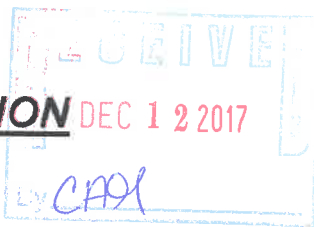




## MAJOR SUBDIVISION APPLICATION

(a total of four or more lots)

City of Rochester, New Hampshire



[office use only. Check # \_\_\_\_\_ Amount \$ \_\_\_\_\_ Date paid \_\_\_\_\_]

Date: 12/12/17 Is a conditional needed? Yes: \_\_\_\_\_ No: X Unclear: \_\_\_\_\_  
(If so, we encourage you to submit an application as soon as possible.)

### Property information

Tax map #: 224; Lot #'s): 310; Zoning district: Agricultural

Property address/location: 685 Salmon Falls Rd. Rochester, NH

Name of project (if applicable): N/A

Size of site: 72.8 acres; Overlay zoning district(s)? N/A

### Property owner

Name (include name of individual): J & L Terra Holdings Inc.

Mailing address: 1 Whitehorse Dr. Rye, NH 03870

Telephone #: 603-490-7635 Email: fourstarbuilder@comcast.net

### Applicant/developer (if different from property owner)

Name (include name of individual): Same as above

Mailing address: \_\_\_\_\_

Telephone #: \_\_\_\_\_ Email: \_\_\_\_\_

### Engineer/surveyor

Name (include name of individual): Beals Associates, PLLC.

Mailing address: 70 Portsmouth Ave. 3rd Fl. Stratham, NH 03885

Telephone #: 603-583-4860 Fax #: 603-583-4863

Email address: sfournier@bealsassociates.com Professional license #: NH-9900

### Proposed project

Number of proposed lots: 32 lots; estimated length of new roads: 2.867

Number of cubic yard of earth being removed from the site? 0

City water? yes X no \_\_\_\_\_; How far is city water from the site? At property frontage

City sewer? yes X no \_\_\_\_\_; How far is city sewer from the site? At property frontage

If city water, what are the est. total gal. per day? 14,850; Are there pertinent covenants? Y

Where will stormwater be discharged? After treatment to a large wetland system to the west and to the swale on Salmon Falls Rd.

(Continued Major Subdivision Plan application Tax Map: 224 Lot: 310 Zone Agricultural )

Wetlands: Is any fill proposed? N; area to be filled: \_\_\_\_\_; buffer impact? N

### Comments

Please feel free to add any comments, additional information, or requests for waivers here:

Requesting 1 waiver which is to article 50 for stormwater volumes above the two year storm to the west.

### Submission of application

This application must be signed by the property owner, applicant/developer (if different from property owner), and/or the agent.

*I (we) hereby submit this Subdivision application to the City of Rochester Planning Board pursuant to the City of Rochester Subdivision Regulations and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. As applicant/developer (if different from property owner)/as agent, I attest that I am duly authorized to act in this capacity.*

Signature of property owner: \_\_\_\_\_

Date: 12/11/17

Signature of applicant/developer: \_\_\_\_\_

Date: 12/11/17

Signature of agent: \_\_\_\_\_

Date: 12-11-17

### Authorization to enter subject property

*I hereby authorize members of the Rochester Planning Board, Zoning Board of Adjustment, Conservation Commission, Planning Department, and other pertinent City departments, boards and agencies to enter my property for the purpose of evaluating this application including performing any appropriate inspections during the application phase, review phase, post-approval phase, construction phase, and occupancy phase. This authorization applies specifically to those particular individuals legitimately involved in evaluating, reviewing, or inspecting this specific application/project. It is understood that these individuals must use all reasonable care, courtesy, and diligence when entering the property.*

Signature of property owner: \_\_\_\_\_

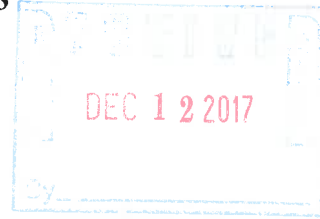
Date: 12/11/17

**BEALS · ASSOCIATES** *PLLC*

Seventy Portsmouth Avenue  
Stratham, New Hampshire  
03885  
603 – 583 - 4860  
Fax: 583 - 4863

December 11, 2017

City of Rochester Planning Board  
31 Wakefield Street  
Rochester, NH 03867



RE: Letter of Explanation - Proposed Subdivision Plan – Salmon Falls Road  
Tax Map#: 224 Lot #: 310

Dear Members of the Board:

J & L Terra, Inc. is proposing to subdivide the parcel depicted on Rochester Tax Map 224, Lot 310 into 33 residential lots served by municipal water service and septic systems. The proposed lots will be served by municipal water and sewer with a proposed new road length of approximately 2,867 linear feet. There are two proposed road entrances off Salmon Falls Road to serve the residential dwelling units with no dead-end roads contemplated. Lots range from 0.20 – acre to 1.23-acres in size and there are 33-lots proposed for the entire development (including the existing house on the parent parcel) where there were 40-lots proposed on the Design Review concepts. Drainage treatment/mitigation areas are shown & all utilities are to be proposed underground.

Thank you for your consideration.

Very truly yours,  
BEALS ASSOCIATES, PLLC

Christian O. Smith, P.E.  
Principal

**BEALS · ASSOCIATES** *PLLC*

70 Portsmouth Avenue  
3<sup>rd</sup> Floor, Suite 2,  
Stratham, N.H. 03885  
603 – 583 - 4860  
Fax: 583 - 4863

December 11, 2017

Chairman  
City of Rochester Planning Board  
PO Box 550  
Rochester, NH 03237



RE: Waiver request memo – Residential Subdivision – Salmon Falls Road  
Tax Map#: 224; Lot #: 310

Dear Members of the Board:

This is written to formalize a request for waiver with regard to the referenced Subdivision application.

Your petitioner seeks the following relief:

Chapter 50 (Section 50.7 (C) 3.)

We respectfully request to a waiver to Section 50.7 (C) 3. that requires that the post-development storm water volume is not increased above pre-development for the 10-year, 25-year and 50-year 24 hour storm event. The request is for the westerly flow only, all storm events analyzed toward Salmon Falls Road result in reduced storm water volumes. We feel the waiver is justified as the site soils are classified as HSG “C” throughout. The 2-year storm volume is reduced and the drainage design is in compliance with NHDES AoT standards and requirements. Stormwater flow to the west is received in a very large wetland complex that is part of the proposed conservation land that will serve to mitigate the volume increases under the larger storm events.

Thank you for your consideration.

Very truly yours,  
BEALS ASSOCIATES, PLLC

Christian O. Smith, PE  
Principal

# MEADOW COURT SUBDIVISION TAX MAP 224, LOT 310



## CIVIL ENGINEERS:



## LAND SURVEYORS:

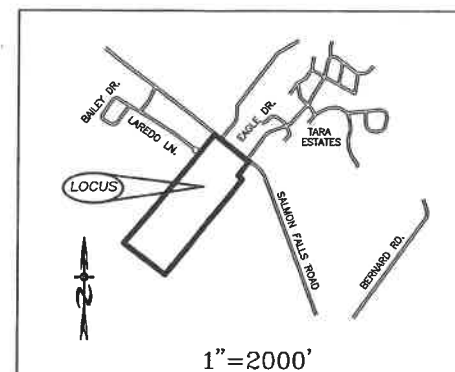
DAVID W. VINCENT, LLS  
LAND SURVEYING SERVICES  
PO BOX 1622  
DOVER, NH 03821  
1-603-664-5786

## WETLAND / SOIL CONSULTANT:

GOVE ENVIRONMENTAL SERVICES INC.  
8 CONTINENTAL DRIVE,  
BLDG 2 UNIT H  
EXETER, NH 03833  
1-603-778-0644



## LOCATION MAP



## INDEX

TITLE SHEET	
SUBDIVISION BOUNDARY PLAN	1-2
EXISTING CONDITION PLAN	3
SUBDIVISION SITE PLAN	4
DRIVEWAY ACCESS PLANS	5-6
PLAN & PROFILES	7-10
DRAINAGE BASIN PLAN	11
CONSTRUCTION DETAILS	12
UTILITY DETAILS	13-14
EROSION & SEDIMENT CONTROL DETAILS	15
ROAD CROSS SECTIONS	16-19

## RECORD OWNER/DEVELOPER

J&L TERRA HOLDINGS, INC.  
79 EXETER ROAD  
N. HAMPTON, N.H. 03862

## PLAN SET LEGEND

5/8" REBAR	●	PROPOSED LIGHT POLE	⦿
DRILL HOLE	⊙	PROPOSED WALL LIGHT	⦿
CONC. BOUND	⊠	PROPOSED PARKING COUNT	③
UTILITY POLE	⊙	OVERHEAD ELEC. LINE	—x—
DRAIN MANHOLE	⊙	FENCING	—D—
SEWER MANHOLE	⊙	DRAINAGE LINE	—S—
EXISTING LIGHT POLE	☆	SEWER LINE	—W—
EXISTING CATCH BASIN	⊠	GAS LINE	—W—
PROPOSED CATCH BASIN	⊠	WATER LINE	—W—
WATER GATE	⊠	STONE WALL	—x—
WATER SHUT OFF	⊠	TREE LINE	—x—
HYDRANT	⊠	ABUT. PROPERTY LINES	—x—
PINES, ETC.	⊠	EXIST. PROPERTY LINES	—x—
MAPLES, ETC.	⊠	BUILDING SETBACK LINES	—x—
EXIST. SPOT GRADE	⊠	EXIST. CONTOUR	—100—
PROP. SPOT GRADE	⊠	PROP. CONTOUR	—100—
DOUBLE POST SIGN	⊠	SOIL LINES	—x—
SINGLE POST SIGN	⊠		

REVISIONS:	DATE:

Legend:

- OHU Overhead Utilities  
 SCRD Stafford County Registry of Deeds  
 ○ Iron Pipe Found  
 ● Iron Rod Found  
 × Steel Stake Found  
 ● Drill Hole Found  
 ● Iron Rod to be Set  
 ⚡ Utility Pole  
 --- Building Setback  
 --- Drainage Easement  
 --- Wetland No-Cut Buffer  
 --- Culvert  
 --- Stone Wall

Length Table:

LINE	BEARING	DISTANCE
L1	N37°36'33"E	40.25'
L2	N23°08'26"E	31.12'
L3	N23°08'26"E	26.73'
L4	N37°36'33"E	12.70'
L5	S51°44'05"E	39.98'
L6	N42°51'16"E	58.72'
L7	N37°36'33"E	53.73'
L8	N23°08'26"E	42.79'
L9	S52°58'14"E	0.99'
L10	S52°12'39"E	16.93'
L11	S51°58'56"E	10.91'
L12	S50°42'29"E	84.53'
L13	S51°27'55"E	18.45'
L14	S37°36'33"W	53.87'
L15	S42°51'16"W	61.72'
L16	N37°36'33"E	66.18'
L17	S23°59'39"W	33.17'
L18	S49°50'09"E	29.10'
L19	S54°14'15"E	52.37'
L20	S51°42'57"E	24.25'
L21	S37°36'33"W	33.09'
L22	S23°08'26"W	38.60'
L23	S34°44'30"E	81.91'
L24	N60°06'34"W	59.20'
L25	S23°59'39"W	43.74'
L26	S60°03'31"E	67.81'
L27	S34°52'15"E	52.49'
L28	S38°28'29"W	78.96'
L29	S38°26'22"W	30.63'
L30	S39°55'27"W	44.99'
L31	S39°05'02"W	29.78'
L32	S23°08'26"W	18.25'
L33	N37°57'58"E	35.12'
L34	S60°06'34"E	34.72'
L35	S60°06'34"E	2.04'
L36	S37°44'29"E	77.35'
L37	S51°42'57"E	53.88'
L38	S53°50'12"E	24.36'
L39	S51°44'05"E	31.77'
L40	S51°27'55"E	25.14'
L41	S52°35'41"E	74.37'

Curve Table:

CURVE	RADIUS	ARC LENGTH	DELTA ANGLE
C1	175.00'	5.94'	1°56'37"
C2	25.00'	37.83'	86°41'54"
C3	25.00'	39.27'	90°00'00"
C4	275.00'	69.44'	14°28'06"
C5	225.00'	56.82'	14°28'06"
C6	30.00'	47.43'	90°39'23"
C7	175.00'	16.02'	5°14'44"
C8	25.00'	35.18'	89°47'48"
C9	125.00'	24.40'	11°11'08"
C10	125.00'	169.92'	77°53'06"
C11	25.00'	36.68'	84°03'36"
C12	25.00'	39.27'	90°00'00"
C13	25.00'	38.87'	89°04'27"
C14	125.00'	11.44'	5°14'44"
C15	125.00'	87.93'	40°18'20"
C16	30.00'	46.77'	89°19'29"
C17	275.00'	69.44'	14°28'06"
C18	125.00'	22.55'	10°20'12"
C19	125.00'	125.26'	57°24'46"
C20	225.00'	56.82'	14°28'06"
C21	175.00'	115.58'	37°30'24"
C22	175.00'	148.08'	48°28'50"
C23	175.00'	150.39'	49°14'16"
C24	175.00'	153.88'	50°22'54"

ZONING REQUIREMENTS

ZONE	AGRICULTURAL (AG)
LOT AREA MIN.	20,000 SF.
LOT FRONTAGE	150 FT.
FRONT YARD	20 FT.
SIDE YARD	10 FT.
REAR YARD	20 FT.
WETLAND SETBACK	50 FT.
WETLAND NO-CUT BUFFER	25 FT.
MAX. LOT COVERAGE	35%
MAX. BUILDING HEIGHT	35 FT.
MAX. BUILDING FOOTPRINT	30%

CITY OF ROCHESTER PLANNING BOARD APPROVAL

Approved by the Rochester Planning Board on \_\_\_\_\_ Date \_\_\_\_\_

Signed by \_\_\_\_\_ Name \_\_\_\_\_ Position \_\_\_\_\_

**SUBDIVISION APPROVAL** Whether or not otherwise expressly recited on this subdivision plan, subdivision approval is conditioned on faithful and diligent adherence by the Owner/Subdivider/Developer of all terms, conditions, provisions and specifications of the City of Rochester Land Subdivision Regulations as amended or as may later be amended, in effect on the date of approval, unless or except insofar as expressly waived, in any particular, below, non-adherence may result in a revocation of approval. Any variation from the approved plan will require a resubmission for subdivision.

