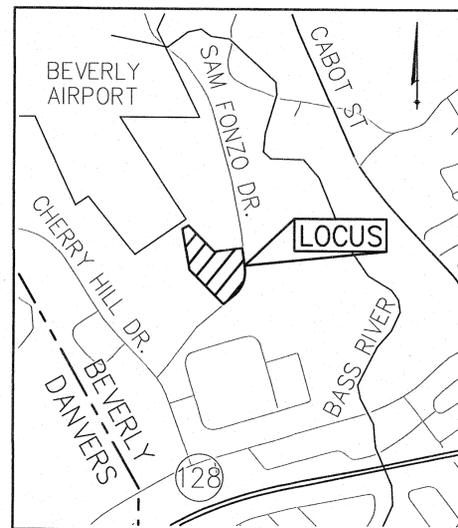


# PERMIT SITE PLAN

## Fonzo Realty, LLC

#40 Sam Fonzo Drive  
Beverly, MA



**VICINITY MAP**  
SCALE: 1" = 800'

**OWNER:**  
FONZO REALTY, LLC

### SHEET INDEX

SHEET 1 .....	TITLE SHEET
SHEET 2 .....	NOTES, REFERENCES AND LEGEND SHEET
SHEET 3 .....	EXISTING CONDITIONS PLAN
SHEET 4 .....	LAYOUT AND MATERIALS PLAN
SHEET 5 .....	GRADING AND DRAINAGE PLAN
SHEET 6 .....	SITE UTILITIES PLAN
SHEET 7 .....	SNOW STORAGE PLAN
SHEET 8 .....	SITWORK DETAILS SHEET 1
SHEET 9 .....	SITWORK DETAILS SHEET 2
SHEET 10 .....	LANDSCAPE PLANTING PLAN

#40  
SAM FONZO  
DRIVE

Beverly, Massachusetts 01915

PREPARED FOR:

FONZO  
REALTY,  
LLC

100 Sam Fonzo Drive  
Beverly, Massachusetts 01915

**HANCOCK  
ASSOCIATES**

Civil Engineers

Land Surveyors

Wetland Scientists

185 CENTRE STREET, DANVERS, MA 01923  
VOICE (978) 777-3050, FAX (978) 774-7816  
WWW.HANCOCKASSOCIATES.COM




NO.	BY	APP	DATE	ISSUE/REVISION	DESCRIPTION

DATE: 12/8/17 DESIGN BY: JPC  
SCALE: 1" = 40' DRAWN BY: JPC  
APPRVD. BY: VVT CHECK BY: KAC

TITLE  
SHEET

PLOT DATE: Dec 15, 2017 8:20 am  
PATH: F:\Civil 3D Projects\20652 - Fonzo - Beverly\DWG\

DWG: 20652 ps.dwg  
LAYOUT: TS  
SHEET: 1 OF 10  
PROJECT NO.: 20652

1

**ZONING**  
IR (RESIDENTIAL INDUSTRIAL)

**REFERENCES**  
LAND COURT DOCUMENT #526914  
LAND COURT PLAN 31995L

**ASSESSORS**  
MAP 78, LOT 13B

**BUILDING DATA**

BUILDING FOOTPRINT 47,319 SF

**PARKING DATA**

USE	REQUIREMENT	PROVIDED
BUSINESS AND PROFESSIONAL OFFICES (1 FOR EVERY 250 S.F. OF FLOOR AREA)	96	
WHOLESALE AND STORAGE IN ENCLOSED BUILDINGS (1 FOR EVERY 1,000 S.F. OF FLOOR AREA)	24	
<b>TOTAL</b>	<b>120</b>	<b>126 (8 HANDICAP)</b>

**DIMENSIONAL REQUIREMENTS**

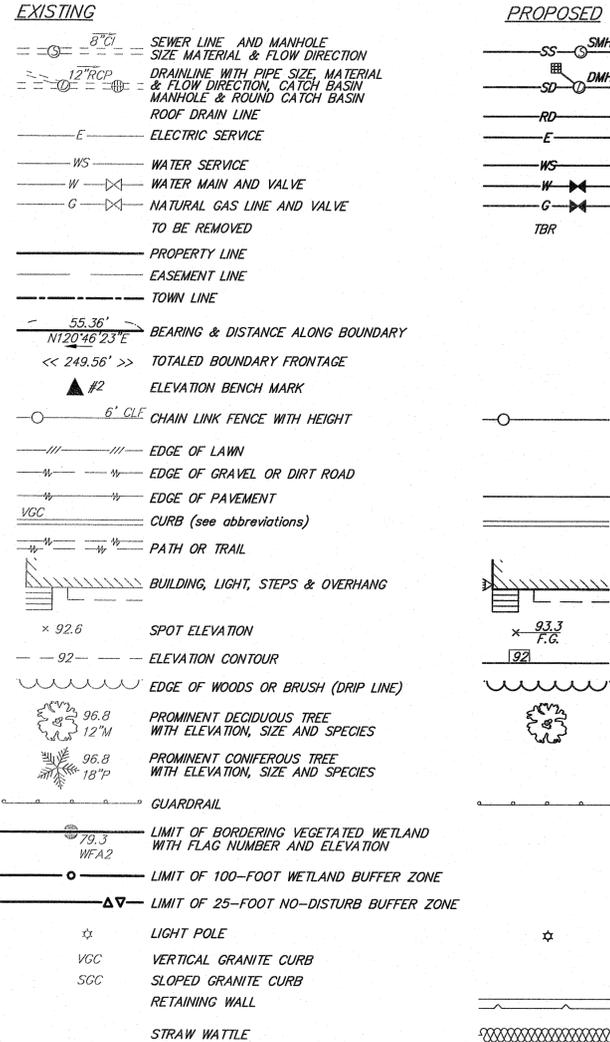
	REQUIRED	PROVIDED
AREA	2 ACRES	5.3 ACRES (NEW PROPERTY LINE)
FRONT YARD	30 FT	76.1 FT
SIDE YARD	20 FT	30.0 FT
REAR YARD	25 FT	193.8 FT
MAXIMUM HEIGHT	60 FT	<60 FT
FRONTAGE	225 FT	607.9± FT

**SOIL TEST DATA:**

<b>TP-1</b> 0-4" FILL LAYER, LOAMY SAND 4-70" FILL LAYER, LOAMY SAND GROUND EL.=161.1' LEDGE REFUSAL AT 70", NO OBSERVED GROUNDWATER	<b>TP-4</b> 0-4" FILL LAYER, LOAMY SAND 4-100" FILL LAYER, LOAMY SAND GROUND EL.=161.1' LEDGE REFUSAL AT 100", NO OBSERVED GROUNDWATER
<b>TP-2</b> 0-4" FILL LAYER, LOAMY SAND 4-57" FILL LAYER, LOAMY SAND 57-98" C1 LAYER, FINE-MED. SAND GROUND EL.=158.3 REFUSAL AT 98", NO OBSERVED GROUNDWATER	<b>TP-5</b> 0-4" FILL LAYER, LOAMY SAND 4-50" FILL LAYER, LOAMY SAND 50-100" C1 LAYER, CRUSHED ROCK GROUND EL.=153.2' REFUSAL AT 100", NO OBSERVED GROUNDWATER
<b>TP-3</b> 0-4" FILL LAYER, LOAMY SAND 4-100" FILL LAYER, LOAMY SAND GROUND EL.=161.1' LEDGE REFUSAL AT 100", NO OBSERVED GROUNDWATER	

ELEVATION BENCH MARKS		
NO.	DESCRIPTION	ELEV.
1.	L.P. BASE - S.W. BOLT (DESTROYED)	66.73
2.	CORNER CONC PAD - BOX CUT	63.97
3.	HYDRANT; X-CUT IN BOLT OVER MAIN OUT	73.68

**LEGEND**



**PLAN INTENT**

- THE INTENT OF THIS PLAN IS FOR PERMITTING PURPOSES ONLY. PLANS SHALL NOT BE USED FOR CONSTRUCTION.

**REGULATORY NOTES**

- CONTRACTOR SHALL CONTACT DIG-SAFE FOR UNDERGROUND UTILITY MARKING AT 811 AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF ANY WORK.
- CONTRACTOR SHALL MAKE HIMSELF AWARE OF ALL CONSTRUCTION REQUIREMENTS, CONDITIONS, AND LIMITATIONS IMPOSED BY PERMITS AND APPROVALS ISSUED BY REGULATORY AUTHORITIES PRIOR TO COMMENCEMENT OF ANY WORK. CONTRACTOR SHALL COORDINATE AND OBTAIN ALL CONSTRUCTION PERMITS REQUIRED BY REGULATORY AUTHORITIES.
- ALL WORK OUTSIDE OF BUILDING THAT IS LESS THAN 10 FEET FROM THE INSIDE FACE OF BUILDING FOUNDATIONS SHALL CONFORM WITH THE UNIFORM STATE PLUMBING CODE OF MASSACHUSETTS, 24B CMR 2.00.
- CONSTRUCTION ACTIVITIES SHALL CONFORM TO THE RULES AND REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).

