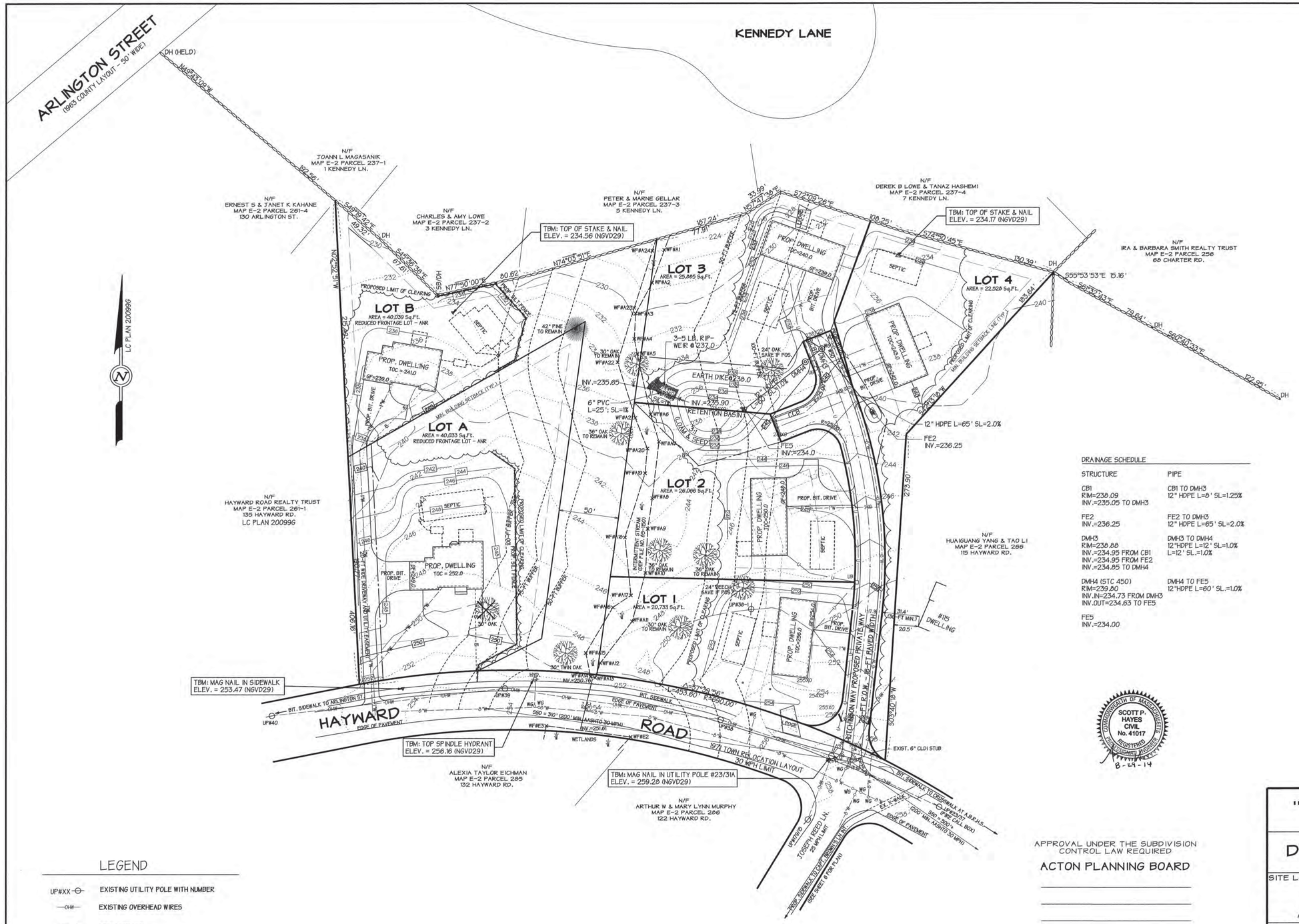

GENERAL NOTES

1. SITE IS NOT WITHIN A SPECIAL FLOOD HAZARD AREA (SFHA) AS DEFINED BY FEMA. REF. F.I.R.M. COMMUNITY PANEL NO. 25017C053F REVISED JULY 7, 2014.
2. THE SITE IS NOT WITHIN AN ESTIMATED HABITAT OF RARE OR ENDANGERED ENDANGERED SPECIES AS DEFINED BY THE NATURAL HERITAGE AND ENDANGERED SPECIES PROGRAM. (REF. MASS GIS 8/16/13).
3. THE SITE IS NOT WITHIN A MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION DEFINED 'ZONE II' OR INTERIM WELLHEAD PROTECTION AREA (IWPA) OF A PUBLIC WATER SUPPLY (REF. MASS GIS 8/16/13).
4. WETLAND DELINEATION BY CARON ENVIRONMENTAL CONSULTING CONDUCTED IN AUGUST OF 2013 AND APPROVED UNDER AN ORDER RESOURCE AREA DELINEATION ISSUED BY THE ACTON CONSERVATION COMMISSION (DEP FILE NO. 085-1150).
5. U.S. NATURAL RESOURCE CONSERVATION SERVICE (NRCS) IDENTIFIES ON SITE SOILS TO BE MAP UNIT 307B (PAXTON 3-8% SLOPES), UNIT 307C (PAXTON 8-15% SLOPES) AND UNIT 622C PAXTON URBAN LAND COMPLEX (8-15% SLOPES). NRCS HYDROLOGIC SOIL GROUP C.
6. ALL ELEVATIONS REFER TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29).

