



MEETING NOTICE AND AGENDA

MANSFIELD INLAND WETLANDS AGENCY

AUDREY P. BECK MUNICIPAL BUILDING ■ 4 SOUTH EAGLEVILLE ROAD ■ COUNCIL CHAMBER

MONDAY, DECEMBER 19, 2016 ■ 6:30 PM

SPECIAL MEETING

1. CALL TO ORDER AND ROLL CALL
2. OLD BUSINESS
 - A. W1575- WILLARD J. STEARNS & SONS, INC., BROWNS & COVENTRY ROAD, 9 LOT SUBDIVISION
3. ADJOURNMENT



TOWN OF MANSFIELD

DEPARTMENT OF PLANNING AND DEVELOPMENT

Date: December 1, 2016

To: Mansfield Inland Wetlands Agency

From: Jennifer Kaufman, Inland Wetlands Agent

Subject: Browns and Coventry Roads (Parcel ID 27.78.1) (File W1575)
Willard J. Stearns and Sons, Inc.
Description of Work: 9-lot subdivision-Mountain View Acres
Map Date: 12/15/2015, Revised Through 10/13/2015

At your meeting of November 16, 2016 you held a public hearing on the above referenced wetlands license application. Pursuant to section 11.2 of the Regulations, “action shall be taken on applications within thirty-five (35) days after completion of a public hearing.” So that you have the opportunity to discuss this application at your December 5th meeting, I recommend that you schedule a special meeting on December 19, 2016 to act on this application.

If you are in agreement with this recommendation, the following motion is in order:

Move to schedule a special meeting of the Inland Wetlands Agency on December 19, 2016.



TOWN OF MANSFIELD

DEPARTMENT OF PLANNING AND DEVELOPMENT

Date: November 10, 2016

To: Mansfield Inland Wetlands Agency

From: Jennifer Kaufman, Inland Wetlands Agent

Subject: Street Address (File W1575)
Willard J. Stearns and Sons, Inc.
Description of Work: 9-lot subdivision-Mountain View Acres
Map Date: 12/15/2015, Revised Through 10/13/2015

PROJECT OVERVIEW

At your meeting of November 16, 2016 you will have a public hearing on the above referenced subdivision. In addition to the application, the following items have been received as of 11/8/2016 and should be incorporated in to the public record:

- Site plans revised through 10/13/2016
- Conservation Commission minutes dated 9/21/2016
- Wetlands Report, Mountain View Acres, 522 Browns Road, Mansfield CT, Prepared by John Ianni, Professional Soil Scientist, Highland Soils, LLC. Dated November 3, 2016.

The applicants propose to subdivide an approximately 36-acre parcel located on the corner of Coventry and Browns Road into 9 lots for single family homes. There will be approximately 80,000 square feet of disturbance in the upland review area and approximately 4,800 square feet of direct wetland impacts associated with a wetland crossing for a driveway to access a lot on the western portion of the parcel. The lots will be served by subsurface sewage disposal systems and private wells. The site is mainly wooded but the land along Coventry Road was logged within the last 10 years. The site drains primarily from Coventry Road to the south where surface flow is collected in a wetland that drains from the west to the east under Browns Road through an 18 inch culvert located in the southwestern portion of the parcel.

Direct Impacts

The main wetland system extends into the property on the western edge of the parcel from Coventry Road and flows towards Browns Road. The Highland Soils, LLC Wetland Report states that in this wetland, "gradients are low and the surface flows in the wetland is diffuse. A centralized flow path is apparent in the wetlands although the presence of hummocks and small depressions tend to spread the surface flows."

It is here that the applicants proposed a 4800 square foot permanent direct wetland impact to create a drive way to access lot 1. Construction in the wetlands includes 14 feet wide and approximately 150 feet long driveway. An additional 300 feet of driveway will be constructed in the upland review area. The driveway will be constructed of 6 inches of bank run gravel topped with 2 inches of processed gravel. Two 12 inch reinforced concrete pipes (RCP) will be installed at the area identified as the centralized flow path. I have consulted with the Assistant Town Engineer and, in his professional opinion, the RCPs are adequately sized for the predicted flow. When the RCPs are installed, instead of silt fence, I recommend using a stone berm check dam downstream to capture sediments resulting from installation of the culvert.

The proposed driveway is located in in the narrowest portion of the wetland and in an area previously disturbed (approximately 5 years ago) as part of a logging operation. Since the logging operation the area has started to revegetate. According to Highland Soils, LLC. Retrorse sedge (an obligate wetland plant according to the US Army Corps of Engineers National Wetland Plant List) is well established and areas of shrub growth are beginning to colonize the disturbed area. At the public hearing the IWA should obtain clarification from the applicant's soil scientist as to whether, in his professional opinion the driveway will fragment the wetland and significantly impact the functions and values of the wetland.

Activities proposed in the Upland Review Area

There has been a vernal pool identified on site. No activity is proposed within the vernal pool or within 100 feet of the vernal pool and the Critical Terrestrial Habitat (750 feet from the vernal pool) will have less than 25% development which is within the recommendations of the Best Development Practices developed by Calhoun and Klemens in 2002. The applicants are proposing a conservation easement in the area of the vernal pool. I recommend reducing the Building Area and Development Area Envelopes where possible in areas that are within 750 feet of the vernal pool.

Other proposed activities are at least 65 feet from the edge of wetlands

Mitigation

The applicants propose the following onsite mitigation to improve plant diversity and wildlife habitat on the property.

- Manage the multiflora rose on the open space dedication that they are proposing deeding to the Town.
- Remove of Phragmites in the margin of the man-made pond to the west of the open space dedication.
- Trim the trees and blueberry patch on the conservation easement identified on lot 7 so to wildlife habitat.

Other

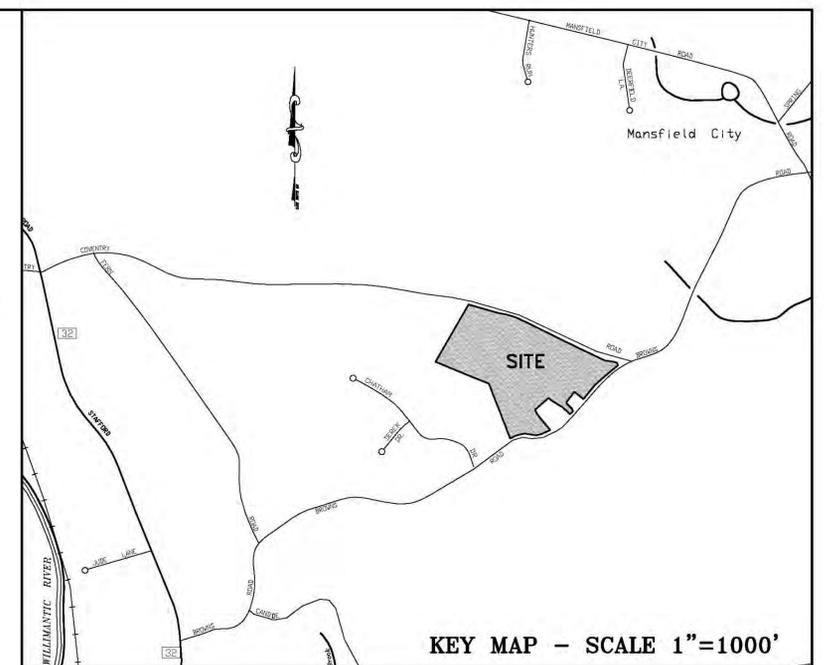
The applicants should strongly consider increasing the conservation easements to protect wetlands where possible. Specifically on lots 6, 7 and 9. Expanding the conservation easement to protect the wetlands on lot 1 where possible is also recommended. This is something that the PZC could require as a condition of approval.

The revised site plans incorporate rain gardens on each lot to manage stormwater. I recommend that Eastern Highlands Health District review the locations to ensure that they do not interfere with the subsurface sewage disposal systems.

OWNER:
WILLARD J. STEARNS & SONS, INC.
50 STEARNS ROAD
MANSFIELD, CT

APPLICANT:
WILLARD J. STEARNS & SONS, INC.
50 STEARNS ROAD
MANSFIELD, CT

LAND SURVEYOR/ENGINEER:
GARDNER & PETERSON ASSOCIATES, LLC
178 HARTFORD TURNPIKE
TOLLAND, CONNECTICUT 06084



- NOTES:**
- THIS MAP AND SURVEY HAVE BEEN PREPARED IN ACCORDANCE WITH THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20-300b-1 THROUGH 20-300b-20. THIS IS A SUBDIVISION PLAN, AND IS A FIRST SURVEY OF THE PERIMETER BOUNDARY AND AN ORIGINAL SURVEY OF THE PROPOSED LOT LINES CONFORMING TO HORIZONTAL ACCURACY CLASS A-2.
 - BEARINGS DEPICTED ON THIS PLAN ARE BASED UPON NAD 83/87 (CONNECTICUT STATE PLANE COORDINATES) BASED ON COORDINATES FROM MAP REFERENCE 3A.
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 - D. "CORRECTIONAL MAP LAND OF DANIEL B AND ANN L. COSTELLO AND PATRICIA E. AND JAMES V. LETA SITUATED ON THE SOUTHERLY LINE OF COVENTRY ROAD IN THE TOWN OF MANSFIELD, THE COUNTY OF TOLLAND AND THE STATE OF CONNECTICUT" SCALE 1"=40' DATED 8-14-65 BY: JOHN R. GRIFFIN
 - E. "PROPERTY OF RUSSELL W. & FRYLIS MARTIN COVENTRY ROAD, BROWNS ROAD MANSFIELD CONNECTICUT" SCALE: 1"=100' DATED 2-7-88 BY: KARHU & PRONOVOST ASSOCIATES, INC.
 - F. "SUBDIVISION PLAN SMITH FARMS PREPARED FOR: REJA ACQUISITION CORP. COVENTRY ROAD MANSFIELD, CONNECTICUT" SCALE: 1"=100' DATED: FEB. 2003 REV. THROUGH 4-20-04 BY: MESSIER & ASSOCIATES, INC.
 - UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING, OR OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO GARDNER & PETERSON ASSOCIATES, LLC. THE EXISTENCE, SIZE AND LOCATION OF ALL SUCH FEATURES MUST BE DETERMINED AND VERIFIED IN THE FIELD BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.
 - WETLANDS DEPICTED HEREON WERE FIELD DELINEATED BY SOIL SCIENTIST JOHN IANNI.
 - SITE AND ABUTTING PARCELS ARE IN RAR-90 ZONE.
 - PARCEL IS LOCATED IN FLOOD ZONE C, AREAS OF MINIMAL FLOODING, PER FIRM FLOOD INSURANCE RATE MAP TOWN OF MANSFIELD, CONNECTICUT TOLLAND COUNTY PANEL 15 OF 20 COMMUNITY-PANEL NUMBER 090128 0015C EFFECTIVE DATE: JANUARY 2, 1981.
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 - PARCEL IS NOT LOCATED WITHIN AN ARCHAEOLOGICAL AREA BASED ON "ARCHAEOLOGICAL ASSESSMENT" MAP BY PLAN OF CONSERVATION AND DEVELOPMENT APRIL 2006.
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 - SPEED LIMIT ON BROWNS ROAD (COLLECTOR RD) IS 30 MPH AND 25 MPH ALONG COVENTRY ROAD (NEIGHBORHOOD ROAD).
 - THE PROPOSED TREELINES ARE CONCEPTUAL AND MAY BE MODIFIED BY THE DEVELOPER. THOUGH CLEARING IS NOT ALLOWED OUTSIDE THE DEVELOPMENT AREA ENVELOPES, CLEARING LIMITS FOR FOOTING DRAIN DISCHARGES ARE NOT SHOWN AND SHALL BE KEPT TO A MINIMUM.
 - FOOTING DRAINS SHALL BE PROVIDED WITH A MINIMUM 0.5% SLOPE FROM THE FOUNDATION TO DAYLIGHT. LOT 6 WILL REQUIRE A SUMP PUMP.
 - THERE ARE NO PUBLIC DRINKING WATER WELLS WITHIN 500' OF THE SITE.
 - THERE ARE NO IMPROVEMENTS WITHIN 150' OF THE SITE ON THE NORTH SIDE OF COVENTRY ROAD OR ON THE EAST SIDE OF BROWNS ROAD. IMPROVEMENTS ON THE WEST SIDE OF BROWNS ROAD AND THE NORTH SIDE OF CHATHAM DRIVE ARE BASED ON AVAILABLE MAPPING.
 - THE PROPOSED HOUSE LOCATIONS ARE BASED UPON THE SUBDIVISION/CLUSTER LAYOUT. THE MAJORITY OF THE HOMES HAVE THE LONG AXIS OF THE HOUSE FACING SOUTH OR WEST. THE BUILDER IS ALSO ENCOURAGED TO PROVIDE ENERGY EFFICIENT MEASURES IN EACH HOME.
 - REDUCTION AND WAIVERS OF LOT FRONTAGE ARE REQUESTED. ADDITIONAL LOTS MAY NOT BE CREATED DUE TO THESE REDUCTIONS/WAIVERS.
 - STONEWALLS SHALL NOT BE REMOVED OR ALTERED UNLESS SPECIFIED ON THESE PLANS.
 - ALL PROPOSED UTILITIES SHALL BE UNDERGROUND.

LEGEND:

BOUNDARY	—
STONE WALL	—○—○—○—○—○—○—○—○—○—
STONE WALL REMAINS	○—○—○—○—○—○—○—○—○—
TREE WITH WIRE	—○—○—○—○—○—○—○—○—○—
PIN / PIPE / DRILL HOLE	●
BARBED WIRE FENCE	—x—x—x—x—x—x—x—x—x—
SPLIT RAIL FENCE	—□—□—□—□—□—□—□—□—□—
FIELD DELINEATED WETLANDS	W#200
FENCE POST	⊙

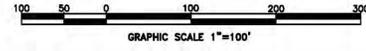
APPROVED BY THE MANSFIELD PLANNING & ZONING COMMISSION
 CHAIRMAN _____ DATE _____

APPROVED BY THE DIRECTOR OF HEALTH
 DIRECTOR _____ DATE _____

APPROVED BY THE DIRECTOR OF PUBLIC WORKS
 DIRECTOR _____ DATE _____

THE WETLAND SOILS ON THIS PROPERTY WERE IDENTIFIED IN THE FIELD USING THE CRITERIA REQUIRED BY CONNECTICUT P.A. 72-155 AS AMENDED BY P.A. 73-571 AND ARE ACCURATELY REPRESENTED ON THIS PLAN

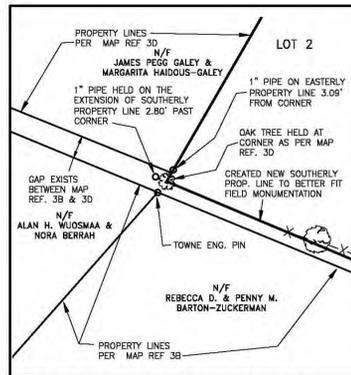
SOIL SCIENTIST *John Ianni*



I HEREBY DECLARE THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

Kenneth R. Peterson
 KENNETH R. PETERSON L.S. 10839 REGISTRATION NO.

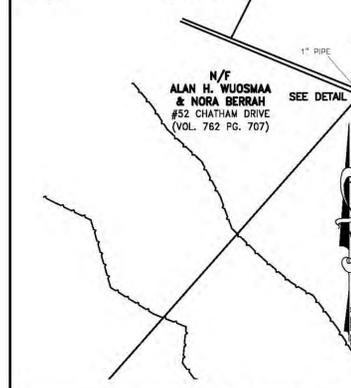
SUBDIVISION PLAN				
MOUNTAIN VIEW ACRES				
#522 BROWNS ROAD				
& COVENTRY ROAD				
MANSFIELD, CONNECTICUT				
GARDNER & PETERSON ASSOCIATES, LLC				
178 HARTFORD TURNPIKE				
TOLLAND, CONNECTICUT				
REVISIONS				
01-27-2016				
10-13-2016 STAFF COMMENTS				
PROFESSIONAL ENGINEERS		LAND SURVEYORS		
BY	SCALE	DATE	SHEET NO.	MAP NO.
B.D.C.	1"=100'	12-15-2015	1 OF 7	105905



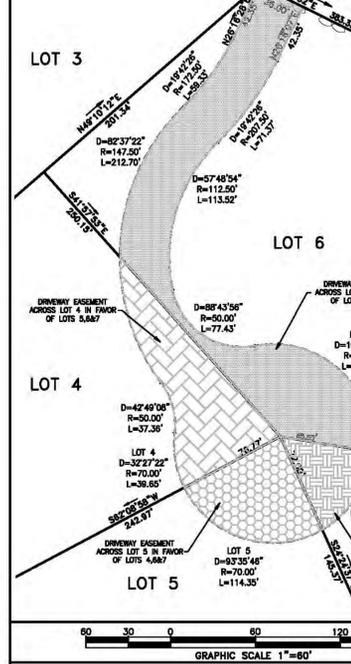
CORNER DETAIL 1"=20'

BUILDABLE AREA:

LOT #1	44,000+S.F.
LOT #2	40,000+S.F.
LOT #3	40,800+S.F.
LOT #4	43,000+S.F.
LOT #5	40,100+S.F.
LOT #6	56,000+S.F.
LOT #7	43,000+S.F.
LOT #8	42,800+S.F.
LOT #9	40,000+S.F.



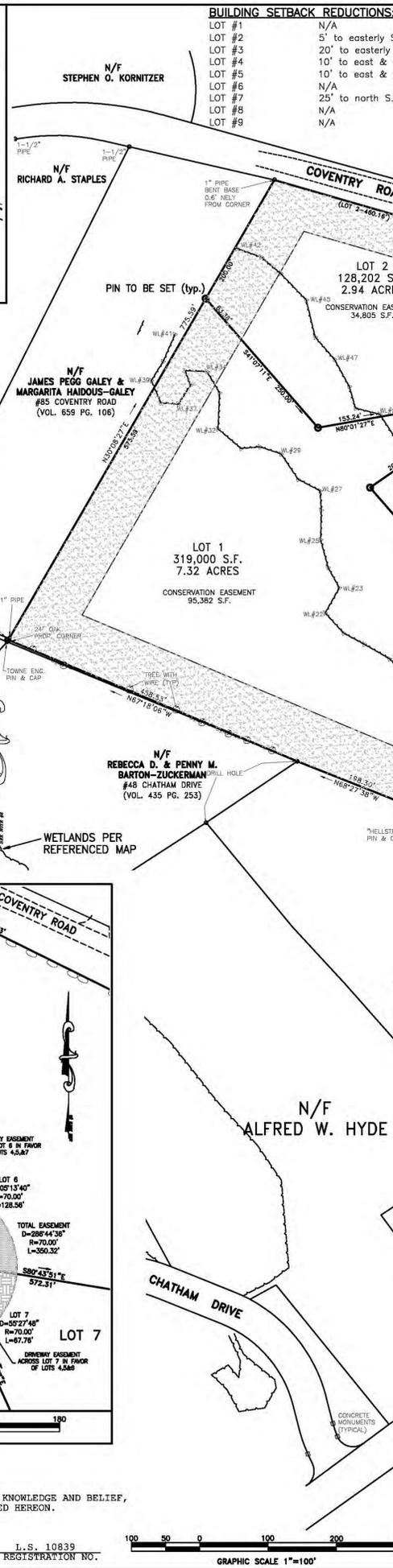
CORNER DETAIL 1"=20'



GRAPHIC SCALE 1"=60'

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REGISTRATION NO.



BUILDING SETBACK REDUCTIONS:

LOT #1 N/A
LOT #2 5' to easterly S.Y.
LOT #3 20' to easterly S.Y., 15' to westerly S.Y.
LOT #4 10' to east & west S.Y., 40' to F.Y.
LOT #5 10' to east & west S.Y., 48' min to F.Y.
LOT #6 N/A
LOT #7 N/A
LOT #8 N/A
LOT #9 N/A

OPEN SPACE COMPUTATIONS:

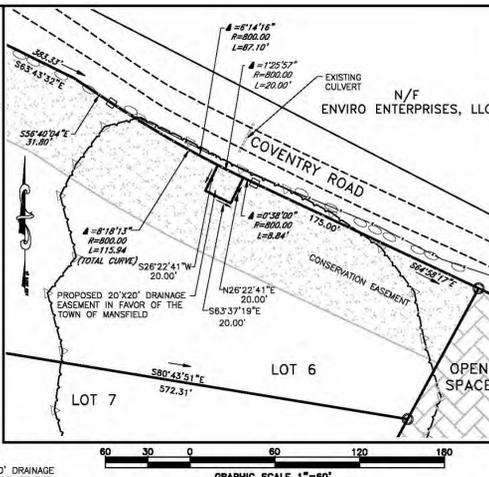
PARCEL AREA: 36.647 ACRES
AREA OF WETLANDS: 9.397 ACRES
AREA OF LEDGE OUTCROPS & SLOPES OVER 20%: 0.90 ACRES
UPLAND AREA: 26.35 ACRES
UPLAND PERCENTAGE: 71.9%

OPEN SPACE REQUIRED FOR CLUSTER DEVELOPMENTS: UP TO 40% (14,659 ACRES)
UPLAND OPEN SPACE AREA REQUIRED: 10.54 ACRES

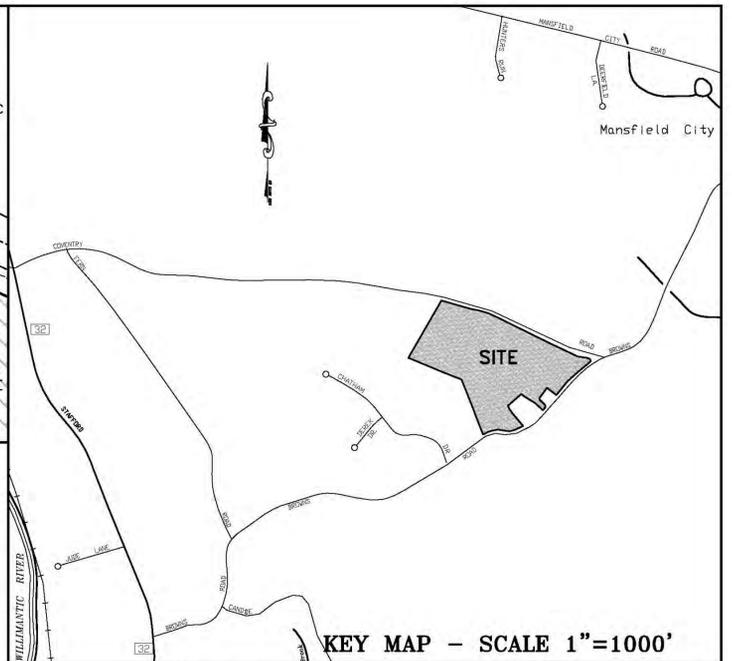
PROP. OPEN SPACE CONSISTS OF LAND DEDICATED TO TOWN OF MANSFIELD & CONSERVATION ESMTS. DEDICATED OPEN SPACE: 2,456 ACRES (6.70%)
CONSERVATION EASEMENT (CE): 13,049 ACRES (35.61%)
TOTAL PROVIDED: 15,505 ACRES (42.31%)
UPLAND PROVIDED IN OPEN SPACE: 1,881 ACRES
UPLAND PROVIDED IN CONSERVATION EASEMENTS: 8,868 ACRES
THEREFORE: 10,749 AC. PROVIDED > 10.54 AC. REQUIRED
RAR-90

LOT FRONTAGE:

LOT #1 0 L.F.—waiver required
LOT #2 460.16 L.F.
LOT #3 317.71 L.F.
LOT #4 0 L.F.—waiver required
LOT #5 0 L.F.—waiver required
LOT #6 706.07 L.F.
LOT #7 0 L.F.—waiver required
LOT #8 250.55 L.F.
LOT #9 496.11 L.F.



