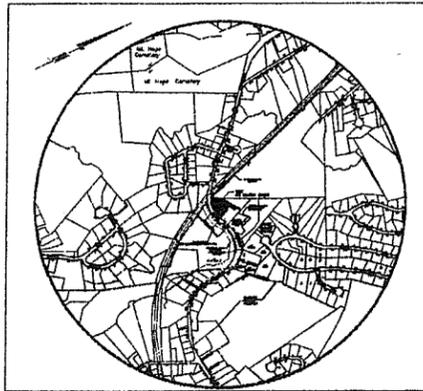


"RICHARDSON CROSSING"

A PROPOSED COMPREHENSIVE PERMIT PROJECT UNDER MGL CHAPTER 40B
ACTON, MASSACHUSETTS

JUNE 19, 2009
REVISED SEPTEMBER 29, 2009



LOCUS PLAN
Scale: 1" = 1200 ft.

OWNERS:
WESTCHESTER COMPANY, INC.
411 MASS. AVE., SUITE 304
ACTON, MA 01720

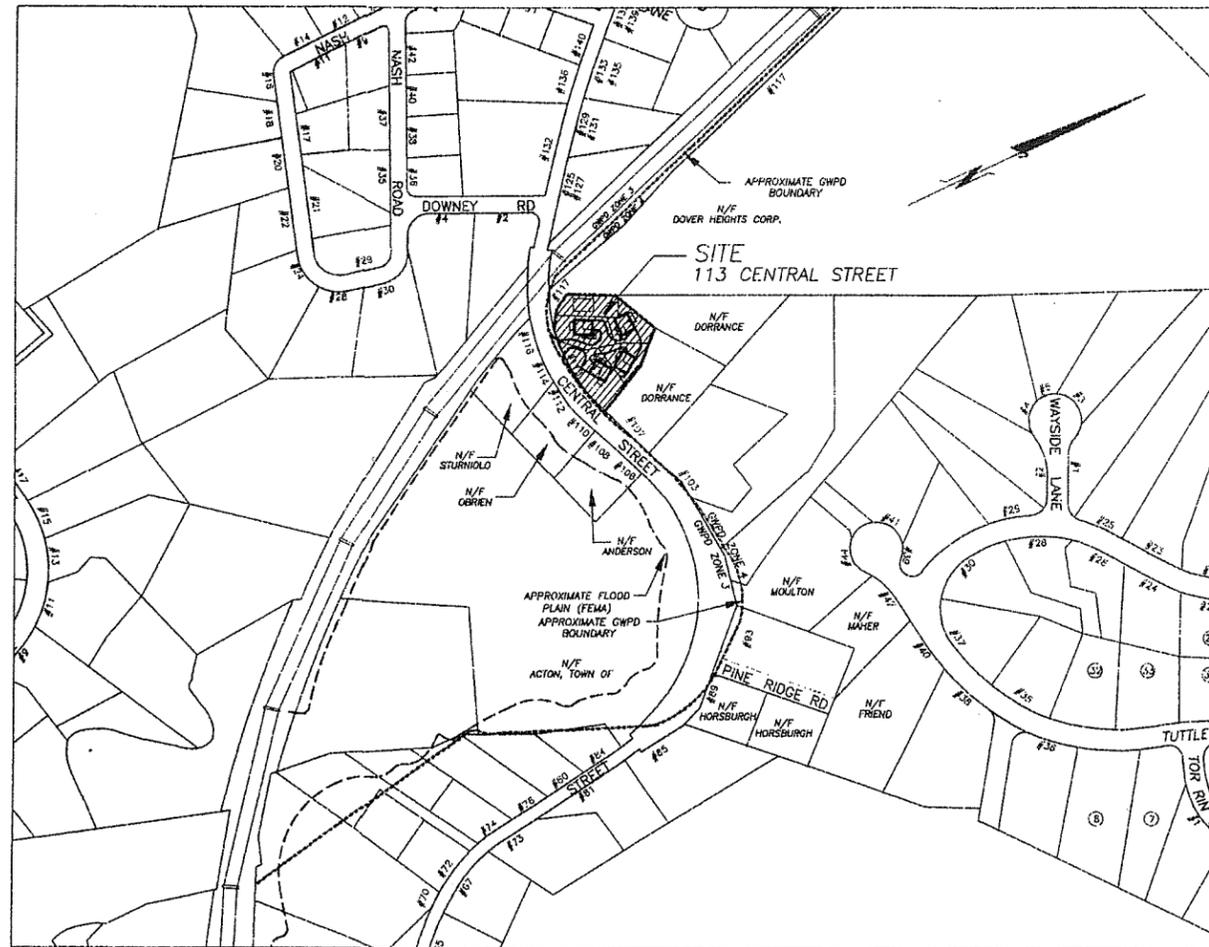
APPLICANT:
RICHARDSON CROSSING, LLC.
411 MASS. AVE., SUITE 304
ACTON, MA 01720

DEED AND PLAN REFERENCE:
DEED BOOK 48077 PAGE 483

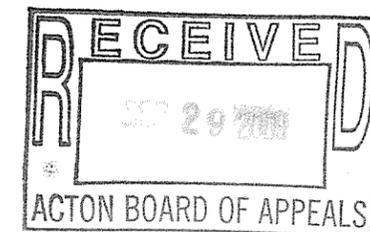
ASSESSOR'S MAP G-2 PARCEL 149

PROPERTY AND EXISTING CONDITIONS
SURVEYED BY FORESITE ENGINEERING
ASSOCIATES, INC.

TOTAL SITE AREA = 0.97 ACRES



VICINITY PLAN
Scale: 1" = 200 ft.



SHEET NO.	TITLE
1	COVER SHEET
2	MASTER DEVELOPMENT PLAN
3	RECORD PLAN
4	NATURAL FEATURES AND EXISTING CONDITIONS
5	SITE DEVELOPMENT PLAN
6	LANDSCAPE PLAN
7	EROSION & SEDIMENTATION CONTROL PLAN

ACTON SURVEY & ENGINEERING, INC.

Civil Engineers • Land Surveyors • Environmental Scientists
97 Great Road P.O. Box 666 Acton, Massachusetts 01720
Phone: (978) 263-3666

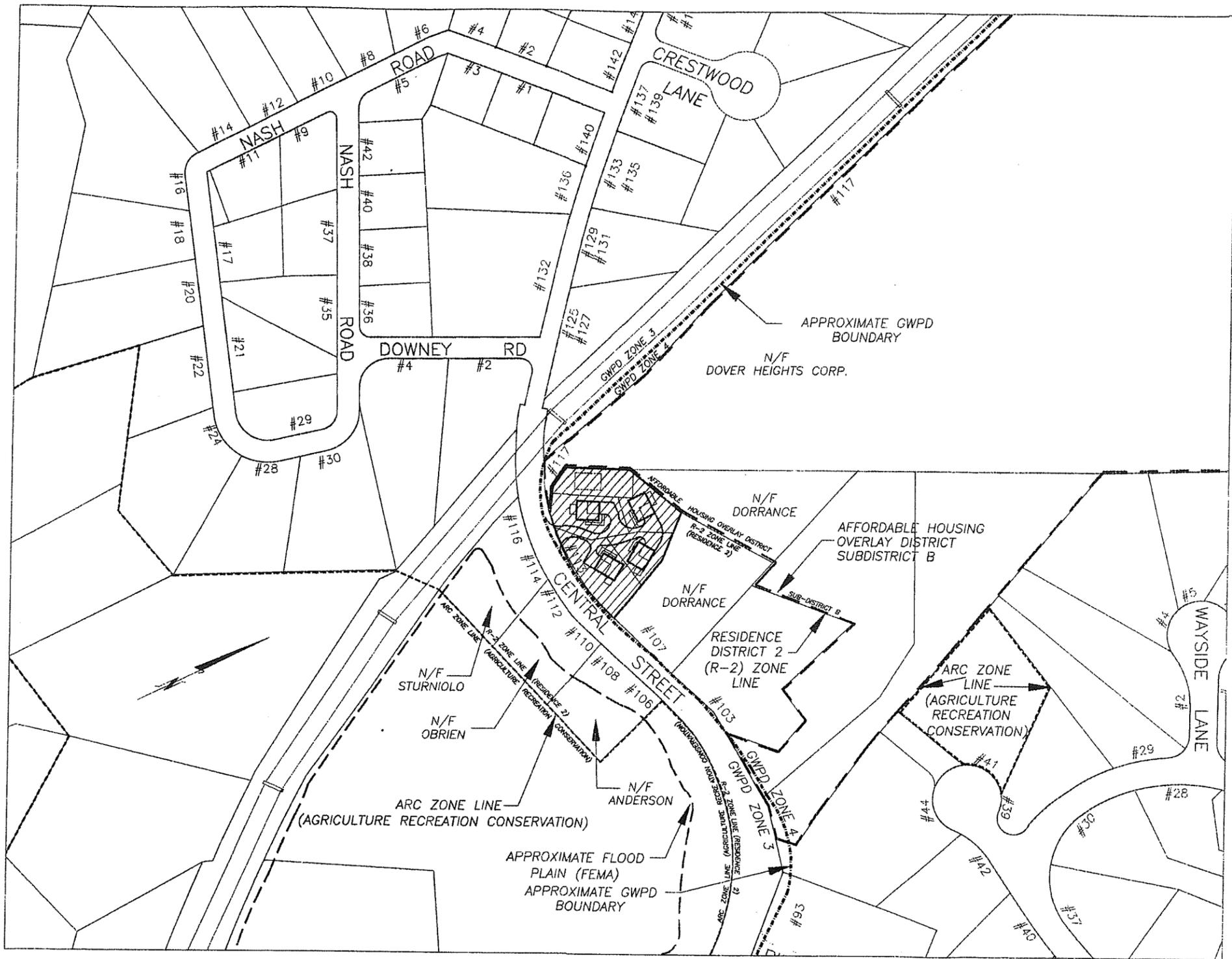
THIS IS TO CERTIFY THAT NOTICE OF APPROVAL OF THIS PLAN BY THE ACTON BOARD OF APPEALS WAS RECEIVED AND RECORDED AT THIS OFFICE ON _____ AND THAT NO APPEAL WAS RECEIVED WITHIN TWENTY DAYS NEXT FOLLOWING RECEIPT AND RECORDING OF THIS NOTICE.