CONSTRUCTION NOTES:

1. NO FILL CONTAINING HAZARDOUS MATERIALS OR WASTE SHALL BE USED ON SITE.
2. LIMIT OF CLEARING SHALL BE CLEARLY STAKED IN THE FIELD PRIOR TO THE START OF CONSTRUCTION AND SHALL BE OBSERVED AS THE LIMIT OF ALL WORK.
3. NO EARTH OR CONSTRUCTION DEBRIS SHALL BE HAULED EXCEPT BETWEEN THE HOURS OF 9 AM AND 4PM ON WEEKDAYS.
4. ALL STUMPS SHALL BE EITHER GROUND ON SITE WITH A STUMP GRINDER OR REMOVED FROM THE SITE FOR PROPER DISPOSAL.
5. CONTRACTOR SHALL CONTACT DIGSAFE AT (888) 344-7233 AT LEAST 72 HOURS BEFORE EXCAVATING ON PUBLIC OR PRIVATE PROPERTY.
6. THIS SITE LIES WITHIN TOWN OF ACTON GROUNDWATER PROTECTION DISTRICT ZONE 4.
7. NO PORTION OF THE SITE LIES WITHIN THE 100 YEAR FLOODPLAIN. REF. F.I.R.M. 25017C0353E EFFECTIVE JUNE 4, 2010.
8. ALL ELEVATIONS REFER TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29). BENCHMARK TRANSFERRED FROM PK NAIL IN UTILITY POLE #10 NORTH OF INTERSECTION OF ROBBINS STREET AND HERON VIEW DRIVE (ELEV. = 201.16).
9. ALL PROPOSED WATER MAINS, SERVICES, AND HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE ACTON WATER SUPPLY DISTRICT.
10. SITE SHALL BE GRADED TO ENSURE RUNOFF AWAY FROM STREETS, BUILDINGS AND ABUTTING PROPERTY AND TO PREVENT POOLING OF DRAINAGE.
11. BORDERING VEGETATED WETLANDS WERE DELINEATED BY CHARLES E. CARON ENVIRONMENTAL CONSULTING IN AUGUST OF 2013.
12. ALL EXISTING SURVEY MONUMENTS SHALL BE MARKED IN THE FIELD PRIOR TO CONSTRUCTION, AND SHALL BE REPAIRED OR REPLACED IF ANY DAMAGE OCCURS DURING CONSTRUCTION.
13. PROPOSED HOUSES AND DRIVEWAYS SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY, ACTUAL HOUSE AND DRIVEWAY LOCATIONS MAY VARY IN CONSTRUCTION.
14. THE LIMITS OF CLEARING SHOWN ON THIS PLAN ARE NOT LIMITED OR OTHERWISE REQUIRED BY THE APPROVAL OF THIS SUBDIVISION PLAN BY THE ACTON PLANNING BOARD.

DRAINAGE SCHEDULE

STRUCTURE	PIPE
CB1 RIM=238.09 INV.=235.05 TO DMH3	CB1 TO DMH3 12" HDPE L=8' SL=1.25%
FE2 INV.=236.25	FE2 TO DMH3 12" HDPE L=65' SL=2.0%
DMH3 RIM=238.88 INV.=234.95 FROM CB1 INV.=234.95 FROM FE2 INV.=234.65 TO DMH4	DMH3 TO DMH4 12"HDPE L=12' SL=1.0% L=12' SL.=1.0%
DMH4 (STC 450) RIM=239.80 INV.IN=234.73 FROM DMH3 INV.OUT=234.63 TO FE5	DMH4 TO FE5 12"HDPE L=60' SL.=1.0%
FE5 INV.=234.00	

LEGEND

UP#XX	EXISTING UTILITY POLE WITH NUMBER
OHW	EXISTING OVERHEAD WIRES
HYD.	FIRE HYDRANT
WG	WATER GATE
8"W	EXISTING 8" WATER MAIN
6"W	PROPOSED 6" CLDI WATER MAIN
U	PROPOSED UNDERGROUND TELECOM UTILITIES
WF#XX	WETLAND RESOURCE AREA FLAG WITH NUMBER
CCB	PROPOSED BITUMINOUS CAPE COD BERM

GRAPHIC SCALE
0 20 40 80 120 FT
0 10 20 40 M

SCOTT P. HAYES CIVIL No. 41017 REGISTERED PROFESSIONAL ENGINEER COMMONWEALTH OF MASSACHUSETTS
8-29-14

APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED
ACTON PLANNING BOARD
DATE APPROVED: _____
DATE ENDORSED: _____

"HAYWARD FARM"
DEFINITIVE SUBDIVISION PLAN

DRAINAGE & GRADING PLAN
SHEET 5 OF 10

SITE LOCATION:
121 HAYWARD ROAD
ACTON, MASSACHUSETTS 01720
ASSESSORS MAP E-2 PARCELS 261-2, 261-3, 262, 272 & 273

PREPARED FOR:
ACTON MANAGEMENT, INC.
P.O. BOX 2350
ACTON, MASSACHUSETTS 01720

DATE: AUGUST 29, 2014 SCALE: 1"=40'