KEY MAP - SCALE 1"=1000'



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LEGEND:

BOUNDARY	—
STONE WALL	—
STONE WALL REMAINS	—
TREE WITH WIRE	—
PIN / PIPE / DRILL HOLE	o
BARBED WIRE FENCE	x
SPLIT RAIL FENCE	□
FIELD DELINEATED WETLANDS	WF200
FENCE POST	o
IRON PIN TO BE SET	o
MONUMENT TO BE SET	□
CONSERVATION EASEMENT	—
CONSERVATION ESMT. AREA	—
DRIVEWAY EASEMENT	—
SLOPES OVER 20%	—
SLOPES 15-20%	—
LEDGE OUTCROP	—

APPROVED BY THE MANSFIELD PLANNING & ZONING COMMISSION

CHAIRMAN	DATE
APPROVED BY THE DIRECTOR OF HEALTH	DATE
DIRECTOR	DATE
APPROVED BY THE DIRECTOR OF PUBLIC WORKS	DATE
DIRECTOR	DATE

BOUNDARY PLAN
MOUNTAIN VIEW ACRES
#522 BROWNS ROAD
& COVENTRY ROAD
MANSFIELD, CONNECTICUT
GARDNER & PETERSON ASSOCIATES, LLC
178 HARTFORD TURNPIKE
TOLLAND, CONNECTICUT

BY	SCALE	DATE	SHEET NO.	MAP NO.
B.D.C.	1"=100' OR AS SHOWN	12-15-2015	2 OF 7	105905

REVISIONS

01-27-2016	10-13-2016 STAFF COMMENTS
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GRAPHIC SCALE 1"=100'

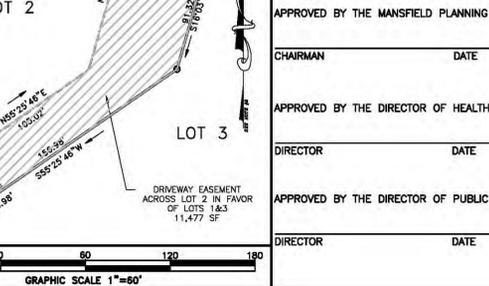
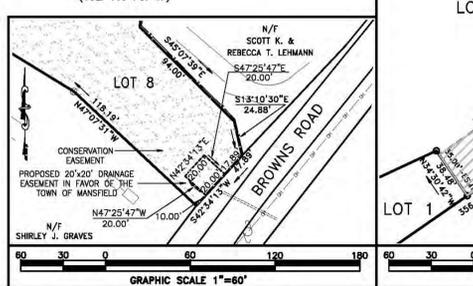
GRAPHIC SCALE 1"=60'

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THE WETLAND SOILS ON THIS PROPERTY WERE IDENTIFIED IN THE FIELD USING THE CRITERIA REQUIRED BY CONNECTICUT P.A. 72-155 AS AMENDED BY P.A. 73-571 AND ARE ACCURATELY REPRESENTED ON THIS PLAN

SOIL SCIENTIST *John Ianni*



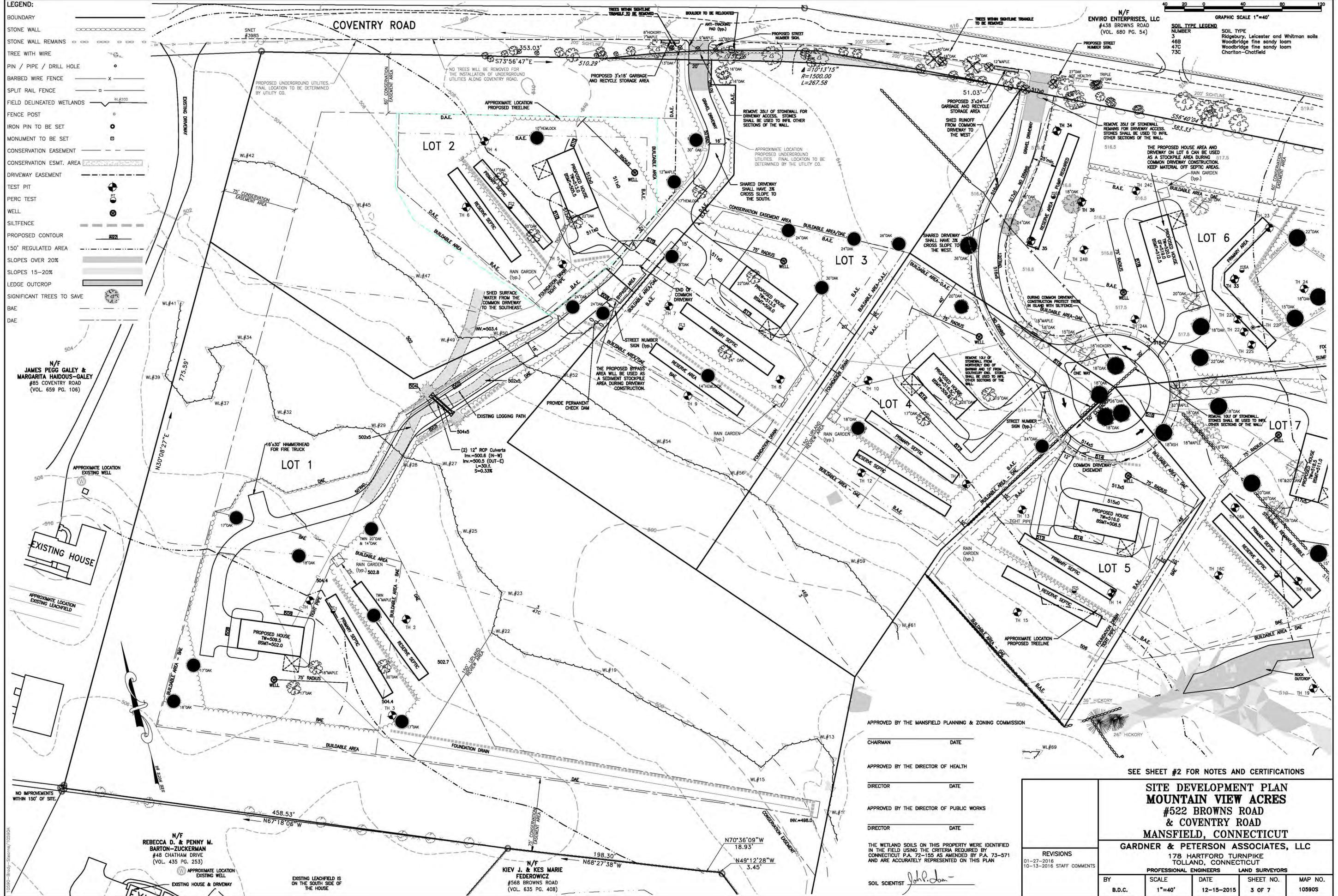
- LEGEND:**
- BOUNDARY ————
 - STONE WALL ————
 - STONE WALL REMAINS - - - - -
 - TREE WITH WIRE ○
 - PIN / PIPE / DRILL HOLE ●
 - BARBED WIRE FENCE — X —
 - SPLIT RAIL FENCE — □ —
 - FIELD DELINEATED WETLANDS WL#200
 - FENCE POST ○
 - IRON PIN TO BE SET ○
 - MONUMENT TO BE SET □
 - CONSERVATION EASEMENT ————
 - CONSERVATION ESMT. AREA [Hatched Box]
 - DRIVEWAY EASEMENT ————
 - TEST PIT [Circle with cross]
 - PERC TEST [Circle with dot]
 - WELL [Circle with dot]
 - SILTFENCE [Dashed Line]
 - PROPOSED CONTOUR [Solid Line]
 - 150' REGULATED AREA [Dotted Area]
 - SLOPES OVER 20% [Stippled Area]
 - SLOPES 15-20% [Horizontal Lines]
 - LEDGE OUTCROP [Wavy Line]
 - SIGNIFICANT TREES TO SAVE [Tree Symbol]
 - BAE [Dashed Line]
 - DAE [Dashed Line]

N/F ENVIRO ENTERPRISES, LLC
#438 BROWNS ROAD
(VOL. 680 PG. 54)

GRAPHIC SCALE 1"=40'

SOIL TYPE LEGEND
NUMBER
3
46B
47C
73C

SOIL TYPE
Ridgebury, Leicester and Whitman soils
Woodbridge fine sandy loam
Woodbridge fine sandy loam
Charlton-Chatfield



N/F JAMES PEGG GALEY & MARGARITA HAIKOUS-GALEY
#85 COVENTRY ROAD
(VOL. 659 PG. 106)

N/F REBECCA D. & PENNY M. BARTON-ZUCKERMAN
#48 CHATHAM DRIVE
(VOL. 435 PG. 253)

N/F KIEV J. & KES MARIE FEDEROWICZ
#568 BROWNS ROAD
(VOL. 635 PG. 408)

APPROVED BY THE MANSFIELD PLANNING & ZONING COMMISSION

CHAIRMAN _____ DATE _____

APPROVED BY THE DIRECTOR OF HEALTH

DIRECTOR _____ DATE _____

APPROVED BY THE DIRECTOR OF PUBLIC WORKS

DIRECTOR _____ DATE _____

THE WETLAND SOILS ON THIS PROPERTY WERE IDENTIFIED IN THE FIELD USING THE CRITERIA REQUIRED BY CONNECTICUT P.A. 72-185 AS AMENDED BY P.A. 73-571 AND ARE ACCURATELY REPRESENTED ON THIS PLAN

SOIL SCIENTIST *John J. Dan*

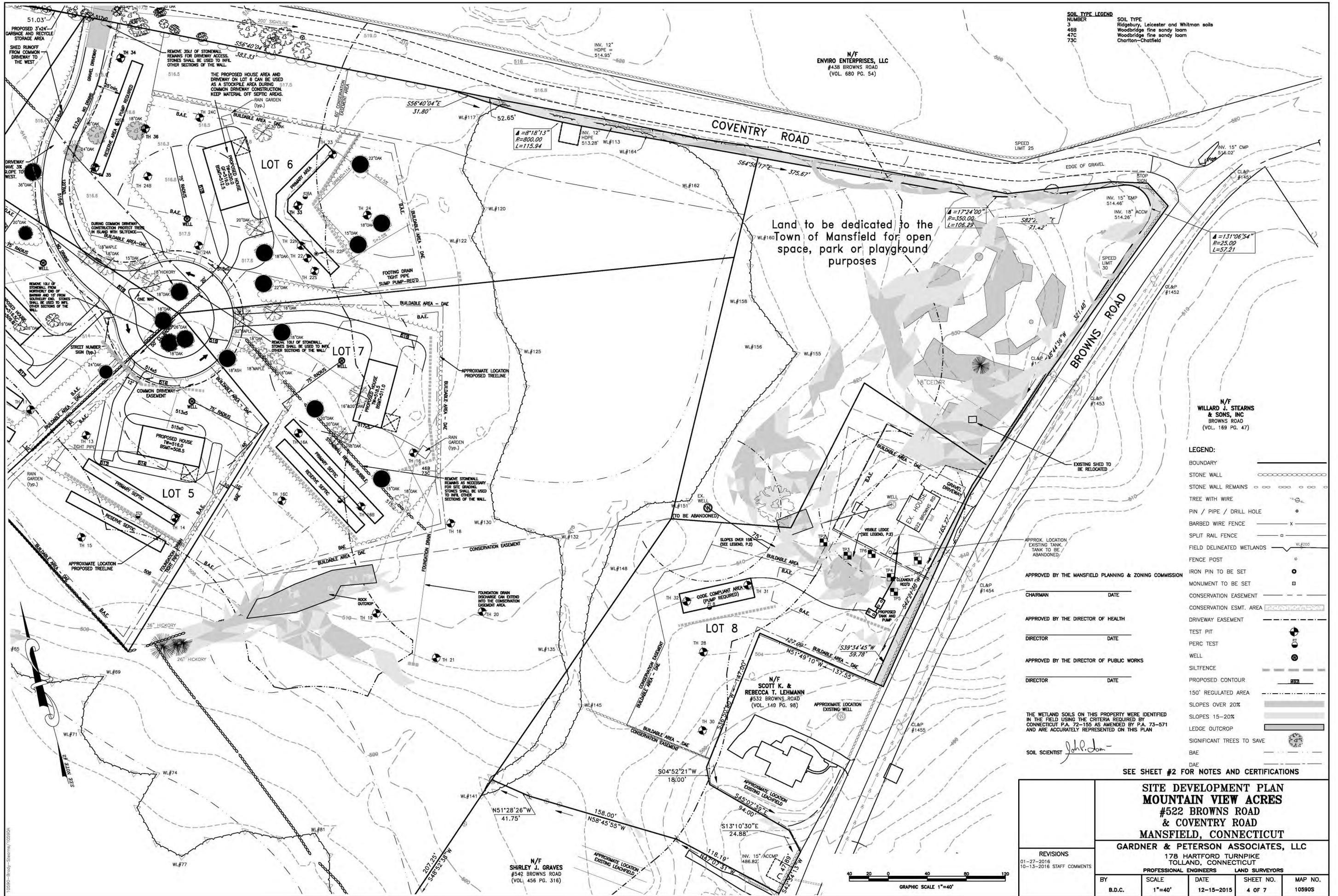
SEE SHEET #2 FOR NOTES AND CERTIFICATIONS

**SITE DEVELOPMENT PLAN
MOUNTAIN VIEW ACRES
#522 BROWNS ROAD
& COVENTRY ROAD
MANSFIELD, CONNECTICUT**

GARDNER & PETERSON ASSOCIATES, LLC
178 HARTFORD TURNPIKE
TOLLAND, CONNECTICUT

PROFESSIONAL ENGINEERS LAND SURVEYORS

REVISIONS				
01-27-2016				
10-13-2016 STAFF COMMENTS				
BY	SCALE	DATE	SHEET NO.	MAP NO.
B.D.C.	1"=40'	12-15-2015	3 OF 7	105905



SOIL TYPE LEGEND

NUMBER	SOIL TYPE
3	Ridgebury, Leicester and Whitman soils
46B	Woodbridge fine sandy loam
47C	Woodbridge fine sandy loam
73C	Charlton-Chatfield

N/F
 ENVIRO ENTERPRISES, LLC
 #438 BROWNS ROAD
 (VOL. 680 PG. 54)

N/F
 WILLARD J. STEARNS
 & SONS, INC
 BROWNS ROAD
 (VOL. 169 PG. 47)

Land to be dedicated to the
 Town of Mansfield for open
 space, park or playground
 purposes

LEGEND:

BOUNDARY	---
STONE WALL	—○—○—○—○—
STONE WALL REMAINS	—○—○—○—○—
TREE WITH WIRE	○
PIN / PIPE / DRILL HOLE	•
BARBED WIRE FENCE	x
SPLIT RAIL FENCE	□
FIELD DELINEATED WETLANDS	WL#202
FENCE POST	○
IRON PIN TO BE SET	•
MONUMENT TO BE SET	□
CONSERVATION EASEMENT	—
CONSERVATION ESMT. AREA	—
DRIVEWAY EASEMENT	—
TEST PIT	⊕
PERC TEST	⊙
WELL	⊕
SILT FENCE	—
PROPOSED CONTOUR	—
150' REGULATED AREA	—
SLOPES OVER 20%	—
SLOPES 15-20%	—
LEGGE OUTCROP	—
SIGNIFICANT TREES TO SAVE	⊕
BAE	—
DAE	—

APPROVED BY THE MANSFIELD PLANNING & ZONING COMMISSION

CHAIRMAN _____ DATE _____

APPROVED BY THE DIRECTOR OF HEALTH

DIRECTOR _____ DATE _____

APPROVED BY THE DIRECTOR OF PUBLIC WORKS

DIRECTOR _____ DATE _____

THE WETLAND SOILS ON THIS PROPERTY WERE IDENTIFIED IN THE FIELD USING THE CRITERIA REQUIRED BY CONNECTICUT P.A. 72-155 AS AMENDED BY P.A. 73-571 AND ARE ACCURATELY REPRESENTED ON THIS PLAN

SOIL SCIENTIST *John J. Jan*

SEE SHEET #2 FOR NOTES AND CERTIFICATIONS

**SITE DEVELOPMENT PLAN
 MOUNTAIN VIEW ACRES
 #522 BROWNS ROAD
 & COVENTRY ROAD
 MANSFIELD, CONNECTICUT**

GARDNER & PETERSON ASSOCIATES, LLC

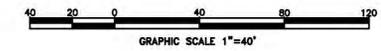
178 HARTFORD TURNPIKE
 TOLLAND, CONNECTICUT

PROFESSIONAL ENGINEERS LAND SURVEYORS

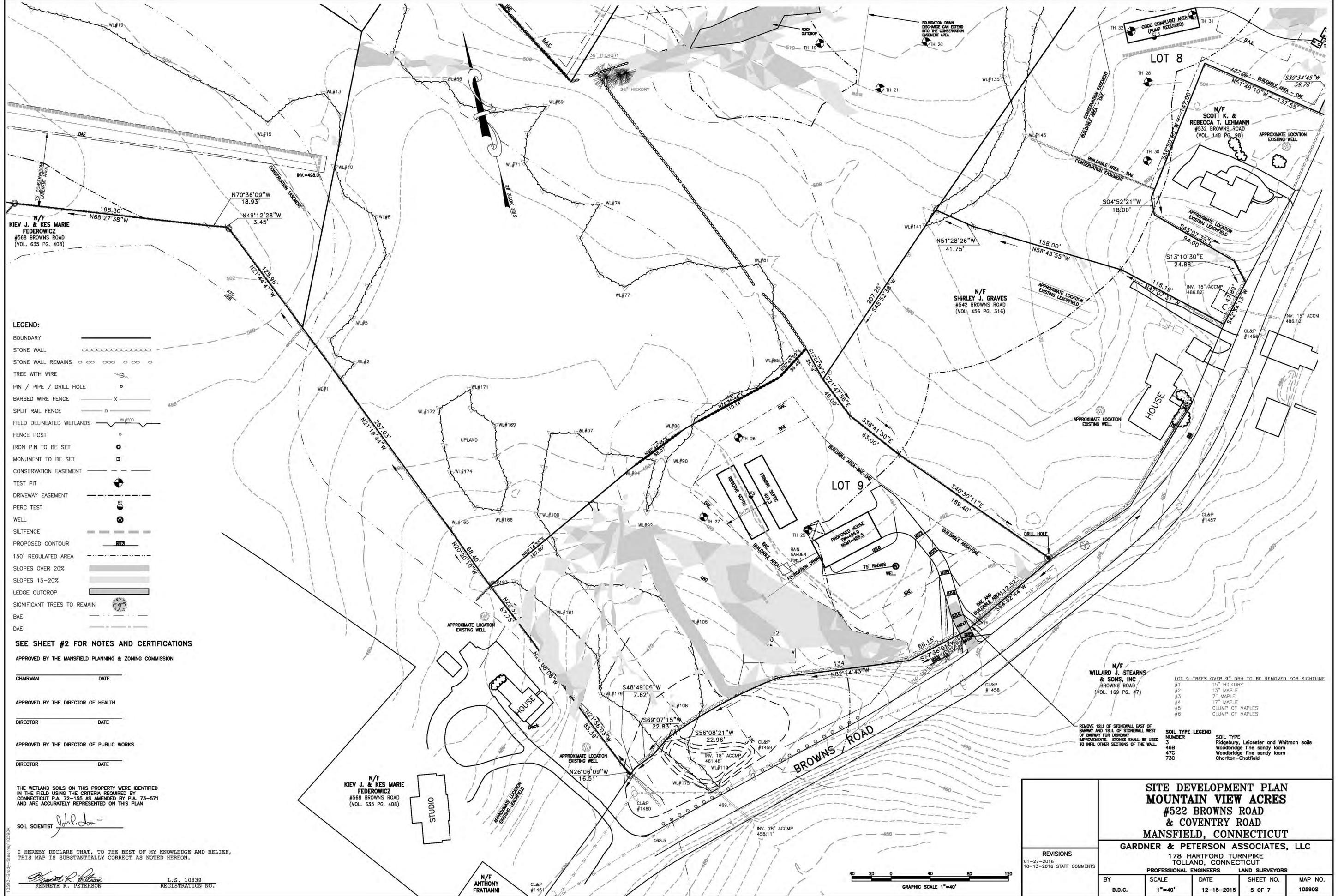
REVISIONS

01-27-2016	STAFF COMMENTS
10-13-2016	STAFF COMMENTS

BY	SCALE	DATE	SHEET NO.	MAP NO.
B.D.C.	1"=40'	12-15-2015	4 OF 7	105905



N/F
 SHIRLEY J. GRAVES
 #542 BROWNS ROAD
 (VOL. 456 PG. 316)



- LEGEND:**
- BOUNDARY ———
 - STONE WALL ———
 - STONE WALL REMAINS - - - - -
 - TREE WITH WIRE ○
 - PIN / PIPE / DRILL HOLE ●
 - BARBED WIRE FENCE — x —
 - SPLIT RAIL FENCE — □ —
 - FIELD DELINEATED WETLANDS ———
 - FENCE POST ○
 - IRON PIN TO BE SET ○
 - MONUMENT TO BE SET □
 - CONSERVATION EASEMENT ———
 - TEST PIT ⊕
 - DRIVEWAY EASEMENT ———
 - PERC TEST ⊕
 - WELL ⊕
 - SILTFENCE ———
 - PROPOSED CONTOUR ———
 - 150' REGULATED AREA ———
 - SLOPES OVER 20% ———
 - SLOPES 15-20% ———
 - LEDGE OUTCROP ———
 - SIGNIFICANT TREES TO REMAIN ○
 - BAE ———
 - DAE ———

SEE SHEET #2 FOR NOTES AND CERTIFICATIONS

APPROVED BY THE MANSFIELD PLANNING & ZONING COMMISSION

CHAIRMAN _____ DATE _____

APPROVED BY THE DIRECTOR OF HEALTH

DIRECTOR _____ DATE _____

APPROVED BY THE DIRECTOR OF PUBLIC WORKS

DIRECTOR _____ DATE _____

THE WETLAND SOILS ON THIS PROPERTY WERE IDENTIFIED IN THE FIELD USING THE CRITERIA REQUIRED BY CONNECTICUT P.A. 72-155 AS AMENDED BY P.A. 73-571 AND ARE ACCURATELY REPRESENTED ON THIS PLAN

SOIL SCIENTIST *John J. Jan*

I HEREBY DECLARE THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

Kenneth R. Peterson
KENNETH R. PETERSON L.S. 10839
REGISTRATION NO.

- LOT 9 - TREES OVER 9" DBH TO BE REMOVED FOR SIGHTLINE
- #1 15" HICKORY
 - #2 13" MAPLE
 - #3 7" MAPLE
 - #4 17" MAPLE
 - #5 CLUMP OF MAPLES
 - #6 CLUMP OF MAPLES

N/F WILLARD J. STEARNS & SONS, INC
BROWNS ROAD
(VOL. 169 PG. 47)

REMOVE 12L OF STONEMALL EAST OF BARWAY AND 18L OF STONEMALL WEST OF BARWAY FOR DRIVEWAY IMPROVEMENTS. STONES SHALL BE USED TO INFL OTHER SECTIONS OF THE WALL.

SOIL TYPE LEGEND

NUMBER	SOIL TYPE
3	Ridgebury, Leicester and Whitman soils
468	Woodbridge fine sandy loam
47C	Woodbridge fine sandy loam
75C	Chorton-Chotfield

**SITE DEVELOPMENT PLAN
MOUNTAIN VIEW ACRES
#522 BROWNS ROAD
& COVENTRY ROAD
MANSFIELD, CONNECTICUT**

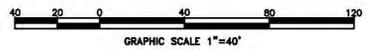
GARDNER & PETERSON ASSOCIATES, LLC

178 HARTFORD TURNPIKE
TOLLAND, CONNECTICUT

PROFESSIONAL ENGINEERS LAND SURVEYORS

REVISIONS
01-27-2016
10-13-2016 STAFF COMMENTS

BY	SCALE	DATE	SHEET NO.	MAP NO.
B.D.C.	1"=40'	12-15-2015	5 OF 7	10590S



MINIMUM LEACHING SYSTEM SPREAD (MLSS)

HYDRAULIC FACTOR (HF) X FLOW FACTOR (FF) X PERCOLATION FACTOR (PF)

MLSS = HF X FF X PF SAMPLE

HYDRAULIC FACTOR (HF)

TO DEPTH	HYDRAULIC GRADIENT (% OF SLOPE)									
	<1	1.1-2	2.1-3	3.1-4	4.1-6	6.1-8	8.1-10	10.1-15	>15	
<17.9	SEE NOTE #1									
18-22	72	62	54	48	42	34	30	28	26	
22-26	66	56	48	42	34	30	28	26	24	
26-30	56	49	42	34	30	28	26	24	20	
30-36	48	42	34	30	28	26	24	20	18	
36-42	42	36	30	28	26	24	20	18	16	
42-48	36	32	28	26	24	20	18	16	14	
48-60	30	28	24	22	20	18	16	14	10	
>60	MLSS NEED NOT BE CONSIDERED									

#1-CANNOT BE APPROVED UNLESS HYDRAULIC ANALYSIS DEMONSTRATES SUITABILITY

FLOW FACTOR (FF) = DESIGN FLOW / 300 SO: 3 BEDROOMS = 450 / 300 = 1.5

4 BEDROOMS = 600 / 300 = 2.0

PERCOLATION FACTOR (PF) LESS THAN 5 MIN/IN = 1.0

5.1 - 10	= 1.2
10.1 - 20	= 1.5
20.1 - 30	= 2.0
30.1 - 45	= 3.0
45.1 - 60	= 5.0

MLSS CALCULATIONS

LOT 1
 Avg. Depth to restrictive layer: 22.3"
 Hydraulic Gradient: 2.1-3%
 HF= 48
 4 Bedrooms, FF= 2.0
 Perc Rate 5.1-10 min/in.
 PF= 1.2
 MLSS= 48 x 2.0 x 1.2 = 116

LOT 2
 Avg. Depth to restrictive layer: 25.6"
 Hydraulic Gradient: 2.1-3%
 HF= 48
 4 Bedrooms, FF= 2.0
 Perc Rate 1-5 min/in.
 PF= 1.0
 MLSS= 48 x 2.0 x 1.0 = 96

LOT 3
 Avg. Depth to restrictive layer: 25.3"
 Hydraulic Gradient: 1.1-4%
 HF= 42
 4 Bedrooms, FF= 2.0
 Perc Rate 5.1-10 min/in.
 PF= 1.2
 MLSS= 42 x 2.0 x 1.2 = 101

LOT 4
 Avg. Depth to restrictive layer: 25"
 Hydraulic Gradient: 4.1-6%
 HF= 34
 4 Bedrooms, FF= 2.0
 Perc Rate 5.1-10 min/in.
 PF= 1.2
 MLSS= 34 x 2.0 x 1.2 = 82

LOT 5
 Avg. Depth to restrictive layer: 22.3"
 Hydraulic Gradient: 4.1-6%
 HF= 34
 4 Bedrooms, FF= 2.0
 Perc Rate 5.1-10 min/in.
 PF= 1.2
 MLSS= 34 x 2.0 x 1.2 = 82

LOT 6
 Avg. Depth to restrictive layer: 26.16"
 (TH's 22,22N,22S,23,24,33)
 Hydraulic Gradient: 2.1-3%
 HF= 48
 4 Bedrooms, FF= 2.0
 Perc Rate 5.1-10 min/in.
 PF= 1.2
 MLSS= 42 x 2.0 x 1.2 = 101

LOT 7
 Avg. Depth to restrictive layer: 26"
 Hydraulic Gradient: 1.1-2%
 HF= 56
 4 Bedrooms, FF= 2.0
 Perc Rate 5.1-10 min/in.
 PF= 1.2
 MLSS= 56 x 2.0 x 1.2 = 135

LOT 8-Existing House
 Avg. Depth to restrictive layer: 26"
 Hydraulic Gradient: 6.1-8%
 HF= 30
 3 Bedrooms, FF= 1.5
 Perc Rate 1-5 min/in.
 PF= 1.0
 MLSS= 30 x 1.5 x 1.0 = 45

LOT 9
 Avg. Depth to restrictive layer: 25.3"
 Hydraulic Gradient: 6.1-8%
 HF= 30
 4 Bedrooms, FF= 2.0
 Perc Rate 5.1-10 min/in.
 PF= 1.2
 MLSS= 30 x 2.0 x 1.2 = 72

CONSTRUCTION NARRATIVE

Common driveway improvements will be provided by subdivider as required. Construction, E&S questions shall be forwarded to designer. Construction can be performed at any time as there will be no wetland disturbance. Standard hours of operation shall be followed (M-F, 7am-5pm) and the construction sequence shall follow the schedule on this plan.

