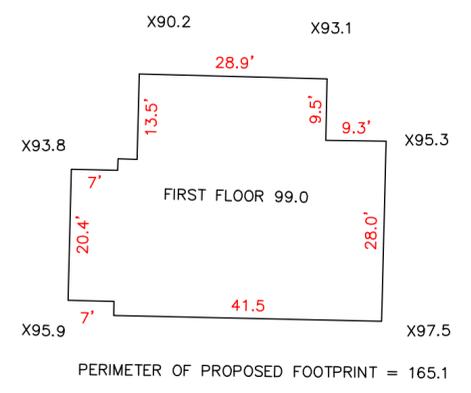
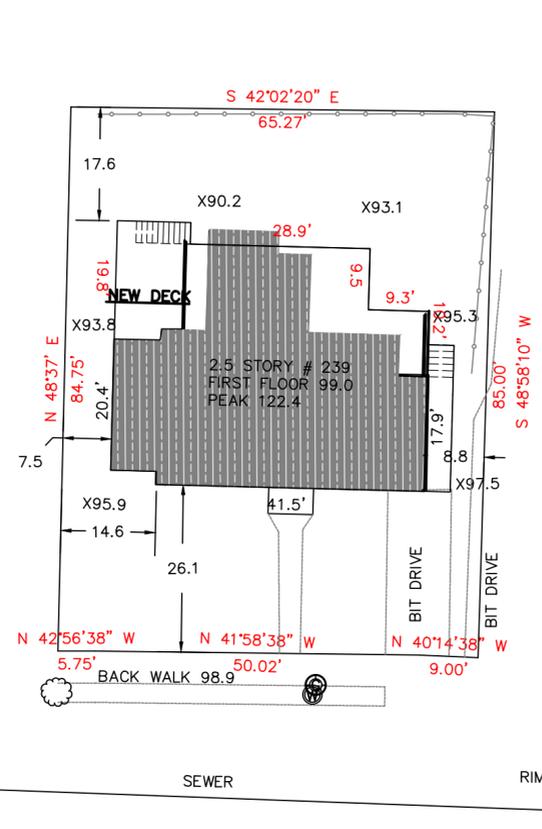


PROPOSED ADDITION
 239 CYPRESS STREET
 NEWTON, MA.
 SCALE: 1 IN = 20 FT
 SEPT 10, 2014
 DEC 12, 2014



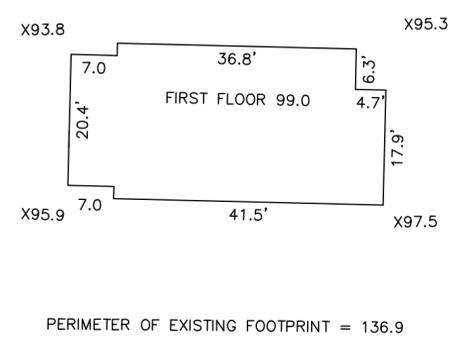
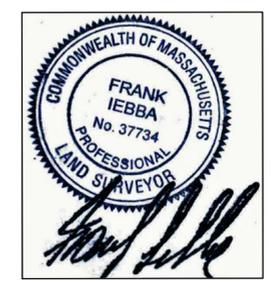
EXISTING
 2.5 STORY
 PROPOSED
 ADDITIONS

RECORD AREA:
 5490 SF
 SR 3 OLD LOT



PROPOSED

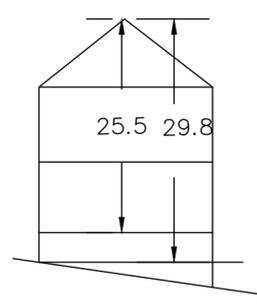
GRADE PLANE 94.6
 TOP FOUND: 97.9
 BASEMENT: $100(7.8-3.3)/7.8=$
 58 % BELOW GRADE
 PROP LOT COVER = 28.7 %
 PROP OPEN SPACE = 61 %
 UNDER PROPOSED CONDITIONS
 31 % OF BASEMENT COUNTS IN FAR



