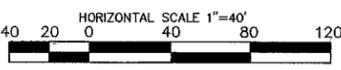
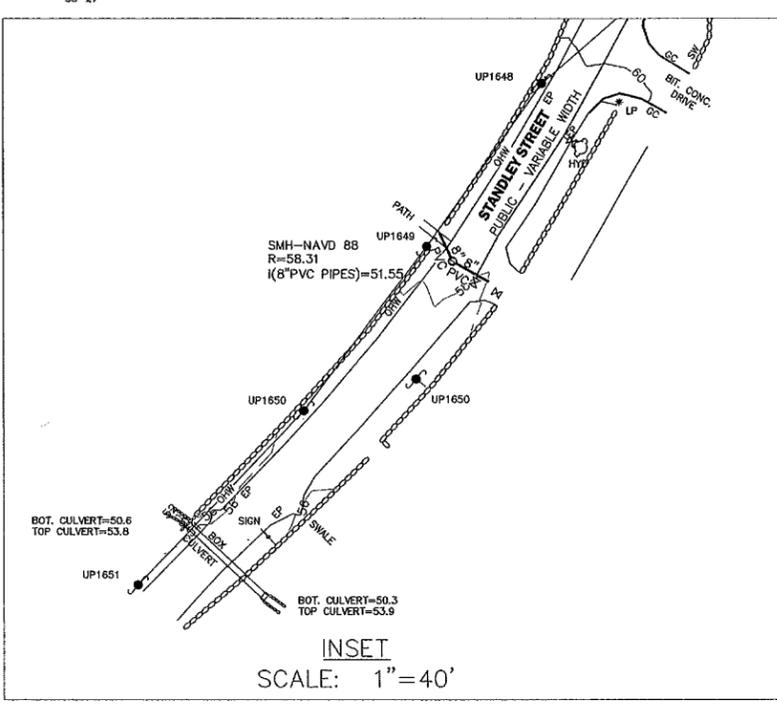
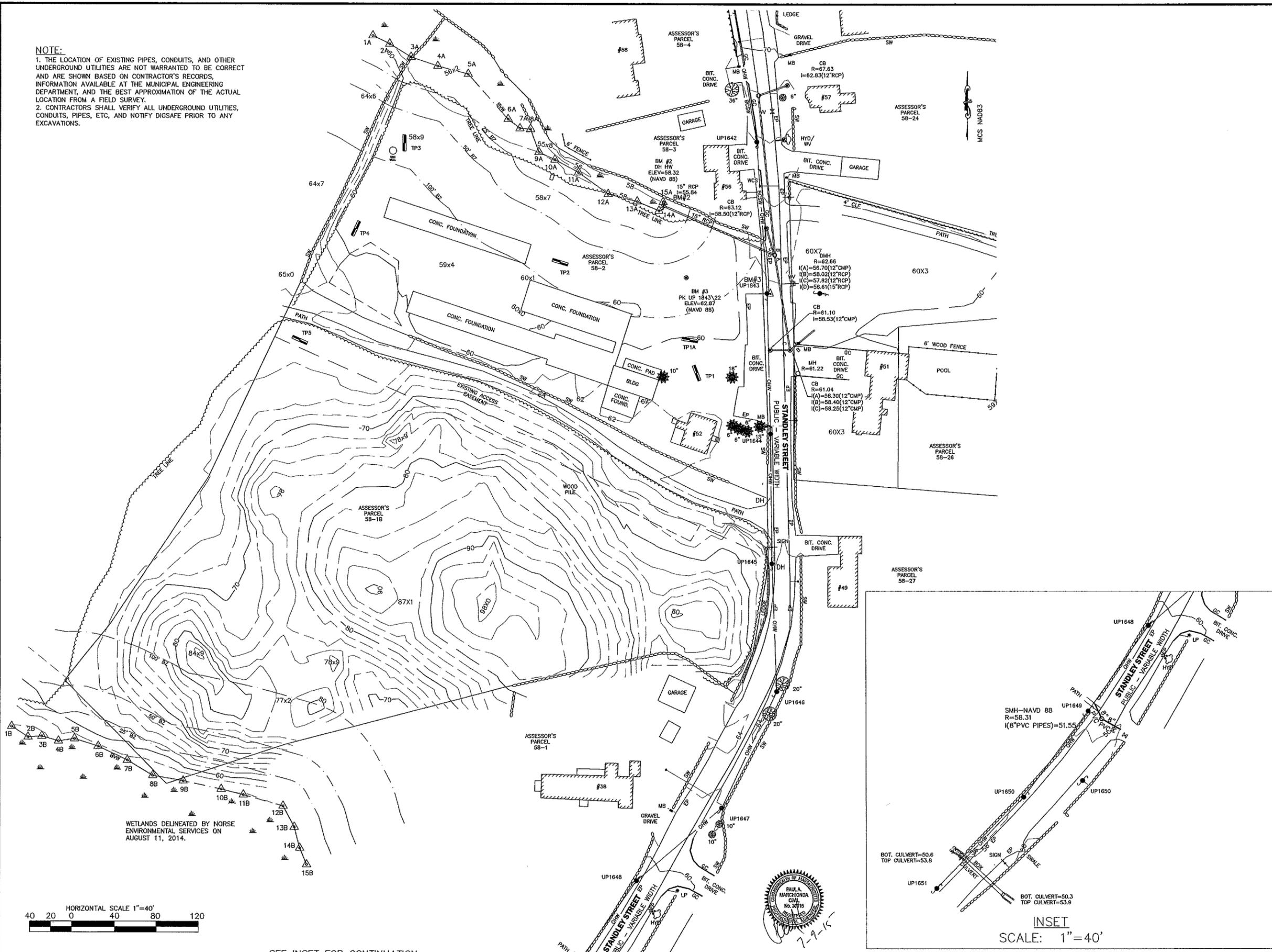