Single family house construction will follow guidelines on individual permit plans and a responsible person shall be noted on the individual plans. Wetland crossing shall be constructed during a dry period.

Soil Testing Results
 Observed By: Eastern Highlands Health District
 Others Present: Gardner & Peterson Associates, LLC and Highland Soils
 Date Tested: September 3, 2015

TH 1
 0-8" Topsoil
 9-30" Orange Brown Fine Sandy Loam
 30-80" Compact Glacial Till
 Mottling @ 27"
 Roots to 30"
 No groundwater
 No ledge

TH 2
 0-8" Topsoil
 9-18" Orange Brown Fine Sandy Loam
 18-78" Compact Glacial Till
 Mottling @ 18"
 Roots to 18"
 No groundwater
 No ledge

TH 3
 0-8" Topsoil
 4-22" Orange Brown Fine Sandy Loam
 22-80" Compact Glacial Till
 Mottling @ 22"
 Roots to 22"
 No groundwater
 No ledge

TH 4
 0-5" Topsoil
 5-26" Orange Brown Fine Sandy Loam
 26-80" Compact Glacial Till
 Mottling @ 26"
 Roots to 26"
 No groundwater
 No ledge

TH 5
 0-4" Topsoil
 4-24" Orange Brown Fine Sandy Loam
 24-81" Compact Glacial Till
 Mottling @ 24"
 Roots to 24"
 No groundwater
 No ledge

TH 6
 0-3" Topsoil
 3-27" Orange Brown Fine Sandy Loam
 27-78" Compact Glacial Till
 Mottling @ 27"
 Roots to 27"
 No groundwater
 No ledge

TH 7
 0-7" Topsoil
 7-30" Orange Brown Fine Sandy Loam
 30-81" Compact Glacial Till
 Mottling @ 30"
 Roots to 30"
 No groundwater
 No ledge

TH 8
 0-8" Topsoil
 8-26" Orange Brown Fine Sandy Loam
 26-80" Compact Glacial Till
 Mottling @ 26"
 Roots to 26"
 No groundwater
 No ledge

TH 9
 0-5" Topsoil
 5-20" Orange Brown Fine Sandy Loam
 20-77" Compact Glacial Till
 Mottling @ 20"
 Roots to 20"
 No groundwater
 No ledge

TH 10
 0-5" Topsoil
 5-26" Orange Brown Fine Sandy Loam
 26-85" Compact Glacial Till
 Mottling @ 26"
 Roots to 26"
 No groundwater
 No ledge

TH 11
 0-4" Topsoil
 4-20" Orange Brown Fine Sandy Loam
 20-72" Compact Glacial Till
 Mottling @ 20"
 Roots to 20"
 No groundwater
 No ledge

TH 12
 0-5" Topsoil
 5-29" Orange Brown Fine Sandy Loam
 29-77" Compact Glacial Till
 Mottling @ 29"
 Roots to 29"
 No groundwater
 No ledge

TH 13
 0-5" Topsoil
 5-19" Orange Brown Fine Sandy Loam
 19-70" Compact Glacial Till
 Mottling @ 19"
 Roots to 19"
 No groundwater
 No ledge

Soil Testing Results
 Observed By: Eastern Highlands Health District
 Others Present: Gardner & Peterson Associates, LLC and Highland Soils
 Date Tested: September 3, 2015

TH 14
 0-4" Topsoil
 4-24" Orange Brown Fine Sandy Loam
 24-90" Compact Glacial Till
 Mottling @ 24"
 Roots to 24"
 No groundwater
 No ledge

TH 15
 0-5" Topsoil
 5-24" Orange Brown Fine Sandy Loam
 24-78" Compact Glacial Till
 Mottling @ 24"
 Roots to 24"
 No groundwater
 No ledge

TH 16
 0-8" Topsoil
 8-40" Orange Brown Fine Sandy Loam
 40-65" Compact Glacial Till
 Mottling @ 40"
 Roots to 40"
 No groundwater
 No ledge

TH 16A
 0-5" Topsoil
 5-26" Orange Brown Fine Sandy Loam
 26-80" Compact Glacial Till
 Mottling @ 26"
 Roots to 26"
 No groundwater
 No ledge

TH 16B
 0-4" Topsoil
 4-24" Orange Brown Fine Sandy Loam
 24-81" Compact Glacial Till
 Mottling @ 24"
 Roots to 24"
 No groundwater
 No ledge

TH 16C
 0-5" Topsoil
 5-31" Orange Brown Fine Sandy Loam
 31-84" Compact Glacial Till
 Mottling @ 31"
 Roots to 31"
 No groundwater
 No ledge

TH 17-not dug

TH 18
 0-5" Topsoil
 5-26" Orange Brown Fine Sandy Loam
 26-90" Compact Glacial Till
 Mottling @ 26"
 Roots to 26"
 No groundwater
 No ledge

TH 19
 0-5" Topsoil
 5-26" Orange Brown Fine Sandy Loam
 26-50" Compact Glacial Till
 Mottling @ 26"
 Roots to 26"
 No groundwater
 No ledge

TH 20
 0-5" Topsoil
 5-30" Orange Brown Fine Sandy Loam
 30-90" Compact Glacial Till
 Mottling @ 30"
 Roots to 30"
 No groundwater
 No ledge

TH 21
 0-5" Topsoil
 5-31" Orange Brown Fine Sandy Loam
 31-84" Compact Glacial Till
 Mottling @ 31"
 Roots to 31"
 No groundwater
 No ledge

TH 22
 0-6" Topsoil
 6-30" Orange Brown Fine Sandy Loam
 30-43" Compact Glacial Till
 Mottling @ 30"
 Roots to 30"
 No groundwater
 No ledge

TH 23
 0-5" Topsoil
 5-24" Orange Brown Fine Sandy Loam
 24-84" Compact Glacial Till
 Mottling @ 24"
 Roots to 24"
 No groundwater
 No ledge

Soil Testing Results
 Observed By: Eastern Highlands Health District
 Others Present: Gardner & Peterson Associates, LLC and Highland Soils
 Date Tested: September 3, 2015

TH 24
 0-4" Topsoil
 4-24" Orange Brown Fine Sandy Loam
 24-90" Compact Glacial Till
 Mottling @ 24"
 Roots to 24"
 No groundwater
 No ledge

TH 24A
 0-5" Topsoil
 5-24" Orange Brown Fine Sandy Loam
 24-80" Compact Glacial Till
 Mottling @ 24"
 Roots to 24"
 No groundwater
 No ledge

TH 24B
 0-8" Topsoil
 8-24" Orange Brown Fine Sandy Loam
 24-89" Compact Glacial Till
 Mottling @ 24"
 Roots to 24"
 No groundwater
 No ledge

TH 24C
 0-8" Topsoil
 8-21" Orange Brown Fine Sandy Loam-Silty
 21-76" Compact Glacial Till
 Mottling @ 21"
 Roots to 21"
 No groundwater
 No ledge

TH 25
 0-7" Topsoil
 7-25" Orange Brown Fine Sandy Loam
 25-90" Compact Glacial Till
 Mottling @ 25"
 Roots to 25"
 No groundwater
 No ledge

TH 26
 0-7" Topsoil
 7-26" Orange Brown Fine Sandy Loam
 26-82" Compact Glacial Till
 Mottling @ 26"
 Roots to 26"
 No groundwater
 No ledge

TH 27
 0-5" Topsoil
 5-26" Orange Brown Fine Sandy Loam
 26-90" Compact Glacial Till
 Mottling @ 26"
 Roots to 26"
 No groundwater
 No ledge

TH 28
 Ledge @ 24"
 TH 29-not dug

TH 30
 0-5" Topsoil
 5-30" Orange Brown Fine Sandy Loam
 30-84" Compact Glacial Till
 Mottling @ 30"
 Roots to 30"
 No groundwater
 No ledge

TH 31
 0-7" Topsoil
 7-26" Orange Brown Fine Sandy Loam
 26-50" Compact Glacial Till
 Mottling @ 26"
 Roots to 26"
 No groundwater
 No ledge

TH 32
 0-6" Topsoil
 6-30" Orange Brown Fine Sandy Loam
 30-64" Compact Glacial Till
 Mottling @ 30"
 Roots to 30"
 No groundwater
 No ledge

Soil Testing Results
 Observed By: Gardner & Peterson Associates, LLC
 Date Tested: October 30, 2015

TH 22P
 A hole was dug by hand (as discussed with Jeffrey Palomhus, Chief Sanitarian) to a depth of 50" to demonstrate there is no ledge down grade of TH 22 within 48" of the ground surface. Photos were forwarded to his attention.

Soil Testing Results
 Observed By: Eastern Highlands Health District
 Others Present: Gardner & Peterson Associates, LLC and Highland Soils
 Date Tested: October 1, 2015

TH 22N
 0-7" Topsoil
 7-30" Orange Brown Fine Sandy Loam
 30-83" Compact Glacial Till
 Mottling @ 30"
 Roots to 29"
 Restrictive @ 30"
 No groundwater
 No ledge

TH 22S
 0-8" Topsoil
 8-24" Orange Brown Fine Sandy Loam
 24-80" Compact Glacial Till
 Mottling @ 24"
 Roots to 25"
 No groundwater
 No ledge

TH 33
 0-8" Topsoil
 8-24" Orange Brown Very Fine Sandy Loam-Silty
 24-89" Compact Glacial Till
 Mottling @ 24"
 Roots to 25"
 No groundwater
 No ledge

TH 35
 0-7" Topsoil
 7-24" Orange Brown Fine Sandy Loam
 24-92" Compact Glacial Till
 Mottling @ 24"
 Roots to 24"
 No groundwater
 No ledge

TH 36
 0-8" Topsoil
 8-29" Orange Brown Fine Sandy Loam
 29-81" Compact Glacial Till
 Mottling @ 29"
 Roots to 29"
 No groundwater
 No ledge

Soil Testing Results
 By: Eastern Highlands Health District Only
 Date Tested: 8/26/2014
 Near existing house-522 Browns Road
 Only location is on EHHO sketch (south of septic tank)

TP 1
 0-4" Topsoil
 4-36" Brown medium sandy loam, very rocky
 36-65" Gray fine & medium sand & gravel, slightly firm
 Ledge @ 65"
 No seepage or mottling
 Roots to 40"

TP 2
 Ledge @ 32"
 No seepage or mottling
 Roots to 32"

TP 3
 0-9" Topsoil
 9-25" Brown Fine Sandy Loam
 25-37" Tan Medium Sand, slightly firm, rocky
 Ledge @ 37"
 No Seepage or Mottling
 Roots to 28"

TP 4
 0-4" Topsoil
 4-28" Brown Fine Sandy Loam
 Trench hit at 17", flooded pit, deeper depth soils unknown
 Seepage @ 17"
 Roots to 28"

TP 5
 Filled & disturbed soils
 Secondary Leaching Trench?
 No Ledge
 Seepage @ 17"
 Mottling @ 19"
 Roots to 28"

TP 6
 0-9" Topsoil
 9-25" Brown Fine Sandy Loam
 25-38" Gray Fine Sand, Rocky
 Machine refusal at 38", probable broken ledge, quite large
 Ledge @ 38"
 No Seepage
 No Mottling
 Roots @ 28"

Percolation Test
 By: Eastern Highlands Health District
 Date Tested: 8/26/2014
 Near existing house-522 Browns Road
 Only location is on EHHO sketch
 Rate: 5 min/in

Percolation Tests
 By: Gardner & Peterson Associates LLC
 Heavy Rain on September 30, 2015

Para #1
 Presoaked 9/21/15 at 2:47
 Presoaked 9/22/15 at 12:40
 Depth=20"
 Mark Down 0"
 TIME DEPTH
 1:21 8"
 1:31 11 3/4"
 1:41 14 3/4"
 1:51 15 3/4"
 2:01 16 3/4"
 2:11 17 3/4"
 2:16 18"
 2:21 18"
 Rate: 10 min/in

Para #2
 Presoaked 9/21/15 at 2:33
 Presoaked 9/22/15 at 10:49
 Depth=20"
 Mark Down 0"
 TIME DEPTH
 1:18 8"
 1:27 13"
 1:37 16 1/2"
 1:47 19 1/2"
 Dry
 Rate: 1-5 min/in

Para #3
 Presoaked 9/21/15 at 3:07
 Presoaked 9/22/15 at 10:46
 Depth=20"
 Mark Down 0"
 TIME DEPTH
 1:15 8"
 1:25 11 1/2"
 1:35 13 1/2"
 1:45 15 1/2"
 1:55 16 3/4"
 2:05 18"
 Dry
 Rate: 5.1-10 min/in

Para #4
 Presoaked 9/21/15 at 3:30
 Presoaked 9/22/15 at 10:43
 Depth=18"
 Mark Down 2"
 TIME DEPTH
 1:15 3 1/2"
 1:20 6"
 1:25 7 1/2"
 1:30 9"
 1:35 10"
 1:40 11"
 1:45 12"
 1:50 13"
 Rate: 10 min/in

Para #5
 Presoaked 9/21/15 at 3:45
 Presoaked 9/22/15 at 10:40
 Depth=18"
 Mark Down 1 1/2"
 TIME DEPTH
 1:14 4 1/2"
 1:15 7 1/2"
 1:20 10 1/2"
 1:25 13 1/2"
 1:30 16 1/2"
 1:35 19 1/2"
 Dry
 Rate: 5.1-10 min/in

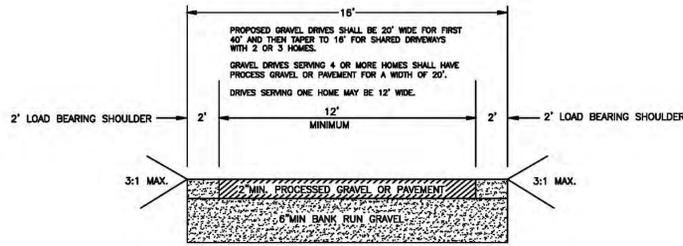
Para #6
 Presoaked 10/01/15 at 8:48
 Depth=18"
 Mark Down 0"
 TIME DEPTH
 10:50 6"
 11:00 9 1/2"
 11:10 11 1/2"
 11:20 13 1/2"
 11:30 14 1/2"
 11:40 15 3/4"
 DRY
 Rate: 5.1-10 min/in

Para #8
 Presoaked 10/01/15 at 8:30
 Depth=17"
 Mark Down 0"
 TIME DEPTH
 10:53 5"
 11:03 10"
 11:13 13"
 11:18 13 3/4"
 11:23 14 3/4"
 11:28 15 3/4"
 11:33 16 1/2"
 11:38 18"
 Rate: 5.1-10 min/in

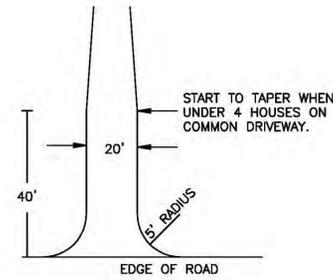
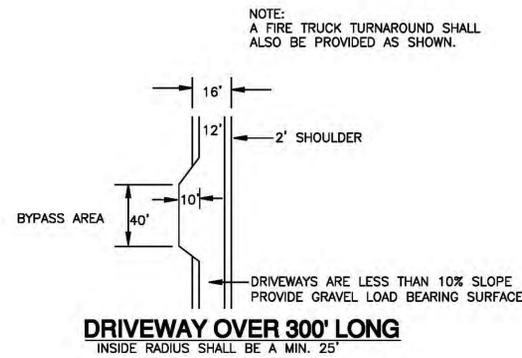
Para #9
 Presoaked 9/21/15 at 4:20
 Presoaked 9/22/15 at 10:24
 Depth=19"
 Mark Down 0"
 TIME DEPTH
 10:56 7 1/2"
 11:06 10"
 11:11 11 1/2"
 11:16 12 1/2"
 11:21 13 1/2"
 11:26 14 1/2"
 11:31 15 1/2"
 11:36 16 1/2"
 11:41 17 1/2"
 11:46 18"
 Dry
 Rate: 5.1-10 min/in

GENERAL EROSION AND SEDIMENT CONTROL NOTES

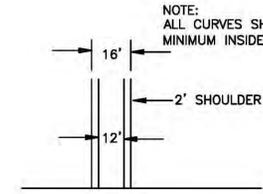
- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE "GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION.
- ALL SEDIMENT CONTROL PRACTICES AND MEASURES SHALL BE CONSTRUCTED, APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED SEDIMENT CONTROL PLAN.
- TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED IN THE AMOUNT NECESSARY TO COMPLETE THE FINISHED GRADING OF ALL EXPOSED AREAS.
- AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS OR OTHER OBJECTIONABLE MATERIAL.
- ALL FILLS SHALL BE COMPACTED AS REQUIRED TO MINIMIZE EROSION, SURFACE, AND SETTLEMENT. FILL INTENDED TO SUPPORT STRUCTURES, DRAINAGE, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH THE APPROPRIATE STATE AND/OR LOCAL SPECIFICATIONS.
- FILL MATERIAL SHALL BE FREE OF BRUSH, RUBBISH, LARGE ROCKS, LOGS, STUMPS, BUILDING MATERIAL, COMPRESSIBLE MATERIAL, AND OTHER MATERIALS WHICH MAY INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
- FROZEN MATERIAL OR SOFT MUDDY OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
- FILL SHALL NOT BE PLACED ON A FROZEN FOUNDATION.
- ALL BENCHES SHALL BE KEPT FREE OF SEDIMENT DURING ALL PHASES OF DEVELOPMENT.
- SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH SOUND CONSTRUCTION PRACTICES.
- ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISH GRADING. IF FINISH GRADING IS TO BE DELAYED FOR MORE THAN 30 DAYS AFTER FINISHING IS COMPLETE, TEMPORARY SOIL STABILIZATION MEASURES SHALL BE APPLIED. AREAS LEFT OVER 30 DAYS SHALL BE CONSIDERED "LONG TERM" AND SHALL RECEIVE TEMPORARY SEEDING WITHIN THE FIRST 15 DAYS.
- SITE IS TO BE GRADDED TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCHING, AND MAINTENANCE UNLESS OTHERWISE SPECIFIED IN THE PLANS.
- CUT AND FILL SLOPES SHALL NOT BE STEEPER THAN 2:1. TOPSOIL SHALL BE SPREAD TO A MINIMUM DEPTH OF 4" ADDITIONAL TOPSOIL MAY BE REQUIRED TO MEET MINIMUM DEPTHS. NO TOPSOIL SHALL BE REMOVED FROM THIS SITE.
- APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL CULTPACKER TYPE SEEDER, OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4" TO 1/2" INCH. HYDROSEEDING WHICH IS MULCHED MAY BE LEFT ON THE SOIL SURFACE.
- WHERE FEASIBLE EXCEPT WHERE EITHER A CULTPACKER TYPE SEEDER OR HYDROSEEDER IS USED, THE SEEDBED SHOULD BE FIRMED FOLLOWING SEEDING WITH A ROLLER OR LIGHT DRAG.
- FERTILIZER AND LIME ARE TO BE WORKED INTO THE SOIL AS NEARLY AS PRACTICAL TO



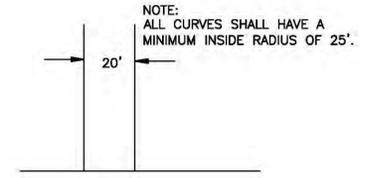
TYPICAL SHARED DRIVEWAY SECTION



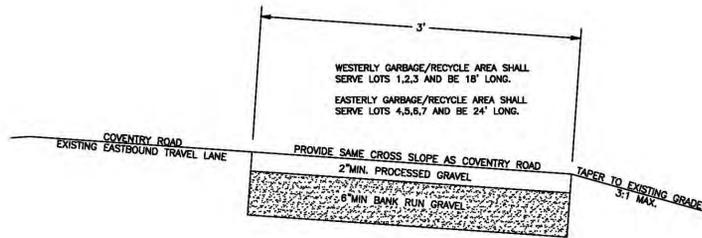
SHARED DRIVEWAY INTERSECTS COVENTRY ROAD



SHARED DRIVEWAY DETAIL WHEN SERVING 2 or 3 HOUSES

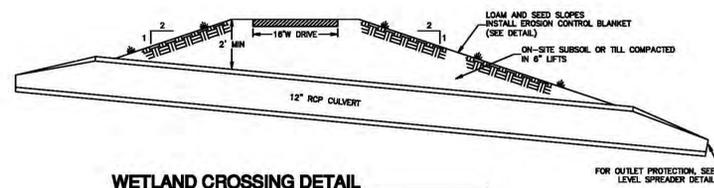


SHARED DRIVEWAY DETAIL WHEN SERVING 4 or MORE HOUSES

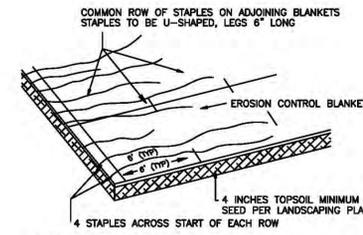


TYPICAL GARBAGE/RECYCLE AREA SECTION

N.T.S.

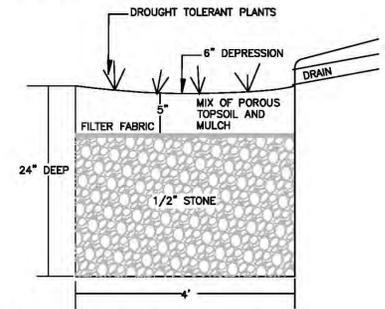


WETLAND CROSSING DETAIL



EROSION CONTROL BLANKET

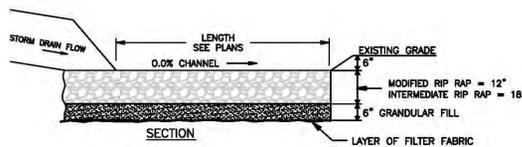
- LOW IMPACT DEVELOPMENT:**
- EACH NEW HOME SHALL HAVE A LOW IMPACT DEVELOPMENT (LID) COMPONENT INCORPORATED INTO THE PERMIT PLAN DESIGN TO COLLECT AND DISCHARGE THE RUNOFF FROM THE PROPOSED ROOF OF EACH NEW HOUSE.
 - A RAIN GARDEN HAS BEEN SELECTED FOR EACH PROPOSED HOUSE BUT THIS CAN BE MODIFIED TO USE AN ALTERNATIVE MEASURE AT THE TIME THE PERMIT PLAN IS PREPARED. SIZING SHALL BE BASED ON THE LID COMPONENT PROPOSED.



- RAIN GARDEN NOTES:**
- THE VICINITY OF THE RAIN GARDEN SHALL BE PROTECTED FROM COMPACTION DURING CONSTRUCTION.
 - ONCE INSTALLED, RAIN GARDEN SHALL BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION.
 - TO PROTECT THE FUNCTION OF THE RAIN GARDEN, THE SURFACE LAYER SHALL BE KEPT FREE OF SEDIMENTATION AND DEBRIS. SEMI-ANNUAL MAINTENANCE SHALL BE REQUIRED BY THE PROPERTY OWNER TO ENSURE THE INFILTRATIVE CAPACITY OF THE SURFACE LAYER.

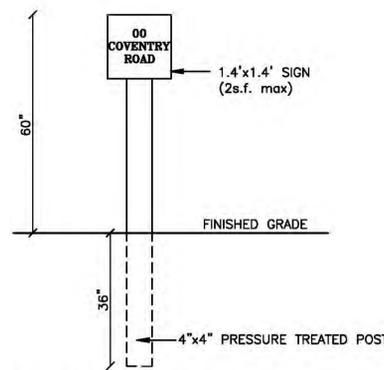
RAIN GARDEN

N.T.S.



