

REFERENCES

MIDDLESEX COUNTY SOUTH REGISTRY OF DEEDS
 DEEDS: BOOK 25057, PAGE 575; BOOK 25057, PAGE 585; BOOK 25057, PAGE 595
 PLANS: PLAN 206 OF 1935; PLAN 1790 OF 1960; PLAN 872 OF 1967; PLAN 1503 OF 1967; PLAN 1273 OF 1969; PLAN 357 OF 1971; PLAN 1238 OF 1972; PLAN 804 OF 1979; PLAN 922 OF 1992; PLAN BOOK 329, PLAN 2; 1912 CONCORD STREET COUNTY LAYOUT

ZONING:

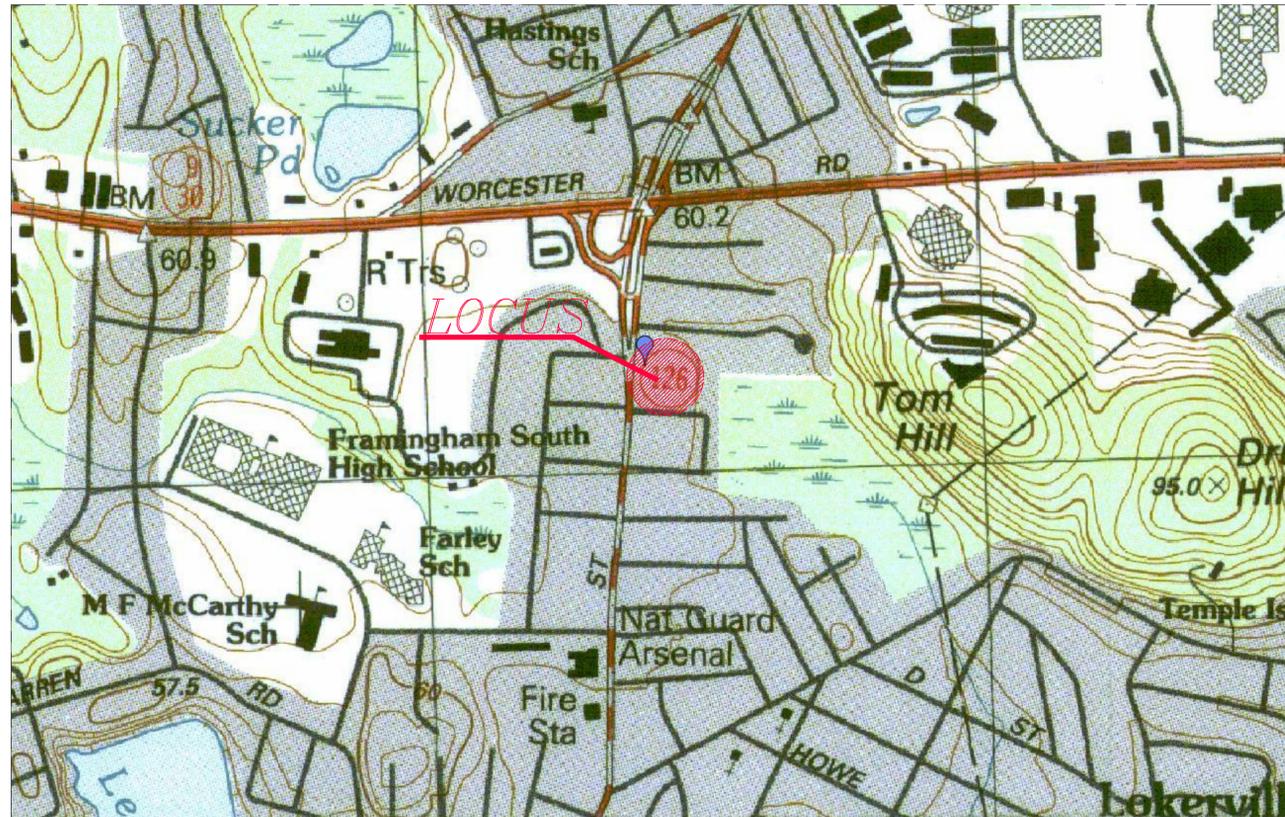
**R-1 SINGLE FAMILY RESIDENCE
 ONE FAMILY OR TWO FAMILY USE**

MINIMUM AREA= 8,000 SQUARE FEET
 MINIMUM FRONTAGE= 65 FEET
 SETBACKS:
 FRONT YARD= 30 FEET OR 50 FEET FROM C;
 SIDE YARD= 10 FEET
 REAR YARD= 10 FEET
 MINIMUM LANDSCAPED OPEN SPACE= 30%
 MAXIMUM HEIGHT= 3 STORIES/ 35 FEET
 MAXIMUM LOT COVERAGE= 35%

OTHER PRINCIPAL USE

MINIMUM AREA= 43,560 SQUARE FEET
 MINIMUM FRONTAGE= 150 FEET
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 REAR YARD= 10 FEET
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 MAXIMUM LOT COVERAGE= 15%

DEFINITIVE SUBDIVISION PLAN COLLEEN'S WAY



0,671 and 673 CONCORD STREET
 FRAMINGHAM, MASS

SHEET INDEX

COVER SHEET.....SHEET 1
 EXISTING CONDITIONS PLAN.....SHEET 2
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 PROPOSED GRADING PLAN.....SHEET 6
 PROPOSED UTILITY PLAN.....SHEET 7
 EROSION AND SEDIMENT CONTROL PLAN.....SHEET 8
 LANDSCAPE & LIGHTING PLAN.....SHEET 9
 LOCUS PLAN.....SHEET 10
 DETAILS PLAN.....SHEET 11
 DETAILS PLAN.....SHEET 12
 DETAILS PLAN.....SHEET 13

NOTES:

- LOCUS IS SHOWN ON ASSESSORS SHEETS:
 MAP 102, BLOCK 02, LOTS 9638 AND 9737.
 MAP 103, BLOCK 12, LOT 0797.

 OLD ASSESSORS' MAP 67, BLOCK 133, LOTS 2, 2A & 2B.
- THIS PLAN IS THE RESULT OF AN ON-THE-GROUND SURVEY PERFORMED BY METROWEST ENGINEERING, INC. UTILITY LOCATIONS DEPICTED ON THIS PLAN, BOTH ABOVE- AND BELOW-GROUND, ARE BASED UPON DIRECT FIELD OBSERVATIONS MADE BY METROWEST ENGINEERING, INC. PERSONNEL DURING A FIELD SURVEY, RECORD PLAN LOCATIONS, OR DIGSAFE PAINT-INDICATORS. METROWEST ENGINEERING, INC. DOES NOT WARRANT THAT ALL UTILITIES ARE SHOWN OR THAT UTILITIES THAT ARE DEPICTED ARE SHOWN IN THE CORRECT LOCATION, OR WITH THE PROPER MATERIAL DESIGNATION. METROWEST ENGINEERING, INC. DOES NOT WARRANT OR PROVIDE AN EXPRESS OR IMPLIED WARRANTY THAT ALL SUBSURFACE IMPROVEMENTS ARE SHOWN OR ARE SHOWN CORRECTLY, INCLUDING, BUT NOT LIMITED TO, UTILITIES, UNDERGROUND VAULTS, UNDERGROUND TANKS OR CHAMBERS, BUNKERS, DUCT BANKS, AND/OR OTHER MAN-MADE IMPROVEMENTS THAT LIE BENEATH THE GROUND SURFACE AT THE TIME OF THE SURVEY. METROWEST ENGINEERING, INC. DOES NOT WARRANT THE LOCATION NOR CHARACTER OF SURFACE IMPROVEMENTS THE OBSERVATION OF WHICH WAS OBSCURED AT THE TIME OF THE SURVEY.
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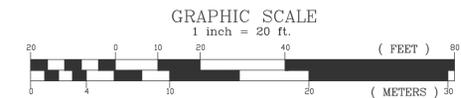
CONTRACTOR TO VERIFY ACTUAL LOCATION OF EXISTING UTILITY SERVICES IN THE FIELD PRIOR TO CONSTRUCTION (WATER, ELECTRICAL, ETC.)
 CALL DIG-SAFE BEFORE YOU DIG 811.

FRAMINGHAM PLANNING BOARD
 APPROVAL UNDER SUBDIVISION CONTROL LAW REQUIRED

DATE:

THIS ENDORSEMENT OF THE PLANNING BOARD SHOULD NOT BE CONSTRUED TO BE A DETERMINATION OF CONFORMANCE WITH ZONING REGULATIONS.

FOR METROWEST ENGINEERING, INC. DATE
 ROBERT A. GEMMA, P.L.S. # 37046
 P.E. # 31967 (CIVIL)



DEFINITIVE SUBDIVISION PLAN

COVER SHEET
 #673 CONCORD STREET
 IN
 FRAMINGHAM, MASS
 (MIDDLESEX COUNTY)

PREPARED FOR:
 GREENHOUSE REALTY TRUST
 673 CONCORD STREET
 FRAMINGHAM, MA 01701

PROPERTY OF:
 GREENHOUSE REALTY TRUST
 673 CONCORD STREET
 FRAMINGHAM, MA 01701

ENGINEERS & SURVEYORS:
 METROWEST ENGINEERING, INC.
 75 FRANKLIN STREET
 FRAMINGHAM, MA 01702
 TEL.: (508)626-0063
 FAX.: (508)875-6440

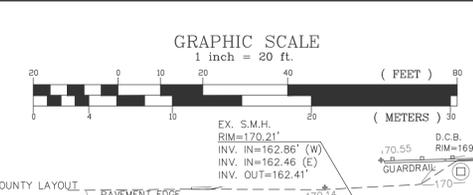
SHEET 1 OF 13 DATE: AUGUST 22, 2016

CALC'D BY: PS,BTN FIELD BK: 606,624 CAD FILE: DEF_SUB_2.dwg
 DRAFTER: BTN PROJECT: FRM_CON4 DWG FILE: SD082216.dwg

SOIL TEST RESULTS FB606						
DTH-1 (ELEV=177.9')	DTH-2 (ELEV=178.2')	DTH-3 (ELEV=176.7')	DTH-4 (ELEV=174.9')	DTH-5 (ELEV=178.5')	DTH-6 (ELEV=170.6')	DTH-7 (ELEV=174.9')
0"-18" A SANDY LOAM 10YR3/2 18"-36" B SANDY LOAM 10YR5/8 36"-120" C1 SAND 2.5Y5/4	0"-24" A SANDY LOAM 10YR3/2 24"-48" B SANDY LOAM 10YR5/8 48"-80" C1 SAND/GRAVE 2.5Y5/4 80"-120" C1 MED SAND 2.5Y6/3	0"-12" A SANDY LOAM 10YR3/2 12"-24" B SANDY LOAM 10YR5/8 24"-40" C1 SANDY LOAM 2.5Y6/4 40"-60" C2 MED SAND 2.5Y6/3 60"-96" C3 COARSE SAND 2.5Y5/4 96"-144" C4 MED SAND 2.5Y6/3	0"-16" A SANDY LOAM 10YR3/2 16"-36" B SANDY LOAM 10YR5/8 36"-96" C1 COARSE SAND 2.5Y5/4 96"-120" C2 FINE SAND 2.5Y6/3 NO WATER, NO REFUSAL NO MOTTLING ASSOC W/ GW	0"-36" A SANDY LOAM 10YR3/2 36"-48" B SANDY LOAM 10YR5/8 48"-72" C1 LOAMY SAND 2.5Y5/4 72"-120" C2 MED SAND 2.5Y6/3 NO WATER, NO REFUSAL MOTTLING @8" 7.5YR/8 VARIATED NOT GW ESTIMATED HIGH WATER=171.5'	0"-16" A SANDY LOAM 10YR3/2 16"-36" B SANDY LOAM 10YR5/8 36"-84" C1 SAND 2.5Y5/4 WATER @92" MOTTLING @48" 7.5YR/8 ESTIMATED HIGH WATER=166.6'	0"-12" A SANDY LOAM 10YR3/2 12"-30" B SANDY LOAM 10YR5/8 30"-60" C1 COARSE SAND 2.5Y5/4 60"-72" C2 MED SAND 2.5Y6/3 72"-84" C3 COARSE SAND 2.5Y5/4 84"-120" C4 MED SAND 2.5Y6/3 NO WATER, NO REFUSAL NO MOTTLING ASSOC W/ GW ESTIMATED HIGH WATER=

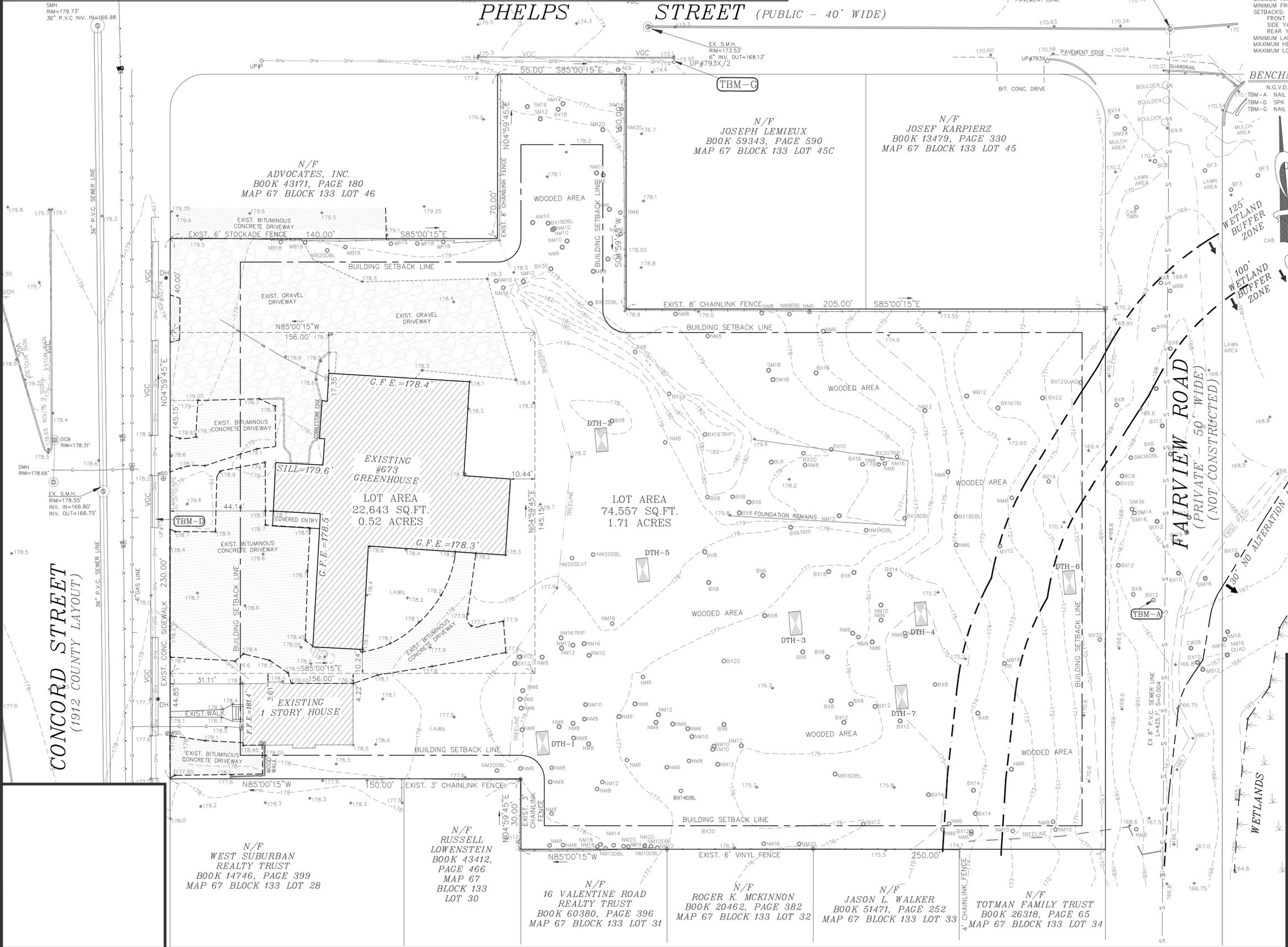
DATE: DECEMBER 04, 2014
BY: JOHN FINNEGAN - SOIL EVALUATOR
INSPECTOR: N/A

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PLAN 922 OF 1992
PLAN BOOK 329, PLAN 2
1912 CONCORD STREET COUNTY LAYOUT



ZONING:
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ONE FAMILY OR TWO FAMILY USE
MINIMUM AREA= 8,000 S.F.
MINIMUM FRONTAGE= 65 FT.
SETBACKS:
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SIDE YARD= 10 FT.
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CONTRACTOR TO VERIFY ACTUAL LOCATION OF EXISTING UTILITY SERVICES IN THE FIELD PRIOR TO CONSTRUCTION (WATER, ELECTRICAL, ETC.)
CALL DIG-SAFE BEFORE YOU DIG 811.



