RECEIVED
NOV 14 2018
COMMUNITY DEVELOPMENT
AND PLANNING

SITE DEVELOPMENT PLAN OF LAND
"GOODRIDGE BROOK ESTATES"
Multi Unit & Single Family Subdivision Layout
LANCASTER, MASSACHUSETTS

DATE: FEBRUARY 8, 2018
Revised: April 10, 2018
July 6, 2018
July 25, 2018
Sept. 18, 2018
Nov. 6, 2018

OWNER REFERENCE:
GLADY C KILBOURN
PO BOX 275
SO LANCASTER, MA

DEED REFERENCE:
REGISTRY OF DEEDS
BOOK 2922, PAGE 341

TOWN OF LANCASTER ASSESSOR'S REFERENCE

MAP 41, LOT 34B

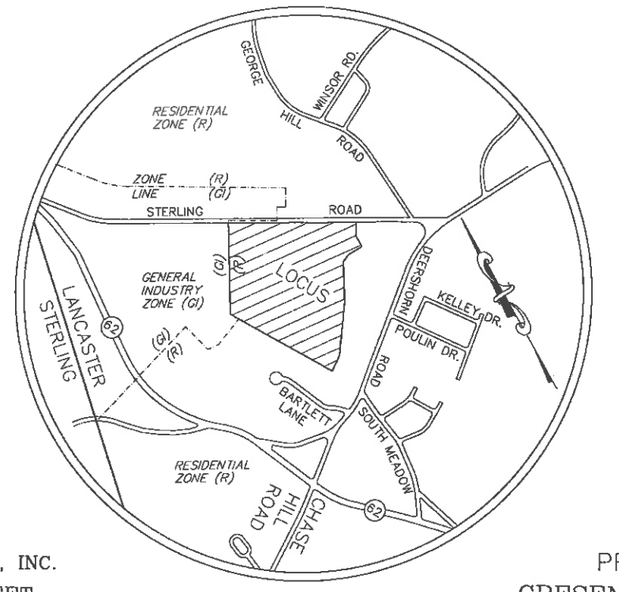
PLAN REFERENCE:
WORCESTER COUNTY REGISTRY
1) PLAN BOOK 486, PLAN No. 69
2) PLAN BOOK 422, PLAN No. 78
3) PLAN BOOK 539, PLAN No. 80
4) PLAN BOOK 763, PLAN No. 63

ZONING TABLE
CLASSIFICATION: RESIDENTIAL

SUBDIVISION SCHEDULE:

	REQUIRED	PROPOSED
LOT AREA:	2.0 Acres	8,000 s.f. (Min)
FRONTAGE:	225 Feet	50 Feet (Min)
SETBACKS:		
FRONT:	74 Feet (Arterial) 60 Feet (Collector) 55 Feet (Minor)	20 Feet (Min)
SIDE:	20 Feet	10 Feet (Min)
REAR:	20 Feet	20 Feet (Min)

NOTE:
THE ON-SITE DRAINAGE SYSTEM IS SUBJECT TO A "STORMWATER MANAGEMENT OPERATION AND MAINTENANCE PLAN" FOR: GOODRIDGE BROOK ESTATES DATED: JULY 6, 2018



LOCUS MAP
1" = 600'

PROJECT SUMMARY:
62 SINGLE FAMILY HOUSE LOTS
120 APARTMENT STYLE UNITS
182 TOTAL PROPOSED UNITS

PROJECT DENSITY:

LOT B1
TOTAL LOT AREA:
833,833 ± S.F. (19.14 ± AC)
Uplands Area: 427,585 S.F.
Wetland Area: 406,248 S.F.

LOT B2
TOTAL LOT AREA:
1,144,579 ± S.F. (26.25 ± AC)
Uplands Area: 976,958 S.F.
Wetland Area: 167,621 S.F.

SHEET INDEX

SHEET NO.	DESCRIPTION
1	COVER
2	PROJECT OVERVIEW
3	EXISTING CONDITIONS
4	MULTI-UNIT LAYOUT
5	MULTI-UNIT LAYOUT
6	MULTI-UNIT GRADING & UTILITIES
7	MULTI-UNIT GRADING & UTILITIES
8	LOT LAYOUT (1 OF 4)
9	LOT LAYOUT (2 OF 4)
10	LOT LAYOUT (3 OF 4)
11	LOT LAYOUT (4 OF 4)
12	SINGLE FAMILY-LAYOUT & GRADING
13	SINGLE FAMILY-LAYOUT & GRADING
14	SINGLE FAMILY-LAYOUT & GRADING
15	PLAN & PROFILE ROAD A
16	PLAN & PROFILE ROAD A
17	PLAN & PROFILE ROAD B
18	PLAN & PROFILE ROAD C
19	PLAN & PROFILE STERLING ROAD
20	EROSION CONTROL DETAILS
21	DETAILS STREET
22	DETAILS DRAIN
23	DETAILS DRAIN
24	DETAILS SEWER
25	DETAILS WATER
26	CDS TREATMENT UNIT DETAIL
27	SOIL LOGS
SUP-A1	SIGHT DISTANCE
SUP-A2	SIGHT DISTANCE

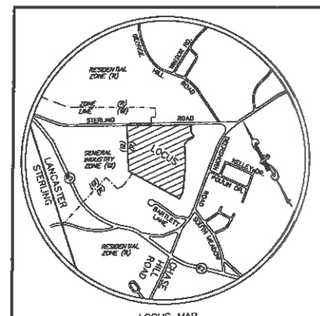
JOYCE A. GUSTAFSON, P.L.S. — 11-7-18 DATE

PAUL E. TRUAX, P.E. — 11-7-2018 DATE

PREPARED BY:
GLM ENGINEERING CONSULTANTS, INC.
19 EXCHANGE STREET
HOLLISTON, MASSACHUSETTS 01746
(508)429-1100 fax:(508)429-7160

PREPARED FOR:
CRESENT BUILDERS, INC.
94 NORTH MAIN STREET
BOYLSTON, MA 01583

DATE: FEBRUARY 8, 2018
SHEET: 1 of 27
PLAN #: 27,147



LOCUS MAP
1" = 1200'

LEGEND

- SEWER LINE (8" PVC TYP.)
- SEWER MANHOLE
- DRAINAGE LINE (12" CONC. TYP.)
- DRAINAGE MANHOLE
- CATCH BASIN
- WATER LINE
- WATERGATE
- HYDRANT
- WATER TEE
- CENTERLINE OF ROAD WAY
- MODIFIED CAPE COD BERM
- DENOTES CONC. BND. W/ D.H.
- 100' BUFFER ZONE
- EDGE OF VEGETATED WETLANDS
- WETLAND FLAG NO.
- EROSION CONTROL BARRIER
- WETLANDS
- UTILITY POLE
- PROPOSED SPOT ELEVATION
- EXISTING CONTOUR
- PROPOSED CONTOUR
- STONE WALL
- PROPOSED LIMIT OF CLEARING
- DRILL HOLE
- IRON PIN
- DEEP TEST HOLE

PROJECT SITE OVERVIEW

REVISIONS		
No.	DATE	DESCRIPTION
1	04/12/18	APARTMENTS 136 UNITS
2	07/06/18	PLAN LAYOUT & DRAINAGE
3	07/23/18	WATER SYSTEM COMMENTS
4	09/19/18	ENGINEERING COMMENTS
5	11/06/18	ENGINEERING COMMENTS

11-7-18

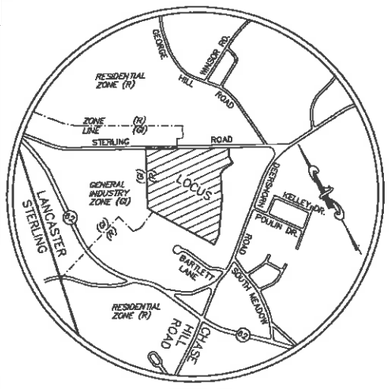
11-7-2018

SITE DEVELOPMENT PLAN
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Multi Unit & Single Family Subdivision Layout
LANCASTER, MASSACHUSETTS

PREPARED FOR:
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19 EXCHANGE STREET
HOLLISTON, MA 01746
P:508-429-1100
F:508-429-7160
www.GLMengineering.com

DRW.:	RST
JOB No.	12,274-DUPLEX
DATE:	OCTOBER 4, 2017
SCALE:	1"= 80'
SHEET:	2 of 27
PLAN #:	27,147



LOCUS MAP
1" = 1200'

LEGEND

- SEWER LINE (8" PVC TYP.)
- SEWER MANHOLE
- DRAINAGE LINE (12" CONC. TYP.)
- DRAINAGE MANHOLE
- CATCH BASIN
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WETLANDS

EDGE OF WOODS

STERLING ROAD

EXISTING CONDITIONS

REVISIONS

No.	DATE	DESCRIPTION
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2	07/06/18	PLAN LAYOUT & DRAINAGE
3	07/25/18	WATER SYSTEM COMMENTS
4	09/18/18	ENGINEERING COMMENTS
5	11/06/18	ENGINEERING COMMENTS

11-7-18

PAUL E. TRUNZ CIVIL NO. 46020 REGISTERED PROFESSIONAL ENGINEER

11-7-2018

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DRW.:	RST
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DATE:	OCTOBER 4, 2017
SCALE:	1"= 80'
SHEET:	3 of 27
PLAN #:	27,147

LEGEND

- SEWER LINE (8" PVC TYP.)
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- DRILL HOLE
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- DEEP TEST HOLE

TOWN OF LANCASTER ASSESSOR'S REFERENCE

MAP 41, LOT 34B

PROJECT SUMMARY:
62 SINGLE FAMILY HOUSE LOTS
120 APARTMENT STYLE UNITS
182 TOTAL PROPOSED UNITS

PLAN REFERENCE:
WORCESTER COUNTY REGISTRY
1) PLAN BOOK 466, PLAN No. 69
2) PLAN BOOK 422, PLAN No. 76
3) PLAN BOOK 539, PLAN No. 80
4) PLAN BOOK 763, PLAN No. 63

TOTAL PARCEL AREA: 45.4 ACRES

OWNER REFERENCE:
GLADY C KILBOURN
PO BOX 275
SO LANCASTER, MA

DEED REFERENCE:
REGISTRY OF DEEDS
BOOK 2922, PAGE 341

EXISTING BUILDING
EXIST. BLDG.
EXIST. BLDG.
N/F
BEST OF NEW ENGLAND INC
GENERAL INDUSTRY (GI)
ZONE LINE
RESIDENTIAL(R)
PRIVATE SEWER FOR SEPTIC SYSTEM
JAMES MONROE WIRE
MADISON WIRE & CABLE CORP
LAWRENCE W & DENISE A BARTLETT
PROPOSED MULT-UNIT BUILDING
40 UNITS
BASEMENT EL=410.0
FIRST FLOOR EL=420.5
PROPOSED MULT-UNIT BUILDING
40 UNITS
FIRST FLOOR EL=413.0
BASEMENT EL=402.5
PROPOSED MULT-UNIT BUILDING
40 UNITS
FIRST FLOOR EL=413.0
BASEMENT EL=402.5
PARKING SCHEDULE:
TOTAL PROVIDED: 1.70 SPACES PER EACH UNIT ACCOMODATED ON THE PREMISES.
120 UNITS (1.70 SPACES/UNIT)= 204 SPACES PROVIDED (INCLUDES ACCESSIBLE PARKING)
WETLANDS
INTERMITTENT STREAM
FLOW
EDGE OF WETLAND
FIRE LANE
705±' TO STREET
745± TO STREET

ZONING TABLE
CLASSIFICATION: RESIDENTIAL

SUBDIVISION SCHEDULE:

	REQUIRED	PROPOSED
LOT AREA:	2.0 Acres	8,000 s.f. (Min)
FRONTAGE:	225 Feet	50 Feet (Min)
SETBACKS:		
FRONT:	74 Feet (Arterial)	20 Feet (Min)
	60 Feet (Collector)	
	55 Feet (Minor)	
SIDE:	20 Feet	10 Feet (Min)
REAR:	20 Feet	20 Feet (Min)

MULTI-UNIT LAYOUT

No.	DATE	REVISIONS DESCRIPTION
1	04/10/18	APARTMENTS 136 UNITS
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3	07/25/18	WATER SYSTEM COMMENTS
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11-7-18

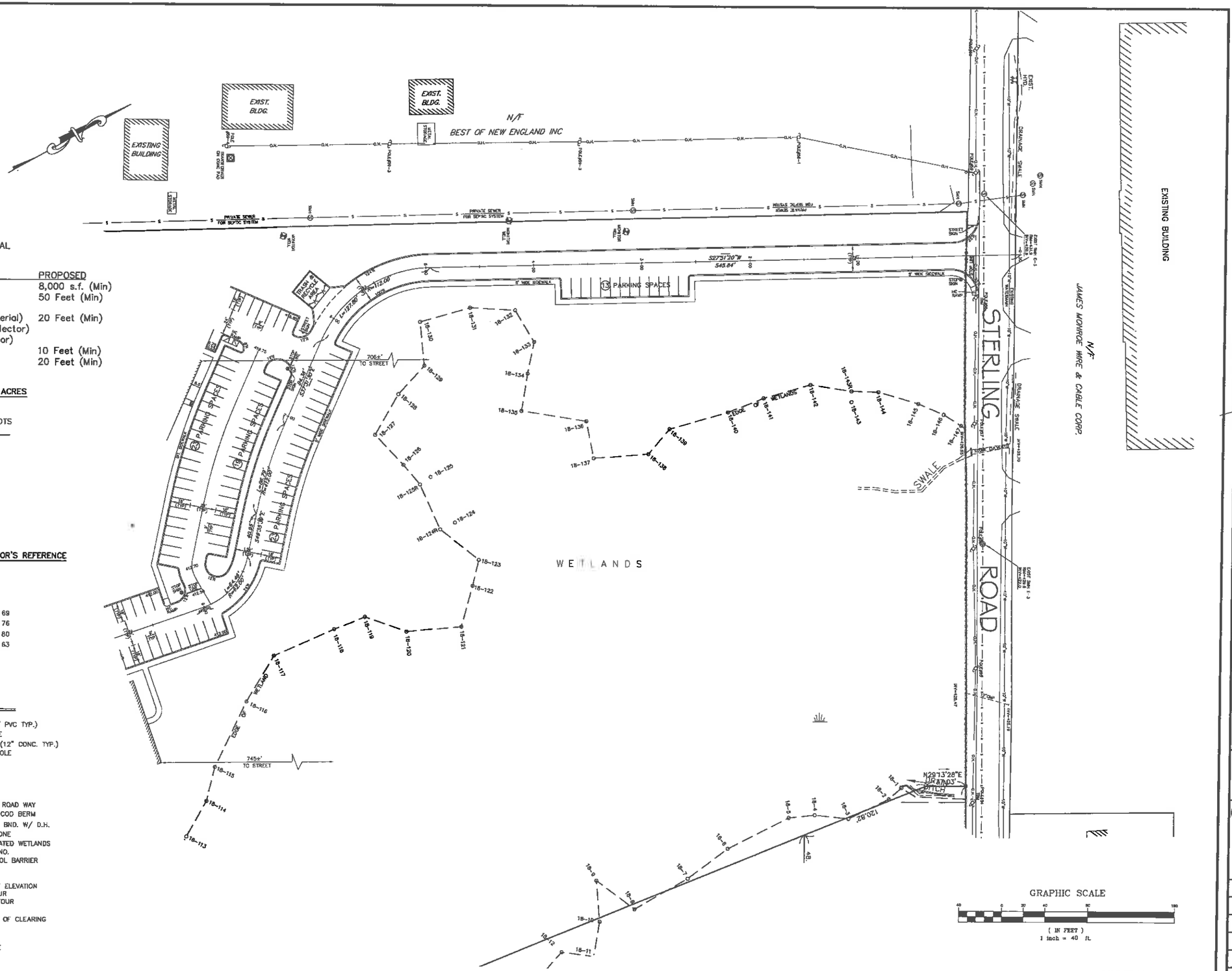
PAUL E. TYLUS CIVIL NO. 46237 REGISTERED PROFESSIONAL ENGINEER
COMMONWEALTH OF MASSACHUSETTS
11-7-2018

SITE DEVELOPMENT PLAN
"GOODRIDGE BROOK ESTATES"
Multi Unit & Single Family Subdivision Layout
LANCASTER, MASSACHUSETTS

PREPARED FOR:
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BOYLSTON MA 01583

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HOLLISTON, MA 01746
P: 508-429-1100
F: 508-429-7160
www.GLMengineering.com

DRW.:	RST
JOB No.	12,274
DATE:	FEBRUARY 8, 2018
SCALE:	1"= 40'
SHEET:	4 of 27
PLAN #:	27,147



ZONING TABLE
CLASSIFICATION: RESIDENTIAL

SUBDIVISION SCHEDULE:

	REQUIRED	PROPOSED
LOT AREA:	2.0 Acres	8,000 s.f. (Min)
FRONTAGE:	225 Feet	50 Feet (Min)
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62 SINGLE FAMILY HOUSE LOTS
120 APARTMENT STYLE UNITS
182 TOTAL PROPOSED UNITS

OWNER REFERENCE:
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PO BOX 275
SO LANCASTER, MA

DEED REFERENCE:
REGISTRY OF DEEDS
BOOK 2922, PAGE 341

TOWN OF LANCASTER ASSESSOR'S REFERENCE

MAP 41, LOT 34B

PLAN REFERENCE:
WORCESTER COUNTY REGISTRY
1) PLAN BOOK 466, PLAN No. 69
2) PLAN BOOK 422, PLAN No. 76
3) PLAN BOOK 539, PLAN No. 80
4) PLAN BOOK 763, PLAN No. 63

LEGEND

- SEWER LINE (8" PVC TYP.)
- SEWER MANHOLE
- DRAINAGE LINE (12" CONC. TYP.)
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MULTI-UNIT LAYOUT

REVISIONS

No.	DATE	DESCRIPTION
1	04/10/18	APARTMENTS 136 UNITS
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PAUL F. TYLKI CIVIL NO 46621 REGISTERED PROFESSIONAL ENGINEER 11-7-2018

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LANCASTER, MASSACHUSETTS

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DRW.:	RST
JOB No.	12,274
DATE:	FEBRUARY 8, 2018
SCALE:	1"= 40'
SHEET:	5 of 27
PLAN #:	27,147

PLAN REFERENCE:
WORCESTER COUNTY REGISTRY
1) PLAN BOOK 466, PLAN No. 69
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SIDE:	20 Feet	10 Feet (Min)
REAR:	20 Feet	20 Feet (Min)

TOTAL PARCEL AREA: 45.4 ACRES

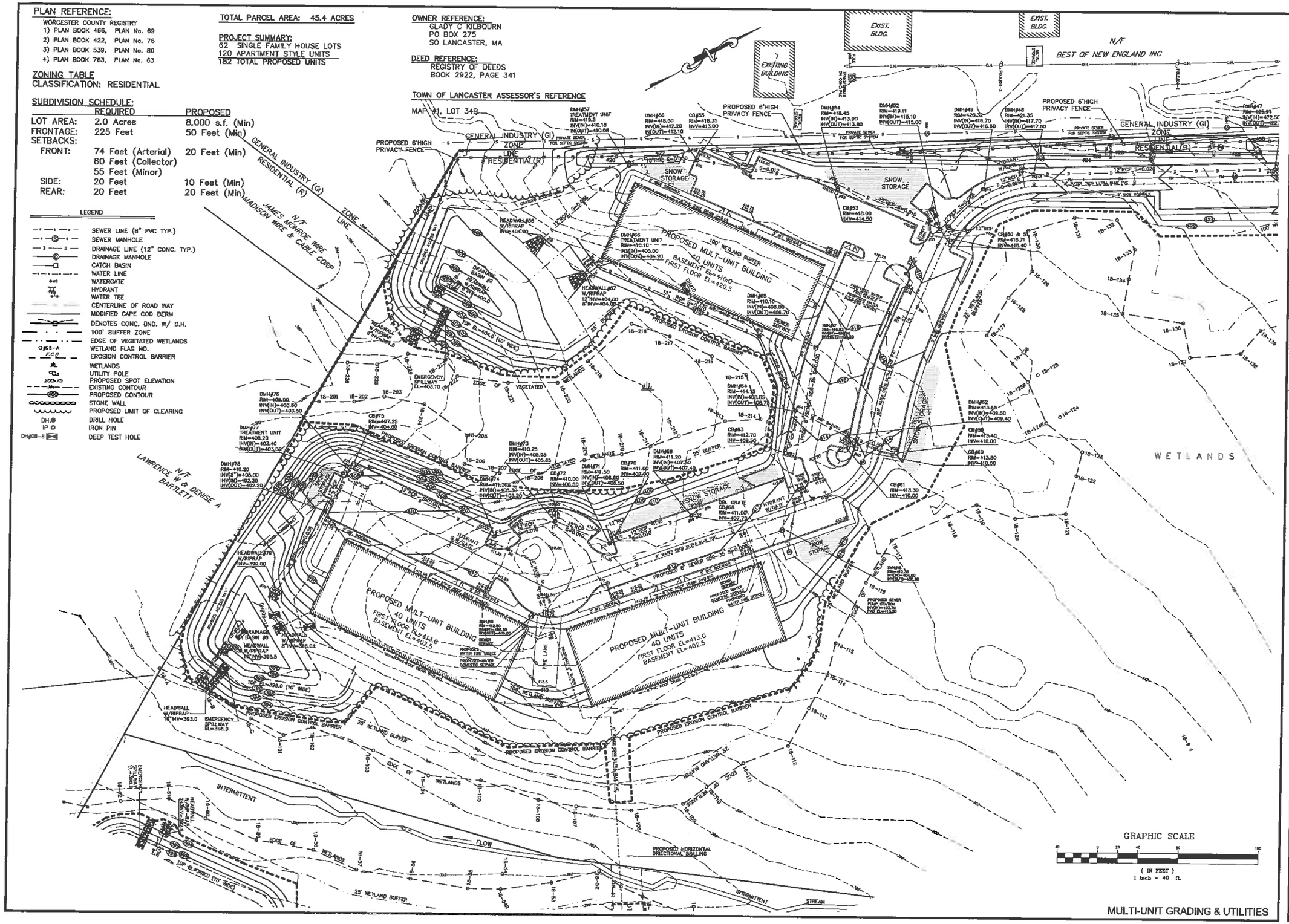
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SO LANCASTER, MA

DEED REFERENCE:
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BOOK 2922, PAGE 341

TOWN OF LANCASTER ASSESSOR'S REFERENCE
MAP 31, LOT 34B

LEGEND
- SEWER LINE (8" PVC TYP.)
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- DEEP TEST HOLE



GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.