**GENERAL NOTES**

- ELEVATIONS SHOWN HEREON REFER TO N.A.V.D. 1988 DERIVED FROM GPS OBSERVATIONS ON SEPTEMBER 6, 2017.
- THE CONTRACTOR SHALL VERIFY THE LOCATION AND RELATIVE ELEVATION OF BENCH MARKS PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY DISCREPANCY SHALL BE REPORTED TO THE ENGINEER.
- CONTRACTOR SHALL FURNISH CONSTRUCTION LAYOUT OF BUILDING AND SITE IMPROVEMENTS. THIS WORK SHALL BE PERFORMED BY A PROFESSIONAL LAND SURVEYOR.
- SAFETY MEASURES, CONSTRUCTION METHODS AND CONTROL OF WORK SHALL BE RESPONSIBILITY OF THE CONTRACTOR.
- ALL SITE CONSTRUCTION SHALL COMPLY WITH THE BEVERLY DEPARTMENT OF PUBLIC WORK STANDARDS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ANY EXISTING IMPROVEMENTS DAMAGED DURING CONSTRUCTION THAT ARE NOT DESIGNATED FOR DEMOLITION AND / OR REMOVAL HEREON. DAMAGED IMPROVEMENTS SHALL BE REPAIRED TO THE SATISFACTION OF THEIR RESPECTIVE OWNERS.
- ANY INTENDED REVISION OF THE HORIZONTAL AND/OR VERTICAL LOCATION OF IMPROVEMENTS TO BE CONSTRUCTED AS SHOWN HEREON SHALL BE REVIEWED AND APPROVED BY ENGINEER PRIOR TO IMPLEMENTATION.
- THIS PLAN IS NOT INTENDED TO SHOW AN ENGINEERED BUILDING FOUNDATION DESIGN, WHICH WOULD INCLUDE DETAILS AND FINAL ELEVATIONS OF FOOTINGS, WALLS AND SUBSURFACE DRAINAGE TO PREVENT INTERIOR FLOODING. SEE ARCHITECTURAL AND/OR STRUCTURAL DRAWINGS.
- PROPOSED BUILDING FOUNDATION CONFIGURATION AND LOCATION ON THE LOT AS SHOWN ARE CONCEPTUAL AND SHALL BE VERIFIED AS TO CONFORMANCE WITH FINAL ARCHITECTURAL PLANS AND ZONING ORDINANCES PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING HORIZONTAL AND VERTICAL MEASUREMENTS FOR ALL SUBSURFACE STRUCTURES. THIS INFORMATION SHALL BE REPORTED TO THE ENGINEER.
- TRASH AND RECYCLING COLLECTION AREAS ARE LOCATED WITHIN THE BUILDINGS.
- STANDARD PARKING SPACES ARE 9' X 18', TYPICAL SITE DRIVEWAYS ARE 24' WIDE. HANDICAP PARKING SPACES SHALL MEET ADA REQUIREMENTS.
- AN APPROVAL NOT REQUIRED PLAN SHALL BE FILED TO CHANGE THE LOT LINES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- DESIGN FOR SEGMENTAL BLOCK WALL SHALL BE PROVIDED BY VENDOR.

**GRADING AND UTILITY PLAN NOTES**

- LOCATIONS OF EXISTING UNDERGROUND UTILITIES/OBSTRUCTIONS/SYSTEMS SHOWN HEREON ARE APPROXIMATE ONLY. ALL UTILITIES/OBSTRUCTIONS/SYSTEMS MAY NOT BE SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL UNDERGROUND UTILITIES/OBSTRUCTIONS/SYSTEMS, WHETHER OR NOT SHOWN HEREON.
- UNLESS OTHERWISE SHOWN, ALL NEW UTILITIES SHALL BE UNDERGROUND.
- RIM ELEVATIONS SHOWN FOR NEW STRUCTURES ARE APPROXIMATE AND ARE PROVIDED TO ASSIST CONTRACTOR WITH MATERIAL TAKEOFFS. FINISH RIM ELEVATIONS SHOULD MATCH PAVEMENT, GRADING OR LANDSCAPING, UNLESS SPECIFICALLY INDICATED OTHERWISE.
- WHERE EXISTING UTILITY LINES/STRUCTURES ARE TO BE CUT/BROKEN DOWN/ ABANDONED, LINES/STRUCTURES SHALL BE PLUGGED/CAPPED/FILLED IN ACCORDANCE WITH OWNER REQUIREMENTS.
- THE CONTRACTOR SHALL ENCASE AND/OR SLEEVE SEWER AND WATER MAINS WHERE THE CROWN OF THE SEWER PIPE IS LESS THAN 18 INCHES BELOW THE INVERT OF THE WATER PIPE AND WHERE THE HORIZONTAL SEPARATION IS LESS THAN 10 FEET, AS REQUIRED BY THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION.
- STRUCTURE DETAILS FROM INDEPENDENT VENDORS ARE CONSTANTLY CHANGING. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THAT DETAILS SHOWN MATCH CURRENT DETAILS AND SPECIFICATIONS FROM VENDORS.
- CONTRACTOR SHALL INSTALL ALL PARKING AREAS AND WALKWAYS IN ACCORDANCE WITH APPLICABLE ADA AND MAAB REQUIREMENTS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
  - HANDICAPPED SPACES AND STRIPED AREA SLOPES SHALL NOT EXCEED 2% IN ANY DIRECTION.
  - HANDICAPPED RAMP SHALL NOT EXCEED 8% FOR A MAXIMUM VERTICAL DISTANCE OF 6 INCHES.
  - SIDEWALKS SHALL HAVE A MAXIMUM SLOPE IN THE PATH OF TRAVEL OF 5% AND A MAXIMUM CROSS SLOPE OF 2%. CONTRACTOR SHOULD NOT LAYOUT SLOPES EXCEEDING 4.5% AND 1.5% RESPECTIVELY TO ALLOW FOR CONSTRUCTION TOLERANCES. IF THE CONTRACTOR DETERMINES THAT THE REQUIRED SLOPES CANNOT BE ACHIEVED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPORTING THE INFORMATION TO THE ENGINEER FOR RESOLUTION.
- ALL PROPOSED TOP OF VERTICAL CURB ELEVATIONS ARE 6" ABOVE THE BOTTOM OF CURB UNLESS OTHERWISE SHOWN.
- WHERE NEW PAVING MEETS EXISTING PAVING, MEET LINE AND GRADE OF EXISTING WITH NEW PAVING.
- AT LOCATIONS WHERE EXISTING PAVEMENT ABUTS NEW CONSTRUCTION, THE EDGE OF THE EXISTING PAVEMENT SHALL BE SAWCUT TO A CLEAN, SMOOTH EDGE.
- EXCAVATION REQUIRED WITHIN PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL VERIFY ALL PROPOSED TOP OF CURB ELEVATIONS BEFORE PROCEEDING WITH ANY CONSTRUCTION AND ADVISE THE ENGINEER OF ANY DISCREPANCY WHICH MAY IMPACT DESIGN.
- ALL DISTURBED AREAS NOT COVERED WITH PAVEMENT, STRUCTURES, INDIVIDUAL PLANTINGS, OR MULCH SHALL HAVE LOAM AND SOD, OR LOAM AND SEED AS SHOWN ON THE LANDSCAPE PLANS OR AS DIRECTED BY THE ENGINEER.
- ALL UNDERGROUND STRUCTURES AND UTILITIES SHALL BE CAPABLE OF WITHSTANDING H20 WHEEL LOADS.
- THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION, SIZE, INVERTS AND TYPES OF EXISTING PIPES AT ALL PROPOSED POINTS OF CONNECTION PRIOR TO ORDERING MATERIALS. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY AT NO ADDITIONAL COST BY THE CONTRACTOR, AND THE INFORMATION FURNISHED IN WRITING TO THE OWNER'S REPRESENTATIVE FOR THE RESOLUTION OF THE CONFLICT.
- SILT FENCE AND/OR HAYBALES SHOWN HEREON SHALL BE INSTALLED BEFORE EARTH DISTURBANCE OCCURS WITHIN BUFFER ZONE, AND SHALL SERVE AS THE LIMIT OF WORK.
- CONTRACTOR SHALL PROVIDE DUST CONTROL FOR CONSTRUCTION OPERATIONS AS APPROVED BY THE ENGINEER.
- ALL POINTS OF CONSTRUCTION EGRESS OR INGRESS SHALL BE MAINTAINED TO PREVENT TRACKING OR FLOWING OF SEDIMENT ON TO PUBLIC ROADS.
- RETAINING WALLS SHALL HAVE AN INTEGRAL GUARDRAIL.