EXISTING TREE DESCRIPTION LEGEND

CODE	DESCRIPTION
AE#	AMERICAN ELM
BC#	BLACK CHERRY
BL#	BLACK LOCUST
BX#	BOX ELDER
CA#	CRABTREE
MB#	MULBERRY
NM#	NORWAY MAPLE
SM#	SUGAR MAPLE
SM#	SILVER MAPLE
SI#	WHITE PINE
DBL	DOUBLE
TRIP	TRIPLE
QUAD	QUADRUPLE
SEXT	SEXTA

DETAIL
TREE LOCATION
TREE CODE
TREE DIAMETER

LEGEND

CODE	DESCRIPTION
100	EXISTING GRADING
DHW	OVERHANG WIRE
UP#	UTILITY POLE
GA	GAS GATE
GM	GAS METER
EM	ELECTRIC METER
X100.0	EXISTING SPOT GRADE
F.F.E.	FIRST FLOOR ELEVATION
G.F.E.	GARAGE FLOOR ELEVATION
SB	STONE BOUND
IR	IRON PIPE
DH	DRILL HOLE
IR	IRON ROD
VOC	VERTICAL GRANITE CURB
SMH	SEWER MANHOLE
DMH	DRAIN MANHOLE
DCB	DRAIN CATCH BASIN
UP#	UTILITY POLE
EV	ELECTRIC VAULT
WG	WATER GATE
WS	WATER SHUTOFF
N/F	NOW OR FORMERLY

FRAMINGHAM PLANNING BOARD
APPROVAL UNDER SUBDIVISION CONTROL LAW REQUIRED

DATE: _____
THIS ENDORSEMENT OF THE PLANNING BOARD SHOULD NOT BE CONSTRUED TO BE A DETERMINATION OF CONFORMANCE WITH ZONING REGULATIONS.
I CERTIFY THAT THE ACTUAL SURVEY OF THIS TRACT OF LAND WAS MADE ON THE GROUND IN ACCORDANCE WITH THE "TECHNICAL STANDARDS FOR PROPERTY SURVEYS" OF THE AMERICAN CONGRESS ON SURVEYING AND MAPPING ON OR BETWEEN DECEMBER 2014 AND JANUARY 2016.

FOR METROWEST ENGINEERING, INC. DATE _____
ROBERT A. GEMMA, P.L.S. # 37046
P.E. # 31967 (CIVIL)

DEFINITIVE SUBDIVISION PLAN

EXISTING CONDITIONS SITE PLAN
#673 CONCORD STREET
IN
FRAMINGHAM, MASS
(MIDDLESEX COUNTY)

PREPARED FOR:
GREENHOUSE REALTY TRUST
673 CONCORD STREET
FRAMINGHAM, MA 01701

PROPERTY OF:
GREENHOUSE REALTY TRUST
673 CONCORD STREET
FRAMINGHAM, MA 01701

ENGINEERS & SURVEYORS:
MWE METROWEST ENGINEERING, INC.
75 FRANKLIN STREET
FRAMINGHAM, MA 01702
TEL.: (508)626-0063
FAX.: (508)875-6440

SHEET 2 OF 13
DATE: AUGUST 22, 2016
CALC'D BY: PS
FIELD BK: 606,624
DRAFTER: BTN
PROJECT: FRM_CON4
DWG FILE: SD082216.dwg

LEGEND

- 100--- EXISTING GRADING
- G GAS LINE
- UGE ELECTRIC UNDERGROUND
- OHW OVERHANG WIRE
- UP# UTILITY POLE
- GAS GATE
- GAS METER
- ELECTRIC METER
- X100.0 EXISTING SPOT GRADE
- F.F.E. FIRST FLOOR ELEVATION
- G.F.E. GARAGE FLOOR ELEVATION
- DTH SOIL TESTING
- SB STONE BOUND
- IP IRON PIN
- DH DRILL HOLE
- IR IRON ROD
- VGC VERTICAL GRANITE CURB
- SMH SEWER MANHOLE
- DMH DRAIN MANHOLE
- DCB DRAIN CATCH BASIN
- UP# UTILITY POLE
- EV ELECTRIC VAULT
- WG# WATER GATE
- WS# WATER SHUTOFF
- N/F NOW OR FORMERLY

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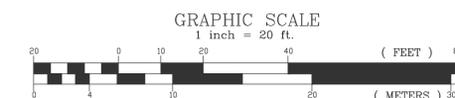
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FRAMINGHAM PLANNING BOARD
 APPROVAL UNDER SUBDIVISION CONTROL LAW REQUIRED

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FOR METROWEST ENGINEERING, INC. DATE
 ROBERT A. GEMMA, P.L.S. # 37046
 P.E. # 31967 (CIVIL)



DEFINITIVE SUBDIVISION PLAN

PLAN OF LAND
 #673 CONCORD STREET
 IN
 FRAMINGHAM, MASS
 (MIDDLESEX COUNTY)

PREPARED FOR:
 GREENHOUSE REALTY TRUST
 673 CONCORD STREET
 FRAMINGHAM, MA 01701

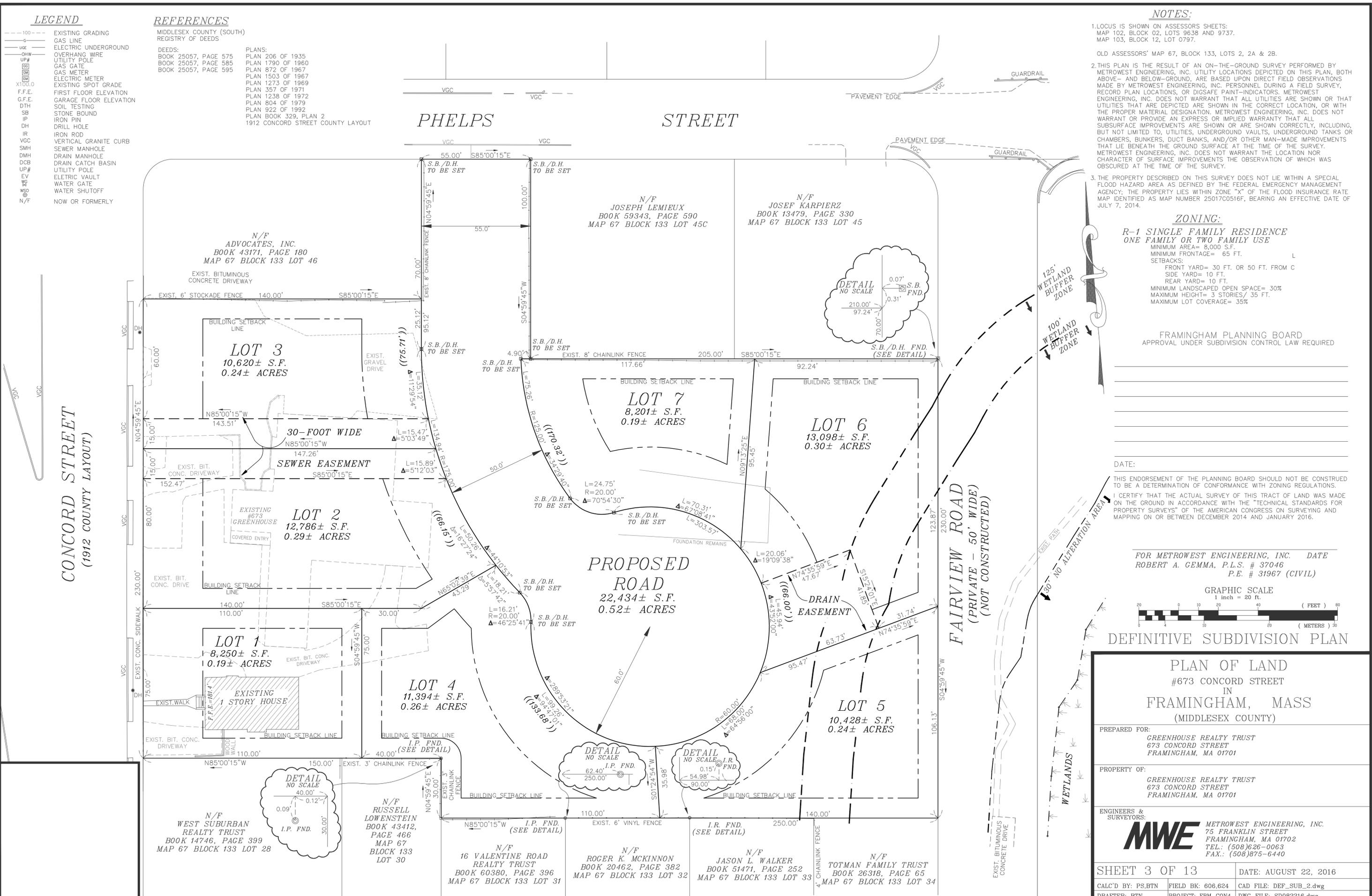
PROPERTY OF:
 GREENHOUSE REALTY TRUST
 673 CONCORD STREET
 FRAMINGHAM, MA 01701

ENGINEERS & SURVEYORS:

 75 FRANKLIN STREET
 FRAMINGHAM, MA 01702
 TEL.: (508)626-0063
 FAX.: (508)875-6440

SHEET 3 OF 13 DATE: AUGUST 22, 2016

CALC'D BY: PS,BTN FIELD BK: 606,624 CAD FILE: DEF_SUB_2.dwg
 DRAFTER: BTN PROJECT: FRM_CON4 DWG FILE: SD082216.dwg



CONCORD STREET
 (1912 COUNTY LAYOUT)

PHELPS STREET

FAIRVIEW ROAD
 (PRIVATE - 50' WIDE)
 (NOT CONSTRUCTED)

PROPOSED ROAD
 22,434± S.F.
 0.52± ACRES

LOT 3
 10,620± S.F.
 0.24± ACRES

LOT 2
 12,786± S.F.
 0.29± ACRES

LOT 1
 8,250± S.F.
 0.19± ACRES

LOT 4
 11,394± S.F.
 0.26± ACRES

LOT 7
 8,201± S.F.
 0.19± ACRES

LOT 6
 13,098± S.F.
 0.30± ACRES

LOT 5
 10,428± S.F.
 0.24± ACRES

N/F WEST SUBURBAN REALTY TRUST
 BOOK 14746, PAGE 399
 MAP 67 BLOCK 133 LOT 28

N/F RUSSELL LOWENSTEIN
 BOOK 43412, PAGE 466
 MAP 67 BLOCK 133 LOT 30

N/F 16 VALENTINE ROAD REALTY TRUST
 BOOK 60380, PAGE 396
 MAP 67 BLOCK 133 LOT 31

N/F ROGER K. MCKINNON
 BOOK 20462, PAGE 382
 MAP 67 BLOCK 133 LOT 32

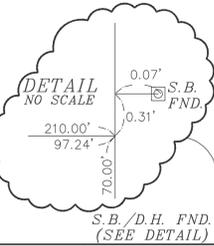
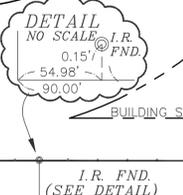
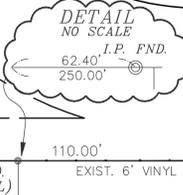
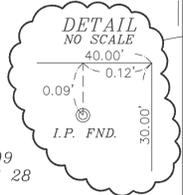
N/F JASON L. WALKER
 BOOK 51471, PAGE 252
 MAP 67 BLOCK 133 LOT 33

N/F TOTMAN FAMILY TRUST
 BOOK 26318, PAGE 65
 MAP 67 BLOCK 133 LOT 34

N/F JOSEPH LEMIEUX
 BOOK 59343, PAGE 590
 MAP 67 BLOCK 133 LOT 45C

N/F JOSEF KARPIETZ
 BOOK 13479, PAGE 330
 MAP 67 BLOCK 133 LOT 45

N/F ADVOCATES, INC.
 BOOK 43171, PAGE 180
 MAP 67 BLOCK 133 LOT 46



LEGEND

- 100 --- EXISTING GRADING
- G --- GAS LINE
- UG --- ELECTRIC UNDERGROUND
- OHW --- OVERHANG WIRE
- UP# --- UTILITY POLE
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- G --- GAS METER
- E --- ELECTRIC METER
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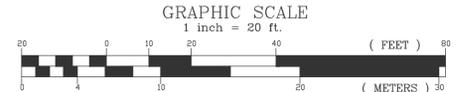
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3. THIS PLAN IS THE RESULT OF AN ON-THE-GROUND SURVEY PERFORMED BY METROWEST ENGINEERING, INC. UTILITY LOCATIONS DEPICTED ON THIS PLAN, BOTH ABOVE- AND BELOW-GROUND, ARE BASED UPON DIRECT FIELD OBSERVATIONS MADE BY METROWEST ENGINEERING, INC. PERSONNEL DURING A FIELD SURVEY. RECORD PLAN LOCATIONS, OR DIGSAFE PAINT-INDICATORS, METROWEST ENGINEERING, INC. DOES NOT WARRANT THAT ALL UTILITIES ARE SHOWN OR THAT UTILITIES THAT ARE DEPICTED ARE SHOWN IN THE CORRECT LOCATION, OR WITH THE PROPER MATERIAL DESIGNATION. METROWEST ENGINEERING, INC. DOES NOT WARRANT OR PROVIDE AN EXPRESS OR IMPLIED WARRANTY THAT ALL SUBSURFACE IMPROVEMENTS ARE SHOWN OR ARE SHOWN CORRECTLY, INCLUDING, BUT NOT LIMITED TO, UTILITIES, UNDERGROUND VAULTS, UNDERGROUND TANKS OR CHAMBERS, BUNKERS, DUCT BANKS, AND/OR OTHER MAN-MADE IMPROVEMENTS THAT LIE BENEATH THE GROUND SURFACE AT THE TIME OF THE SURVEY. METROWEST ENGINEERING, INC. DOES NOT WARRANT THE LOCATION NOR CHARACTER OF SURFACE IMPROVEMENTS THE OBSERVATION OF WHICH WAS OBTAINED AT THE TIME OF THE SURVEY.
4. THE PROPERTY DESCRIBED ON THIS SURVEY DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD AREA AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY. THE PROPERTY LIES WITHIN ZONE "X" OF THE FLOOD INSURANCE RATE MAP IDENTIFIED AS MAP NUMBER 25017C0516F, BEARING AN EFFECTIVE DATE OF JULY 7, 2014.
5. CONTRACTOR TO VERIFY ACTUAL LOCATION OF EXISTING UTILITY SERVICES IN THE FIELD PRIOR TO CONSTRUCTION (WATER, ELECTRICAL, ETC.) CALL DIG-SAFE BEFORE YOU DIG 811.