MULTI-UNIT GRADING & UTILITIES

REVISIONS		
No.	DATE	DESCRIPTION
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11-17-18

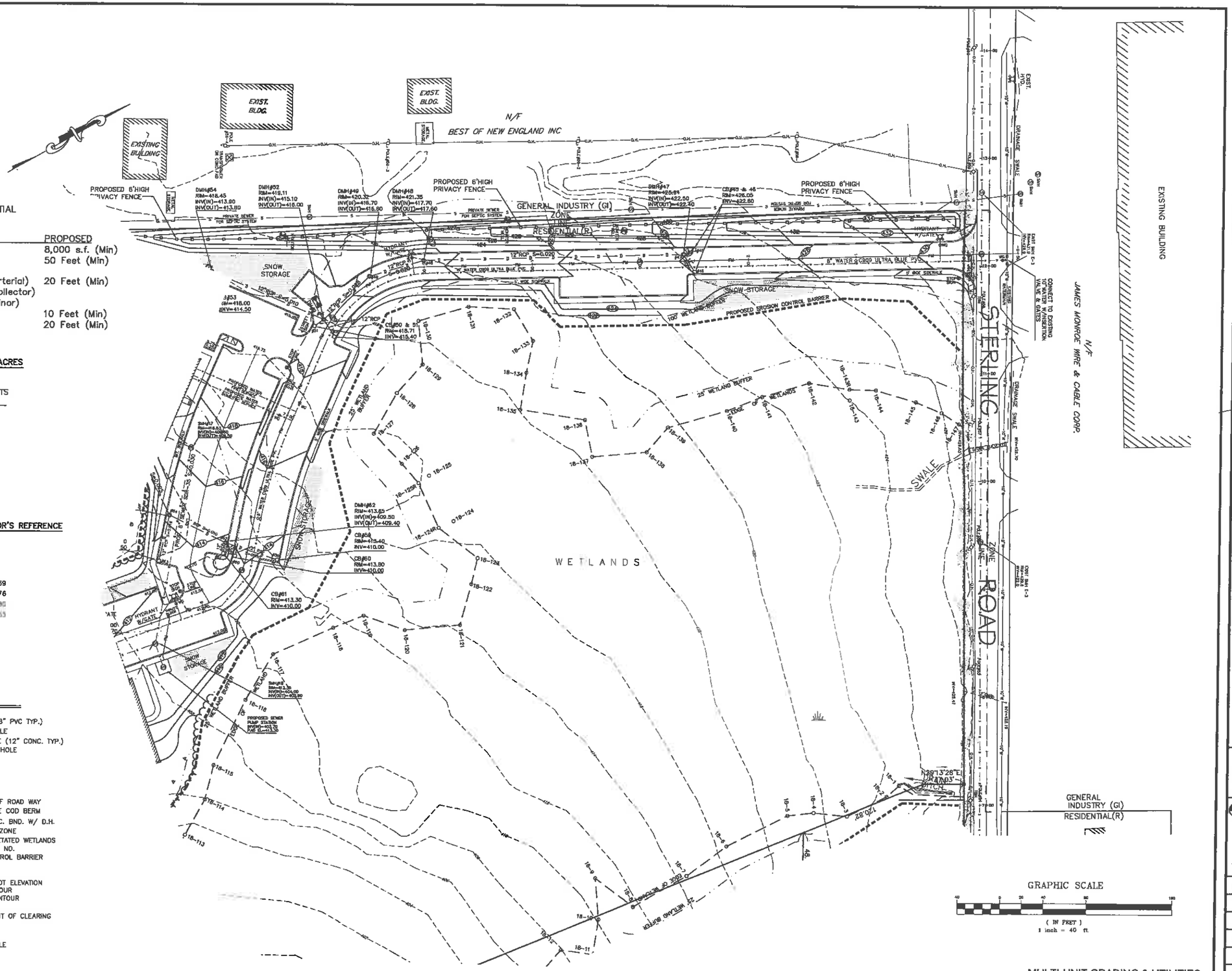
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DRW.:	RST
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DATE:	FEBRUARY 8, 2018
SCALE:	1"= 40'
SHEET:	6 of 27
PLAN #:	27,147



ZONING TABLE
CLASSIFICATION: RESIDENTIAL

SUBDIVISION SCHEDULE:

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TOTAL PARCEL AREA: 45.4 ACRES

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OWNER REFERENCE:
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PO BOX 275
SO LANCASTER, MA

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BOOK 2922, PAGE 341

TOWN OF LANCASTER ASSESSOR'S REFERENCE

MAP 41, LOT 34B

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WORCESTER COUNTY REGISTRY
1) PLAN BOOK 466, PLAN No. 69
2) PLAN BOOK 422, PLAN No. 76
3) PLAN BOOK 539, PLAN No. 86
4) PLAN BOOK 763, PLAN No. 65

LEGEND

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- SEWER MANHOLE
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MULTI-UNIT GRADING & UTILITIES

REVISIONS		
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11-7-2018

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DRW.:	RST
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DATE:	FEBRUARY 8, 2018
SCALE:	1"= 40'
SHEET:	7 of 27
PLAN #:	27,147

FOR REGISTRY OF DEEDS USE ONLY

ZONING TABLE
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SIDE:	20 Feet	10 Feet (Min)
REAR:	20 Feet	20 Feet (Min)

I HEREBY CERTIFY THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE LANCASTER ZONING BOARD OF APPEALS WAS RECIEVED AND RECORDED AT THIS OFFICE AND NO APPEAL WAS RECIEVED DURING THE 20 DAYS NEXT AFTER SUCH RECIEPT OF RECORDING OF SAID NOTICE.

TOWN CLERK _____ DATE _____

APPROVAL UNDER THE SUBDIVISION CONTROL LAW
LANCASTER BOARD OF APPEALS

_____

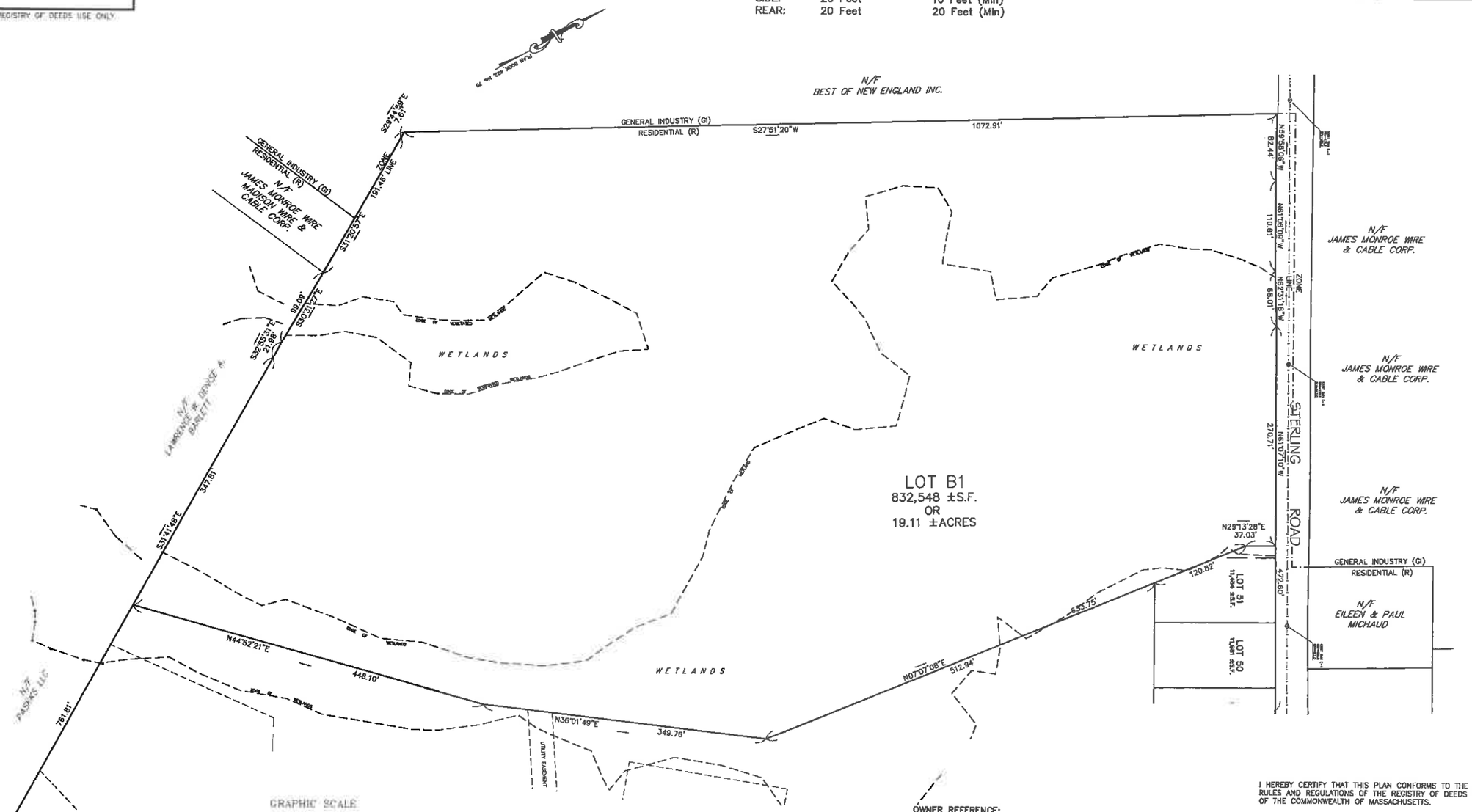
_____

_____

_____

_____

DATE : _____



GRAPHIC SCALE

DENOTES IRON ROD TO BE SET
DENOTES CONCRETE BOUND TO BE SET

PLAN REFERENCES:
WORCESTER COUNTY REGISTRY OF DEEDS
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PO BOX 275
SO LANCASTER, MA

DEED REFERENCE:
REGISTRY OF DEEDS
BOOK 2922, PAGE 341

TOWN OF LANCASTER ASSESSOR'S REFERENCE

MAP 41, LOT 34B

I HEREBY CERTIFY THAT THIS PLAN CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTRY OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE PROCEDURAL AND TECHNICAL STANDARDS FOR THE PRACTICE OF LAND SURVEYING IN THE COMMONWEALTH OF MASSACHUSETTS.

JOYCE E. HASTINGS , P.L.S. 11-7-18 DATE

LOT LAYOUT 1 OF 4

REVISIONS

No.	DATE	DESCRIPTION
1	04/10/18	APARTMENTS 136 UNITS
2	07/06/18	PLAN LAYOUT & DRAINAGE
3	07/25/18	WATER SYSTEM COMMENTS
4	09/19/18	ENGINEERING COMMENTS
5	11/08/18	ENGINEERING COMMENTS

SITE DEVELOPMENT PLAN
"GOODRIDGE BROOK ESTATES"
Multi Unit & Single Family Subdivision Layout
LANCASTER, MASSACHUSETTS

PREPARED FOR:
CRESCENT BUILDERS, INC.
94 NORTH MAIN STREET
BOYLSTON MA 01583

GLM Engineering Consultants, Inc.
19 EXCHANGE STREET
HOLLISTON, MA 01746
P: 508-429-1100
F: 508-429-7160
www.GLMengineering.com

DRW.: RST
JOB No. 12,274-DUPLEX
DATE: OCTOBER 4, 2017
SCALE: 1"= 60'
SHEET: 8 of 27
PLAN #: 27,147

FOR REGISTRY OF DEEDS USE ONLY

I HEREBY CERTIFY THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE LANCASTER ZONING BOARD OF APPEALS WAS RECIEVED AND RECORDED AT THIS OFFICE AND NO APPEAL WAS RECIEVED DURING THE 20 DAYS NEXT AFTER SUCH RECIEPT OF RECORDING OF SAID NOTICE.

TOWN CLERK _____ DATE _____

APPROVAL UNDER THE SUBDIVISION CONTROL LAW
LANCASTER BOARD OF APPEALS

DATE : _____

N/F RICHARD R. & JUDITH COLLINS

TOWN OF LANCASTER

N/F PAMELA L & MICHAEL E HARRIS

N/F KENNETH LEE & ELIN S KREIDER

N/F ESDRAS E & JILLIAN J. PEREIRA

TOWN OF LANCASTER

N/F HEATHER CULLINANE

N/F JOHN D & SUSAN A ROSS

N/F ERIC J & MELISSA J MCLAUGHLIN

STERLING (PUBLIC VARIABLE WIDTH) ROAD

LOT 51 11,484 ±S.F.
LOT 50 11,981 ±S.F.
LOT 49 11,149 ±S.F.
LOT 48 9,331 ±S.F.
LOT 47 8,757 ±S.F.
LOT 46 8,910 ±S.F.
LOT 45 10,465 ±S.F.
LOT 42 9,542 ±S.F.
LOT 43 8,297 ±S.F.
LOT 44 8,762 ±S.F.
LOT 41 11,695 ±S.F.
LOT 40 10,915 ±S.F.
LOT 39 10,219 ±S.F.
LOT 1 10,241 ±S.F.
LOT 2 10,058 ±S.F.
LOT 3 8,057 ±S.F.
LOT 4 8,255 ±S.F.
LOT 5 10,083 ±S.F.
LOT 6 8,040 ± S.F.
LOT 7 8,826 ± S.F.
LOT 8 8,200 ± S.F.
LOT 38 10,051 ±S.F.
LOT 37 10,360 ±S.F.
LOT 36 10,595 ±S.F.
LOT 35 12,386 ±S.F.

ROAD E
19,038 ± S.F.
0.44 ± ACRES

LOT PARCEL A
345,069 ±S.F.
7.92 ±ACRES

LOT PARCEL B
35,858± S.F.
0.82 ±ACRES

DRAINAGE EASEMENT

WETLANDS

20' SEWER EASE

20' WIDE SEWER EASE

20' WIDE DRAIN EASE

(40' R.O.W.)

N/F MICHAEL T & CHERYL A GILL

OWNER REFERENCE:
GLADY C KILBOURN
PO BOX 275
SO LANCASTER, MA

DEED REFERENCE:
REGISTRY OF DEEDS
BOOK 2922, PAGE 341

TOWN OF LANCASTER
ASSESSOR'S REFERENCE

MAP 41, LOT 34B

DENOTES IRON ROD TO BE SET
DENOTES CONCRETE BOUND TO BE SET

GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft

LOT SHAPE CALCULATION TABLE:

Lot	Perimeter	Area	Lot Shape
1	405.06	10241	16.02
2	406.85	10058	16.46
3	372.84	8057	17.25
4	373.45	8255	16.89
5	413.41	10083	16.95
6	392.93	8040	19.20
7	384.15	8826	16.72
8	395.50	8200	19.09
9	440.00	11200	17.29
10	440.00	11200	17.29
11	440.00	11200	17.29
12	459.79	12587	16.80
13	440.47	11203	17.32
14	440.00	11200	17.29
15	440.00	11200	17.29
16	440.00	11200	17.29
17	440.00	11200	17.29
18	440.00	11200	17.29
19	413.75	8294	18.42
20	453.97	11642	17.70
21	566.50	19994	16.05
22	438.69	10596	18.16
23	482.81	13728	16.98
24	461.75	13553	15.73
25	433.81	9988	18.84
26	396.76	9233	17.05
27	375.26	8566	16.44
28	370.17	8400	16.31
29	370.00	8400	16.30
30	370.00	8400	16.30
31	370.00	8400	16.30
32	389.46	9193	16.50
33	407.63	9419	17.64
34	501.79	15122	16.65
35	458.45	12386	16.97
36	423.04	10595	16.73
37	410.00	10350	16.24
38	404.77	10051	16.30
39	417.92	10219	17.09
40	412.05	10915	15.48
41	440.91	11695	16.62
42	386.56	9542	15.66
43	375.35	8297	16.98
44	402.50	8762	18.49
45	401.48	10465	15.40
46	403.11	8910	18.24
47	385.69	8757	16.99
48	378.14	9331	15.32
49	436.44	11149	17.08
50	459.53	11981	17.63
51	449.91	11484	17.63
52	420.21	10779	16.38
53	370.00	8400	16.30
54	451.65	11390	17.91
55	370.00	8400	16.30
56	370.00	8400	16.30
57	369.36	8395	16.25
58	427.04	10114	18.03
59	423.00	10246	17.46
60	408.47	10275	16.34
61	370.00	8400	16.30
62	370.00	8400	16.30

ZONING TABLE
CLASSIFICATION: RESIDENTIAL

SUBDIVISION SCHEDULE:

	REQUIRED	PROPOSED
LOT AREA:	2.0 Acres	8,000 s.f. (Min)
FRONTAGE:	225 Feet	50 Feet (Min)
SETBACKS:		
FRONT:	74 Feet (Arterial) 60 Feet (Collector) 55 Feet (Minor)	20 Feet (Min)
SIDE:	20 Feet	10 Feet (Min)
REAR:	20 Feet	20 Feet (Min)

I HEREBY CERTIFY THAT THIS PLAN CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTRY OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE PROCEDURAL AND TECHNICAL STANDARDS FOR THE PRACTICE OF LAND SURVEYING IN THE COMMONWEALTH OF MASSACHUSETTS.

JOYCE E. HASTINGS , P.L.S. 11-17-18 DATE

LOT LAYOUT 2 OF 4

No.	DATE	REVISIONS DESCRIPTION
1	04/10/18	APARTMENTS 138 UNITS
2	07/09/18	PLAN LAYOUT & DRAINAGE
3	07/25/18	WATER SYSTEM COMMENTS
4	09/18/18	ENGINEERING COMMENTS
5	11/09/18	ENGINEERING COMMENTS

SITE DEVELOPMENT PLAN
"GOODRIDGE BROOK ESTATES"
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LANCASTER, MASSACHUSETTS

PREPARED FOR:
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19 EXCHANGE STREET
HOLLISTON, MA 01746
P:508-429-1100
F:508-429-7160
www.GLMengineering.com

DRW.: RST
JOB No. 12,274
DATE: FEBRUARY 8, 2018
SCALE: 1"= 40'
SHEET: 9 of 27
PLAN #: 27,147

FOR REGISTRY OF DEEDS USE ONLY

7.92 ±ACRES

LOT SHAPE CALCULATION TABLE:

Lot	Perimeter	Area	Lot Shape
1	405.06	10241	16.02
2	406.85	10058	16.46
3	372.84	8057	17.25
4	373.45	8255	16.89
5	419.43	10083	16.85
6	392.93	8040	19.20
7	384.15	8826	16.72
8	395.60	8200	19.09
9	440.00	11200	17.29
10	440.00	11200	17.29
11	440.00	11200	17.29
12	459.79	12587	16.80
13	440.47	11203	17.32
14	440.00	11200	17.29
15	440.00	11200	17.29
16	440.00	11200	17.29
17	440.00	11200	17.29
18	440.00	11200	17.29
19	413.75	9294	18.42
20	453.97	11842	17.70
21	566.50	19994	16.05
22	438.69	10596	18.16
23	482.81	13728	16.98
24	461.75	13553	15.73
25	433.81	9986	18.84
26	396.76	9233	17.05
27	375.26	8566	16.44
28	370.17	8400	16.31
29	370.00	8400	16.30
30	370.00	8400	16.30
31	370.00	8400	16.30
32	389.66	9193	16.50
33	407.63	9419	17.64
34	501.79	15122	16.65
35	458.45	12386	16.97
36	421.04	10595	16.73
37	410.00	10350	16.24
38	404.77	10051	16.30
39	417.92	10219	17.09
40	411.05	10915	15.48
41	440.91	11695	16.62
42	386.56	9542	15.66
43	375.35	8297	16.98
44	402.50	8762	18.49
45	401.48	10465	15.40
46	403.11	8910	18.24
47	385.69	8757	16.99
48	378.14	9331	15.32
49	436.44	11149	17.08
50	459.53	11981	17.63
51	449.91	11484	17.63
52	420.21	10779	16.38
53	370.00	8400	16.30
54	451.65	11390	17.91
55	370.00	8400	16.30
56	370.00	8400	16.30
57	369.36	8395	16.25
58	427.04	10114	18.03
59	423.00	10246	17.46
60	408.47	10275	16.24
61	370.00	8400	16.30
62	370.00	8400	16.30

WETLANDS

STREAM

INTERMITTENT

FLOW

EDGE OF WETLANDS

INTERMITTENT

EDGE OF WETLANDS

DRAINAGE EASEMENT

UTILITY EASEMENT

UTILITY EASEMENT

DRAIN EASE.

LOT 35
12,386 ±S.F.