**#40 SAM FONZO DRIVE**

Beverly, Massachusetts 01915

PREPARED FOR:

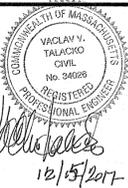
**FONZO REALTY, LLC**

100 Sam Fonzo Drive  
Beverly, Massachusetts 01915

**HANCOCK ASSOCIATES**

Civil Engineers  
Land Surveyors  
Wetland Scientists

185 CENTRE STREET, DANVERS, MA 01923  
VOICE (978) 777-3050, FAX (978) 774-7816  
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DATE: 12/8/17 DESIGN BY: JPC  
SCALE: 1" = 40' DRAWN BY: JPC  
APPRVD. BY: VVT CHECK BY: KAC

**NOTES, REFERENCES AND LEGEND**

PLOT DATE: Dec 15, 2017 8:22 am  
PATH: F:\GIS 20 Projects\20652 - Fonzo - Beverly\DWG\ DWG: 20652 ps.dwg  
LAYOUT: NPL  
SHEET: 2 OF 10  
PROJECT NO.: 20652

MASS STATE PLAN COORDINATES, MAINLAND, NAD 83, GEOID 12A

**ASSESSORS:**

MAP 7B, LOT 13B

**REFERENCES:**

LAND COURT DOCUMENT #526914  
LAND COURT PLAN 31995L

**RECORD OWNER:**

S&D REAL ESTATE TRUST  
DAVID S. FONZO  
100 SAM FONZO DRIVE  
BEVERLY, MA 01915

**ZONING:**

IR (RESIDENTIAL INDUSTRIAL)

**NOTES:**

1) ELEVATIONS SHOWN HEREON REFER TO N.A.V.D. 1988 DERIVED FROM GPS OBSERVATIONS ON SEPTEMBER 6, 2017.

2) UNDERGROUND UTILITIES SHOWN HEREON ARE COMPILED FROM FIELD LOCATIONS OF STRUCTURES AND FROM AVAILABLE RECORD INFORMATION ON FILE AT THE TOWN ENGINEERING OFFICES, TOWN D.P.W., MASS HIGHWAY DEPT. AND UTILITY COMPANIES. OTHER UNDERGROUND UTILITIES MAY EXIST. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION, SIZE & ELEVATION OF ALL UTILITIES WITHIN THE AREA OF PROPOSED WORK AND TO CONTACT "DIG-SAFE" AT 811 AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION, DEMOLITION OR CONSTRUCTION.

3) LIMITS OF BORDERING VEGETATED WETLANDS SHOWN HEREON WERE DELINEATED BY HANCOCK ASSOCIATES ON 9/12/2017 AND LOCATED BY FIELD SURVEY.

**#40  
SAM FONZO  
DRIVE**

Beverly, Massachusetts 01915

PREPARED FOR:

**FONZO  
REALTY,  
LLC**

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Beverly, Massachusetts 01915

**HANCOCK  
ASSOCIATES**

Civil Engineers

Land Surveyors

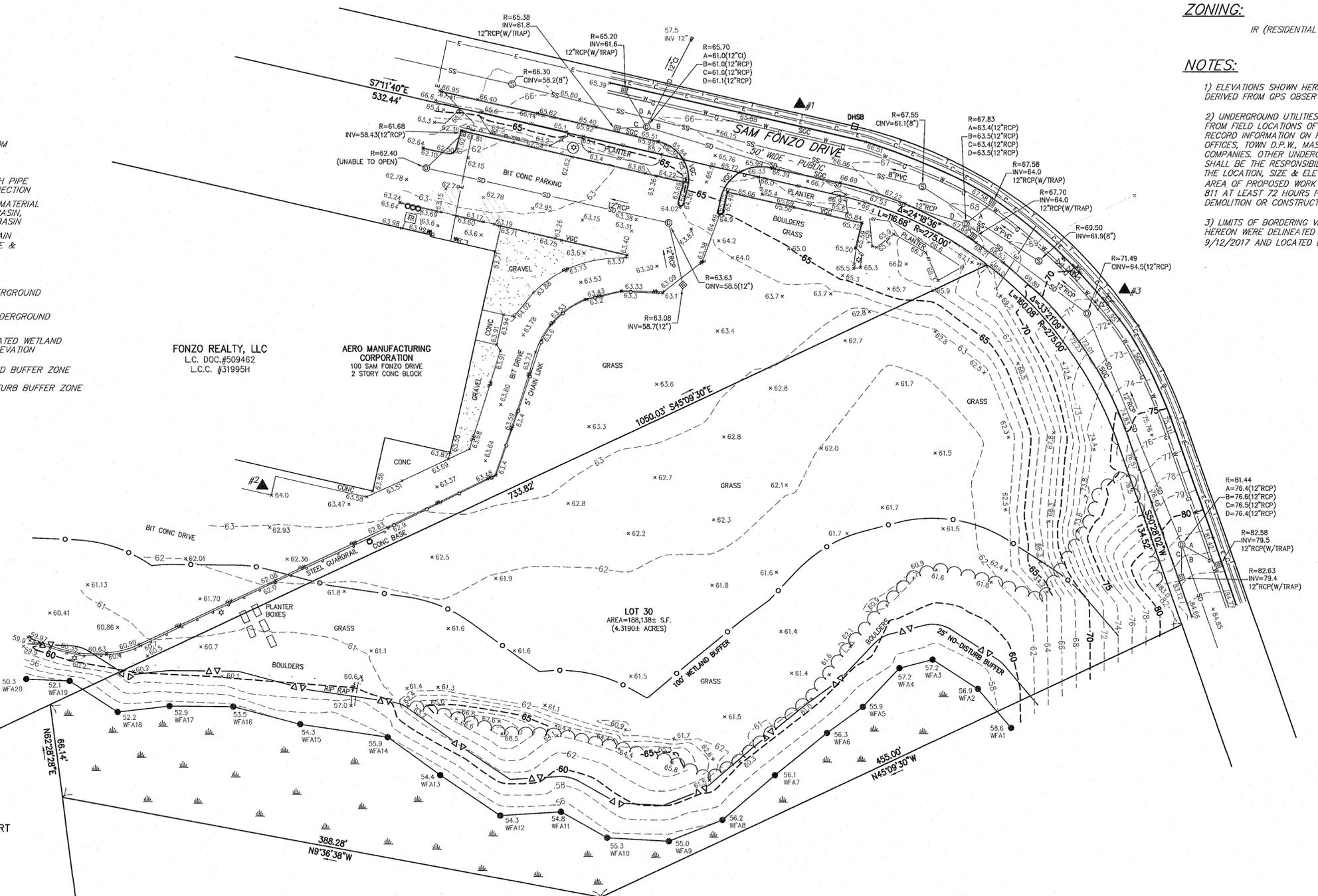
Wetland Scientists

185 CENTRE STREET, DANVERS, MA 01923  
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**LEGEND**

- 102 ——— SURFACE CONTOUR
- |— METAL GUARDRAIL
- |— EDGE OF PAVEMENT
- ○ ○ CHAIN LINK FENCE
- 86.75  
86.25 CURB WITH TOP AND BOTTOM CURB ELEVATION
- |— EDGE OF WOODED AREA
- |— SEWERLINE & MANHOLE WITH PIPE SIZE, MATERIAL & FLOW DIRECTION
- |— DRAINLINE WITH PIPE SIZE, MATERIAL & FLOW DIRECTION, CATCHBASIN, MANHOLE & ROUND CATCHBASIN
- |— WATER MANHOLE, WATER MAIN WITH SIZE, TEE, GATE VALVE & FIRE HYDRANT
- |— GAS MAIN WITH SIZE & GATE VALVE
- |— ELECTRIC MANHOLE & UNDERGROUND ELECTRIC LINES
- |— TELEPHONE MANHOLE & UNDERGROUND TELEPHONE LINES
- 79.3 WFA2 LIMIT OF BORDERING VEGETATED WETLAND WITH FLAG NUMBER AND ELEVATION
- ○ ○ LIMIT OF 100-FOOT WETLAND BUFFER ZONE
- △ △ △ LIMIT OF 25-FOOT NO-DISTURB BUFFER ZONE
- × 100.7 SPOT ELEVATION
- ☆ LIGHT POLE
- SMH ⊙ SEWER MANHOLE
- DMH ⊙ DRAIN MANHOLE
- CB ⊙ CATCH BASIN
- |— SIGN
- CINV CENTER INVERT
- INV INVERT
- ▽ FLARED END SECTION
- VGC VERTICAL GRANITE CURB
- SGC SLOPED GRANITE CURB



FONZO REALTY, LLC  
L.C. DOC.#509462  
L.C.C. #31995H

AERO MANUFACTURING CORPORATION  
100 SAM FONZO DRIVE  
2 STORY CONC BLOCK

LOT 30  
AREA=188,138± S.F.  
(4.3190± ACRES)

THE CITY OF BEVERLY  
L.C. DOC.#530001  
L.C.C. #31995L

BEVERLY AIRPORT

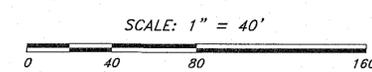
ELEVATION BENCH MARKS		
DATUM: N.A.V.D. 1988		
NO.	DESCRIPTION	ELEV.
1.	L.P. BASE - S.W. BOLT (DESTROYED)	66.73
2.	CORNER CONC PAD - BOX CUT	63.97
3.	HYDRANT, X-CUT IN BOLT OVER MAIN OUT	73.68

1	RF	WCJ	11/2/17	ADDITIONAL TOPO
NO.	BY	APP	DATE	ISSUE/REVISION DESCRIPTION
DATE:	9/20/2017	DRAWN BY:	RF	
SCALE:	1" = 40'	CHECK BY:	WCJ	