FRAMINGHAM PLANNING BOARD
 APPROVAL UNDER SUBDIVISION CONTROL LAW REQUIRED

DATE: _____
 THIS ENDORSEMENT OF THE PLANNING BOARD SHOULD NOT BE CONSTRUED TO BE A DETERMINATION OF CONFORMANCE WITH ZONING REGULATIONS.

FOR METROWEST ENGINEERING, INC. DATE _____
 ROBERT A. GEMMA, P.L.S. # 37046
 P.E. # 31967 (CIVIL)



DEFINITIVE SUBDIVISION PLAN

PROPOSED LAYOUT PLAN
 #673 CONCORD STREET
 IN
 FRAMINGHAM, MASS
 (MIDDLESEX COUNTY)

PREPARED FOR:
 GREENHOUSE REALTY TRUST
 673 CONCORD STREET
 FRAMINGHAM, MA 01701

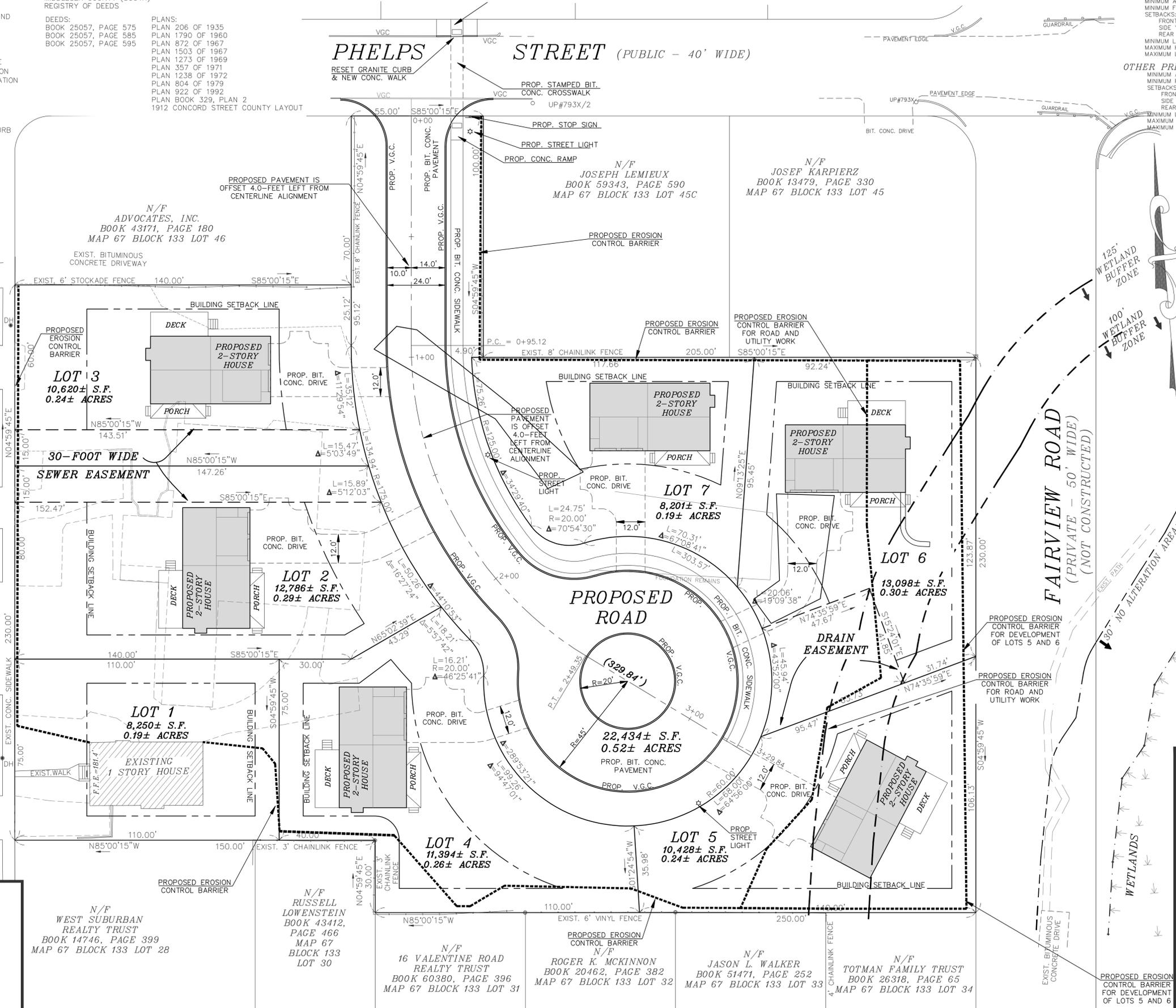
PROPERTY OF:
 GREENHOUSE REALTY TRUST
 673 CONCORD STREET
 FRAMINGHAM, MA 01701

ENGINEERS & SURVEYORS:

 75 FRANKLIN STREET
 FRAMINGHAM, MA 01702
 TEL: (508)626-0063
 FAX: (508)875-6440

SHEET 4 OF 13
 DATE: AUGUST 22, 2016
 CALC'D BY: PS,BTN FIELD BK: 606,624 CAD FILE: DEF_SUB_2.dwg
 DRAFTER: BTN PROJECT: FRM_CON4 DWG FILE: SD082216.dwg

CONCORD STREET
 (1912 COUNTY LAYOUT)



N/F WEST SUBURBAN REALTY TRUST
 BOOK 14746, PAGE 399
 MAP 67 BLOCK 133 LOT 28

N/F RUSSELL LOWENSTEIN
 BOOK 43412, PAGE 466
 MAP 67 BLOCK 133 LOT 30

N/F 16 VALENTINE ROAD REALTY TRUST
 BOOK 60380, PAGE 396
 MAP 67 BLOCK 133 LOT 31

N/F ROGER K. MCKINNON
 BOOK 20462, PAGE 382
 MAP 67 BLOCK 133 LOT 32

N/F JASON L. WALKER
 BOOK 51471, PAGE 252
 MAP 67 BLOCK 133 LOT 33

N/F TOTMAN FAMILY TRUST
 BOOK 26318, PAGE 65
 MAP 67 BLOCK 133 LOT 34

N/F ADVOCATES, INC.
 BOOK 43171, PAGE 180
 MAP 67 BLOCK 133 LOT 46

N/F JOSEPH LEMIEUX
 BOOK 59343, PAGE 590
 MAP 67 BLOCK 133 LOT 45C

N/F JOSEF KAPIERZ
 BOOK 13479, PAGE 330
 MAP 67 BLOCK 133 LOT 45

LOT 7
 8,201± S.F.
 0.19± ACRES

LOT 6
 13,098± S.F.
 0.30± ACRES

LOT 2
 12,786± S.F.
 0.29± ACRES

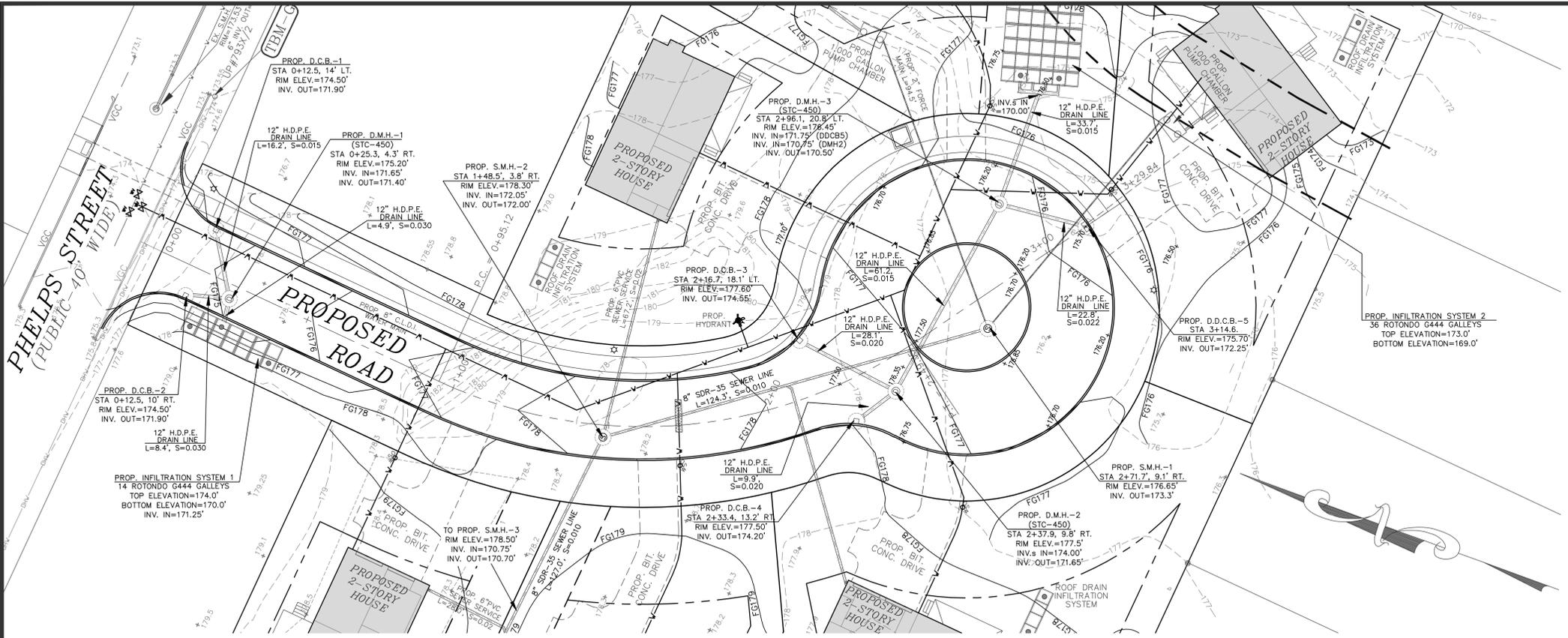
LOT 3
 10,620± S.F.
 0.24± ACRES

LOT 1
 8,250± S.F.
 0.19± ACRES

LOT 4
 11,394± S.F.
 0.26± ACRES

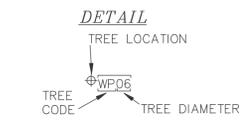
LOT 5
 10,428± S.F.
 0.24± ACRES

PROPOSED ROAD
 (329.94')
 R=20'



EXISTING TREE DESCRIPTION LEGEND

CODE	DESCRIPTION
AE#	AMERICAN ELM
BC#	BLACK CHERRY
BL#	BLACK LOCUST
BL#	BOX ELDER
CA#	CRABTREE
ME#	MULBERRY
NM	NORWAY MAPLE
SM#	SUGAR MAPLE
SIM#	SILVER MAPLE
WP#	WHITE PINE
DBL	DOUBLE
TRIP	TRIPLE
QUAD	QUADRUPLE



LEGEND

---	EXISTING GRADING
-	GAS LINE
-	ELECTRIC UNDERGROUND
-	OVERHANG WIRE
UP#	UTILITY POLE
CG	GAS GATE
GM	GAS METER
EM	ELECTRIC METER
X100.0	EXISTING SPOT GRADE
F.F.E.	FIRST FLOOR ELEVATION
DTH	SOIL TESTING
SB	STONE BOUND
IP	IRON PIN
DH	DRILL HOLE
IR	IRON ROD
VGC	VERTICAL GRANITE CURB
SMH	SEWER MANHOLE
DMH	DRAIN MANHOLE
DCB	DRAIN CATCH BASIN
UP#	UTILITY POLE
EV	ELECTRIC VAULT
WG	WATER GATE
WSO	WATER SHUTOFF
GB	
N/F	NOW OR FORMERLY

- NOTES:**
- LOCUS IS SHOWN ON ASSESSORS SHEETS: MAP 102, BLOCK 02, LOTS 9638 AND 9737. MAP 103, BLOCK 12, LOT 0797.
 - OLD ASSESSORS' MAP 67, BLOCK 133, LOTS 2, 2A & 2B.
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 - CONTRACTOR TO VERIFY ACTUAL LOCATION OF EXISTING UTILITY SERVICES IN THE FIELD PRIOR TO CONSTRUCTION (WATER, ELECTRICAL, ETC.) CALL DIG-SAFE BEFORE YOU DIG 811.

FRAMINGHAM PLANNING BOARD
APPROVAL UNDER SUBDIVISION CONTROL LAW REQUIRED

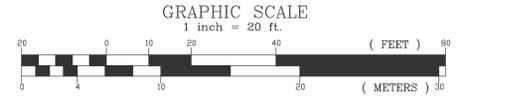
BENCHMARK (TBM)

- N.G.V.D. 1929 DATUM
 TBM-A NAIL SET AT BX12, ELEVATION=168.57'
 TBM-D SPK SET AT UP#73, ELEVATION=179.89'
 TBM-G NAIL SET AT UP#798X/2, ELEVATION=174.61'

TOWN OF FRAMINGHAM PUBLIC WORKS DEPARTMENT, ENGINEERING DEPARTMENT, AND PLANNING BOARD, SHALL BE NOTIFIED 36 HOURS IN ADVANCE OF ANY ROADWAY OR MUNICIPAL SERVICE CONSTRUCTION. NO PORTION OF ANY UTILITIES SHALL BE BACKFILLED UNTIL APPROVAL FOR SUCH BACKFILLING IS OBTAINED IN WRITING FROM THE PUBLIC WORKS AND ENGINEERING DEPARTMENTS. SUCH APPROVAL DOES NOT CONSTITUTE ACCEPTANCE OF SUCH UTILITIES BY THE TOWN OF FRAMINGHAM.