LOT 34
15,122 ±S.F.

LOT 33
9,419 ±S.F.

LOT 32
8,438 ±S.F.

LOT 31
8,400 ±S.F.

LOT 30
8,400 ±S.F.

LOT 29
8,400 ±S.F.

LOT 28
8,400 ±S.F.

LOT 27
8,566 ±S.F.

LOT 59
10,246 ±S.F.

LOT 60
10,275 ±S.F.

LOT 58
10,114 ±S.F.

LOT 61
8,400 ±S.F.

LOT 57
8,395 ±S.F.

LOT 62
8,400 ±S.F.

LOT 56
8,400 ±S.F.

LOT 53
8,400 ±S.F.

LOT 55
8,400 ±S.F.

LOT 52
10,779 ±S.F.

LOT 54
11,390 ±S.F.

LOT 25
9,988 ±S.F.

ROAD A
70,855 ± S.F.
1.62 ± ACRES

ROAD B
38,651 ± S.F.

(40' R.O.W.)

LOT 8
8,200 ± S.F.

LOT 9
11,200 ± S.F.

LOT 10
11,200 ± S.F.

LOT 11
11,200 ± S.F.

LOT 12
12,587 ± S.F.

LOT 13
11,203 ± S.F.

LOT 14
11,200 ± S.F.

LOT 15
11,200 ± S.F.

LOT 16
11,200 ± S.F.

LOT 17
11,200 ± S.F.

LOT 18
11,200 ± S.F.

N/F
DAVID KILBOURN

PLAN BOOK 422, No. 76

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

I HEREBY CERTIFY THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE LANCASTER ZONING BOARD OF APPEALS WAS RECIEVED AND RECORDED AT THIS OFFICE AND NO APPEAL WAS RECIEVED DURING THE 20 DAYS NEXT AFTER SUCH RECIEPT OF RECORDING OF SAID NOTICE.

TOWN CLERK _____ DATE _____

APPROVAL UNDER THE SUBDIVISION CONTROL LAW
LANCASTER BOARD OF APPEALS

DATE : _____

ZONING TABLE
CLASSIFICATION: RESIDENTIAL

SUBDIVISION SCHEDULE:

	REQUIRED	PROPOSED
LOT AREA:	2.0 Acres	8,000 s.f. (Min)
FRONTAGE:	225 Feet	50 Feet (Min)
SETBACKS:		
FRONT:	74 Feet (Arterial) 60 Feet (Collector) 55 Feet (Minor)	20 Feet (Min)
SIDE:	20 Feet	10 Feet (Min)
REAR:	20 Feet	20 Feet (Min)

OWNER REFERENCE:
GLADY C KILBOURN
PO BOX 275
SO LANCASTER, MA

DEED REFERENCE:
REGISTRY OF DEEDS
BOOK 2922, PAGE 341

TOWN OF LANCASTER ASSESSOR'S REFERENCE

MAP 41, LOT 34B

DENOTES IRON ROD TO BE SET
DENOTES CONCRETE BOUND TO BE SET

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11-7-18
JOYCE E. HASTINGS , P.L.S. DATE

LOT LAYOUT 3 OF 4

REVISIONS

No.	DATE	DESCRIPTION
1	04/10/18	APARTMENTS 136 UNITS
2	07/06/18	PLAN LAYOUT & DRAINAGE
3	07/25/18	WATER SYSTEM COMMENTS
4	09/18/18	ENGINEERING COMMENTS
5	11/06/18	ENGINEERING COMMENTS

SITE DEVELOPMENT PLAN
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www.GLMengineering.com

DRW.:	RST
JOB No.	12,274
DATE:	FEBRUARY 8, 2018
SCALE:	1"= 40'
SHEET:	10 of 27
PLAN #:	27,147

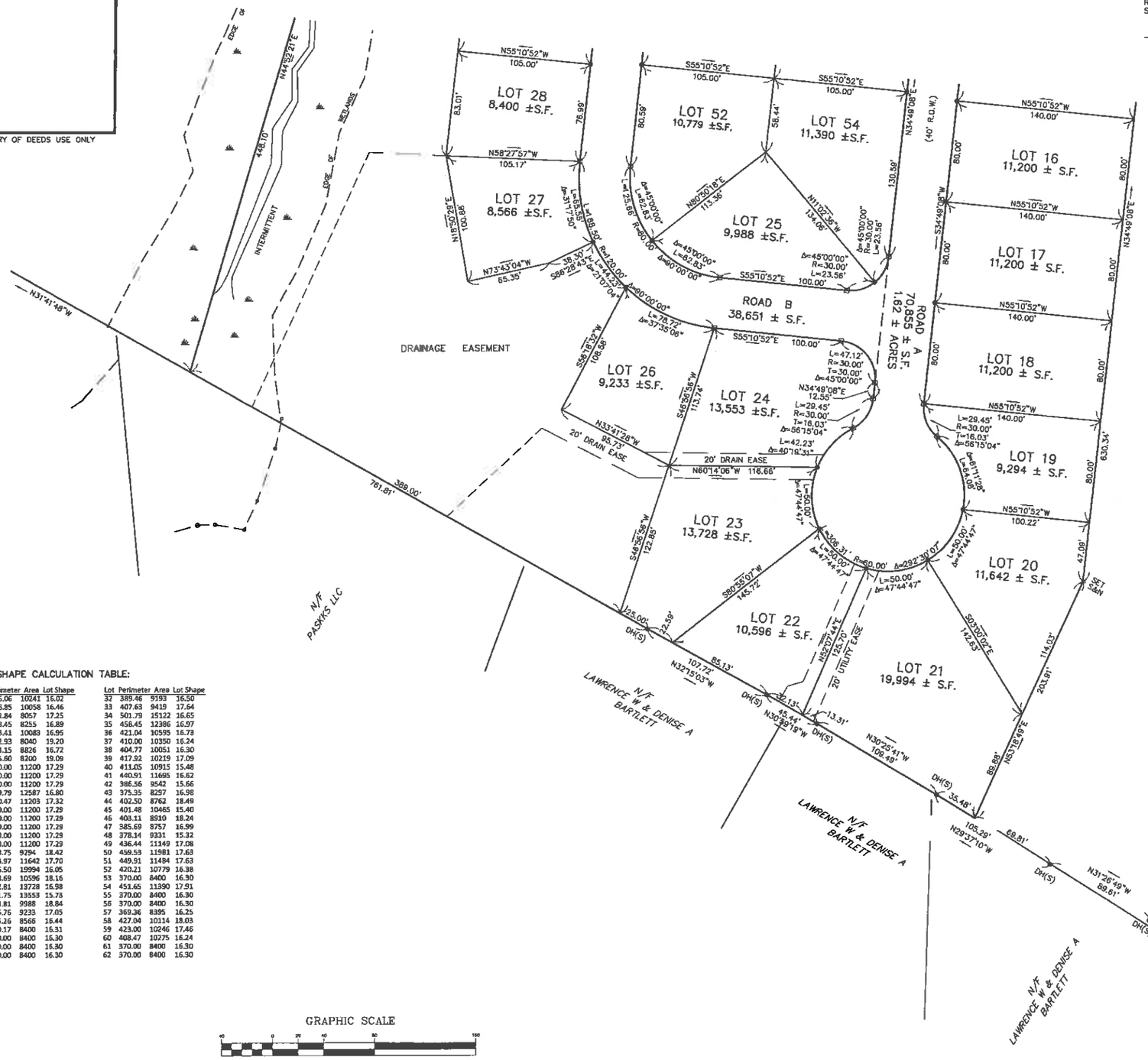
FOR REGISTRY OF DEEDS USE ONLY

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TOWN CLERK _____ DATE _____

APPROVAL UNDER THE SUBDIVISION CONTROL LAW
LANCASTER BOARD OF APPEALS

DATE _____



ZONING TABLE
CLASSIFICATION: RESIDENTIAL

SUBDIVISION SCHEDULE:

	REQUIRED	PROPOSED
LOT AREA:	2.0 Acres	8,000 s.f. (Min)
FRONTAGE:	225 Feet	50 Feet (Min)
SETBACKS:		
FRONT:	74 Feet (Arterial) 60 Feet (Collector) 55 Feet (Minor)	20 Feet (Min)
SIDE:	20 Feet	10 Feet (Min)
REAR:	20 Feet	20 Feet (Min)

LOT SHAPE CALCULATION TABLE:

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3	372.84	8057	17.25	34	501.79	15122	16.65
4	373.45	8255	16.89	35	458.45	12386	16.97
5	413.41	10083	16.95	36	421.04	10595	16.73
6	392.93	8040	19.20	37	410.00	10350	16.24
7	384.15	8826	16.72	38	404.77	10051	16.30
8	395.60	8200	19.09	39	417.32	10219	17.09
9	440.00	11200	17.29	40	411.05	10915	15.48
10	440.00	11200	17.29	41	440.91	11695	16.62
11	440.00	11200	17.29	42	386.56	9542	15.66
12	459.79	12587	16.80	43	375.35	8257	16.98
13	440.47	11203	17.32	44	402.50	8762	18.49
14	440.00	11200	17.29	45	401.48	10465	15.40
15	440.00	11200	17.29	46	403.11	8910	18.24
16	440.00	11200	17.29	47	385.69	8757	16.99
17	440.00	11200	17.29	48	378.14	9331	15.32
18	440.00	11200	17.29	49	436.44	11349	17.08
19	413.75	9294	18.42	50	459.53	11981	17.63
20	453.97	11642	17.70	51	449.91	11484	17.63
21	566.50	19994	16.05	52	420.21	10779	16.38
22	438.69	10596	18.16	53	370.00	8400	16.30
23	482.81	13728	16.98	54	451.65	11390	17.91
24	461.75	13553	15.73	55	370.00	8400	16.30
25	433.81	9988	18.84	56	370.00	8400	16.30
26	396.76	9233	17.05	57	369.36	8395	16.25
27	375.26	8566	16.44	58	427.04	10114	18.03
28	370.17	8400	16.31	59	423.00	10246	17.46
29	370.00	8400	16.30	60	408.47	10275	16.24
30	370.00	8400	16.30	61	370.00	8400	16.30
31	370.00	8400	16.30	62	370.00	8400	16.30

GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.

OWNER REFERENCE:
GLADY C KILBOURN
PO BOX 275
SO LANCASTER, MA

DEED REFERENCE:
REGISTRY OF DEEDS
BOOK 2922, PAGE 341

TOWN OF LANCASTER ASSESSOR'S REFERENCE

MAP 41, LOT 34B

I HEREBY CERTIFY THAT THIS PLAN CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTRY OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE PROCEDURAL AND TECHNICAL STANDARDS FOR THE PRACTICE OF LAND SURVEYING IN THE COMMONWEALTH OF MASSACHUSETTS.

11-7-18
JOYCE E. HASTINGS , P.L.S. DATE

LOT LAYOUT 4 OF 4

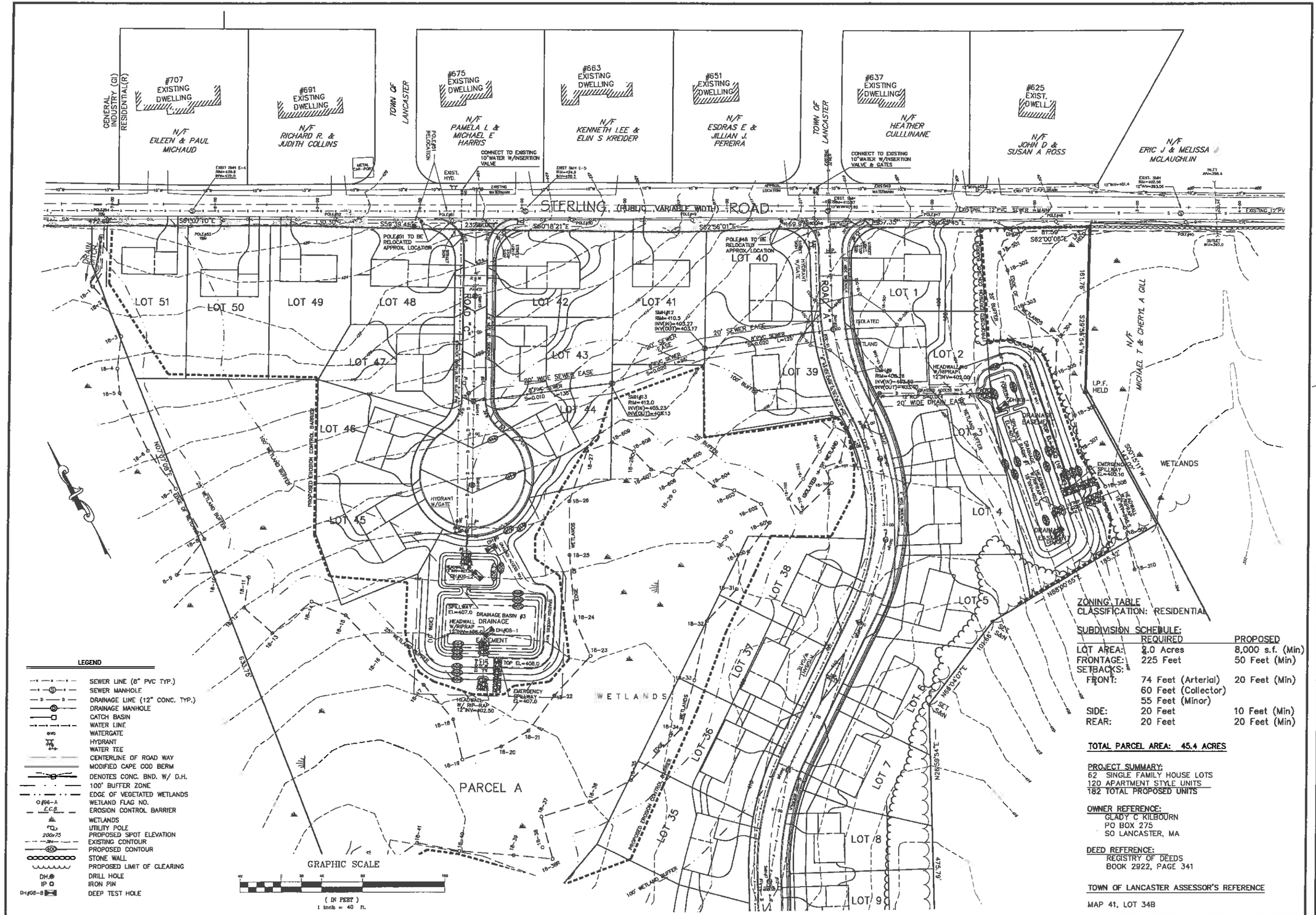
No.	DATE	REVISIONS DESCRIPTION
1	04/10/18	APARTMENTS 138 UNITS
2	07/06/18	PLAN LAYOUT & DRAINAGE
3	07/25/18	WATER SYSTEM COMMENTS
4	09/18/18	ENGINEERING COMMENTS
5	11/08/18	ENGINEERING COMMENTS

SITE DEVELOPMENT PLAN
"GOODRIDGE BROOK ESTATES"
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P:508-429-1100
F:508-429-7160
www.GLMengineering.com

DRW.:	RST
JOB No.	12,274
DATE:	FEBRUARY 8, 2018
SCALE:	1"= 40'
SHEET:	11 of 27
PLAN #:	27,147



LEGEND

- SEWER LINE (8" PVC TYP.)
- SEWER MANHOLE
- DRAINAGE LINE (12" CONC. TYP.)
- DRAINAGE MANHOLE
- CATCH BASIN
- WATER LINE
- WATERGATE
- HYDRANT
- WATER TEE
- CENTERLINE OF ROAD WAY
- MODIFIED CAPE COD BERM
- DENOTES CONC. BND. W/ D.H.
- 100' BUFFER ZONE
- EDGE OF VEGETATED WETLANDS
- WETLAND FLAG NO.
- EROSION CONTROL BARRIER
- WETLANDS
- UTILITY POLE
- PROPOSED SPOT ELEVATION
- EXISTING CONTOUR
- PROPOSED CONTOUR
- STONE WALL
- PROPOSED LIMIT OF CLEARING
- DRILL HOLE
- IRON PIN
- DEEP TEST HOLE

ZONING TABLE
CLASSIFICATION: RESIDENTIAL

SUBDIVISION SCHEDULE:

	REQUIRED	PROPOSED
LOT AREA:	2.0 Acres	8,000 s.f. (Min)
FRONTAGE:	225 Feet	50 Feet (Min)
SETBACKS:		
FRONT:	74 Feet (Arterial)	20 Feet (Min)
	60 Feet (Collector)	
	55 Feet (Minor)	
SIDE:	20 Feet	10 Feet (Min)
REAR:	20 Feet	20 Feet (Min)

TOTAL PARCEL AREA: 45.4 ACRES

PROJECT SUMMARY:
62 SINGLE FAMILY HOUSE LOTS
120 APARTMENT STYLE UNITS
182 TOTAL PROPOSED UNITS

OWNER REFERENCE:
GLADY C KILBOURN
PO BOX 275
SO LANCASTER, MA

DEED REFERENCE:
REGISTRY OF DEEDS
BOOK 2922, PAGE 341

TOWN OF LANCASTER ASSESSOR'S REFERENCE

MAP 41, LOT 34B

SINGLE FAMILY - LAYOUT & GRADING

No.	DATE	REVISIONS DESCRIPTION
1	04/10/18	APARTMENTS 136 UNITS
2	07/06/18	PLAN LAYOUT & DRAINAGE
3	07/25/18	WATER SYSTEM COMMENTS
4	09/18/18	ENGINEERING COMMENTS
5	11/06/18	ENGINEERING COMMENTS

11-7-18

COMMONWEALTH OF MASSACHUSETTS PAUL E. TRUNE CIVIL NO. 46027 REGISTERED PROFESSIONAL ENGINEER

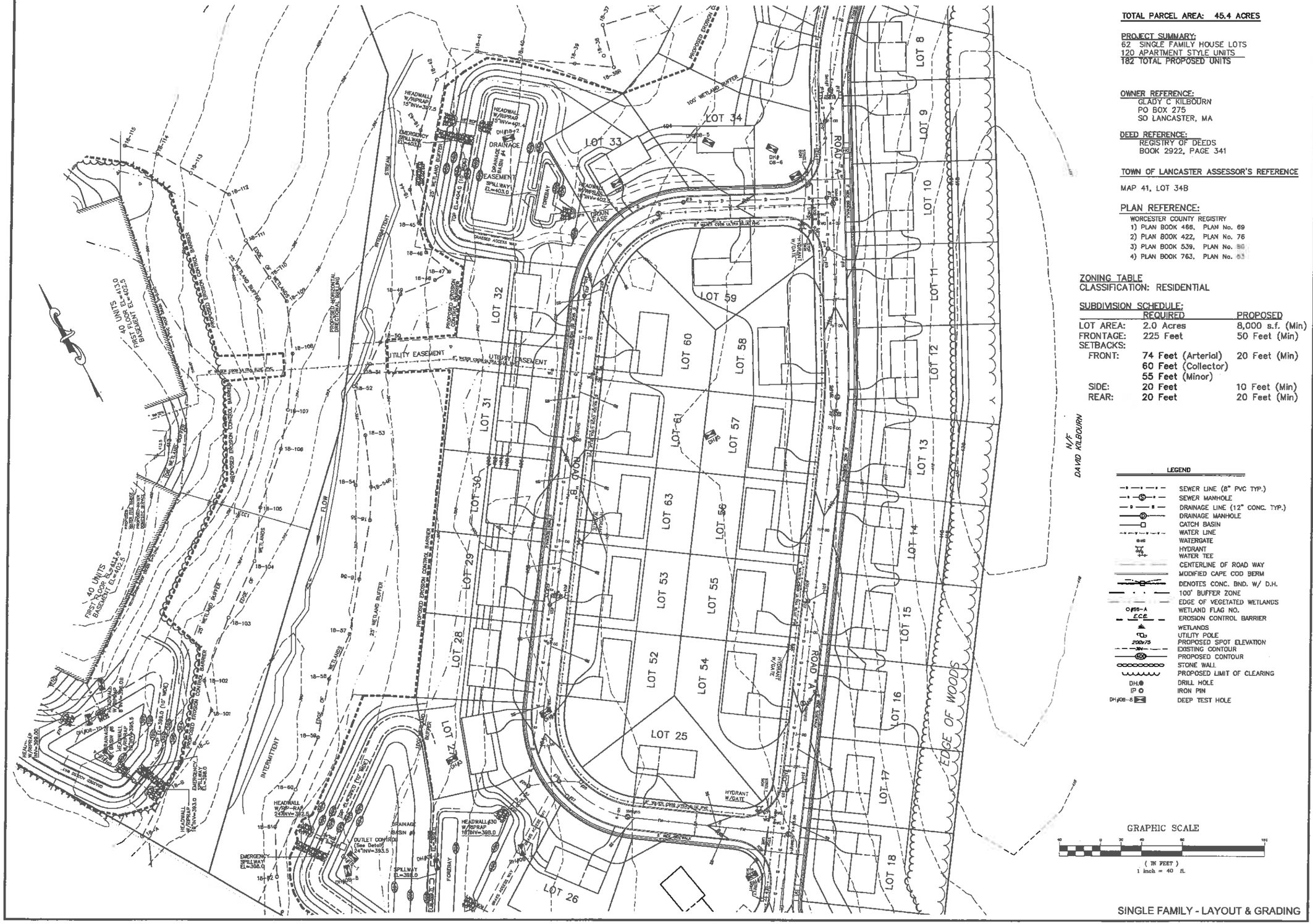
11-7-2018

SITE DEVELOPMENT PLAN
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DRW.:	RST
JOB No.	12,274
DATE:	FEBRUARY 8, 2018
SCALE:	1"= 40'
SHEET:	12 of 27
PLAN #:	27,147