**GRANTED WAIVERS:**

Map 224 / Lot 19  
 Ruel Family Revocable Trust  
 694 Salmon Falls Road  
 Rochester, NH 03868

Map 224 / Lot 22  
 Wilfred R. & Shirley L. Creteau Revocable Trust  
 688 Salmon Falls Road  
 Rochester, NH 03868

Map 224 / Lot 20  
 Steven & Janice Tilton  
 694 Salmon Falls Road  
 Rochester, NH 03868

Map 224 / Lot 21  
 David J. & Kristen L. Beaulieu  
 700 Salmon Falls Road  
 Rochester, NH 03868

Map 224 / Lot 308  
 Toro Estates Community Limited Partnership  
 716 Salmon Falls Road  
 Rochester, NH 03868

Map 224 / Lot 309  
 Toro Estates Inc.  
 716 Salmon Falls Road  
 Rochester, NH 03868

Map 224 / Lot 311  
 Dyer Family Revocable Trust  
 679 Salmon Falls Road  
 Rochester, NH 03868  
 SCRD Bk 3159, Pg 774

Map 224 / Lot 321  
 Great Woods Subdivision Homeowners Association  
 95 Blackwater Road  
 Rochester, NH 03867  
 SCRD Bk 3711, Pg 620

Map 227 / Lot 38  
 Lee Davidkin  
 727 Salmon Falls Road  
 Rochester, NH 03868  
 SCRD Bk 4173, Pg 659

Map 227 / Lot 35  
 Donald R. Routhier  
 c/o Lorraine C. Whaley  
 753 Salmon Falls Road  
 Rochester, NH 03868  
 SCRD Bk 3931, Pg 66

Laredo Lane

Map 224 / Lot 321  
 Great Woods Subdivision Homeowners Association  
 95 Blackwater Road  
 Rochester, NH 03867  
 SCRD Bk 3711, Pg 620



WETLAND SCIENTIST CERTIFICATION

- US Army Corps of Engineers Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northeast and Northcentral Region, Technical Report ERDC/EL TR-09-19 (Oct 2009).
- Field Indicators of Hydric Soils in the United States, A Guide for Identifying and Delineating Hydric Soils, Version 7.0. United States Department of Agriculture (2010).
- North American Digital Flora: National Wetland Plant List, Version 2.2.1 (2009).
- Classification of Wetlands and Deepwater Habitats of the United States. USFWS Manual FWS/OBS-79/31 (1979).



David W. Vincent, LLS No. 821

11 Dec. 2017

Date

NO.	DATE	DESCRIPTION	BY
4			
3			
2			
1			

References:

- "Plan of Land Limited Subdivision, Robert E. Melivier, Rochester, NH," dated Feb. 1976, prepared by Frederick E. Drew Assoc., SCRD Plan No.17-33.
- "Lot Line Revisions for Raymond D. Collins & Jake W. Collins, Rochester, NH," dated May 2006, rev. 11/4/07, prepared by Norway Plains Assoc., Inc., SCRD Plan No. 92-66.
- "Subdivision of Land Prepared for Steven Miller, Rochester, NH," dated Nov. 2007, prepared by Norway Plains Assoc., Inc., SCRD Plan No. 93-42.
- "Subdivision of Land for Great Woods Development, LLC, Rochester, NH," dated February 2008, prepared by Norway Plains Assoc., Inc., SCRD Plan No. 96-23.

For Registry of Deeds Purposes



Notes:

- The purpose of this plan is to subdivide Lot 310 into residential lots. Each lot is to be served by municipal sewer and water.
- Field Procedure: Nikon (NPL-322) Electronic Total Station Instrument & Carlson Survey Plus Data Collector, Adjusted Closed Traverse Performed May/July 2017, Least Squares Balance.
- Error of Closure Better Than 1:36,000.
- Parcel is shown as Lot 310 on Assessor's Map 224.
- Parcel is located in the Agricultural (AG) Zoning District and Conservation Overlay District (CO).
- Owners of Record:  
 J & L Terra Holdings Inc.  
 78 Exeter Road  
 North Hampton, NH 03882  
 SCRD Bk 4476, Pg 82  
 a.) Parcel is subject to an easement to PSNH as described in SCRD Bk 854, Pg 264.
- This plan does not show any unrecorded or unwritten easements which may exist. A reasonable and diligent attempt has been made to observe any apparent, visible uses of the land; however this does not constitute that no such easements exist.
- Parcel is not located in a Flood Hazard Zone as depicted on Flood Insurance Rate Map, No. 33017C0200D & 33017C216D, Stafford County, NH, (All Jurisdictions), Effective Date: May 17, 2005.
- Existing Lot Area: 72.77 Acres
- The wetland boundaries shown herein were field delineated by Gove Environmental Services, of Exeter, NH.
- Horizontal Datum Based upon the City of Rochester GPS Control Monuments 218 & 219.

MAJOR SUBDIVISION PLAN

PREPARED FOR

J & L TERRA HOLDINGS INC.

SHOWN AS

TAX MAP 224 / LOT 310

LOCATED AT

685 SALMON FALLS ROAD

COUNTY OF STRAFFORD

ROCHESTER, NH

SCALE: 1"= 60' DATE: DECEMBER 11, 2017

DAVID W. VINCENT, LLS

LAND SURVEYING SERVICES

PO BOX 1622

DOVER, NH 03821

TEL/FAX (603) 664-5786

www.landsurveyingservices.net

**Legend:**

OHU Overhead Utilities  
 SCRD Strafford County Registry of Deeds  
 O Iron Pipe Found  
 • Iron Rod Found  
 x Steel Stake Found  
 • Drill Hole Found  
 o Iron Rod to be Set  
 d Utility Pole  
 --- Building Setback  
 --- Drainage Easement  
 --- Wetland No-Cut Buffer  
 --- Culvert  
 --- Stone Wall

**Length Table:**

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L7	N37°36'33"E	53.75'
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C23	175.00'	150.39'	49°14'16"
C24	175.00'	153.88'	50°22'54"

**ZONING REQUIREMENTS**

ZONE AGRICULTURAL (AG)  
 LOT AREA MIN. 20,000 SF.  
 LOT FRONTAGE 150 FT.  
 FRONT YARD 20 FT.  
 SIDE YARD 10 FT.  
 REAR YARD 20 FT.  
 WETLAND SETBACK 50 FT.  
 WETLAND NO-CUT BUFFER 25 FT.  
 MAX. LOT COVERAGE 35%  
 MAX. BUILDING HEIGHT 35 FT.  
 MAX. BUILDING FOOTPRINT 30%

**CITY OF ROCHESTER  
 PLANNING BOARD APPROVAL**

Approved by the Rochester Planning Board on \_\_\_\_\_ Date \_\_\_\_\_

Signed by \_\_\_\_\_ Name \_\_\_\_\_ Position \_\_\_\_\_

**SUBDIVISION APPROVAL:** Whether or not otherwise expressly recited on this subdivision plan, subdivision approval granted is conditioned on faithful and diligent adherence by the Owner/Subdivider/Developer of all terms, conditions, provisions and specifications of the City of Rochester Land Subdivision Regulations as amended or as may later be amended, in effect on the date of approval, unless or except insofar as expressly waived, in any particular, below, non-adherence may result in a revocation of approval. Any variation from the approved plan will require a resubmission for subdivision.

**GRANTED WAIVERS:**



**WETLAND SCIENTIST CERTIFICATION**

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- North American Digital Flora: National Wetland Plant List, Version 2.2.1 (2009).
- Classification of Wetlands and Deepwater Habitats of the United States. USFWS Manual FWS/OBS-79/31 (1979).

I certify, that this plan, based upon the plan references, and a survey conducted on the ground on May 22, 2017 through July 27, 2017, meet the minimum requirements for accuracy and completeness per the State of New Hampshire and the City of Rochester.



David W. Vincent, LLS No. 821

11 Dec. 2017

NO.	DATE	DESCRIPTION	BY
3			
2			
1			

**Legend:**

- OHU Overhead Utilities  
 SCRD Stafford County Registry of Deeds  
 ○ Iron Pipe Found  
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**Length Table:**

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L5	S51°50'56"E	10.91'
L6	S53°24'29"E	84.53'
L7	S51°27'55"E	43.59'
L8	S38°26'22"W	30.63'
L9	S39°55'27"W	44.99'

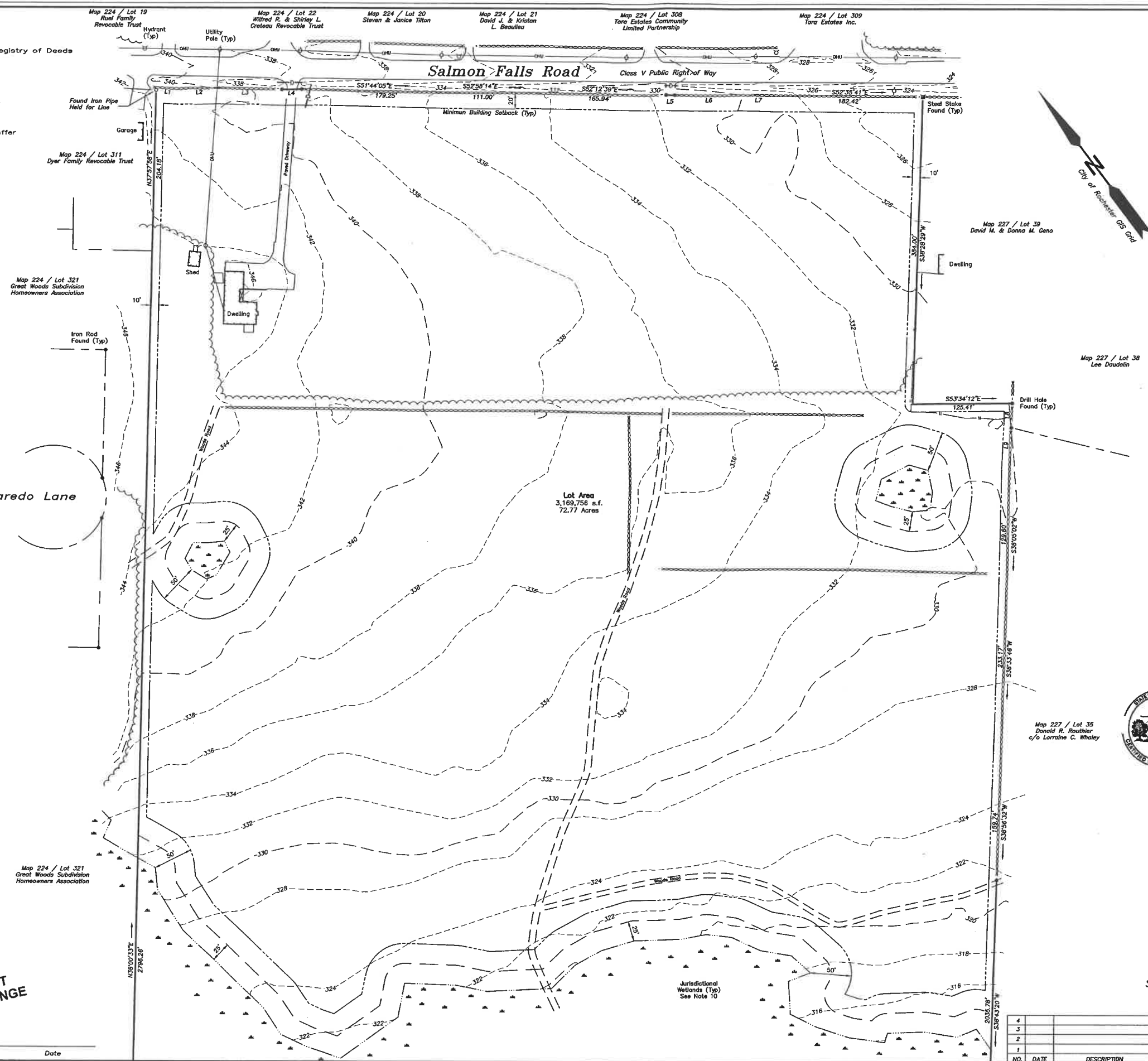
**ZONING REQUIREMENTS**

ZONE	AGRICULTURAL (AG)
LOT AREA MIN.	20,000 SF.
LOT FRONTAGE	150 FT.
FRONT YARD	20 FT.
SIDE YARD	10 FT.
REAR YARD	20 FT.
WETLAND SETBACK	50 FT.
WETLAND NO-CUT BUFFER	25 FT.
MAX. LOT COVERAGE	35%
MAX. BUILDING HEIGHT	35 FT.
MAX. BUILDING FOOTPRINT	30%

**PROGRESS PRINT  
 SUBJECT TO CHANGE**

David W. Vincent, LLS No. 821 Date

DWG NAME: 011xcon FB: 49/40-68



**Notes:**

- 1.) The purpose of this plan is to depict the existing conditions of the subject tract at the time of the on the ground survey conducted May/July 2017.
- 2.) Field Procedure: Nikon (NPL-322) Electronic Total Station Instrument & Carlson Surveyor Plus Data Collector, Adjusted Closed Traverse Performed May/July 2017, Least Squares Balance.
- 3.) Error of Closure Better Than 1:36,000.
- 4.) Parcel is shown as Lot 310 on Assessor's Map 224.
- 5.) Parcel is located in the Agricultural (AG) Zoning District and Conservation Overlay District (CO).
- 6.) Owners of Record:  
 J & L Terra Holdings Inc.  
 79 Exeter Road  
 North Hampton, NH 03862  
 SCRD Bk 4478, Pg 92  
 a.) Parcel is subject to an easement to PSNH as described in SCRD Bk 854, Pg 284.
- 7.) This plan does not show any unrecorded or unwritten easements which may exist. A reasonable and diligent attempt has been made to observe any apparent, visible uses of the land; however this does not constitute that no such easements exist.
- 8.) Parcel is not located in a Flood Hazard Zone as depicted on Flood Insurance Rate Map, No. 33017C208D & 33017C216D, Strafford County, NH, (All Jurisdictions), Effective Date: May 17, 2005.
- 9.) Existing Lot Area: 72.77 Acres
- 10.) The wetland boundaries shown hereon were field delineated by Gove Environmental Services, of Exeter, NH.
- 11.) Horizontal & Vertical Datum Based upon the City of Rochester GPS Control Monuments 218 & 219.

**WETLAND SCIENTIST CERTIFICATION**

1. US Army Corps of Engineers Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northeast and Northcentral Region, Technical Report ERDC/EL TR-09-19 (Oct 2009).
2. Field Indicators of Hydric Soils in the United States, A Guide for Identifying and Delineating Hydric Soils, Version 7.0, United States Department of Agriculture (2010).
3. North American Digital Flora: National Wetland Plant List, Version 2.2.1 (2009).
4. Classification of Wetlands and Deepwater Habitats of the United States. USFWS Manual FWS/OBS-79/31 (1979).

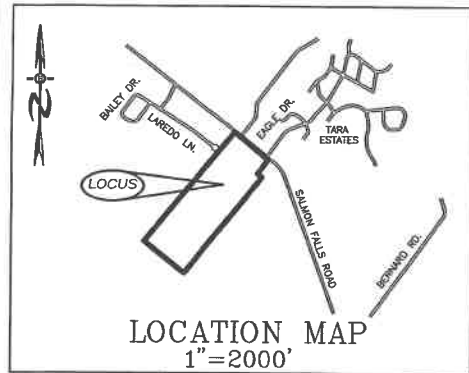


**EXISTING CONDITIONS PLAN**  
 PREPARED FOR  
**J & L TERRA HOLDINGS INC.**  
 SHOWN AS  
**TAX MAP 224 / LOT 310**  
 LOCATED AT  
**685 SALMON FALLS ROAD**  
 COUNTY OF STRAFFORD  
**ROCHESTER, NH**

FEET 0 30 60 120 240  
 METERS 0 10 20 40 80  
 SCALE: 1" = 60' DATE: OCTOBER 3, 2017

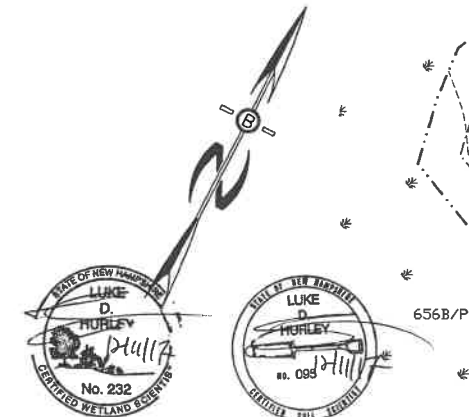
**DAVID W. VINCENT, LLS**  
**LAND SURVEYING SERVICES**  
 PO BOX 1622  
 DOVER, NH 03821  
 TEL/FAX (603) 664-5786  
 www.landsurveyingservices.net

NO.	DATE	DESCRIPTION	BY
4			
3			
2			
1			



#### ZONING REQUIREMENTS

ZONE = AGRICULTURAL  
LOT AREA (w/ S&W) 20,000 S.F. MIN.  
LOT FRONTAGE 150 FT.  
FRONT YARD 20 FT.  
REAR YARD 20 FT. MIN.  
SIDE YARD 10 FT.  
WETLAND SETBACK 50 FT. (25' NO-DISTURB)  
BUILDING HEIGHT 35 FT.  
COVERAGE (FOOTPRINT) 35% MAX.