DATE: _____
 THIS ENDORSEMENT OF THE PLANNING BOARD SHOULD NOT BE CONSTRUED TO BE A DETERMINATION OF CONFORMANCE WITH ZONING REGULATIONS.

FOR METROWEST ENGINEERING, INC. DATE _____
 ROBERT A. GEMMA, P.L.S. # 37046
 P.E. # 31967 (CIVIL)



DEFINITIVE SUBDIVISION PLAN

PROPOSED PLAN AND PROFILE
 #673 CONCORD STREET
 IN
 FRAMINGHAM, MASS
 (MIDDLESEX COUNTY)

PREPARED FOR:
GREENHOUSE REALTY TRUST
 673 CONCORD STREET
 FRAMINGHAM, MA 01701

PROPERTY OF:
GREENHOUSE REALTY TRUST
 673 CONCORD STREET
 FRAMINGHAM, MA 01701

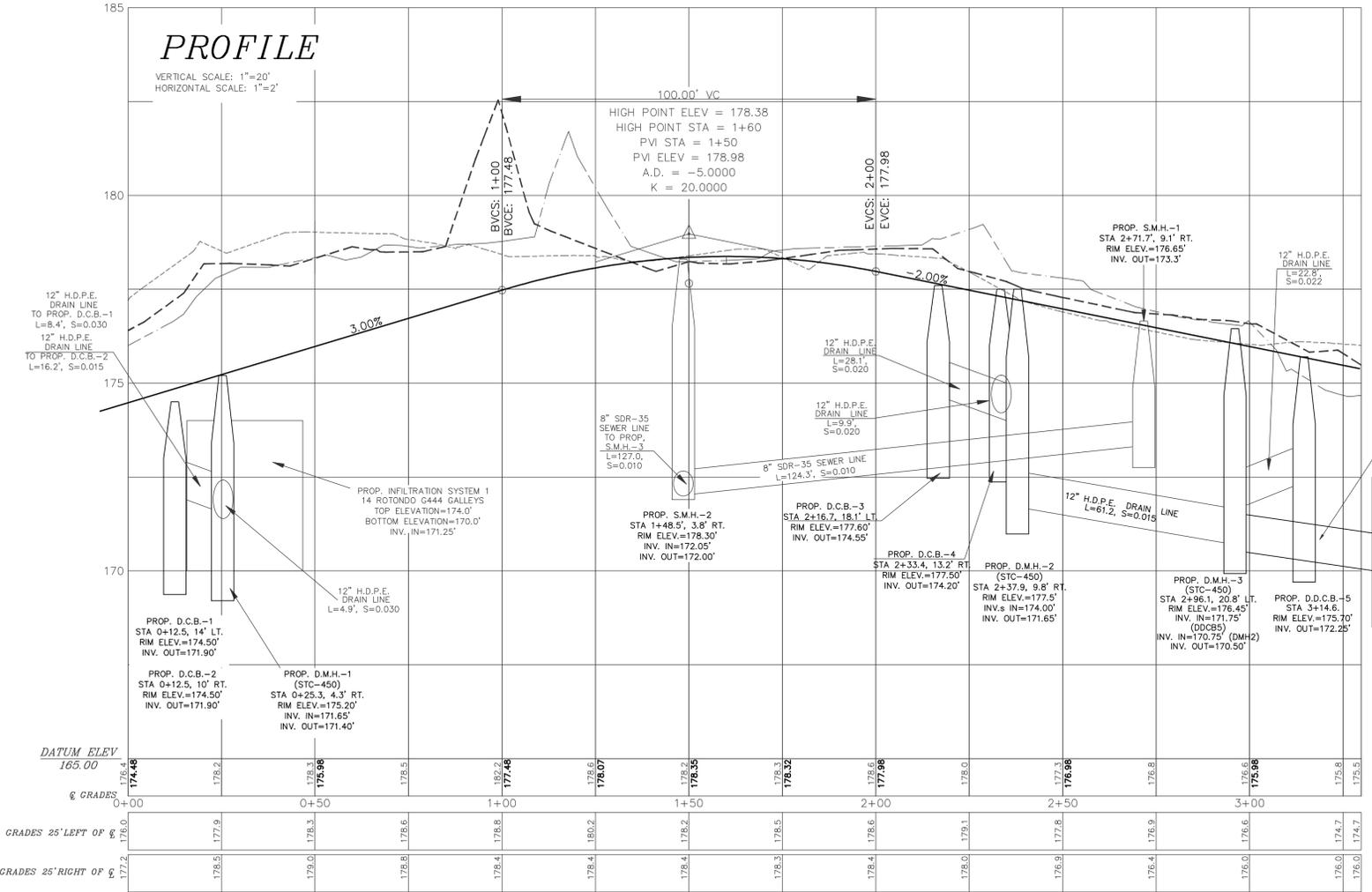
ENGINEERS & SURVEYORS:
MWE METROWEST ENGINEERING, INC.
 75 FRANKLIN STREET
 FRAMINGHAM, MA 01702
 TEL: (508)626-0063
 FAX: (508)875-6440

SHEET 5 OF 13 DATE: AUGUST 22, 2016

CALC'D BY: PS,BTN FIELD BK: 606,624 CAD FILE: DEF_SUB_2.dwg
 DRAFTER: BTN PROJECT: FRM_CON4 DWG FILE: SD082216.dwg

PROFILE

VERTICAL SCALE: 1"=20'
 HORIZONTAL SCALE: 1"=2'



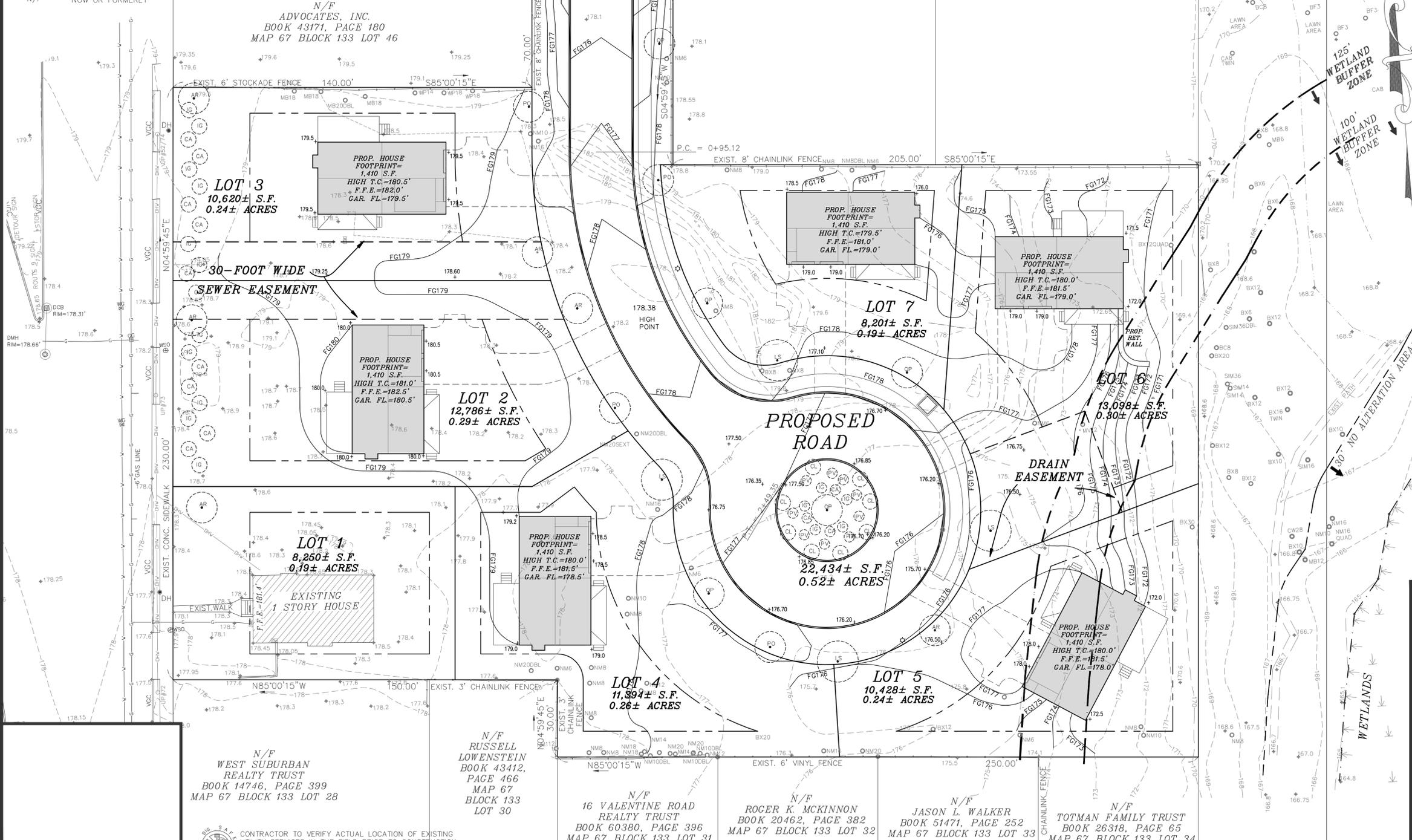
LEGEND

- 100 --- EXISTING GRADING
- G GAS LINE
- UG# ELECTRIC UNDERGROUND
- OH# OVERHANG WIRE
- UP# UTILITY POLE
- GAS GATE
- GAS METER
- ELECTRIC METER
- X100.0 EXISTING SPOT GRADE
- F.F.E. FIRST FLOOR ELEVATION
- G.F.E. GARAGE FLOOR ELEVATION
- SOIL TESTING
- SB STONE BOUND
- IP IRON PIN
- DH DRILL HOLE
- IR IRON ROD
- VGC VERTICAL GRANITE CURB
- SMH SEWER MANHOLE
- DMH DRAIN MANHOLE
- DCB DRAIN CATCH BASIN
- UP# UTILITY POLE
- EV ELECTRIC VAULT
- WG WATER GATE
- WS WATER SHUTOFF
- N/F NOW OR FORMERLY

EXISTING TREE DESCRIPTION LEGEND

- | CODE | DESCRIPTION |
|------|--------------|
| AE# | AMERICAN ELM |
| BC# | BLACK CHERRY |
| BL# | BLACK LOCUST |
| BX# | BOX ELDER |
| CA# | CRABTREE |
| MB# | MULBERRY |
| NM# | NORWAY MAPLE |
| SM# | SUGAR MAPLE |
| SIM# | SILVER MAPLE |
| WP# | WHITE PINE |
| DBL | DOUBLE |
| TRIP | TRIPLE |
| QUAD | QUADRUPLE |

DETAIL



N/F
ADVOCATES, INC.
BOOK 43171, PAGE 180
MAP 67 BLOCK 133 LOT 46

N/F
JOSEPH LEMIEUX
BOOK 59343, PAGE 590
MAP 67 BLOCK 133 LOT 45C

N/F
JOSEF KARRIERZ
BOOK 13479, PAGE 330
MAP 67 BLOCK 133 LOT 45

LOT 3
10,620± S.F.
0.24± ACRES

SEWER EASEMENT
30-FOOT WIDE

LOT 2
12,786± S.F.
0.29± ACRES

LOT 1
8,250± S.F.
0.19± ACRES

EXISTING
1 STORY HOUSE

LOT 7
8,201± S.F.
0.19± ACRES

PROPOSED ROAD

LOT 5
10,428± S.F.
0.24± ACRES

LOT 4
11,894± S.F.
0.26± ACRES

LOT 6
13,098± S.F.
0.30± ACRES

LOT 7
22,434± S.F.
0.52± ACRES

N/F
WEST SUBURBAN
REALTY TRUST
BOOK 14746, PAGE 399
MAP 67 BLOCK 133 LOT 28

N/F
RUSSELL
LOWENSTEIN
BOOK 43412, PAGE 466
MAP 67 BLOCK 133 LOT 30

N/F
16 VALENTINE ROAD
REALTY TRUST
BOOK 60380, PAGE 396
MAP 67 BLOCK 133 LOT 31

N/F
ROGER K. MCKINNON
BOOK 20462, PAGE 382
MAP 67 BLOCK 133 LOT 32

N/F
JASON L. WALKER
BOOK 51471, PAGE 252
MAP 67 BLOCK 133 LOT 33

N/F
TOTMAN FAMILY TRUST
BOOK 26318, PAGE 65
MAP 67 BLOCK 133 LOT 34

CONTRACTOR TO VERIFY ACTUAL LOCATION OF EXISTING UTILITY SERVICES IN THE FIELD PRIOR TO CONSTRUCTION (WATER, ELECTRICAL, ETC.). CALL DIG-SAFE BEFORE YOU DIG 811.

PROPOSED PLANTING SCHEDULE

TREES

SYMBOL	SPECIES	QUANTITY	SIZE
⊙	RED MAPLE (ACER RUBRUM)	7	2.5" CALIPER
⊙	PIN OAK (QUESEUS PALUSTRIS)	4	2.5" CALIPER
⊙	SWEET GUM (LIQUIDAMBAR STYRACIFLUA)	4	2.5" CALIPER
⊙	LONDON PLAIN TREE (PLATANUS OCCIDENTALIS)	4	2.5" CALIPER

SHRUBS

SYMBOL	SPECIES	QUANTITY	SIZE
⊙	DOGWOODS (CORNUS AMOMUM)	15	8" HIGH
⊙	INKBERRY (ILEX GLABRA)	20	8" HIGH

ORNAMENTAL GRASSES

SYMBOL	SPECIES	QUANTITY	SIZE
⊙	SWITCHGRASS (PANICUM VIRGATUM)	10	1 GALLON 24" SPACING
⊙	NORTHERN SEA OATS (CHASMANTHIUM LATIFOLIUM)	10	1 GALLON 24" SPACING

FRAMINGHAM PLANNING BOARD
APPROVAL UNDER SUBDIVISION CONTROL LAW REQUIRED

DATE:

THIS ENDORSEMENT OF THE PLANNING BOARD SHOULD NOT BE CONSTRUED TO BE A DETERMINATION OF CONFORMANCE WITH ZONING REGULATIONS.