ENGINEERING
SURVEYING
PLANNING
FORESITE ENGINEERING
16 Gleasondale Road Suite 1-1
Stow, Massachusetts 01775
Phone: (978) 461-2350
Fax: (978) 841-4102
www.foresitel.com

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EROSION & SEDIMENT CONTROL NOTES

1. LIMITS OF CLEARING AND EROSION CONTROL BARRIER LOCATIONS SHALL BE MARKED IN THE FIELD BY A REGISTERED PROFESSIONAL ENGINEER OR LAND SURVEYOR PRIOR TO THE START OF CONSTRUCTION.
2. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS AND GOOD ENGINEERING PRACTICES TO INSURE THEY PERFORM AS INTENDED.
3. ACCUMULATED SEDIMENT SHALL BE REMOVED ONCE THE VOLUME REACHES 1/4 TO 1/2 THE HEIGHT OF THE CONTROL DEVICE, SEDIMENT FROM SILT FENCE SHALL BE REMOVED PRIOR TO ACCUMLATED SILT REACHING THE LOAD BEARING CAPACITY OF THE SILT FENCE.
4. ACCUMULATED SEDIMENT FROM SEDIMENT TRAPS OR BASINS SHALL BE REMOVED WHEN DESIGN CAPACITY HAS BEEN REDUCED BY NOT MORE THAN 50%.
5. ON AND OFF-SITE MATERIALS STORAGE AREAS SHALL BE PROPERELY PROTECTED AND MANAGED IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN WHICH IS AN INTEGRAL PART OF THIS PLAN.
6. ALL SOIL STOCKPILES SHALL BE SURROUNDED BY SUITABLE EROSION CONTROL BARRIERS AND/OR COVERED AT THE END OF EACH WORK DAY. STOCKPILE SIDESLOPES SHALL NOT EXCEED 2:1.
7. ALL CONSTRUCTION MATERIALS AND METHODS, WASTE DISPOSAL, SANITARY WASTE DISPOSAL, AND AIR QUALITY MEASURES INCLUDING DUST CONTROL SHALL COMPLY WITH ALL APPLICABLE FEDERAL STATE AND LOCAL LAWS AND REGULATIONS.
8. A STABILIZED CRUSHED STONE CONSTRUCTION ENTRANCE SHALL BE INSTALLED AT THE SOLE CONSTRUCTION ENTRANCE/EXIT FOLLOWING INSTALLATION OF PERIMETER EROSION CONTROLS. SEE EROSION CONTROL PLAN 2 FOR CONSTRUCTION DETAIL.
9. PERMANENT SEEDING SHALL BE UNDERTAKEN IN THE SPRING FROM MARCH THROUGH MAY, AND IN LATE SUMMER AND EARLY FALL FROM AUGUST THROUGH OCTOBER 15. DURING PEAK SUMMER MONTHS AND IN THE FALL WHEN SEEDING IS FOUND TO BE IMPRACTICAL, APPROPRIATE TEMPORARY MULCH SHALL BE APPLIED. PERMANENT SEEDING MAY BE UNDERTAKEN DURING SUMMER IF ADEQUATE MULCHING AND WATERING IS PROVIDED.
10. SLOPES GREATER THAN 3:1 SHALL BE FURTHER PROTECTED BY ADDITIONAL EROSION CONTROL MEASURES AND IMMEDIATE STABILIZATION VIA HYDROSEEDING OR MULCHING AS APPROPRIATE.
11. INTERIM AND PERMANENT STABILIZATION MEASURES SHALL BE INSTITUTED ON ALL DISTURBED AREAS IMMEDIATELY AFTER CONSTRUCTION ACTIVITES HAVE TEMPORARILY OR PERMANENTLY CEASED ON THAT PORTION OF THE SITE.
12. TEMPORARY SEDIMENT TRAPPING DEVICES SHALL NOT BE REMOVED UNTIL PERMANENT STABILIZATION IS ESTABLISHED IN ALL CONTRIBUTING DRAINAGE AREAS.
13. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED AFTER FINAL SITE STABILIZATION. DISTURBED SOIL AREAS RESULTING FROM THE REMOVAL OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED WITHIN 30 DAYS OF REMOVAL.

LEGEND

- UP#XX — UTILITY POLE WITH NUMBER
- OHW — OVERHEAD WIRES
- HYD. — FIRE HYDRANT
- WF#XX — WETLAND RESOURCE AREA FLAG WITH NUMBER
- PROPOSED SILT FENCE EROSION CONTROL BARRIER
- PROPOSED 4-FT HIGH ORANGE HDPE CONSTRUCTION FENCE
- PROPOSED FIBER ROLL EROSION CONTROL BARRIER
- PROPOSED STAKED HAYBALE EROSION CONTROL BARRIER

SCOTT P. HAYES CIVIL No. 41017 REGISTERED PROFESSIONAL ENGINEER COMMONWEALTH OF MASSACHUSETTS
8-29-14

APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

ACTON PLANNING BOARD

DATE APPROVED: _____

DATE ENDORSED: _____

"HAYWARD FARM"