THE SITE SPECIFIC SOIL SURVEY WAS PRODUCED SEPTEMBER 21, 2017, AND WAS PREPARED BY LUKE HURLEY, CSS # 004, GOVE ENVIRONMENTAL SERVICES, INC. FIELD WORK WAS CONDUCTED NOVEMBER AND DECEMBER OF 2015, AND JANUARY OF 2016. PROJECT IS GES # 2015170.

SOILS WERE IDENTIFIED WITH THE NEW HAMPSHIRE STATE-WIDE NUMERICAL SOILS LEGEND, USDA NRCS, DURHAM, NH. ISSUE # 10, JANUARY 2011.

MAP SYMBOL	MAP UNIT NAME	HYDROLOGIC GROUP
29	WOODBRIDGE	FINE SANDY LOAM C
656/P	RIDGEBURY	FINE SANDY LOAM C

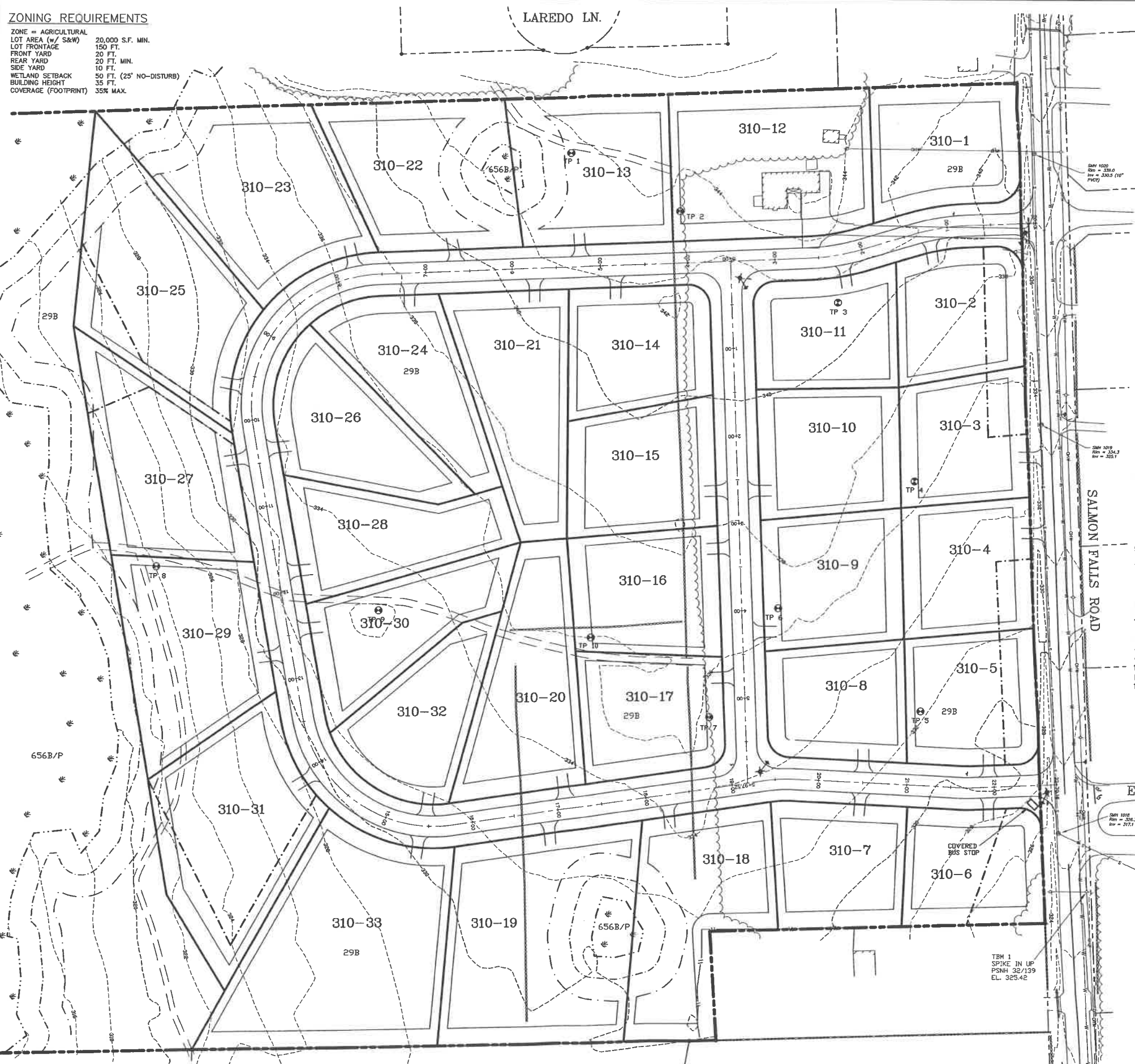
SLOPE RANGE	DRAINAGE
B 0-8%	SWPD = SOMEWHAT POORLY DRAINED
C 8-15%	PD = POORLY DRAINED
D 15-25%	VPD = VERY POORLY DRAINED
E 25-50%	W = WATER (POUND)

#### LEGEND

	UTILITY POLE
	TEST PIT W/ NO.
	STONE WALL
	TREE LINE
	EXISTING CONTOUR - 10'
	EXISTING CONTOUR - 2'
	WETLAND BOUNDARY
	SOILS BOUNDARY LINE
	BUILDING SETBACK LINE
	ABUTTING PROPERTY LINE
	EXISTING PROPERTY LINE
	PROPOSED PROPERTY LINE

THE INTENT OF THIS PLAN IS TO ESTABLISH RESIDENTIAL LOT DENSITY YIELD OR PRELIMINARY COMMERCIAL DESIGN USING CALCULATIONS ACCORDING TO TOWN REGULATIONS AND NOT INTENDED FOR CONSTRUCTION AND/OR APPROVAL. THIS PLAN WAS CREATED USING AVAILABLE DATA FROM EXISTING MUNICIPAL AND STATE RECORDS. THE ELEVATIONS SHOWN ARE FROM USGS MAPS AND TO BE CONSIDERED APPROXIMATE.

BEALS ASSOCIATES PLLC. DID NOT PERFORM A BOUNDARY SURVEY AND TAKES NO RESPONSIBILITY FOR ITS USE. BOUNDARY DATA WAS TAKEN FROM EXISTING PUBLIC RECORDS.



PREPARED FOR:

J&L TERRA HOLDINGS, INC.  
79 EXETER ROAD  
N. HAMPTON, N.H. 03862

**BEALS ASSOCIATES PLLC**

70 PORTSMOUTH AVE, STRATHAM, N.H. 03885  
PHONE: 603-583-4860, FAX: 603-583-4863

#### NOTES

1. UNDERGROUND FACILITIES, UTILITIES AND STRUCTURES HAVE BEEN LOCATED FROM FIELD OBSERVATIONS AND THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. BEALS ASSOCIATES OR ANY OF THEIR EMPLOYEES TAKE NO RESPONSIBILITY FOR THE LOCATION OF ANY UNDERGROUND STRUCTURES OR UTILITIES NOT SHOWN, THAT MAY EXIST. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL UNDERGROUND UTILITIES OR STRUCTURES LOCATED PRIOR TO EXCAVATION WORK BY CALLING 1-888-DIG-SAFE.
2. THIS PLAN HAS BEEN PREPARED FOR MUNICIPAL AND STATE APPROVALS AND FOR CONSTRUCTION BASED ON DATA OBTAINED FROM ON-SITE FIELD SURVEY AND EXISTING MUNICIPAL RECORDS. THROUGHOUT THE CONSTRUCTION PROCESS, THE CONTRACTOR SHALL INFORM THE ENGINEER IMMEDIATELY OF ANY FIELD DISCREPANCY FROM DATA AS SHOWN ON THE DESIGN PLANS. THIS INCLUDES ANY UNFORESEEN CONDITIONS, SUBSURFACE OR OTHERWISE, FOR EVALUATION AND RECOMMENDATIONS. ANY CONTRADICTION BETWEEN ITEMS OF THIS PLAN/PLAN SET, OR BETWEEN THE PLANS AND ON-SITE CONDITIONS MUST BE RESOLVED BEFORE RELATED CONSTRUCTION HAS BEEN INITIATED.
3. ALL BENCHMARKS AND TOPOGRAPHY SHOULD BE FIELD VERIFIED BY THE CONTRACTOR.
4. ALL ROAD AND DRAINAGE WORK TO CONFORM TO CITY STANDARD SPECIFICATIONS FOR CONSTRUCTION. ALL PROPOSED UTILITIES TO BE UNDERGROUND.
5. ALL PROPOSED SIGNS SHALL CONFORM TO THE ZONING REGULATIONS.
7. PROPOSED DISTURBANCE IS OVER 100,000 S.F. MIN., ALTERATION TERRAIN RSA 485-A-17 IS REQUIRED.
8. THE LANDOWNER IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL WETLAND REGULATIONS, INCLUDING ANY PERMITTING AND SETBACK REQUIREMENTS REQUIRED UNDER THESE REGULATIONS.
9. SEE DETAIL SHEET FOR STANDARD CONSTRUCTION NOTES AND DETAILS.
10. THE CONSTRUCTION SITE OPERATOR AND OWNER SHALL SUBMIT A NOTICE OF INTENT (NOI) TO USE PA, WASHINGTON, DC, STORMWATER NOTICE PROCESSING CENTER AT LEAST 14 DAYS PRIOR TO COMMENCEMENT OF WORK ON SITE. EPA WILL POST THE NOI AT [http://cfpub.epa.gov/npdes/stormwater/noi/noi\\_search.cfm](http://cfpub.epa.gov/npdes/stormwater/noi/noi_search.cfm).
11. THE 25' WETLAND BUFFERS ARE TO BE MARKED WITH PLACARDS ON EXISTING TREES OR ON A CONSTRUCTED SIGN POST EVERY 50' OR AS DIRECTED BY THE ROCHESTER CONSERVATION COMMISSION, PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY PERMITS.
12. ALL DWELLINGS TO HAVE STONE DRIP EDGES FOR ROOF INFILTRATION. (DEED RESTRICTION).
- 13.

EAGLE DRIVE



REVISIONS:

DATE:

#### SUBDIVISION SITE PLAN

MEADOW COURT  
RESIDENTIAL DEVELOPMENT  
SALMON FALLS ROAD  
ROCHESTER, NH

DATE: MARCH 2017

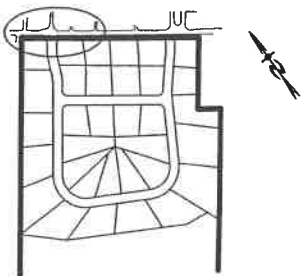
SCALE: 1"=60'

PROJ. NO: NH-1007

SHEET NO. 4 OF 19

PREPARED FOR:  
J&L TERRA HOLDINGS, INC.  
79 EXETER ROAD  
N. HAMPTON, N.H. 03862

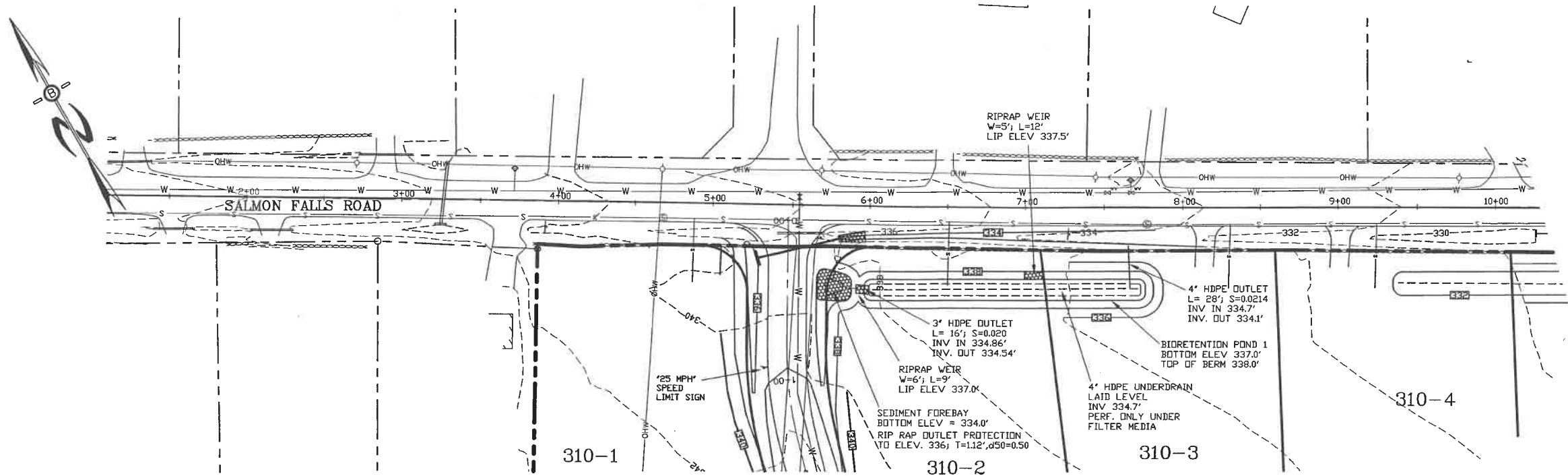
**BEALS ASSOCIATES PLLC**  
70 PORTSMOUTH AVE, STRATHAM, N.H. 03885  
PHONE: 603-583-4860, FAX: 603-583-4863