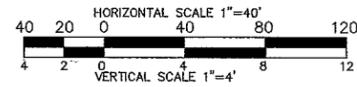
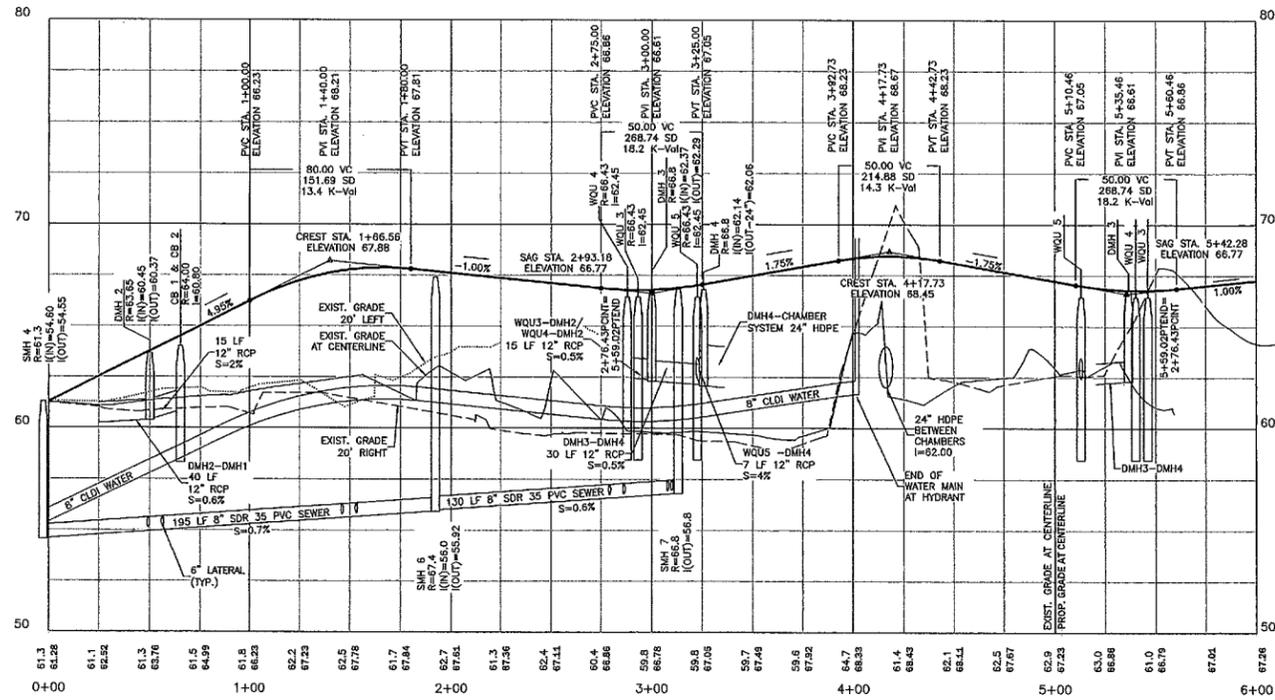
NOTE:
 1. THE LOCATION OF EXISTING PIPES, CONDUITS, AND OTHER UNDERGROUND UTILITIES ARE NOT WARRANTED TO BE CORRECT AND ARE SHOWN BASED ON CONTRACTOR'S RECORDS, INFORMATION AVAILABLE AT THE MUNICIPAL ENGINEERING DEPARTMENT, AND THE BEST APPROXIMATION OF THE ACTUAL LOCATION FROM A FIELD SURVEY.
 2. CONTRACTORS SHALL VERIFY ALL UNDERGROUND UTILITIES, CONDUITS, PIPES, ETC., AND NOTIFY DIGSAFE PRIOR TO ANY EXCAVATIONS.