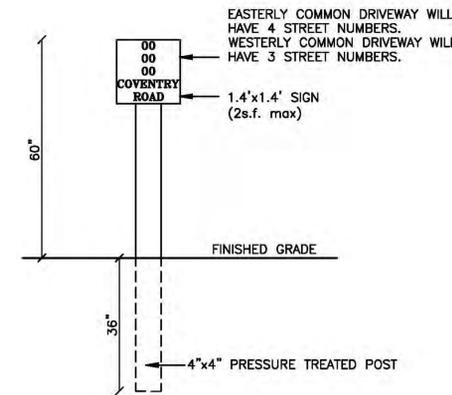
- NOTES:**
- WHERE POSSIBLE LEVEL SPREADER TO BE CONSTRUCTED ON UNDISTURBED SOIL.
 - SHAPE THE ENTRANCE TO THE SPREADER IN SUCH A MANNER AS TO INSURE THAT RUNOFF ENTERS DIRECTLY ONTO THE 0.0% CHANNEL.
 - LIP TO BE CONSTRUCTED LEVEL AT 0.0% GRADE TO INSURE UNIFORM SPREADING OF STORM WATER RUNOFF.

LEVEL SPREADER DETAIL



STREET NUMBER SIGN AT INTERSECTION OF COMMON & SINGLE FAMILY DRIVEWAY

N.T.S.



STREET NUMBER SIGN AT COVENTRY ROAD

N.T.S.

APPROVED BY THE MANSFIELD PLANNING & ZONING COMMISSION

CHAIRMAN _____ DATE _____

APPROVED BY THE DIRECTOR OF HEALTH

DIRECTOR _____ DATE _____

APPROVED BY THE DIRECTOR OF PUBLIC WORKS

DIRECTOR _____ DATE _____

CONSTRUCTION DETAILS				
MOUNTAIN VIEW ACRES				
#522 BROWNS ROAD				
& COVENTRY ROAD				
MANSFIELD, CONNECTICUT				
GARDNER & PETERSON ASSOCIATES, LLC				
178 HARTFORD TURNPIKE TOLLAND, CONNECTICUT				
PROFESSIONAL ENGINEERS		LAND SURVEYORS		
REVISIONS	SCALE	DATE	SHEET NO.	MAP NO.
01-27-2016 10-13-2016 STAFF COMMENTS	N.T.S.	12-15-2015	7 OF 7	105905
BY				
B.D.C.				



TOWN OF MANSFIELD

DEPARTMENT OF PLANNING AND DEVELOPMENT

Date: October 26, 2016

To: Mansfield Inland Wetlands Agency

From: Jennifer Kaufman, Inland Wetlands Agent

Subject: Street Address (File W1575)
Willard J. Stearns and Sons, Inc.
Description of Work: 9-lot subdivision-Mountain View Acres
Map Date: 12/15/2015

PROJECT OVERVIEW

Because we were anticipating a lengthy public hearing regarding the Storrs Lodges Project (File #1564-2) at your November 2, 2016 meeting, staff requested that the applicants adjourn the public hearing for the above referenced project to a special meeting of the Inland Wetlands Agency on November 16, 2016, the same night as a regularly scheduled Planning and Zoning Commission Meeting. The applicants rearranged their schedule to accommodate this and when the Storrs Lodges application was withdrawn they were unable to reschedule their team back to November 2nd. Therefore, staff requests that the Agency open the public hearing for this application and immediately adjourn it to November 16, 2016 and schedule a special meeting of the IWA for November 16, 2016.

If the IWA accepts staff's request, after the public hearing is opened, the following motion would be in order:

_____ MOVES, _____ seconds to adjourn the public hearing on the 9-lot subdivision application (Mountain View Acres) submitted by Willard J. Stearns and Sons, Inc. (File W1575), subdivision to November 16, 2016 and schedule a special meeting of the Inland Wetlands Agency for November 16, 2016.



TOWN OF MANSFIELD

DEPARTMENT OF PLANNING AND DEVELOPMENT

Date: August 30, 2016

To: Mansfield Inland Wetlands Agency

From: Jennifer Kaufman, Inland Wetlands Agent

Subject: Street Address (File W1575)
Willard J. Stearns and Sons, Inc.
Description of Work: 9-lot subdivision-Mountain View Acres
Map Date: 12/15/2015

PROJECT OVERVIEW

The applicants propose to subdivide an approximately 36-acre parcel located on the corner of Coventry and Browns Road into 9 lots for single family homes. There will be approximately 80,000 square feet of disturbance in the upland review area and approximately 4,800 square feet of disturbance associated with a wetland crossing for a driveway to access a lot on the western portion of the parcel. The lots will be served by subsurface sewage disposal systems and private wells. The site is mainly wooded but the land along Coventry Road was logged within the last 10 years. The site drains primarily from Coventry Road to the south where surface flow is collected in a wetland that drains from the west to the east under Browns Road through an 18 inch culvert located in the southwestern portion of the parcel.

Because the applicants are proposing direct impacts to the wetlands, I recommend that the Agency hold a public hearing pursuant to section 9.0 of the regulations.

- The project includes work in wetlands.
- The project includes work in the 150 foot upland review area.

APPLICATION FEES AND NOTIFICATIONS

- The applicant has paid the required application fee.
- The applicant has submitted copies of the notice mailed to neighbors and a list of abutters to be notified. Certified mail receipts must be submitted prior to action on the application.

RECEIPT MOTION

_____ MOVE to receive the application submitted by Willard J. Stearns and Sons, Inc. (IWA File 1575) under the Wetlands and Watercourses Regulations of the Town of Mansfield for a 9-lot subdivision on property located at 522 Browns Road as shown on a map dated 12/15/2015 and as described in application submissions, to refer said application to staff and the Conservation Commission for review and comments, and to schedule a public hearing on November 2, 2016.

APPLICATION FOR PERMIT
MANSFIELD INLAND WETLANDS AGENCY
4 SOUTH EAGLEVILLE ROAD, STORRS, CT 06268
860-429-3015x6204 (DIRECT) TEL: 860-429-3330 OR
FAX: 860-429-6863

FOR OFFICE USE ONLY
File #
W W1575
Fee Paid \$810-~~00~~
Official Date of Receipt 8-29-16

Applicants are referred to the Mansfield Inland Wetlands and Watercourses Regulations for complete requirements, and are obligated to follow them. For assistance, please contact the Inland Wetlands Agent at the telephone numbers above.

Please print or type or use similar format for computer; attach additional pages as necessary.

Part A - Applicant

Name Willard J. Stearns & Son, Inc.

Mailing Address 50 Stearns Road, Mansfield, CT

Zip 06250

Phone 860-423-9289 Email paul.brody@mountaindairy.com

Title and Brief Description of Project

Subdivision Plan Mountain View Acres

By: Gardner & Peterson, Assoc., LLC Date 12-15-15

Location of Project 522 Browns Road

Intended Start Date _____

Part B - Property Owner (if applicant is the owner, just write "same")

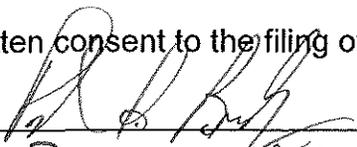
Name Same

Mailing Address _____

Zip _____

Phone _____ Email _____

Owner's written consent to the filing of this application, if owner is not the applicant:

Signature  date 8/10/16

PAUL J. BRODY, PRESIDENT

Applicant's interest in the land: (if other than owner) _____

Part C - Project Description (attach extra pages, if necessary)

- 1) Describe in detail the proposed activity here or on an attached page. (See guidelines at end of application)

Please include a description of all activity or construction or disturbance:

- a) in the wetland/watercourse
b) in the area **adjacent** to (within 150 feet from the edge of) the wetland/watercourse, even if wetland/watercourse is **off** your property

There will be one proposed wetland crossing associated with the development of the nine lots. The proposed driveway for lot #1 will cross the wetland in the same location as an existing crossing. Site work will be performed by an excavator during a dry time of the year.

Abutting the wetlands, within the 150' regulated area, typical development associated with single family lots is proposed such as clearing and construction of houses, driveways and septic systems.

- 2) Describe the amount or area of disturbance (in square feet or cubic yards or acres):

- a) in the wetland/watercourse
b) in the area **adjacent** to (within 150 feet from the edge of) the wetland/watercourse, even if wetland/watercourse is **off** your property

The proposed wetland crossing will disturb 4,800 s.f. of wetlands though much of it was disturbed previously due to logging activities.

The 150' upland review area will have 80,000 s.f. of disturbance.

- 3) Describe the type of materials you are using for the project: _____

Clean fill for the proposed driveways and select sand for leaching systems.

- a) include **type** of material used as fill or to be excavated Processed and bank run gravel.
b) include **volume** of material to be filled or excavated Remove 70 c.y. of topsoil at driveway crossing and provide 140 c.y. of fill.

- 4) Describe measures to be taken to minimize or avoid any adverse impacts on the wetlands and regulated areas (silt fence, staked hay bales or other Erosion and Sedimentation control measures).

Siltfence will be used downgrade of site disturbance and around stockpile areas. In general, the site is relatively flat which helps minimize the risk of erosion.

Part D - Site Description

Describe the general character of the land. (Hilly? Flat? Wooded? Well drained? etc.)

The site generally has a uniform flat slope. The parcel is wooded except for the field on lot #9, though it has been logged.

Part E - Alternatives

Have you considered any alternatives to your proposal that would meet your needs and might have less impact on the wetland/watercourse? Please list these alternatives.

Other alternatives would require a longer wetland crossing and not utilize an existing crossing.

Part F - Map/Site Plan (all applications)

1) Attach to the application a map or site plan showing **existing conditions** and the **proposed project** in relation to wetland/ watercourses. Scale of map or site plan should be 1" = 40'; if this is not possible, please indicate the scale that you are using. A sketch map may be sufficient for small, minor projects. **(See guidelines at end of application)**

2) Applicant's map date and date of last revision 12-15-2015, revised 01-27-2016

3) Zone Classification RAR-90

4) Is your property in a flood zone? Yes XX No Don't Know

Part G - Major Applications Requiring Full Review and a Public Hearing

See Section 6 of the Mansfield Regulations for additional requirements.

Part H - Notice to Abutting Property Owners

1) Attach list of abutters, name, and address

2) **Proof of Written Notice to Abutters.** You must notify abutting (neighboring) property owners (any property immediately contiguous with the subject property, including those across the street) by certified mail, return receipt requested, stating that a wetland application is in progress, and that abutters may contact the Mansfield Inland Wetlands Agent for more information. Include a brief description of your project. **Postal receipts of your notice to abutters must accompany your application.** To generate an abutters list go to <http://www.mainstreetmaps.com/CT/Mansfield/>

Part I - Additional Notices, if necessary

Notice to Windham Water Works and CT Department of Public Health is attached. If this application is in the public watershed for the Windham Water Works (WWW), you must notify the WWW and the Department of Public Health of your project within 7 days of sending the application to Mansfield--sending it by certified mail, return receipt requested. Contact the Mansfield Inland Wetlands Agent to find out if you are in this watershed.

Notice to Adjoining Town. If your property is within 500 feet of an adjoining town, you must also send a copy of the application, on the same day you sent one to Mansfield, to the Inland Wetlands Agency of the adjoining town, by certified mail, return receipt requested.

The Statewide Reporting Form shall be part of the application and specified parts must be completed and returned with this application.

Part J - Other Impacts To Adjoining Towns, if applicable

- 1) Will a significant portion of the traffic to the completed project on the site use streets within the adjoining municipality to enter or exit the site? ___ Yes XX No ___ Don't Know
- 2) Will sewer or water drainage from the project site flow through and impact the sewage or drainage system within the adjoining municipality? ___ Yes XX No ___ Don't Know
- 3) Will water run-off from the improved site impact streets or other municipal or private property within the adjoining municipality? ___ Yes XX No ___ Don't Know

Part K - Additional Information from the Applicant

Set forth (or attach) any other information which would assist the Agency in evaluating your application. (*Please provide extra copies of any lengthy documents or reports, and extra copies of maps larger than 8.5" x 11", which are not easily copied.*)

Part L - Filing Fee

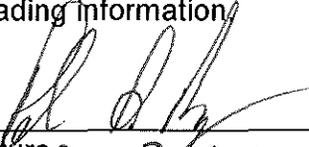
Application fees shall be in accordance with the current Mansfield Code of Ordinance fee Schedule, pursuant to Section 8-1c of the Connecticut General Statutes. The fee schedule includes provisions for applicant-funded consultant studies and reports. The current fee schedule is available in the Planning and Zoning office.

Note: The Agency may require additional information about the upland review area or about wetlands or watercourses affected by the regulated activity. If the Agency, upon review of your application, finds the activity proposed may involve a "significant activity" as defined in the Regulations, additional information and/or a public hearing may be required.

Certification

I hereby certify that:

- I am familiar with the information contained in this form and that such information is true and correct to the best of my knowledge.
- I understand the penalties for obtaining a permit through deception or through inaccurate or misleading information.



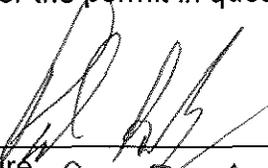
 Signature PAUL J. BROWN, PRESIDENT

8/10/16

 Date

Authorization to Enter Property

The undersigned hereby consent to necessary and proper inspections of the above-mentioned property by members and agents of the Inland Wetlands Agency at reasonable times, both before and after the permit in question has been issued by the Agency.



 Signature PAUL J. BROWN, PRESIDENT

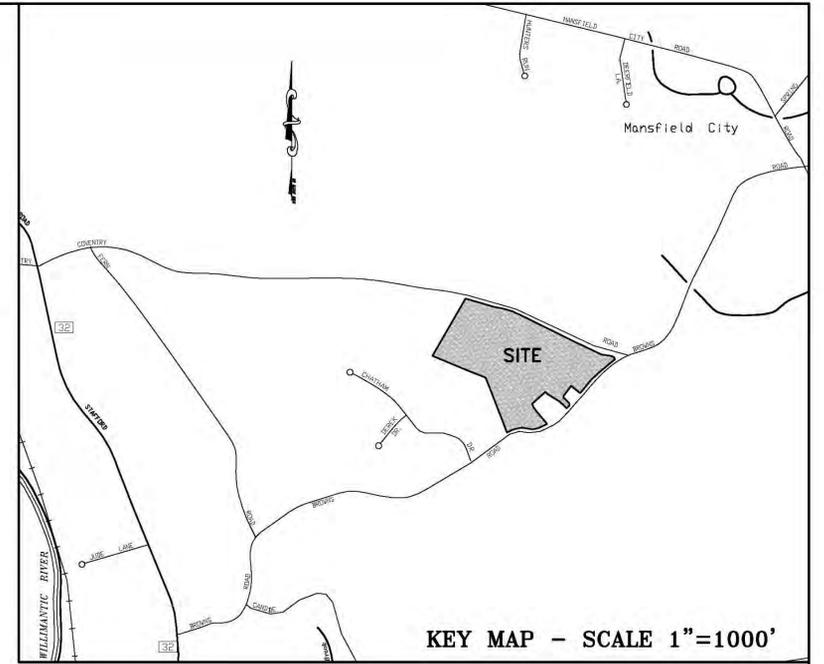
8/10/16

 Date

OWNER:
WILLARD J. STEARNS & SONS, INC.
50 STEARNS ROAD
MANSFIELD, CT

APPLICANT:
WILLARD J. STEARNS & SONS, INC.
50 STEARNS ROAD
MANSFIELD, CT

LAND SURVEYOR/ENGINEER:
GARDNER & PETERSON ASSOCIATES, LLC
178 HARTFORD TURNPIKE
TOLLAND, CONNECTICUT 06084



- NOTES:**
- THIS MAP AND SURVEY HAVE BEEN PREPARED IN ACCORDANCE WITH THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20-300b-1 THROUGH 20-300b-20. THIS IS A SUBDIVISION PLAN, AND IS A FIRST SURVEY OF THE PERIMETER BOUNDARY AND AN ORIGINAL SURVEY OF THE PROPOSED LOT LINES CONFORMING TO HORIZONTAL ACCURACY CLASS A-2.
 - BEARINGS DEPICTED ON THIS PLAN ARE BASED UPON NAD 83/87 (CONNECTICUT STATE PLANE COORDINATES) BASED ON COORDINATES FROM MAP REFERENCE 3A.
 - MAP REFERENCES:
 - "PROPERTY SURVEY CERTAIN PROPERTY OF WILLARD J. STEARNS & SONS, INC IDENTIFIED AS FARM 1, FARM 2 AND FARM 3 BROWNS RD., STEARNS RD., MANSFIELD CITY RD., PLEASANT VALLEY RD., MANSFIELD, CONNECTICUT" DATED 9-11-2014 SCALE: 1"=200' BY: F.A. HESKETH & ASSOCIATES, INC.
 - "BOUNDARY SURVEY FOR SUBDIVISION ENTITLED CHATHAM HILL BROWNS ROAD MANSFIELD, CONNECTICUT" OWNER & SUBDIVIDER MICHAEL DILAJ TRUSTEE SCALE: 1"=100' DATED: 1-98 REV. 6-15-98 BY: DATUM ENG.
 - "BOUNDARY & TOPOGRAPHIC SURVEY PREPARED FOR KIEV FEDEROWICZ PROPOSED HOUSE ADDITION & PROPOSED BARN/STUDIO 568 BROWNS ROAD MANSFIELD CONNECTICUT" SCALE: 1"=30' DATED 4-9-13 REV. THROUGH 1-28-15 BY: ROB HELLSTROM LAND SURVEYING LLC
 - "CORRECTONAL MAP LAND OF DANIEL B AND ANN L. COSTELLO AND PATRICIA E. AND JAMES V. LETA SITUATED ON THE SOUTHERLY LINE OF COVENTRY ROAD IN THE TOWN OF MANSFIELD, THE COUNTY OF TOLLAND AND THE STATE OF CONNECTICUT" SCALE 1"=40' DATED 8-14-65 BY: JOHN R. GRIFFIN
 - "PROPERTY OF RUSSELL W. & PHYLLIS MARTIN COVENTRY ROAD, BROWNS ROAD MANSFIELD CONNECTICUT" SCALE: 1"=100' DATED 2-7-88 BY: KARHU & PRONOVOST ASSOCIATES, INC.
 - "SUBDIVISION PLAN SMITH FARMS PREPARED FOR: REJA ACQUISITION CORP., COVENTRY ROAD MANSFIELD, CONNECTICUT" SCALE: 1"=100' DATED: FEB. 2003 REV. THROUGH 4-20-04 BY: MESSIER & ASSOCIATES, INC.
 - UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING, OR OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO GARDNER & PETERSON ASSOCIATES, LLC. THE EXISTENCE, SIZE AND LOCATION OF ALL SUCH FEATURES MUST BE DETERMINED AND VERIFIED IN THE FIELD BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.
 - WETLANDS DEPICTED HEREON WERE FIELD DELINEATED BY SOIL SCIENTIST JOHN IANNI, CSS.
 - SITE AND ABUTTING PARCELS ARE IN RAR-90 ZONE.
 - PARCEL IS LOCATED IN FLOOD ZONE C, AREAS OF MINIMAL FLOODING, PER FIRM FLOOD INSURANCE RATE MAP TOWN OF MANSFIELD, CONNECTICUT TOLLAND COUNTY PANEL 15 OF 20 COMMUNITY-PANEL NUMBER 090128 0015C EFFECTIVE DATE: JANUARY 2, 1981.
 - PARCEL IS NOT LOCATED WITHIN AN AQUIFER AREA BASED ON "SURFACES AND GROUNDWATER RESOURCES" MAP BY PLAN OF CONSERVATION AND DEVELOPMENT APRIL 2006.
 - PARCEL IS NOT LOCATED WITHIN AN ARCHAEOLOGICAL AREA BASED ON "ARCHAEOLOGICAL ASSESSMENT" MAP BY PLAN OF CONSERVATION AND DEVELOPMENT APRIL 2006.
 - PARCEL IS NOT LOCATED IN AN AREA OF STATE AND FEDERAL LISTED SPECIES & SIGNIFICANT NATURAL COMMUNITIES BASED ON THE CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION NATURAL DIVERSITY DATA BASE AREA MAP FOR MANSFIELD, CT DATED DECEMBER 2014.
 - SPEED LIMIT ON BROWNS ROAD IS 30 MPH AND 25 MPH ALONG COVENTRY ROAD.
 - THE PROPOSED TREELINES ARE CONCEPTUAL AND MAY BE MODIFIED BY THE DEVELOPER. CLEARING LIMITS ARE NOT SHOWN FOR THE FOOTING DRAIN DISCHARGES.

LEGEND:

BOUNDARY	—
STONE WALL	—○—○—○—○—○—○—○—○—○—
STONE WALL REMAINS	○—○—○—○—○—○—○—○—○—
TREE WITH WIRE	—○—○—○—○—○—○—○—○—○—
PIN / PIPE / DRILL HOLE	●
BARBED WIRE FENCE	—x—x—x—x—x—x—x—x—x—
SPLIT RAIL FENCE	—□—□—□—□—□—□—□—□—□—
FIELD DELINEATED WETLANDS	—w/200—
FENCE POST	⊙

APPROVED BY THE MANSFIELD PLANNING & ZONING COMMISSION

CHAIRMAN _____ DATE _____

APPROVED BY THE DIRECTOR OF HEALTH

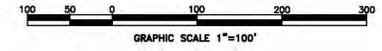
DIRECTOR _____ DATE _____

APPROVED BY THE DIRECTOR OF PUBLIC WORKS

DIRECTOR _____ DATE _____

THE WETLAND SOILS ON THIS PROPERTY WERE IDENTIFIED IN THE FIELD USING THE CRITERIA REQUIRED BY CONNECTICUT P.A. 72-155 AS AMENDED BY P.A. 73-571 AND ARE ACCURATELY REPRESENTED ON THIS PLAN

SOIL SCIENTIST *John Ianni*

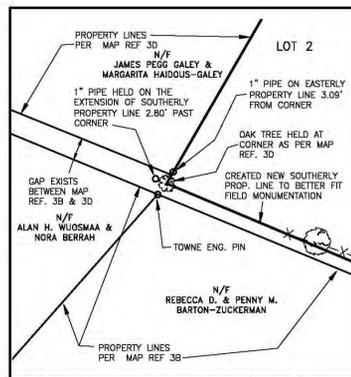


I HEREBY DECLARE THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

Kenneth R. Peterson
 KENNETH R. PETERSON L.S. 10839
 REGISTRATION NO.

SUBDIVISION PLAN				
MOUNTAIN VIEW ACRES				
#522 BROWNS ROAD				
& COVENTRY ROAD				
MANSFIELD, CONNECTICUT				
GARDNER & PETERSON ASSOCIATES, LLC				
178 HARTFORD TURNPIKE TOLLAND, CONNECTICUT				
REVISIONS 01-27-2016				
PROFESSIONAL ENGINEERS		LAND SURVEYORS		
BY	SCALE	DATE	SHEET NO.	MAP NO.
B.D.C.	1"=100'	12-15-2015	1 OF 7	105905

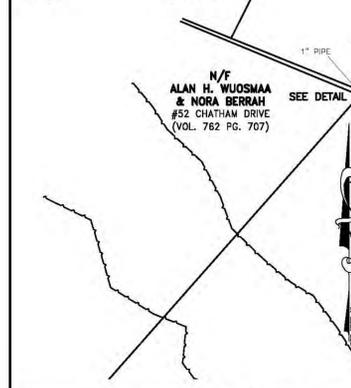
10590-Prop-01-27-16-105905-005



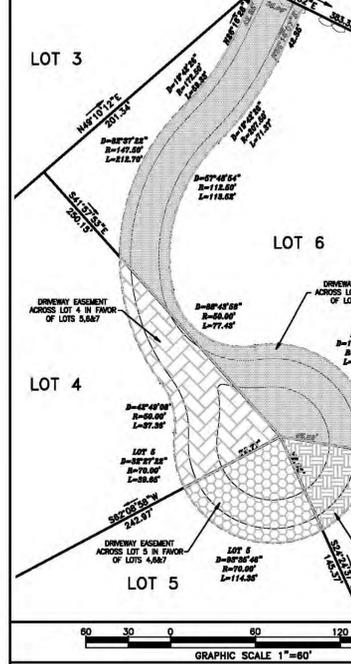
CORNER DETAIL 1"=20'

BUILDABLE AREA:

LOT #1	44,000+S.F.
LOT #2	40,000+S.F.
LOT #3	40,800+S.F.
LOT #4	43,000+S.F.
LOT #5	40,100+S.F.
LOT #6	56,000+S.F.
LOT #7	43,000+S.F.
LOT #8	42,800+S.F.
LOT #9	40,000+S.F.



CORNER DETAIL 1"=20'



GRAPHIC SCALE 1"=60'

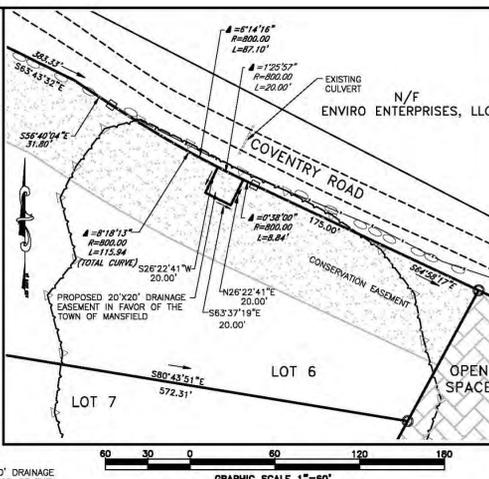
I HEREBY DECLARE THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

Kenneth K. Peterson
KENNETH K. PETERSON
L.S. 10839
REGISTRATION NO.