DEFINITIVE SUBDIVISION PLAN

EROSION & SEDIMENT CONTROL PLAN 1

SHEET 7 OF 10

SITE LOCATION:

121 HAYWARD ROAD
ACTON, MASSACHUSETTS 01720
ASSESSORS MAP E-2 PARCELS 261-2, 261-3, 262, 272 & 273

PREPARED FOR:

ACTON MANAGEMENT, INC.
P.O. BOX 2350
ACTON, MASSACHUSETTS 01720

DATE: AUGUST 29, 2014 SCALE: 1"=40'

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GENERAL

THE PURPOSE OF THIS PLAN IS TO PROVIDE THE DEVELOPER OR CONTRACTOR WITH A MEANS FOR EROSION AND SEDIMENT CONTROL DURING AND AFTER CONSTRUCTION OF THE SUBDIVSION.

GENERAL NOTES:

1. PRIOR TO THE START OF CONSTRUCTION THE LIMITS OF CLEARING AND TREES NOT INTENDED FOR REMOVAL SHALL BE CLEARLY MARKED IN THE FIELD WITH FLORESCENT FLAGGING BEARING THE LABEL "LIMIT OF CLEARING" OR "TREE TO BE SAVED", AS APPROPRIATE. ALTERATION OF AREAS BEYOND THE DEMARKED LIMITS OF CLEARING IS PROHIBITED.
2. PRIOR TO THE BEGINNING OF CONSTRUCTION ALL EROSION CONTROL BARRIERS SHALL BE INSTALLED. THE LOCATIONS SHALL BE STAKED IN THE FIELD BY A REGISTERED PROFESSIONAL ENGINEER OR LAND SURVEYOR.
3. NO WORK SHALL BE DONE WITHIN A RESOURCE AREA OR BUFFER ZONE WITHOUT FIRST OBTAINING AN ORDER OF CONDITIONS FROM THE ACTON CONSERVATION COMMISSION. THE EROSION CONTROL BARRIER MARKS THE LIMIT OF WORK.
4. SUFFICIENT HAYBALES SHALL BE STACKED ON SITE AND KEPT FOR EMERGENCIES. PROPOSED HAYBALES SHALL BE REPLACED WHEN NECESSARY.
5. A CRUSHED STONE MOUND SHALL BE PLACED THE FULL WIDTH OF THE ENTRANCE WAY, 50 FEET INTO THE SITE AND ONE FOOT DEEP. THIS MOUND SHALL BE MAINTAINED AND REPLACED IF NECESSARY (SEE DETAIL).
6. EROSION CONTROL BARRIERS SHALL BE INSPECTED AND MAINTAINED REGULARLY.
7. ALL CLEARED AREAS OF THE STREET NOT PLANTED WITH GROUND COVER SHALL BE LOAMED WITH NOT LESS THAN SIX INCES OF COMPACTED, GOOD QUALITY LOAM AND SEEDED WITH TURF GRASS IN ACCORDANCE WITH GOOD PLANTING PRACTICE.

SLOPE STABILIZATION

1. DENUDED SLOPES SHALL NOT BE UNATTENDED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME, SUCH AS THE INACTIVE WINTER SEASON.
2. NO LATER THAN OCTOBER 15 OF EACH CALENDAR YEAR, THE DEVELOPER SHALL STABILIZE ALL EXPOSED SOILS AND OTHER VULNERABLE OR SENSITIVE AREAS IN A MANNER ACCEPTABLE TO THE CONSERVATION COMMISSION AND THE PLANNING BOARD. NO ADDITIONAL DISRUPTION MAY OCCUR EXCEPT IN ACCORDANCE WITH THE APPROVED CONSTRUCTION PLAN.
3. TOPSOIL SHALL HAVE A SANDY LOAM TEXTURE RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS.
4. THE SEED MIX SHALL BE INOCULATED WITHIN 24 HOURS BEFORE MIXING AND PLANTING, WITH APPROPRIATE INOCULUM FOR EACH VARIETY.

VELOCITY CHECK DAMS

THE CONTRACTOR SHALL PROVIDE VELOCITY CHECK DAMS IN ALL UNPAVED STREET AREAS AT THE INTERVAL INDICATED BELOW:

GRADE OF STREET	INTERVALS BETWEEN CHECKDAMS
LESS THAN 4%	100 FEET
4%-10%	50 FEET

THE CONTRACTOR SHALL PROVIDE VELOCITY CHECK DAMS IN ALL UNVEGETATED OR UNPAVED CHANNELS AT INTERVALS INDICATED BELOW:

GRADE OF CHANNEL	INTERVALS BETWEEN CHECKDAMS
LESS THAN 3%	100 FEET
3%-6%	50 FEET

1. CHECK DAMS SHALL BE OF STAKED HAYBALES.
2. CHECK DAMS SHALL BE INSTALLED AT THE END OF EACH WORKING DAY OR BEFORE STOPPAGE DUE TO RAIN.
3. CHECK DAMS SHALL EXTEND COMPLETELY ACROSS GUTTER FLOW LINES AT RIGHT ANGLES TO THE CENTERLINE.