SEE INSET FOR CONTINUATION



<p>REGISTRY USE ONLY</p> <p>APPROVED BY THE CITY OF BEVERLY PLANNING BOARD</p> <p style="text-align: right;">DATE</p>	
<p>CHK:</p>	<p>DATE</p>
<p>DSG:</p>	<p>DESCRIPTION</p>
<p>DRW:</p>	<p>REL</p>
<p>EXISTING CONDITIONS</p> <p>DEFINITIVE SUBDIVISION PLAN STANLEY STREET GARDENS AN OPEN SPACE RESIDENTIAL DESIGN</p> <p>BEVERLY, MA</p> <p>PREPARED FOR R.C. REALTY CONSTRUCTION & DEVELOPMENT, LLC 7 NICOLE AVENUE BEVERLY, MA 01915</p>	
<p>Marchionda & Associates, L.P.</p> <p>Engineering and Planning Consultants</p> <p>62 Montvale Avenue Suite 1 Stoneham, MA 02180 TEL: (781) 438-6121 FAX: (781) 438-9654 Email: engineering@marchionda.com Website: www.marchionda.com</p>	
<p>DATE: 7/9/15</p> <p>H:\PROJECTS\857-01\DEFINITIVE\EX-COND.DWG</p> <p>M. & A. NO.: 857-01 SCALE: 1"=40'</p> <p style="text-align: right;">SHEET 4 OF 13</p>	

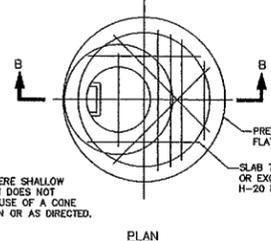


NOTE:
 1. THE LOCATION OF EXISTING PIPES, CONDUITS, AND OTHER UNDERGROUND UTILITIES ARE NOT WARRANTED TO BE CORRECT AND ARE SHOWN BASED ON CONTRACTOR'S RECORDS, INFORMATION AVAILABLE AT THE MUNICIPAL ENGINEERING DEPARTMENT, AND THE BEST APPROXIMATION OF THE ACTUAL LOCATION FROM A FIELD SURVEY.
 2. CONTRACTORS SHALL VERIFY ALL UNDERGROUND UTILITIES, CONDUITS, PIPES, ETC., AND NOTIFY DIGSAFE PRIOR TO ANY EXCAVATIONS.