TOTAL PARCEL AREA: 45.4 ACRES

PROJECT SUMMARY:
62 SINGLE FAMILY HOUSE LOTS
120 APARTMENT STYLE UNITS
182 TOTAL PROPOSED UNITS

OWNER REFERENCE:
GLADY C KILBOURN
PO BOX 275
SO LANCASTER, MA

DEED REFERENCE:
REGISTRY OF DEEDS
BOOK 2922, PAGE 341

TOWN OF LANCASTER ASSESSOR'S REFERENCE

MAP 41, LOT 34B

PLAN REFERENCE:
WORCESTER COUNTY REGISTRY
1) PLAN BOOK 466, PLAN No. 69
2) PLAN BOOK 422, PLAN No. 76
3) PLAN BOOK 539, PLAN No. 80
4) PLAN BOOK 763, PLAN No. 63

ZONING TABLE
CLASSIFICATION: RESIDENTIAL

SUBDIVISION SCHEDULE:

	REQUIRED	PROPOSED
LOT AREA:	2.0 Acres	8,000 s.f. (Min)
FRONTAGE:	225 Feet	50 Feet (Min)
SETBACKS:		
FRONT:	74 Feet (Arterial) 60 Feet (Collector) 55 Feet (Minor)	20 Feet (Min)
SIDE:	20 Feet	10 Feet (Min)
REAR:	20 Feet	20 Feet (Min)

LEGEND

- SEWER LINE (8" PVC TYP.)
- SEWER MANHOLE
- DRAINAGE LINE (12" CONC. TYP.)
- DRAINAGE MANHOLE
- CATCH BASIN
- WATER LINE
- WATERGATE
- HYDRANT
- WATER TEE
- CENTERLINE OF ROAD WAY
- MODIFIED CAPE COD BERM
- DENOTES CONC. BND. W/ D.H.
- 100' BUFFER ZONE
- EDGE OF VEGETATED WETLANDS
- WETLAND FLAG NO.
- EROSION CONTROL BARRIER
- WETLANDS
- UTILITY POLE
- PROPOSED SPOT ELEVATION
- EXISTING CONTOUR
- PROPOSED CONTOUR
- STONE WALL
- PROPOSED LIMIT OF CLEARING
- DRILL HOLE
- IRON PIN
- DEEP TEST HOLE

SINGLE FAMILY - LAYOUT & GRADING

No.	DATE	REVISIONS DESCRIPTION
1	04/10/18	APARTMENTS 136 UNITS
2	07/06/18	PLAN LAYOUT & DRAINAGE
3	07/25/18	WATER SYSTEM COMMENTS
4	08/18/18	ENGINEERING COMMENTS
5	11/08/18	ENGINEERING COMMENTS

11-7-2018

SITE DEVELOPMENT PLAN
"GOODRIDGE BROOK ESTATES"
Multi Unit & Single Family Subdivision Layout
LANCASTER, MASSACHUSETTS

PREPARED FOR:
CRESCENT BUILDERS, INC.
94 NORTH MAIN STREET
BOYLSTON MA 01583

GLM Engineering Consultants, Inc.
19 EXCHANGE STREET
HOLLISTON, MA 01746
P: 508-429-1100
F: 508-429-7160
www.GLMengineering.com

DRW.:	RST
JOB No.	12,274
DATE:	FEBRUARY 8, 2018
SCALE:	1"= 40'
SHEET:	13 of 27
PLAN #:	27,147

TOTAL PARCEL AREA: 45.4 ACRES

PROJECT SUMMARY:
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120 APARTMENT STYLE UNITS
182 TOTAL PROPOSED UNITS

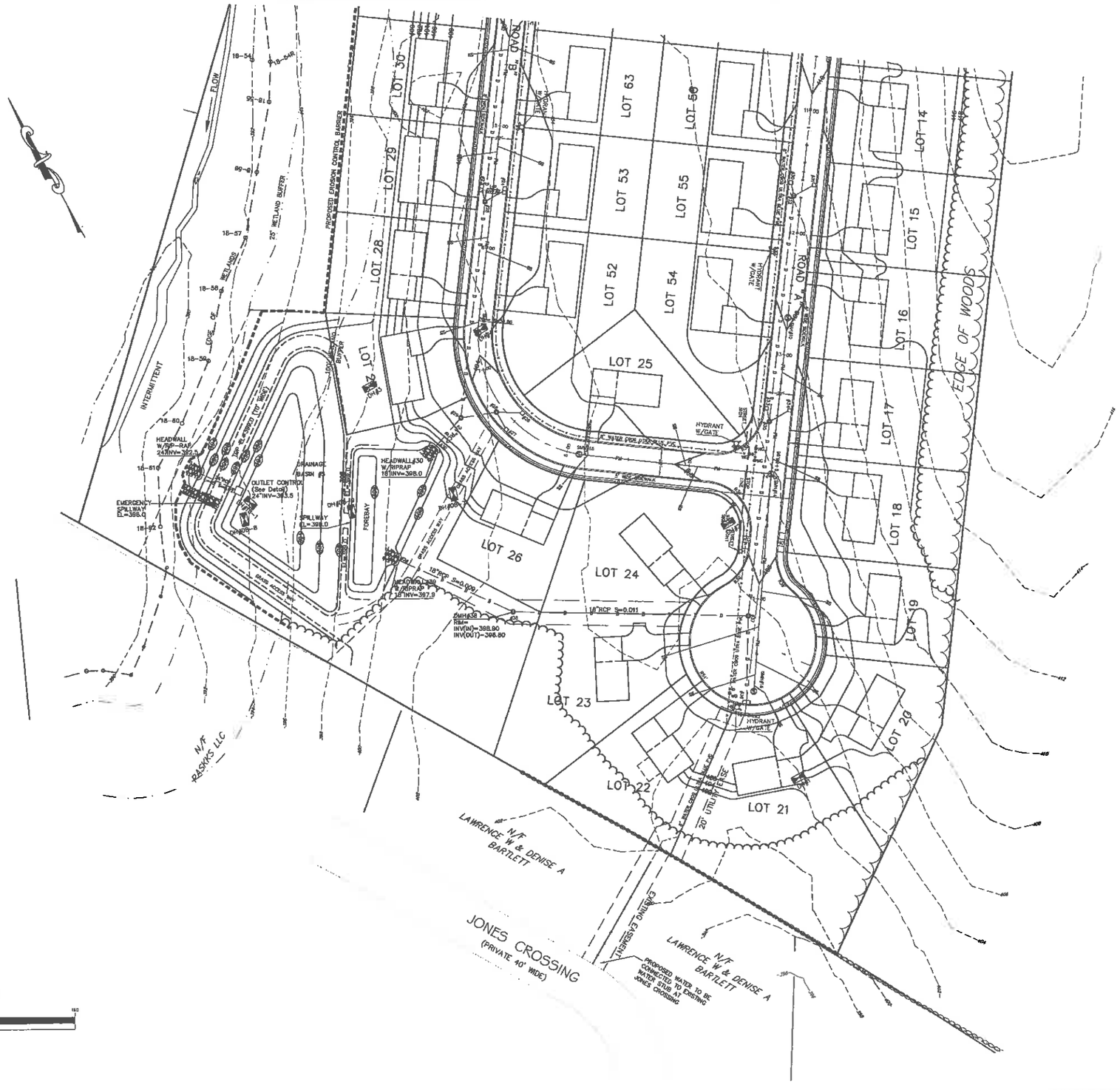
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3) PLAN BOOK 539, PLAN No. 80
4) PLAN BOOK 763, PLAN No. 63



LEGEND

	SEWER LINE (8" PVC TYP.)
S	SEWER MANHOLE
D	DRAINAGE LINE (12" CONC. TYP.)
D	DRAINAGE MANHOLE
	CATCH BASIN
W	WATER LINE
WG	WATERGATE
	HYDRANT
	WATER TEE
	CENTERLINE OF ROAD WAY
	MODIFIED CAPE COD BERM
	DENOTES CONC. BND. W/ D.H.
	100' BUFFER ZONE
	EDGE OF VEGETATED WETLANDS
O#66-A	WETLAND FLAG NO.
E.C.B.	EROSION CONTROL BARRIER
	WETLANDS
TD	UTILITY POLE
200x75	PROPOSED SPOT ELEVATION
394	EXISTING CONTOUR
400	PROPOSED CONTOUR
	STONE WALL
	PROPOSED LIMIT OF CLEARING
DH	DRILL HOLE
IP	IRON PIN
DH#08-8	DEEP TEST HOLE

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

SINGLE FAMILY - LAYOUT & GRADING

REVISIONS		
No.	DATE	DESCRIPTION
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2	07/06/18	PLAN LAYOUT & DRAINAGE
3	07/25/18	WATER SYSTEM COMMENTS
4	09/18/18	ENGINEERING COMMENTS
5	11/06/18	ENGINEERING COMMENTS

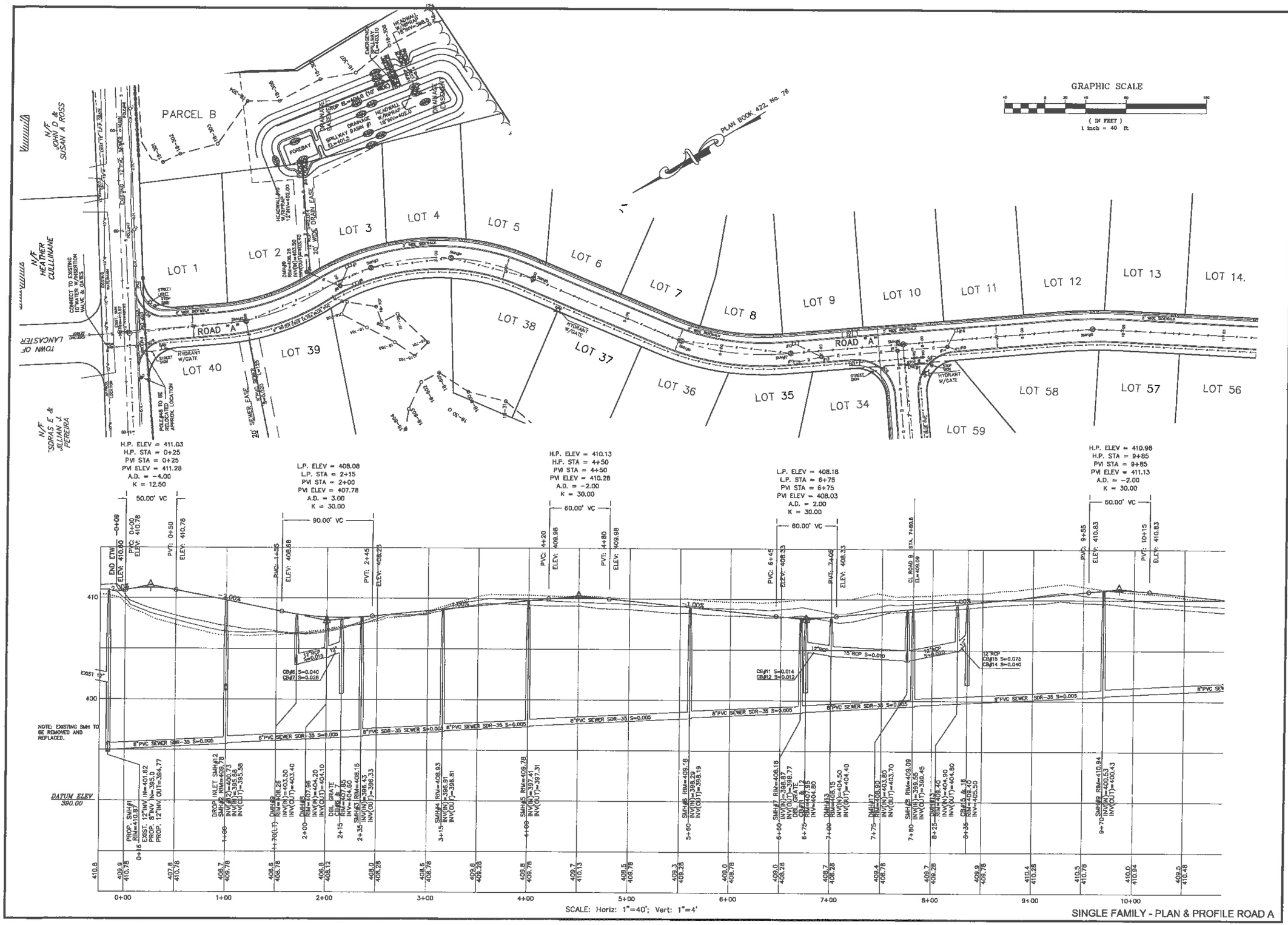
11-7-2018

SITE DEVELOPMENT PLAN
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Multi Unit & Single Family Subdivision Layout
LANCASTER, MASSACHUSETTS

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SHEET:	14 of 27
PLAN #:	27,147



REVISIONS		
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5	11/06/18	ENGINEERING COMMENTS

11-7-18

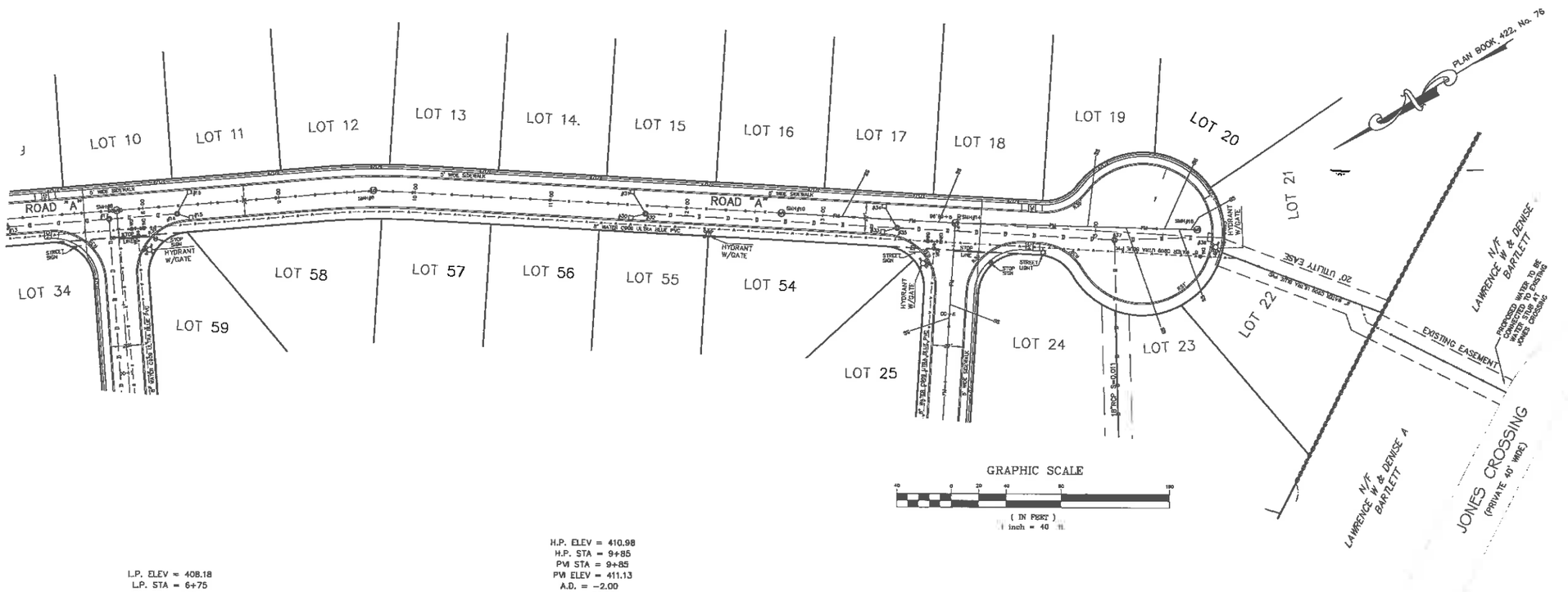
11-7-2018

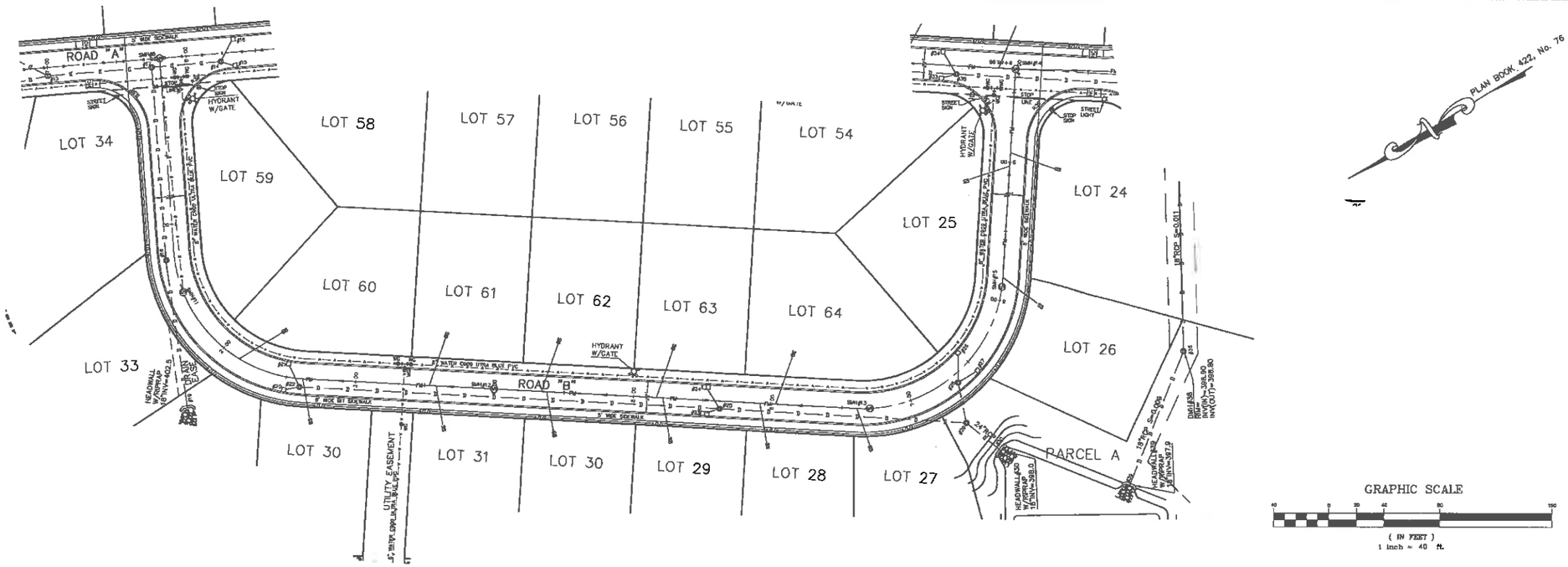
SITE DEVELOPMENT PLAN
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Multi Unit & Single Family Subdivision Layout
LANCASTER, MASSACHUSETTS

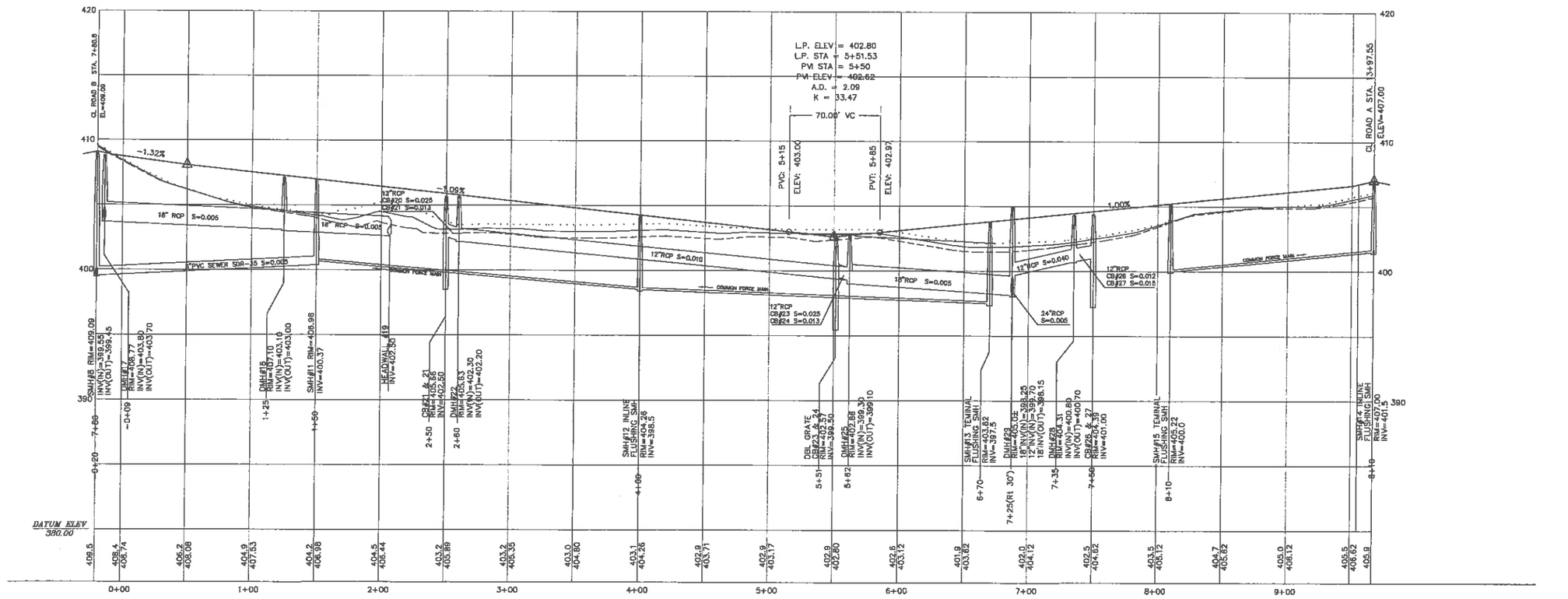
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DRW.:	RST
JOB No.	12,274
DATE:	FEBRUARY 8, 2018
SCALE:	1"= 40'
SHEET:	15 of 27
PLAN #:	27,147