**EXISTING CONDITIONS  
PLAN OF LAND  
IN  
BEVERLY, MA**

PLT DATE: Nov 30, 2017 1:45 pm  
PATH: F:\GIS 3D Project\20652 - Fonzo - Beverly\DWG\

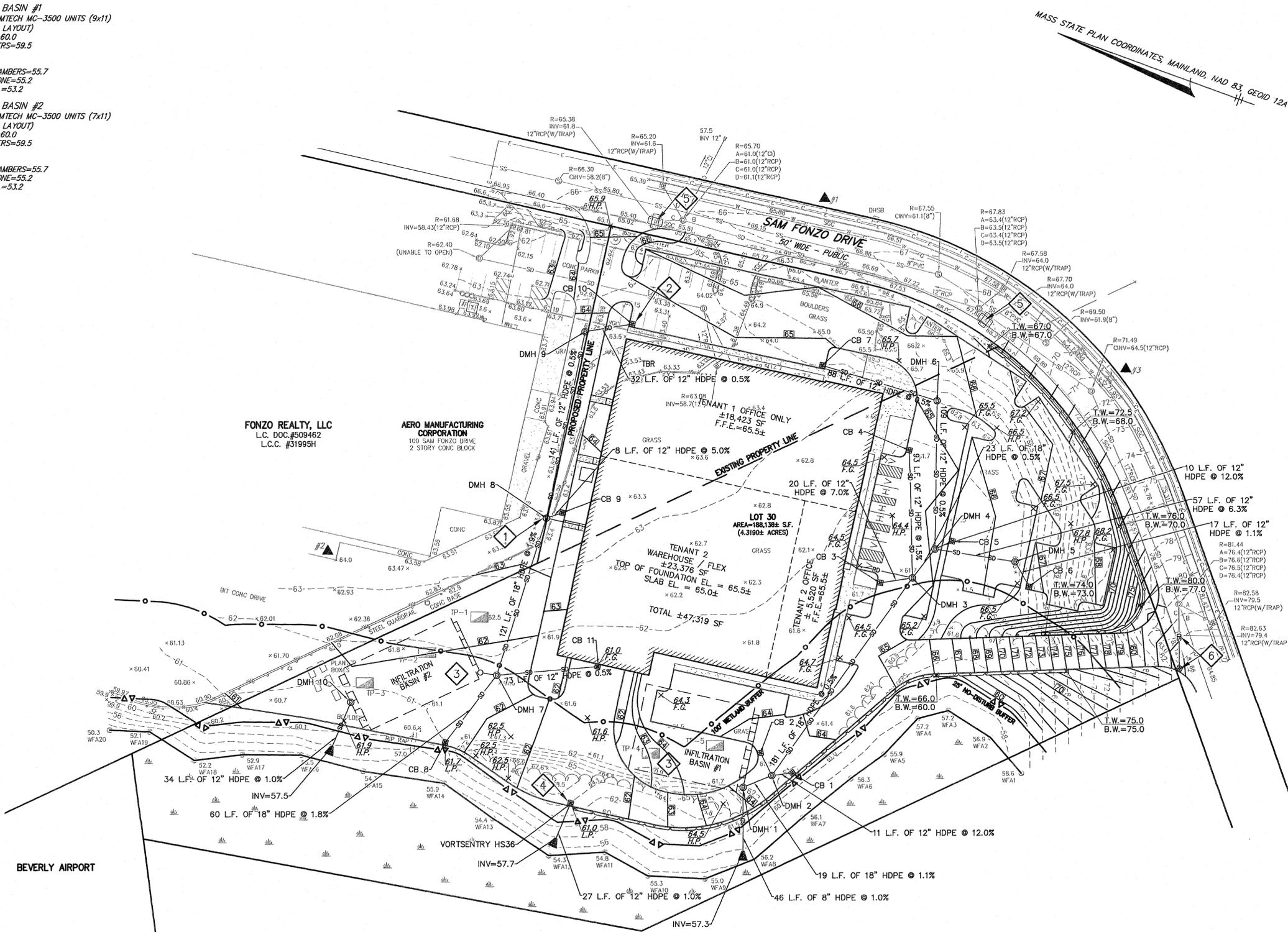
DWG: 20652t.dwg  
LAYOUT: EC  
SHEET: 1 OF 1  
PROJECT NO.: 20652





**DRAINAGE STRUCTURE SCHEDULE**

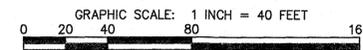
CB 1 RIM=63.5 INV OUT=59.5 (DMH 2)	DMH 1 RIM=63.9 INV IN=58.8 (DMH 2) INV OUT=55.7 (ISOLATOR ROW) TOP OF STONE=60.0 BOTTOM OF CHAMBERS=59.5 INV IN=58.5 WEIR=59.5	INFILTRATION BASIN #1 99 TOTAL STORMTECH MC-3500 UNITS (9x11) (SEE PLAN FOR LAYOUT) TOP OF STONE=60.0 BOTTOM OF CHAMBERS=59.5 INV IN=58.5 WEIR=59.5
CB 2 RIM=63.5 INV OUT=59.5 (DMH 2)	DMH 2 RIM=63.8 INV IN=57.2 (DMH 3) INV IN=57.7 (CB 1 AND CB 2) INV OUT=57.1 (DMH 1)	INFILTRATION BASIN #2 77 TOTAL STORMTECH MC-3500 UNITS (7x11) (SEE PLAN FOR LAYOUT) TOP OF STONE=60.0 BOTTOM OF CHAMBERS=59.5 INV IN=58.5 WEIR=59.5
CB 3 RIM=64.1 INV OUT=60.1 (DMH 3)	DMH 3 RIM=64.7 INV IN=58.2 (DMH 4) INV IN=58.7 (CB 3 AND CB 4) INV OUT=58.1 (DMH 2)	
CB 4 RIM=64.1 INV OUT=60.1 (DMH 3)	DMH 4 RIM=65.1 INV IN=58.8 (DMH 6) INV IN=58.8 (DMH 5) INV IN=58.8 (CB 5) INV OUT=58.3 (DMH 3)	
CB 5 RIM=65.2 INV OUT=60.0 (DMH 4)	DMH 5 RIM=66.5 INV IN=62.5 (CB 6) INV OUT=62.4 (DMH 4)	
CB 6 RIM=66.7 INV OUT=62.7 (DMH 5)	DMH 6 RIM=65.3 INV IN=59.4 (CB 7) INV OUT=59.3 (DMH 4)	
CB 7 RIM=63.8 INV OUT=59.8 (DMH 6)	DMH 7 RIM=61.8 INV IN=56.1 (DMH 8) INV IN=56.1 (CB 8) INV IN=56.6 (CB 11) INV OUT=55.7 (ISOLATOR ROW) INV OUT=58.5 (OTHER CHAMBERS)	
CB 8 RIM=61.7 INV OUT=57.2 (DMH 7)	DMH 8 RIM=63.3 INV IN=58.9 (DMH 9) INV IN=58.9 (CB 9) INV OUT=58.4 (DMH 7)	
CB 9 RIM=63.3 INV OUT=59.3 (DMH 8)	DMH 9 RIM=63.9 INV IN=59.6 (CB 10) INV OUT=59.5 (DMH 8)	
CB 10 RIM=63.8 INV OUT=59.8 (DMH 9)	DMH 10 RIM=61.8 INV IN=55.7 (INFILTRATION BASIN #2) INV OUT=57.8	
CB 11 RIM=61.0 INV OUT=57.0 (DMH 7)	VORTSENTRY HS36 RIM=61.0 INV OUT=58.0	



**CONSTRUCTION KEY NOTES:**  
(NOT NECESSARILY A CONSTRUCTION SEQUENCE)

- 1 INSTALL DRAIN MANHOLE (TYPICAL)
- 2 INSTALL CATCH BASIN (TYPICAL)
- 3 INSTALL STORMWATER TREATMENT UNIT  
STORMTECH MODEL MC-3500 CHAMBERS
- 4 INSTALL VORTSENTRY HS36 UNIT
- 5 INSTALL HAYBALE PROTECTION AND SILT SACK IN  
EXISTING CATCH BASINS TO REMAIN.
- 6 RELOCATE EXISTING CATCH BASIN  
RIM=83.2  
INV OUT=79.4

SEE SHEET 2 FOR NOTES AND LEGEND



**#40  
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DRIVE**

Beverly, Massachusetts 01915

PREPARED FOR:

**FONZO  
REALTY,  
LLC**

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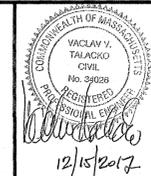
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DATE: 12/8/17 DESIGN BY: JPC  
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APPRVD. BY: VVT CHECK BY: KAC

**GRADING  
AND DRAINAGE  
PLAN**

PLOT DATE: Dec 15, 2017 8:42 am  
PATH: F:\CMT 3D Projects\20652 - Fonzo - Beverly\DWG\