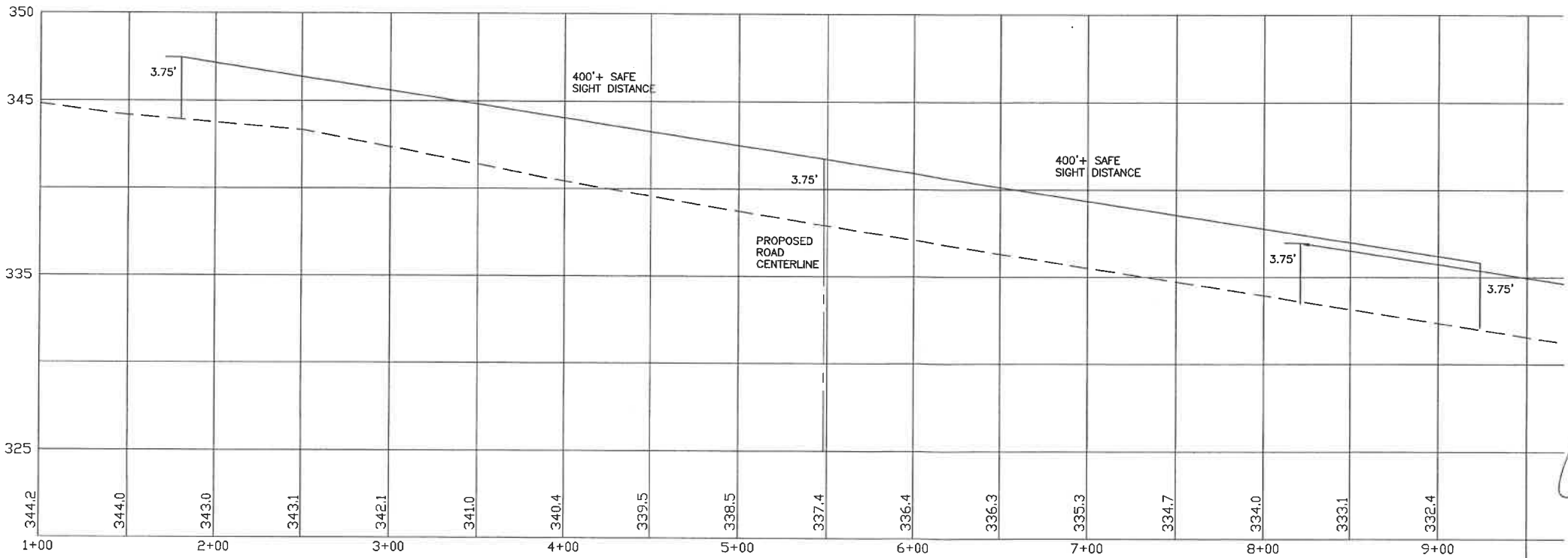
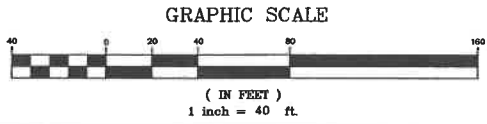
LOCATION LEGEND 1"=500'

NOTES

1. ALL ELECTRICAL, TELEPHONE, CABLE TELEVISION AND ALARM LINES TO BE UNDERGROUND. THE SIZE AND LOCATION IS TO BE PLACED OUTSIDE OF THE RIGHT-OF-WAY AS PER TOWN OF BRENTWOOD TYP. ROADWAY SECTION ADDENDUM A SUBDIVISION REGULATIONS, WITH REVIEW AND APPROVAL BY THE TOWN OF BRENTWOOD TOWN ENGINEER. LOW PROFILE UTILITY BOX STRUCTURES SHALL BE USED TO THE GREATEST EXTENT.
2. ALL BENCHMARKS AND TOPOGRAPHY SHOULD BE FIELD VERIFIED BY THE CONTRACTOR, ENGINEER TO BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY.
3. ALL CONSTRUCTION METHODS AND MATERIALS WILL CONFORM TO THE TOWN OF BARRINGTON STANDARD SPECIFICATIONS AND TO N.H.D.O.T. STANDARDS AND REGULATIONS.
4. ALL DRAINAGE STRUCTURES AND SWALES WILL BE BUILT AND STABILIZED PRIOR TO HAVING RUN-OFF DIRECTED TO THEM.
5. SEE DETAIL SHEETS FOR STANDARD CONSTRUCTION DETAILS.
6. CONTRACTOR TO EMPLOY BEST MANAGEMENT PRACTICES AS SHOWN ON PLANS, AND AS FOUND IN THE STORM WATER MANAGEMENT, AND EROSION AND SEDIMENT CONTROL HANDBOOK FOR URBAN AND DEVELOPING AREAS IN NEW HAMPSHIRE, DATED AUGUST 1992.
7. NATURAL VEGETATED FILTER STRIPS ARE TO REMAIN WOODED.
8. CULVERTS SHOULD BE MAINTAINED BI-ANNUALLY.
9. SEDIMENT TRAPS ARE TO BE INSTALLED AT ALL PIPE INLETS UNTIL SITE IS STABILIZED.



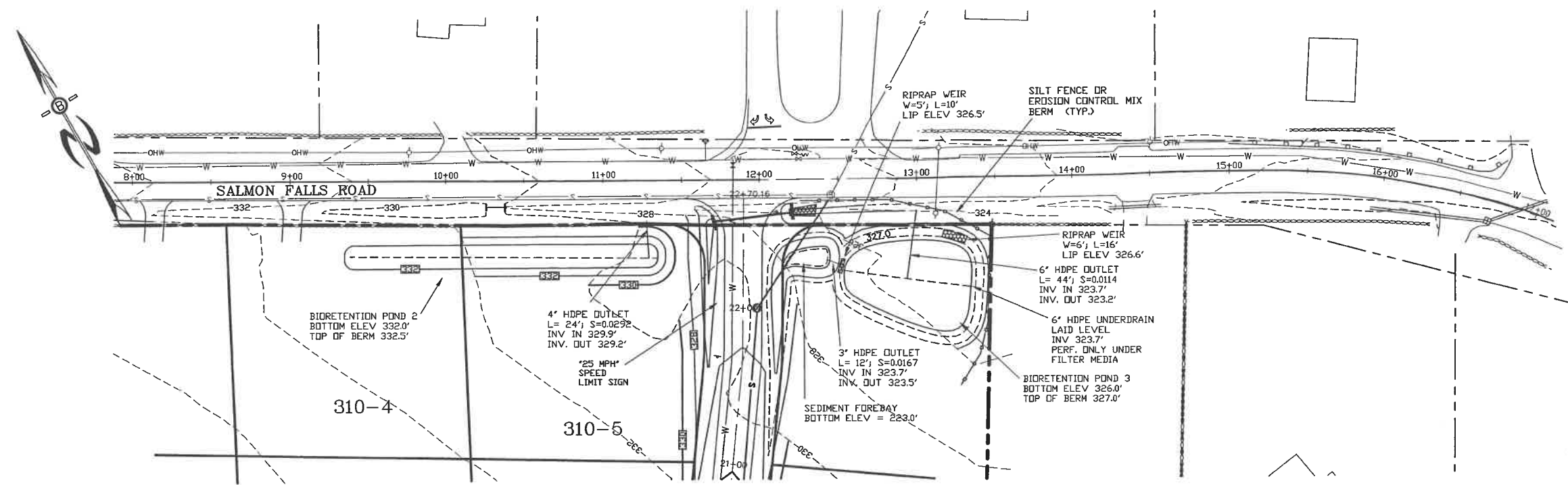
PROFILE SCALES:  
HORIZONTAL: 1"=40' VERTICAL: 1"=4'



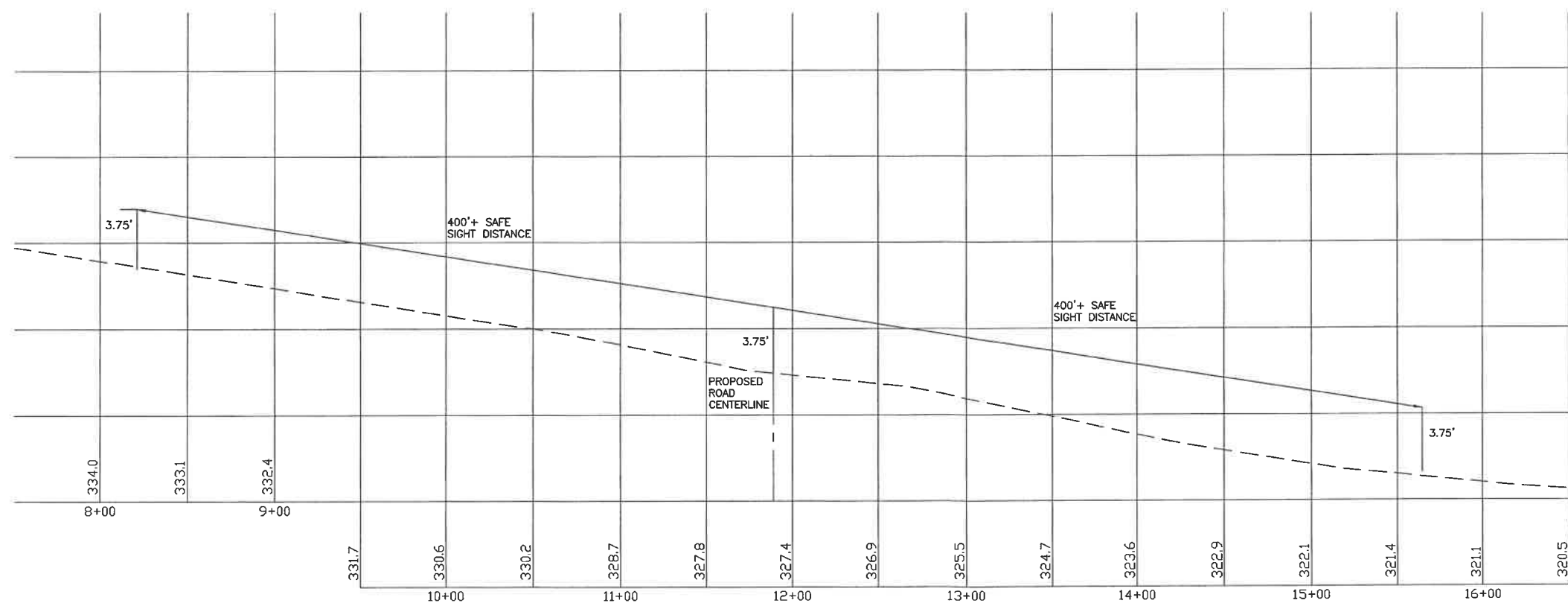
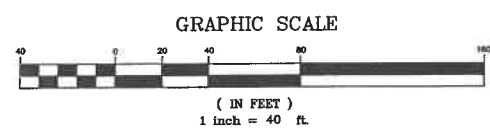
PROFILE SCALES:  
HORIZONTAL: 1"=50' VERTICAL: 1"=5'



ROADWAY ACCESS PLAN	
MEADOW COURT RESIDENTIAL DEVELOPMENT SALMON FALLS ROAD ROCHESTER, NH	
DATE: AUG, 2017	SCALE: 1" = 40'
PROJ. NO: NH-1007	SHEET NO. 5 OF 38

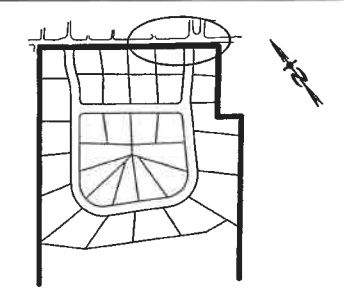


PROFILE SCALES:  
HORIZONTAL: 1"=40' VERTICAL: 1"=4'



PREPARED FOR:  
J&L TERRA HOLDINGS, INC.  
79 EXETER ROAD  
N. HAMPTON, N.H. 03862

**BEALS ASSOCIATES PLLC**  
70 PORTSMOUTH AVE, STRATHAM, N.H. 03885  
PHONE: 603-583-4860, FAX: 603-583-4863

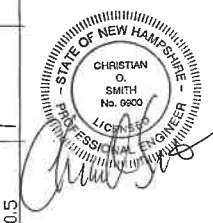


LOCATION LEGEND 1"=500'

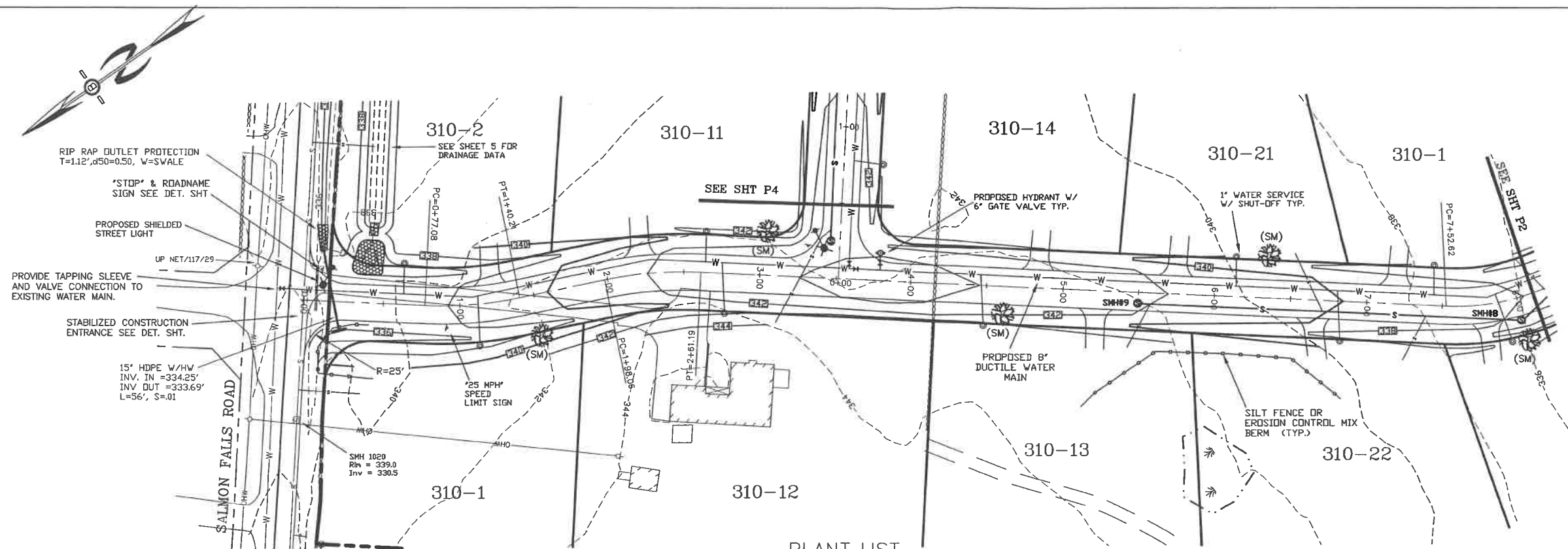
NOTES

1. ALL ELECTRICAL, TELEPHONE, CABLE TELEVISION AND ALARM LINES TO BE UNDERGROUND. THE SIZE AND LOCATION IS TO BE PLACED OUTSIDE OF THE RIGHT-OF-WAY AS PER TOWN OF BRENTWOOD TYP. ROADWAY SECTION ADDENDUM A SUBDIVISION REGULATIONS, WITH REVIEW AND APPROVAL BY THE TOWN OF BRENTWOOD TOWN ENGINEER. LOW PROFILE UTILITY BOX STRUCTURES SHALL BE USED TO THE GREATEST EXTENT.
2. ALL BENCHMARKS AND TOPOGRAPHY SHOULD BE FIELD VERIFIED BY THE CONTRACTOR, ENGINEER TO BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY.
3. ALL CONSTRUCTION METHODS AND MATERIALS WILL CONFORM TO THE TOWN OF BARRINGTON STANDARD SPECIFICATIONS AND TO N.H.D.O.T. STANDARDS AND REGULATIONS.
4. ALL DRAINAGE STRUCTURES AND SWALES WILL BE BUILT AND STABILIZED PRIOR TO HAVING RUN-OFF DIRECTED TO THEM.
5. SEE DETAIL SHEETS FOR STANDARD CONSTRUCTION DETAILS.
6. CONTRACTOR TO EMPLOY BEST MANAGEMENT PRACTICES AS SHOWN ON PLANS, AND AS FOUND IN THE STORM WATER MANAGEMENT, AND EROSION AND SEDIMENT CONTROL HANDBOOK FOR URBAN AND DEVELOPING AREAS IN NEW HAMPSHIRE, DATED AUGUST 1992.
7. NATURAL VEGETATED FILTER STRIPS ARE TO REMAIN WOODED.
8. CULVERTS SHOULD BE MAINTAINED BI-ANNUALLY.
9. SEDIMENT TRAPS ARE TO BE INSTALLED AT ALL PIPE INLETS UNTIL SITE IS STABILIZED.