ACTON TOWN CLERK _____ DATE _____
ACTON BOARD OF APPEALS _____
DATE _____

SEE DECISION ON APPLICATION BY RICHARDSON CROSSING, LLC. FOR A COMPREHENSIVE PERMIT. DECISION DATED _____, 2009, RECORDED HERewith.

COVER SHEET
RICHARDSON CROSSING
113 CENTRAL STREET
ACTON, MA
PREPARED FOR:
RICHARDSON CROSSING, LLC
411 MASS AVE, SUITE 304
ACTON, MA 01720
SCALE: AS NOTED DATE: JUNE 19, 2009

Acton Survey & Engineering, Inc.
Since 1967
97 GREAT ROAD
P.O. BOX 666
ACTON, MA 01720
PH. (978) 263-3666
FAX (978) 635-0218



DEVELOPMENT DATA:

EXISTING:
 DWELLING AND GARAGE LOCATED AT 113 CENTRAL STREET TO BE RAZED.

PROPOSED DEVELOPMENT: FOUR SINGLE FAMILY UNITS
 (4) 3-BEDROOM UNITS = 12 BEDROOMS
 (1) AFFORDABLE UNIT; (LOT #3)

THERE ARE NO WETLANDS LOCATED ON THE PROPERTY.
 THE ENTIRE SITE CONSISTS OF UPLANDS.

DWELLING UNIT DENSITY:
 TOTAL UPLAND AREA = 0.97 acres
 TOTAL NUMBER OF UNITS = 4
 NUMBER OF UNITS PER ACRE = 4.1

FLOOR AREA RATIO:
 NET FLOOR AREA/DEVELOPABLE SITE AREA = 0.27

NET FLOOR AREA=11,424 sf (1428sf x 2 floors x 4 units)
 DEV. SITE AREA = 42,253 sf (0.97ac x 43560)

EXISTING IMPERVIOUS COVER = 6,372 sf (15%)
 PROPOSED BUILDING COVERAGE = 5,712 sf (13.5%)
 PROPOSED IMPERVIOUS COVER = 13,488 sf (32%)

ZONING INFORMATION:

DISTRICT:
 RESIDENCE 2; R-2

OVERLAY DISTRICTS:
 GROUNDWATER PROTECTION DISTRICT 4

FLOOD ZONE:
 ZONE X (OUTSIDE OF 500 YR FLOODPLAIN)

ZONING REQUIREMENTS:

AREA (sf):
 FRONTAGE (ft):
 FRONT YARD SETBACK (ft):
 REAR YARD SETBACK (ft):
 SIDE YARD SETBACK (ft):
 MIN. LOT WIDTH:
 NO. UNITS PER LOT:
 FLOOR AREA RATIO:

MINIMUM REQUIRED	PROPOSED LOT #1	PROPOSED LOT #2	PROPOSED LOT #3	PROPOSED LOT #4	PROPOSED PARCEL A
20,000	9,467	7,243	6,557	12,230	7,050
150	NA	NA	NA	NA	NA
30	33	NA	NA	31	NA
10	35	14	12	3	NA
10	7	1	1	28	NA
50	NA	NA	NA	NA	NA
1	1	1	1	1	0
NA	NA	NA	NA	NA	NA

No.	DATE	DESCRIPTION
1	9/29/09	TOWN COMMENTS

REVISIONS

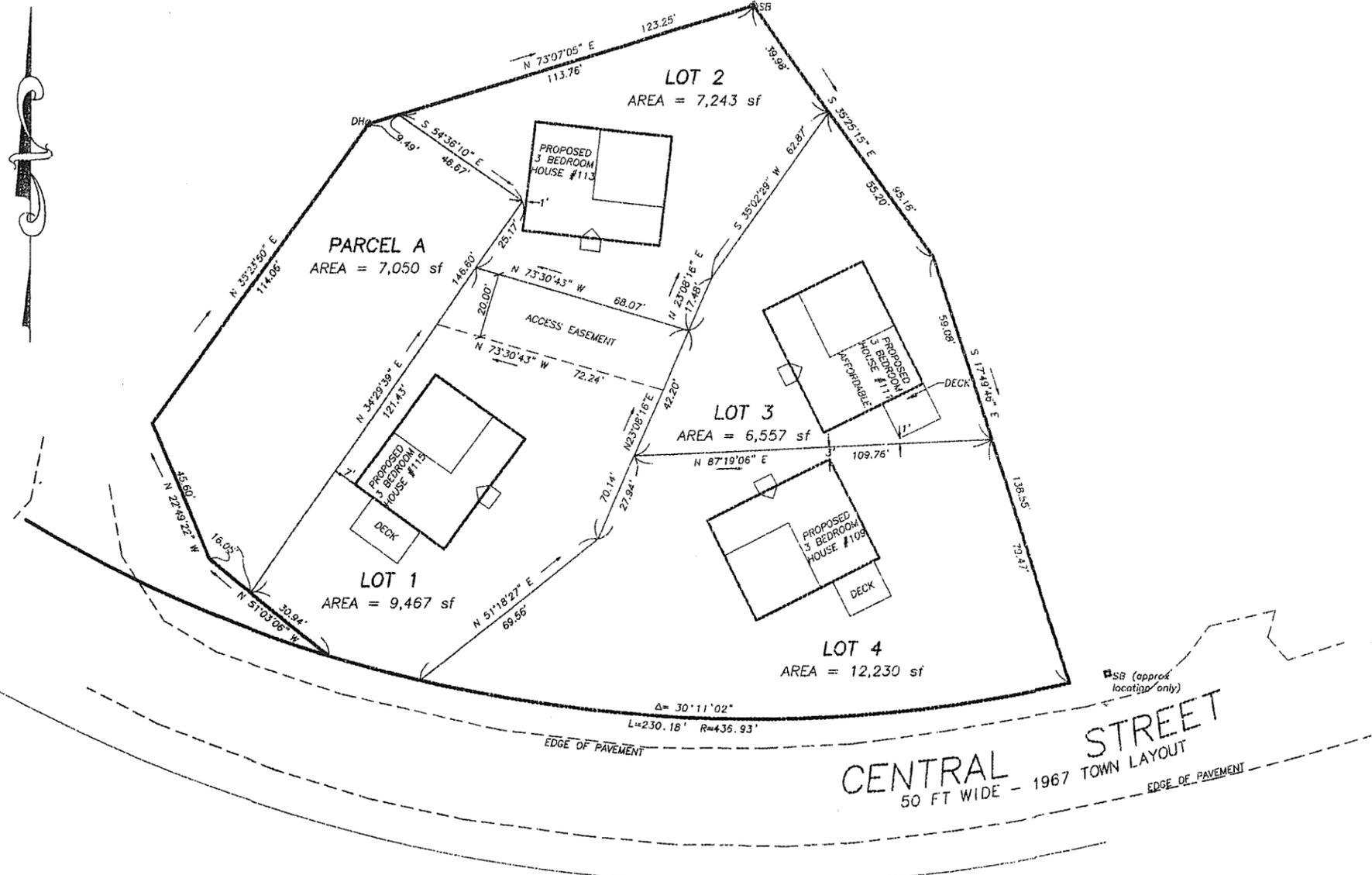
MASTER DEVELOPMENT PLAN
RICHARDSON CROSSING
 113 CENTRAL STREET
 ACTON, MA

PREPARED FOR:
 RICHARDSON CROSSING, LLC
 411 MASS AVE, SUITE 204
 ACTON, MA 01720

SCALE: AS NOTED DATE: JUNE 19, 2009

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OWNERS:
 WESTCHESTER COMPANY, INC.
 411 MASS. AVE., SUITE 304
 ACTON, MA 01720