DWG: 20652 ps.dwg

LAYOUT: GD

SHEET: 5 OF 10

PROJECT NO.: 20652

**5**

**CONSTRUCTION KEY NOTES:**  
(NOT NECESSARILY A CONSTRUCTION SEQUENCE)

- 1 INSTALL 8" CLDI FIRE SERVICE
- 2 INSTALL 4" CLDI DOMESTIC WATER SERVICE
- 3 INSTALL GAS SERVICE
- 4 INSTALL 8" SDR-35 PVC SEWER SERVICE TO THE BUILDING  
COORDINATE WITH PLUMBER. S=2.0%
- 5 INSTALL ELECTRIC AND TELECOM SERVICE
- 6 SAWCUT

MASS STATE PLAN COORDINATES MAINLAND, NAD 83, GEOID 12A

#40  
SAM FONZO  
DRIVE

Beverly, Massachusetts 01915

PREPARED FOR:

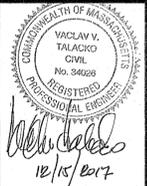
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HANCOCK  
ASSOCIATES

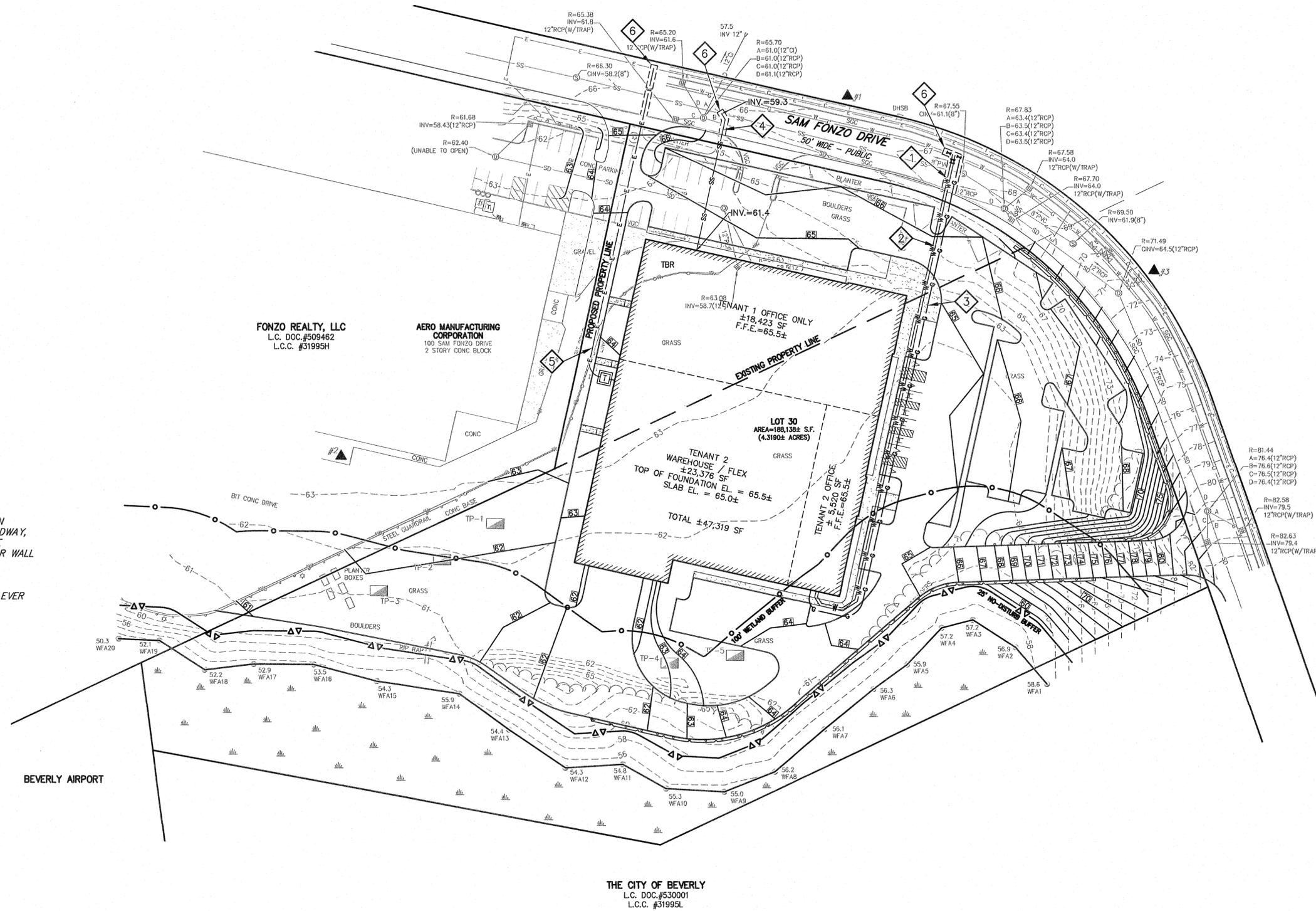
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**UTILITY PLAN NOTES**

- THE INTENT OF THE PROPOSED SITE LIGHTING AS SHOWN HEREON IS FOR THE LIGHT POLE LAYOUT FOR THE ROADWAY, SITE DRIVEWAYS AND PARKING LOT LIGHTING ONLY. SITE LIGHTING IN THE OUTDOOR AMENITY AREA AND OUTDOOR WALL MOUNTED LIGHTING SHALL BE BY OTHERS.
- ALL LIGHTING SPECIFICATIONS AND DETAILS SHALL BE PROVIDED BY OTHERS.
- POWER AND DATA CONNECTIONS WILL BE DESIGNED BY EVER SOURCE.
- NATURAL GAS CONNECTIONS TO BE DESIGNED BY EVER SOURCE.



BEVERLY AIRPORT

THE CITY OF BEVERLY  
L.C. DOC.#530001  
L.C.C. #31995L

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SCALE: 1" = 40' DRAWN BY: JPC  
APPRVD. BY: VVT CHECK BY: KAC

SITE  
UTILITIES  
PLAN

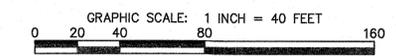
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PATH: P:\DWG 20 Proj\2017\20652 - Fonzo - Beverly\DWG\

DWG: 20652 ps.dwg

LAYOUT: UTIL

SHEET: 6 OF 10

PROJECT NO.: 20652



SEE SHEET 2 FOR NOTES AND LEGEND

MASS STATE PLAN COORDINATES, MAINLAND, NAD 83, GEOID 12A

# #40 SAM FONZO DRIVE

Beverly, Massachusetts 01915

PREPARED FOR:

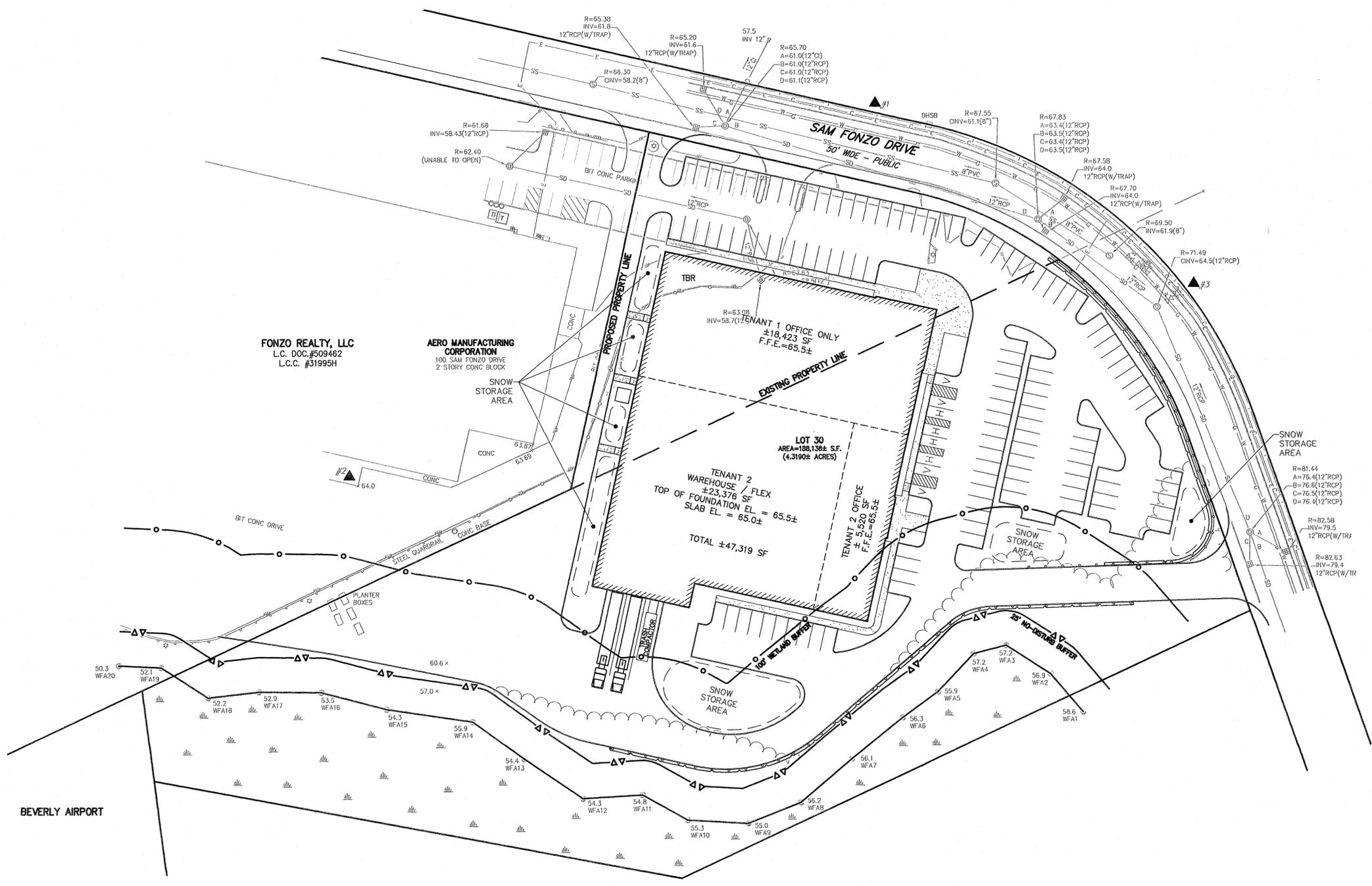
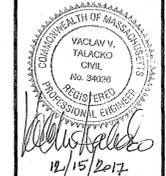
## FONZO REALTY, LLC