PROFILE SCALES:  
HORIZONTAL: 1"=50' VERTICAL: 1"=5'

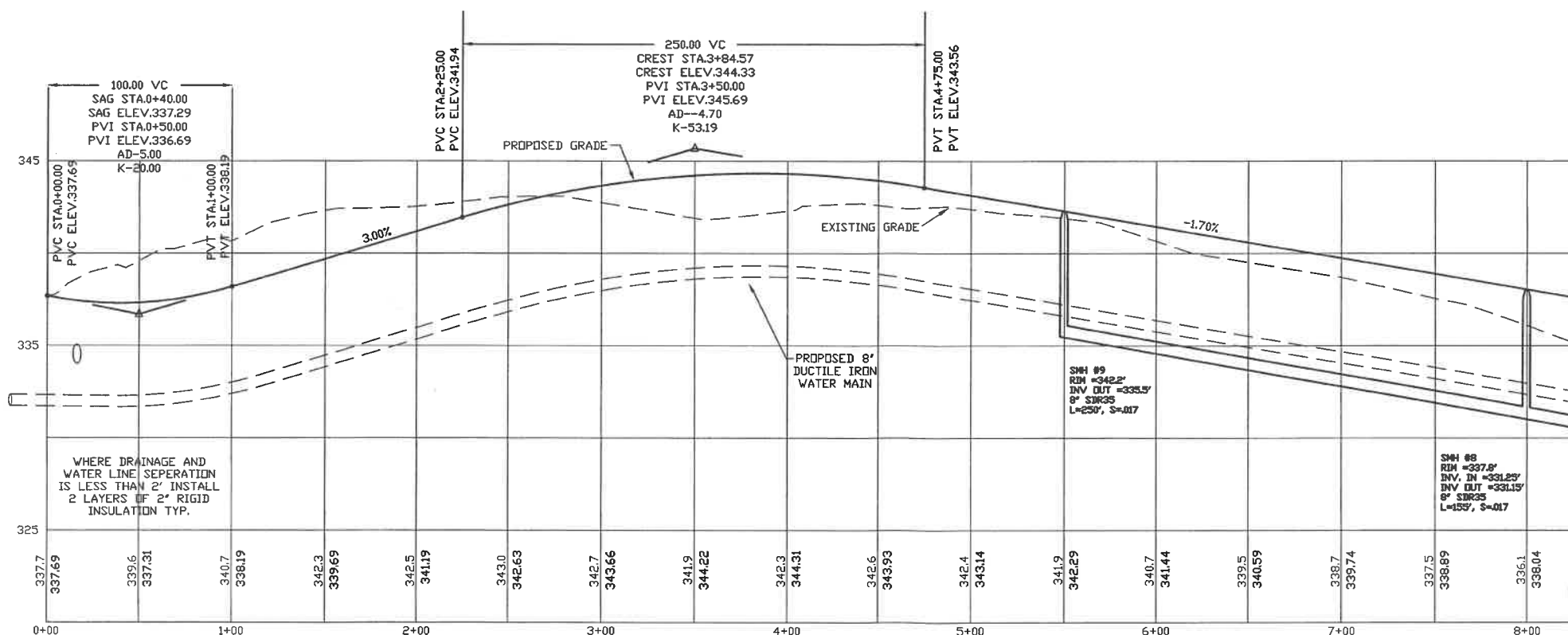


REVISIONS:		DATE:	
ROADWAY ACCESS PLAN		MEADOW COURT RESIDENTIAL DEVELOPMENT SALMON FALLS ROAD ROCHESTER, NH	
DATE: AUG, 2017		SCALE: 1" = 40'	
PROJ. NO: NH-1007		SHEET NO. 6 OF 38	



**PLANT LIST**

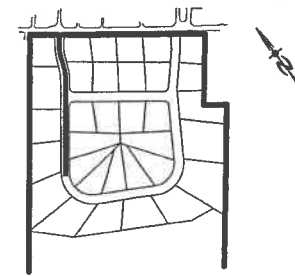
BOTANICAL NAME	COMMON NAME	SIZE AND SPECIFICATION
<b>TREES</b>		
ACER REBRUM	RED SUNSET (SM)	2.5"-3" CAL. B&B
PYRUS CALLERYANA	REDSPIRE PEAR	2.5"-3" CAL. B&B
ULMUS X LIBERTY	LIBERTY ELM	2.5"-3" CAL. B&B



PREPARED FOR:  
J&L TERRA HOLDINGS, INC.  
79 EXETER ROAD  
N. HAMPTON, N.H. 03862

**BEALS ASSOCIATES PLLC**

70 PORTSMOUTH AVE, STRATHAM, N.H. 03885  
PHONE: 603-583-4860, FAX: 603-583-4863



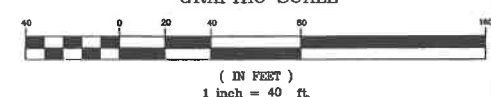
LOCATION LEGEND 1"=500'

PROFILE SCALES:  
HORIZONTAL: 1"=40' VERTICAL: 1"=4'

**NOTES**

1. ALL ELECTRICAL, TELEPHONE, CABLE TELEVISION AND ALARM LINES TO BE UNDERGROUND. THE SIZE AND LOCATION IS TO BE DETERMINED BY APPROPRIATE UTILITY COMPANY.
2. ALL BENCHMARKS AND TOPOGRAPHY SHOULD BE FIELD VERIFIED BY THE CONTRACTOR, ENGINEER TO BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY.
3. ALL CONSTRUCTION METHODS AND MATERIALS WILL CONFORM TO N.H.D.O.T. STANDARDS AND REGULATIONS.
4. ALL DRAINAGE STRUCTURES AND SWALES WILL BE BUILT AND STABILIZED PRIOR TO HAVING RUN-OFF DIRECTED TO THEM.
5. SEE DETAIL SHEETS FOR STANDARD CONSTRUCTION NOTES AND DETAILS.
6. ALL CROSS CULVERTS & DRIVEWAY CULVERTS TO BE MIN. 12" ADS N-12 AND TO HAVE MASONRY HEADWALLS UNLESS FLARED END SECTIONS ARE SPECIFIED ON THE PLANS.
7. NATURAL DEVELOPED AREA BUFFERS ARE TO REMAIN WOODED.
8. ALL SIDE SLOPES STEEPER THAN 3:1 (WETLAND CROSSINGS) TO BE LINED WITH JUTE MATTING OR EQUAL.
9. ALL SWALE MATTING WILL EXTEND TO THE LIP OF THE LEVEL SPREADER AT THE END OF EACH SWALE.
10. ALL PERMANENT EROSION CONTROL SWALE LINING MATERIAL SHALL BE NAG C350 OR EQUIVALENT. ALL OTHER SWALES WILL BE PROTECTED WITH TEMPORARY STONE CHECK DAMS (S.C.D.) UNTIL THE VEGETATION HAS FULLY STABILIZED. AT THIS TIME THE S.C.D.'S WILL BE REMOVED.

**GRAPHIC SCALE**

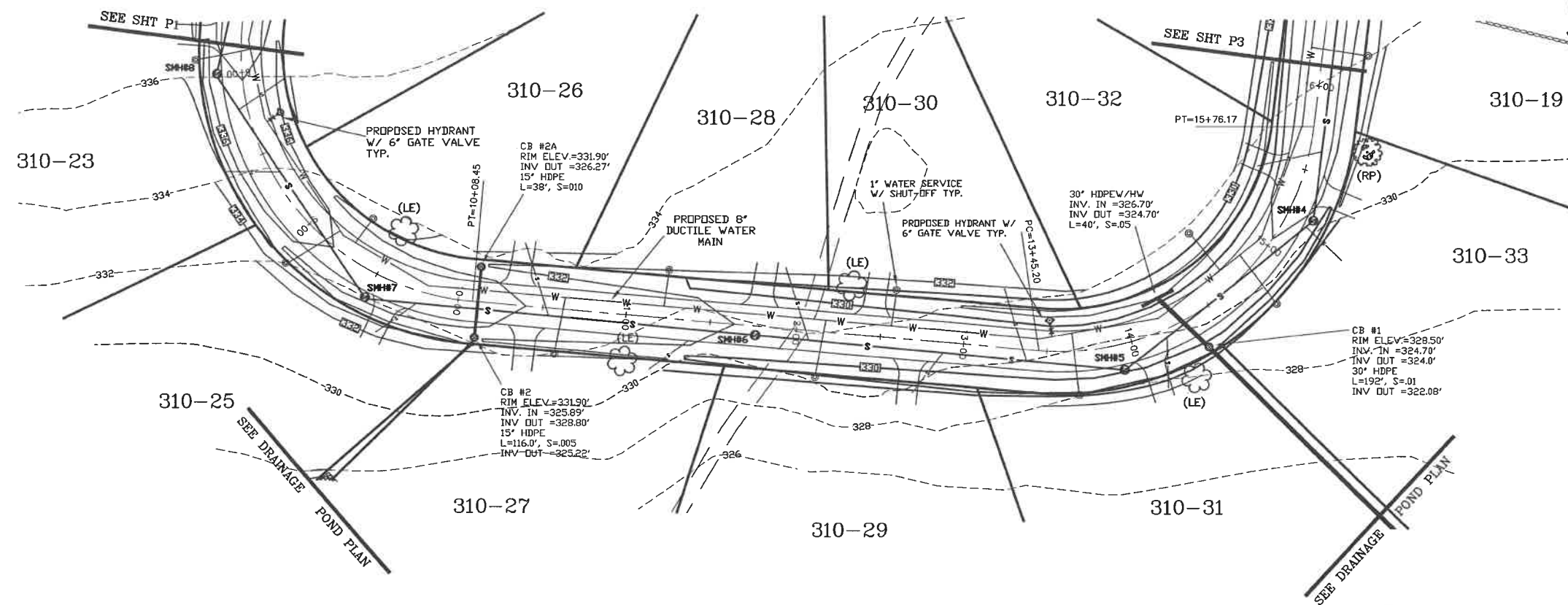


REVISIONS: \_\_\_\_\_ DATE: \_\_\_\_\_

**PLAN AND PROFILE-P1**

MEADOW COURT  
RESIDENTIAL DEVELOPMENT  
SALMON FALLS ROAD  
ROCHESTER, NH

DATE: DEC, 2017 SCALE: 1" = 40'  
PROJ. NO: NH-1007 SHEET NO. 7 OF 19

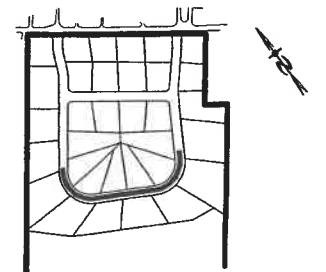


PREPARED FOR:

J&L TERRA HOLDINGS, INC.  
79 EXETER ROAD  
N. HAMPTON, N.H. 03862

**BEALS ASSOCIATES PLLC**

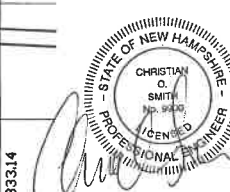
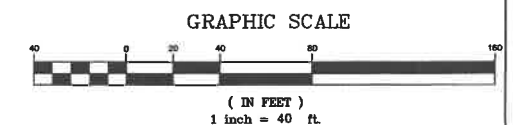
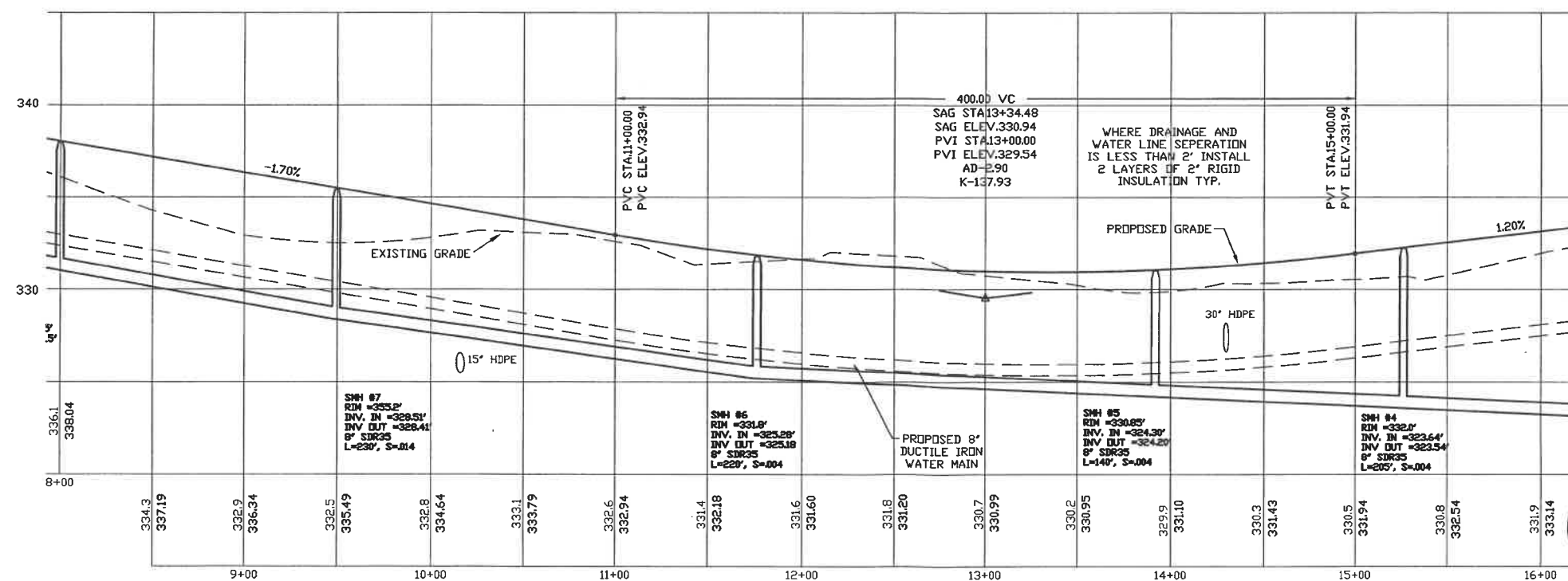
70 PORTSMOUTH AVE, STRATHAM, N.H. 03885  
PHONE: 603-583-4860, FAX: 603-583-4863



LOCATION LEGEND 1"=500'

PROFILE SCALES:

HORIZONTAL: 1"=40' VERTICAL: 1"=4'



PLAN AND PROFILE-P2

MEADOW COURT  
RESIDENTIAL DEVELOPMENT  
SALMON FALLS ROAD  
ROCHESTER, NH

DATE: DEC, 2017

SCALE: 1" = 40'

PROJ. NO: NH-1007

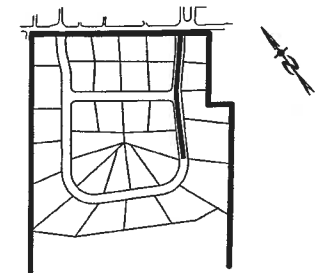
SHEET NO. 8 OF 19

PREPARED FOR:

J&L TERRA HOLDINGS, INC.  
79 EXETER ROAD  
N. HAMPTON, N.H. 03862

**BEALS ASSOCIATES PLLC**

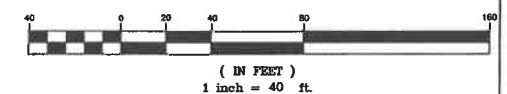
70 PORTSMOUTH AVE, STRATHAM, N.H. 03885  
PHONE: 603-583-4860, FAX: 603-583-4863



LOCATION LEGEND 1"=500'

PROFILE SCALES:  
HORIZONTAL: 1"=40' VERTICAL: 1"=4'

GRAPHIC SCALE

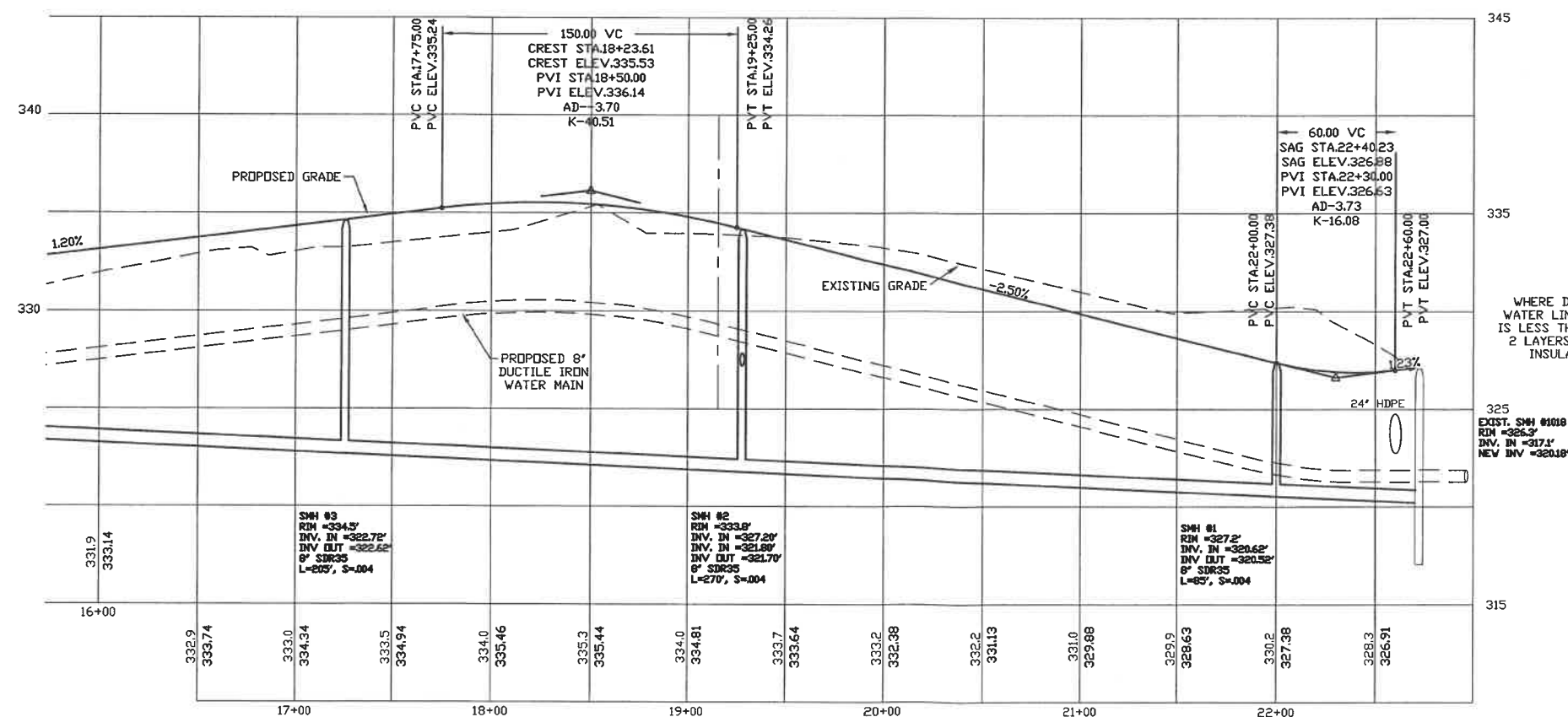
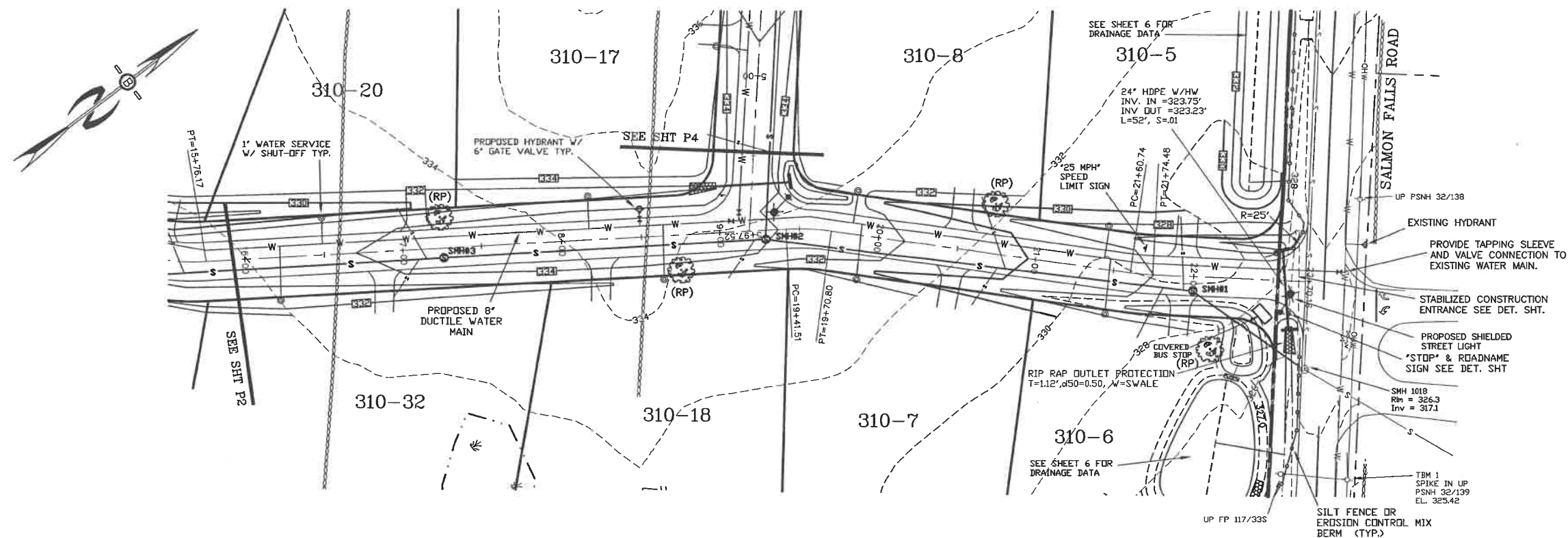


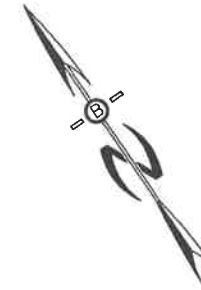
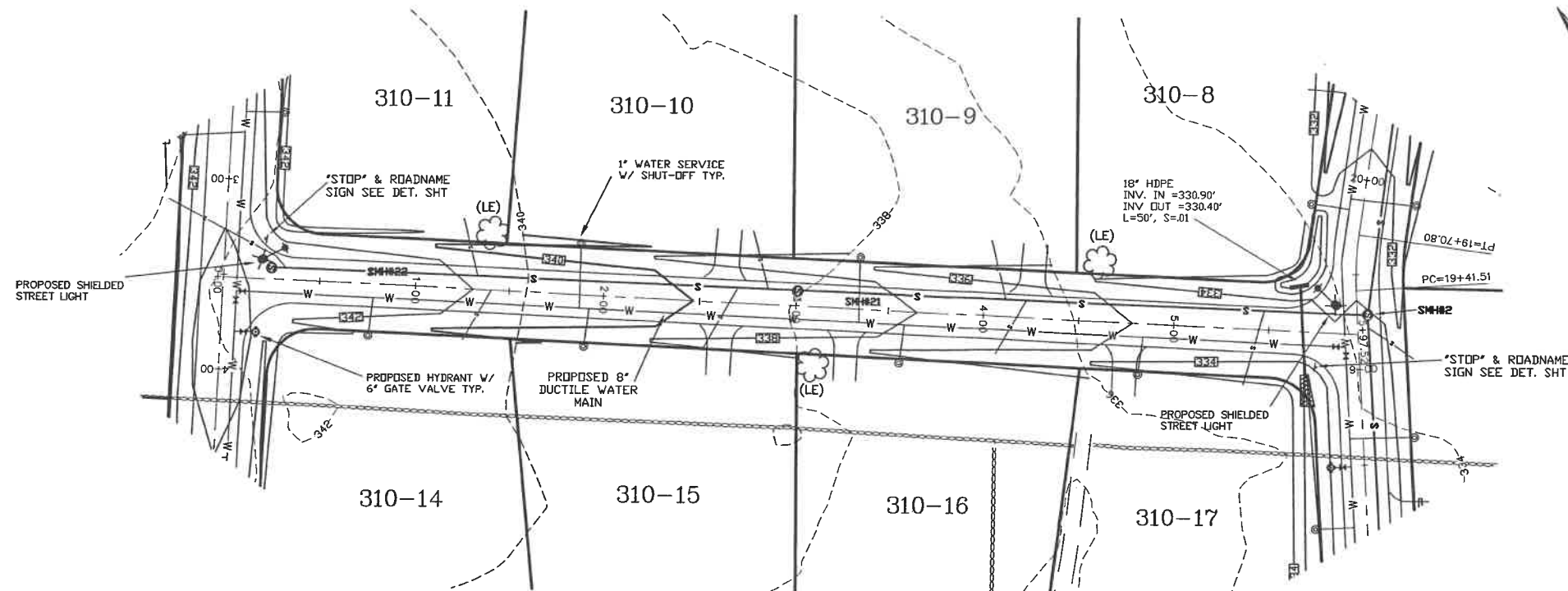
REVISIONS: DATE:

PLAN AND PROFILE-P3

MEADOW COURT  
RESIDENTIAL DEVELOPMENT  
SALMON FALLS ROAD  
ROCHESTER, NH

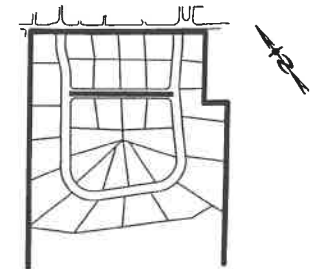
DATE: DEC, 2017 SCALE: 1" = 40'  
PROJ. NO: NH-1007 SHEET NO. 9 OF 19





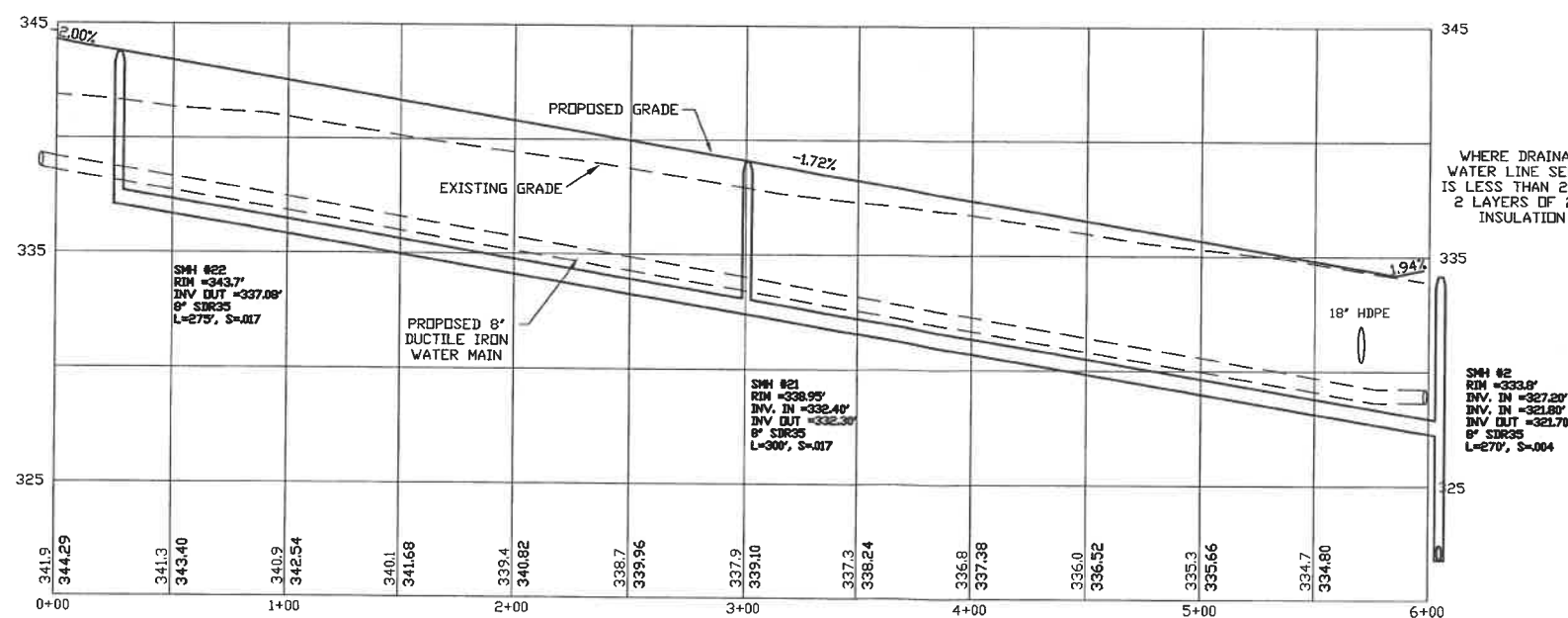
PREPARED FOR:  
**J&L TERRA HOLDINGS, INC.**  
 79 EXETER ROAD  
 N. HAMPTON, N.H. 03862

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 PHONE: 603-583-4860, FAX: 603-583-4863

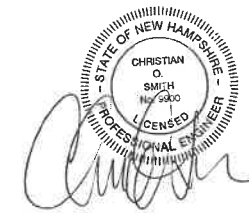
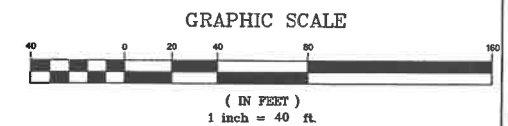


LOCATION LEGEND 1"=500'

PROFILE SCALES:  
 HORIZONTAL: 1"=40' VERTICAL: 1"=4'



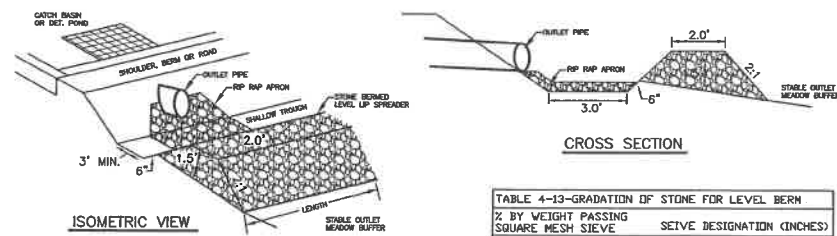
WHERE DRAINAGE AND  
 WATER LINE SEPERATION  
 IS LESS THAN 2' INSTALL  
 2 LAYERS OF 2" RIGID  
 INSULATION TYP.