APPLICANT:
 RICHARDSON CROSSING, LLC.
 411 MASS. AVE., SUITE 304
 ACTON, MA 01720

DEED AND PLAN REFERENCE:
 DEED BOOK 48077 PAGE 483

ASSESSOR'S MAP G-2 PARCEL 149

PROPERTY AND EXISTING CONDITIONS
 SURVEYED BY FORESITE ENGINEERING
 ASSOCIATES, INC.

TOTAL SITE AREA = 0.97 ACRES

THIS IS TO CERTIFY THAT NOTICE OF APPROVAL OF THIS
 PLAN BY THE ACTON BOARD OF APPEALS WAS RECEIVED
 AND RECORDED AT THIS OFFICE ON _____ AND THAT
 NO APPEAL WAS RECEIVED WITHIN TWENTY DAYS NEXT
 FOLLOWING RECEIPT AND RECORDING OF THIS NOTICE.

ACTON TOWN CLERK _____ DATE _____

ACTON BOARD OF APPEALS

 DATE _____

PROPERTY AND EXISTING CONDITIONS
 SURVEYED BY FORESITE ENGINEERING
 ASSOCIATES, INC.

PRIOR TO A PLAN BEING PREPARED FOR REGISTRY STANDARDS, ACTON
 SURVEY & ENGINEERING WILL REQUIRE A PERIMETER SURVEY TO BE
 PERFORMED.

SEE DECISION ON APPLICATION BY RICHARDSON
 CROSSING, LLC. FOR A COMPREHENSIVE PERMIT,
 DECISION _____ DATED _____, 2009,
 RECORDED HEREWITH.

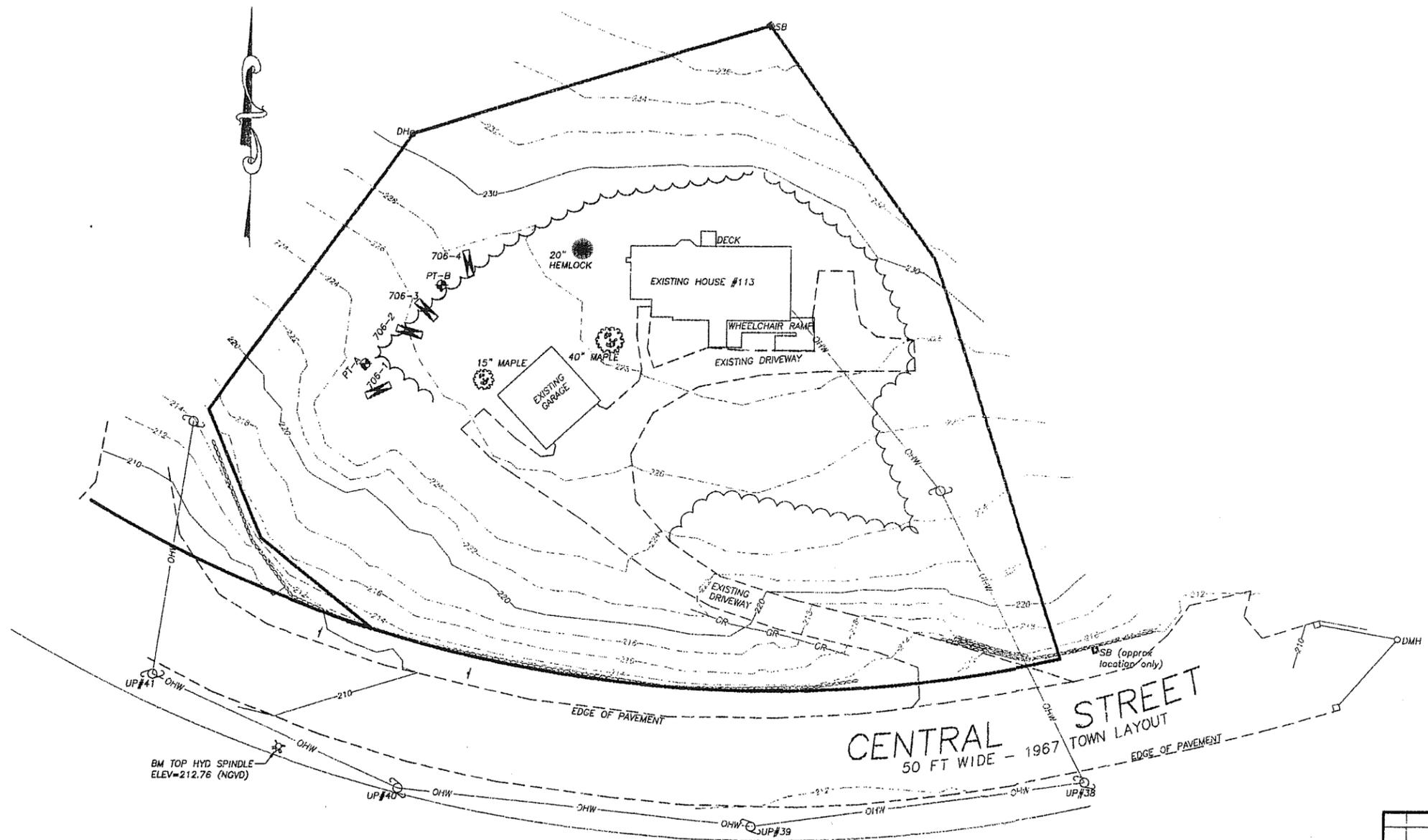
No.	DATE	DESCRIPTION
1	9/29/09	TOWN COMMENTS

REVISIONS

RECORD PLAN-DRAFT
RICHARDSON CROSSING
 113 CENTRAL STREET
 ACTON, MA
 PREPARED FOR:
 RICHARDSON CROSSING, LLC
 411 MASS AVE, SUITE 204
 ACTON, MA 01720
 SCALE: 1"=20' DATE: JUNE 19, 2009


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 FAX (978) 635-0218

I:\CADD\6729W161\6729W161.dwg, 408 RECORD PLAN (3 of 7), Copyright Acton Survey & Engineering, Inc.



LEGEND

- 255— EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- 250- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- EXISTING PAVEMENT
- PROPOSED PAVEMENT
- EDGE OF WETLANDS
- 100' WETLANDS BUFFER ZONE
- CATCH BASIN
- ⊙ DRAIN MANHOLE
- W EXISTING WATER MAIN
- CURB STOP
- UTILITY POLE
- OHW— EXISTING OVERHEAD WIRES
- E— PROPOSED ELECTIC UTILITIES
- ⊕ PROPOSED LIGHT
- ▽ PROPOSED SIGN
- ZONE LINE

OWNER:
 WESTCHESTER COMPANY, INC.
 411 MASSACHUSETTS AVENUE, SUITE 304
 ACTON, MA 01720

DEED BOOK 48077 PAGE 483

ASSESSOR'S MAP G-2 PARCEL 149

PROPERTY AND EXISTING CONDITIONS
 SURVEYED BY FORESITE ENGINEERING
 ASSOCIATES, INC.