100 Sam Fonzo Drive  
Beverly, Massachusetts 01915

## HANCOCK ASSOCIATES

Civil Engineers  
Land Surveyors  
Wetland Scientists

185 CENTRE STREET, DANVERS, MA 01923  
VOICE (978) 777-3050, FAX (978) 774-7816  
WWW.HANCOCKASSOCIATES.COM



FONZO REALTY, LLC  
L.C. DOC.#509462  
L.C.C. #31995H

AERO MANUFACTURING  
CORPORATION  
100 SAM FONZO DRIVE  
2 STORY CONC BLOCK

TENANT 1 OFFICE ONLY  
±18,423 SF  
F.F.E.=65.5±

LOT 30  
AREA=188,138± S.F.  
(4.3190± ACRES)

TENANT 2 OFFICE  
±5,520 SF  
F.F.E.=65.5±

WAREHOUSE / FLEX  
±23,376 SF  
TOP OF FOUNDATION EL. = 65.5±  
SLAB EL. = 65.0±

TOTAL ±47,319 SF

BEVERLY AIRPORT

THE CITY OF BEVERLY  
L.C. DOC.#530001  
L.C.C. #31995L

NO.	BY	APP	DATE	ISSUE/REVISION DESCRIPTION

DATE: 12/8/17 DESIGN BY: JPC  
SCALE: 1" = 40' DRAWN BY: JPC  
APPRVD. BY: VVT CHECK BY: KAC

## SNOW STORAGE PLAN

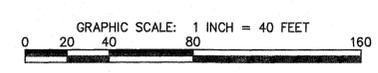
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DWG: 20652 ps.dwg

LAYOUT: SNOW

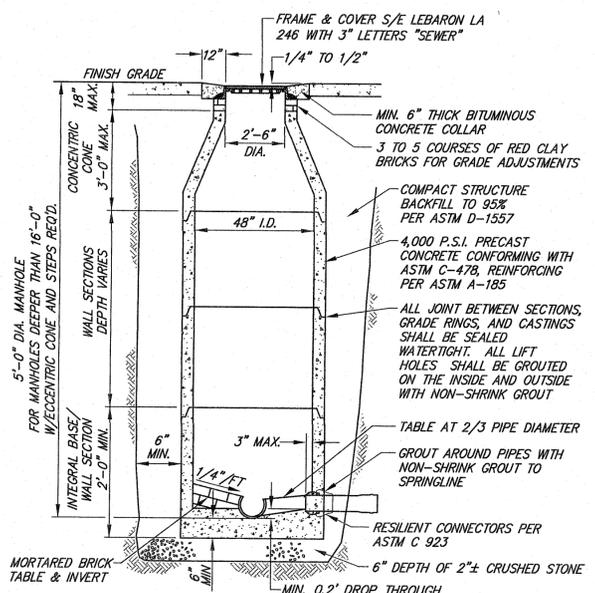
SHEET: 7 OF 10

PROJECT NO.: 20652

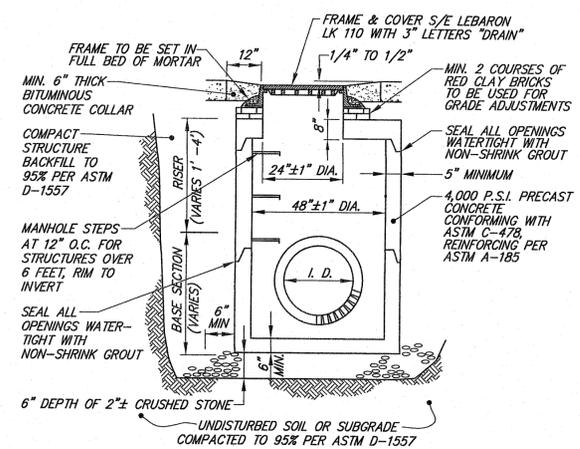


SEE SHEET 2 FOR NOTES AND LEGEND

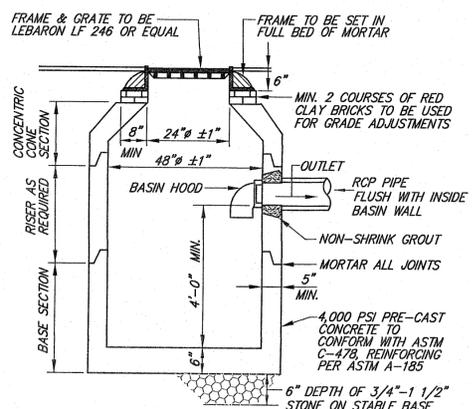
7



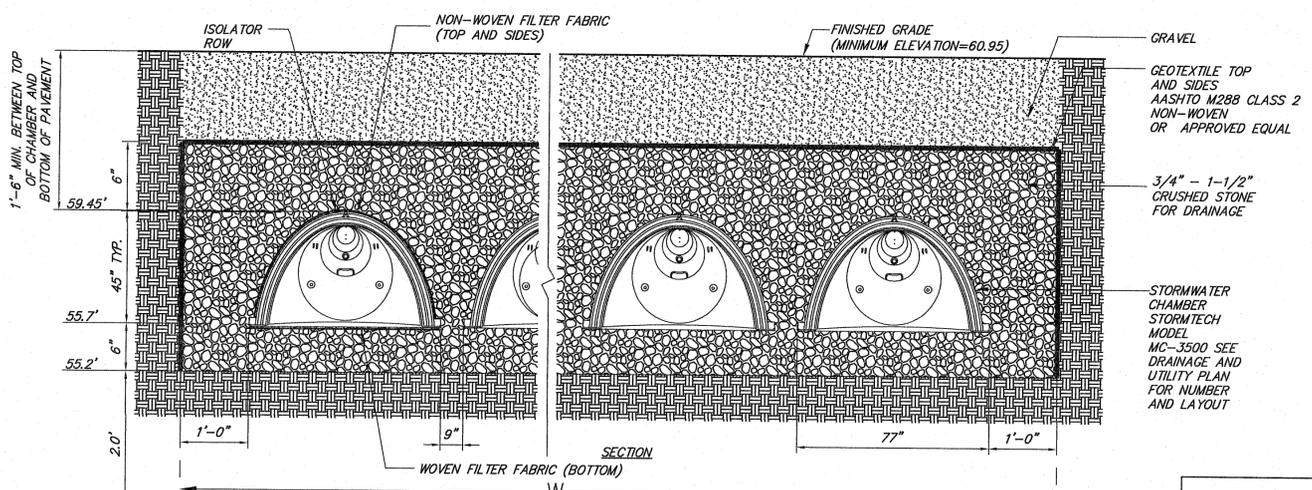
SEWER MANHOLE  
TYPICAL CROSS SECTION  
NOT TO SCALE