FOR METROWEST ENGINEERING, INC. DATE
ROBERT A. GEMMA, P.L.S. # 37046
P.E. # 31967 (CIVIL)

GRAPHIC SCALE



DEFINITIVE SUBDIVISION PLAN

PROPOSED LANDSCAPING & LIGHTING PLAN
#673 CONCORD STREET
IN
FRAMINGHAM, MASS
(MIDDLESEX COUNTY)

PREPARED FOR:
GREENHOUSE REALTY TRUST
673 CONCORD STREET
FRAMINGHAM, MA 01701

PROPERTY OF:
GREENHOUSE REALTY TRUST
673 CONCORD STREET
FRAMINGHAM, MA 01701

ENGINEERS & SURVEYORS:
MWE METROWEST ENGINEERING, INC.
75 FRANKLIN STREET
FRAMINGHAM, MA 01702
TEL: (508)626-0063
FAX: (508)875-6440

SHEET 9 OF 13 DATE: AUGUST 22, 2016

CALC'D BY: PS,BTN FIELD BK: 606,624 CAD FILE: DEF_SUB_2.dwg
DRAFTER: BTN PROJECT: FRM_CON4 DWG FILE: SD082216.dwg



ZONING:
R-1 SINGLE FAMILY RESIDENCE
ONE FAMILY OR TWO FAMILY USE
 MINIMUM AREA= 8,000 S.F.
 MINIMUM FRONTAGE= 65 FT.
 SETBACKS:
 FRONT YARD= 30 FT. OR 50 FT. FROM C
 SIDE YARD= 10 FT.
 REAR YARD= 10 FT.
 MINIMUM LANDSCAPED OPEN SPACE= 30%
 MAXIMUM HEIGHT= 3 STORIES/ 35 FT.
 MAXIMUM LOT COVERAGE= 35%

NOTES:

- LOCUS IS SHOWN ON ASSESSORS SHEETS:
 MAP 102, BLOCK 02, LOTS 9638 AND 9737.
 MAP 103, BLOCK 12, LOT 0797.
 OLD ASSESSORS' MAP 67, BLOCK 133, LOTS 2, 2A & 2B.
- THIS PLAN IS THE RESULT OF AN ON-THE-GROUND SURVEY PERFORMED BY METROWEST ENGINEERING, INC. UTILITY LOCATIONS DEPICTED ON THIS PLAN, BOTH ABOVE- AND BELOW-GROUND, ARE BASED UPON DIRECT FIELD OBSERVATIONS MADE BY METROWEST ENGINEERING, INC. PERSONNEL DURING A FIELD SURVEY, RECORD PLAN LOCATIONS, OR DIGSAFE PAINT-INDICATORS. METROWEST ENGINEERING, INC. DOES NOT WARRANT THAT ALL UTILITIES ARE SHOWN OR THAT UTILITIES THAT ARE DEPICTED ARE SHOWN IN THE CORRECT LOCATION, OR WITH THE PROPER MATERIAL DESIGNATION. METROWEST ENGINEERING, INC. DOES NOT WARRANT OR PROVIDE AN EXPRESS OR IMPLIED WARRANTY THAT ALL SUBSURFACE IMPROVEMENTS ARE SHOWN OR ARE SHOWN CORRECTLY, INCLUDING, BUT NOT LIMITED TO, UTILITIES, UNDERGROUND VAULTS, UNDERGROUND TANKS OR CHAMBERS, BUNKERS, DUCT BANKS, AND/OR OTHER MAN-MADE IMPROVEMENTS THAT LIE BENEATH THE GROUND SURFACE AT THE TIME OF THE SURVEY. METROWEST ENGINEERING, INC. DOES NOT WARRANT THE LOCATION NOR CHARACTER OF SURFACE IMPROVEMENTS THE OBSERVATION OF WHICH WAS OBTAINED AT THE TIME OF THE SURVEY.
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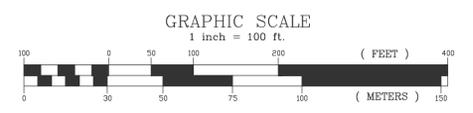
 CONTRACTOR TO VERIFY ACTUAL LOCATION OF EXISTING UTILITY SERVICES IN THE FIELD PRIOR TO CONSTRUCTION (WATER, ELECTRICAL, ETC.) CALL DIG-SAFE BEFORE YOU DIG 811.

FRAMINGHAM PLANNING BOARD
 APPROVAL UNDER SUBDIVISION CONTROL LAW REQUIRED

DATE: _____

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FOR METROWEST ENGINEERING, INC. DATE _____
 ROBERT A. GEMMA, P.L.S. # 37046
 P.E. # 31967 (CIVIL)



DEFINITIVE SUBDIVISION PLAN

LOCUS PLAN
 #673 CONCORD STREET
 IN
FRAMINGHAM, MASS
 (MIDDLESEX COUNTY)

PREPARED FOR:
GREENHOUSE REALTY TRUST
 673 CONCORD STREET
 FRAMINGHAM, MA 01701

PROPERTY OF:
GREENHOUSE REALTY TRUST
 673 CONCORD STREET
 FRAMINGHAM, MA 01701

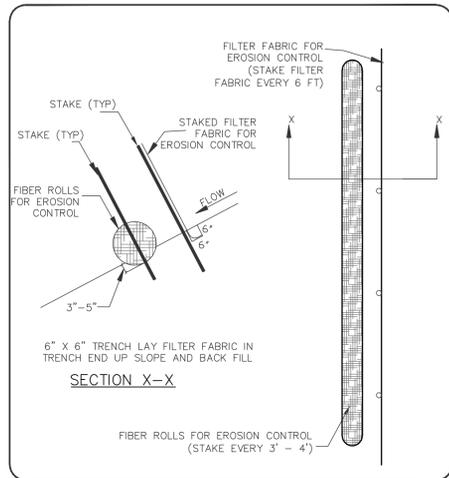
ENGINEERS & SURVEYORS:
 **METROWEST ENGINEERING, INC.**
 75 FRANKLIN STREET
 FRAMINGHAM, MA 01702
 TEL.: (508)626-0063
 FAX.: (508)875-6440

SHEET 10 OF 13 DATE: AUGUST 22, 2016

CALC'D BY: PS,BTN FIELD BK: 606,624 CAD FILE: DEF_SUB_2.dwg
 DRAFTER: BTN PROJECT: FRM_CON4 DWG FILE: SD082216.dwg

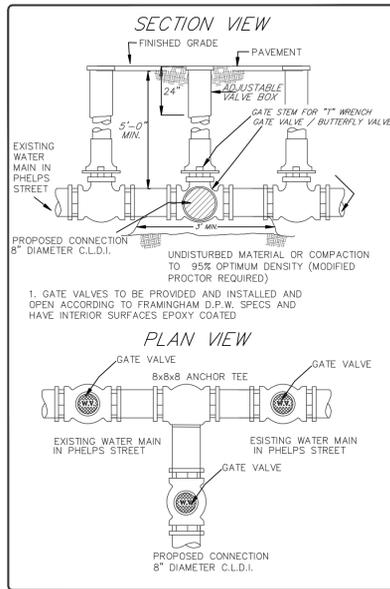
EROSION CONTROL BARRIER

NOT TO SCALE



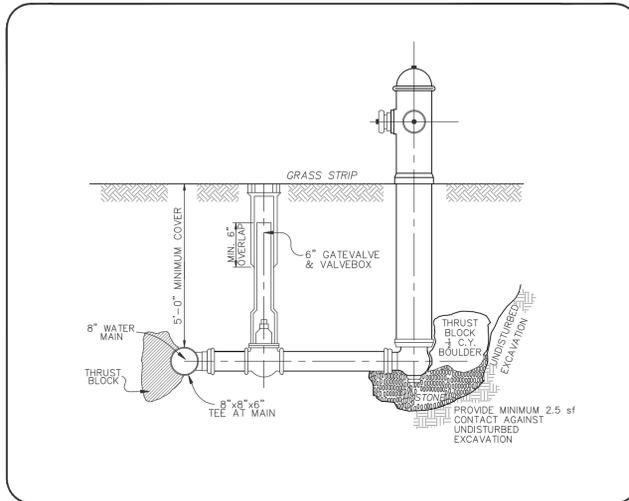
WATER MAIN CONNECTION GATE VALVE DETAIL

NOT TO SCALE



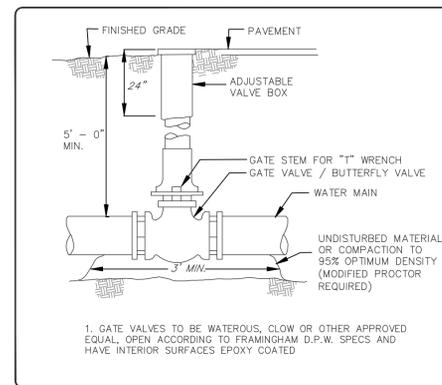
HYDRANT DETAIL

NOT TO SCALE



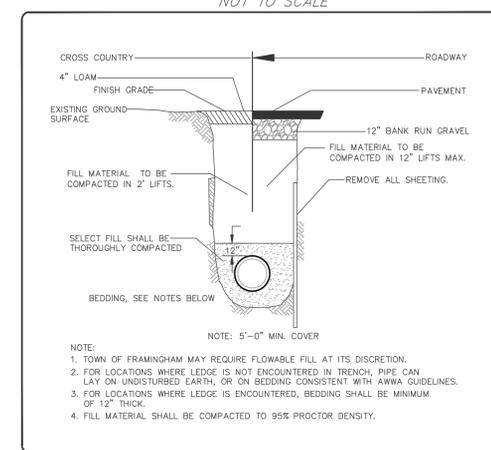
GATE VALVE DETAIL

NOT TO SCALE



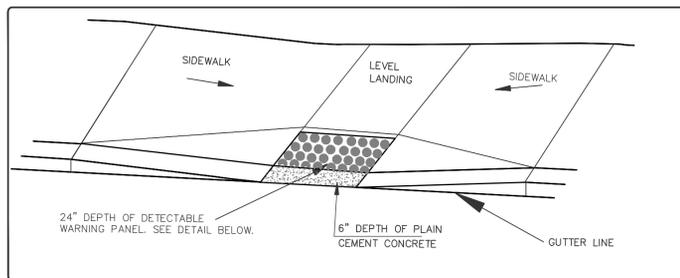
WATER MAIN TRENCH DETAIL

NOT TO SCALE



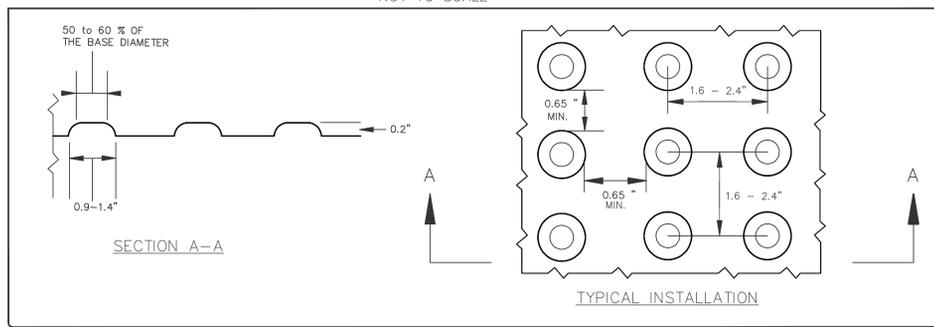
DETECTABLE WARNING PANELS

NOT TO SCALE



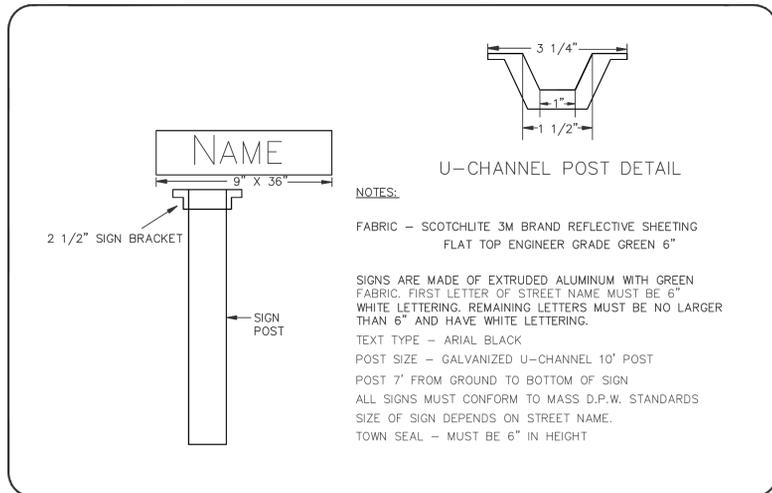
DETECTABLE WARNING PANEL

NOT TO SCALE



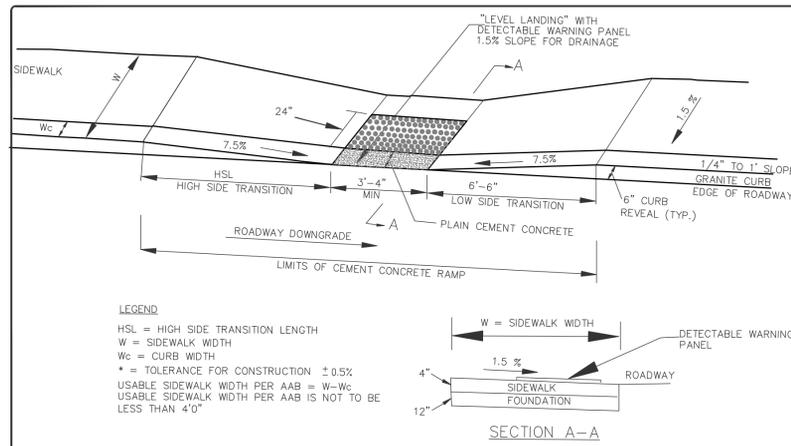
STANDARD STREET SIGN DETAIL

NOT TO SCALE



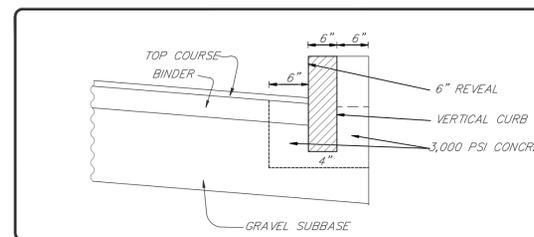
WHEELCHAIR RAMP

NOT TO SCALE



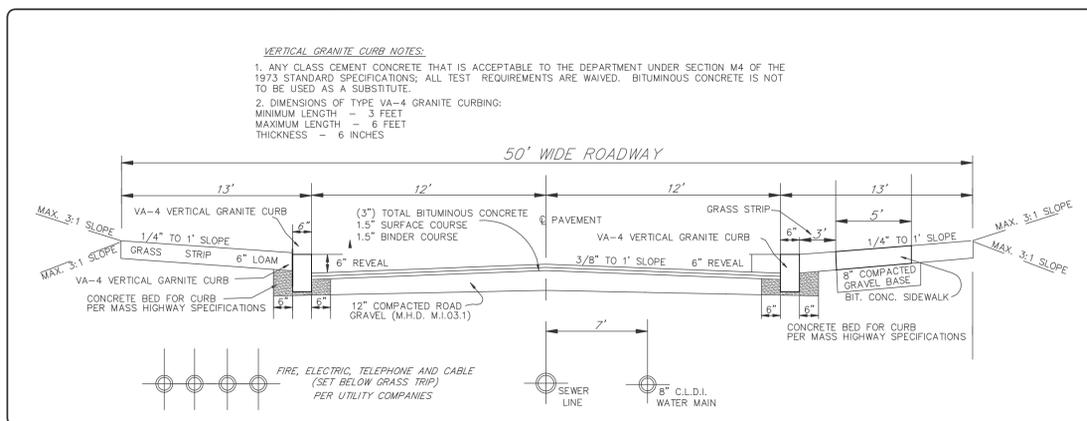
VERTICAL GRANITE AND CONCRETE CURB

NOT TO SCALE



TYPICAL ROADWAY CROSS SECTION

NOT TO SCALE



FRAMINGHAM PLANNING BOARD
APPROVAL UNDER SUBDIVISION CONTROL LAW REQUIRED

DATE: _____
THIS ENDORSEMENT OF THE PLANNING BOARD SHOULD NOT BE CONSTRUED TO BE A DETERMINATION OF CONFORMANCE WITH ZONING REGULATIONS.