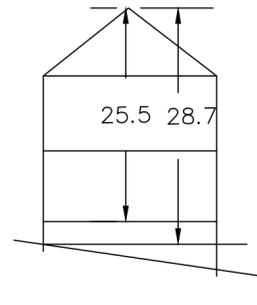
EXISTING

GRADE PLANE 95.7
 TOP FOUND: 97.9
 BASEMENT: $100(7.8-2.2)/7.8=$
 72 % BELOW GRADE
 EXIST LOT COVER = 20.4 %
 EXIST OPEN SPACE = 70 %
 UNDER EXISTING CONDITIONS
 14.6 % OF THE BASEMENT COUNTS IN FAR

BOOK 51320 PAGE 489
 PLAN BOOK 412 PLAN 68, REC MAY 11, 1928



PROPOSED GRADE PLANE 94.6



EXISTIN GRADE PLANE 95.7

ESSEX ENG. & SURVEY
 PO BOX 620622 NEWTON LOWER FALLS
 MA. 02462-0622

617-797-7342
 FRANK.IEBBA@GMAIL.COM

DISCUSSION:

THE PROPOSED IMPERVIOUS SURFACE FOR THE LOT FOR DRIVE, WALK AND HOUSE AFTER DEVELOPMENT IS APPROX. 600 SF. USING A RUNOFF C OF .3 FOR NATURAL AND .9 FOR IMPERVIOUS SURFACES THE POSTDEVELOPMENT RUNOFF IS AS FOLLOWS:
 $600 SF(.9 - .3)(.97/12) = 210 CF (100 YR STORM)$

THE PROPOSAL IS TO STORE THE EXTRA VOLUME BY UTILIZING DRYWELLS.

METHODOLOGY:

PERCOLATION RATE: 20 MIN. PER INCH (SITE PERCOLATION)

DRYWELL SIZE:

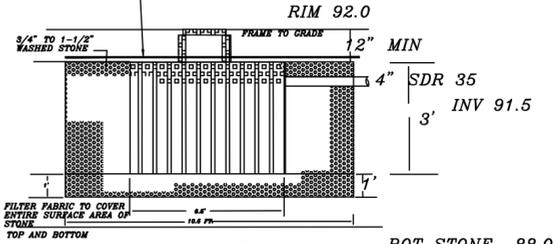
10 FT 6 IN DIAMETER
 3 FT DEEP
 $BOTTOM AREA = 3.14 * D^2 / 4 = 3.14 * 10.5^2 / 4 = 86.6 SF$
 $VOLUME OF PIT: 3.14 * D^2 * H / 4 = 3.14 * 6.5 * 3 / 4 = 99.5 CF$
 $VOLUME OF STONE = 3.14 * D^2 * H / 4 = 3.14 * 10.5^2 * 10.5^3 / 4 = 259.8 CF$
 VOID STORAGE VOLUME = VOID RATIO (STONE VOLUME - PIT VOLUME)

STORAGE PER DRYWELL = $99.5 + 58.1 = 157.6 CF$
 $(.35(259.8 - 99.5)) = 58.1$

INFILTRATION CAPACITY = $BOTTOM AREA * INFILTRATION RATE$
 $= 86.6 SF * .05 IN/MIN * 1/12 * 60/HR$
 $= 21.6 CF/HOUR$
 $= 518 CF/DAY$

ONE DRYWELL REQUIRED

TOP OF DRYWELL TO BE COVERED WITH A MINIMUM 3" PEASTONE AND ENCASED WITH FILTER FABRIC



DRYWELL DETAIL (NTS)
 BOT STONE 88.0
 TOP OF DRYWELL TO BE COVERED WITH A MINIMUM 3" PEASTONE

TP (12-12-14)

- ⊕ 0-8" TOPSOIL 10 YR 4/3
- ⊕ 8-6" FT SANDY LOAM 10 YR 5/5
- ⊕ 6-9" SANDY LOAM 10 YR 5/4
- SEASONAL HIGH WATER ⊕ 7' NO LEDGE
- PERC 20 MIN/IN ⊕ 36"