DRAIN MANHOLE  
TYPICAL CROSS SECTION  
NOT TO SCALE

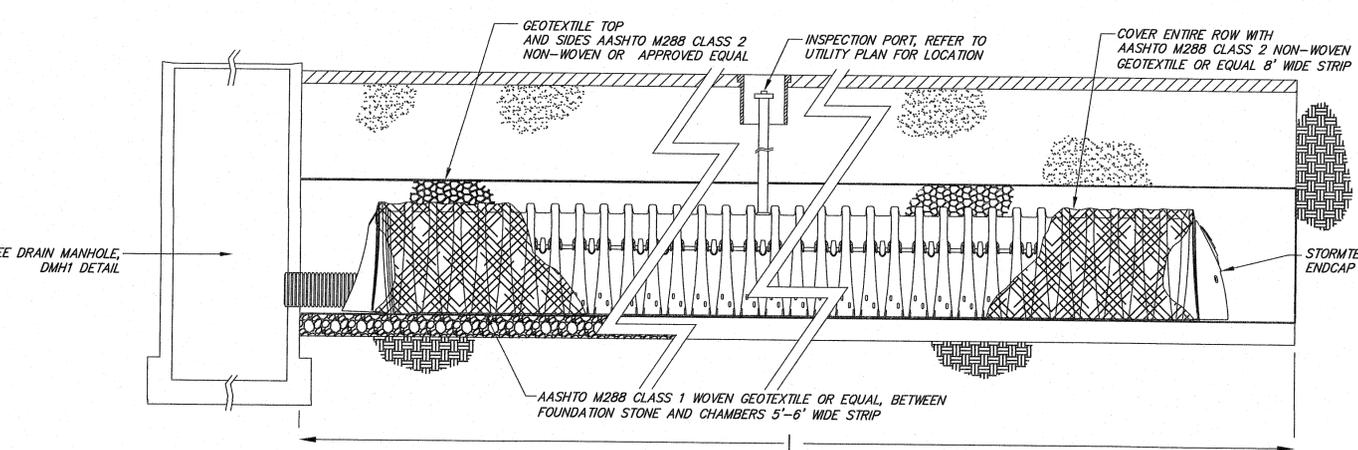


CATCH BASIN WITH HOOD  
TYPICAL CROSS SECTION - NOT TO SCALE

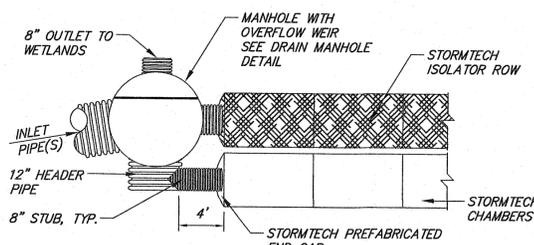


STORMTECH CHAMBERS - SECTION VIEW  
NOT TO SCALE

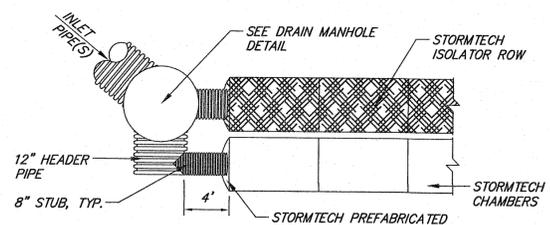
	LENGTH OF FIELD (L)	WIDTH OF FIELD (W)	# OF ROWS	# OF CHAMBERS PER ROW
INFILTRATION BASIN #1	84.64'	65.75'	9	11
INFILTRATION BASIN #2	84.64'	51.42'	7	11



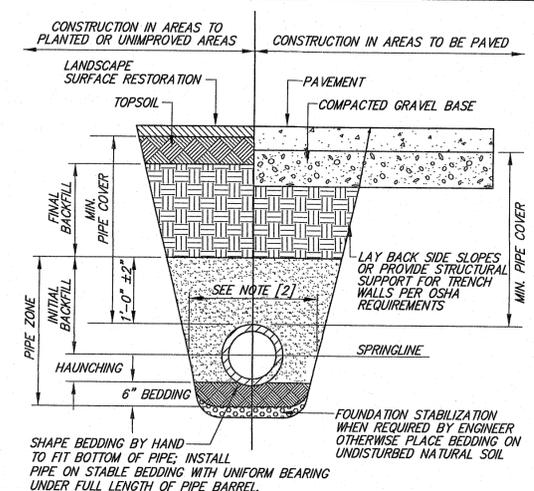
STORMTECH CHAMBERS - ISOLATOR ROW  
NOT TO SCALE



STORMTECH CHAMBERS #1 - MANIFOLD  
NOT TO SCALE



STORMTECH CHAMBERS #2 - MANIFOLD  
NOT TO SCALE



NOTES:  
[1] PLACE 3/4" ± GRADED GRANULAR BACKFILL AT OPTIMUM MOISTURE IN HORIZONTAL, 8"-DEEP, LOOSE LAYERS; COMPACT TO 95% PER ASTM D-1557.  
[2] MINIMUM WIDTH OF TRENCH MEASURED AT THE SPRINGLINE OF THE PIPE, INCLUDING ANY NECESSARY SHEATHING.

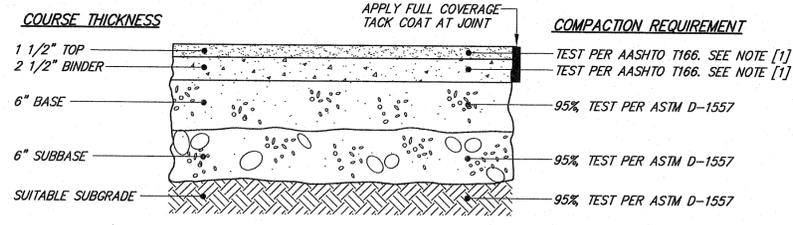
FOUNDATION, BEDDING, & BACKFILL MATERIALS	HDP, PVC	RC, DI
PIPE MATERIAL	[6]	[6]
FOUNDATION STABILIZATION	[1]	[1]
BEDDING	[1]	[1]
HAUNCHING	[1]	[1]
INITIAL BACKFILL	[1]	[1]
FINAL BACKFILL	[4]	[4]
MIN. PIPE COVER	[5]	[5]

PIPE I.D.	WIDTH
LESS THAN 21"	O.D. + 12"
21" TO 42"	O.D. + 24"
GREATER THAN 42"	O.D. + 30"

[3] INSTALL PIPE IN CENTER OF TRENCH.  
[4] IN PLANTED OR UNIMPROVED AREAS, USE ON-SITE EXCAVATED MATERIAL FOR FINAL BACKFILL. COMPACT TO 95% PER ASTM D-1557. IN PAVED AREAS, OBTAIN ENGINEER APPROVAL OF ON-SITE EXCAVATED MATERIALS FOR USE AS FINAL BACKFILL.  
[5] MINIMUM COVER OVER TOP OF PIPE.

PIPE MATERIAL	HDP, PVC	RC, DI
WATER	5'-0"	5'-0"
SEWER	4'-0"	4'-0"
DRAIN	1'-6"	1'-0"

PIPE TRENCH  
TYPICAL CROSS SECTION  
NOT TO SCALE



NOTES:  
[1] COMPACT TO TEST AVERAGE OF 95% ± 2.5%

MATERIAL	SPECIFICATION	MAXIMUM AGGREGATE OR PARTICLE SIZE (IN.)
TOP - BITUMINOUS CONCRETE	MHD M3.11.03 CLASS I, TYPE I-1	1/2
BINDER - BITUMINOUS CONCRETE	MHD M3.11.03 CLASS I, TYPE I-1	1
BASE - DENSE GRADED CRUSHED STONE	MHD M2.01.7	1 1/2
SUBBASE - GRAVEL BORROW	MHD M1.03.0 TYPE C	2

BITUMINOUS CONCRETE PAVEMENT  
TYPICAL CROSS SECTION  
NOT TO SCALE

#40  
SAM FONZO  
DRIVE  
Beverly, Massachusetts 01915

PREPARED FOR:  
FONZO  
REALTY,  
LLC  
100 Sam Fonzo Drive  
Beverly, Massachusetts 01915

HANCOCK  
ASSOCIATES  
Civil Engineers  
Land Surveyors  
Wetland Scientists  
185 CENTRE STREET, DANVERS, MA 01923  
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WWW.HANCOCKASSOCIATES.COM

NO. BY APP DATE ISSUE/REVISION DESCRIPTION  
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APPRVD. BY: VVT CHECK BY: KAC

SITWORK  
DETAILS 1  
PROJECT NO.: 20652

#40  
SAM FONZO  
DRIVE

Beverly, Massachusetts 01915

PREPARED FOR:

FONZO  
REALTY,  
LLC

100 Sam Fonzo Drive  
Beverly, Massachusetts 01915

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DATE:	12/8/17	DESIGN BY:	JPC	
SCALE:	1" = 40'	DRAWN BY:	JPC	
APPRVD. BY:	VVT	CHECK BY:	KAC	

DETAILS

PLT DATE: Dec 15, 2017 9:13 am  
PAR: F:\G04 30 Projects\20652 - Fonzo - Beverly\DWG

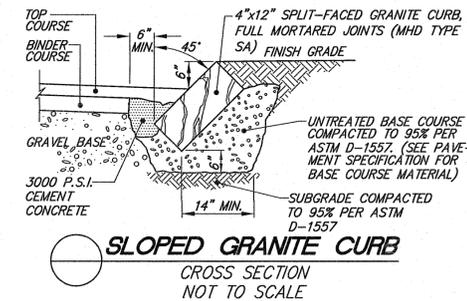
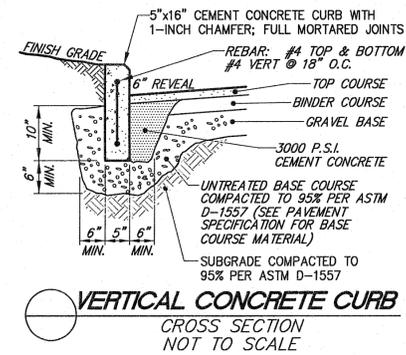
DWG: 20652 ps.dwg

LAYOUT: DET 2

SHEET: 9 OF 10

PROJECT NO.: 20652

9



**VORTSENTRY HS DESIGN NOTES**  
VSHS RATED TREATMENT CAPACITY IS SHOWN IN THE TABLE BELOW, OR PER LOCAL REGULATIONS. MAXIMUM HYDRAULIC INTERNAL BYPASS CAPACITY VARIES. CONTACT YOUR CONTECH REPRESENTATIVE FOR ADDITIONAL INFORMATION.  
THE STANDARD SOLID COVER CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW.