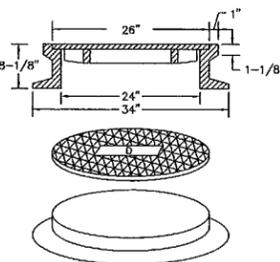
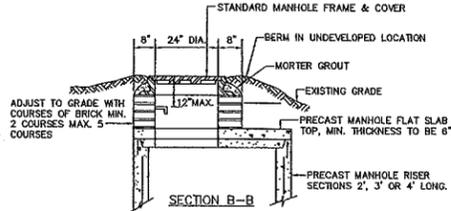
PLAN AND PROFILE EMILY WAY		REGISTRY USE ONLY
DEFINITIVE SUBDIVISION PLAN STANDLEY STREET GARDENS AN OPEN SPACE RESIDENTIAL DESIGN IN BEVERLY, MA PREPARED FOR R.C. REALTY CONSTRUCTION & DEVELOPMENT, LLC 7 NICOLE AVENUE BEVERLY, MA 01915		APPROVED BY THE CITY OF BEVERLY PLANNING BOARD _____ DATE _____
DRW:	DSG:	CHK:
REL	DESCRIPTION	DATE
 Marchionda & Associates, L.P. Engineering and Planning Consultants 62 Montvale Avenue Suite 1 Stoneham, MA 02180 TEL: (781) 438-6121 FAX: (781) 438-9654 Email: engineering@marchionda.com Website: www.marchionda.com		
DATE: 7/9/15		
H:\PROJECTS\857-01\DEFINITIVE\PROFILE.DWG		
M. & A. NO.: 857-01	SCALE: 1"=40'	
SHEET 8 OF 13		

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



PLAN

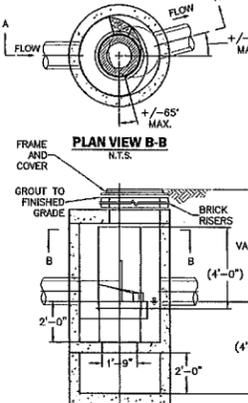
FLAT TOP SECTION
N.T.S.



DRAIN MANHOLE FRAME & COVER
N.T.S.



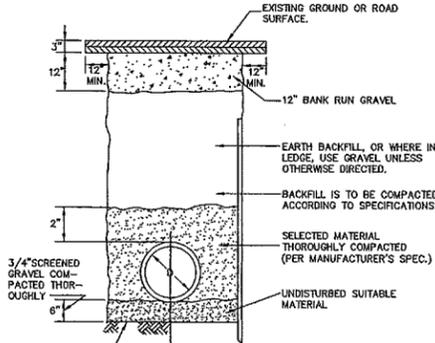
FRAME AND COVER
N.T.S.



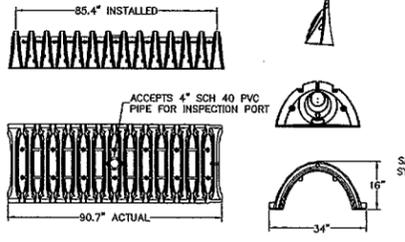
SECTION A-A
N.T.S.

GENERAL NOTES
REFER TO CONTECH'S CURRENT RECOMMENDED INSTALLATION GUIDELINES.
WQU #3-5 ARE TO BE CONTECH VORTSENTRY HS MODEL #VSH36-G OUTFITTED WITH CUSTOM INTERNALS DESIGNED BY CONTECH ENGINEERED SOLUTIONS, LLC.
UNITS TO BE FITTED WITH FRAME/GRATE AND GRANITE CURB INLETS.
SEE SITE PLANS FOR SPECIFIC RIM AND INVERT ELEVATIONS.

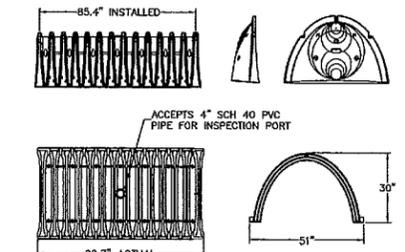
**WATER QUALITY UNITS #3, #4 & #5
CONTECH VORTSENTRY HS**
N.T.S.



TYPICAL DRAIN TRENCH DETAIL
N.T.S.



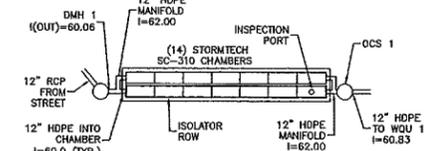
SC-310
N.T.S.