REVISIONS:		DATE:
PLAN AND PROFILE-P4		
MEADOW COURT RESIDENTIAL DEVELOPMENT SALMON FALLS ROAD ROCHESTER, NH		
DATE: DEC, 2017	SCALE: 1" = 40'	
PROJ. NO: NH-1007	SHEET NO. 10 OF 19	



## STONE BERM LEVEL SPREADER

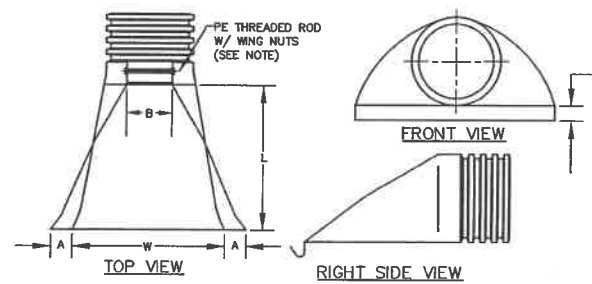


## LEVEL SPREADER

1. CONSTRUCT THE LEVEL SPREADER LIP ON A 0% GRADE TO INSURE UNIFORM SPREADING OF RUNOFF.
2. LEVEL SPREADER SHALL BE CONSTRUCTED ON UNDISTURBED SOIL AND NOT ON FILL.
3. THE ENTIRE LEVEL UP AREA SHALL BE PROTECTED BY PLACING EXCELSIOR ENFORCER MATTING BENEATH THE STONE. EACH STRIP SHALL OVERLAP BY AT LEAST SIX INCHES.
4. THE FLOW FROM THE LEVEL SPREADER SHALL OUTLET ONTO STABILIZED AREAS. WATER SHOULD NOT RE-CONCENTRATE IMMEDIATELY BELOW THE SPREADER.
5. MAINTENANCE: THE LEVEL SPREADER SHOULD BE CHECKED PERIODICALLY AND AFTER EVERY MAJOR STORM TO DETERMINE IF THE LIP HAS BEEN DAMAGED AND THE DESIGN CONDITIONS HAVE NOT CHANGED. ANY DETRIMENTAL SEDIMENT ACCUMULATION SHOULD BE REMOVED. IF STONE REMOVAL HAS TAKEN PLACE ON THE LIP, THEN THE DAMAGE SHOULD BE REPAIRED.

TABLE 7-24--RECOMMENDED RIP RAP GRADATION RANGES		
THICKNESS OF RIP RAP = 0.50 FEET		
d50 SIZE=	FEET	INCHES
% OF WEIGHT SMALLER THAN THE GIVEN d50 SIZE	SIZE OF STONE (INCHES) FROM	TO
100%	9	12
85%	8	11
50%	6	9
15%	2	3

TABLE 7-24--RECOMMENDED RIP RAP GRADATION RANGES		
THICKNESS OF RIP RAP = 0.75 FEET		
d50 SIZE=	FEET	INCHES
% OF WEIGHT SMALLER THAN THE GIVEN d50 SIZE	SIZE OF STONE (INCHES) FROM	TO
100%	14	18
85%	12	16
50%	9	14
15%	3	5

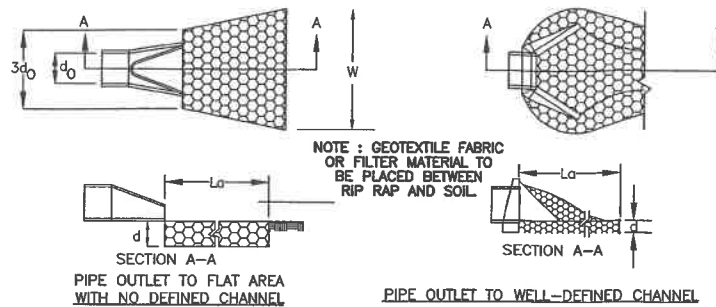


PART No.	PIPE SIZE	A	B(MAX)	H	L	W
1510-NP	15"	6.5"	10"	6.5"	25"	29"
1810-NP	18"	7.5"	12"	7.5"	32"	35"
2410-NP	24"	10.5"	N/A	10.5"	53"	68"
3010-NP	30"	10.5"	N/A	10.5"	53"	68"
3610-NP	36"	10.5"	N/A	10.5"	53"	68"

NOTE: PE THREADED ROD W/ WING NUTS PROVIDED FOR END SECTIONS 15'-24'. 30' & 36" END SECTIONS TO BE WELDED PER MANUFACTURER'S RECOMMENDATIONS.

## ADS N-12 FLARED END SECTIONS

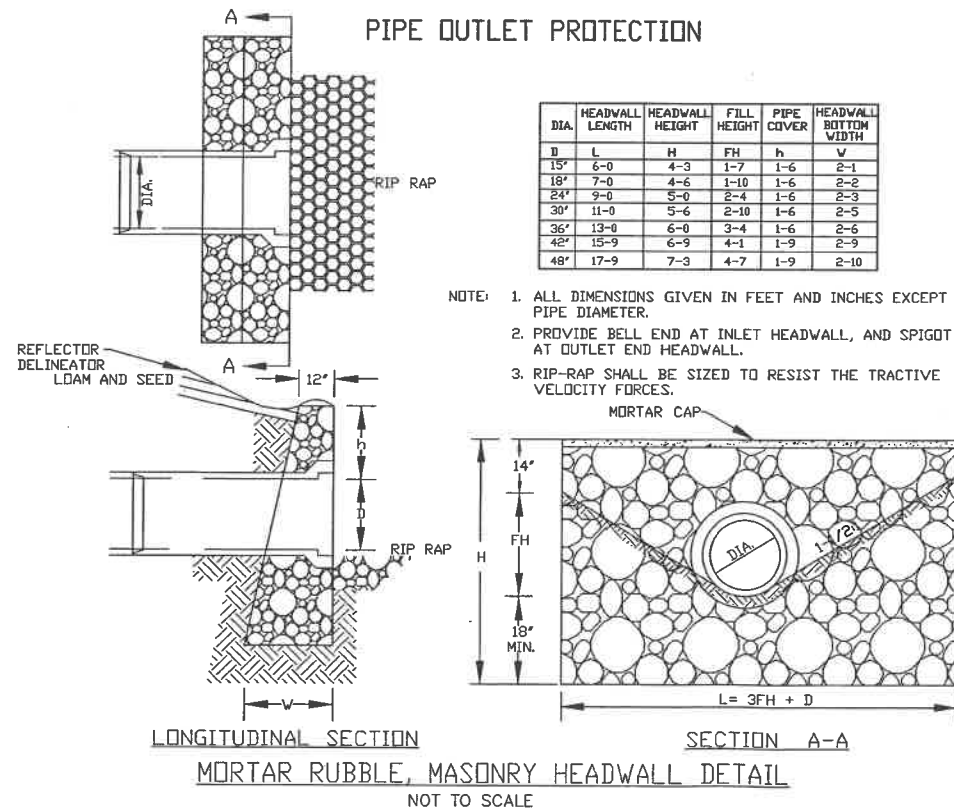
NOT TO SCALE (ALL DIMENSIONS ARE NOMINAL)



## CONSTRUCTION SPECIFICATIONS

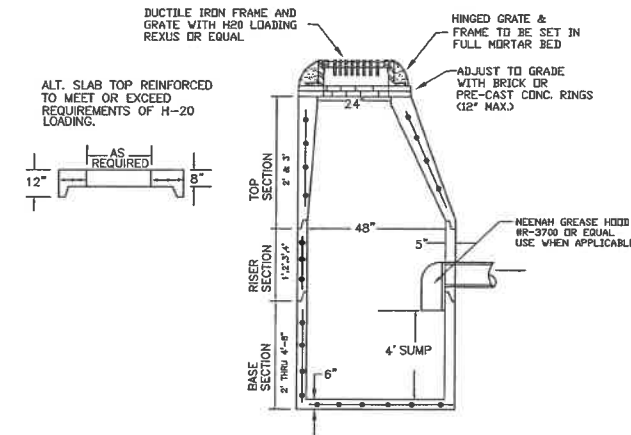
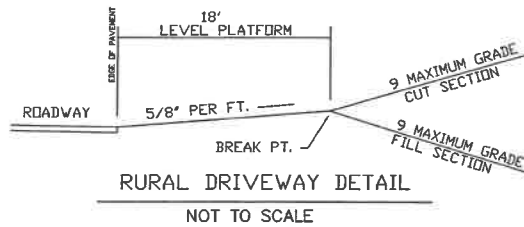
1. THE SUB GRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIP RAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
  2. THE ROCK OR GRAVEL USED FOR FILTER OF RIP RAP SHALL CONFORM TO THE SPECIFIED GRADATION. 3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIP RAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
  4. STONE FOR THE RIP RAP MAY BE PLACED BY EQUIPMENT AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES. TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.
  5. STONE FOR RIP RAP SHALL BE ANGULAR OR SUBANGULAR. THE STONES SHOULD BE SHAPED SO THAT THE LEAST DIMENSION OF THE STONE FRAGMENT SHALL BE NOT LESS THAN ONE-THIRD OF THE GREATEST DIMENSION OF THE FRAGMENT.
  6. FLAT ROCKS SHALL NOT USED FOR RIP RAP. VOIDS IN THE ROCK RIPRAP SHOULD BE FILLED WITH SPALLS AND SMALLER ROCKS.
- MAINTENANCE**
1. THE OUTLET PROTECTION SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR STORM. IF THE RIP RAP HAS BEEN DISPLACED, UNDERMINED OR DAMAGED, IT SHOULD BE REPAIRED IMMEDIATELY. THE CHANNEL IMMEDIATELY BELOW THE OUTLET SHOULD BE CHECKED TO SEE THAT EROSION IS NOT OCCURRING. THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS, AND SEDIMENT THAT COULD CHANGE FLOW PATTERNS AND/OR TAILWATER DEPTHS ON THE PIPES. REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO OUTLET PROTECTION.

## PIPE OUTLET PROTECTION



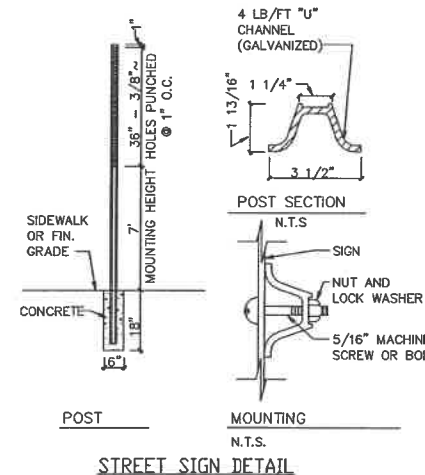
DIA.	HEADWALL LENGTH	HEADWALL HEIGHT	FILL HEIGHT	PIPE COVER	HEADWALL BOTTOM WIDTH
15"	6'-0"	4'-3"	1'-7"	1'-6"	2'-1"
18"	7'-0"	4'-6"	1'-10"	1'-6"	2'-2"
24"	9'-0"	5'-0"	2'-4"	1'-6"	2'-3"
30"	11'-0"	5'-6"	2'-10"	1'-6"	2'-5"
36"	13'-0"	6'-0"	3'-4"	1'-6"	2'-6"
42"	15'-0"	6'-3"	4'-1"	1'-9"	2'-9"
48"	17'-0"	7'-3"	4'-7"	1'-9"	2'-10"

- NOTE:
1. ALL DIMENSIONS GIVEN IN FEET AND INCHES EXCEPT PIPE DIAMETER.
  2. PROVIDE BELL END AT INLET HEADWALL, AND SPIGOT END AT OUTLET END HEADWALL.
  3. RIP-RAP SHALL BE SIZED TO RESIST THE TRACTIVE VELOCITY FORCES.



## PRECAST CATCH BASIN

NOT TO SCALE



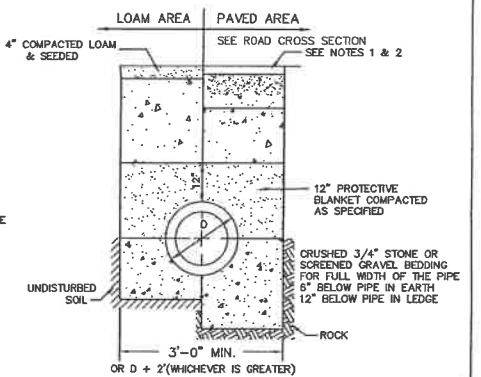
## STREET SIGN DETAIL

PREPARED FOR:

J&L TERRA HOLDINGS, INC.  
79 EXETER ROAD  
N. HAMPTON, N.H. 03862

## BEALS ASSOCIATES PLLC

70 PORTSMOUTH AVE, STRATHAM, N.H. 03885  
PHONE: 603-583-4860, FAX: 603-583-4863



- NOTE:
1. PAVEMENT REPAIR IN EXISTING ROADWAYS SHALL CONFORM TO STREET OPENING REGULATIONS.
  2. NEW ROADWAY CONSTRUCTION SHALL CONFORM TO SUBDIVISION SPEC'S.

## TYPICAL DRAINAGE TRENCH

NOT TO SCALE

TRAFFIC CONTROL SCHEDULE					
SIGN NUMBER	SIGN	SIZE OF SIGN WIDTH HEIGHT	DESCRIPTION	MOUNT TYPE	MOUNT HEIGHT
R1-1	STOP	30" 30"	WHITE ON RED	CHANNEL	7'-0"
R2-1	SPEED LIMIT 25	18" 24"	BLACK ON WHITE	CHANNEL	7'-0"

## CONSTRUCTION DETAILS D1

MEADOW COURT  
RESIDENTIAL DEVELOPMENT  
SALMON FALLS ROAD  
ROCHESTER, NH

DATE: AUG, 2017 SCALE: NTS  
PROJ. NO: NH-1007 SHEET NO. 12 OF 19



PREPARED FOR:

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79 EXETER ROAD  
N. HAMPTON, N.H. 03862

**BEALS ASSOCIATES PLLC**

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PHONE: 603-583-4860, FAX: 603-583-4863

NOTES

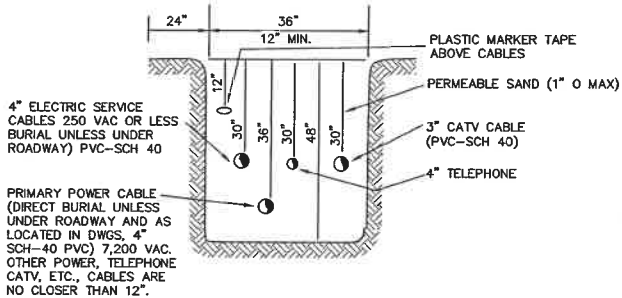
- ORDERED EXCAVATION OF UNSUITABLE MATERIAL BELOW GRADE. REFILL WITH BEDDING MATERIAL. (SEE NOTE 6 ALSO)
- BEDDING: MINIMUM 12" SAND BLANKET AS SPECIFIED AND REMAINING FILL AS SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATERIAL AND MEETING ASTM C-33 STONE SIZE No. 67  

100%	PASSING	1 INCH SCREEN
90-100%	PASSING	3/4 INCH SCREEN
20-50%	PASSING	3/8 INCH SCREEN
0-10%	PASSING	No. 4 SIEVE
0-5%	PASSING	No. 8 SIEVE