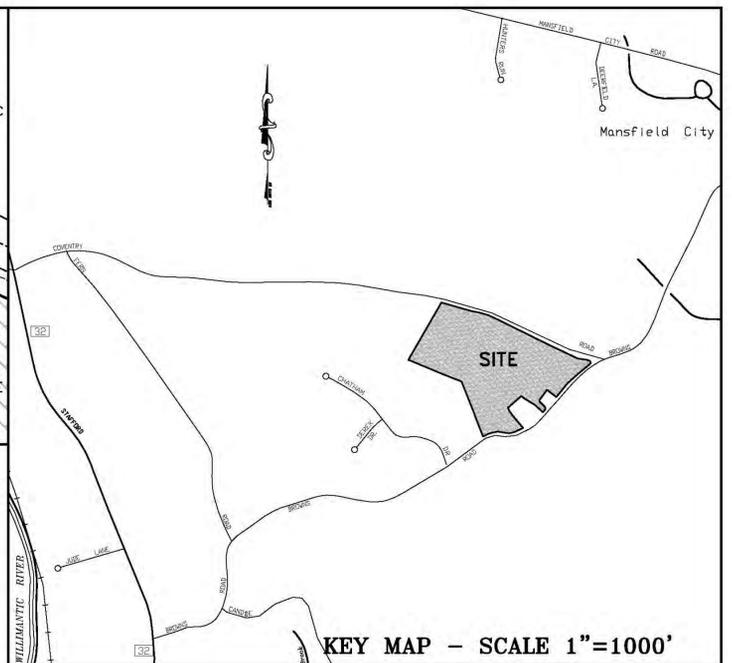


GRAPHIC SCALE 1"=100'

OPEN SPACE COMPUTATIONS:
 PARCEL AREA: 36.64 ACRES
 AREA OF WETLANDS: 9.397 ACRES
 AREA OF LEDGE OUTCROPS & SLOPES OVER 20%: 0.90 ACRES
 UPLAND AREA: 26.35 ACRES
 UPLAND PERCENTAGE: 71.9%
 OPEN SPACE REQUIRED FOR CLUSTER DEVELOPMENTS UPLAND OPEN SPACE AREA REQUIRED: UP TO 40% (14.659 ACRES) 10.54 ACRES
 PROP. OPEN SPACE CONSISTS OF LAND DEDICATED TO TOWN OF MANSFIELD & CONSERVATION ESMTS.: 2.456 ACRES (6.70%)
 DEDICATED OPEN SPACE: 13.049 ACRES (35.61%)
 CONSERVATION EASEMENT (CE): 15.505 ACRES (42.31%)
 TOTAL PROVIDED: 1.881 ACRES
 UPLAND PROVIDED IN OPEN SPACE: 8.868 ACRES
 UPLAND PROVIDED IN CONSERVATION EASEMENTS THEREFORE: 10.749 AC. PROVIDED > 10.54 AC. REQUIRED
 ZONE: RAR-90



GRAPHIC SCALE 1"=60'



KEY MAP - SCALE 1"=1000'

- NOTES:**
- THIS MAP AND SURVEY HAVE BEEN PREPARED IN ACCORDANCE WITH THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20-300b-1 THROUGH 20-300b-20. THIS IS A SUBDIVISION PLAN, AND IS A FIRST SURVEY OF THE PERIMETER BOUNDARY AND AN ORIGINAL SURVEY OF THE PROPOSED LOT LINES CONFORMING TO HORIZONTAL ACCURACY CLASS A-2.
 - BEARINGS DEPICTED ON THIS PLAN ARE BASED UPON NAD 83/87 (CONNECTICUT STATE PLANE COORDINATES) BASED ON COORDINATES FROM MAP REFERENCE 3A.
 - MAP REFERENCES:
 - A. "PROPERTY SURVEY CERTAIN PROPERTY OF WILLARD J. STEARNS & SONS, INC IDENTIFIED AS FARM 1, FARM 2 AND FARM 3 BROWNS RD., STEARNS RD., MANSFIELD CITY RD., PLEASANT VALLEY RD. MANSFIELD, CONNECTICUT DATED 9-11-2014 SCALE: 1"=200' BY: F.A. HESKETH & ASSOCIATES, INC.
 - B. "BOUNDARY SURVEY FOR SUBDIVISION ENTITLED CHATHAM HILL BROWNS ROAD MANSFIELD, CONNECTICUT OWNER & SUBDIVIDER MICHAEL DILAJ TRUSTEE SCALE: 1"=100' DATED 1-1-98 REV. 6-15-98 BY: DATUM ENG.
 - C. "BOUNDARY & TOPOGRAPHIC SURVEY PREPARED FOR KIEV FEDEROWICZ PROPOSED HOUSE ADDITION & PROPOSED BARN/STUDIO 568 BROWNS ROAD MANSFIELD CONNECTICUT SCALE: 1"=30' DATED 4-9-13 REV. THROUGH 1-28-15 BY: ROB HELLSTROM LAND SURVEYING LLC
 - D. "CORRECTIONAL MAP LAND OF DANIEL B AND ANN L. COSTELLO AND PATRICIA E. AND JAMES V. LETA SITUATED ON THE SOUTHERLY LINE OF COVENTRY ROAD IN THE TOWN OF MANSFIELD, THE COUNTY OF TOLLAND AND THE STATE OF CONNECTICUT SCALE: 1"=40' DATED 8-14-65 BY: JOHN R. GRIFFIN
 - E. "PROPERTY OF RUSSELL W. & PHYLLIS MARTIN COVENTRY ROAD, BROWNS ROAD MANSFIELD CONNECTICUT SCALE: 1"=100' DATED 2-7-88 BY: KARHU & PRONGVOST ASSOCIATES, INC.
 - F. "SUBDIVISION PLAN SMITH FARMS PREPARED FOR: REJA ACQUISITION CORP. COVENTRY ROAD MANSFIELD, CONNECTICUT SCALE: 1"=100' DATED: FEB. 2003 REV. THROUGH 4-20-04 BY: MESSIER & ASSOCIATES, INC.
 - UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING, OR OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO GARDNER & PETERSON ASSOCIATES, LLC. THE EXISTENCE, SIZE AND LOCATION OF ALL SUCH FEATURES MUST BE DETERMINED AND VERIFIED IN THE FIELD BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.
 - WETLANDS DEPICTED HEREON WERE FIELD DELINEATED BY SOIL SCIENTIST JOHN IANNI.
 - SITE AND ADJUTING PARCELS ARE IN RAR-90 ZONE.
 - PARCEL IS LOCATED IN FLOOD ZONE C, AREAS OF MINIMAL FLOODING, PER FIRM FLOOD INSURANCE RATE MAP TOWN OF MANSFIELD, CONNECTICUT TOLLAND COUNTY PANEL 15 OF 20 COMMUNITY-PANEL NUMBER 090128 0015C EFFECTIVE DATE: JANUARY 2, 1981.
 - PARCEL IS NOT LOCATED WITHIN AN AQUIFER AREA BASED ON "SURFACES AND GROUNDWATER RESOURCES" MAP BY PLAN OF CONSERVATION AND DEVELOPMENT APRIL 2006.
 - PARCEL IS NOT LOCATED WITHIN AN ARCHAEOLOGICAL AREA BASED ON "ARCHAEOLOGICAL ASSESSMENT" MAP BY PLAN OF CONSERVATION AND DEVELOPMENT APRIL 2006.
 - PARCEL IS NOT LOCATED IN AN AREA OF STATE AND FEDERAL LISTED SPECIES & SIGNIFICANT NATURAL COMMUNITIES BASED ON THE CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION NATURAL DIVERSITY DATA BASE AREA MAP FOR MANSFIELD, CT DATED FEBRUARY 2014.
 - SPEED LIMIT ON BROWNS ROAD (COLLECTOR RD) IS 30 MPH AND 25 MPH ALONG COVENTRY ROAD (NEIGHBORHOOD ROAD).
 - THE PROPOSED TREELINES ARE CONCEPTUAL AND MAY BE MODIFIED BY THE DEVELOPER. CLEARING LIMITS ARE NOT SHOWN FOR THE FOOTING DRAIN DISCHARGES.

LEGEND:

BOUNDARY	---
STONE WALL	—●—●—●—●—
STONE WALL REMAINS	—○—○—○—○—
TREE WITH WIRE	—x—x—x—x—
PIN / PIPE / DRILL HOLE	○
BARBED WIRE FENCE	—x—x—x—x—
SPLIT RAIL FENCE	—x—x—x—x—
FIELD DELINEATED WETLANDS	—wavy lines—
FENCE POST	⊙
IRON PIN TO BE SET	⊙
MONUMENT TO BE SET	⊠
CONSERVATION EASEMENT	—dashed line—
CONSERVATION ESMT. AREA	—shaded area—
DRIVEWAY EASEMENT	—dashed line with arrows—
SLOPES OVER 20%	—stippled area—
SLOPES 15-20%	—horizontal lines—
LEDGE OUTCROP	—vertical lines—

APPROVED BY THE MANSFIELD PLANNING & ZONING COMMISSION

CHAIRMAN	DATE
APPROVED BY THE DIRECTOR OF HEALTH	DATE
DIRECTOR	DATE
APPROVED BY THE DIRECTOR OF PUBLIC WORKS	DATE
DIRECTOR	DATE

BOUNDARY PLAN			
MOUNTAIN VIEW ACRES			
#522 BROWNS ROAD			
& COVENTRY ROAD			
MANSFIELD, CONNECTICUT			
GARDNER & PETERSON ASSOCIATES, LLC			
178 HARTFORD TURNPIKE			
TOLLAND, CONNECTICUT			
REVISIONS		01-27-2016	
PROFESSIONAL ENGINEERS		LAND SURVEYORS	
BY	SCALE	DATE	SHEET NO.
B.D.C.	1"=100' OR AS SHOWN	12-15-2015	2 OF 7
			MAP NO.
			105905

CHAIRMAN DATE

APPROVED BY THE DIRECTOR OF HEALTH

DIRECTOR DATE

APPROVED BY THE DIRECTOR OF PUBLIC WORKS

DIRECTOR DATE

THE WETLAND SOILS ON THIS PROPERTY WERE IDENTIFIED IN THE FIELD USING THE CRITERIA REQUIRED BY CONNECTICUT P.A. 72-156 AS AMENDED BY P.A. 73-571 AND ARE ACCURATELY REPRESENTED ON THIS PLAN

SOIL SCIENTIST *John Jan*

N/F JAMES PEGG GALEY & MARGARITA HAIDOUS-GALEY #85 COVENTRY ROAD (VOL. 659 PG. 106)

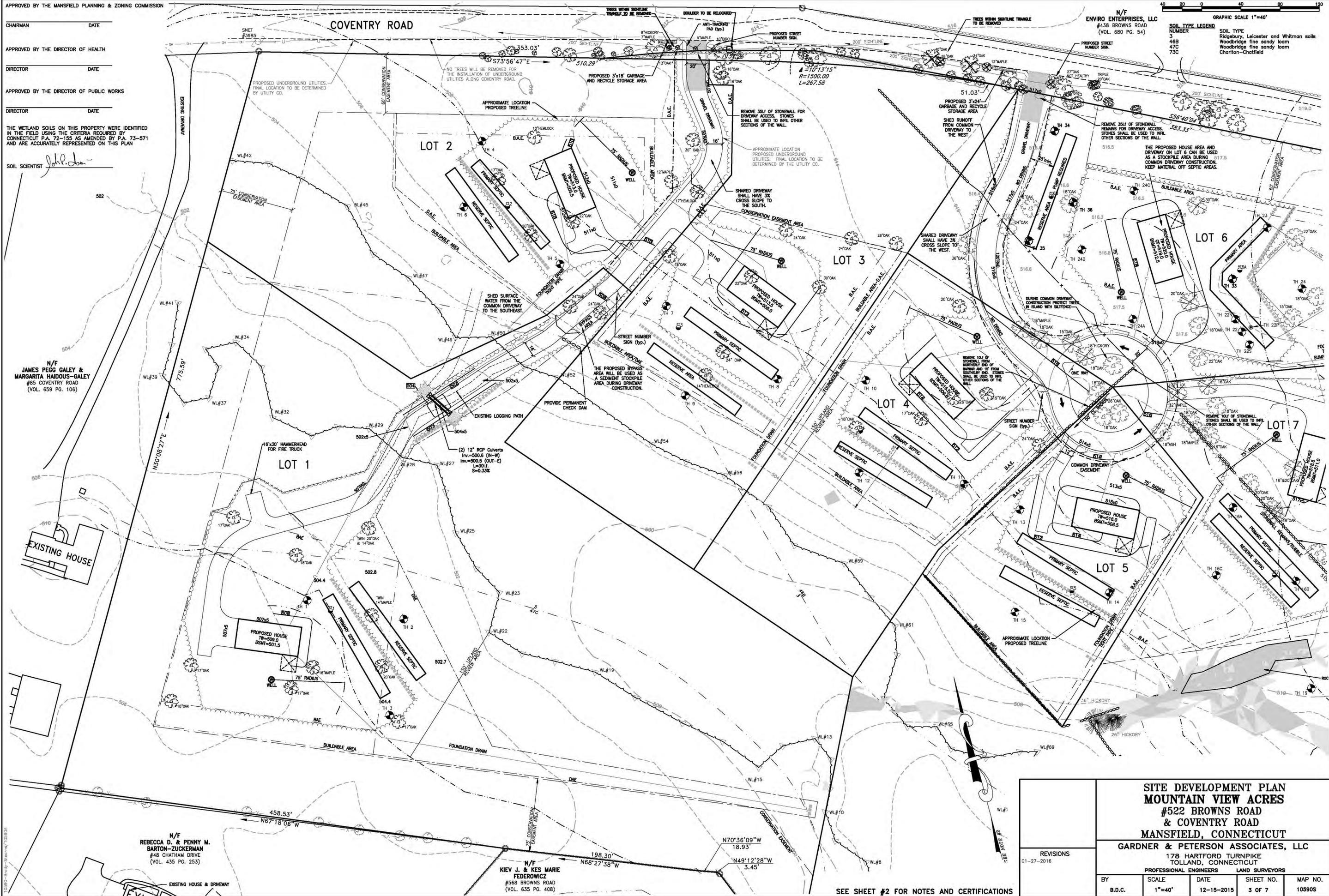
N/F REBECCA D. & PENNY M. BARTON-ZUCKERMAN #48 CHATHAM DRIVE (VOL. 435 PG. 253)

N/F KIEV J. & KES MARIE FEDEROWICZ #568 BROWNS ROAD (VOL. 635 PG. 408)

N/F ENVIRO ENTERPRISES, LLC #438 BROWNS ROAD (VOL. 680 PG. 54)

SOIL TYPE LEGEND
NUMBER
3 Ridgebury, Leicester and Whitman soils
46B Woodbridge fine sandy loam
47C Woodbridge fine sandy loam
73C Charlton-Chatfield

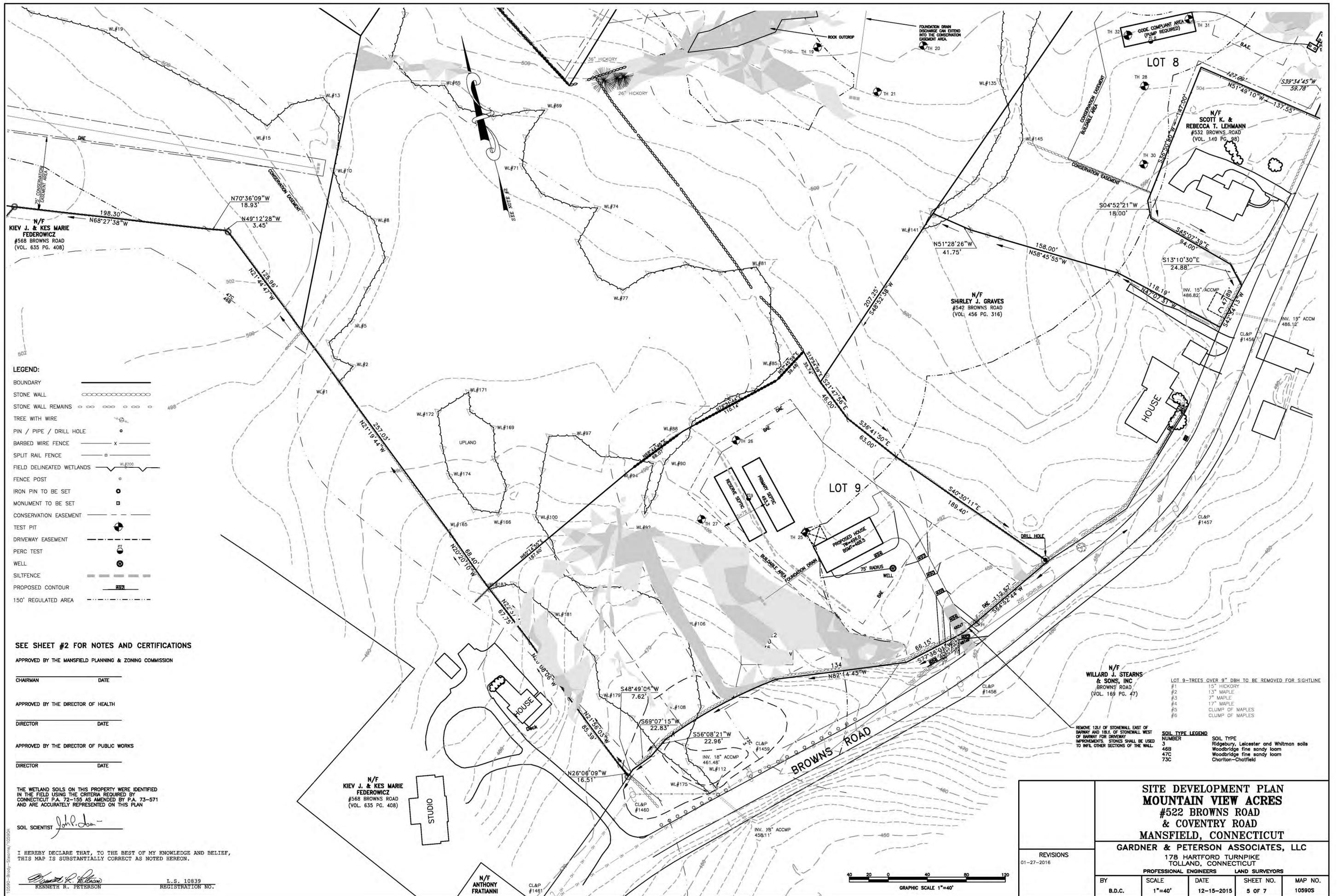
GRAPHIC SCALE 1"=40'



SITE DEVELOPMENT PLAN MOUNTAIN VIEW ACRES #522 BROWNS ROAD & COVENTRY ROAD MANSFIELD, CONNECTICUT				
GARDNER & PETERSON ASSOCIATES, LLC 178 HARTFORD TURNPIKE TOLLAND, CONNECTICUT				
REVISIONS 01-27-2016		PROFESSIONAL ENGINEERS LAND SURVEYORS		
BY B.D.C.	SCALE 1"=40'	DATE 12-15-2015	SHEET NO. 3 OF 7	MAP NO. 105905

SEE SHEET #2 FOR NOTES AND CERTIFICATIONS





- LEGEND:**
- BOUNDARY ————
 - STONE WALL ————
 - STONE WALL REMAINS ————
 - TREE WITH WIRE ————
 - PIN / PIPE / DRILL HOLE ○
 - BARBED WIRE FENCE ————
 - SPLIT RAIL FENCE ————
 - FIELD DELINEATED WETLANDS ————
 - FENCE POST ○
 - IRON PIN TO BE SET ○
 - MONUMENT TO BE SET □
 - CONSERVATION EASEMENT ————
 - TEST PIT ○
 - DRIVEWAY EASEMENT ————
 - PERC TEST ○
 - WELL ○
 - SILT FENCE ————
 - PROPOSED CONTOUR ————
 - 150' REGULATED AREA ————

SEE SHEET #2 FOR NOTES AND CERTIFICATIONS

APPROVED BY THE MANSFIELD PLANNING & ZONING COMMISSION

CHAIRMAN _____ DATE _____

APPROVED BY THE DIRECTOR OF HEALTH

DIRECTOR _____ DATE _____

APPROVED BY THE DIRECTOR OF PUBLIC WORKS

DIRECTOR _____ DATE _____

THE WETLAND SOILS ON THIS PROPERTY WERE IDENTIFIED IN THE FIELD USING THE CRITERIA REQUIRED BY CONNECTICUT P.A. 72-155 AS AMENDED BY P.A. 73-571 AND ARE ACCURATELY REPRESENTED ON THIS PLAN

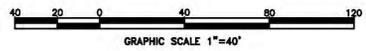
SOIL SCIENTIST *John J. Jan*

I HEREBY DECLARE THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

Kenneth R. Peterson
KENNETH R. PETERSON L.S. 10839
REGISTRATION NO.

- LOT 9-TREES OVER 9" DBH TO BE REMOVED FOR SIGHTLINE
- #1 15" HICKORY
 - #2 13" MAPLE
 - #3 7" MAPLE
 - #4 17" MAPLE
 - #5 CLUMP OF MAPLES
 - #6 CLUMP OF MAPLES

- REMOVE 12% OF STONEMASS EAST OF DRIVEWAY AND 18% OF STONEMASS WEST OF DRIVEWAY FOR DRIVEWAY IMPROVEMENTS. STONES SHALL BE USED TO INFILL OTHER SECTIONS OF THE WALL.
- SOIL TYPE LEGEND**
- | NUMBER | SOIL TYPE |
|--------|--|
| 3 | Ridgebury, Leicester and Whitman soils |
| 468 | Woodbridge fine sandy loam |
| 47C | Woodbridge fine sandy loam |
| 75C | Chariton-Chotfield |



**SITE DEVELOPMENT PLAN
MOUNTAIN VIEW ACRES
#522 BROWNS ROAD
& COVENTRY ROAD
MANSFIELD, CONNECTICUT**

GARDNER & PETERSON ASSOCIATES, LLC
178 HARTFORD TURNPIKE
TOLLAND, CONNECTICUT

PROFESSIONAL ENGINEERS LAND SURVEYORS

REVISIONS
01-27-2016

BY	SCALE	DATE	SHEET NO.	MAP NO.
B.D.C.	1"=40'	12-15-2015	5 OF 7	10590S

MINIMUM LEACHING SYSTEM SPREAD (MLSS)

HYDRAULIC FACTOR (HF) X FLOW FACTOR (FF) X PERCOLATION FACTOR (PF)

MLSS = HF X FF X PF SAMPLE

HYDRAULIC FACTOR (HF)

TO DEPTH	HYDRAULIC GRADIENT (% OF SLOPE)									
	<1	1.1-2	2.1-3	3.1-4	4.1-6	6.1-8	8.1-10	10.1-15	>15	
<17.9	SEE NOTE #1									
18-22	72	62	54	48	42	34	30	28	26	
22-26	66	56	48	42	34	30	28	26	24	
26-30	56	49	42	34	30	28	26	24	20	
30-36	48	42	34	30	28	26	24	20	18	
36-42	42	36	30	28	26	24	20	18	16	
42-48	36	32	28	26	24	20	18	16	14	
48-60	30	28	24	22	20	18	16	14	10	
>60	MLSS NEED NOT BE CONSIDERED									

#1-CANNOT BE APPROVED UNLESS HYDRAULIC ANALYSIS DEMONSTRATES SUITABILITY

FLOW FACTOR (FF) = DESIGN FLOW / 300 SO: 3 BEDROOMS = 450 / 300 = 1.5

4 BEDROOMS = 600 / 300 = 2.0

PERCOLATION FACTOR (PF) LESS THAN 5 MIN/IN = 1.0

5.1 - 10	= 1.2
10.1 - 20	= 1.5
20.1 - 30	= 2.0
30.1 - 45	= 3.0
45.1 - 60	= 5.0

MLSS CALCULATIONS

LOT 1
 Avg. Depth to restrictive layer: 22.3"
 Hydraulic Gradient: 2.1-3%
 HF= 48
 4 Bedrooms, FF= 2.0
 Perc Rate: 5.1-10 min/in.
 PF= 1.2
 MLSS= 48 x 2.0 x 1.2 = 116

LOT 2
 Avg. Depth to restrictive layer: 25.6"
 Hydraulic Gradient: 2.1-3%
 HF= 48
 4 Bedrooms, FF= 2.0
 Perc Rate: 1-5 min/in.
 PF= 1.0
 MLSS= 48 x 2.0 x 1.0 = 96

LOT 3
 Avg. Depth to restrictive layer: 25.3"
 Hydraulic Gradient: 3.1-4%
 HF= 42
 4 Bedrooms, FF= 2.0
 Perc Rate: 5.1-10 min/in.
 PF= 1.2
 MLSS= 42 x 2.0 x 1.2 = 101