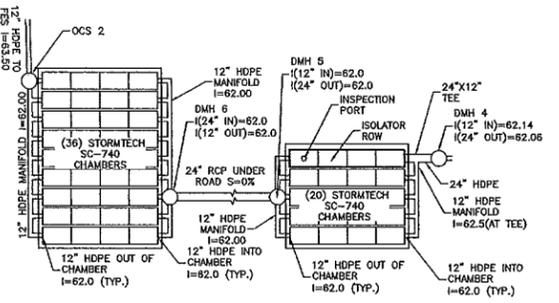
SC-740
N.T.S.

NOTES
1. ISOLATOR ROWS TO BE INSTALLED PER STORMTECH SPECIFICATIONS. SEE STORMTECH INSTALLATION MANUAL AND DETAIL SHEETS.
2. INSPECTION PORT TO BE SUPPLIED AT ISOLATOR ROW, PER STORMTECH DETAIL.
3. SEE STORMTECH DETAIL FOR RECOMMENDED INSPECTION AND MAINTENANCE SCHEDULE AND PROCEDURES.

**SUBSURFACE DETENTION/INFILTRATION SYSTEM #1
SCHEMATIC**
N.T.S.



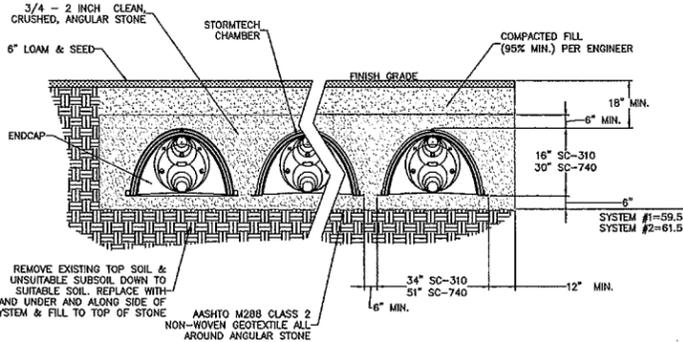
**SUBSURFACE DETENTION/INFILTRATION SYSTEM #2
SCHEMATIC**
N.T.S.



GENERAL NOTES
REFER TO CONTECH'S CURRENT RECOMMENDED INSTALLATION GUIDELINES.
WQU #2 TO BE CONTECH CDS INLINE UNIT MODEL #CDS2015-4.
SEE SITE PLANS FOR SPECIFIC RIM AND INVERT ELEVATIONS.

**WATER QUALITY UNIT #2
CONTECH CDS INLINE**
N.T.S.

**SUBSURFACE DETENTION/INFILTRATION SYSTEM
TYPICAL SECTION**
N.T.S.

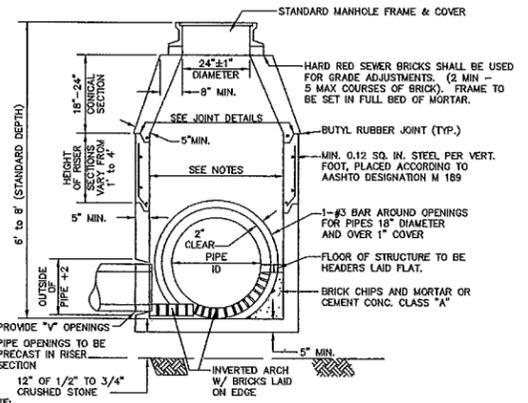


NOTES
SC-740 & SC-310 CHAMBERS BY STORMTECH. REFER TO STORMTECH'S CURRENT RECOMMENDED INSTALLATION GUIDELINES.
ALL CHAMBERS MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

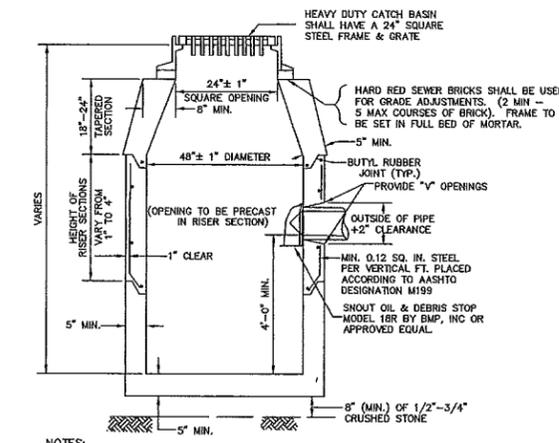
**SUBSURFACE DETENTION/INFILTRATION SYSTEM
CROSS SECTION**
N.T.S.