**CONFIGURATION OPTION DESCRIPTION**  
GRATE INLET (NO INLET PIPE)  
GRATE INLET WITH INLET PIPE

**VORTSENTRY HS GENERAL INFORMATION**

Model	Manhole Diameter (ID)		Total Treatment Flow Rate		Typical Total Distance Rim to Outside Bottom		Typical Distance Rim to Invert		Typical Depth Below Invert		Approximate Minimum Distance Rim to Invert		Maximum Pipe Diameter (ID)	
	FT	MM	CFS	L/S	FT	M	FT	M	FT	MM	FT	M	IN	MM
HS36	3	900	0.55	15.6	10.16	3.10	4.08	1.24	5.58	1702	3.00	0.91	18	450
HS48	4	1200	1.20	34.0	13.25	4.04	6.00	1.83	6.75	2057	4.00	1.22	24	600
HS60	5	1500	2.20	62.3	15.13	4.61	6.50	1.98	7.98	2426	4.62	1.47	30	750
HS72	6	1800	3.70	104.8	18.56	5.05	6.75	2.06	9.15	2788	5.59	1.70	36	900
HS84	7	2100	5.60	158.6	18.85	5.75	7.75	2.36	10.35	3156	6.00	1.52	42	1050
HS96	8	2400	8.10	229.4	20.87	6.36	8.50	2.59	11.54	3518	6.91	2.11	48	1200

**SITE SPECIFIC DATA REQUIREMENTS**

STRUCTURE ID: \_\_\_\_\_  
WATER QUALITY FLOW RATE (CFS): \_\_\_\_\_  
PEAK FLOW RATE (CFS): \_\_\_\_\_  
RETURN PERIOD OF PEAK FLOW (YRS): \_\_\_\_\_

PIPE DATA:

PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	_____	_____	_____
OUTLET PIPE	_____	_____	_____

RIM ELEVATION: \_\_\_\_\_  
ANTI-FLOTATION BALLAST: \_\_\_\_\_ WIDTH: \_\_\_\_\_ HEIGHT: \_\_\_\_\_

NOTES/SPECIAL REQUIREMENTS: \_\_\_\_\_  
\* PER ENGINEER OF RECORD

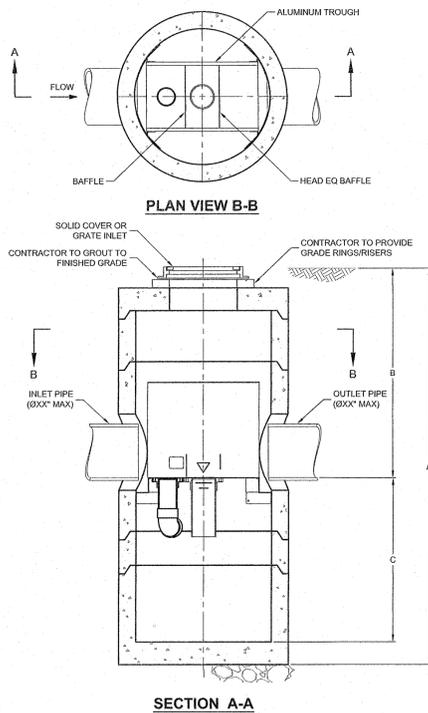
**FRAME AND COVER (DIAMETER VARIES) N.T.S.**  
**FRAME AND GRATE (24" SQUARE) N.T.S.**

**GENERAL NOTES**  
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.  
2. DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.  
3. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com  
4. VORTSENTRY HS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.  
5. STRUCTURE SHALL MEET AASHTO H20 AND CASTINGS SHALL MEET AASHTO M306 LOAD RATING, ASSUMING GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION.

**INSTALLATION NOTES**  
1. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.  
2. CONTRACTOR TO PROVIDE EQUIPMENT WITH SURFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE VORTSENTRY HS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED).  
3. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.  
4. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.  
5. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

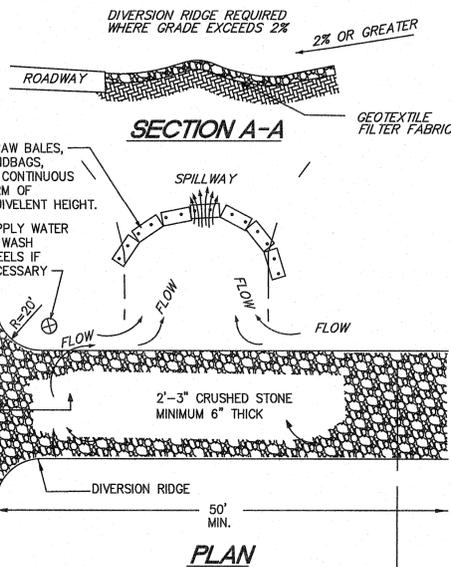
**CONTECH ENGINEERED SOLUTIONS LLC**  
www.ContechES.com  
2025 Centre Street Dr., Suite 400, West Chester, OH 45383  
603-335-1122 613-445-7009 613-445-7993 FAX

**VORTSENTRY HS STANDARD DETAIL**



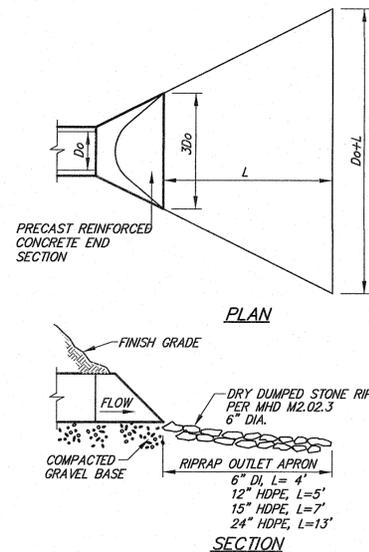
VortSentry

CONTECH ENGINEERED SOLUTIONS LLC

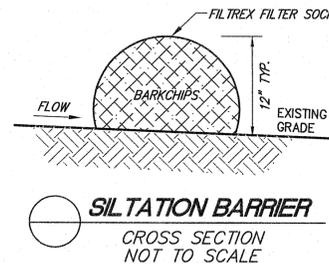


**NOTES:**  
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.  
2. WHEN NECESSARY WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.  
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

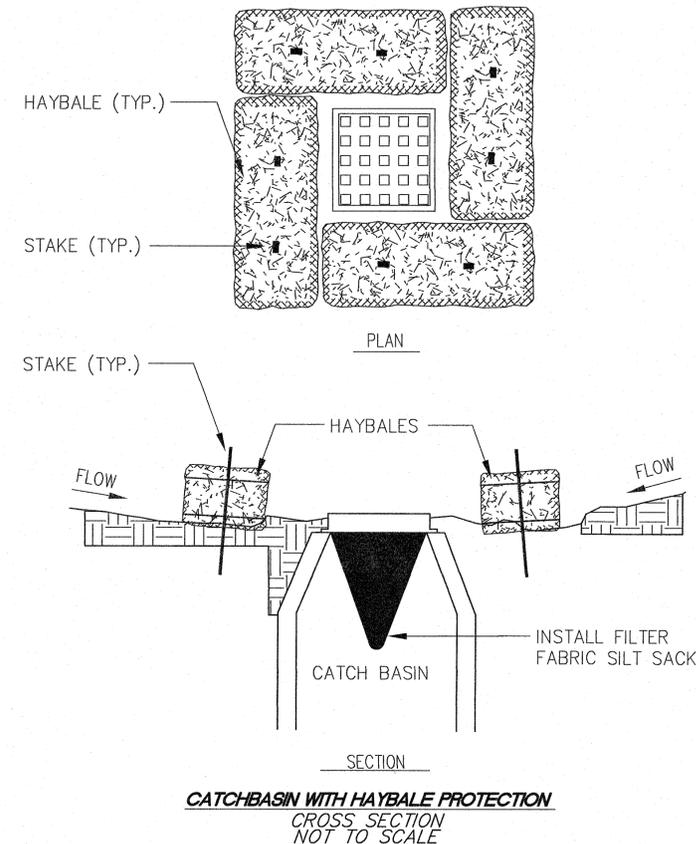
**TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT**  
NOT TO SCALE



**DRAIN OUTLET AND APRON**  
TYPICAL CROSS SECTION  
NOT TO SCALE



**SILTATION BARRIER**  
CROSS SECTION  
NOT TO SCALE



**CATCHBASIN WITH HAYBALE PROTECTION**  
CROSS SECTION  
NOT TO SCALE

I:\STANDARD\DWG\PS3\VORTSENTRY HS\45 STANDARD DRAWINGS\VORTSENTRY HS.DWG 5/18/2014 4:31 PM