LOT 4
 Avg. Depth to restrictive layer: 25"
 Hydraulic Gradient: 4.1-6%
 HF= 34
 4 Bedrooms, FF= 2.0
 Perc Rate: 5.1-10 min/in.
 PF= 1.2
 MLSS= 34 x 2.0 x 1.2 = 82

LOT 5
 Avg. Depth to restrictive layer: 22.3"
 Hydraulic Gradient: 4.1-6%
 HF= 34
 4 Bedrooms, FF= 2.0
 Perc Rate: 5.1-10 min/in.
 PF= 1.2
 MLSS= 34 x 2.0 x 1.2 = 82

LOT 6
 Avg. Depth to restrictive layer: 26.16"
 (TH's 22,22N,22S,23,24,33)
 Hydraulic Gradient: 2.1-3%
 HF= 48
 4 Bedrooms, FF= 2.0
 Perc Rate: 5.1-10 min/in.
 PF= 1.2
 MLSS= 48 x 2.0 x 1.2 = 101

LOT 7
 Avg. Depth to restrictive layer: 26"
 Hydraulic Gradient: 1.1-2%
 HF= 56
 4 Bedrooms, FF= 2.0
 Perc Rate: 5.1-10 min/in.
 PF= 1.2
 MLSS= 56 x 2.0 x 1.2 = 135

LOT 8-Existing House
 Avg. Depth to restrictive layer: 26"
 Hydraulic Gradient: 6.1-8%
 HF= 30
 3 Bedrooms, FF= 1.5
 Perc Rate: 1-5 min/in.
 PF= 1.0
 MLSS= 30 x 1.5 x 1.0 = 45

LOT 9
 Avg. Depth to restrictive layer: 25.3"
 Hydraulic Gradient: 6.1-8%
 HF= 30
 4 Bedrooms, FF= 2.0
 Perc Rate: 5.1-10 min/in.
 PF= 1.2
 MLSS= 30 x 2.0 x 1.2 = 72

Soil Testing Results
 Observed By: Eastern Highlands Health District
 Others Present: Gardner & Peterson Associates, LLC and Highland Soils
 Date Tested: September 3, 2015

TH 1
 0-8" Topsoil
 9-30" Orange Brown Fine Sandy Loam
 30-80" Compact Glacial Till
 Mottling @ 27"
 Roots to 30"
 No groundwater
 No ledge

TH 2
 0-5" Topsoil
 5-18" Orange Brown Fine Sandy Loam
 18-78" Compact Glacial Till
 Mottling @ 18"
 Roots to 18"
 No groundwater
 No ledge

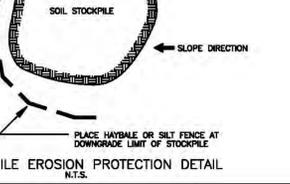
TH 3
 0-4" Topsoil
 4-22" Orange Brown Fine Sandy Loam
 22-80" Compact Glacial Till
 Mottling @ 22"
 Roots to 22"
 No groundwater
 No ledge

TH 4
 0-5" Topsoil
 5-26" Orange Brown Fine Sandy Loam
 26-80" Compact Glacial Till
 Mottling @ 26"
 Roots to 26"
 No groundwater
 No ledge

TH 5
 0-4" Topsoil
 4-24" Orange Brown Fine Sandy Loam
 24-81" Compact Glacial Till
 Mottling @ 30"
 Roots to 30"
 No groundwater
 No ledge

TH 6
 0-3" Topsoil
 3-27" Orange Brown Fine Sandy Loam
 27-78" Compact Glacial Till
 Mottling @ 27"
 Roots to 27"
 No groundwater
 No ledge

TH 7
 0-7" Topsoil
 7-30" Orange Brown Fine Sandy Loam
 30-81" Compact Glacial Till
 Mottling @ 30"
 Roots to 30"
 No groundwater
 No ledge



Soil Testing Results
 Observed By: Eastern Highlands Health District
 Others Present: Gardner & Peterson Associates, LLC and Highland Soils
 Date Tested: September 3, 2015

TH 14
 0-4" Topsoil
 4-24" Orange Brown Fine Sandy Loam
 24-90" Compact Glacial Till
 Mottling @ 24"
 Roots to 24"
 No groundwater
 No ledge

TH 15
 0-5" Topsoil
 5-18" Orange Brown Fine Sandy Loam
 18-78" Compact Glacial Till
 Mottling @ 24"
 Roots to 24"
 No groundwater
 No ledge

TH 16
 0-4" Topsoil
 4-22" Orange Brown Fine Sandy Loam
 22-80" Compact Glacial Till
 Mottling @ 22"
 Roots to 22"
 No groundwater
 No ledge

TH 18
 0-5" Topsoil
 5-26" Orange Brown Fine Sandy Loam
 26-80" Compact Glacial Till
 Mottling @ 26"
 Roots to 26"
 No groundwater
 No ledge

TH 19
 0-5" Topsoil
 5-26" Orange Brown Fine Sandy Loam
 26-80" Compact Glacial Till
 Mottling @ 26"
 Roots to 26"
 No groundwater
 No ledge

TH 20
 0-5" Topsoil
 5-30" Orange Brown Fine Sandy Loam
 30-84" Compact Glacial Till
 Mottling @ 30"
 Roots to 30"
 No groundwater
 No ledge

TH 21
 0-5" Topsoil
 5-31" Orange Brown Fine Sandy Loam
 31-84" Compact Glacial Till
 Mottling @ 31"
 Roots to 31"
 No groundwater
 No ledge

TH 22
 0-6" Topsoil
 6-30" Orange Brown Fine Sandy Loam
 30-43" Compact Glacial Till
 Mottling @ 20"
 Roots to 20"
 No groundwater
 No ledge

Soil Testing Results
 Observed By: Eastern Highlands Health District
 Others Present: Gardner & Peterson Associates, LLC and Highland Soils
 Date Tested: September 3, 2015

TH 24A
 0-5" Topsoil
 5-24" Orange Brown Fine Sandy Loam
 24-80" Compact Glacial Till
 Mottling @ 24"
 Roots to 24"
 No groundwater
 No ledge

TH 24B
 0-4" Topsoil
 4-24" Orange Brown Fine Sandy Loam
 24-89" Compact Glacial Till
 Mottling @ 24"
 Roots to 24"
 No groundwater
 No ledge

TH 25
 0-7" Topsoil
 7-25" Orange Brown Fine Sandy Loam
 25-90" Compact Glacial Till
 Mottling @ 25"
 Roots to 25"
 No groundwater
 No ledge

TH 26
 0-5" Topsoil
 5-31" Orange Brown Fine Sandy Loam
 31-84" Compact Glacial Till
 Mottling @ 26"
 Roots to 26"
 No groundwater
 No ledge

TH 27
 0-5" Topsoil
 5-25" Orange Brown Fine Sandy Loam
 25-77" Compact Glacial Till
 Mottling @ 25"
 Roots to 25"
 No groundwater
 No ledge

TH 28
 Ledge @ 24"
 TH 29-Not dug

TH 30
 0-5" Topsoil
 5-30" Orange Brown Fine Sandy Loam
 30-84" Compact Glacial Till
 Mottling @ 30"
 Roots to 30"
 No groundwater
 No ledge

TH 31
 0-7" Topsoil
 7-26" Orange Brown Fine Sandy Loam
 26-50" Compact Glacial Till
 Mottling @ 24"
 Roots to 24"
 No groundwater
 No ledge

Soil Testing Results
 Observed By: Eastern Highlands Health District
 Others Present: Gardner & Peterson Associates, LLC and Highland Soils
 Date Tested: September 3, 2015

TH 22N
 0-7" Topsoil
 7-30" Orange Brown Fine Sandy Loam
 30-93" Compact Glacial Till
 Mottling @ 35"
 Roots to 29"
 Restrictive @ 30"
 No groundwater
 No ledge

TH 22S
 0-5" Topsoil
 5-24" Orange Brown Fine Sandy Loam
 24-80" Compact Glacial Till
 Mottling @ 24"
 Roots to 25"
 No groundwater
 No ledge

TH 33
 0-5" Topsoil
 5-24" Orange Brown Very Fine Sandy Loam-Silty
 24-89" Compact Glacial Till
 Mottling @ 24"
 Roots to 25"
 No groundwater
 No ledge

TH 35
 0-7" Topsoil
 7-24" Orange Brown Fine Sandy Loam
 24-92" Compact Glacial Till
 Mottling @ 24"
 Roots to 24"
 No groundwater
 No ledge

TH 36
 0-8" Topsoil
 8-29" Orange Brown Fine Sandy Loam-Silty
 21-76" Compact Glacial Till
 Mottling @ 21"
 Roots to 24"
 No groundwater
 No ledge

TH 32
 0-6" Topsoil
 6-30" Orange Brown Fine Sandy Loam
 30-64" Compact Glacial Till
 Mottling @ 30"
 Roots to 30"
 No groundwater
 No ledge

TH 32
 0-6" Topsoil
 6-30" Orange Brown Fine Sandy Loam
 30-64" Compact Glacial Till
 Mottling @ 30"
 Roots to 30"
 No groundwater
 No ledge

TH 32
 0-6" Topsoil
 6-30" Orange Brown Fine Sandy Loam
 30-64" Compact Glacial Till
 Mottling @ 30"
 Roots to 30"
 No groundwater
 No ledge

Percolation Tests
 Observed By: Gardner & Peterson Associates LLC
 Heavy Rain on September 30, 2015

Parc #1
 Presoaked 9/21/15 at 2:47
 Presoaked 9/22/15 at 12:40
 Depth=20"
 Mark Down 0"
 TIME DEPTH
 1:21 8"
 1:31 11 3/4"
 1:41 14 3/4"
 1:51 15 3/4"
 2:01 16 3/4"
 2:11 17 3/4"
 2:16 18 3/4"
 2:21 Dry
 Rate: 10 min/in

Parc #2
 Presoaked 9/21/15 at 2:33
 Presoaked 9/22/15 at 10:49
 Depth=20"
 Mark Down 0"
 TIME DEPTH
 1:18 8"
 1:27 13"
 1:37 16 1/2"
 1:47 19 1/2"
 Dry
 Rate: 1-5 min/in

Parc #3
 Presoaked 9/21/15 at 3:07
 Presoaked 9/22/15 at 10:46
 Depth=20"
 Mark Down 0"
 TIME DEPTH
 1:15 8"
 1:25 11 1/2"
 1:35 13 1/2"
 1:45 15 1/2"
 1:55 16 3/4"
 2:05 18"
 Dry
 Rate: 5.1-10 min/in

Parc #4
 Presoaked 9/21/15 at 3:30
 Presoaked 9/22/15 at 10:43
 Depth=18"
 Mark Down 2"
 TIME DEPTH
 1:55 3 1/2"
 12:05 6"
 12:15 7 1/2"
 12:25 9"
 12:35 10"
 12:45 11"
 12:55 12"
 1:05 13"
 Rate: 10 min/in

Parc #5
 Presoaked 9/21/15 at 3:45
 Presoaked 9/22/15 at 10:40
 Depth=18"
 Mark Down 1 1/2"
 TIME DEPTH
 11:40 4 1/2"
 11:50 8 1/2"
 12:00 10 1/2"
 12:10 13"
 12:20 14"
 Dry
 Rate: 5.1-10 min/in

Parc #6A
 Presoaked 10/01/15 at 8:48
 Depth=18"
 Mark Down 0"
 TIME DEPTH
 10:50 6"
 11:00 9 1/2"
 11:10 11 1/2"
 11:20 13 1/2"
 11:30 14 1/2"
 11:40 15 3/4"
 11:50 DRY
 Rate: 5.1-10 min/in

Parc #6B
 Presoaked 10/01/15 at 8:30
 Depth=17"
 Mark Down 0"
 TIME DEPTH
 10:53 5"
 11:03 10"
 11:13 13"
 11:18 13 3/4"
 11:23 14 3/4"
 11:28 15 3/4"
 11:33 16 3/4"
 11:38 DRY
 Rate: 5.1-10 min/in

Parc #6C
 Presoaked 9/21/15 at 4:20
 Presoaked 9/22/15 at 10:24
 Depth=19"
 Mark Down 0"
 TIME DEPTH
 10:56 7 1/2"
 11:06 10"
 11:02 11 1/2"
 11:05 12 1/2"
 11:08 13 3/4"
 11:11 14 3/4"
 11:14 15 3/4"
 11:17 16 1/2"
 11:20 16 3/4"
 11:23 17 1/2"
 11:28 18"
 Dry
 Rate: 5.1-10 min/in

Parc #6D
 Presoaked 10/01/15 at 8:30
 Depth=17"
 Mark Down 0"
 TIME DEPTH
 10:53 5"
 11:03 10"
 11:13 13"
 11:18 13 3/4"
 11:23 14 3/4"
 11:28 15 3/4"
 11:33 16 3/4"
 11:38 DRY
 Rate: 5.1-10 min/in

Soil Testing Results
 Observed By: Eastern Highlands Health District
 Others Present: Gardner & Peterson Associates, LLC and Highland Soils
 Date Tested: September 3, 2015

TH 14
 0-4" Topsoil
 4-24" Orange Brown Fine Sandy Loam
 24-90" Compact Glacial Till
 Mottling @ 24"
 Roots to 24"
 No groundwater
 No ledge

TH 15
 0-5" Topsoil
 5-18" Orange Brown Fine Sandy Loam
 18-78" Compact Glacial Till
 Mottling @ 24"
 Roots to 24"
 No groundwater
 No ledge

TH 16
 0-4" Topsoil
 4-22" Orange Brown Fine Sandy Loam
 22-80" Compact Glacial Till
 Mottling @ 22"
 Roots to 22"
 No groundwater
 No ledge

TH 18
 0-5" Topsoil
 5-26" Orange Brown Fine Sandy Loam
 26-80" Compact Glacial Till
 Mottling @ 26"
 Roots to 26"
 No groundwater
 No ledge

TH 19
 0-5" Topsoil
 5-26" Orange Brown Fine Sandy Loam
 26-80" Compact Glacial Till
 Mottling @ 26"
 Roots to 26"
 No groundwater
 No ledge

TH 20
 0-5" Topsoil
 5-30" Orange Brown Fine Sandy Loam
 30-84" Compact Glacial Till
 Mottling @ 30"
 Roots to 30"
 No groundwater
 No ledge

TH 21
 0-5" Topsoil
 5-31" Orange Brown Fine Sandy Loam
 31-84" Compact Glacial Till
 Mottling @ 31"
 Roots to 31"
 No groundwater
 No ledge

TH 22
 0-6" Topsoil
 6-30" Orange Brown Fine Sandy Loam
 30-43" Compact Glacial Till
 Mottling @ 20"
 Roots to 20"
 No groundwater
 No ledge

Soil Testing Results
 Observed By: Eastern Highlands Health District
 Others Present: Gardner & Peterson Associates, LLC and Highland Soils
 Date Tested: September 3, 2015

TH 24A
 0-5" Topsoil
 5-24" Orange Brown Fine Sandy Loam
 24-80" Compact Glacial Till
 Mottling @ 24"
 Roots to 24"
 No groundwater
 No ledge

TH 24B
 0-4" Topsoil
 4-24" Orange Brown Fine Sandy Loam
 24-89" Compact Glacial Till
 Mottling @ 24"
 Roots to 24"
 No groundwater
 No ledge

TH 25
 0-7" Topsoil
 7-25" Orange Brown Fine Sandy Loam
 25-90" Compact Glacial Till
 Mottling @ 25"
 Roots to 25"
 No groundwater
 No ledge

TH 26
 0-5" Topsoil
 5-31" Orange Brown Fine Sandy Loam
 31-84" Compact Glacial Till
 Mottling @ 26"
 Roots to 26"
 No groundwater
 No ledge

TH 27
 0-5" Topsoil
 5-25" Orange Brown Fine Sandy Loam
 25-77" Compact Glacial Till
 Mottling @ 25"
 Roots to 25"
 No groundwater
 No ledge

TH 28
 Ledge @ 24"
 TH 29-Not dug

TH 30
 0-5" Topsoil
 5-30" Orange Brown Fine Sandy Loam
 30-84" Compact Glacial Till
 Mottling @ 30"
 Roots to 30"
 No groundwater
 No ledge

TH 31
 0-7" Topsoil
 7-26" Orange Brown Fine Sandy Loam
 26-50" Compact Glacial Till
 Mottling @ 24"
 Roots to 24"
 No groundwater
 No ledge

Soil Testing Results
 Observed By: Eastern Highlands Health District
 Others Present: Gardner & Peterson Associates, LLC and Highland Soils
 Date Tested: September 3, 2015

TH 22N
 0-7" Topsoil
 7-30" Orange Brown Fine Sandy Loam
 30-93" Compact Glacial Till
 Mottling @ 35"
 Roots to 29"
 Restrictive @ 30"
 No groundwater
 No ledge

TH 22S
 0-5" Topsoil
 5-24" Orange Brown Fine Sandy Loam
 24-80" Compact Glacial Till
 Mottling @ 24"
 Roots to 25"
 No groundwater
 No ledge

TH 33
 0-5" Topsoil
 5-24" Orange Brown Very Fine Sandy Loam-Silty
 24-89" Compact Glacial Till
 Mottling @ 24"
 Roots to 25"
 No groundwater
 No ledge

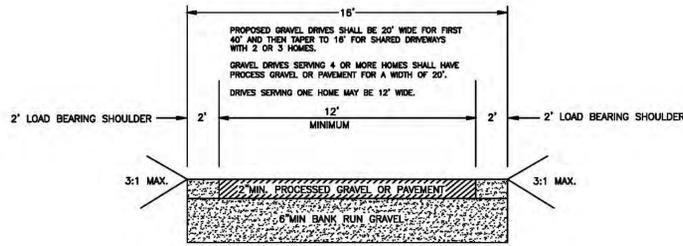
TH 35
 0-7" Topsoil
 7-24" Orange Brown Fine Sandy Loam
 24-92" Compact Glacial Till
 Mottling @ 24"
 Roots to 24"
 No groundwater
 No ledge

TH 36
 0-8" Topsoil
 8-29" Orange Brown Fine Sandy Loam-Silty
 21-76" Compact Glacial Till
 Mottling @ 21"
 Roots to 24"
 No groundwater
 No ledge

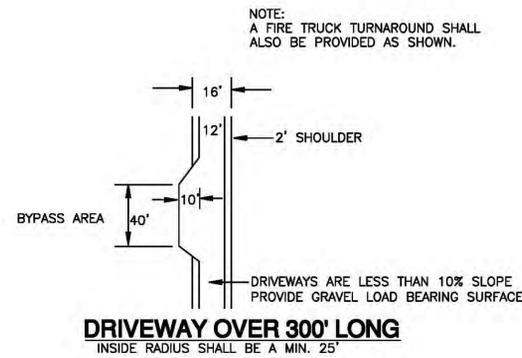
TH 32
 0-6" Topsoil
 6-30" Orange Brown Fine Sandy Loam
 30-64" Compact Glacial Till
 Mottling @ 30"
 Roots to 30"
 No groundwater
 No ledge

TH 32
 0-6" Topsoil
 6-30" Orange Brown Fine Sandy Loam
 30-64" Compact Glacial Till
 Mottling @ 30"
 Roots to 30"
 No groundwater
 No ledge

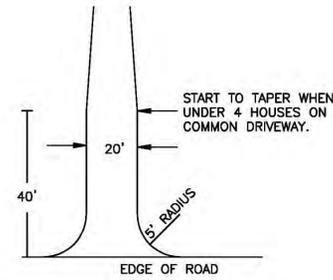
TH 32
 0-6" Topsoil
 6-30" Orange Brown Fine Sandy Loam
 30-64" Compact Glacial Till
 Mottling @ 30"



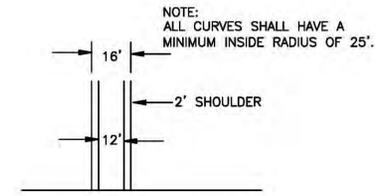
TYPICAL SHARED DRIVEWAY SECTION



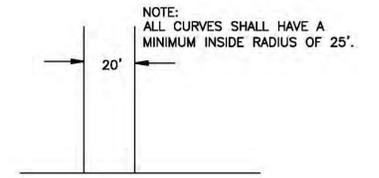
DRIVEWAY OVER 300' LONG



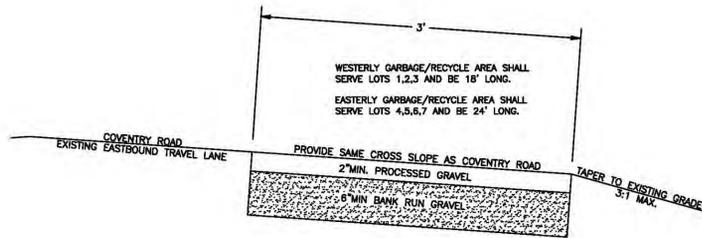
SHARED DRIVEWAY INTERSECTS COVENTRY ROAD



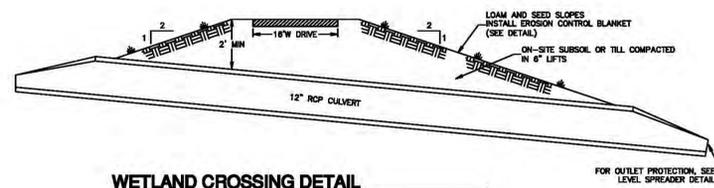
SHARED DRIVEWAY DETAIL WHEN SERVING 2 or 3 HOUSES



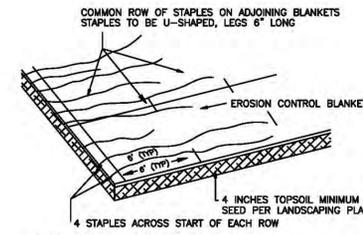
SHARED DRIVEWAY DETAIL WHEN SERVING 4 or MORE HOUSES



TYPICAL GARBAGE/RECYCLE AREA SECTION

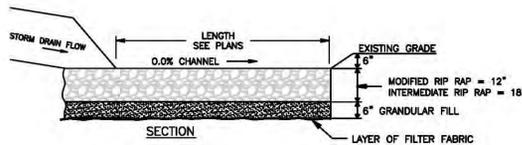


WETLAND CROSSING DETAIL



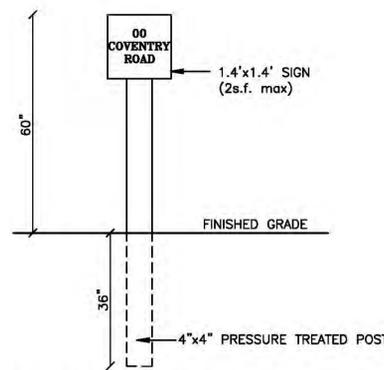
NOTES:
 1. APPLY ON SLOPES 2:1 OR GREATER, BUT LESS THAN 3:1.
 2. EROSION CONTROL BLANKET TO BE NORTH AMERICAN GREEN S 150 DOUBLE NET STRAW BLANKET OR EQUAL.
 3. INSTALL ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

EROSION CONTROL BLANKET

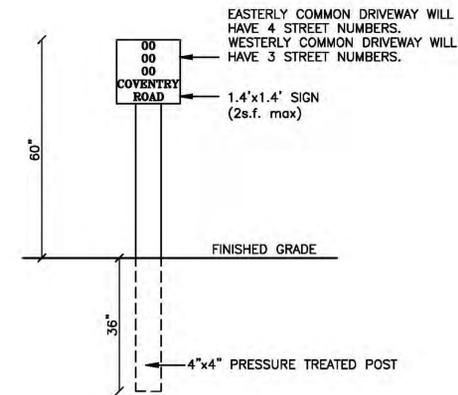


NOTES:
 1. WHERE POSSIBLE LEVEL SPREADER TO BE CONSTRUCTED ON UNDISTURBED SOIL.
 2. SHAPE THE ENTRANCE TO THE SPREADER IN SUCH A MANNER AS TO INSURE THAT RUNOFF ENTERS DIRECTLY ONTO THE 0.0% CHANNEL.
 3. LIP TO BE CONSTRUCTED LEVEL AT 0.0% GRADE TO INSURE UNIFORM SPREADING OF STORM WATER RUNOFF.

LEVEL SPREADER DETAIL



STREET NUMBER SIGN AT INTERSECTION OF COMMON & SINGLE FAMILY DRIVEWAY



STREET NUMBER SIGN AT COVENTRY ROAD

APPROVED BY THE MANSFIELD PLANNING & ZONING COMMISSION

CHAIRMAN _____ DATE _____

APPROVED BY THE DIRECTOR OF HEALTH

DIRECTOR _____ DATE _____

APPROVED BY THE DIRECTOR OF PUBLIC WORKS

DIRECTOR _____ DATE _____

CONSTRUCTION DETAILS				
MOUNTAIN VIEW ACRES				
#522 BROWNS ROAD				
& COVENTRY ROAD				
MANSFIELD, CONNECTICUT				
GARDNER & PETERSON ASSOCIATES, LLC				
178 HARTFORD TURNPIKE TOLLAND, CONNECTICUT				
PROFESSIONAL ENGINEERS		LAND SURVEYORS		
REVISIONS 01-27-2016	SCALE N.T.S.	DATE 12-15-2015	SHEET NO. 7 OF 7	MAP NO. 105905

MOUNTAIN VIEW ACRES

**522 Browns Road &
Coventry Road
Mansfield, Connecticut**

STORMWATER MANAGEMENT REPORT

July 1, 2016

PREPARED FOR: Willard J. Stearns & Sons, Inc.
50 Stearns Road
Mansfield, Connecticut

PREPARED BY: Gardner & Peterson Associates, LLC
178 Hartford Turnpike
Tolland, CT 06084

Mountain View Acres

Summary:

This project proposes to subdivide approximately 36 acres of land located in the RAR-90 Zone on the south side of Coventry Road and west side of Browns Road into nine building lots. The lots will be served by subsurface sewage disposal systems and private wells while protecting over 7.5 acres of land with conservation easements and dedicating nearly 2.5 acres to the Town of Mansfield.