INFILTRATION SYSTEM #1 (SC-310)	
MIN. FINISHED GRADE	63.0
TOP OF STONE	61.83
TOP OF CHAMBER	61.33
E.S.H.W.	57.5±
INVERT IN/MANIFOLD	60.0
INVERT OUT/MANIFOLD	60.0
INV. OVERFLOW	60.83 12" HDPE
BOTTOM OF CHAMBER	60.0
BOTTOM OF STONE	59.5
BED SIZE	423 S.F.
# CHAMBERS	14
# END CAPS	28

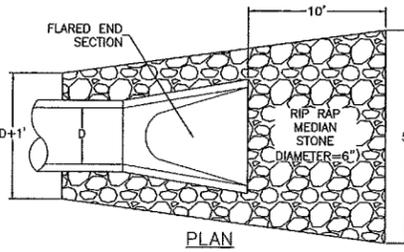
DETENTION/INFILTRATION SYSTEM #2 (SC-740)	
MIN. FINISHED GRADE	66.0
TOP OF STONE	65.5
TOP OF CHAMBER	64.5
E.S.H.W.	57.5±
INVERT IN/MANIFOLD	62.0
INVERT OUT/MANIFOLD	62.0
INV. OVERFLOW	63.5 12" HDPE
BOTTOM OF CHAMBER	62.0
BOTTOM OF STONE	61.5
BED SIZE	785 S.F./1348 S.F.
# CHAMBERS	20/36 = 56 TOTAL
# END CAPS	10/18 = 28 TOTAL



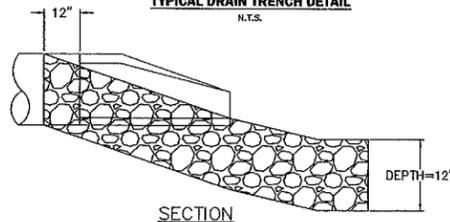
PRECAST CONCRETE MANHOLE DETAILS
N.T.S.



PRECAST CONCRETE CATCH BASIN DETAILS
N.T.S.



RIP RAP APRON AT FLARED END SECTION
N.T.S.



N.T.S.

REGISTRY USE ONLY

APPROVED BY THE
CITY OF BEVERLY
PLANNING BOARD

DATE

CHK:

DSG:

DRW:

DRAINAGE DETAILS

**DEFINITIVE SUBDIVISION PLAN
STANDLEY STREET GARDENS**
AN OPEN SPACE RESIDENTIAL DESIGN
IN
BEVERLY, MA

PREPARED FOR
R.C. REALTY CONSTRUCTION & DEVELOPMENT, LLC
7 NICOLE AVENUE
BEVERLY, MA 01915

Marchionda
& Associates, L.P.

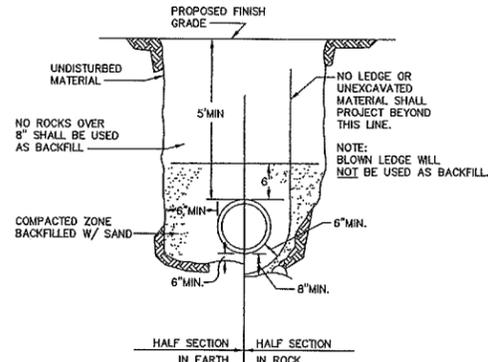
Engineering and
Planning Consultants

62 Montvale Avenue
Suite 1
Stoneham, MA 02180
TEL: (781) 438-6121
FAX: (781) 438-9654
Email: engineering@marichionda.com
Website: www.marichionda.com

DATE: 7/9/15

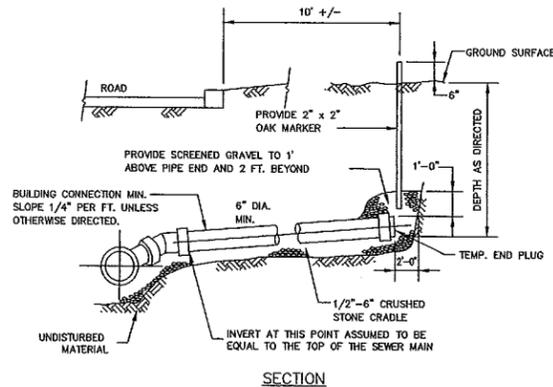
H:\PROJECTS\857-01\DEFINITIVE\DET.DWG
M. & A. NO.: 857-01 SCALE: N.T.S.