FOR METROWEST ENGINEERING, INC. DATE
ROBERT A. GEMMA, P.E. # 31967 (CIVIL)

DEFINITIVE SUBDIVISION PLAN

DETAILS PLAN
#673 CONCORD STREET
IN
FRAMINGHAM, MASS
(MIDDLESEX COUNTY)

PREPARED FOR:
GREENHOUSE REALTY TRUST
673 CONCORD STREET
FRAMINGHAM, MA 01701

PROPERTY OF:
GREENHOUSE REALTY TRUST
673 CONCORD STREET
FRAMINGHAM, MA 01701

ENGINEERS & SURVEYORS:
MWE METROWEST ENGINEERING, INC.
75 FRANKLIN STREET
FRAMINGHAM, MA 01702
TEL.: (508)626-0063
FAX.: (508)875-6440

SHEET 11 OF 13 DATE: AUGUST 22, 2016

CALC'D BY: PS,BTN FIELD BK: 606,624 CAD FILE: DEF_SUB_2.dwg
DRAFTER: BTN PROJECT: FRM_CON4 DWG FILE: SD082216.dwg

SEWER SYSTEM MATERIALS AND INSTALLATION

- 1) ALL MATERIALS AND CONSTRUCTION METHODS SHALL COMPLY WITH THE TOWN OF FRAMINGHAM DEPARTMENT OF PUBLIC WORKS CONSTRUCTION STANDARDS.
- 2) ALL PIPE AND OTHER APPURTENANCES SHALL BE HANDLED CAREFULLY AND INSPECTED PRIOR TO INSTALLATION.
- 3) POLYVINYL CHLORIDE PIPE AND FITTINGS (P.V.C.) SHALL BE MINIMUM SDR 35 WITH DIAMETER DIMENSIONS CONFORMING TO SPECIFICATIONS FOR TYPE PSM P.V.C. SEWER PIPES AND FITTINGS, ASTM D-3034, LATEST REVISION.
- 4) ALL P.V.C. PIPE SHALL HAVE AN INTEGRAL WALL BELL AND SPIGOT PUSH-ON JOINT WITH ELASTOMERIC GASKETS SECURED IN THE BELL END OF THE PIPE. ELASTOMERIC GASKETS SHALL CONFORM TO ASTM D3212.
- 5) SPIGOT ENDS SHALL HAVE BEVELS FROM THE MANUFACTURER TO ENSURE PROPER INSERTION AND SHALL HAVE AN ASSEMBLY STRIP IMPRINTED THEREON TO WHICH THE BELL END OF THE MATED PIPE WILL EXTEND UPON JOINING THE PIPES.
- 6) ALL PRECAST CONCRETE MANHOLS SHALL CONFORM TO ASTM DESIGNATION D478 AND SHALL BE MANUFACTURED WITH 4,000 P.S.I. (MINIMUM) COMPRESSIVE STRENGTH CONCRETE AND BE DESIGNED FOR HS-20 LOADING REQUIREMENTS.
- 7) PRECAST SECTIONS SHALL BE JOINED BY BUTYL RUBBER SEALANT.
- 8) MANHOLE FRAMES AND COVERS SHALL HAVE A MINIMUM CLEAR OPENING OF 24-INCHES AND BE A MINIMUM OF SIX-INCHES (6") IN HEIGHT.
- 9) MANHOLE FRAMES AND COVERS SHALL BE MANUFACTURED BY EAST JORDAN IRON WORKS (FORMERLY LEBARON FOUNDRY) AND CONSIST OF 2111Z FRAME AND 2111A SEWER COVER.
- 10) FRAMES SHALL BE ADJUSTED TO FINISH GRADE WITH MORTAR AND HARD RED BRICK; MINIMUM OF TWO COURSES AND MAXIMUM OF FIVE COURSES OF BRICK.
- 11) GRAVITY SERVICE CONNECTION SHALL BE A MINIMUM OF SIX-INCH DIAMETER SDR 35 SEWER PIPE AND SHALL HAVE A MINIMUM SLOPE OF ONE-PERCENT (1.0%).
- 12) ALL SERVICE CONNECTIONS TO THE SEWER MAIN SHALL BE MADE BY WYES, T-WYES OR SADDLE TYPE CONNECTIONS.
- 13) PIPE SHALL BE LAID ACCURATELY TO LINE AND GRADE IN APPROVED BEDDING OR 3/4" CRUSHED STONE. BEDDING SHALL EXTEND NO LESS THAN SIX-INCHES (6") AROUND THE PIPE IN ALL DIRECTIONS.
- 14) BEDDING MATERIAL SHALL BE COMPACTED BY HAND UNDER AND AROUND THE SEWER PIPE IN LAYERS NOT EXCEEDING SIX-INCHES (6").
- 14.) SEWER PIPE SHALL BE LAID AT LEAST TEN-FEET (10') FROM A WATER MAIN WHENEVER POSSIBLE.
- 15.) ALL SEWER PIPES SHALL BE CUT FLUSH WITH THE INSIDE FACE OF MANHOLE STRUCTURES UNLESS NOTED OTHERWISE ON DRAWINGS.
- 16.) THE CONTRACTOR SHALL PROVIDE TEMPORARY PLUGS AT ENDS OF SEWER LINES TO PREVENT THE ACCUMULATION OF DIRT OR SEDIMENT IN SEWER PIPES WHEN PIPE LAYING OPERATIONS ARE NOT IN PROGRESS.
- 17.) ALL PIPE JOINTS SHALL BE MADE WATERTIGHT AND ALL JOINTING SHALL BE DONE IN CONFORMANCE WITH THE MANUFACTURERS RECOMMENDATIONS.

CONTRACTOR IS SOLELY RESPONSIBLE FOR ESTABLISHING EXISTING LOCATIONS OF ALL SUB-SURFACE UTILITIES AND REQUIREMENTS TO REPLACE, RELOCATE OR REPAIR EXISTING UTILITIES. MWE IS NOT RESPONSIBLE OR LIABLE FOR DELAYS OR COSTS ASSOCIATED WITH REMOVING/REPLACING/RELOCATING OF EXISTING UTILITIES.

WATER SYSTEM MATERIALS AND INSTALLATION

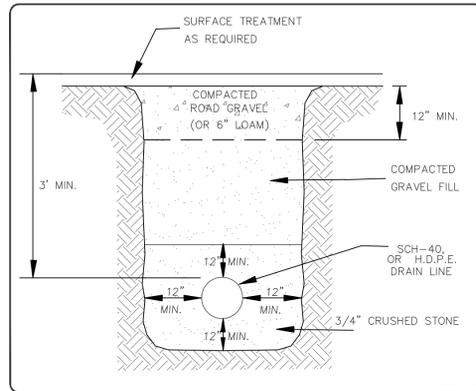
- 1) ALL MATERIALS AND CONSTRUCTION METHODS SHALL COMPLY WITH THE TOWN OF FRAMINGHAM DEPARTMENT OF PUBLIC WORKS CONSTRUCTION STANDARDS AND REQUIREMENTS OF THE FRAMINGHAM FIRE DEPARTMENT.
- 2) ALL PIPE AND OTHER APPURTENANCES SHALL BE HANDLED CAREFULLY AND INSPECTED PRIOR TO INSTALLATION.
- 3) ALL MATERIALS INCLUDING PIPE AND FITTINGS SHALL BE LEAD FREE.
- 4) ALL WATER MAINS SHALL BE MINIMUM DUCTILE IRON CLASS 52, SINGLE GASKET, DOUBLE SEALING PIPE WITH CEMENT LINING. ALL DUCTILE IRON PIPE SHALL BE RATED FOR A MINIMUM OPERATING PRESSURE OF 350 P.S.I.
- 5) MECHANICAL JOINT RESTRAINTS SHALL CONSIST OF ACTUATED WEDGES THAT INCREASE RESISTANCE TO PULL OUT AS PRESSURE INCREASES.
- 6.) USE SERIES 1100 MEGA-LUG RESTRAINTS OR APPROVED EQUAL FOR PIPE RESTRAINTS.
- 7) PIPE FITTINGS SHALL BE CEMENT LINED DUCTILE IRON AND RATED FOR 350 P.S.I.
- 8) PIPE FITTINGS SHALL BE FITTED WITH MECHANICAL JOINT RESTRAINTS WITH ALL NUTS AND BOLTS OF A SIMILAR TYPE DUCTILE IRON OR KOR-10 STEEL T BOLTS AND NUTS.
- 9) RESILIENT SEAT GATE VALVES SHALL BE MANUFACTURED OF DUCTILE IRON, OPEN LEFT (COUNTER CLOCKWISE) AND BE DESIGNED FOR A MINIMUM WORKING PRESSURE OF 250 P.S.I.
- 10) GATE VALVE BOXES SHALL BE ADJUSTABLE, BUFFALO STYLE, WITH THE LOWER PART MADE OF CAST IRON AND THE UPPER PART OF STEEL OR CAST IRON. THE VALVE BOX SHALL BE DESIGNED TO PREVENT DIRECT TRANSMISSION OF TRAFFIC LOADS TO THE VALVE OR PIPE.
- 11) HYDRANTS SHALL BE AMERICAN DARLING B-62B AS MANUFACTURED BY AMERICAN FLOW CONTROL INC.
- 12) HYDRANTS SHALL HAVE A 5 1/4-INCH VALVE OPENED BY TURNING THE OPERATING UNIT IN THE COUNTER CLOCKWISE DIRECTION. THE HYDRANT SHALL HAVE ONE 4 1/2-INCH STEAMER CONNECTION AND TWO 2 1/2-INCH HOSE CONNECTIONS. ALL CONNECTIONS SHALL HAVE NATIONAL STANDARD THREADS.
- 13) THE HYDRANT SHALL HAVE A BRONZE DRAIN RING SECURELY HELD BETWEEN THE BARREL AND THE BASE FLANGE. IT SHALL PROVIDE BRONZE TO BRONZE THREADED CONNECTION FOR HYDRANT SEAL.
- 14) ALL WATER PIPING SHALL BE INSTALLED WITH A MINIMUM OF FIVE- FEET (5') OF COVER. PIPE SHALL BE PROPERLY INSULATED WHEN THE PROPER COVER CAN NOT BE ACHIEVED.
- 15.) PIPE SHALL BE LAID ACCURATELY TO LINE AND GRADE IN SAND BEDDING (MASSDOT SPEC. M1.04.0, SAND BORROW) IN ACCORDANCE WITH AWWA GUIDELINES.
- 16.) PUSH-ON PIPE GASKETS SHALL BE CLEAN AND THOROUGHLY COATED WITH LUBRICANT SUPPLIED BY THE MANUFACTURER DURING INSTALLATION.
- 17.) ALL PIPE LINES SHALL BE PRESSURE TESTED FOR STRENGTH AND LEAKAGE AT A PRESSURE OF 200 P.S.I. BY A QUALIFIED THIRD PARTY.
- 18.) ALLOWABLE LEAKAGE AMOUNTS DURING TESTING SHALL CONFORM TO AWWA STANDARDS FOR PRESSURE TESTING DUCTILE IRON PIPE (AWWA C600.)
- 19.) ALL NEW HYDRANT LATERALS SHALL BE LEFT IN THE OPEN POSITION DURING TESTING.
- 20.) CONTRACTOR SHALL REPAIR ANY LEAKS DISCOVERED UNDER ANY OF THE REQUIRED TESTS AND RETEST PIPES IF NECESSARY.
- 21.) CONTRACTOR SHALL SUBMIT A DETAILED DISINFECTION PLAN TO THE FRAMINGHAM D.P.W. AND WATER SUPERINTENDENT AND SHALL NOT BEGIN DISINFECTION UNTIL THE PLAN HAS BEEN APPROVED BY THE FRAMINGHAM D.P.W.
- 22.) THE DISINFECTION PLAN SHALL INCLUDE THE INTENDED CHLORINE DOSAGE, METHOD FOR ESTABLISHING DOSAGE AND LOCATIONS FOR APPLICATION OF DOSAGE.
- 23.) THE CONTACT PERIOD FOR DISINFECTION SHALL BE AT LEAST 24-HOURS.
- 24.) THE PIPELINE SHALL BE ADEQUATELY FLUSHED WITH POTABLE WATER FOR THE DE-CHLORINATION OF RESIDUAL CHLORINATED WATER.

UTILITY NOTES

- 1.) ALL WORK MUST BE INSPECTED BY A DEPARTMENT OF PUBLIC WORKS UTILITY INSPECTOR. TO SCHEDULE A PRE-CONSTRUCTION MEETING OR INSPECTION CALL (508) 532-6022 OR (508) 532-6010 48-HOURS PRIOR TO THE START OF WORK.
- 2.) ANY PROPOSED SURFACE OPENINGS AND EXCAVATION WORK WITHIN THE TOWN RIGHT OF WAY LIMITS WILL REQUIRE A STREET OPENING PERMIT (SOP) WITH THE WORK CONDUCTED UNDER SAID PERMIT BEING PERFORMED IN COMPLIANCE WITH THE TOWN OF FRAMINGHAM SOP POLICY.
- 3.) ALL DRAINAGE, WATER AND SEWER WORK (OUTSIDE OF THE BUILDING FOOTPRINT) SHALL BE PERFORMED BY A LICENSED FRAMINGHAM DRAINLAYER.
- 4.) A TRENCH OPENING PERMIT (TOP) SHALL BE OBTAINED PRIOR TO THE EXCAVATION OF ANY TRENCH. A TRENCH IS DEFINED UNDER MGL B2A AND 520 CMR14.00 AS ANY EXCAVATION GREATER THAN THREE- FEET IN DEPTH AND LESS THAN 15- FEET BETWEEN SOIL WALLS AS MEASURED FROM THE BOTTOM.
- 5.) ALL PROPOSED UTILITY SERVICE WORK SHALL COMPLY WITH THE TOWN OF FRAMINGHAM D.P.W. CONSTRUCTION STANDARDS.