Existing Conditions:

The site contains one house that fronts on Browns Road which will be located on Lot #8 of the subdivision. The site is mainly wooded, though the land along Coventry Road was logged within the past ten years. The site primarily drains from Coventry Road to the south where surface flow is collected in a wetland which drains from west to east and under Browns Road through an 18" culvert which is at the bottom of the watershed analyzed in this report. The soils in the upland areas are primarily a Woodbridge Fine Sandy Loam per the Natural Resources Conservation Service, Web Soil Survey.

Based on the Flood Insurance Rate Map (FIRM) the site is located in Flood Zone C, area of minimal flooding. Test pits were excavated on site with the Eastern Highlands Health Department to determine septic suitability. Suitable areas were found on all lots and restrictive soil layers average approximately 24" below grade.

In addition, the site is not located in an aquifer area based on "Surfaces and Groundwater Resources" map by plan of conservation and development, April 2006 and the parcel is not located within an archaeological area based on "Archaeological Assessment" map by plan of conservation and development April 2006.

Stormwater Management:

Based on reviews by various town committees and town staff the applicant has been advised to provide an Open Space Subdivision to avoid a traditional layout and minimize the number of curb cuts. Common driveways are provided and stormwater runoff will sheet flow from disturbed areas in the direction it is headed today. This report includes the design of a cross culvert to convey the limited flow under the proposed driveway on Lot #1 and an overall site analysis to evaluate pre-development and post-development flows.

Hydraflow Hydrographs Extension was used to determine the peak flows mentioned above. The twin 12" culverts under the proposed driveway on Lot 1 has been designed to convey the flow from a 10 year storm. When comparing the existing and proposed flow rates from the overall site, there is no change in the watershed area or

travel time. Due to the proposed improvements, the runoff coefficient will increase which results in a small increase in the flow rate off site from 47.3cfs to 52.5 cfs for a 25 year storm frequency. The runoff will shed through an undisturbed, vegetated buffer over relatively flat slopes before reaching the wetland corridor. The wetland corridor consists of a flat area that will provide flood storage and potential reduction the rate of runoff and a defined channel for water conveyance at the easterly end of the wetland.

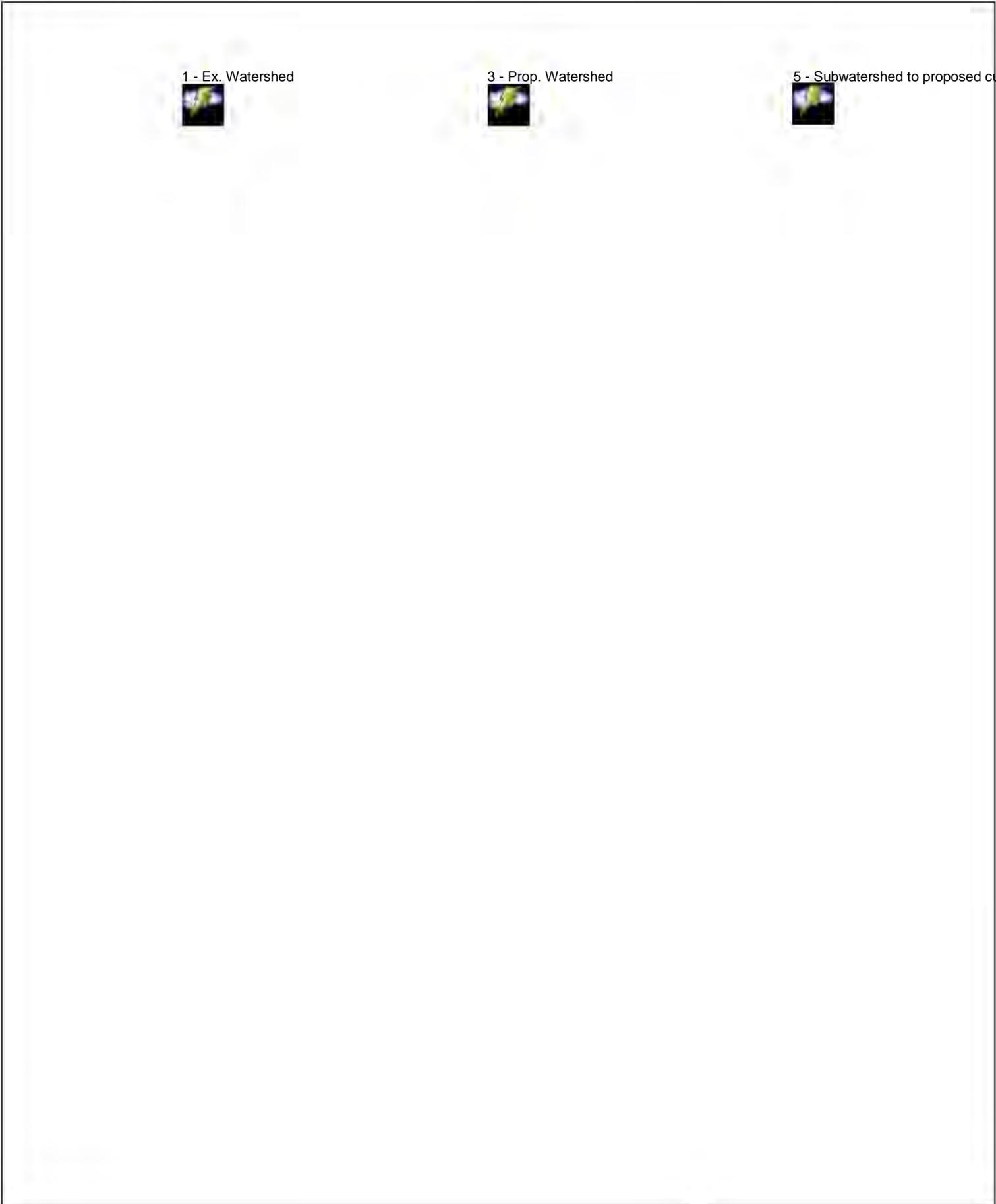
Erosion & Sediment Control:

The erosion & sediment control plan for this site consists of the use of soil stockpile areas, silt fence and/or hay bales down gradient of all disturbed areas and seeding schedules. An undisturbed vegetated area down gradient of the proposed developed areas will also remain. An anti-tracking pad will be installed at both entrances to the site though it may be unnecessary due the existing and proposed gravel surfaces.

Mark A. Peterson, P.E. 20905

Watershed Model Schematic

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066



Hydrograph Return Period Recap

Hydroflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Hyd. No.	Hydrograph type (origin)	Inflow Hyd(s)	Peak Outflow (cfs)								Hydrograph description
			1-Yr	2-Yr	3-Yr	5-Yr	10-Yr	25-Yr	50-Yr	100-Yr	
1	Rational	-----	-----	27.10	-----	-----	40.12	47.28	-----	-----	Ex. Watershed
3	Rational	-----	-----	30.11	-----	-----	44.58	52.53	-----	-----	Prop. Watershed
5	Rational	-----	-----	4.063	-----	-----	5.970	7.035	-----	-----	Subwatershed to proposed culvert

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph description
1	Rational	27.10	1	34	55,280	-----	-----	-----	Ex. Watershed
3	Rational	30.11	1	34	61,422	-----	-----	-----	Prop. Watershed
5	Rational	4.063	1	28	6,825	-----	-----	-----	Subwatershed to proposed culvert
Flow off Site.gpw					Return Period: 2 Year			Friday, Aug 26, 2016	

Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Friday, Aug 26, 2016

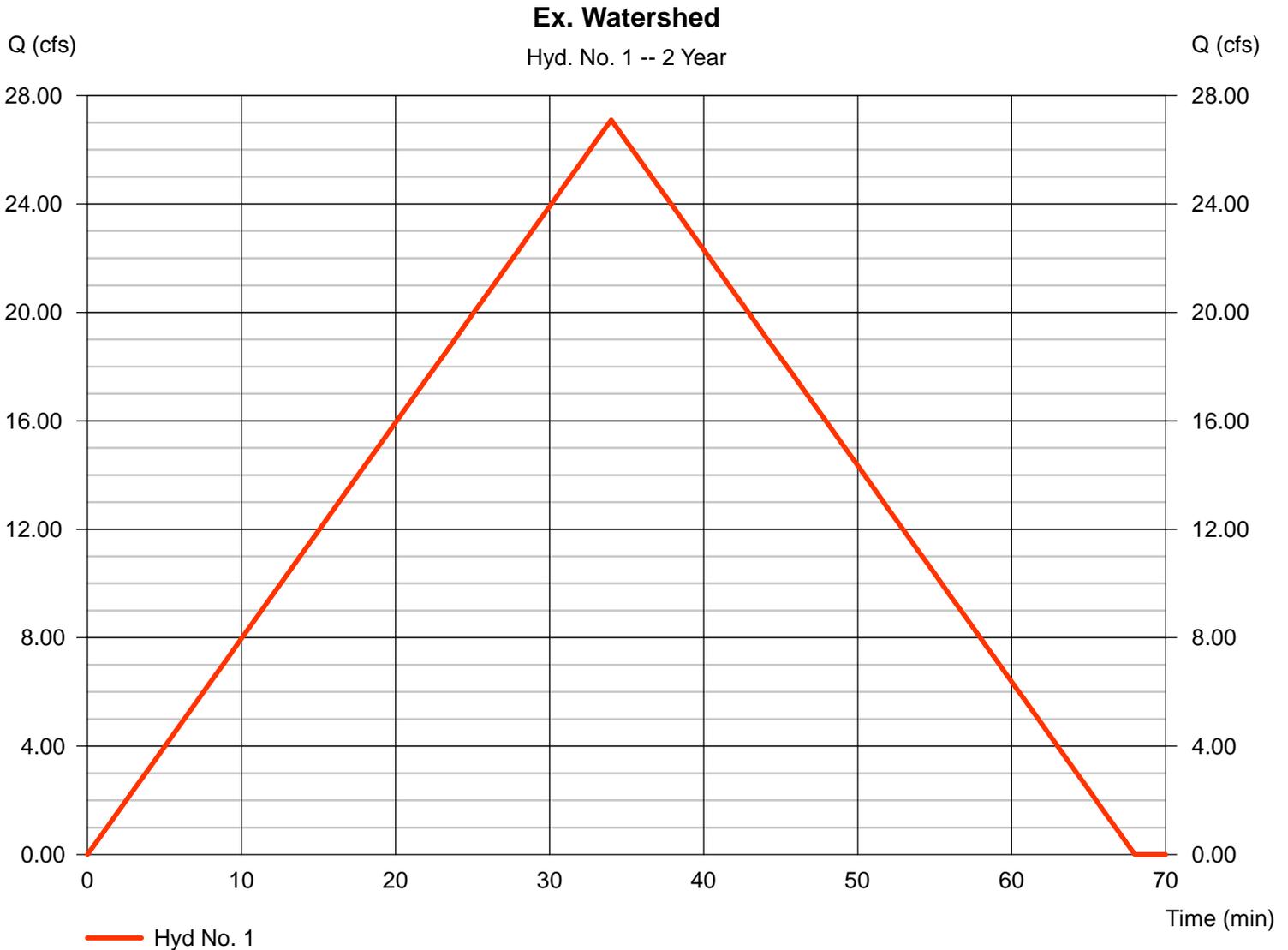
Hyd. No. 1

Ex. Watershed

Hydrograph type = Rational
 Storm frequency = 2 yrs
 Time interval = 1 min
 Drainage area = 57.200 ac
 Intensity = 1.755 in/hr
 IDF Curve = CT-DOT.IDF

Peak discharge = 27.10 cfs
 Time to peak = 34 min
 Hyd. volume = 55,280 cuft
 Runoff coeff. = 0.27*
 Tc by User = 34.00 min
 Asc/Rec limb fact = 1/1

* Composite (Area/C) = [(0.420 x 0.90) + (0.920 x 0.85) + (2.200 x 0.40) + (53.660 x 0.25)] / 57.200



Hydrograph Report

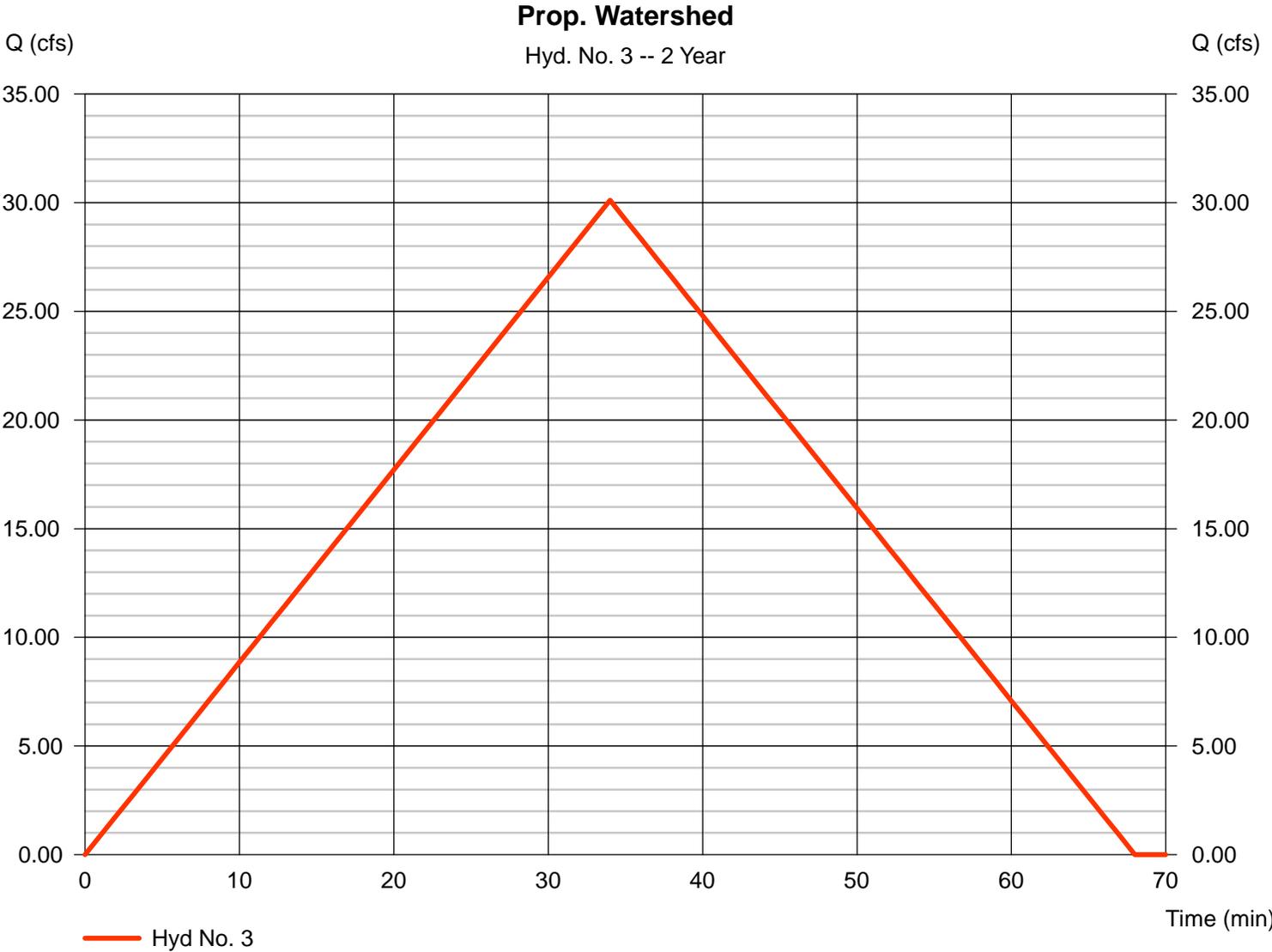
Hyd. No. 3

Prop. Watershed

Hydrograph type = Rational
Storm frequency = 2 yrs
Time interval = 1 min
Drainage area = 57.200 ac
Intensity = 1.755 in/hr
IDF Curve = CT-DOT.IDF

Peak discharge = 30.11 cfs
Time to peak = 34 min
Hyd. volume = 61,422 cuft
Runoff coeff. = 0.3*
Tc by User = 34.00 min
Asc/Rec limb fact = 1/1

* Composite (Area/C) = [(0.850 x 0.90) + (1.880 x 0.85) + (6.330 x 0.40) + (48.140 x 0.25)] / 57.200



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph description	
1	Rational	40.12	1	34	81,844	-----	-----	-----	Ex. Watershed	
3	Rational	44.58	1	34	90,938	-----	-----	-----	Prop. Watershed	
5	Rational	5.970	1	28	10,030	-----	-----	-----	Subwatershed to proposed culvert	
Flow off Site.gpw					Return Period: 10 Year			Friday, Aug 26, 2016		

Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Friday, Aug 26, 2016

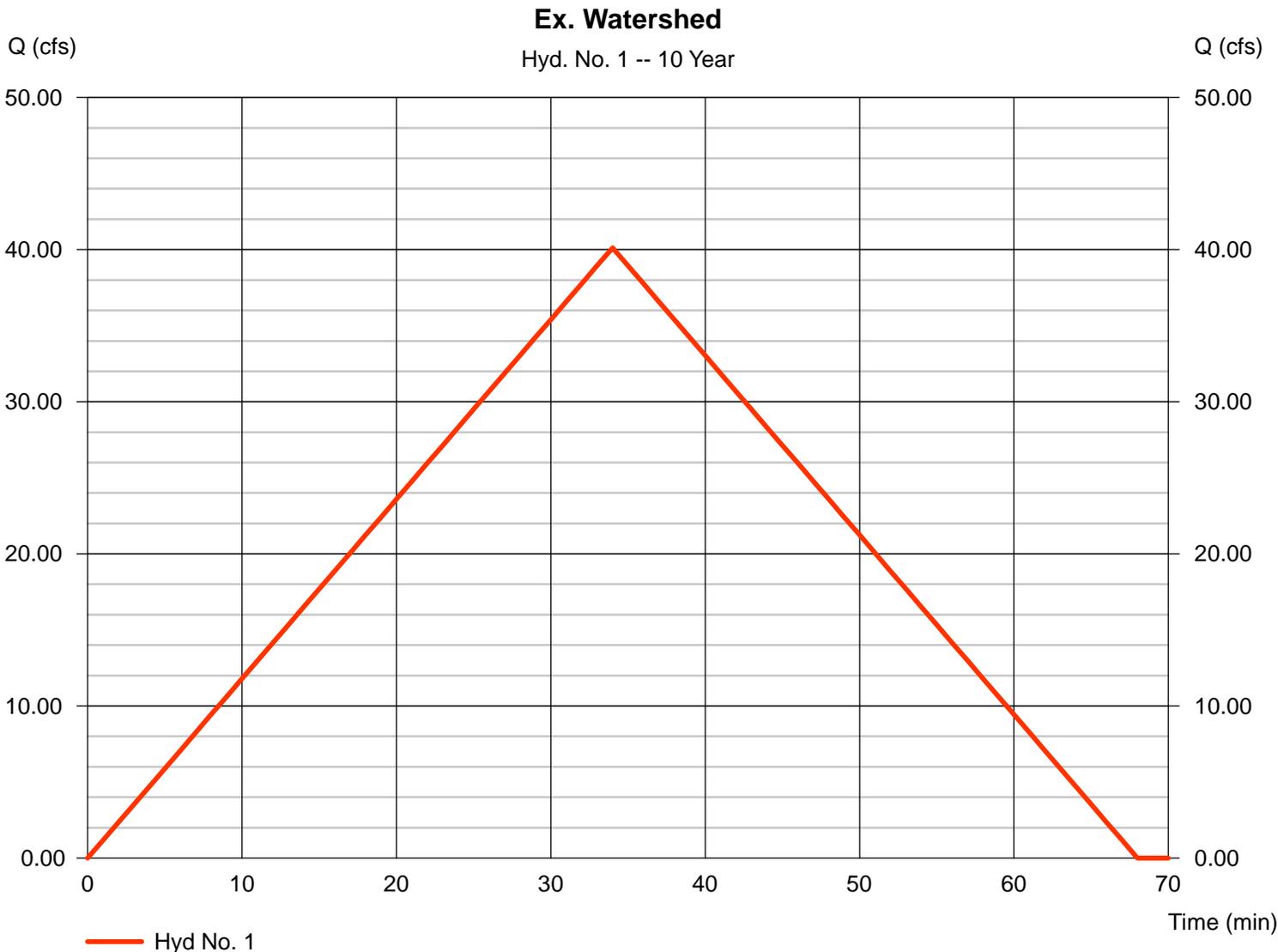
Hyd. No. 1

Ex. Watershed

Hydrograph type = Rational
 Storm frequency = 10 yrs
 Time interval = 1 min
 Drainage area = 57.200 ac
 Intensity = 2.598 in/hr
 IDF Curve = CT-DOT.IDF

Peak discharge = 40.12 cfs
 Time to peak = 34 min
 Hyd. volume = 81,844 cuft
 Runoff coeff. = 0.27*
 Tc by User = 34.00 min
 Asc/Rec limb fact = 1/1

* Composite (Area/C) = [(0.420 x 0.90) + (0.920 x 0.85) + (2.200 x 0.40) + (53.660 x 0.25)] / 57.200



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Friday, Aug 26, 2016

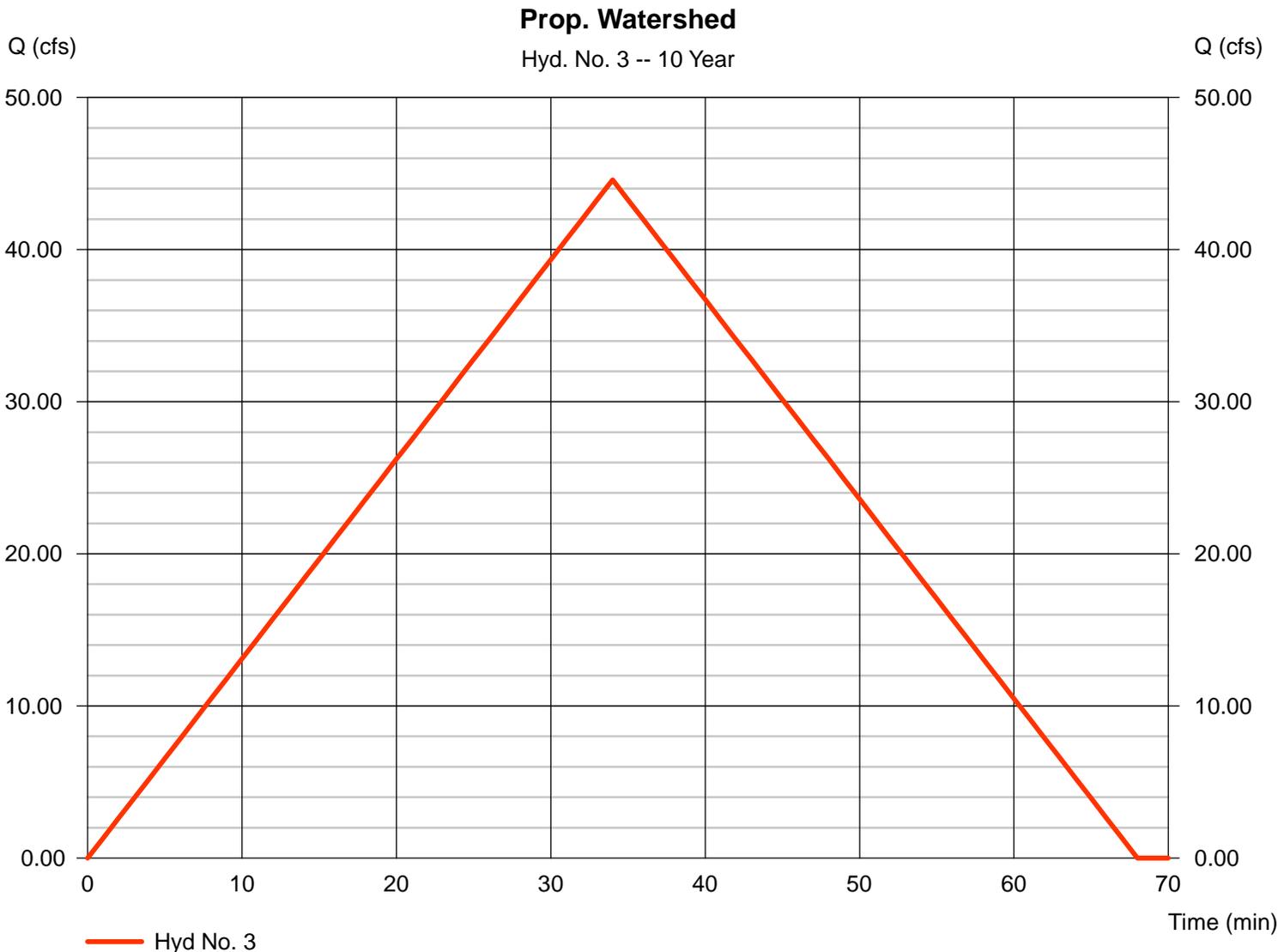
Hyd. No. 3

Prop. Watershed

Hydrograph type = Rational
Storm frequency = 10 yrs
Time interval = 1 min
Drainage area = 57.200 ac
Intensity = 2.598 in/hr
IDF Curve = CT-DOT.IDF