SHEET 11 OF 13

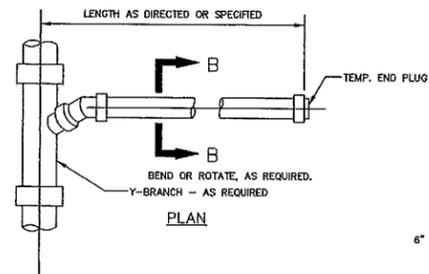


NOTES:
 1. INSTALLATION OF PIPE AND FITTINGS SHALL CONFORM TO THE STRICTER OF EITHER AWWA STANDARDS OR MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES.
 2. PROVIDE AT LEAST ONE IMPERVIOUS DAM IN GRAVEL EVERY 200 FT AND AT ALL JUNCTIONS (ONE ON EACH LEG OF THE JUNCTION) - SEE DETAIL.
 3. BEDDING AND BACKFILL SHOWN ON THIS DETAIL REPRESENT MINIMUM REQUIREMENTS AND SHALL BE ADJUSTED IF NECESSARY TO MEET PIPE MANUFACTURER'S REQUIREMENTS.

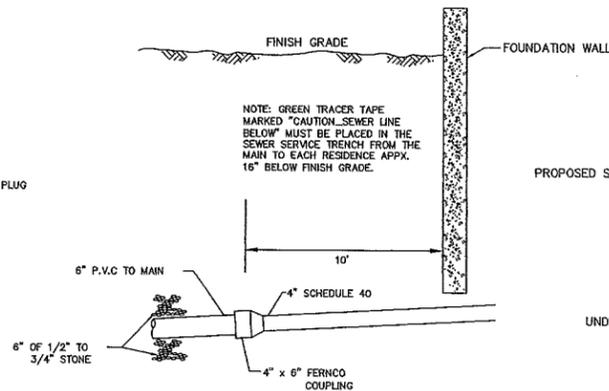
WATER MAIN TRENCH DETAIL
 NOT TO SCALE



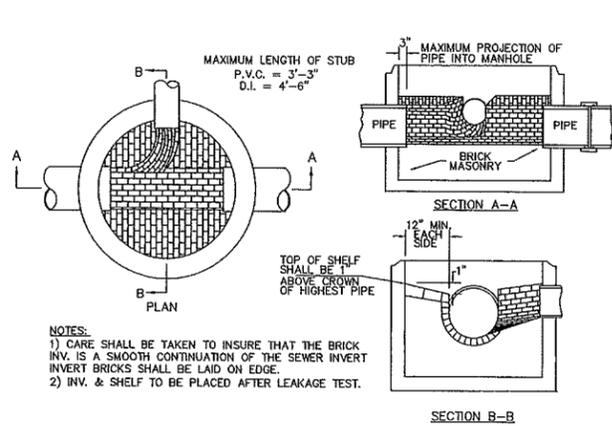
TYPICAL SEWER LATERAL CONNECTION
 N.T.S.



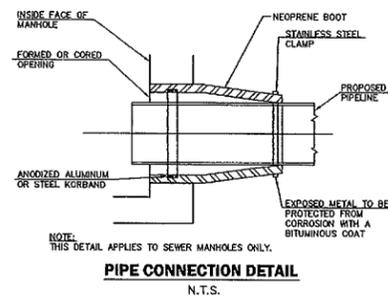
TYPICAL SEWER LATERAL FITTINGS
 N.T.S.