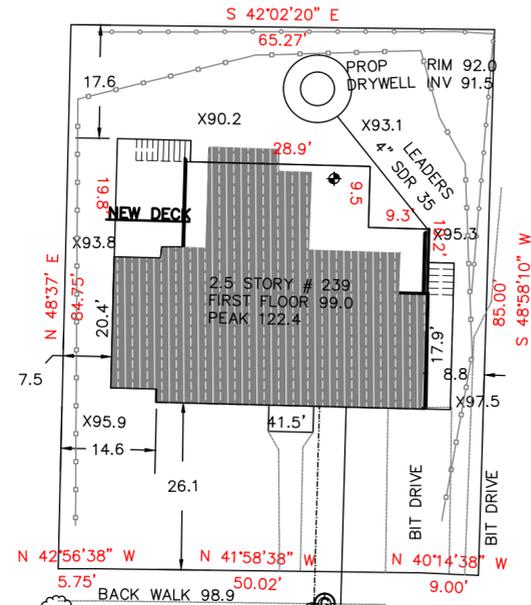
SILT FENCE DETAIL

CONSTRUCTION SEQUENCE
 EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED PRIOR TO ANY CONSTRUCTION

AS OF JAN 1, 2009, ALL TRENCH EXCAVATION CONTRACTORS SHALL COMPLY WITH MGL 22A, TRENCH EXCAVATION AND SAFETY REQUIREMENTS, TO PROTECT THE PUBLIC FROM UNAUTHORIZED ACCESS TO UNATTENDED TRENCHES. AN EXCAVATION PERMIT IS REQUIRED AND APPLIES TO ALL TRENCHES ON PUBLIC OR PRIVATE PROPERTY.

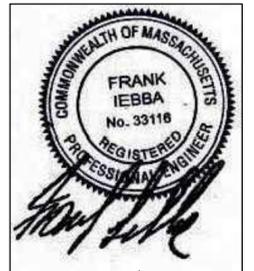
ALL WORK WITHIN THE NEWTON ROW WILL COMPLY WITH THE CITY'S CONSTRUCTION SPECS. AND 521 CMR 21 & 22.