No.	DATE	DESCRIPTION
1	9/29/09	TOWN COMMENTS

REVISIONS

**EXISTING CONDITIONS PLAN
 RICHARDSON CROSSING**
 113 CENTRAL STREET
 ACTON, MA

PREPARED FOR:
 RICHARDSON CROSSING, LLC
 411 MASS AVE, SUITE 204
 ACTON, MA 01720

SCALE: 1"=20' DATE: JUNE 19, 2009

Acton Survey &
Engineering, Inc.
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6729W161-4/7

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GENERAL NOTES:

- Plans were prepared for named client and project. Reproduction in whole, in part or by adaptation for other purposes is expressly prohibited.
- Drawings shall not be scaled. If clarification of intent is REQUIRED, contractor shall obtain prompt clarification prior to continuing work.
- Contractor shall visit site prior to initiation of work and shall notify ACTON SURVEY & ENGINEERING, INC. and owner of any discrepancies with site conditions, or proposed construction, on date discovered.
- Contractor shall be responsible for coordinating proposed construction with existing conditions.
- Contractor shall notify Dig-Safe [1-888-344-7233] and verify all underground utilities prior to construction.
- Contractor shall be responsible for obtaining all necessary permits and licenses.
- All work shall conform to all local and state regulatory agencies and utility company requirements.
- Upon entering the site, the contractor shall become responsible for all erosion control, dewatering and shall undertake all measures to protect wetlands, the drainage system and streets from siltation and dust.
- Contractor shall be responsible for repairing any damage caused to roads, walks, utilities, site improvements (existing or proposed) both inside and outside the limit of work due to damage due to work directly associated with this project.
- Existing utilities shall be maintained in service as required by the use of site and adjacent properties. Relocate utility lines as required.
- The drainage system shall be maintained and functional during construction and all catch basins, manholes & pipes shall be cleaned after the completion of the project.
- The "site plan" is based on topographic survey showing all visually apparent features of the site on the date(s) that surface explorations and topography were completed.
- No attempt was made, in preparing the plans, to ascertain the location of non-visually apparent subsurface utilities and structures, or conditions.
- The limit of work shall be as designated and / or the edges of the proposed grading and / or the property lines, if not indicated.
- Materials imported to the site shall be free of hazardous waste and noxious materials, stored as designated and shall not hamper the site activities.
- Materials exported from the site shall become the property of the contractor and be disposed of in a legal manner.
- All existing and new utility structures shall be adjusted to finished grades. Setting of rims temporarily at blinder course may be required.
- All water mains, water services and force mains shall have a five (5') foot minimum cover.
- All pavements shall be cut to a vertical face outside limits of prior disturbance and prior to installing adjacent new pavements. All new pavements shall be installed in a manner that is uniform, with watertight joints resulting.
- The project shall be complete when the site is found to be litter/debris free, erosion resistant, all erosion barriers are removed and pavements, catch basins, manholes and pipes are clean.
- The contractor shall clearly mark the limits of work in the field prior to the start of construction.
- Hauling of earth to or from the site shall be done between the hours of 9:00 a.m. and 4:00 p.m. on weekdays only.

EXISTING FACILITIES

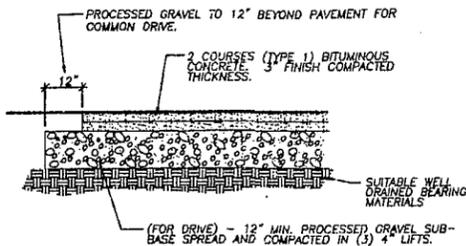
- THE EXISTING STRUCTURES ARE TO BE DEMOLISHED AND REMOVED FROM THE SITE IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.
- FLOOR SLABS ARE TO BE CRACKED AND FOUNDATIONS ARE TO BE PUSHED IN AND BACKFILLED IN A MANNER SUCH THAT VOIDS ARE NOT FORMED UNLESS THEY ARE LOCATED UNDER AREAS TO BE UTILIZED FOR NEW STRUCTURES, INSTALLATION OF UTILITIES, STORMWATER MANAGEMENT SYSTEMS, OR SUBSURFACE SEWAGE DISPOSAL SYSTEMS.
- COLLAPSED FOUNDATIONS SHALL NOT RETAIN WATER.
- EXISTING BITUMINOUS CONCRETE PAVEMENTS ARE TO BE REMOVED AND TRANSPORTED OFF SITE FOR RECYCLING.
- THE EXISTING UTILITIES ARE TO BE DISCONNECTED AS DIRECTED BY THE APPROPRIATE UTILITY COMPANIES.
- THE EXISTING WATER SERVICE IS TO BE TERMINATED AS DIRECTED BY THE ACTON WATER DISTRICT.

OWNER:
WESTCHESTER COMPANY, INC.
411 MASSACHUSETTS AVENUE, SUITE 304
ACTON, MA 01720

DEED BOOK 48077 PAGE 483

ASSESSOR'S MAP G-2 PARCEL 149

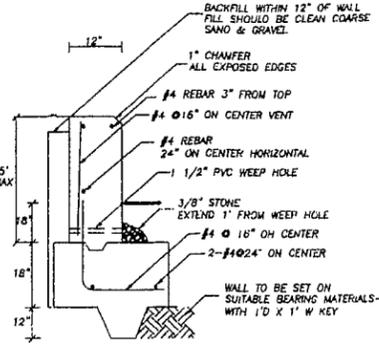
PROPERTY AND EXISTING CONDITIONS
SURVEYED BY FORESITE ENGINEERING
ASSOCIATES, INC.



- NOTES:**
- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE ACTON COMMON DRIVEWAY BY LAWS AND / OR MASS. HIGHWAY DEPARTMENT STANDARDS SPECIFICATIONS AND REGULATIONS.
 - PAVEMENT SHALL BE CLASS 1 BITUMINOUS CONCRETE LAID IN 2 COURSES TO A FINISHED DEPTH OF 3" (1 1/2" MIN. BINDER WITH A 1 1/2" WEARING COURSE ABOVE.)
 - GRAVEL SUBBASE SHALL CONTAIN NO STONES GREATER THAN 2" AND BE INSTALLED TO A MIN. DEPTH OF 12" (FOR DRIVE). COMPACT IN 4" (MAX.) LIFTS. REMOVE ALL ORGANIC SILTS & UNSUITABLE MATERIALS BENEATH.

BITUMINOUS CONCRETE DRIVEWAY DETAIL

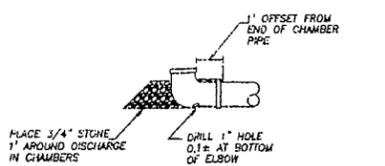
N.T.S.



HOUSE #115 DRIVEWAY WALL

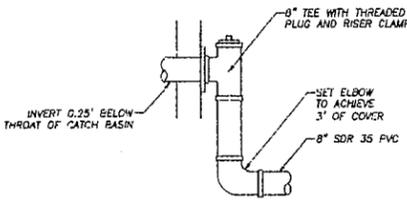
N.T.S.

- NOTES:**
- CONCRETE TO BE 3,000 P.S.I. @ 28 DAYS
 - REINFORCING STEEL TO HAVE 3" MINIMUM COVER AND BE SPLICED 18"
 - ENGINEER TO BE INFORMED OF ANY INCOMPATIBILITY OF WALL WITH FIELD CONDITIONS



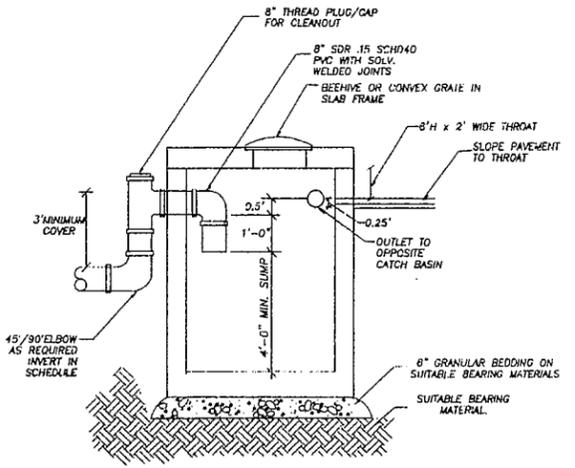
CONNECTION TO RECHARGE WORKS

N.T.S.



CONNECTION TO CATCH BASIN IN SERIES

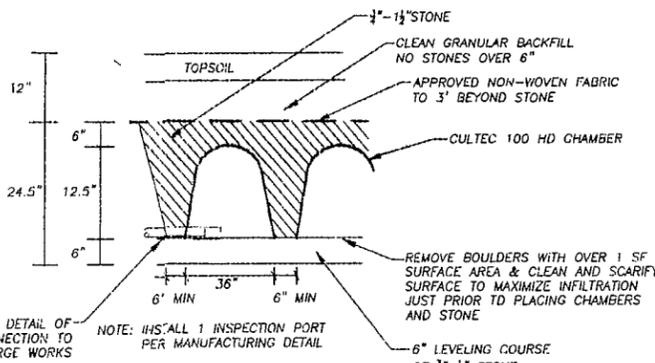
N.T.S.