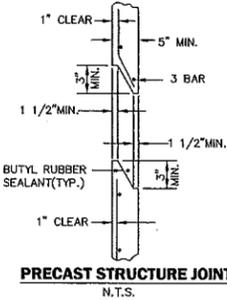
SEWER PIPE TRENCH (CHECK) DAM DETAIL
 NOT TO SCALE



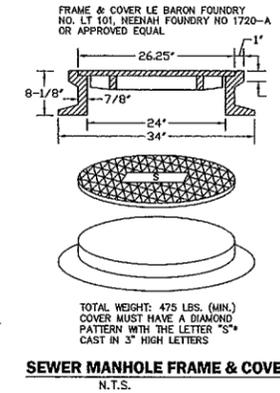
BRICK INVERT AT SEWER MANHOLE
 N.T.S.



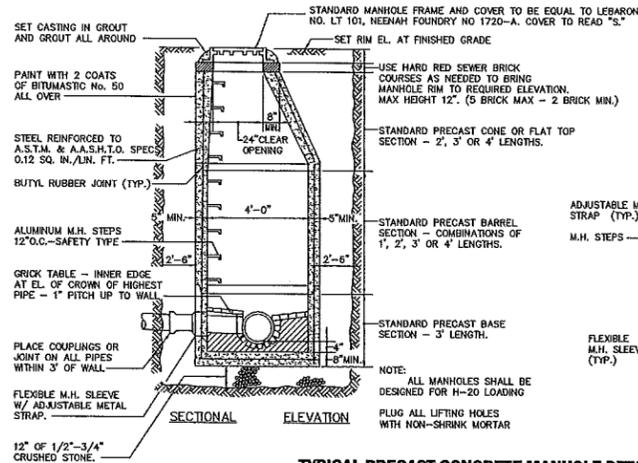
PIPE CONNECTION DETAIL
 N.T.S.



PRECAST STRUCTURE JOINT
 N.T.S.



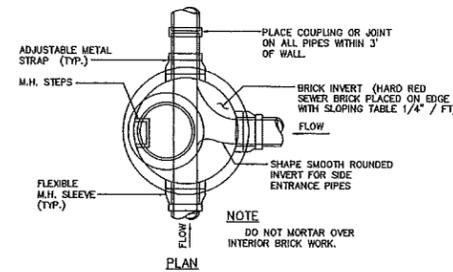
SEWER MANHOLE FRAME & COVER
 N.T.S.



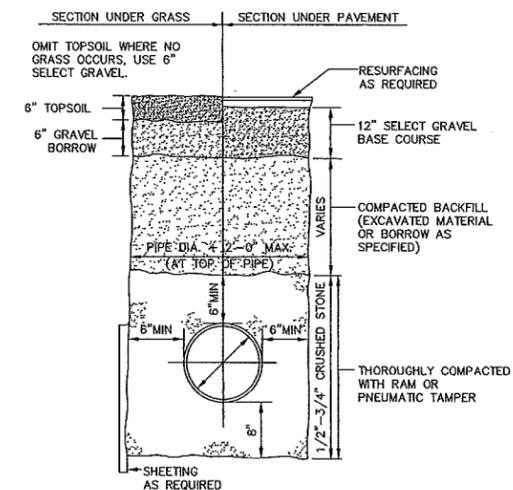
TYPICAL PRECAST CONCRETE MANHOLE DETAILS
 N.T.S.



MANHOLE STEP DETAILS
 N.T.S.



TYPICAL PRECAST CONCRETE MANHOLE DETAILS
 N.T.S.



TYPICAL SEWER TRENCH DETAIL
 N.T.S.

NOTES:
 1. PROVIDE AT LEAST ONE IMPERVIOUS DAM IN GRAVEL BEDDING BETWEEN EACH MANHOLE OR EVERY 200 FT, WHICHEVER IS LESS (SEE DETAIL).
 2. PROVIDE INSULATION AROUND PIPE WHERE COVER IS LESS THAN 3 FEET.

REGISTRY USE ONLY	
APPROVED BY THE CITY OF BEVERLY PLANNING BOARD	DATE
CHK:	
DWG:	
DRW:	
	DESCRIPTION
	REF
	DATE

SEWER DETAILS

DEFINITIVE SUBDIVISION PLAN
STANDLEY STREET GARDENS
 AN OPEN SPACE RESIDENTIAL DESIGN

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 PREPARED FOR
R.C. REALTY CONSTRUCTION & DEVELOPMENT, LLC
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