LOT 10
LOT 11
LOT 12
LOT 13
LOT 14.
LOT 15
LOT 16
LOT 17
LOT 18
LOT 19
LOT 20
LOT 21
LOT 22
LOT 23
LOT 24
LOT 25
LOT 34
LOT 59
LOT 58
LOT 57
LOT 56
LOT 55
LOT 54
ROAD "A"
HYDRANT W/GATE
STREET SIGN
STOP SIGN
STREET LIGHT
8" WATER MAIN TO BE ABANDONED
8" WATER MAIN
8" WATER MAIN TO BE ABANDONED
8" WATER MAIN
8" WATER MAIN
8" WATER MAIN





SINGLE FAMILY - PLAN & PROFILE ROAD B

REVISIONS		
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3	07/25/18	WATER SYSTEM COMMENTS
4	09/18/18	ENGINEERING COMMENTS
5	11/06/18	ENGINEERING COMMENTS

PAUL E. TRUAX CIVIL NO. 40027 REGISTERED PROFESSIONAL ENGINEER
11-7-18

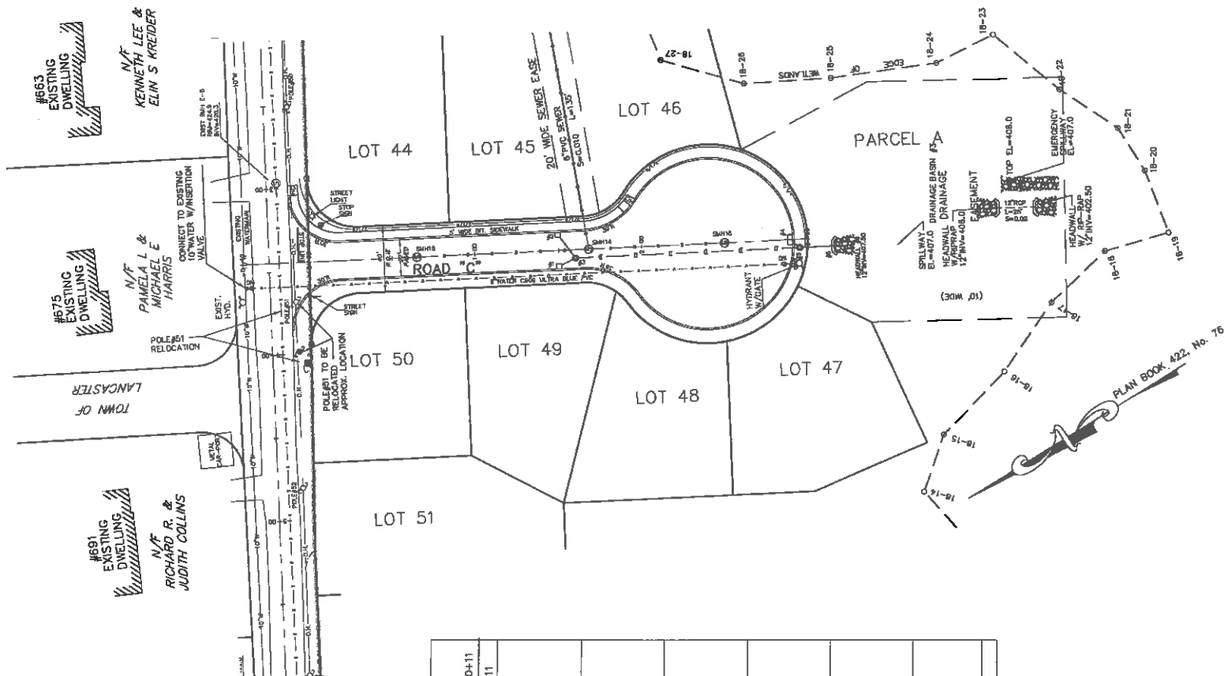
COMMONWEALTH OF MASSACHUSETTS PAUL E. TRUAX CIVIL NO. 40027 REGISTERED PROFESSIONAL ENGINEER
Paul Truax 11-7-2018

SITE DEVELOPMENT PLAN
"GOODRIDGE BROOK ESTATES"
Multi Unit & Single Family Subdivision Layout
LANCASTER, MASSACHUSETTS

PREPARED FOR:
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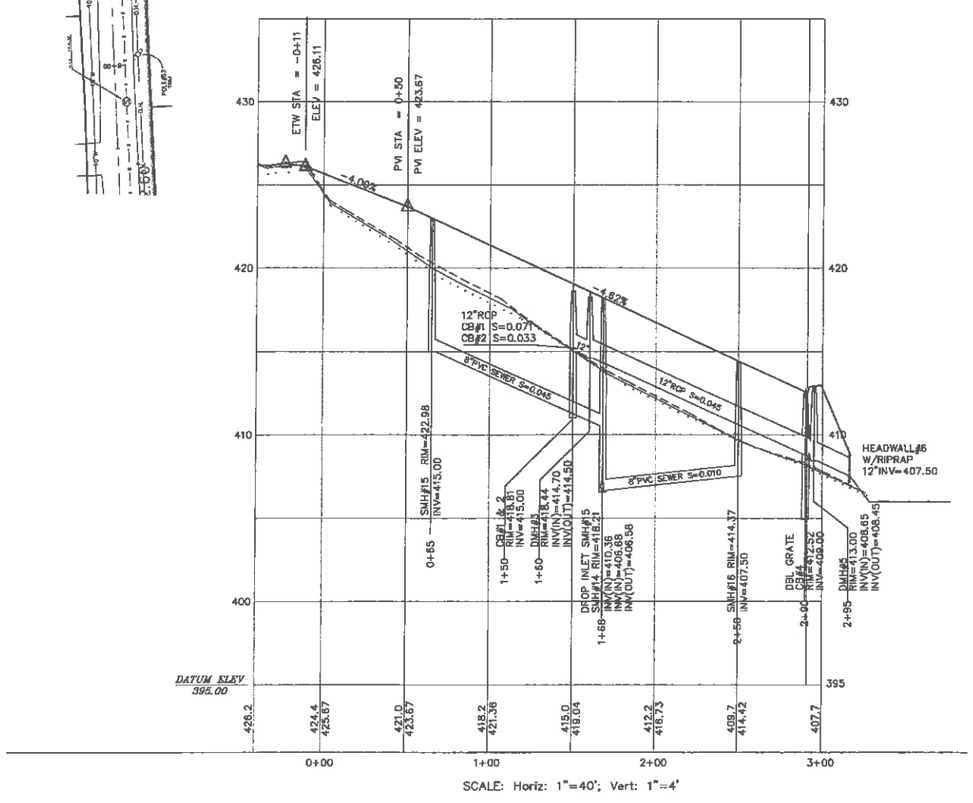
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JOB No.	12,274
DATE:	FEBRUARY 8, 2018
SCALE:	1"= 40'
SHEET:	17 of 27
PLAN #:	27,147

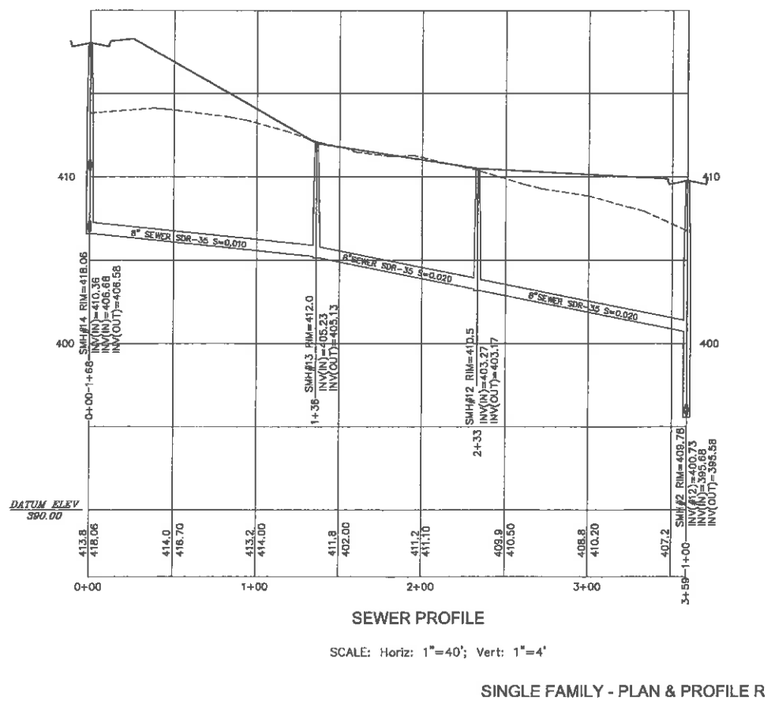


GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.





SINGLE FAMILY - PLAN & PROFILE ROAD C

REVISIONS

No.	DATE	DESCRIPTION
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11-7-2018

SITE DEVELOPMENT PLAN
"GOODRIDGE BROOK ESTATES"
Multi Unit & Single Family Subdivision Layout
LANCASTER, MASSACHUSETTS

PREPARED FOR:
CRESCENT BUILDERS, INC.
84 NORTH MAIN STREET
BOYLSTON MA 01583

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DRW.: RST	
JOB No.	12,274
DATE: FEBRUARY 8, 2018	
SCALE:	1"= 40'
SHEET:	18 of 27
PLAN #:	27,147

NOTE:
THE EXISTING HOUSES ARE TO BE RECONNECTED THE NEW SEWER LINE DURING CONSTRUCTION. THE CONTRACTOR SHALL MAKE ALL PROVISIONS TO INSURE NO LOSS OF SERVICE DURING CONSTRUCTION.

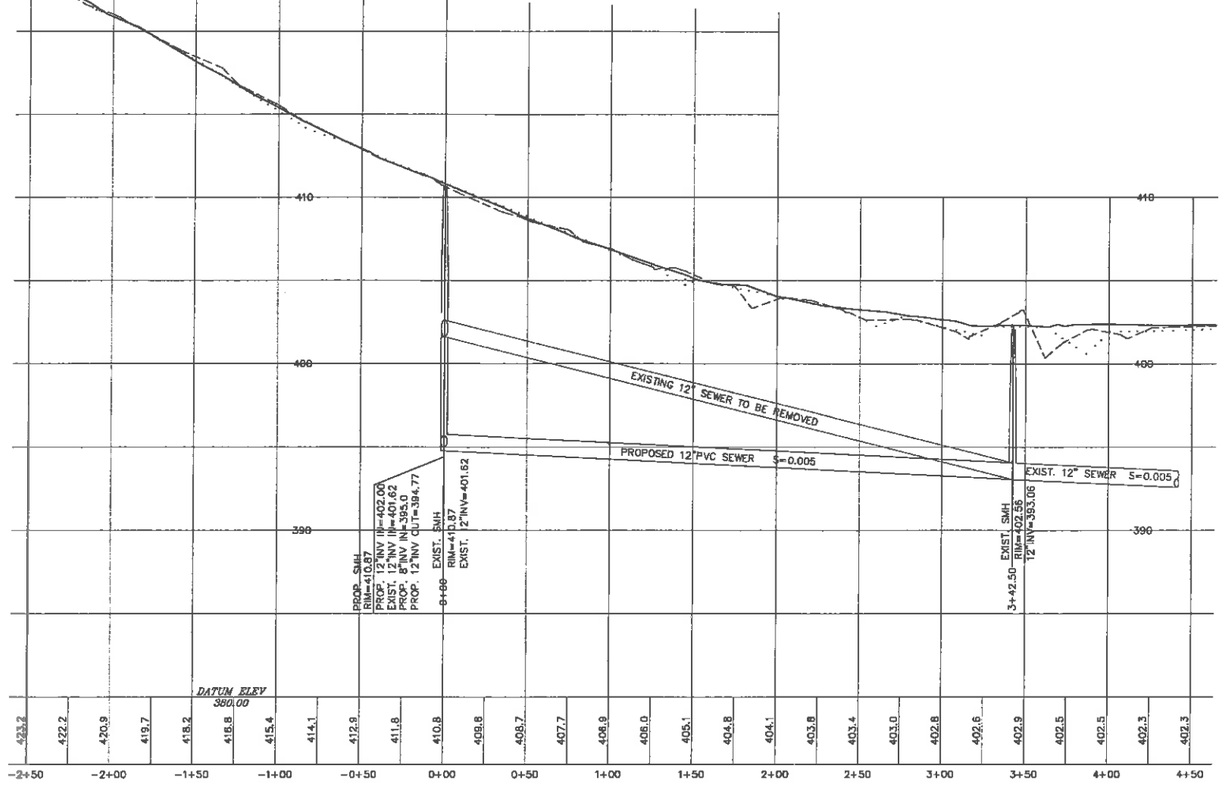
NOTE:
STERLING ROAD TO BE CONSTRUCTION TO BE COORDINATE WITH THE DEPARTMENT OF PUBLIC WORKS.
- RECOMMEND PATCH ALL TRENCH WORK.
- GRIND ROADWAY SURFACE 1½" DEPTH FOR FULL LENGTH OF CONSTRUCTION AND RESURFACE WITH 1½" TOP COARSE.

#691 EXISTING DWELLING
N/F RICHARD R. & JUDITH COLLINS
TOWN OF LANCASTER
#675 EXISTING DWELLING
N/F PAMELA L & MICHAEL E HARRIS
#663 EXISTING DWELLING
N/F KENNETH LEE & ELIN S KREIDER
#651 EXISTING DWELLING
N/F ESDRAS E & JILLIAN J. PEREIRA
TOWN OF LANCASTER
#637 EXISTING DWELLING
N/F HEATHER CULLINANE
#625 EXIST. DWELL.
N/F JOHN D & SUSAN A ROSS
N/F ERIC J & MELISSA J MCLAUGHLIN

STERLING (PUBLIC - VARIABLE WIDTH) ROAD

CONNECT TO EXISTING 10"WATER W/INSERTION VALVE
CONNECT TO EXISTING 10"WATER W/INSERTION VALVE & GATES
POLE#51 RELOCATION
POLE#51 TO BE RELOCATED APPROX. LOCATION
POLE#48 TO BE RELOCATED APPROX. LOCATION
EXIST. HYD.
EXISTING WATERMAIN
EXISTING 12" PVC SEWER MAIN
EXIST. 12" C.P.P. DRAIN
EXIST. SMH RIM=412.56 12"INV=383.06
OUTLET INV=387.0
S59°39'45"E 130.30'
S60°18'21"E 232.00'
S62°56'01"E 169.97'
S80°43'45"E 367.39'
S62°00'06"E 182.78'
S25°54'44"W 181.78'
LOT 51
LOT 50
LOT 49
LOT 44
LOT 45
LOT 40
LOT 1
ROAD "C"
ROAD "A"
PARCEL B
18-301
18-302
EDGE OF WETLANDS
18-303
18-304
18-305
I.P.F. HELD
N/F MICHAEL I & CHERYL A DILL
SMH#12 RIM=410.5 INV(IN)=403.27 INV(OUT)=403.17
SMH#13 RIM=412.0 INV(IN)=405.23 INV(OUT)=405.13
20' SEWER EASE
8"PVC SEWER S=0.020 L=125'
8"PVC SEWER S=0.010 L=135'
20' WIDE SEWER EASE
STREET SIGN
STREET HYDRANT W/GATE
S.M.H.
D.H.

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.



SCALE: Horiz: 1"=40'; Vert: 1"=4'

SINGLE FAMILY - PLAN & PROFILE STERLING ROAD

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11-7-18

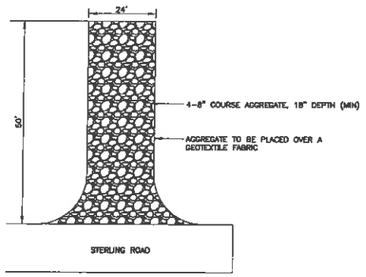
PAUL E. TRUNK CIVIL NO 49321 REGISTERED PROFESSIONAL ENGINEER
11-7-2018

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Multi Unit & Single Family Subdivision Layout
LANCASTER, MASSACHUSETTS

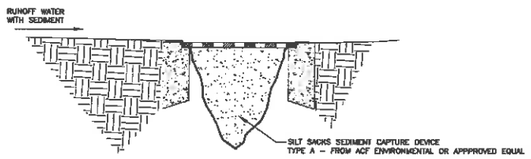
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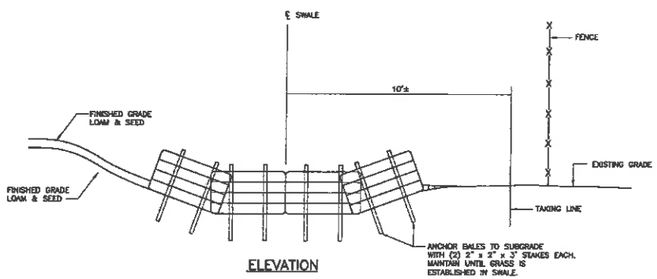
DRW.:	RST
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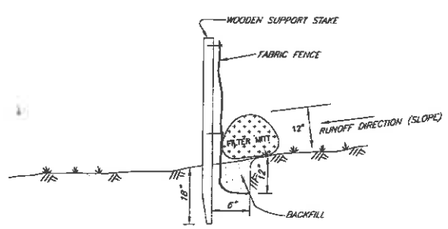
TRAP ROCK APRON
CONSTRUCTION ENTRANCE
NOT TO SCALE



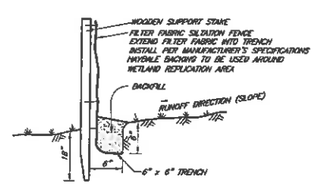
SILT SACK CATCH BASIN INLET
NOT TO SCALE



SEDIMENT CHECK DAM DETAIL
N.T.S.



EROSION CONTROL BARRIER
WITH FILTER MITT
TO BE USED IN AREAS WITHIN 25' OF WETLAND DELINEATION



EROSION CONTROL BARRIER
WITHOUT FILTER MITT
TO BE USED IN AREAS OUTSIDE OF 25'

EROSION CONTROL MAINTENANCE:

THE CONTRACTOR SHALL HAVE ON THE SITE, AN ADEQUATE QUANITY OF SUPPLEMENTAL FILTER MITT AND STAKES TO BE USED FOR CONTROL OF EMERGENCY EROSION PROBLEMS. ALL EROSION CONTROL MEASURES SHALL BE INSPECTED WEEKLY AND AFTER A STORM EVENT OF 1" INCH OR GREATER.

DEWATERING:

PUMPING AND DEWATERING SHALL BE DONE IN A MANNER WHICH WILL NOT DISCHARGE ANY SILT AND SEDIMENT INTO A RESOURCE AREA. DISCHARGES FROM A DEWATERING CONSTRUCTION PROCEDURE WILL BE FILTERED THROUGH A SILTATION BASIN CONSTRUCTED UPLAND FROM THE WORK SITE. THE SILTATION BASIN SHALL BE A DEPRESSION SURROUNDED BY A HAYBALE DIKE OR SILT FENCE. OVERFLOW FROM THE BASIN SHALL BE PLANNED TO BE LOCATED OVER THICKLY AND NATURALLY MULCHED UPLAND AREA. ALL BASINS SHALL BE LOCATED AT LEAST 100 FEET UPSLOPE FROM ANY WETLAND RESOURCE AREA.

STOCKPILING:

ALL STOCKPILES AREAS SHALL BE SECURED AROUND THE PERIMETER WITH FILTER MITT BARRIER.

EROSION AND SEDIMENTATION CONTROL:

1. PRIOR TO ANY DISTURBANCE OR ALTERATIONS ON ANY AREA ON THE SITE. THE FILTER MITT SEDIMENT BARRIER SHALL BE INSTALLED IN THE LOCATIONS SHOWN ON THE SITE PLAN.

2. BARRIERS SHALL BE CONSTRUCTED AS SHOWN ON THE FILTER MITT DETAIL WITH CONSTRUCTION FENCE DETAIL ABOVE.

3. ONCE INSTALLED, THE FILTER MITT SEDIMENT BARRIERS SHALL BE MAINTAINED IN PLACE UNTIL ALL AREAS UPGRADIENT FROM THE BARRIERS HAVE BEEN STABILIZED AS SPECIFIED HEREIN. UPON COMPLETION AND STABILIZATION OF THE PROJECT, THE FILTER MITT AND FENCE SHALL BE REMOVED.

4. THE SILT FENCE IS INTENDED TO ACT AS A LIMIT OF DISTURBANCE. ANY LAND DOWN GRADIENT FROM THE FENCE ACCIDENTALLY DISTURBED SHALL BE IMMEDIATELY REPAIRED AND RESTORED TO ORIGINAL CONDITION.

5. EROSION CONTROL MEASURES SHALL BE MONITORED ON A DAILY BASIS, OR AS NEEDED, AND BE REINFORCED, REPAIRED, OR REPLACED WHEN NEEDED, PER JUDGEMENT OF THE SITE FOREMAN AND/OR TOWN OF LANCASTER REPRESENTATIVE.