SEED MIXTURES

MOWED AREAS (ALL FLATS AND SLOPES EQUAL TO OR LESS THAN 3:1)

MIXTURE	% BY WEIGHT	SEEDING DATES
RED FESCUE	75	APRIL 1 - JUNE 15
KENTUCKY BLUEGRASS	15	AUGUST 15 - OCTOBER 15
COLONIAL BENTGRASS	5	SPRING OR FALL
PERRENIAL RYEGRASS	5	SPRING OR FALL

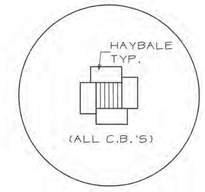
UNMOWED AREAS (FLAT SLOPES GREATER THAN 3:1)

MIXTURE	% BY WEIGHT	SEEDING DATES
RED FESCUE	75	APRIL 1 - JUNE 15
KENTUCKY BLUEGRASS	5	AUGUST 15 - OCTOBER 15
COLONIAL BENTGRASS	5	SPRING OR FALL
PERRENIAL RYEGRASS	15	SPRING OR FALL

CONSTRUCTION SEQUENCE

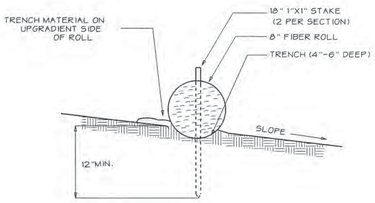
DURING THIS SEQUENCE ALL EROSION CONTROL BARRIERS SHALL BE INSPECTED AND MAINTAINED. ALL DISTURBED AREAS SHALL BE STABILIZED BY WOOD CHIPS, MULCH, SEEDING OR SODDING AS SOON AS AS POSSIBLE AFTER GRADING IS COMPLETE. ALL EROSION CONTROL BARRIERS SHALL BE REMOVED UPON COMPLETION OF ALL SLOPE STABLILIZATION. SITE SHALL BE CONSTRUCTED IN ONE PHASE.

1. DEMARK LIMITS OF CLEARING; INSTALL EROSION CONTROL BARRIERS.
2. CLEAR AND STUMP SITE; STRIP ROADWAY RIGHT OF WAY; STOCK-PILE LOAM AND DELETERIOUS MATERIALS WITHIN ROAD R.O.W.
3. INSTALL CRUSHED STONE CONSTRUCTION ENTRANCE.
4. ROUGH GRADE ROADWAY.
5. INSTALL VELOCITY CHECKDAMS.
6. INSTALL STORM DRAINS BEGINNING DOWNGRADIENT.
7. INSTALL UTILITIES WITHIN ROAD RIGHT OF WAY.
8. COMPLETE ROADWAY GRADING AND COMPACTION.
9. PLACE BINDER COURSE OF PAVEMENT, INSTALL ROAD BERMS AND CURB CUTS FOR DRIVEWAYS.
10. INSTALL HAYBALES OR FILTER FABRIC SILT SACKS AROUND CATCHBASIN INLETS.
11. CONSTRUCT DWELLING UNITS AND DRIVEWAYS.
12. PLACE TOP COURSE OF PAVEMENT.
13. LOAM AND SEED ALL DISTURBED AREAS.
14. FOLLOWING CONSTRUCTION, AFTER VEGETATION HAS BEEN WELL ESTABLISHED, REMOVE AND DISPOSE OF ALL EROSION CONTROL BARRIERS AND TEMPORARY CONSTRUCTION FENCING.



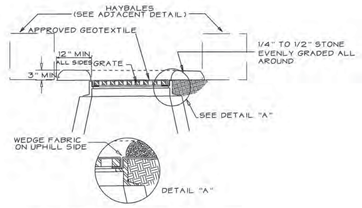
CATCH BASIN INLET PROTECTION DETAIL

NOTE: AN APPROVED FILTER FABRIC SILT SACK PLACED UNDER THE CATCHBASIN GRATES IS A SUITABLE ALTERNATIVE.



STAKED FIBER ROLL DETAIL

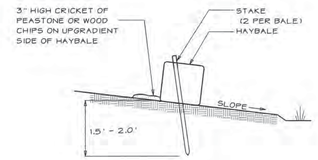
NOT TO SCALE



FILTERED CATCHBASIN INLET

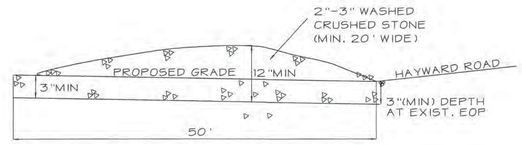
NOT TO SCALE

NOTE: ALL CATHCBASINS SHALL HAVE HAYBALES PLACED AROUND THEM AS SHOWN ON THE 'CATCHBASINS WITH HAYBALES' DETAIL UNTIL ALL CONSTRUCTION IS COMPLETE AND DISTURBED SLOPES ARE STABILIZED.