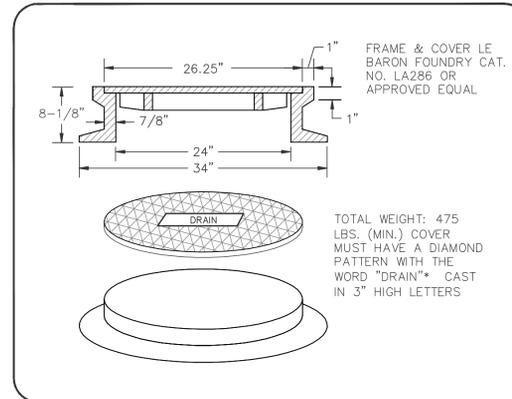
TYPICAL DRAIN LINE TRENCH

NOT TO SCALE



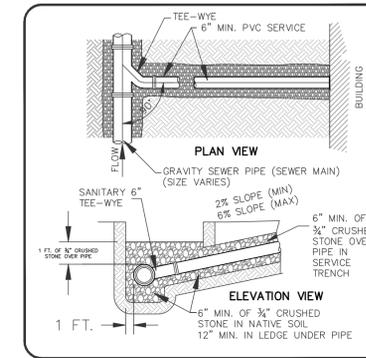
STANDARD DRAIN MANHOLE FRAME & COVER

NOT TO SCALE



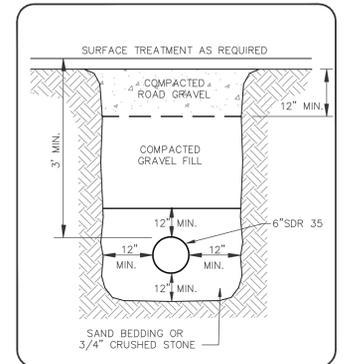
TYPICAL SEWER SERVICE CONNECTION

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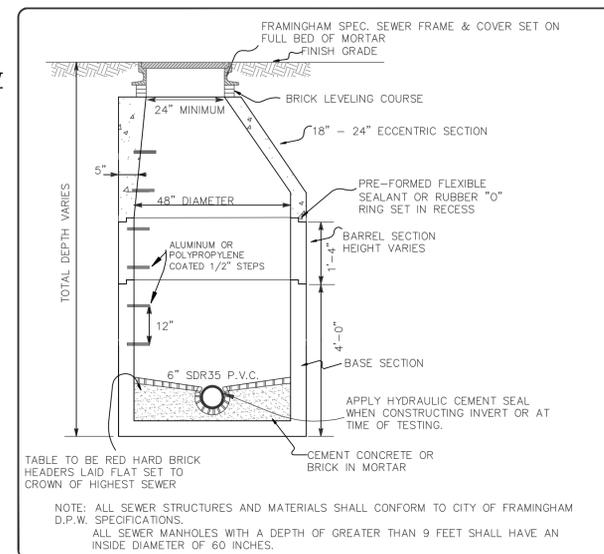
TYPICAL SEWER TRENCH

NOT TO SCALE



PRECAST CONCRETE SEWER MANHOLE

NOT TO SCALE

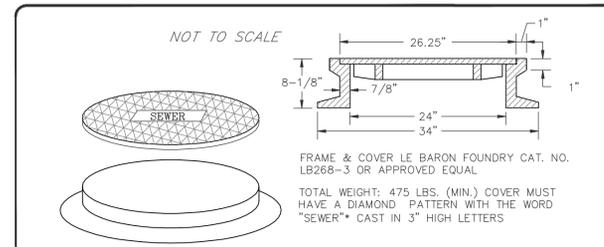


PAVEMENT AND BASE MATERIALS AND INSTALLATION

- 1) ALL MATERIALS AND CONSTRUCTION METHODS SHALL COMPLY WITH THE TOWN OF FRAMINGHAM DEPARTMENT OF PUBLIC WORKS CONSTRUCTION STANDARDS.
- 2) BITUMINOUS PAVING SHALL NOT BE PLACED WHEN AMBIENT TEMPERATURE IS BELOW 40-DEGREES FAHRENHEIT, OR WHEN THERE IS FROST IN THE BASE, OR WHEN WEATHER CONDITIONS ARE UNSUITABLE IN ANY WAY.
- 3) CONTRACTOR SHALL SAWCUT ALL EXISTING TRENCHES AND EXCAVATIONS WHEN LOCATED WITHIN LIMITS OF EXISTING PAVEMENT. PAVEMENT BREAKER MAY BE USED FOR INITIAL EXCAVATION AND A SAWCUT MAY BE EMPLOYED TO PROVIDE NEATER CUT FOR TRENCH PRIOR TO PLACEMENT OF NEW PAVEMENT.
- 4.) SAWCUTS SHALL EXTEND COMPLETELY THROUGH BINDER AND TOP COURSE LAYERS.
- 5) PAVEMENT EDGES SHALL BE TRIMMED AND CLEANED FOR A NEAT VERTICAL FACE FREE OF LOOSE MATERIALS AND DEBRIS.
- 6.) CONTRACTOR SHALL EXERCISE CARE TO PREVENT OR MINIMIZE DAMAGE TO EXISTING PAVEMENT SURROUNDING EXCAVATION WORK.
- 7) BACKFILL IN TRENCHES SHALL BE IN ACCORDANCE WITH SPECIFIC UTILITY TRENCH REQUIREMENTS. BACKFILL MATERIAL IN TRENCHES SHALL CONSIST OF GRANULAR GRAVEL BORROW, PROCESSED GRAVEL, SAND OR CRUSHED STONE MATERIAL. BACKFILL MATERIAL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 12-INCH LIFTS AND COMPACTED TO NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY AASHTO DESIGNATION T99 COMPACTION TEST METHODS.
- 8.) BROKEN PAVEMENT, LARGE STONES, ROOTS AND OTHER DEBRIS SHALL NOT BE USED IN TRENCH BACKFILL
- 9.) PERMANENT PAVEMENT SHALL CONSIST OF A TOP COURSE LAYER OF NOT LESS THAN TWO-INCHES (2") AND A BINDER COURSE LAYER OF NOT LESS THAN THREE-INCHES (3") AFTER COMPACTION. PAVEMENT SHALL BE MIXED IN ACCORDANCE WITH MASSDOT SPECIFICATION SECTION M3.11.03 (TABLE A).
- 10.) PAVEMENT SHALL BE COMPACTED AND ROLLED BY AN OSCILLATING ROLLER WITH A WEIGHT OF NOT LESS THAN 10-TONS. ROLLER SHALL MAKE AT LEAST FOUR PASSES OVER ALL NEWLY PLACED PAVEMENT.
- 11.) ROLLER SHALL NOT EXCEED A SPEED OF 3 MILES PER HOUR DURING ROLLING OPERATIONS TO ENSURE PROPER COMPACTION. ANY RIDGES, INDENTATIONS SHALL BE ROLLED ADDITIONALLY UNTIL THEY ARE REMOVED.
- 12.) GRAVEL BASE MATERIAL SHALL CONSIST OF A LAYER OF EITHER DENSE GRADE CRUSHED STONE COMPLYING WITH REQUIREMENTS OF MASSDOT SECTION M2.01.7 OR GRAVEL BORROW COMPLYING WITH REQUIREMENTS OF MASSDOT SECTION M1.03.0.
- 13.) BASE MATERIALS SHALL BE PLACED IN LIFTS NOT TO EXCEED EIGHT-INCHES (8") AND COMPACTED TO NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH AASHTO SPECIFICATION T99.
- 14.) SUITABLE SUBBASE MATERIALS SHALL BE COMPACTED TO NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH AASHTO SPECIFICATION T99.
- 15.) UNSUITABLE SUBBASE MATERIAL SHALL BE REMOVED AND REPLACED WITH MATERIAL IN CONFORMANCE WITH MASSDOT SPECIFICATION M1.02.0, SPECIAL BORROW OR SPECIFICATION M.2.03.0 FOR GRAVEL BORROW.
- 16.) IMPORTED SUBBASE MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEEDING TWELVE-INCHES AND COMPACTED IN TO NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH AASHTO SPECIFICATION T99.

SEWER MANHOLE FRAME AND COVER

NOT TO SCALE



FRAMINGHAM PLANNING BOARD
APPROVAL UNDER SUBDIVISION CONTROL LAW REQUIRED

DATE: _____

THIS ENDORSEMENT OF THE PLANNING BOARD SHOULD NOT BE CONSTRUED TO BE A DETERMINATION OF CONFORMANCE WITH ZONING REGULATIONS.

FOR METROWEST ENGINEERING, INC. DATE
ROBERT A. GEMMA, P.E. # 31967 (CIVIL)

DEFINITIVE SUBDIVISION PLAN

DETAILS PLAN
#673 CONCORD STREET
IN
FRAMINGHAM, MASS
(MIDDLESEX COUNTY)

PREPARED FOR:
GREENHOUSE REALTY TRUST
673 CONCORD STREET
FRAMINGHAM, MA 01701

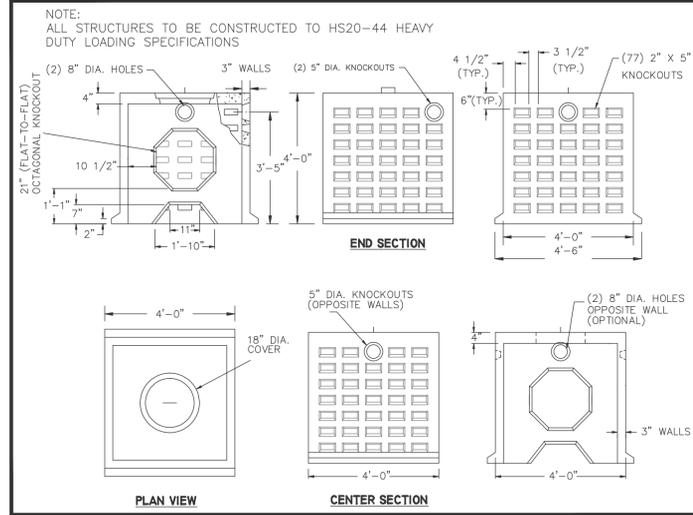
PROPERTY OF:
GREENHOUSE REALTY TRUST
673 CONCORD STREET
FRAMINGHAM, MA 01701

ENGINEERS & SURVEYORS:
MWE METROWEST ENGINEERING, INC.
75 FRANKLIN STREET
FRAMINGHAM, MA 01702
TEL.: (508)626-0063
FAX.: (508)875-6440

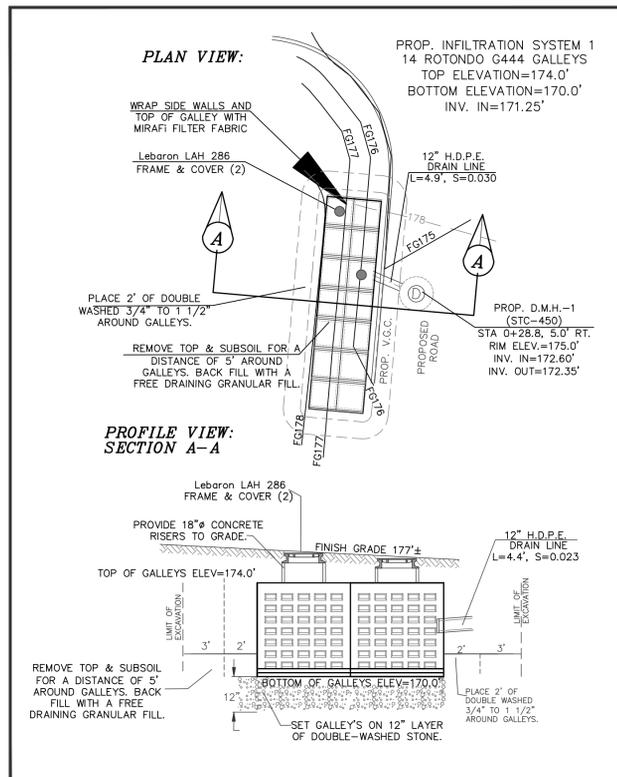
SHEET 12 OF 13 DATE: AUGUST 22, 2016

CALC'D BY: PS,BTN FIELD BK: 606,624 CAD FILE: DEF_SUB_2.dwg
DRAFTER: BTN PROJECT: FRM_C0N4 DWG FILE: SD082216.dwg

DRAINAGE INFILTRATION LEACHING GALLEYS
NOT TO SCALE



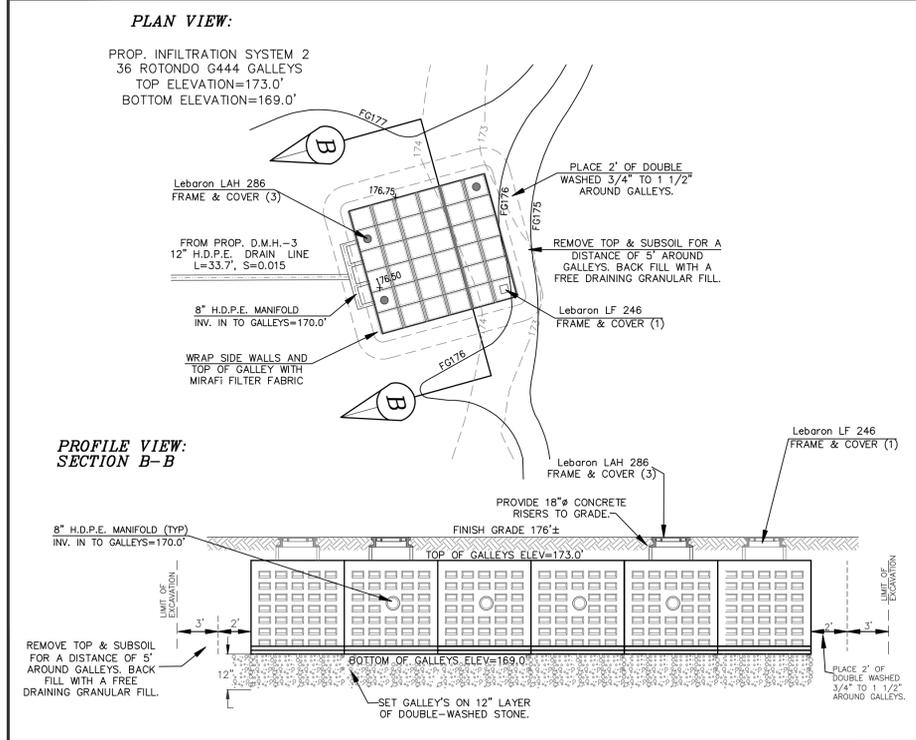
PROPOSED INFILTRATION SYSTEM 1
NOT TO SCALE



H.D.P.E. DRAIN PIPE MATERIALS AND INSTALLATION

- 1.) ALL PIPE SHALL CONFORM TO MASSDOT SECTION M5.03.10.
- 2.) PIPE SHALL BE SMOOTH INTERIOR WALL AND CORRUGATED EXTERIOR WALL AND SHALL BE BELL AND SPIGOT CONNECTION.
- 3.) PIPE SHALL COMPLY WITH REQUIREMENTS AND MARKINGS FOUND IN AASHTO DESIGNATIONS M252 AND M294.
- 4.) ALL PIPE SHALL SUPPORT AN HS-20 LIVE LOAD WITH A MAXIMUM DEFLECTION OF 5% OF THE PIPE DIAMETER.
- 5.) ALL PIPE AND FITTINGS SHALL BE MADE FROM VIRGIN POLYETHYLENE COMPOUNDS WHICH CONFORM TO CURRENT AASHTO CLASSIFICATIONS AND ALSO AS DEFINED IN ASTM D3530.
- 6.) PIPES SHALL BE CAREFULLY LAID TO LINES AND GRADES AS SHOWN ON DESIGN PLANS.
- 7.) PIPE BEDDING MATERIAL SHALL BE PLACED TO A DEPTH OF NO LESS THAN SIX-INCHES BELOW THE INVERT OF THE PIPE.
- 8.) TRENCHES FOR DRAIN LINES SHALL PROVIDE MINIMUM OF TWELVE-INCHES (12") OF HORIZONTAL CLEARANCE FROM SIDES OF PIPE TO EDGE OF TRENCH.
- 9.) INSTALLATION OF H.D.P.E. PIPE SHALL BE IN ACCORDANCE WITH ASTM D2321 AND AS RECOMMENDED BY THE MANUFACTURER.
- 10.) WATER TIGHT JOINTS SHALL BE USED ON ALL PIPES IN ACCORDANCE WITH ASTM D3212. PIPE JOINTS SHALL BE BELL AND SPIGOT WITH ELASTOMERIC RUBBER GASKETS MEETING OR EXCEEDING ASTM F477.
- 11.) PIPE BEDDING MATERIAL OR 3/4" CRUSHED STONE SHALL BE CAREFULLY BACKFILLED AND COMPACTED AROUND PIPE TO A DEPTH OF TWELVE-INCHES ABOVE THE TOP OF PIPE.
- 12.) MATERIAL FOR BACKFILLING THE REMAINDER OF THE TRENCH, PAVEMENT AND PAVEMENT BASE MATERIAL EXCLUDED, SHALL BE BACKFILLED AND COMPACTED IN TWELVE-INCH LIFTS WITH SUITABLE MATERIAL WITH NO STONES GREATER THAN FOUR-INCHES IN DIAMETER. MATERIAL SHOULD BE FREE OF ORGANICS AND DEBRIS.
- 13.) TRENCH SHALL BE FINISHED WITH SIX-INCHES (6") OF LOAM AND SEED IN NON PAVED AREAS AND PREPARED IN ACCORDANCE WITH PAVEMENT STRUCTURE IN PAVED AREAS.