ANY TREE REMOVED FROM THE PROPERTY SHALL MEET THE CITY OF NEWTON TREE ORDINANCE

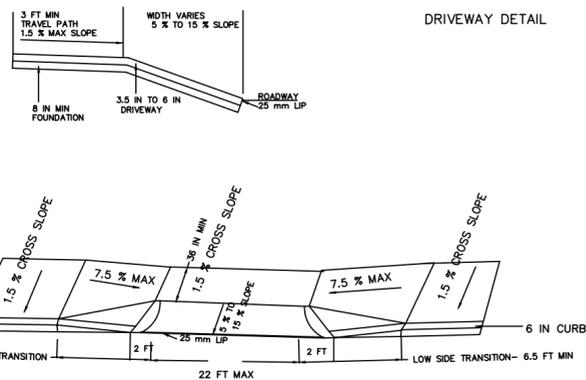


EXISTING 2.5 STORY
 PROPOSED ADDITIONS

RECORD AREA:
 5490 SF
 SR 3 OLD LOT



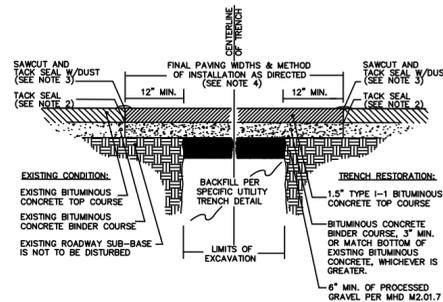
civ/san



DRIVEWAY DETAIL

PROPOSED GRANITE CORNERS, GRANITE CURBING AND CONCRETE APRON WILL BE CONSTRUCTED PER CITY SPECIFICATIONS

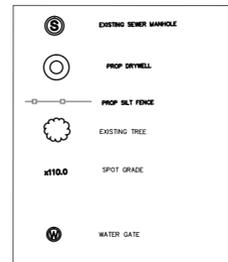
- 1) ALL WORK TO BE IN ACCORDANCE WITH CITY OF NEWTON AND MASS HIGHWAY STANDARDS. DRIVEWAY WILL CONFORM TO MA AAB & NEWTON STANDARDS. A MINIMUM 3 FT (96 IN) WIDTH AND MAX 1.5 % CROSS SLOPE WILL BE MAINTAINED.
- 2) MINIMUM COMPACTION IN TRENCHES TO BE 98%.
- 3) PRIOR TO START CONSTRUCTION ALL APPLICABLE LOCAL AGENCIES AND DIG SAFE WILL BE NOTIFIED AT LEAST 72 HOURS PRIOR TO COMMENCING WORK.
- 4) NO BACKFILLING OF ANY TRENCHES WILL TAKE PLACE UNTIL WORK HAS BEEN INSPECTED AND APPROVED BY THE CITY AND UTILITIES CAN ONLY BE BACKFILLED ON APPROVAL & SIGNOFF BY INSPECTOR.
- 5) AS BUILT UTILITY & GRADING PLAN WILL BE SUBMITTED TO NEWTON DPW(ENG DIV) IN BOTH DIGITAL AND HARD COPY PRIOR TO ISSUANCE OF OCCUPANCY PERMIT. PLAN MUST SHOW ALL UTILITIES, WITH TIES, EASEMENTS AND FINAL GRADING.
- 6) STREET OPENING, SIDEWALK CROSSING, AND UTILITY CONNECTION PERMITS WILL BE OBTAINED FROM THE CITY PRIOR TO COMMENCING ANY WORK.
- 7) TRENCH PAVEMENT PERMANENT PATCH WILL CONFORM NEWTON STANDARDS AND WITH THE TRENCH SECTION SPECIFIED HEREIN.
- 8) LOCATION OF UNDERGROUND UTILITIES IS APPROXIMATE. CONTRACTOR WILL NOTIFY DIG SAFE PRIOR TO COMMENCING WORK. CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGE RESULTING FROM INCORRECTLY LOCATED UTILITIES.
- 9) ALL TRENCH WORK WITHIN THE NEWTON ROW WILL BE BACKFILLED WITH TYPE 1B CDF FILL AS SPECIFIED BY THE ENGINEERING SPECIFICATIONS.
- 10) LOCATION OF UNDERGROUND UTILITIES IS APPROXIMATE. CONTRACTOR WILL VERIFY UTILITY LOCATIONS THROUGH DIGSAFE. ANY DAMAGE CAUSED BY CONTRACTOR AS A RESULT OF UTILITY LOCATIONS SHOWN WILL BE BORNE SOLELY BY CONTRACTOR AT NO COST TO OWNER.
- 11) IT IS THE CONTRACTORS RESPONSIBILITY TO CONTACT THE DESIGN ENGINEER FOR ALL REQUIRED INSPECTIONS SUCH AS MATERIALS USED, COMPACTION, UTILITY AS BUILTS, ETC.. ENGINEER ASSUMES NO RESPONSIBILITY UNLESS HE INSPECTS THE SYSTEM DURING CONSTRUCTION.



1. ALL INSTALLATION AND MATERIAL SPECIFICATIONS PER MASS. HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 1988 AS AMENDED.
2. ALL EXPOSED BITUMINOUS CONCRETE IS TO BE TACKED PER MHD PRIOR TO NEW BITUMINOUS CONCRETE INSTALLATION.
3. ALL EXPOSED JOINTS ARE TO BE SEALED WITH TACK AND STONE DUST.
4. ANY TOP COURSE APPLIED AT A WIDTH OF 6' WIDE OR GREATER IS TO BE PLACED BY MACHINE/BOX SPREADER WHEN & AS DIRECTED BY THE CITY OF NEWTON.

TYPICAL TRENCH REPAIR & PAVEMENT SECTION DETAIL

LEGEND



PROPOSED ADDITION
 239 CYPRESS STREET
 NEWTON, MA.
 SCALE: 1 IN = 20 FT

DEC 12, 2014

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