CATCH BASIN / DISCHARGE DETAIL

N.T.S.

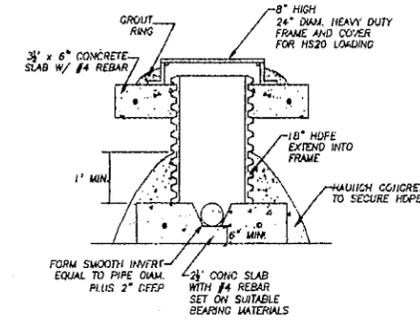
NOTE: ALL CONNECTING PIPE IS TO BE 6" SDR 35 PVC OR SCHD 40 PVC



RECHARGE WORKS DETAILS

N.T.S.

- RECHARGE WORKS SCHEDULE**
- WORKS #1: 3 ROWS OF 3 CHAMBERS
- WORKS #2: 2 ROWS OF 7 CHAMBERS
- WORKS #3 THROUGH #7: 2 ROWS OF 2 CHAMBERS



CLEANOUT DETAIL

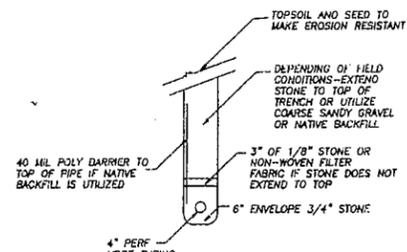
N.T.S.

RECHARGE WORKS ELEVATION SCHEDULE

SYSTEM No.	BOTTOM OF CHAMBER ELEVATION
1	207.5
2	207.0
3	212.0
4	216.0
5	215.5
6	219.5
7	224.0

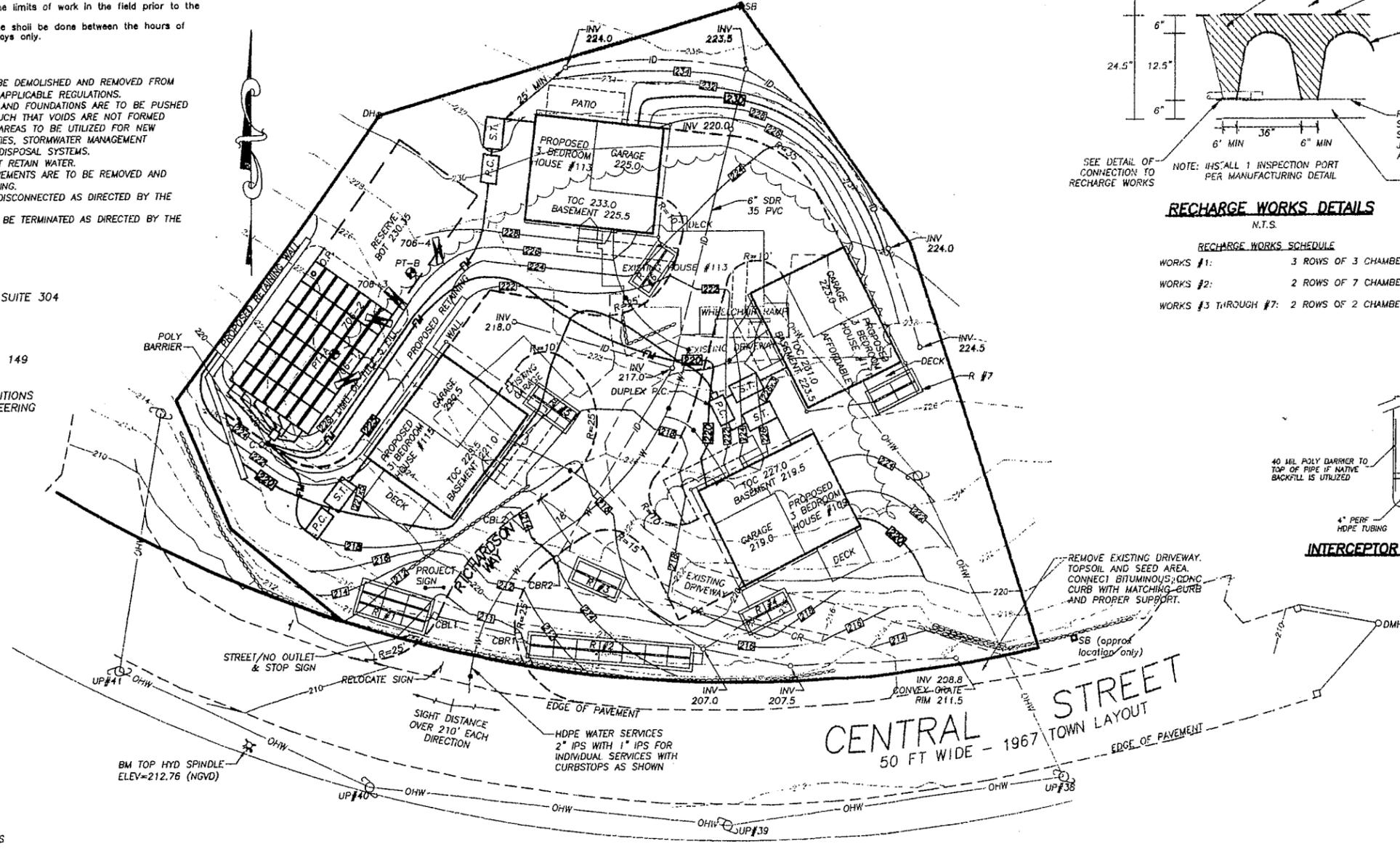
CATCH BASIN SCHEDULE

CB1	THROAT 211.7	OUTLET TO R#1 207.5
CB1	THROAT 211.7	OUTLET TO R#2 207.0
CB2	THROAT 213.8	OUTLET TO CBR2 213.5
CB2	THROAT 214.0	OUTLET TO R#3 212.25



INTERCEPTOR TRENCH DETAIL

N.T.S.



LEGEND

- 250--- EXISTING 10' CONTOUR
- 252--- EXISTING 2' CONTOUR
- 254--- PROPOSED 10' CONTOUR
- 256--- PROPOSED 2' CONTOUR
- EXISTING PAVEMENT
- PROPOSED PAVEMENT
- CATCH BASIN
- ⊙ DRAIN MANHOLE
- PROPOSED WATERLINE
- CURB STOP
- UTILITY POLE
- OHW — EXISTING OVERHEAD WIRES
- EXISTING SIGN