6. TEMPORARY VEGETATION COVER SHALL BE ESTABLISHED ON ALL DISTURBED AREAS WHERE CONSTRUCTION ACTIVITIES TEMPORARILY CEASE FOR AT LEAST 30 DAYS. AREAS SHALL BE STABILIZED WITH TEMPORARY SEED. IF THE SEASON PREVENTS THE ESTABLISHMENT OF A VEGETATIVE COVER, DISTURBED AREAS SHALL BE MULCHED AND THEN SEEDED WHEN WEATHER CONDITIONS ALLOW.

7. THE FIRST ONE-HUNDRED (100) FEET OF THE PROPOSED DRIVEWAY ENTRANCE AT STERLING ROAD SHALL BE COVERED WITH TWELVE (12) INCHES OF 4 – 8 INCH CRUSHED STONE TO STABILIZE THE AREA.

8. WATER SPRAYING SHALL BE UTILIZED ON ALL DISTURBED AREAS DURING DRY WEATHER TO PREVENT DUST. A WATER TRUCK SHALL BE KEPT ON SITE AT ALL TIMES DURING THE DURING THE SUMMER MONTHS OF CONSTRUCTION.

9. FOLLOWING CONSTRUCTION OF THE CATCH BASIN STRUCTURES, A SILT SACK SHALL BE PLACE IN EACH STRUCTURE TO PREVENT SEDIMENT FROM ENTERING THE DRAINAGE SYSTEM. (SEE DETAIL)

NOTE:
ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF LANCASTER CONSTRUCTION STANDARDS AND SPECIFICATIONS.

EROSION CONTROL DETAILS

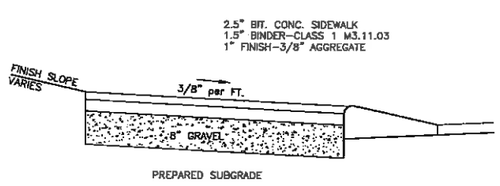
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COMMONWEALTH OF MASSACHUSETTS
PAUL R. TRUE
CIVIL
NO. 46547
REGISTERED PROFESSIONAL ENGINEER
11-7-2018

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DRW.:	RST
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DATE:	FEBRUARY 8, 2018
SCALE:	nts
SHEET:	20 of 27
PLAN #:	27,147

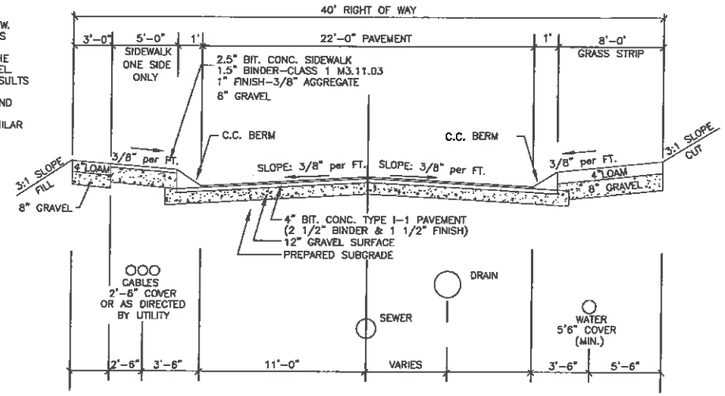


BITUMINOUS SIDEWALK DETAIL

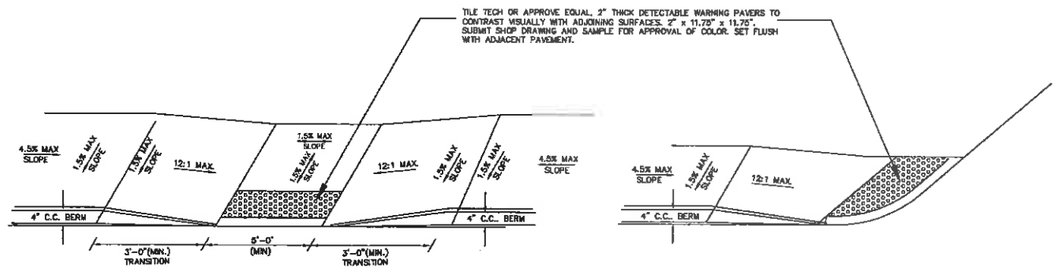
NOT TO SCALE:

NOTE:
ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF LANCASTER CONSTRUCTION STANDARDS AND SPECIFICATIONS.

NOTES:
1. FILL MATERIAL IF REQUIRED, SHALL MEET THE SPECIFICTIONS OF MSSHB M1.01.0, ORDINARY BORROW.
2. GRAVEL SURFACE FOR ROADWAYS AND SIDEWALKS SHALL BE MSSHB M.1.03.0, TYPE B.
3. SIEVE TEST RESULTS SHALL BE SUBMITTED TO THE TOWN OF LANCASTER REPRENTATIVE FOR THE GRAVEL.
4. COMPACTION TEST MUST BE CONDUCTED AND RESULTS SUBMITTED FOR THE SUBBASE AND GRAVEL.
5. NO PAVING IS ALLOWED BETWEEN NOVEMBER 1 AND APRIL 15.
6. ALL PAVEMENT SHALL MEET MSSHB M3.11.03, SIMILAR TO THE SIDEWALK SPECIFICATIONS.

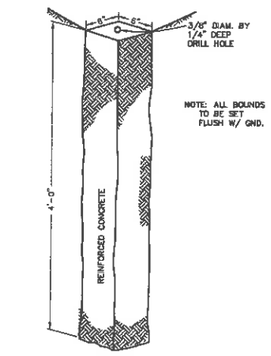


TYPICAL RIGHT OF WAY CROSS SECTION
LANCASTER, MASS.

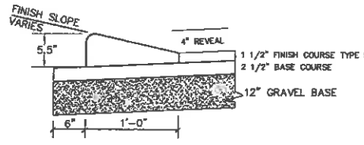


NOTES:
1. THE DIMENSIONS SHOWN AT ROADWAY EDGE AREA FIXED DISTANCE.
2. RAMP CROSS SECTION TO BE THE SAME AS ADJACENT SIDEWALK
3. BITUMINOUS PAVED RAMPS ARE TO BE PROVIDED.
4. IN NO CASE ARE THE RAMPS TO BE PLACED BEHIND THE STOP LINE.
5. THE DIMENSIONS ARE SUBJECT TO CHANGE IN THE FIELD IN EXISTING APPURTENANCES OR CONDITIONS WILL MAKE THE RAMP LOCATIONS IMPRACTICAL OR UNSAFE. CONSULT CIVIL ENGINEER PRIOR TO MAKING ANY MODIFICATIONS.

HANDICAP SIDEWALK CURB CUT DETAIL
NOT TO SCALE



CONCRETE BOUND DETAIL
NOT TO SCALE:



CAPE COD BERM DETAIL
NOT TO SCALE:

DETAILS

REVISIONS		
No.	DATE	DESCRIPTION
1	04/10/18	APARTMENTS 136 UNITS
2	07/06/18	PLAN LAYOUT & DRAINAGE
3	07/26/18	WATER SYSTEM COMMENTS
4	08/18/18	ENGINEERING COMMENTS
5	11/06/18	ENGINEERING COMMENTS

COMMONWEALTH OF MASSACHUSETTS
PAUL E. TRUAX
CIVIL
NO. 46527
REGISTERED PROFESSIONAL ENGINEER

11-7-2018

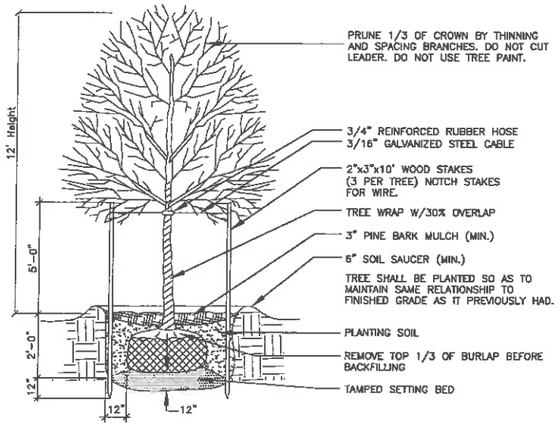
SITE DEVELOPMENT PLAN
"GOODRIDGE BROOK ESTATES"
Multi Unit & Single Family Subdivision Layout
LANCASTER, MASSACHUSETTS

PREPARED FOR:
CRESCENT BUILDERS, INC.
94 NORTH MAIN STREET
BOYLSTON MA 01583

GLM Engineering Consultants, Inc.
19 EXCHANGE STREET
HOLLISTON, MA 01746
P: 508–429–1100
F: 508–429–7160
www.GLMengineering.com

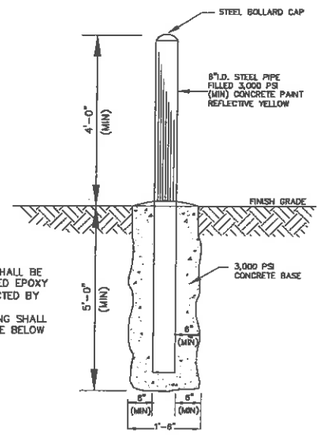
DRW.: RST
JOB No. 12,274
DATE: FEBRUARY 8, 2018
SCALE: nts
SHEET: 21 of 27
PLAN #: 27,147

NOTE:
STREET TREES SHALL BE PLANTED AT INTERVALS OF FORTY (40) FEET SPACING ALONG BOTH SIDES OF THE ROADWAY.
TREES SHALL BE WELL BRANCHED, NURSERY GROWN AT LEAST 2.5 INCH TRUNK DIAMETER AT FOUR (4) FEET ABOVE GROUND LEVEL.



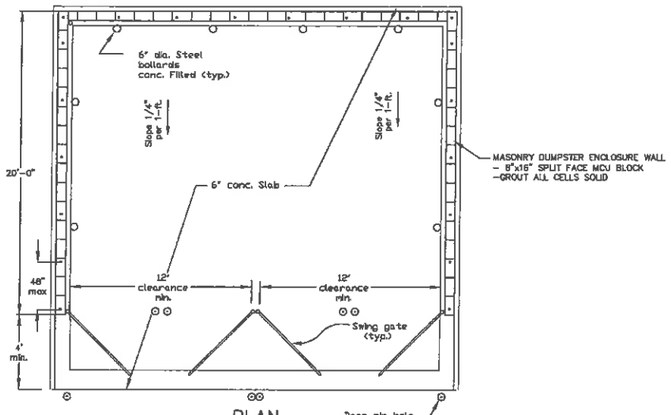
TYP. DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE

NOTE:
ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF LANCASTER CONSTRUCTION STANDARDS AND SPECIFICATIONS.

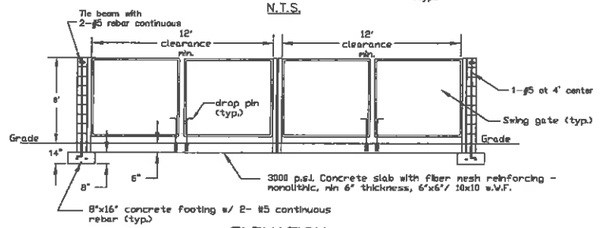


NOTES:
1. ALL EXPOSED PIPE SHALL BE PAINTED WITH CATALYZED EPOXY POINT (COLOR AS DIRECTED BY THE SITE ENG.)
2. A BITUMASTIC COATING SHALL BE APPLIED TO ALL PIPE BELOW GRADE

BOLLARD DETAIL
NOT TO SCALE

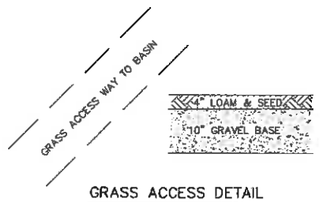


PLAN
N.T.S.

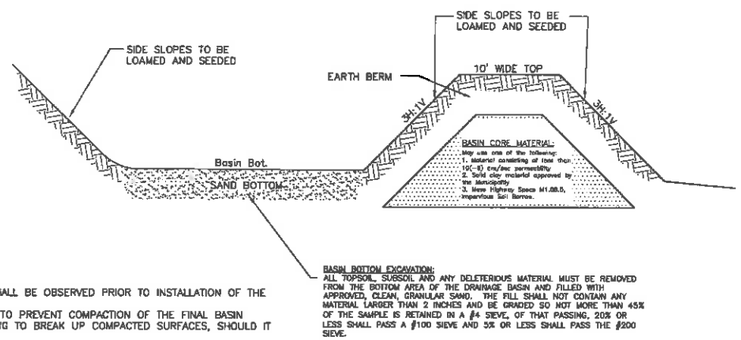


ELEVATION
N.I.S.

DUMPSTER PAD & SCREENING DETAIL
NOT TO SCALE

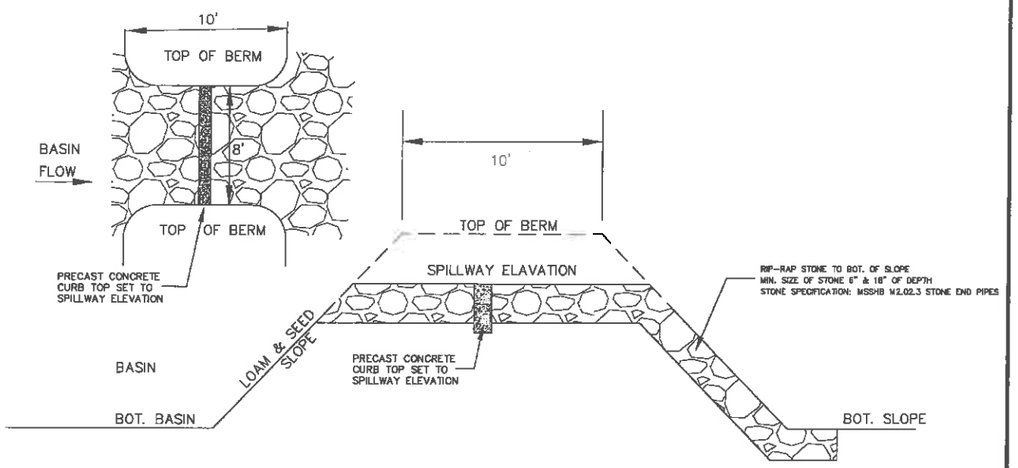


GRASS ACCESS DETAIL



NOTES:
-SUBSOIL CONDITIONS SHALL BE OBSERVED PRIOR TO INSTALLATION OF THE INFILTRATION BASIN.
-CARE SHALL BE TAKEN TO PREVENT COMPACTION OF THE FINAL BASIN BOTTOM. USE DEEP TILLING TO BREAK UP COMPACTED SURFACES, SHOULD IT OCCUR.
-ENSURE ALL STUMPS ARE FULLY REMOVED FROM THE AREA OF THE INFILTRATION BASIN TO ENSURE PROPER FUNCTION.

DETENTION BASIN TYPICAL SECTION
NOT TO SCALE



DETENTION BASIN EMERGENCY SPILLWAY DETAIL
NOT TO SCALE

DETAILS

REVISIONS

No.	DATE	DESCRIPTION
1	04/10/18	APARTMENTS 136 UNITS
2	07/06/18	PLAN LAYOUT & DRAINAGE
3	07/25/18	WATER SYSTEM COMMENTS
4	08/16/18	ENGINEERING COMMENTS
5	11/06/18	ENGINEERING COMMENTS

COMMONWEALTH OF MASSACHUSETTS
PAUL E. TRASK
CIVIL
NO. 45507
REGISTERED PROFESSIONAL ENGINEER

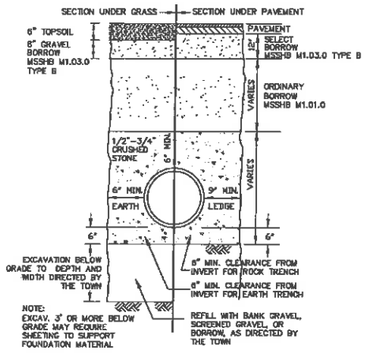
11-7-2018

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LANCASTER, MASSACHUSETTS

PREPARED FOR:
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94 NORTH MAIN STREET
BOYLSTON MA 01583

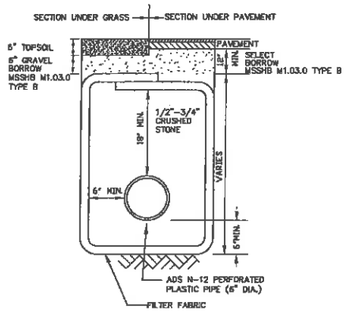
GLM Engineering Consultants, Inc.
19 EXCHANGE STREET
HOLLISTON, MA 01746
P: 508-429-1100
F: 508-429-7160
www.GLMengineering.com

DRW.: RST
JOB No. 12,274
DATE: FEBRUARY 8, 2018
SCALE: nts
SHEET: 22 of 27
PLAN #: 27,147



TYPICAL SECTION EARTH/ROCK TRENCH

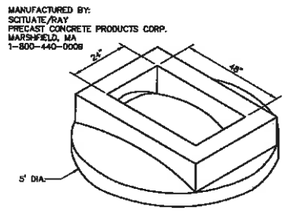
DRAIN PIPES, SEWER MAINS, FORCE MAINS, & WATER MAINS
N.T.S



NOTE:
SUBDRAIN TO BE INSTALLED ALONG ROADWAY IN AREAS WHERE SEASONAL HIGH GROUND WATER IS ENCOUNTERED & AS SHOWN ON PLAN

SUBDRAIN DETAIL

N.T.S.

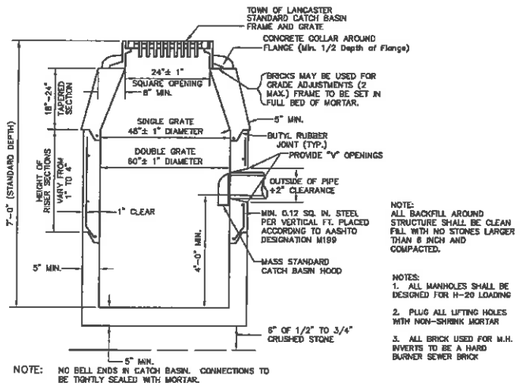


1. MANUFACTURED TO MEET OR EXCEED ASTM C-478 & AASHTO M 199 SPECS.
2. REINFORCING SHALL CONFORM TO ASTM A-185 AND BE PLACED AS PER ASTM C-478 (8.1, 8.3)
3. CONCRETE = 4000 PSI MIN. AND CEMENT PER ASTMC-478 (5.1)
4. MANHOLE STEPS - POLYPROPLENE COATED GRADE 60 R-BAR PER ASTM C-478 & OSHA (STD. 1-18)
5. BUTYL RUBBER JOINT SEALANT PER ASTM C-990 & AASHTO M-198
6. WATERPROOFING PER CONTRACT SPECS. AS REQUIRED.
7. DESIGNED FOR H-20 LOADING.