PROPOSED INFILTRATION SYSTEM 2
NOT TO SCALE



DRAINAGE MATERIALS NOTES:
PRECAST CONCRETE DRAIN MANHOLE MATERIALS AND INSTALLATION

- 1.) ALL MATERIALS ASSOCIATED SHALL BE IN ACCORDANCE WITH THE DESIGN PLANS, THE TOWN OF FRAMINGHAM DEPARTMENT OF PUBLIC WORKS CONSTRUCTION STANDARDS.
- 2.) STORMCEPTOR UNITS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
- 3.) FILTER FABRIC SHALL BE MIRAFI 140N (TENCATE INDUSTRIES) OR APPROVED EQUAL.
- 4.) MANHOLES SHALL BE CONSTRUCTION OF REINFORCED PRECAST CONCRETE BASE SECTION, BARREL SECTION AND DOME SECTION MEETING THE REQUIREMENTS OF ASTM C78 AND AASHTO M199. CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 P.S.I.
- 5.) IN CASES WHERE VERTICAL TOLERANCE DOES NOT PERMIT A CONE TOP SECTION, A PRECAST CONCRETE FLAT SECTION MAY BE USED.
- 6.) MANHOLES SHALL MEET OR EXCEED HS-20 LOADING REQUIREMENTS.
- 7.) MANHOLES SHALL HAVE A MINIMUM OPENING OF 26-INCHES AND A MINIMUM INSIDE DIAMETER OF FOUR-FOOT (4').
- 8.) MANHOLES SHALL HAVE TONGUE AND GROOVE JOINTS BETWEEN SECTIONS THAT ARE MORTARED OR SEALED WITH BUTYL RUBBER SEALANTS.
- 9.) PIPE INLETS AND OUTLETS SHALL BE SEALED WITH MORTAR OR RUBBER SEALANTS OR BOOT TYPE CONNECTIONS.
- 10.) DRAIN MANHOLES SHALL BE PLACED ON A LAYER OF COMPACTED, LEVEL, BEDDING MATERIAL NOT LESS THAN SIX-INCHES IN HEIGHT.
- 11.) MANHOLE SECTIONS SHALL BE CAREFULLY PLACED SO THAT ALL SECTIONS ARE LEVEL AND PLUMB.
- 12.) EXCAVATION AROUND THE MANHOLE STRUCTURE SHALL BE BACKFILLED AND COMPACTED IN TWELVE-INCH (12") LIFTS WITH SUITABLE MATERIALS.
- 13.) ROAD BASE MATERIAL AND PAVEMENT MATERIALS SHALL BE INSTALLED AROUND STRUCTURES IN ACCORDANCE WITH BASE AND PAVEMENT PREPARATION INSTRUCTIONS.
- 14.) FRAME AND COVER SHALL BE ADJUSTED TO FINISH GRADE USING LAYERS OF MORTAR AND BRICK.
- 15.) FRAME AND COVERS SHALL MEET ASTM A888 AND MADE FROM CLASS 20, GREY CAST IRON.

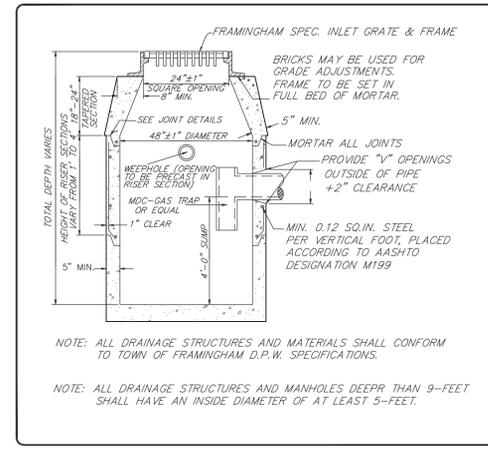
PRECAST CONCRETE DRAIN CATCH BASIN MATERIALS AND INSTALLATION

- 1.) ALL MATERIALS ASSOCIATED SHALL BE IN ACCORDANCE WITH THE DESIGN PLANS, THE TOWN OF FRAMINGHAM DEPARTMENT OF PUBLIC WORKS CONSTRUCTION STANDARDS.
- 2.) ALL CATCH BASINS SHALL HAVE A SUMP OF AT LEAST FOUR-FOOT (48-INCHES) BELOW THE INVERT OF THE OUTLET PIPE AND SHALL HAVE A HOOD ON OUTLET PIPES.
- 3.) CATCH BASIN HOODS SHALL EXTEND AT LEAST ONE-FOOT BELOW THE INVERT OF THE OUTLET PIPE.
- 4.) CATCH BASINS SHALL BE CONSTRUCTED OF REINFORCED PRECAST CONCRETE BASE SECTION, BARREL SECTION AND DOME SECTION MEETING THE REQUIREMENTS OF ASTM C78 AND AASHTO M199. CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 P.S.I.
- 5.) IN CASES WHERE VERTICAL TOLERANCE DOES NOT PERMIT A CONE TOP SECTION, A PRECAST CONCRETE FLAT SECTION MAY BE USED.
- 6.) CATCH BASINS SHALL MEET OR EXCEED HS-20 LOADING REQUIREMENTS.
- 7.) CATCH BASINS SHALL HAVE A MINIMUM OPENING OF 26-INCHES AND A MINIMUM INSIDE DIAMETER OF FOUR-FOOT (4').
- 8.) CATCH BASINS SHALL HAVE TONGUE AND GROOVE JOINTS BETWEEN SECTIONS THAT ARE MORTARED OR SEALED WITH BUTYL RUBBER SEALANTS.
- 9.) PIPE INLETS AND OUTLETS SHALL BE SEALED WITH MORTAR OR RUBBER SEALANTS OR BOOT TYPE CONNECTIONS.
- 10.) DRAIN MANHOLES SHALL BE PLACED ON A LAYER OF COMPACTED, LEVEL, BEDDING MATERIAL NOT LESS THAN SIX-INCHES IN HEIGHT.
- 11.) CATCH BASIN SECTIONS SHALL BE CAREFULLY PLACED SO THAT ALL SECTIONS ARE LEVEL AND PLUMB.
- 12.) EXCAVATION AROUND THE MANHOLE STRUCTURE SHALL BE BACKFILLED AND COMPACTED IN TWELVE-INCH (12") LIFTS WITH SUITABLE MATERIALS.
- 13.) ROAD BASE MATERIAL AND PAVEMENT MATERIALS SHALL BE INSTALLED AROUND STRUCTURES IN ACCORDANCE WITH BASE AND PAVEMENT PREPARATION INSTRUCTIONS.
- 14.) MANHOLE ACCESS FRAME AND COVER SHALL CONSIST OF EAST JORDAN IRONWORKS 5523A/5524Z FRAME AND 5520 M5 COVER.
- 15.) FRAME AND COVER SHALL BE ADJUSTED TO FINISH GRADE USING LAYERS OF MORTAR AND BRICK.

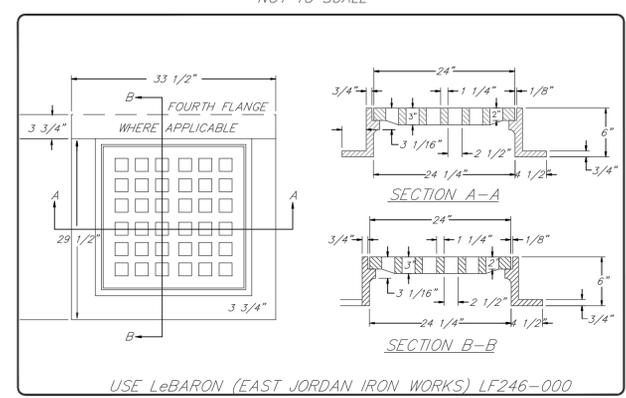
SUBSURFACE INFILTRATION SYSTEM MATERIALS AND INSTALLATION

- 1.) ALL MATERIALS ASSOCIATED SHALL BE IN ACCORDANCE WITH THE DESIGN PLANS AND THE TOWN OF FRAMINGHAM DEPARTMENT OF PUBLIC WORKS CONSTRUCTION STANDARDS.
- 2.) SUBSURFACE LEACHING CHAMBERS SHALL BE SHEA DW-SDW GALLEYS OR APPROVED EQUAL.
- 3.) FILTER FABRIC SHALL BE MIRAFI 140N (TENCATE INDUSTRIES) OR APPROVED EQUAL.
- 4.) ACCESS MANHOLES SHALL BE REQUIRED AT LOCATIONS SPECIFIED ON DESIGN PLANS.
- 5.) ACCESS MANHOLES SHALL CONSIST OF EAST JORDAN IRONWORKS 2111Z/2111A, HEAVY DUTY FRAME AND COVER AND SHALL MEET OR EXCEED HS-20 LOADING REQUIREMENTS.
- 6.) ACCESS MANHOLES SHALL BE ADJUSTED TO FINISH GRADE WITH PRECAST CONCRETE RISERS AND/OR LAYERS OF BRICK AND MORTAR.
- 7.) EXCAVATION FOR PRECAST LEACHING CHAMBERS SHALL BE DONE CAREFULLY TO AVOID SMEARING AND COMPACTION OF BOTTOM AND EXCAVATION SIDEWALLS.
- 8.) ANY UNSUITABLE MATERIAL SHALL BE REMOVED AND REPLACED WITH FREE DRAINING MATERIAL, INCLUDING BUT NOT LIMITED TO TITLE V SAND.
- 9.) ALL PRECAST LEACHING CHAMBERS SHALL BE PLACED ON A TWELVE-INCH (12") DEEP LAYER OF COMPACTED 3/4" TO 1 1/2" DOUBLE WASHED CRUSHED STONE.
- 10.) PRECAST LEACHING CHAMBERS SHALL BE CAREFULLY PLACED AT THE SAME ELEVATION IN ROWS AND BUTTED TOGETHER SO NO VOIDS EXIST BETWEEN UNITS.
- 11.) AREAS BETWEEN ROWS OF PRECAST LEACHING CHAMBERS SHALL BE FILLED WITH 3/4" TO 1 1/2" DOUBLE WASHED STONE.
- 12.) ALL PIPES SHALL BE SECURELY MORTARED IN PLACE TO PROVIDE WATER TIGHT CONNECTIONS.
- 13.) FILTER FABRIC SHALL BE INSTALLED AROUND THE SIDES, AND ON TOP OF THE PRECAST LEACHING CHAMBERS.
- 14.) CONTRACTOR SHALL OVERLAP ROWS OF FILTER FABRIC ONE-HALF FOOT (0.5') AND CAREFULLY BACKFILL AROUND AND ON TOP OF THE LEACHING CHAMBERS TO AVOID SHIFTING OR TEARING FILTER FABRIC.
- 15.) INSTALL AND COMPACT 3/4" TO 1 1/2" DOUBLE WASHED STONE IN TWELVE-INCH (12") LIFTS FOR A DISTANCE OF TWO-FOOT (2') AROUND THE PERIMETER OF LEACHING CHAMBERS.

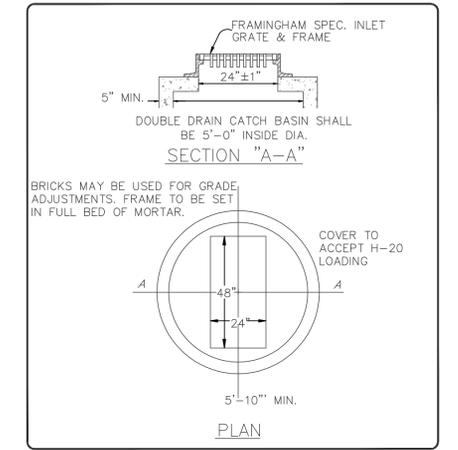
PRECAST CONCRETE CATCH BASIN
NOT TO SCALE



SQUARE CATCH BASIN FRAME & GRATE
NOT TO SCALE



DOUBLE GRATE CATCH BASIN TOP
NOT TO SCALE



FRAMINGHAM PLANNING BOARD
APPROVAL UNDER SUBDIVISION CONTROL LAW REQUIRED

DATE:
THIS ENDORSEMENT OF THE PLANNING BOARD SHOULD NOT BE CONSTRUED TO BE A DETERMINATION OF CONFORMANCE WITH ZONING REGULATIONS.

FOR METROWEST ENGINEERING, INC. DATE
ROBERT A. GEMMA, P.E. # 31967 (CIVIL)

DEFINITIVE SUBDIVISION PLAN

DETAILS PLAN
#673 CONCORD STREET
IN
FRAMINGHAM, MASS
(MIDDLESEX COUNTY)

PREPARED FOR:
GREENHOUSE REALTY TRUST
673 CONCORD STREET
FRAMINGHAM, MA 01701

PROPERTY OF:
GREENHOUSE REALTY TRUST
673 CONCORD STREET
FRAMINGHAM, MA 01701

ENGINEERS & SURVEYORS:
MWE METROWEST ENGINEERING, INC.
75 FRANKLIN STREET
FRAMINGHAM, MA 01702
TEL.: (508)626-0063
FAX.: (508)875-6440

SHEET 13 OF 13 DATE: AUGUST 22, 2016

CALC'D BY: PS,BTN FIELD BK: 606,624 CAD FILE: DEF_SUB_2.dwg
DRAFTER: BTN PROJECT: FRM_CON4 DWG FILE: SD082216.dwg