No.	DATE	DESCRIPTION
1	9/29/09	TOWN COMMENTS

REVISIONS

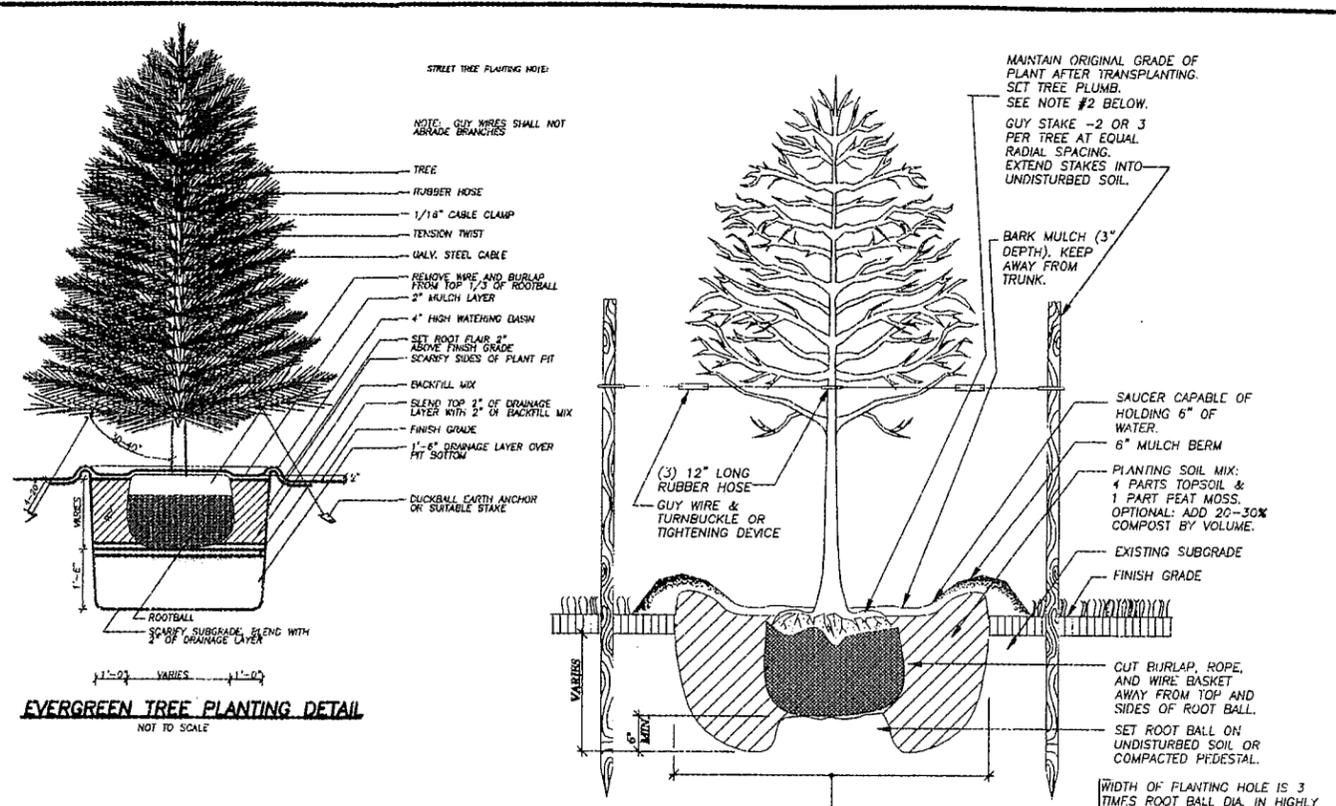
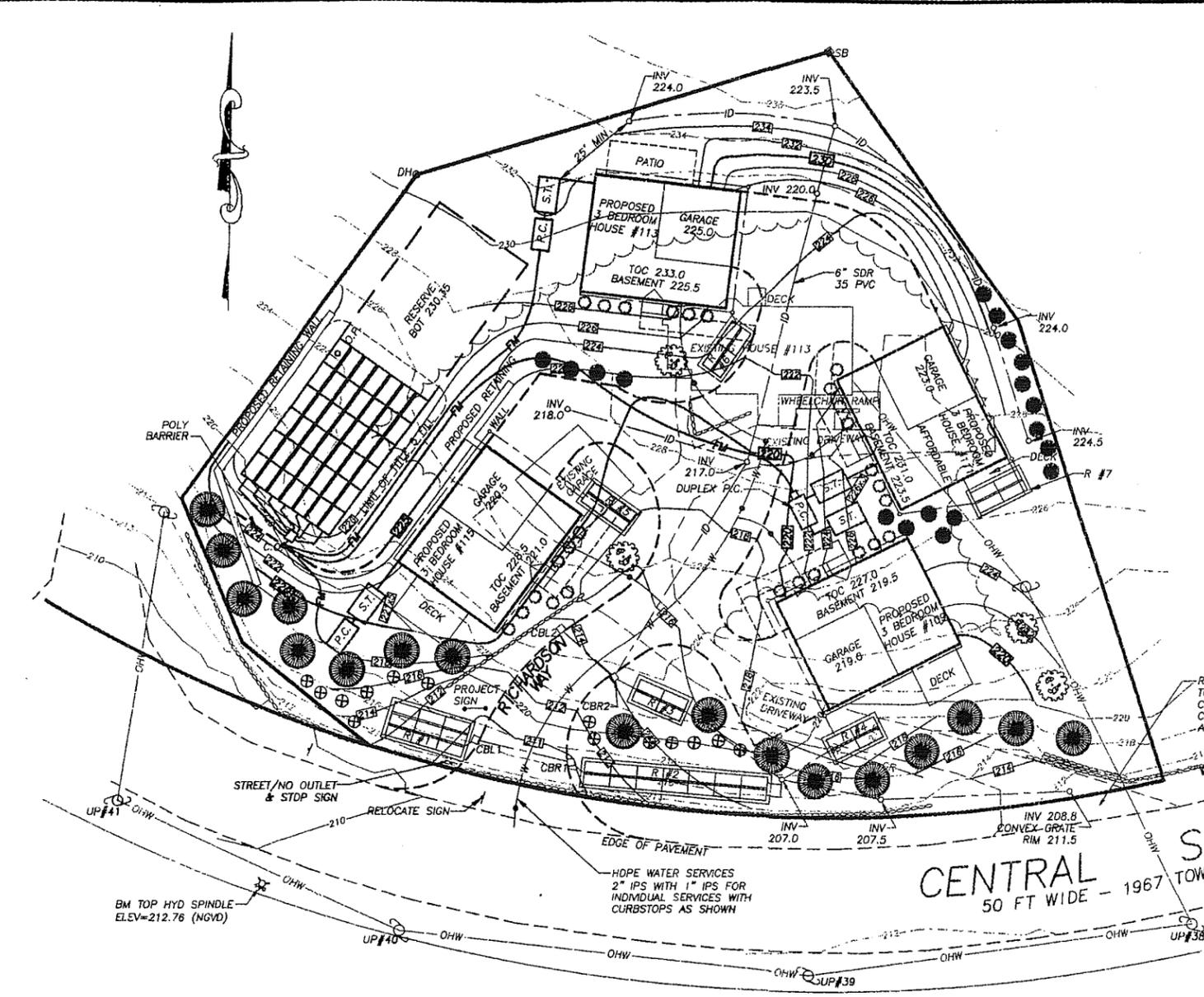
SITE DEVELOPMENT PLAN
RICHARDSON CROSSING
113 CENTRAL STREET
ACTON, MA

PREPARED FOR:
RICHARDSON CROSSING, LLC
411 MASS AVE, SUITE 204
ACTON, MA 01720

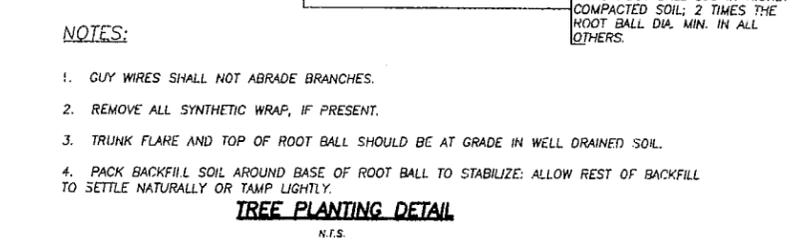
SCALE: 1"=20' DATE: JUNE 19, 2009

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P.O. BOX 666
ACTON, MA 01720
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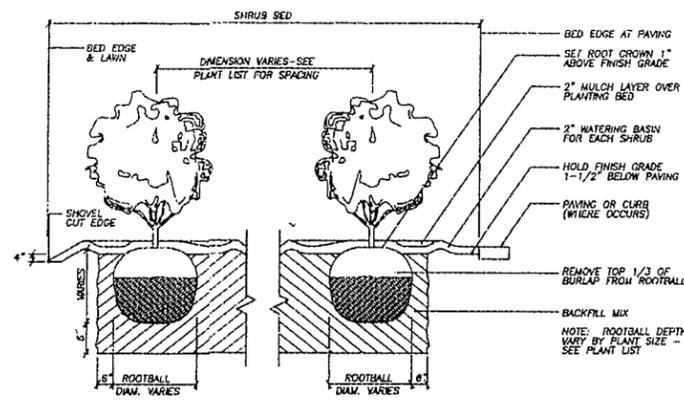


EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE



TREE PLANTING DETAIL
N.T.S.

- NOTES:**
- GUY WIRES SHALL NOT ABRASE BRANCHES.
 - REMOVE ALL SYNTHETIC WRAP, IF PRESENT.
 - TRUNK FLARE AND TOP OF ROOT BALL SHOULD BE AT GRADE IN WELL DRAINED SOIL.
 - PACK BACKFILL SOIL AROUND BASE OF ROOT BALL TO STABILIZE; ALLOW REST OF BACKFILL TO SETTLE NATURALLY OR TAMP LIGHTLY.



SHRUB PLANTING DETAIL
NOT TO SCALE

LANDSCAPE NOTES

- All landscape materials shall be of nursery stock grown in New England.
- All topsoil shall be retained onsite.
- Branches and brush shall be chipped and retained for incorporation into erosion controls and slope stabilization.
- Areas of disturbance shall be limited and be made erosion resistant as soon as possible.

GRASS

All disturbed areas shall be planted in grass, unless shown otherwise on the plans. Planting shall be performed during the optimum periods of the year and facilities for irrigation shall be present.

Weed killers shall not be utilized before, during or immediately after seeding.