DOUBLE OPEN CATCH BASIN DOME TOP

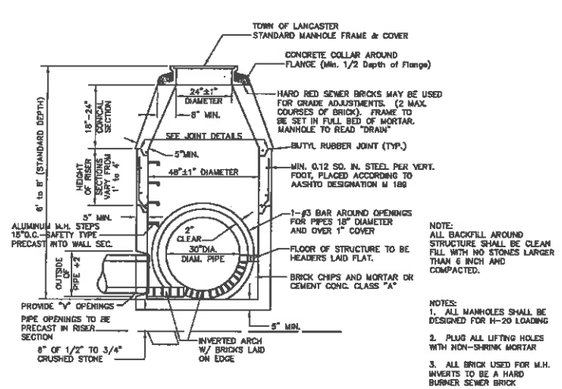
NOT TO SCALE

NOTE:
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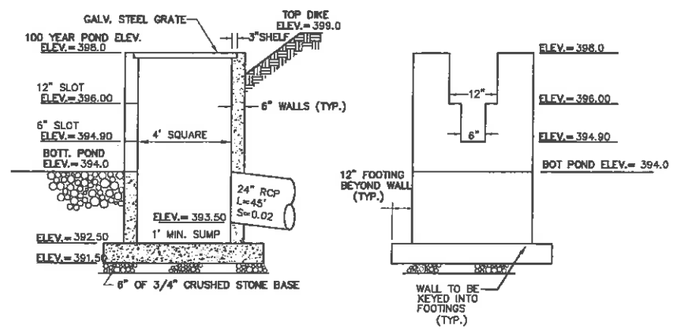
PRECAST CONCRETE CATCH BASIN DETAILS

NOT TO SCALE



PRECAST CONCRETE MANHOLE DETAILS

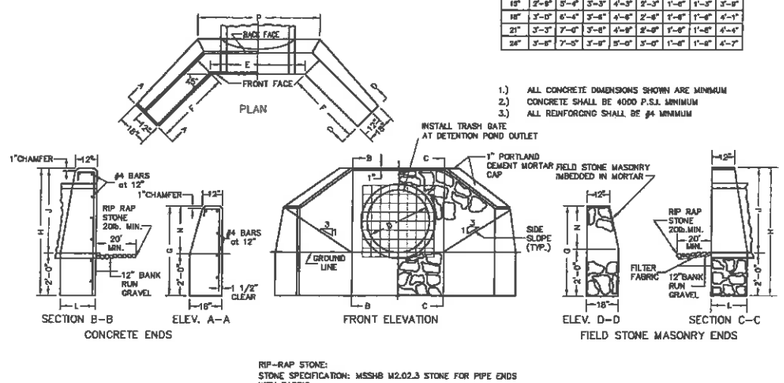
NOT TO SCALE



PROPOSED OUTLET CONTROL STRUCTURE DRAINAGE BASIN#5

(PRECAST CONCRETE STRUCTURE)
NOT TO SCALE

D	E	F	G	H	J	L	N	P
12"	2'-6"	4'-8"	3'-2"	4'-0"	2'-0"	1'-6"	1'-2"	3'-5"
15"	2'-9"	5'-4"	3'-3"	4'-3"	2'-3"	1'-6"	1'-3"	3'-8"
18"	3'-0"	6'-4"	3'-4"	4'-6"	2'-6"	1'-6"	1'-6"	4'-1"
21"	3'-3"	7'-0"	3'-6"	4'-9"	2'-9"	1'-6"	1'-6"	4'-4"
24"	3'-6"	7'-3"	3'-8"	5'-0"	3'-0"	1'-6"	1'-6"	4'-7"



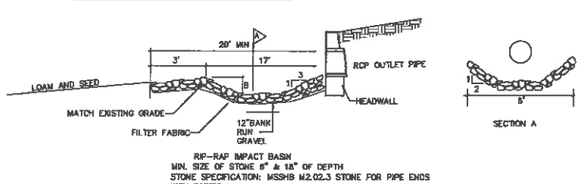
RIP-RAP STONE:
STONE SPECIFICATION: MSSHB M2.02.3 STONE FOR PIPE ENDS WITH FABRIC

CONCRETE AND FIELD STONE MASONARY HEADWALL DETAILS

NOT TO SCALE

IMPACT BASIN SIZING

FLARED END #	DEPTH "B" (INCHES)	RIP-RAP SIZE D50 (IN.)
1	18.00	6.00
2	18.00	6.00
3	18.00	6.00



RIP-RAP IMPACT BASIN
MIN. SIZE OF STONE 6" & 18" OF DEPTH
STONE SPECIFICATION: MSSHB M2.02.3 STONE FOR PIPE ENDS WITH FABRIC

RIP-RAP IMPACT BASIN AT HEADWALLS

NOT TO SCALE

DETAILS

REVISIONS		
No.	DATE	DESCRIPTION
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2.	07/06/18	PLAN LAYOUT & DRAINAGE
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4.	08/18/18	ENGINEERING COMMENTS
5	11/06/18	ENGINEERING COMMENTS

PAUL E. TRUAX CIVIL NO. 46522 REGISTERED PROFESSIONAL ENGINEER COMMONWEALTH OF MASSACHUSETTS

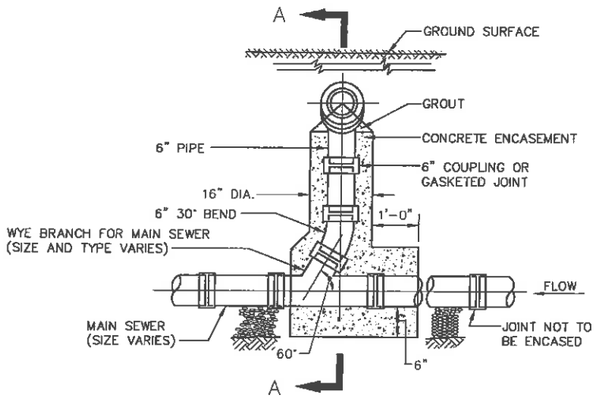
11-7-2018

SITE DEVELOPMENT PLAN
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Multi Unit & Single Family Subdivision Layout
LANCASTER, MASSACHUSETTS

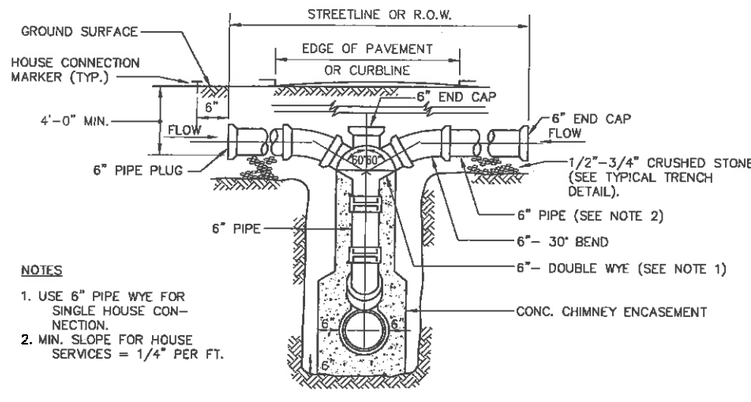
PREPARED FOR:
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DRW.: RST
JOB No. 12,274
DATE: FEBRUARY 8, 2018
SCALE: nts
SHEET: 23 of 27
PLAN #: 27,147



ELEVATION



SECTION A-A

NOTES

1. USE 6" PIPE WYE FOR SINGLE HOUSE CONNECTION.
2. MIN. SLOPE FOR HOUSE SERVICES = 1/4" PER FT.

TYPICAL HOUSE SERVICE CONNECTION & CHIMNEY DETAIL

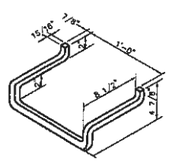
(FOR MAIN SEWER OVER 8'-0" DEEP)
NOT TO SCALE

NOTE:

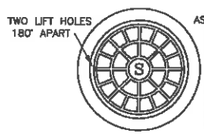
IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION

DIGSAFE IS TO BE NOTIFIED 72 WORKING HOURS IN ADVANCE OF CONSTRUCTION.
DIGSAFE 1-888-DIG-SAFE

NOTE:
ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF LANCASTER CONSTRUCTION STANDARDS AND SPECIFICATIONS.



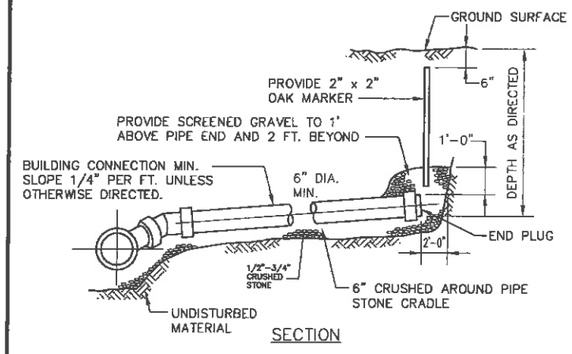
MANHOLE STEP DETAIL
NOT TO SCALE



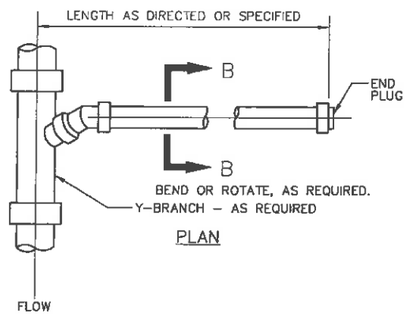
AS MANUFACTURED BY:
LE BARON FONDRY CO.
BROCKTON, MA
No. LT 101
MECHANICS IRON FOUNDRY CO.
BOSTON, MA
No. K 6004
C.M. WHITE IRON WORKS
NORTH READING, MA
No. R 258

NOTE:
FOR WATERTIGHT APPLICATIONS USE THE FOLLOWING CASTINGS:
LE BARON FOUNDRY CO.
WATERTIGHT M.H. FRAME & COVER
No. LBW268-2
OR
LE BARON FOUNDRY CO.
BOLTED & GASKETED FRAME & COVER
No. LBB268-2
OR APPROVED EQUAL

CAST IRON
MANHOLE FRAME AND COVER
MIN. WEIGHT=450# PER SET

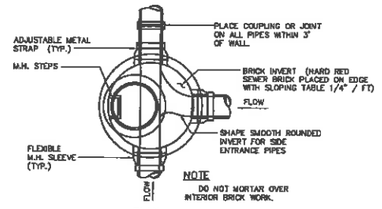


SECTION



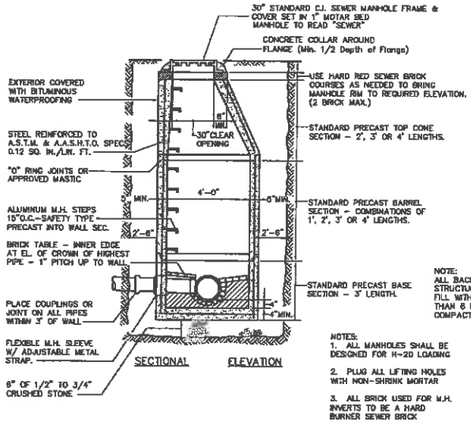
PLAN

TYPICAL BUILDING CONNECTION
NOT TO SCALE



NOTE
DO NOT MORTAR OVER INTERIOR BRICK WORK.

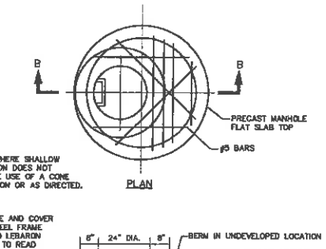
PLAN



NOTES:
1. ALL MANHOLES SHALL BE DESIGNED FOR H-20 LOADING
2. PLUG ALL LIFTING HOLES WITH NON-SHRINK MORTAR
3. ALL BRICK USED FOR M.H. INVERTS TO BE A HARD BURNER SEWER BRICK

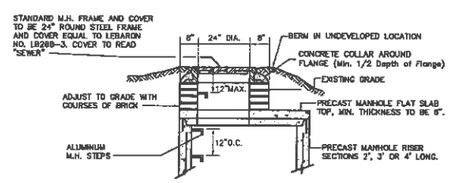
NOTE:
ALL BACKFILL AROUND STRUCTURE SHALL BE CLEAN FILL WITH NO STONES LARGER THAN 6 INCH AND COMPACTED.

TYPICAL SEWER MANHOLE DETAIL
NOT TO SCALE



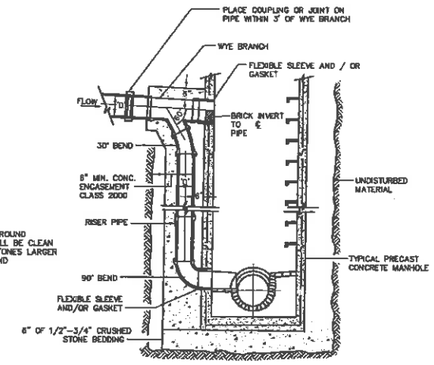
NOTE
FOR USE WHERE SHALLOW INSTALLATION DOES NOT PERMIT THE USE OF A CONE TYPE SECTION OR AS DIRECTED.

PLAN



SECTION B-B

FLAT TOP SECTION
NOT TO SCALE



NOTE:

TYPICAL DROP INLET MANHOLE DETAILS
NOT TO SCALE

DIGSAFE 1-888-DIG-SAFE

DETAILS

No.	DATE	REVISIONS DESCRIPTION
1	04/10/18	APARTMENTS 136 UNITS
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5	11/06/18	ENGINEERING COMMENTS

COMMONWEALTH OF MASSACHUSETTS PAUL E. TRUAX CIVIL NO. 49037 REGISTERED PROFESSIONAL ENGINEER

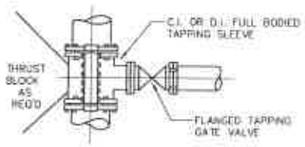
11-7-2018

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Multi Unit & Single Family Subdivision Layout
LANCASTER, MASSACHUSETTS

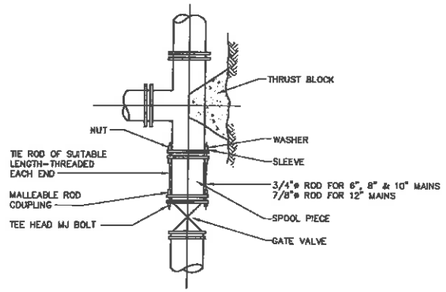
PREPARED FOR:
CRESCENT BUILDERS, INC.
94 NORTH MAIN STREET
BOYLSTON MA 01583

GLM Engineering Consultants, Inc.
19 EXCHANGE STREET
HOLLISTON, MA 01746
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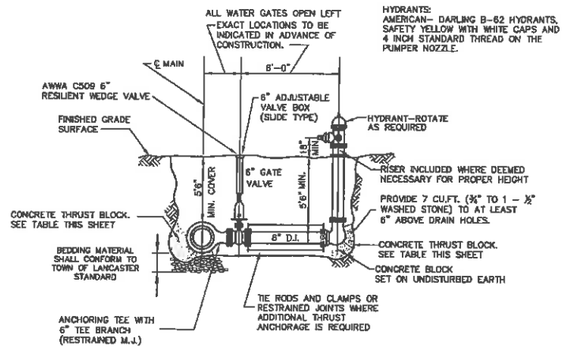
DRW.:	RST
JOB No.	12,274
DATE:	FEBRUARY 8, 2018
SCALE:	nts
SHEET:	24 of 27
PLAN #:	27,147



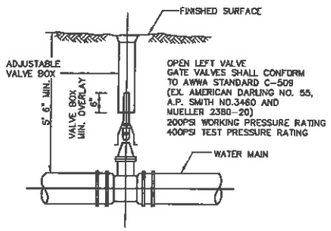
TAPPING SLEEVE AND VALVE DETAIL
NOT TO SCALE



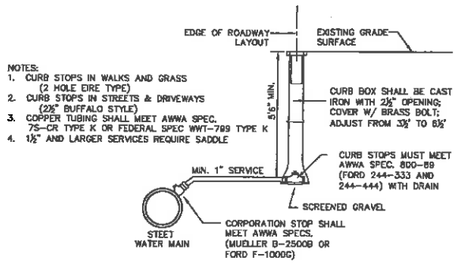
TYPICAL TIED MECHANICAL JOINT VALVE CONNECTION DETAILS
NOT TO SCALE



TYPICAL HYDRANT ASSEMBLY DETAIL
NOT TO SCALE



TYPICAL GATE VALVE
NOT TO SCALE



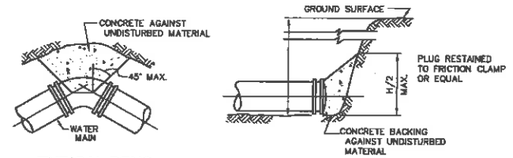
TYPICAL NEW WATER SERVICE CONNECTION DETAIL
NOT TO SCALE

NOTE: CONCRETE FOR THRUST BLOCKS SHALL BE NO LONGER THAN THE RATIO OF 2 1/2 : 5 1/2 AND SHALL HAVE A MINIMUM COMPRESSION STRENGTH OF 2000 PSI (SO THAT FLANGES AND BOLTS ARE ACCESSIBLE.)

BEARING AREAS OF THRUST BLOCKS (BEARING AREA IN SQUARE FT.)				
PIPE SIZE INCHES	1/4 BEND	1/8 BEND	1/16 BEND OR LESS	PLUG TEES
6 AND 8	8	5		8
10 AND 12	22	13	8	16

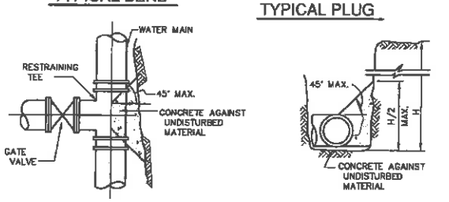
TYPICAL THRUST BLOCK DETAIL
NOT TO SCALE

NOTE:
ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF LANCASTER CONSTRUCTION STANDARDS AND SPECIFICATIONS.



TYPICAL BEND

TYPICAL PLUG



TYPICAL TEE

TYPICAL SECTION

NOTES:
ALL WATER DETAILS MANUFACTURERS & CONSTRUCTION STANDARDS SHALL CONFORM TO THE TOWN OF LANCASTER STANDARDS,

DETAILS

REVISIONS		
No.	DATE	DESCRIPTION
1	04/10/18	APARTMENTS 136 UNITS
2	07/06/18	PLAN LAYOUT & DRAINAGE
3	07/25/18	WATER SYSTEM COMMENTS
4	09/18/18	ENGINEERING COMMENTS
5	11/06/18	ENGINEERING COMMENTS

PAUL R. TRASK CIVIL NO. 48852 REGISTERED PROFESSIONAL ENGINEER
COMMONWEALTH OF MASSACHUSETTS

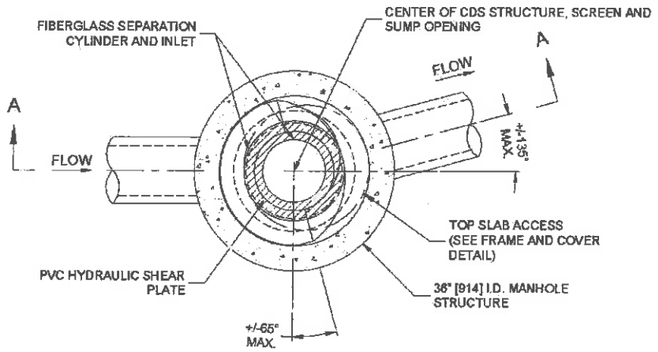
11-7-2018

SITE DEVELOPMENT PLAN
"GOODRIDGE BROOK ESTATES"
Multi Unit & Single Family Subdivision Layout
LANCASTER, MASSACHUSETTS

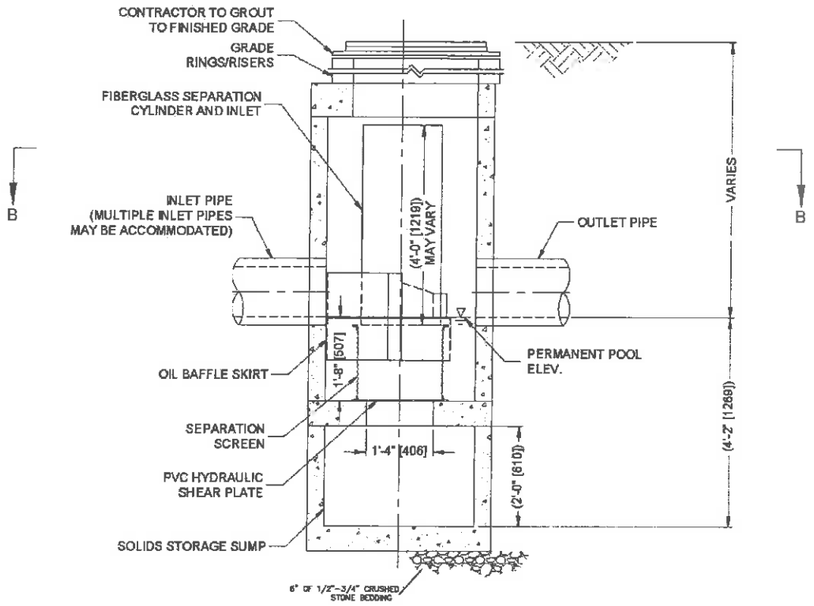
PREPARED FOR:
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DRW.: RST
JOB No. 12,274
DATE: FEBRUARY 8, 2018
SCALE: nts
SHEET: 25 of 27
PLAN #: 27,147

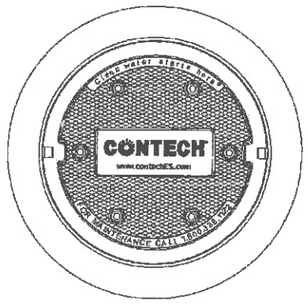


PLAN VIEW B-B
N.T.S.



ELEVATION A-A
N.T.S.