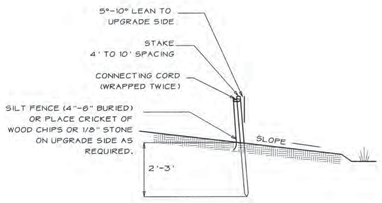
STAKED HAYBALE DETAIL

NOT TO SCALE



STABILIZED CRUSHED STONE CONSTRUCTION ENTRANCE

NOT TO SCALE



SILT FENCE DETAIL

NOT TO SCALE

APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

ACTON PLANNING BOARD

_____

_____

_____

_____

_____

_____

_____

DATE APPROVED: _____

DATE ENDORSED: _____

"HAYWARD FARM"

DEFINITIVE SUBDIVISION PLAN

EROSION & SEDIMENT CONTROL PLAN 2

SHEET 8 OF 10

SITE LOCATION:

121 HAYWARD ROAD

ACTON, MASSACHUSETTS 01720

ASSESSORS MAP E-2 PARCELS 261-2, 261-3, 262, 272 & 273

PREPARED FOR:

ACTON MANAGEMENT, INC.

P.O. BOX 2350

ACTON, MASSACHUSETTS 01720

DATE: AUGUST 29, 2014 SCALE: AS NOTED

ENGINEERING
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16 Gleasondale Road Suite 1-1
Stow, Massachusetts 01775

Phone: (978) 461-2350
Fax: (978) 841-4102

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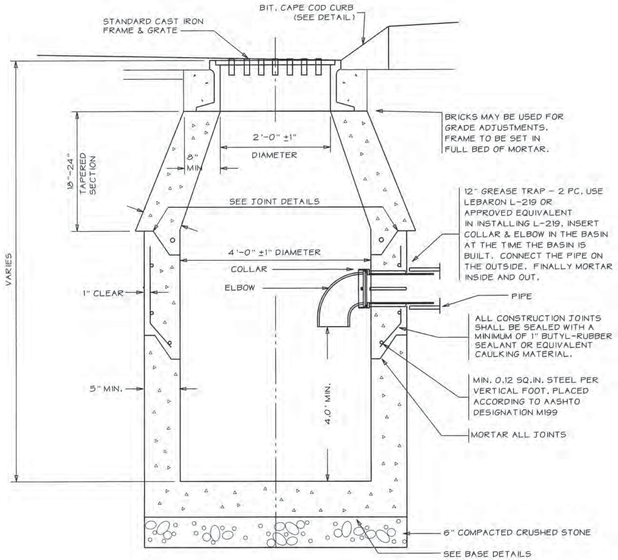
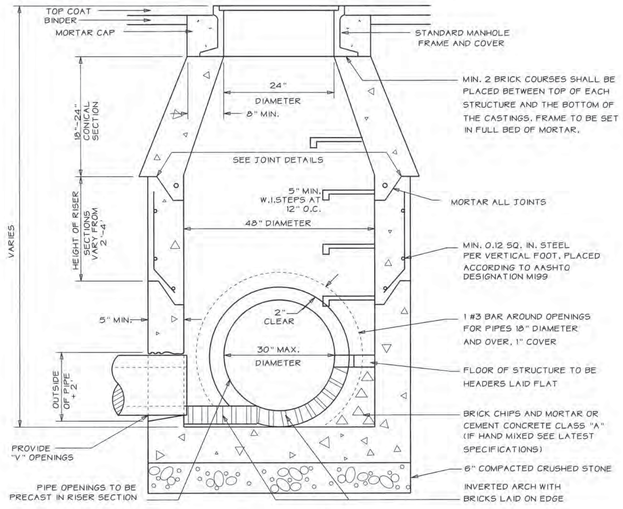
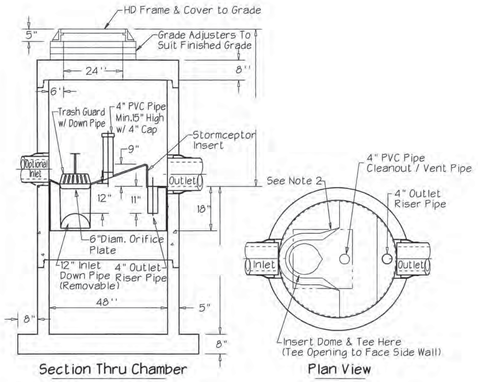




NOTE: FOR DESCRIPTIONS, MATERIALS, AND CONSTRUCTION METHODS; SEE LATEST MHD SPECIFICATIONS

PRECAST CONCRETE DRAIN MANHOLE
NOT TO SCALE



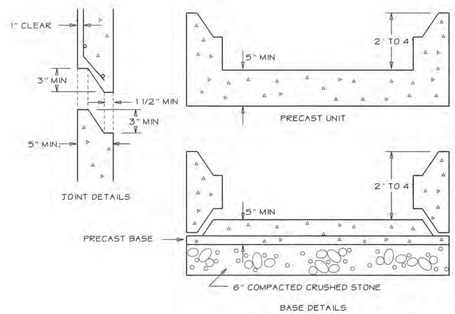
Section Thru Chamber

Plan View

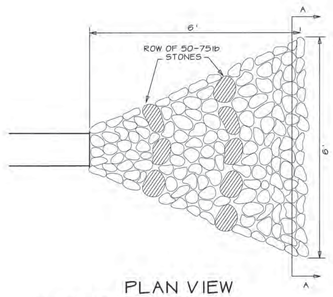
Notes:
1. The use of a Flexible Connection is cecommended at The Inlet and Outlet Pipe.
2. The Cover should be positioned over The Inlet Drop Pipe and The Vent Pipe.
3. The Stormceptor System is protected by one or more of the following U.S. Patents: #4985148, #5498331, #5725760, #5753115, #5849181, #6068765, #6371690.
4. Contact a Hydro Conduit representative for further details not listed on this sheet.