Six inches of topsoil, corrected for alkalinity, shall be spread to conform to the grades shown on the plans. Adjustments shall be made to eliminate shallow areas where water might collect and areas in excess of 3H:1V.

The top three inches of the topsoil shall be loosened and debris, sticks and stones shall be removed.

Soil pads shall be broken to a size less than a half dollar and the formation of a fine soil shall be avoided.

Spread seed at the rate stipulated by the grower. Generally, 16 seeds per square inch is desirable. Over seeding will result in plants not receiving sufficient nutrients resulting in weak grass. Spreading shall be by rotary spreader.

Grass seed shall be selected based on the nature of the lawn surface to be established. Consideration should be given to drought resistant grasses.

Cover the seeds by dragging so that 1/4 inch of cover results and lightly compact the soil with an empty roller to provide soil contact.

Apply a starter fertilized by rotary spreader at the rate provided by the manufacturer.

Water lightly and frequently in a manner that does not saturate the soil or result in runoff. Irrigation shall be at least daily and if possible for three 10 minute periods with one being timed to provide cooling in the early afternoon and to keep roots moist.

Weed control applications shall only be made if not prohibited by an Order of Conditions and after the grass has been mowed at least 3 times.

Establishing the lawn areas by hydro-seeding or placement of sod may be substituted and is recommended under adverse growing conditions or in areas requiring rapid stabilization.

PLANTING LIST			
SYMBOL	TYPE	SIZE	EXAMPLE
	FLOWERING TREE	6'	PIRUS CALLERYANA (ARISTOCRAT FLOWERING PEAR)
	EVERGREEN TREE	8'	PIRUS STROBUS (WHITE PINE), TSUGA CANADENSIS (CANADIAN HEMLOCK), PINUS RESINOSA (RED PINE), TAXUS THUJA SMARAGO (EMERALD GREEN ARBORVITAE)
	FORSYTHIA	4'	FORSYTHIA 'GOLD TIDE' (GOLD TIDE FORSYTHIA)
	FOUNDATION PLANT	16-24\"/>	
	ARBORVITAE	6-8'	TAXUS THUJA SMARAGO (EMERALD GREEN ARBORVITAE)

1	9/29/09	TOWN COMMENTS
No.	DATE	DESCRIPTION
REVISIONS		
LANDSCAPE PLAN		
RICHARDSON CROSSING		
113 CENTRAL STREET ACTON, MA		
PREPARED FOR: RICHARDSON CROSSING, LLC 411 MASS AVE, SUITE 204 ACTON, MA 01720		
SCALE: 1"=20'		DATE: JUNE 19, 2009
Acton Survey & Engineering, Inc. Since 1967		97 GREAT ROAD P.O. BOX 666 ACTON, MA 01720 PH. (978) 263-3666 FAX (978) 635-0218

RICHARDSON PROJECTS 0729W161-8-ASE.dwg, LANDSCAPE (6 of 7), Copyright Acton Survey & Engineering, Inc.

PROPERTY AND EXISTING CONDITIONS SURVEYED BY FORESITE ENGINEERING ASSOCIATES, INC.

EROSION AND SEDIMENTATION CONTROL

GENERAL

A rapid and well ordered construction project at this site resulting in the limitation of extent and time in which earthwork is not erosion resistant shall be the primary erosion and sedimentation control method utilized at this site. The transport of or tracking of earth to Central Street where it could be "washed" to catch basins or wetland resources areas is of major concern. The area of disturbance shown on the plans is less than one acre. Disturbance of over one acre requires a filing with US EPA.

CLEARING

Prior to clearing the limit of work shall be demarcated. Invasive vegetation shall be removed and transported off site for disposal by incineration. All other vegetation shall be removed and disposed of within one week of cutting, except woodchips which should be retained on site for erosion control.

EROSION BARRIERS

A silt fence shall be installed 5 feet from the top of the wall along Central Street and its toe sealed with wood chips.

The existing driveway shall be used for access and a row of sand bag dikes shall be placed across the bottom to divert runoff to a basin formed by placing sand bags extending to the wall. The capacity of the basin will be minimal and carbon products must be removed from the driveways and the area tributary to the sand bags must be kept stable or materials will be transported beyond the sand bags.

A broom and shovel shall be kept at the site for polishing the driveway and Central Street.

Silt fences and sand bag check dams shall be installed as necessary to decrease the concentration of runoff and transport of products of erosion.

The installation of a temporary construction entrance or tracking pad at the top of the driveway, before it widens and branches out, should be installed if warranted by site conditions.

SITE CONSTRUCTION

The existing house shall be removed with allowances for proper dust control and be removed from site simultaneously with its demolition. Materials shall not be piled on site.

The interceptor trench should be installed early in the construction process if site grading is to be initiated during periods in which groundwater could be intercepted at the rear of the property. The drain shall discharge at locations that will not impact Central Street and temporary recharge works might be required.

The existing driveway shall be utilized for access to the site with the permanent driveway being constructed with equipment working up hill and away from Central Street so that the areas of disturbance tributary to Central Street is limited. As soon as possible a temporary construction entrance shall be installed and the existing driveway be abandoned as the access point. Once the existing driveway can be abandoned the pavement shall be removed and the area shall be graded and made erosion resistant.

The proposed driveway slopes continuously down in Central Street and care shall be taken to limit the concentration of runoff on its surface. Sand bag check dams shall be installed to divert and hold runoff and a temporary settling basin could be located in the driveway of house number 111 to remove sediment. Care must be taken to insure that the basin does not become overtopped and result in erosion.

Building materials shall be stored in a manner that will not concentrate runoff and create unnecessary traffic. Containers shall be utilized for disposal of refuse except liquid wastes which shall be placed in sealed containers and transported offsite for required disposal.

The site shall be kept neat and litter free.

The area of disturbance required for the subsurface sewage disposal is a significant portion of the site and the construction of the system shall be scheduled so it can be accomplished and made erosion resistant in a short time period. Stabilization of its surface with an annual cover shall be done if permanent stabilization is not possible.

Driveways shall be brought to binder course as soon as possible to limit rutting. The placement of pavement will enhance the transport of products of erosion from tributary surfaces and efforts shall be made to limit runoff, control erosion and capture materials prior to their reaching the pavement.

Stabilization shall be an on going process and not be delayed until final landscaping. Topsoil has a high erosion potential.

RECHARGE SYSTEMS

Stormwater management for the site is accomplished by recharge chambers for roof runoff and at the end of the driveway. The long term viability of these facilities will be adversely impacted if products of erosion reached them.

Prior to the construction of the recharge facilities areas tributary to them shall be made erosion resistant and barriers such as sand bag dikes shall be installed as required to provide necessary protections.

After their installation the site shall be maintained to limit the transport of soil, debris and landscape litter to the recharge trenches.

RECHARGE SYSTEM OPERATION AND MAINTENANCE

The recharge systems has been designed to require limited maintenance if the surfaces tributary to them are kept erosion resistant and free of materials (leaf litter, sand for ice control, etc.) that could be transported by runoff to the trenches.

Noticeable amounts of sand and debris located on the driveways shall be promptly removed and properly disposed of.

The concrete structures located at the bottom driveway near Central Street are catch basins installed to removed materials from the runoff flowing down the driveway. The catch basins have four foot deep sumps to retain sand and other debris and the piped outlet is arranged to retain oil and other materials that float on the water surface.

The catch basins should be cleaned on a annual basis by a licensed person and observed each quarter to determine if additional cleaning is required by passing a dipstick through the open grate and measuring the depth of water. If debris is not present the depth of water will be four feet. If the depth of water is less than three feet there is over a foot of debris and the basin should be cleaned.

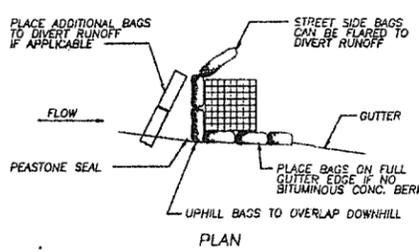
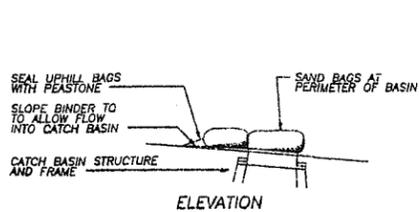
When the dipstick is removed its surface should be inspected for the presence of oil and if such materials are detected the catch basin shall be cleaned.

The catch basins and roof gutter downspouts discharge to buried recharge chambers. With the exception of the recharge system serving house 109 the chambers are interconnected. The chambers have a grated observation port to allow their water levels to be observed, if localized blockages occur the chambers will overflow through the observation ports.