Peak discharge = 44.58 cfs
Time to peak = 34 min
Hyd. volume = 90,938 cuft
Runoff coeff. = 0.3*
Tc by User = 34.00 min
Asc/Rec limb fact = 1/1

* Composite (Area/C) = [(0.850 x 0.90) + (1.880 x 0.85) + (6.330 x 0.40) + (48.140 x 0.25)] / 57.200



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph description
1	Rational	47.28	1	34	96,445	-----	-----	-----	Ex. Watershed
3	Rational	52.53	1	34	107,161	-----	-----	-----	Prop. Watershed
5	Rational	7.035	1	28	11,818	-----	-----	-----	Subwatershed to proposed culvert
Flow off Site.gpw					Return Period: 25 Year			Friday, Aug 26, 2016	

Hydrograph Report

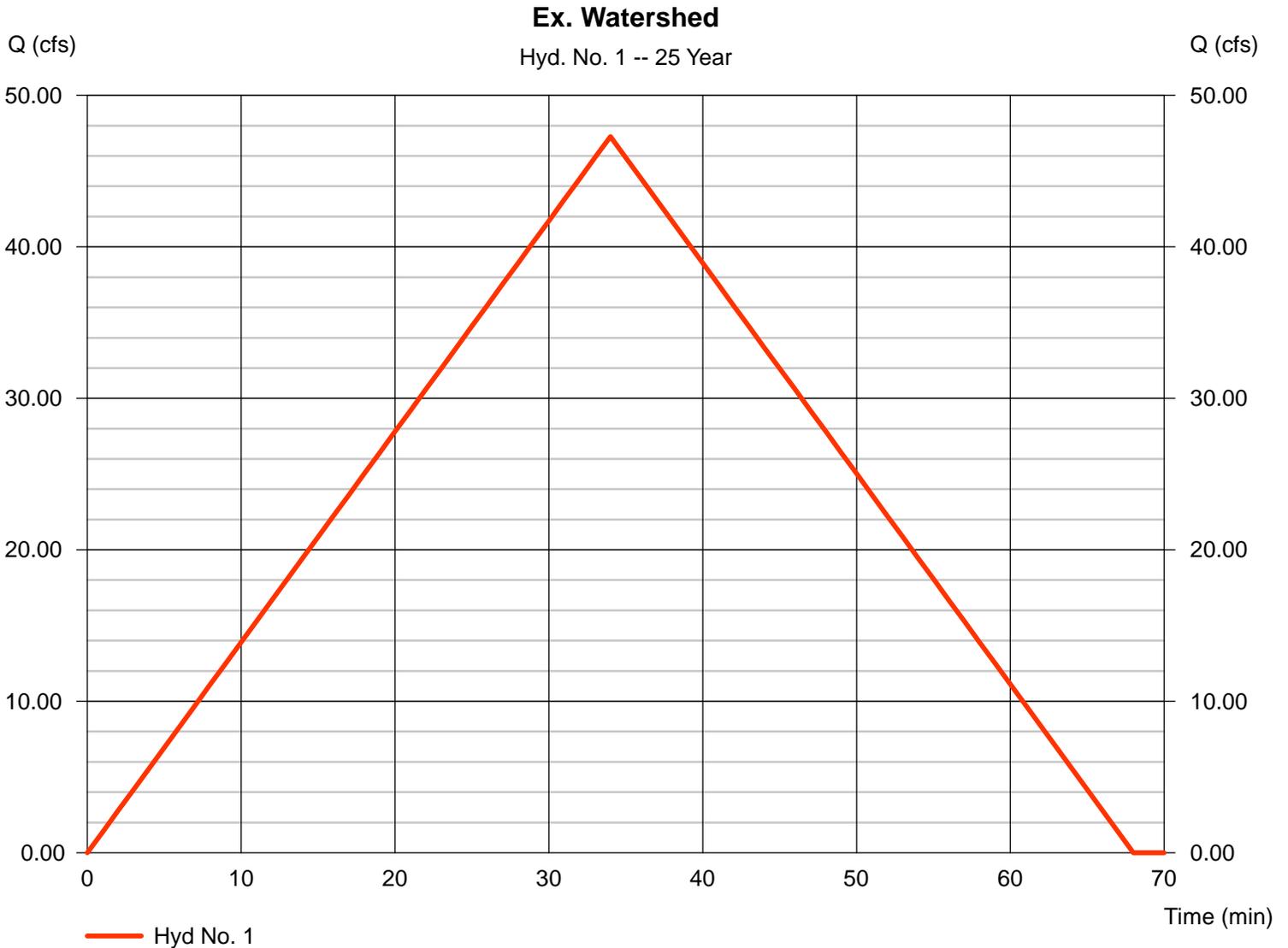
Hyd. No. 1

Ex. Watershed

Hydrograph type = Rational
Storm frequency = 25 yrs
Time interval = 1 min
Drainage area = 57.200 ac
Intensity = 3.061 in/hr
IDF Curve = CT-DOT.IDF

Peak discharge = 47.28 cfs
Time to peak = 34 min
Hyd. volume = 96,445 cuft
Runoff coeff. = 0.27*
Tc by User = 34.00 min
Asc/Rec limb fact = 1/1

* Composite (Area/C) = [(0.420 x 0.90) + (0.920 x 0.85) + (2.200 x 0.40) + (53.660 x 0.25)] / 57.200



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Friday, Aug 26, 2016

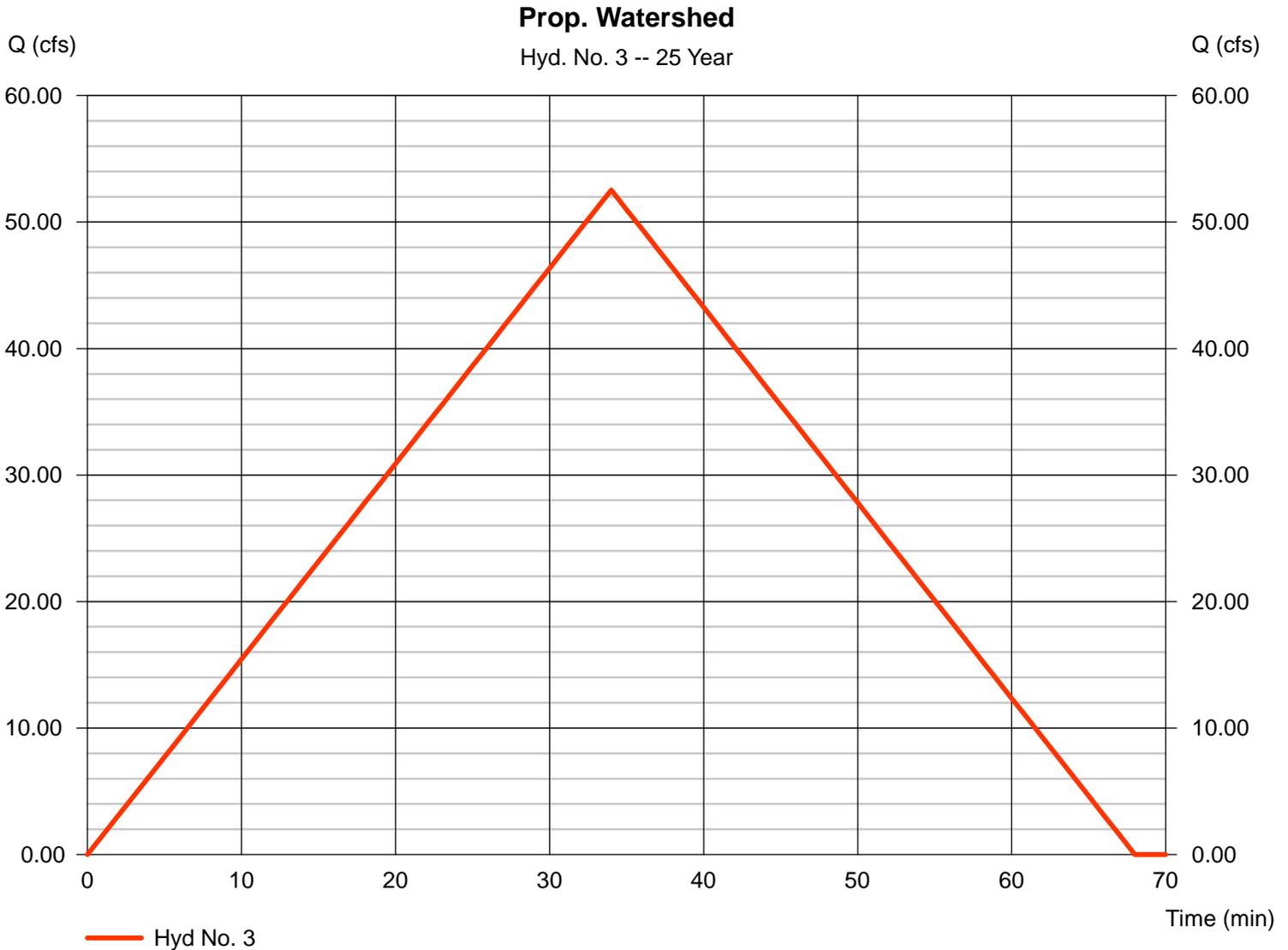
Hyd. No. 3

Prop. Watershed

Hydrograph type = Rational
 Storm frequency = 25 yrs
 Time interval = 1 min
 Drainage area = 57.200 ac
 Intensity = 3.061 in/hr
 IDF Curve = CT-DOT.IDF

Peak discharge = 52.53 cfs
 Time to peak = 34 min
 Hyd. volume = 107,161 cuft
 Runoff coeff. = 0.3*
 Tc by User = 34.00 min
 Asc/Rec limb fact = 1/1

* Composite (Area/C) = [(0.850 x 0.90) + (1.880 x 0.85) + (6.330 x 0.40) + (48.140 x 0.25)] / 57.200



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Friday, Aug 26, 2016

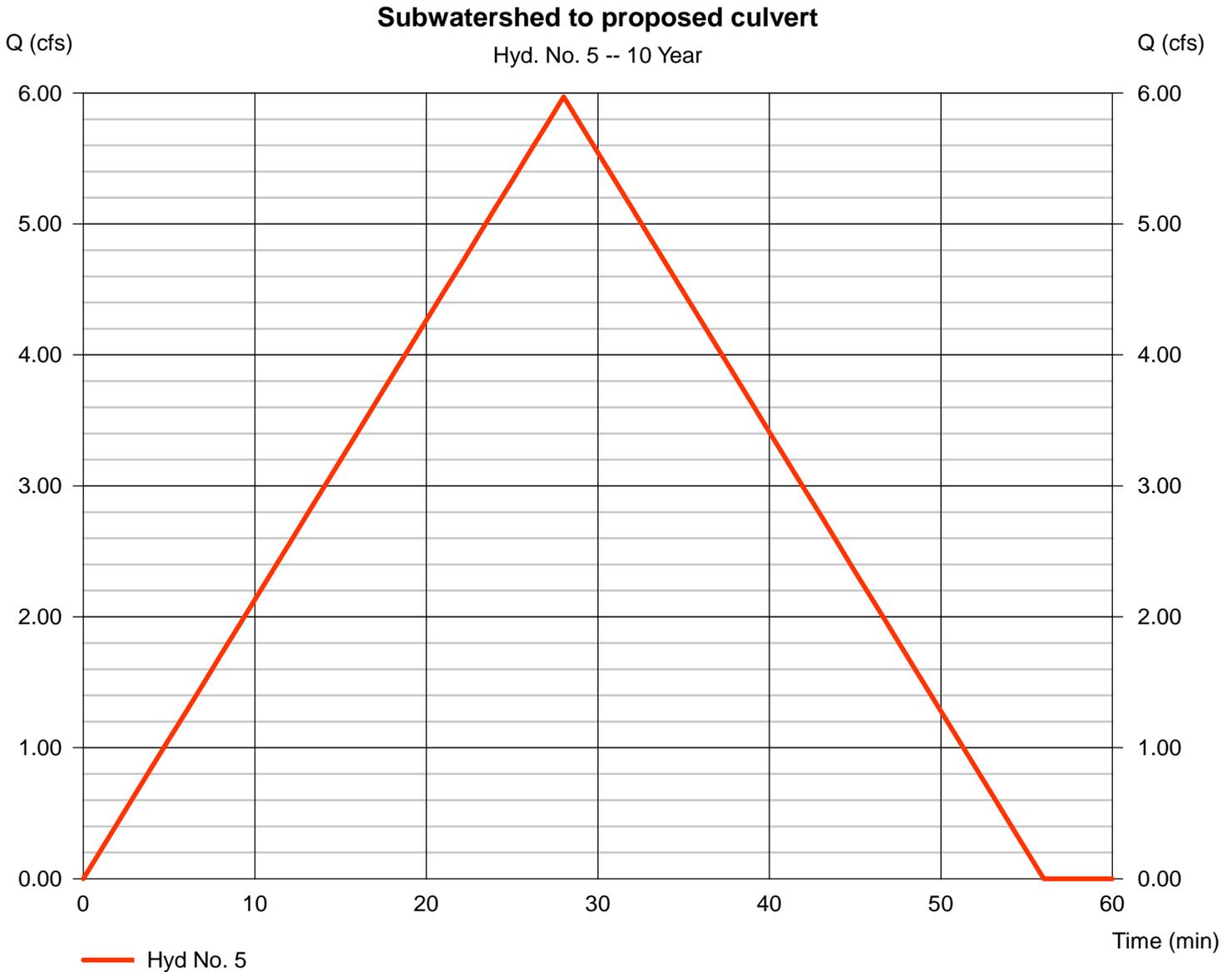
Hyd. No. 5

Subwatershed to proposed culvert

Hydrograph type = Rational
 Storm frequency = 10 yrs
 Time interval = 1 min
 Drainage area = 5.120 ac
 Intensity = 2.915 in/hr
 IDF Curve = CT-DOT.IDF

Peak discharge = 5.970 cfs
 Time to peak = 28 min
 Hyd. volume = 10,030 cuft
 Runoff coeff. = 0.4*
 Tc by TR55 = 28.00 min
 Asc/Rec limb fact = 1/1

* Composite (Area/C) = [(0.300 x 0.75) + (0.060 x 0.90) + (1.000 x 0.24) + (3.760 x 0.40)] / 5.120



TR55 Tc Worksheet

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Hyd. No. 5

Subwatershed to proposed culvert

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>
Sheet Flow				
Manning's n-value	= 0.400	0.011	0.011	
Flow length (ft)	= 100.0	0.0	0.0	
Two-year 24-hr precip. (in)	= 3.20	0.00	0.00	
Land slope (%)	= 3.00	0.00	0.00	
Travel Time (min)	= 18.26	+ 0.00	+ 0.00	= 18.26
Shallow Concentrated Flow				
Flow length (ft)	= 460.00	360.00	0.00	
Watercourse slope (%)	= 1.70	0.40	0.00	
Surface description	= Unpaved	Unpaved	Paved	
Average velocity (ft/s)	= 2.10	1.02	0.00	
Travel Time (min)	= 3.64	+ 5.88	+ 0.00	= 9.52
Channel Flow				
X sectional flow area (sqft)	= 0.00	0.00	0.00	
Wetted perimeter (ft)	= 0.00	0.00	0.00	
Channel slope (%)	= 0.00	0.00	0.00	
Manning's n-value	= 0.015	0.015	0.015	
Velocity (ft/s)	= 0.00	0.00	0.00	
Flow length (ft)	= 0.0	0.0	0.0	
Travel Time (min)	= 0.00	+ 0.00	+ 0.00	= 0.00
Total Travel Time, Tc				28.00 min

Culvert Report

Cir Culvert

Invert Elev Dn (ft) = 500.50
Pipe Length (ft) = 30.00
Slope (%) = 0.33
Invert Elev Up (ft) = 500.60
Rise (in) = 12.0
Shape = Cir
Span (in) = 12.0
No. Barrels = 2
n-Value = 0.013
Inlet Edge = Projecting
Coeff. K,M,c,Y,k = 0.0045, 2, 0.0317, 0.69, 0.5

Embankment

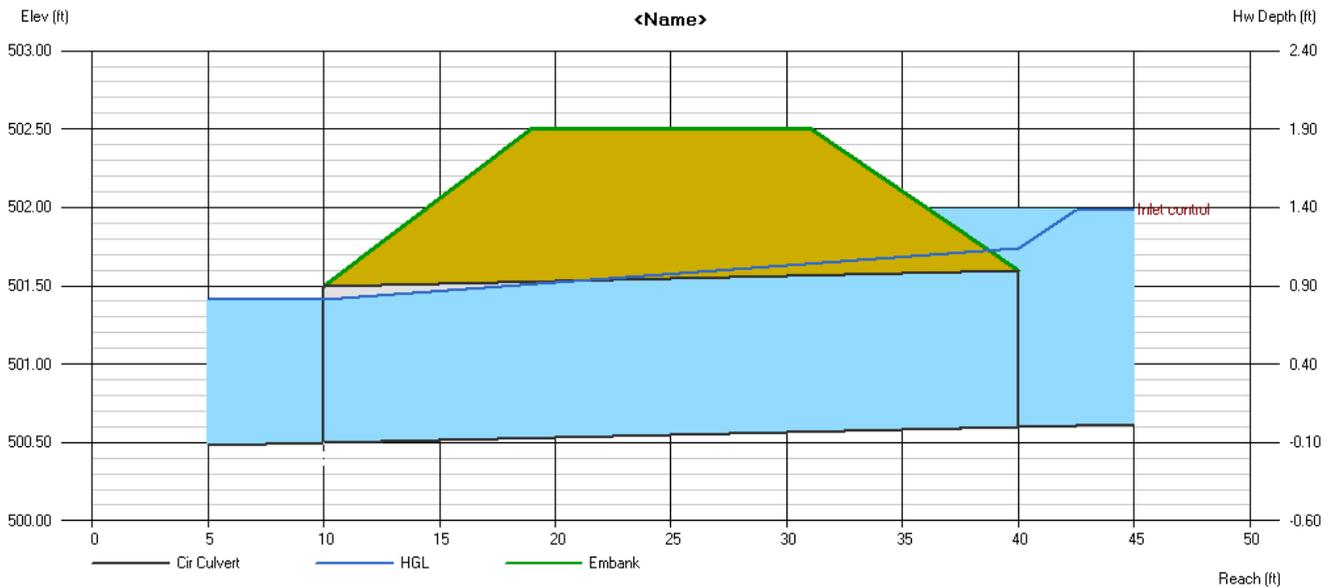
Top Elevation (ft) = 502.50
Top Width (ft) = 12.00
Crest Width (ft) = 110.00

Calculations

Qmin (cfs) = 7.36
Qmax (cfs) = 7.36
Tailwater Elev (ft) = $(dc+D)/2$

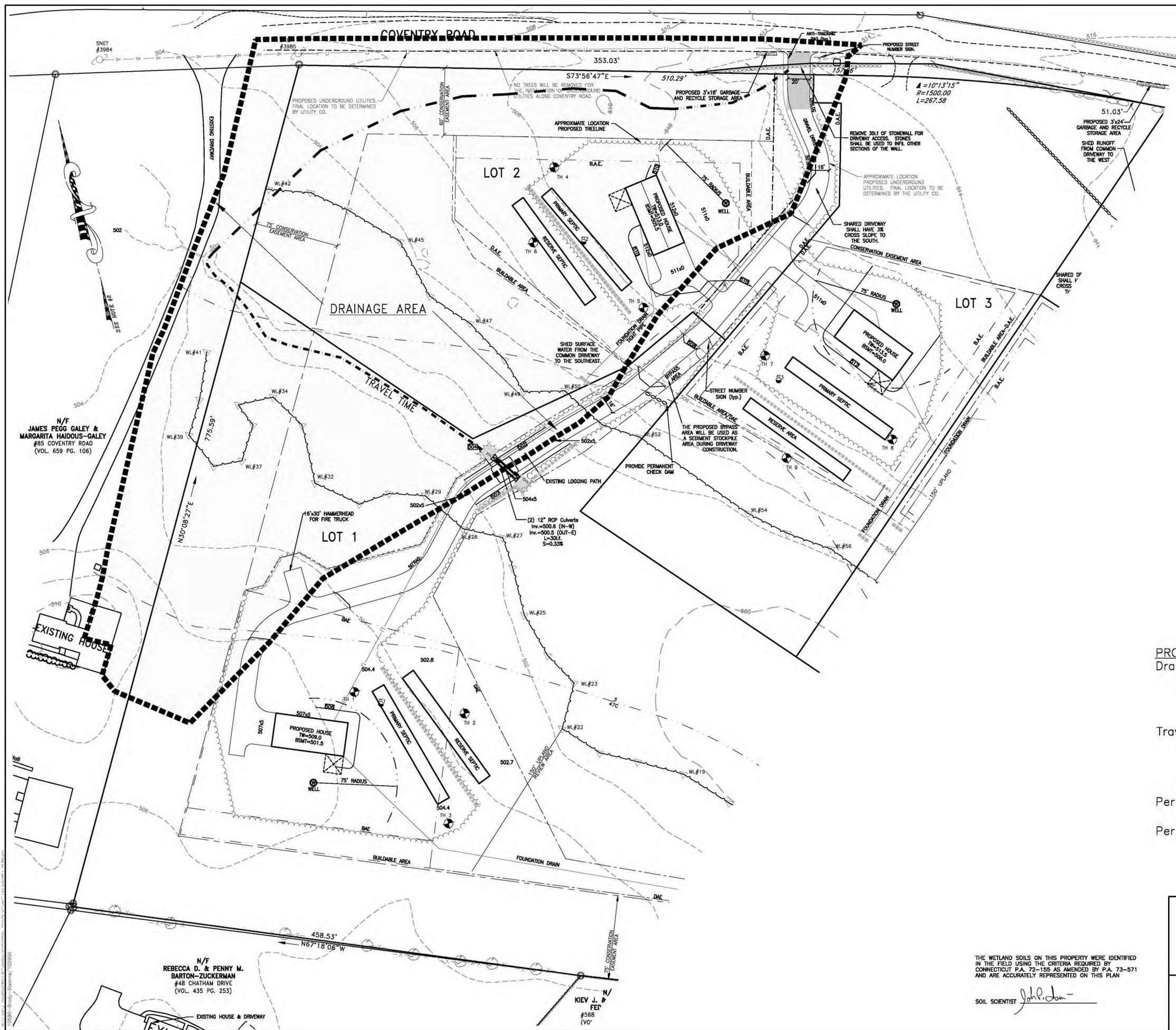
Highlighted

Qtotal (cfs) = 7.36
Qpipe (cfs) = 7.36
Qovertop (cfs) = 0.00
Veloc Dn (ft/s) = 4.90
Veloc Up (ft/s) = 4.69
HGL Dn (ft) = 501.41
HGL Up (ft) = 501.74
Hw Elev (ft) = 501.98
Hw/D (ft) = 1.38
Flow Regime = Inlet Control



SOIL TYPE LEGEND

NUMBER	SOIL TYPE
3	Ridgebury, Leicester and Whitman soils
46B	Woodbridge fine sandy loam
47C	Woodbridge fine sandy loam
73C	Charlton-Chatfield



N/F
 JAMES PEGG GALEY &
 MARGARITA HAIDOUS-GALEY
 #85 COVENTRY ROAD
 (VOL. 659 PG. 106)

N/F
 REBECCA D. & PENNY M.
 BARTON-ZUCKERMAN
 #48 CHATHAM DRIVE
 (VOL. 435 PG. 253)

N/
 KIEV J. J.
 #568
 (VO)

PROPOSED CULVERT CROSSING – LOT 1

Drainage Area:	5.12 acres
gravel	0.30 acres
impervious	0.06 acres
woods	3.76 acres
grass	1.00 acres
Travel Time:	
overland	100' @ 3%
shallow concentrated	460' @ 1.7%
shallow concentrated	360' @ 0.4%

Per Hydraflow Hydragrap Extension – Q₁₀ = 5.97cfs
 (see output)
 Per Hydraflow Express Extension: Provide (2) 12" culverts
 (see output)

THE WETLAND SOILS ON THIS PROPERTY WERE IDENTIFIED
 IN THE FIELD USING THE CRITERIA REQUIRED BY
 CONNECTICUT P.A. 72-155 AS AMENDED BY P.A. 73-571
 AND ARE ACCURATELY REPRESENTED ON THIS PLAN

SOIL SCIENTIST *John P. Jan*

CULVERT DRAINAGE AREA MAP

PREPARED FOR MOUNTAIN VIEW ESTATES #522 BROWNS ROAD & COVENTRY ROAD MANSFIELD, CONNECTICUT				
GARDNER & PETERSON ASSOCIATES, LLC 178 HARTFORD TURNPIKE TOLLAND, CONNECTICUT				
REVISIONS		PROFESSIONAL ENGINEERS LAND SURVEYORS		
BY	SCALE	DATE	SHEET NO.	MAP NO.
M.A.P.	1"=40'	6-30-2016	1 OF 1	10590D