CDS UNITS TO BE INSTALLED AT:
DRAIN MH#57
DRAIN MH#66
DRAIN MH#77



FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

CONTECH
ENGINEERED SOLUTIONS LLC
www.contechES.com

CDS1515-3-C
ONLINE CDS
STANDARD DETAIL

DRAINAGE TREATMENT UNITS

REVISIONS		
No.	DATE	DESCRIPTION
1	04/10/18	APARTMENTS 136 UNITS
2	07/06/18	PLAN LAYOUT & DRAINAGE
3	07/25/18	WATER SYSTEM COMMENTS
4	09/18/18	ENGINEERING COMMENTS
5	11/06/18	ENGINEERING COMMENTS

PAUL R. TRUAX CIVIL NO. 48807 REGISTERED PROFESSIONAL ENGINEER
11-7-2018

SITE DEVELOPMENT PLAN
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Multi Unit & Single Family Subdivision Layout
LANCASTER, MASSACHUSETTS
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DRW.:	RST
JOB No.	12,274
DATE:	FEBRUARY 8, 2018
SCALE:	nts
SHEET:	26 of 27
PLAN #:	27,147

DEEP HOLE – #08-1 — DATE: 01/28/08

HORIZ DEPTH	SOIL DESCRIPTION	ELEV.
0"		404.0
6"	A – TOPSOIL	403.5
16"	B – SILT LOAM	402.2
84"	C – FINE SILT LOAM, 5 % GRAVEL	397.0
28"	GROUNDWATER OBSERVED (STANDING / WEEPING)	401.7
24"	SOIL MOTTLING	402.0
24"	ESTIMATED SEASONAL HIGH GROUNDWATER	402.0

DEEP HOLE – #08-2 — DATE: 01/28/08

HORIZ DEPTH	SOIL DESCRIPTION	ELEV.
0"		406.0
4"	A – TOPSOIL	405.7
12"	B – SANDY LOAM	405.0
80"	C – SILT LOAM	399.3
38"	GROUNDWATER OBSERVED (STANDING / WEEPING)	402.8
30"	SOIL MOTTLING – FAINT	403.5
30"	ESTIMATED SEASONAL HIGH GROUNDWATER	403.5

DEEP HOLE – #08-3 — DATE: 01/28/08

HORIZ DEPTH	SOIL DESCRIPTION	ELEV.
0"		402.0
2"	A – TOPSOIL	401.8
10"	B – SILT LOAM	401.2
115"	C – SILT LOAM	392.4
NA	GROUNDWATER OBSERVED (STANDING / WEEPING)	
86"	SOIL MOTTLING – FAINT	394.8
86"	ESTIMATED SEASONAL HIGH GROUNDWATER	394.8

DEEP HOLE – #08-4 — DATE: 01/28/08

HORIZ DEPTH	SOIL DESCRIPTION	ELEV.
0"		402.2
4"	A – TOPSOIL	401.9
14"	B – SILT LOAM	401.0
76"	C – SILT LOAM	395.9
NA	GROUNDWATER OBSERVED (STANDING / WEEPING)	
NA	SOIL MOTTLING – FAINT	
	ESTIMATED SEASONAL HIGH GROUNDWATER	

DEEP HOLE – #08-5 — DATE: 01/28/08

HORIZ DEPTH	SOIL DESCRIPTION	ELEV.
0"		404.5
8"	A – TOPSOIL	403.8
26"	B – SILT LOAM	402.3
108"	C – SILT LOAM	395.5
48"	GROUNDWATER OBSERVED (STANDING / WEEPING)	400.5
34"	SOIL MOTTLING – FAINT	401.7
34"	ESTIMATED SEASONAL HIGH GROUNDWATER	401.7

DEEP HOLE – #08-6 — DATE: 01/28/08

HORIZ DEPTH	SOIL DESCRIPTION	ELEV.
0"		406.3
3"	A – TOPSOIL	406.0
26"	B – SILT LOAM	404.1
72"	C – SILT LOAM	400.3
48"	GROUNDWATER OBSERVED (STANDING / WEEPING)	402.3
38"	SOIL MOTTLING – FAINT	403.1
38"	ESTIMATED SEASONAL HIGH GROUNDWATER	403.1

DEEP HOLE – #08-7 — DATE: 01/28/08

HORIZ DEPTH	SOIL DESCRIPTION	ELEV.
0"		401.2
2"	A – TOPSOIL	401.0
10"	B – SANDY LOAM	400.4
92"	C – SANDY LOAM	393.5
NA	GROUNDWATER OBSERVED (STANDING / WEEPING)	
NA	SOIL MOTTLING – FAINT	
NA	ESTIMATED SEASONAL HIGH GROUNDWATER	

DEEP HOLE – #08-8 — DATE: 01/28/08

HORIZ DEPTH	SOIL DESCRIPTION	ELEV.
0"		394.0
2"	A – TOPSOIL	393.8
20"	B – SILT LOAM	392.3
48"	C1– COURSE SAND	390.0
108"	C1– FINE SAND	385.0
52"	GROUNDWATER OBSERVED (STANDING / WEEPING)	389.7
42"	SOIL MOTTLING – FAINT	390.5
42"	ESTIMATED SEASONAL HIGH GROUNDWATER	390.5

DEEP HOLE – #08-9 — DATE: 01/28/08

HORIZ DEPTH	SOIL DESCRIPTION	ELEV.
0"		398.5
3"	A – TOPSOIL	398.3
10"	B – SANDY LOAM	397.7
102"	C – SANDY LOAM	390.0
80"	GROUNDWATER OBSERVED (STANDING / WEEPING)	391.8
74"	SOIL MOTTLING – FAINT	392.3
74"	ESTIMATED SEASONAL HIGH GROUNDWATER	392.3

DEEP HOLE – #08-10 — DATE: 01/28/08

HORIZ DEPTH	SOIL DESCRIPTION	ELEV.
0"		398.0
3"	A – TOPSOIL	397.8
8"	B – SANDY LOAM	397.3
48"	C1 – SANDY LOAM	394.0
76"	C2 – SILTY LOAM	391.7
108"	C3 – SILTY LOAM WITH SHALE	388.0
88"	GROUNDWATER OBSERVED (STANDING / WEEPING)	390.7
78"	SOIL MOTTLING – FAINT	391.5
78"	ESTIMATED SEASONAL HIGH GROUNDWATER	391.5

DEEP HOLE – #1 — DATE: 03/28/08

HORIZ DEPTH	SOIL DESCRIPTION	ELEV.
0"		401.8
4"	A – TOPSOIL	401.5
19"	B–FINE SANDY LOAM	401.6
108"	C – FINE SILT LOAM, 20% GRAVEL	392.8
48"	GROUNDWATER OBSERVED (STANDING / WEEPING)	397.6
24"	SOIL MOTTLING – FAINT	399.8
24"	ESTIMATED SEASONAL HIGH GROUNDWATER	399.8

DEEP HOLE – #2 — DATE: 03/28/08

HORIZ DEPTH	SOIL DESCRIPTION	ELEV.
0"		404.3
8"	A – TOPSOIL	403.6
18"	B–FINE SANDY LOAM	402.8
108"	C – SILT LOAM	395.3
18"	GROUNDWATER OBSERVED (STANDING / WEEPING)	402.8
18"	SOIL MOTTLING – FAINT	402.8
18"	ESTIMATED SEASONAL HIGH GROUNDWATER	402.8

DEEP HOLE – #3 — DATE: 03/28/08

HORIZ DEPTH	SOIL DESCRIPTION	ELEV.
0"		398.6
8"	A – TOPSOIL	397.9
12"	B–FINE SANDY LOAM	397.6
108"	C – SILT LOAM	389.6
72"	GROUNDWATER OBSERVED (STANDING / WEEPING)	392.6
NA	SOIL MOTTLING – FAINT	
72"	ESTIMATED SEASONAL HIGH GROUNDWATER	392.6

DEEP HOLE – #4 — DATE: 03/28/08

HORIZ DEPTH	SOIL DESCRIPTION	ELEV.
0"		402.2
6"	A – TOPSOIL	401.7
19"	B–FINE SANDY LOAM	400.6
120"	C – SILT LOAM	392.2
92"	GROUNDWATER OBSERVED (STANDING / WEEPING)	394.5
NA	SOIL MOTTLING – FAINT	
92"	ESTIMATED SEASONAL HIGH GROUNDWATER	394.5

DEEP HOLE – #5 — DATE: 03/28/08

HORIZ DEPTH	SOIL DESCRIPTION	ELEV.
0"		408.6
6"	A – TOPSOIL	408.1
18"	B – SANDY LOAM	405.1
37"	C1 – SANDY LOAM	403.5
113"	C2 – SILT LOAM	397.2
28"	GROUNDWATER OBSERVED (STANDING / WEEPING)	404.3
28"	SOIL MOTTLING – FAINT	404.3
28"	ESTIMATED SEASONAL HIGH GROUNDWATER	404.3

DEEP HOLE – #6 — DATE: 03/28/08

HORIZ DEPTH	SOIL DESCRIPTION	ELEV.
0"		407.5
6"	A – TOPSOIL	407.0
20"	B – SANDY LOAM	405.8
36"	C1 – SANDY LOAM	404.5
113"	C2 – SILT LOAM	398.1
51"	GROUNDWATER OBSERVED (STANDING / WEEPING)	403.3
24"	SOIL MOTTLING	405.5
24"	ESTIMATED SEASONAL HIGH GROUNDWATER	405.5

DEEP HOLE – #7 — DATE: 03/28/08

HORIZ DEPTH	SOIL DESCRIPTION	ELEV.
0"		403.0
8"	A – TOPSOIL	402.3
28"	B – SILT LOAM	400.7
38"	C1 – SANDY LOAM	399.8
108"	C2 – SILT LOAM	394.0
36"	GROUNDWATER OBSERVED (STANDING / WEEPING)	400.0
NA	SOIL MOTTLING	
36"	ESTIMATED SEASONAL HIGH GROUNDWATER	400.0

DEEP HOLE – #8 — DATE: 03/28/08

HORIZ DEPTH	SOIL DESCRIPTION	ELEV.
0"		407.0
6"	A – TOPSOIL	406.5
16"	B – SILT LOAM	405.2
108"	C – SILT LOAM	397.5
48"	GROUNDWATER OBSERVED (STANDING / WEEPING)	403.0
NA	SOIL MOTTLING	
48"	ESTIMATED SEASONAL HIGH GROUNDWATER	403.0

DEEP HOLE – #9 — DATE: 03/28/08

HORIZ DEPTH	SOIL DESCRIPTION	ELEV.
0"		418.1
8"	A – TOPSOIL	417.4
28"	B – SILT LOAM	415.8
40"	C1 – SANDY LOAM	414.8
108"	C2 – SILT LOAM	409.1
44"	GROUNDWATER OBSERVED (STANDING / WEEPING)	414.4
NA	SOIL MOTTLING	
44"	ESTIMATED SEASONAL HIGH GROUNDWATER	414.4

DEEP HOLE – #10 — DATE: 03/28/08

HORIZ DEPTH	SOIL DESCRIPTION	ELEV.
0"		410.1
8"	A – TOPSOIL	409.4
18"	B–FINE SANDY LOAM	408.6
28"	C1 – SANDY LOAM	407.8
108"	C2 – SILT LOAM	401.1
60"	GROUNDWATER OBSERVED (STANDING / WEEPING)	405.1
NA	SOIL MOTTLING	
60"	ESTIMATED SEASONAL HIGH GROUNDWATER	405.1

DEEP HOLE – #18-1 (Basin 5) — DATE: 8/14/18

HORIZ DEPTH	SOIL DESCRIPTION	ELEV.
0"		394.0
4"	A – TOPSOIL	393.7
26"	B – SILT LOAM	391.8
132"	C1 – LOAMY SAND	383.0
120"	GROUNDWATER OBSERVED (STANDING / WEEPING)	384.0
NA	SOIL MOTTLING	
	ESTIMATED SEASONAL HIGH GROUNDWATER	

DEEP HOLE – #18-2 (Basin 4) — DATE: 8/14/18

HORIZ DEPTH	SOIL DESCRIPTION	ELEV.
0"		400.0
4"	A – TOPSOIL	399.7
30"	B – SILT LOAM	397.5
84"	C – LOAMY SAND	393.0
74"	GROUNDWATER OBSERVED (STANDING / WEEPING)	393.8
30"	SOIL MOTTLING	397.5
30"	ESTIMATED SEASONAL HIGH GROUNDWATER	397.5

DEEP HOLE – #18-3 (Basin 2) — DATE: 03/28/08

HORIZ DEPTH	SOIL DESCRIPTION	ELEV.
0"		398.0
4"	A – TOPSOIL	397.7
32"	B – SILT LOAM	395.3
62"	C1 – LOAMY SAND	392.8
	GROUNDWATER OBSERVED (STANDING / WEEPING)	
32"	SOIL MOTTLING	395.3
32"	ESTIMATED SEASONAL HIGH GROUNDWATER	395.3

DEEP HOLE – #18-4 (Basin 5) — DATE: 8/15/18

HORIZ DEPTH	SOIL DESCRIPTION	ELEV.
0"		396.0
6"	A – TOPSOIL	395.5
24"	B–FINE SANDY LOAM	394.0
92"	C1 – SAND	388.3
108"	C2 – LOAMY SAND	387.0
None	GROUNDWATER OBSERVED (STANDING / WEEPING)	
90"	SOIL MOTTLING	388.5
90"	ESTIMATED SEASONAL HIGH GROUNDWATER	388.5

SOIL TEST LOGS

REVISIONS

No.	DATE	DESCRIPTION
1	04/10/18	APARTMENTS 136 UNITS
2	07/06/18	PLAN LAYOUT & DRAINAGE
3	07/25/18	WATER SYSTEM COMMENTS
4	09/18/18	ENGINEERING COMMENTS
5	11/06/18	ENGINEERING COMMENTS

COMMONWEALTH OF MASSACHUSETTS — PAUL E. TRUAX — CIVIL — NO. 48621 — REGISTERED PROFESSIONAL ENGINEER

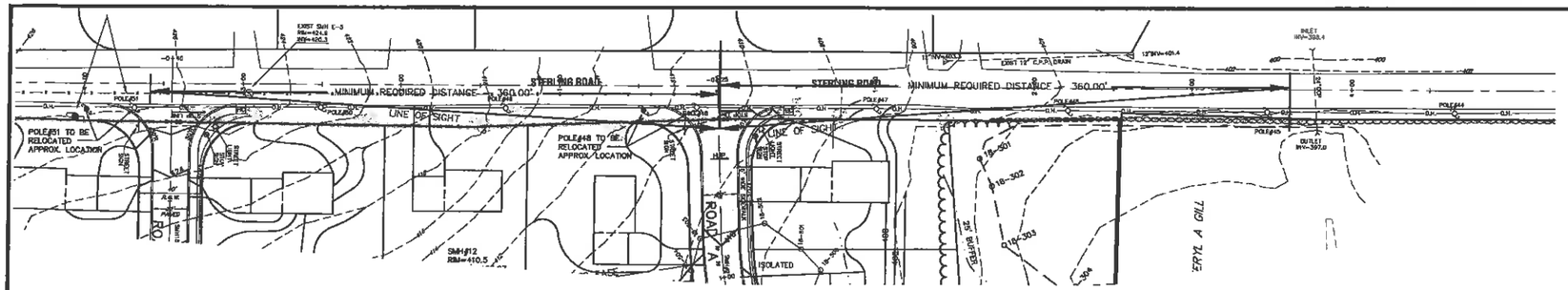
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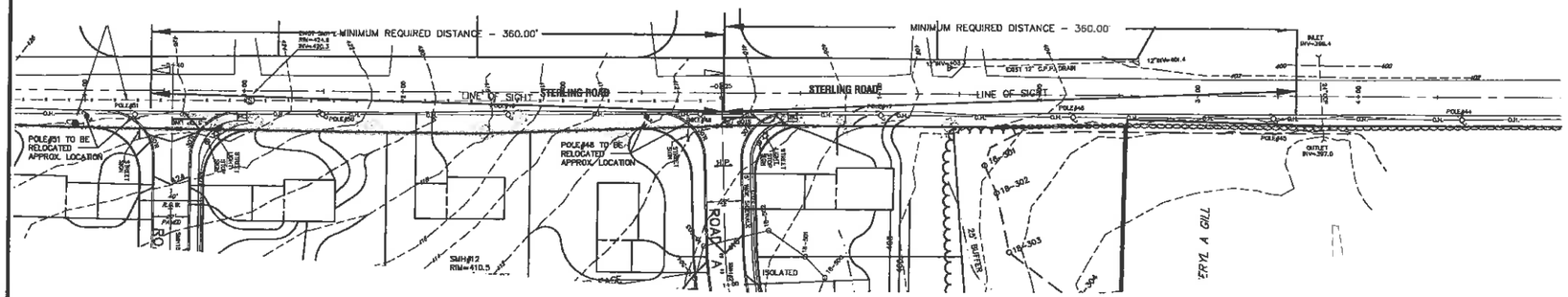
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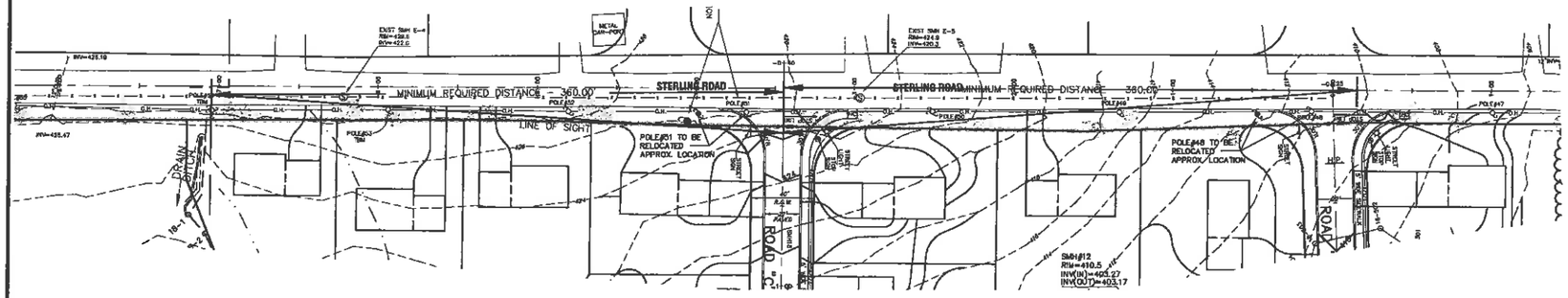
DRW.: RST
JOB No. 12,274
DATE: FEBRUARY 8, 2018
SCALE:
SHEET: 27 of 27
PLAN #: 27,147



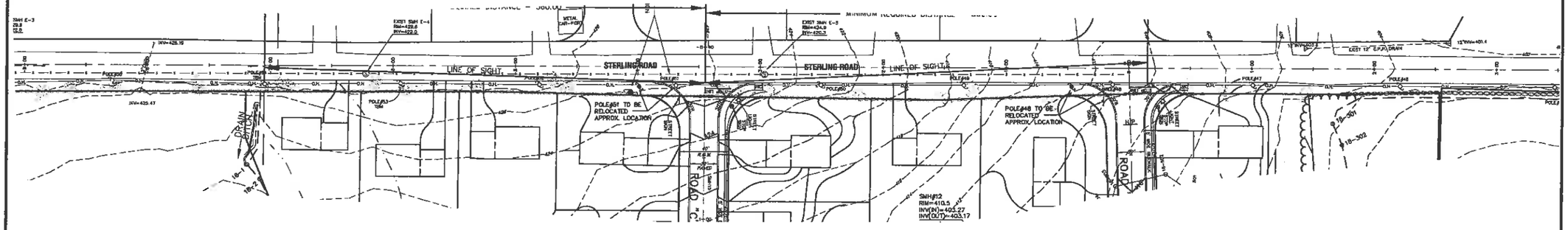
Intersection Sight Distance (ISD) - Road A



Stopping Sight Distance (SSD) - Road A



Intesection Sight Distance (ISD) - Road C



Stopping Sight Distance (SSD) - Road C

SITE DISTANCE

REVISIONS		
No.	DATE	DESCRIPTION
1	04/10/18	APARTMENTS 138 UNITS
2	07/06/18	PLAN LAYOUT & DRAINAGE
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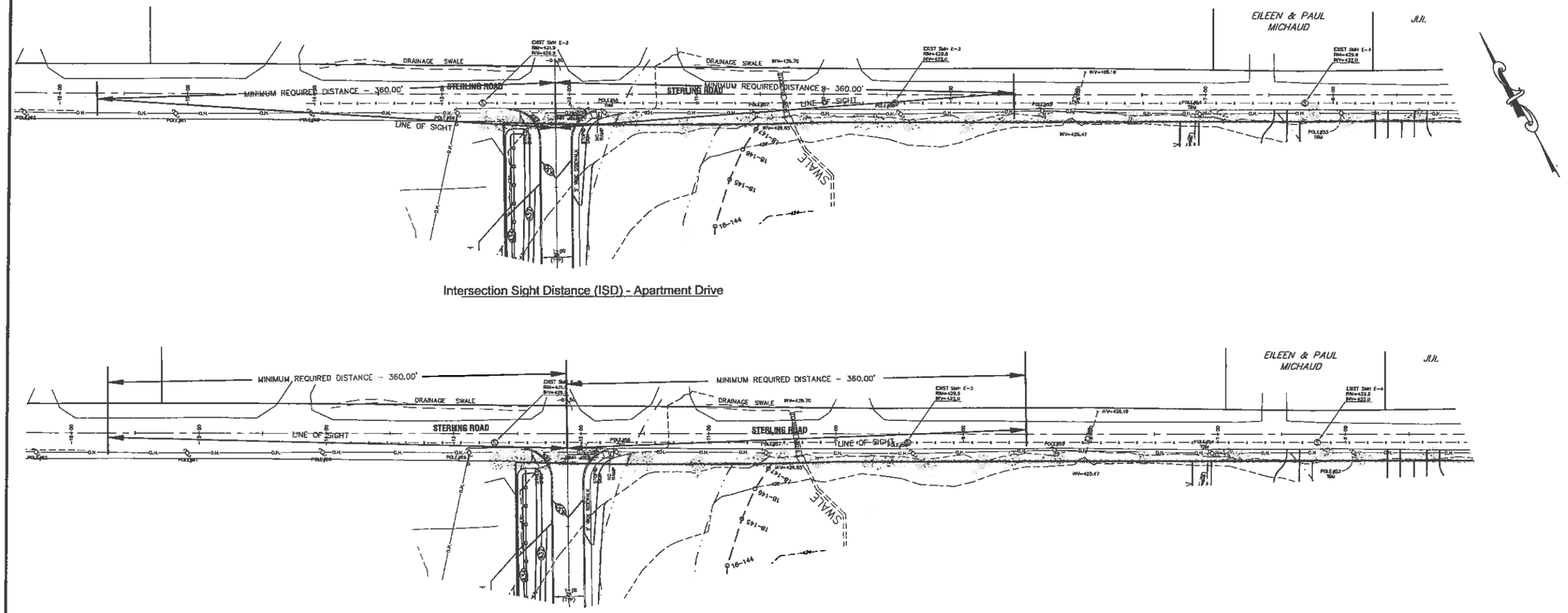
11-7-18

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DRW.: RST
JOB No. 12,274
DATE: FEBRUARY 8, 2018
SCALE: 1"= 40'
SHEET: SUP-A1
PLAN #: 27,147



Intersection Sight Distance (ISD) - Apartment Drive

Stopping Sight Distance (SSD) - Apartment Drive

SITE DISTANCE

No.	DATE	REVISIONS DESCRIPTION
1	04/10/18	APARTMENTS 130 UNITS
2	07/06/18	PLAN LAYOUT & DRAINAGE
3	07/25/18	WATER SYSTEM COMMENTS
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11-7-18

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DRW.:	RST
JOB No.	12,274
DATE:	FEBRUARY 8, 2018
SCALE:	1"= 40'
SHEET:	SUP-A2
PLAN #:	27,147