Intense or long duration rainfalls will result in the recharge chambers overflowing through either the observation ports and/or the lowest catch basins.

If overflowing is observed the recharge works should be monitored to determine if this is a common occurrence. If it is found that it is a common occurrence replacement of the recharge works by excavation and placement of new stone shall be planned. Expansion of the works might be required.

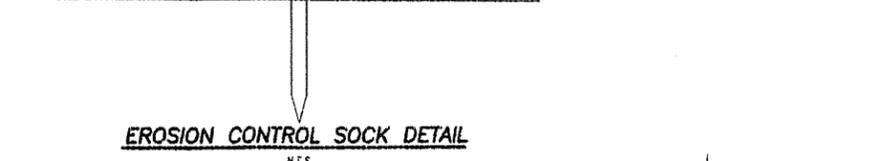
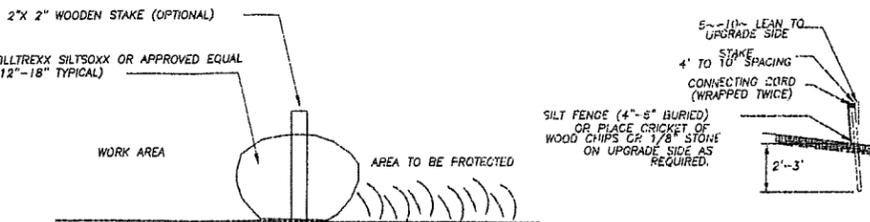
Water should be absent in the recharge chambers between rain storms. The water level can be viewed through the observation port grate. If it is found to be present it should be closely monitored to determine if renovation of the recharge works should be planned.



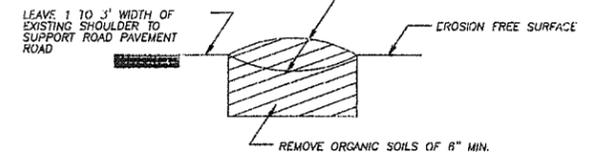
NOTE:
1. FRAMES SHALL BE SET LOW OR PAVEMENT ADDED AND REMOVED TO PROVIDE FLOW TO BASIN FROM BINDER COURSE.

CATCH BASIN PROTECTION DETAIL

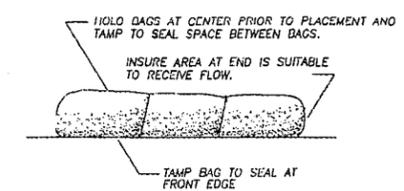
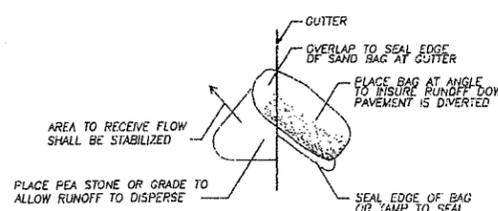
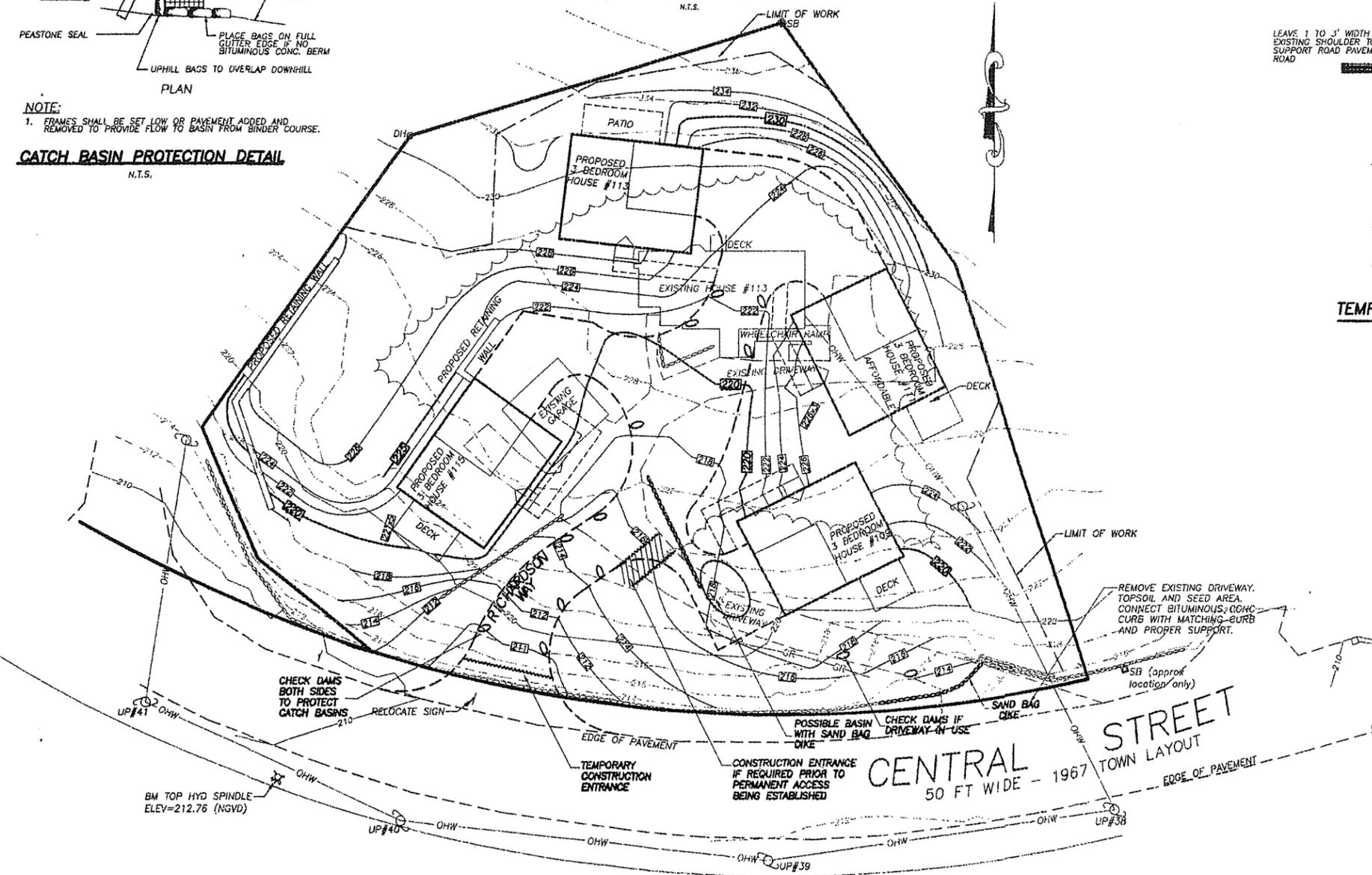
N.T.S.



- NOTES:**
- FENCES SHALL BE LOCATED AT LIMIT OF WORK OR AS SHOWN ON PLANS.
 - PENETRATE OR "SNUG" GROUND WITH BOTTOM FOR ENTIRE LENGTH.
 - DO NOT INSTALL IN A MANNER WHICH WILL CONCENTRATE RUNOFF.
 - BACK FENCE WITH STAKED HAYBALES IN HIGH RISK AREAS.
 - MAINTAIN AND REMOVE FENCE AS REQUIRED.
 - REMOVE PRODUCTS OF EROSION FREQUENTLY.



- NOTES:**
- STONE SHALL BE 1-3" IN SIZE AND INSTALLED TO REMOVE AND ENTRAP MATERIALS FROM TIRES AND NOT BE TRANSPORTED TO ROAD.
 - STONE SHALL EXTEND ACROSS FULL WIDTH OF ENTRANCE AND BE OF SUFFICIENT LENGTH TO PRECLUDE MUD FROM REACHING ROAD.
 - STONE SHALL BE REPLACED AS REQUIRED TO INSURE MUD REMOVAL.



PROPERTY AND EXISTING CONDITIONS SURVEYED BY FORESITE ENGINEERING ASSOCIATES, INC.

No.	DATE	DESCRIPTION
1	9/29/09	TOWN COMMENTS

REVISIONS

EROSION AND SEDIMENTATION CONTROL
RICHARDSON CROSSING
113 CENTRAL STREET
ACTON, MA

PREPARED FOR:
RICHARDSON CROSSING, LLC
411 MASS AVE, SUITE 204
ACTON, MA 01720

SCALE: 1"=20' DATE: JUNE 19, 2009

Acton Survey & Engineering, Inc.
Since 1967

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