SUPPLIER: CEMEX USA, WESTFIELD, MA (413) 562-3647.

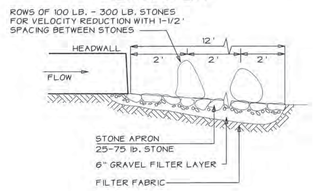
STORMCEPTOR MODEL STC 450i STORMWATER TREATMENT UNIT
(450 U.S. Gallon Capacity)
NOT TO SCALE



PRECAST CONCRETE DEEP SUMP CATCH BASIN
NOT TO SCALE

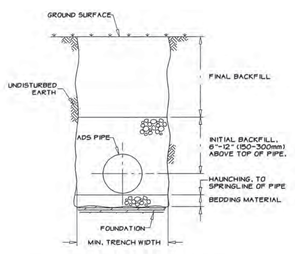


PLAN VIEW



CROSS-SECTION

DRAIN OUTFALL WITH VELOCITY REDUCER
NOT TO SCALE



TYPICAL TRENCH CROSS-SECTION

NOTES:
1. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH A FOUNDATION OF CLASS I OR II MATERIAL AS DEFINED IN ASTM D2321, "STANDARD PRACTICE FOR INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS," LATEST EDITION; AS AN ALTERNATIVE AND AT THE DISCRETION OF THE ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A WOVEN GEOTEXTILE FABRIC.
2. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

   UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100-600mm) CORRUGATED POLYETHYLENE PIPE (CPEP); 6" (150mm) FOR 30"-60" (750-1500mm) CPEP.
3. HAUNCHING AND INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
4. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM TRENCH WIDTHS SHALL BE AS FOLLOWS:

NOMINAL in (mm)	MIN. RECOMMENDED TRENCH WIDTH, in (mm)
4 (100)	21 (530)
6 (150)	23 (580)
8 (200)	25 (630)
10 (250)	28 (710)
12 (300)	31 (790)
15 (375)	34 (860)
18 (450)	39 (990)
24 (600)	45 (1220)
30 (750)	66 (1680)
36 (900)	78 (1980)
42 (1050)	83 (2110)
48 (1200)	89 (22280)
60 (1500)	102 (2590)

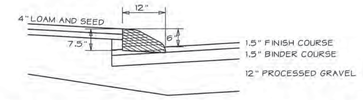
5. MINIMUM COVER: MINIMUM RECOMMENDED DEPTHS OF COVER FOR VARIOUS LIVE LOADING CONDITIONS ARE SUMMARIZED IN THE FOLLOWING TABLE. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TAKEN FROM THE TOP OF PIPE TO THE GROUND SURFACE.

SURFACE LIVE LOADING CONDITION	MINIMUM RECOMMENDED COVER, in (mm)
H25 (FLEXIBLE PAVEMENT)	12 (300), 24 (600) FOR 60" (1500) PIPE
H25 (RIGID PAVEMENT)	12 (300), 24 (600) FOR 60" (1500) PIPE
E80 RAILWAY	24 (600)
HEAVY CONSTRUCTION	48 (1200)

*TOP OF PIPE TO BOTTOM OF BITUMINOUS PAVEMENT SECTION

TYPICAL HDPE DRAIN PIPE INSTALLATION
NOT TO SCALE

COMMONWEALTH OF MASSACHUSETTS
SCOTT P. HAYES
CIVIL
No. 41017
REGISTERED PROFESSIONAL ENGINEER
8-29-14



BITUMINOUS CAPE COD CURB DETAIL
NO SCALE

TO BE PLACED ALONG EDGE OF PAVEMENT OF PARKING LOT AS SHOWN ON PLAN VIEW DENOTED CCB

APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

ACTON PLANNING BOARD

DATE APPROVED: _____

DATE ENDORSED: _____

"HAYWARD FARM"
DEFINITIVE SUBDIVISION PLAN

CONSTRUCTION DETAILS 1
SHEET 9 OF 10

SITE LOCATION:
121 HAYWARD ROAD
ACTON, MASSACHUSETTS 01720
ASSESSORS MAP E-2 PARCELS 261-2, 261-3, 262, 272 & 273

PREPARED FOR:
ACTON MANAGEMENT, INC.
P.O. BOX 2350
ACTON, MASSACHUSETTS 01720

DATE: AUGUST 29, 2014 SCALE: AS NOTED

ENGINEERING
SURVEYING
PLANNING
FORESITE ENGINEERING
16 Gleasondale Road Suite 1-1
Stow, Massachusetts 01775
Phone: (978) 461-2350
Fax: (978) 841-4102
www.foresitel.com

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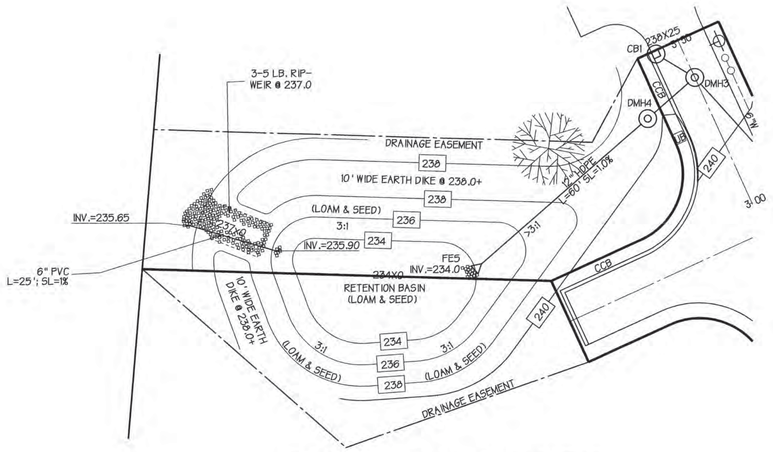
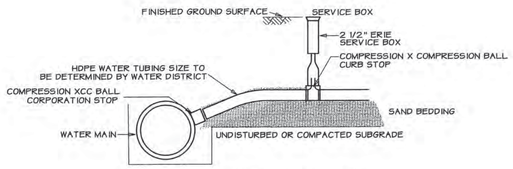
121DETL2D



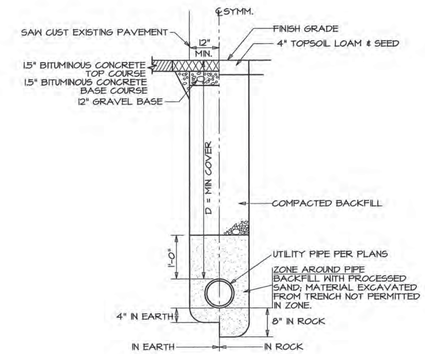
RETENTION BASIN PLAN DETAIL

SCALE: 1"=20'



WATER SERVICE CONNECTION DETAIL

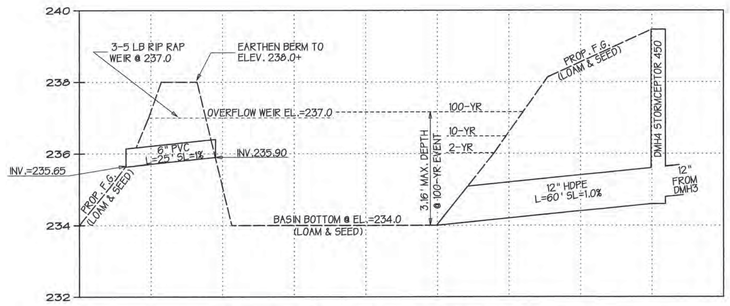
NOT TO SCALE



TRENCH DEPTH TABLE	
UTILITY CONDUIT	TRENCH DEPTH
ELECTRIC CONDUIT	2'
TELEPHONE CONDUIT	2'
CABLE TELEVISION CONDUIT	2'
DRAIN LINE	4'

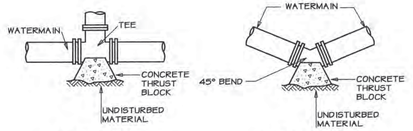
UTILITY TRENCH DETAIL

NOT TO SCALE



RETENTION BASIN SECTION DETAIL

H. SCALE: 1"=20'
V. SCALE: 1"=2'



TEE-PLAN

NOT TO SCALE

45° PLAN

NOT TO SCALE

1. CONCRETE FOR THRUST BLOCKS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 1500 PSI AT 28 DAYS.

2. THRUST BLOCK BEARING AREAS TO BE A MINIMUM AREA OF 6SQ.FT. ON SUPPORT SOIL MINIMUM OF 15Q.FT. ON PIPE, 6" MINIMUM THICKNESS.

WATER MAIN THRUST BLOCK DETAILS

NOT TO SCALE

APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

ACTON PLANNING BOARD

_____

_____

_____

_____

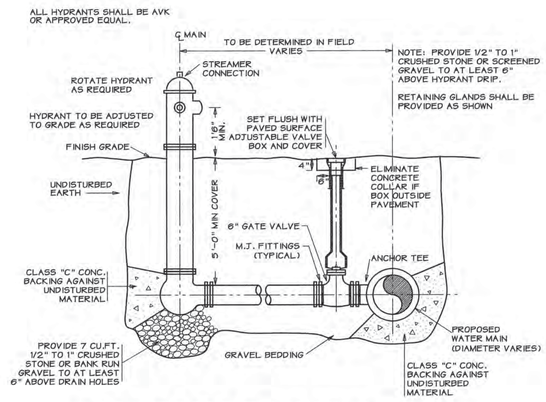
_____

_____

_____

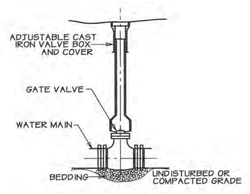
DATE APPROVED: _____

DATE ENDORSED: _____



HYDRANT ASSEMBLY & VALVE DETAIL

NOT TO SCALE



GATE VALVE & BOX

NOT TO SCALE

"HAYWARD FARM"

DEFINITIVE SUBDIVISION PLAN

CONSTRUCTION DETAILS 2

SHEET 10 OF 10

SITE LOCATION:

121 HAYWARD ROAD
ACTON, MASSACHUSETTS 01720
ASSESSORS MAP E-2 PARCELS 261-2, 261-3, 262, 272 & 273

PREPARED FOR:

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