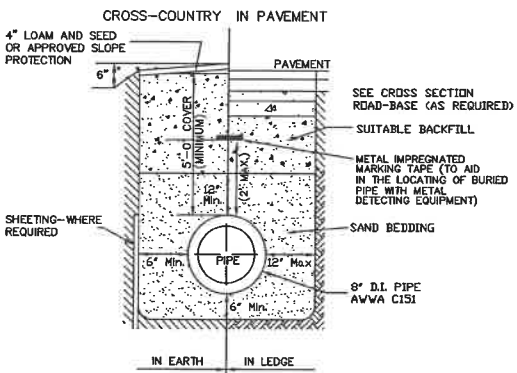
WHERE ORDERED BY THE ENGINEER TO STABILIZE THE TRENCH BASE, GRADED SCREENED GRAVEL OR CRUSHED STONE 3/4 INCH TO 1-1/2 INCH SHALL BE USED.
- SUITABLE MATERIAL IN ROADS, ROAD SHOULDERS, WALKWAYS, AND TRAVELED WAYS: SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOP SOIL, ALL WET OR SOFT MUCK, PEAT OR CLAY, ALL EXCAVATED LEDGE MATERIAL, AND ALL ROCKS OVER SIX INCHES IN LARGEST DIMENSION.
- BASE COURSE: IF ORDERED BY THE ENGINEER, SHALL MEET THE REQUIREMENTS OF DIVISION 300 OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION.
- WOOD SHEETING: IF REQUIRED, WHERE SHEETING IS PLACED ALONG SIDE THE PIPE AND EXTENDS BELOW MID-DIAMETER, IT SHALL BE CUT OFF AND LEFT IN PLACE TO AN ELEVATION NOT LESS THAN ONE FOOT ABOVE THE TOP OF THE PIPE. WHERE SHEETING IS ORDERED BY THE ENGINEER TO BE LEFT IN PLACE, IT SHALL BE CUT OFF AT LEAST 3 FEET BELOW FINISHED GRADE, BUT NOT LESS THAN ONE FOOT ABOVE THE TOP OF THE PIPE.
- W = MAXIMUM ALLOWABLE TRENCH WIDTH TO A PLANE 12 INCHES ABOVE THE PIPE FOR PIPES 15 INCHES NOMINAL DIAMETER OR LESS, W SHALL BE NO MORE THAN 36 INCHES; FOR PIPES GREATER THAN 15 INCHES NOMINAL DIAMETER, W SHALL BE 24 INCHES PLUS PIPE O.D., W SHALL ALSO BE THE PAYMENT WIDTH FOR LEDGE EXCAVATION AND FOR ORDERED EXCAVATION BELOW GRADE.
- FOR CROSS COUNTRY CONSTRUCTION: BACKFILL OR FILL SHALL BE MOUND TO A HEIGHT OF 6 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
- DUCTILE-IRON PIPE, FITTINGS AND JOINTS:
  - DUCTILE IRON PIPE AND FITTINGS SHALL CONFORM TO THE FOLLOWING STANDARDS OF THE UNITED STATES OF AMERICA STANDARDS INSTITUTE  
ANSI A21.50/AWWA C150 THICKNESS DESIGN OF DUCTILE-IRON PIPE AND WITH ASTM A-536 DUCTILE-IRON CASTINGS  
ANSI A21.51/AWWA C151 DUCTILE-IRON PIPE, CENTRIFUGALLY CAST IN METAL MOLDS OR SAND-LINED MOLDS FOR WATER OR OTHER LIQUIDS
  - JOINTS SHALL BE OF THE MECHANICAL OR PUSH-ON TYPE JOINTS AND GASKETS SHALL CONFORM TO ANSI A21.11/AWWA C111 RUBBER GASKET JOINTS FOR DUCTILE IRON PRESSURE PIPE AND FITTINGS
- ALL WATER LINES SHALL BE DISINFECTED AND PRESSURE TESTED TO THE APPROVAL OF THE SEWER COMMISSION. MIN. TEST PRESSURE 150 PSI OR 1 1/2 TIMES THE WORKING PRESSURE WHICH EVER IS GREATER.

NOTE: ALL UTILITIES SHALL BE REVIEWED AND APPROVED BY APPROPRIATE UTILITY COMPANY.

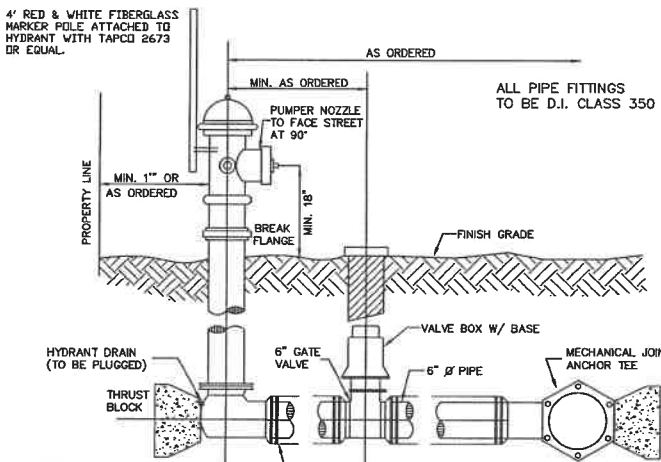
SERVICE BOX CONNECTIONS SHALL BE "FLUSH MOUNT" TO GREATEST EXTENT POSSIBLE AND LOCATED AT PROPERTY LINE CORNERS.



UTILITY TRENCH DETAIL



TYPICAL TRENCH DETAIL FOR WATER SYSTEM



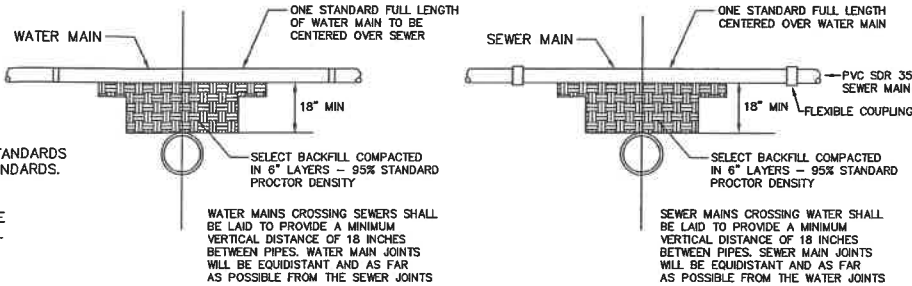
- NOTES:
- USE A VALVE ANCHORING TEE ON ALL HYDRANT BRANCHES.
  - ALL FITTINGS SHALL BE MEGALUG OR APPROVED EQUAL.

LOW PRESSURE HYDRANTS SHALL BE PAINTED ALL RED.  
HIGH PRESSURE HYDRANTS SHALL BE RED WITH YELLOW CAPS.

HYDRANT INSTALLATION DETAIL

SEPERATION NOTES:

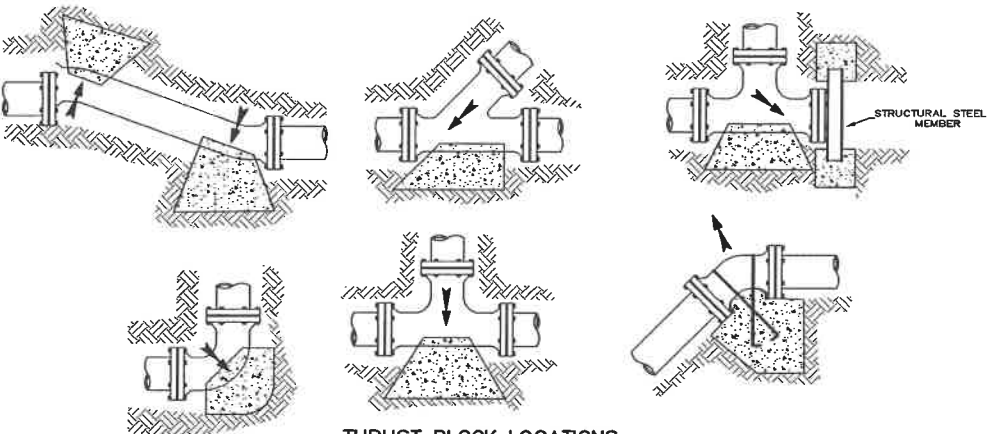
- WATER MAIN RELATIONS TO SHALL BE IN ACCORDANCE WITH THE "RECOMMENDED STANDARDS FOR WATER WORKS" SO-CALLED TEN STATE STANDARDS AND NEW HAMPSHIRE WATER SUPPLY AND POLLUTION CONTROL DESIGN STANDARDS.
- WATER MAINS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED SEWERS. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE. IF THIS DISTANCE CANNOT BE OBTAINED, THEN THE PIPES SHALL BE INSTALLED IN A SEPERATE TRENCH WITH A VERTICAL SEPERATION AT LEAST 18 INCHES APART.



WATER MAIN ABOVE SEWER

WATER MAIN BELOW SEWER

TYPICAL WATER/SEWER SEPERATION DETAILS  
NOT TO SCALE



THRUST BLOCK LOCATIONS

TYPICAL THRUST BLOCK DETAILS

NOT TO SCALE

THE FOLLOWING PRECAUTIONS MUST BE OBSERVED WHEN CONSTRUCTING BLOCKS:

- BLOCKS MUST BE POURED AGAINST UNDISTURBED SOIL.
- PIPE JOINTS AND BOLTS MUST BE ACCESSIBLE.
- CONCRETE SHOULD BE CURED AT LEAST 3 DAYS AND SHALL HAVE A COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS.
- BLOCKS MUST BE POSITIONED TO COUNTERACT THE DIRECTION OF THE RESULTANT THRUST FORCE.

RESTRAINED PUSH-ON AND MECHANICAL JOINTS ARE AVAILABLE FOR ALL PIPE SIZES AND PRESENT NO INSTALLATION PROBLEMS. THEY ARE USED FOR RESISTING THRUST FORCES WHERE THERE IS NO SPACE OR WHERE SOIL BEHIND THE FITTING WILL NOT PROVIDE ADEQUATE SUPPORT. THIS RESTRAINING METHOD INVOLVES THE PLACEMENT OF THESE SPECIAL JOINTS AT APPROPRIATE FITTINGS AND FOR A PREDETERMINED NUMBER OF PIPE LENGTHS ON EACH SIDE.

THE RODS MAY BE USED BY THEMSELVES OR IN COMBINATION WITH OTHER RESTRAINT DEVICES. WHEN THE RODS ARE USED WITH STEEL BANDS AROUND THE PIPE BARREL, ONLY ONE(1) ROD SHALL BE ATTACHED TO EACH BAND AND THE BAND SHALL BE COCKED TO PREVENT SLIPPAGE ALONG THE PIPE BARREL. A BAND PLACED BEHIND A BELL MAY BE USED WITH TWO(2) RODS. FOR MECHANICAL JOINT PIPE, THE RODS MAY BE THREADED THROUGH THE BOLT HOLES IN A FLANGE AND SECURED BY NUTS. ALL RODS SHALL BE MADE OF OR COATED WITH CORROSION RESISTANT MATERIALS TO PREVENT RUST AND DETERIORATION.

RESTRAINT MAY BE NECESSARY FOR MORE THAN ONE (1) PIPE LENGTH ON EACH SIDE OF ANY CHANGE IN DIRECTION, DEADEND OR TEE.

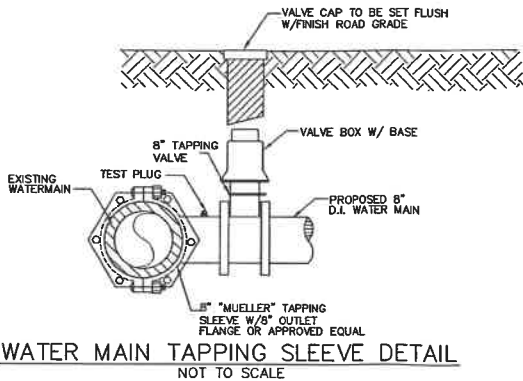
SOIL	BEARING CAPACITY (LOAD/PSF)
MUCK	0
CLAY	1000
SANDY CLAY	1500
SANDY SILT	2000
SILT	2500
HARD CLAY	3000

THRUST FORCES ARE CREATED IN A PIPELINE AT CHANGES IN DIRECTION, TEE, DEADENDS OR WHERE CHANGES IN PIPE SIZE OCCUR AT REDUCERS. AVAILABLE RESTRAINT METHODS INCLUDE CONCRETE THRUST BLOCKS, RESTRAINED JOINTS AND TIE RODS. FORCES TO BE RESTRAINED ARE SHOWN BELOW:

RESULTANT THRUST AT FITTINGS @ 100 PSI (TOTAL POUNDS)					
NOM. PIPE DIA. (IN.)	DEAD END	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
6	1810	2549	1385	706	335
8	2715	3824	2078	1059	503
10	3620	5099	2763	1412	671
12	4525	6374	3448	1765	830
14	5430	7649	4133	2118	989
16	6335	8924	4818	2471	1148
18	7240	10199	5503	2824	1307
20	8145	11474	6188	3177	1466
22	9050	12749	6873	3530	1625
24	9955	14024	7558	3883	1784
26	10860	15299	8243	4236	1943
28	11765	16574	8928	4589	2102
30	12670	17849	9613	4942	2261
32	13575	19124	10298	5295	2420
34	14480	20399	10983	5648	2579
36	15385	21674	11668	6001	2738

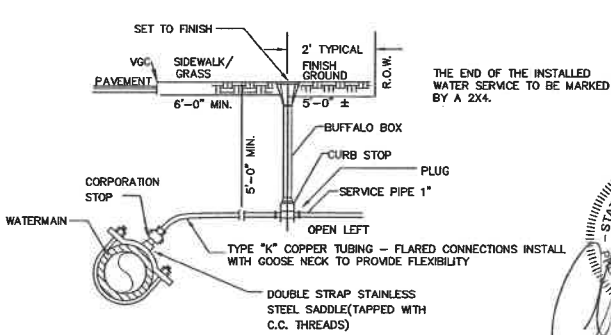
NOTE: TO DETERMINE THRUST AT PRESSURES OTHER THAN 100 PSI, MULTIPLY THE THRUST OBTAINED IN THE TABLE BY THE RATIO OF THE PRESSURE TO 100. FOR EXAMPLE: THE THRUST ON A 12", 90° BEND @ 125 PSI IS:  $19353 \times 125 / 100 = 24191$  LBS.

TO DETERMINE THE SIZE OF A CONCRETE THRUST BLOCK, DIVIDE THE TOTAL FORCE BY THE BEARING VALUE OF THE CONSTITUENT SOIL. THE QUOTIENT WILL BE THE SIZE OF THE BEARING OF THE THRUST BLOCK IN SQUARE FEET. APPROXIMATE VALUES FOR VARIOUS TYPES OF SOIL ARE LISTED BELOW. NO RESPONSIBILITY CAN BE ASSUMED FOR THE ACCURACY OF THE DATA REPRESENTED DUE TO THE WIDE VARIATION OF BEARING VALUES FOR EACH SOIL TYPE.



WATER MAIN TAPPING SLEEVE DETAIL

NOT TO SCALE



TYPICAL WATER SERVICE CONNECTION

UTILITY DETAILS

MEADOW COURT  
RESIDENTIAL DEVELOPMENT  
SALMON FALLS ROAD  
ROCHESTER, NH

DATE: AUG, 2017

SCALE: NTS

PROJ. NO: NH-1007

SHEET NO. 13 OF 19

PREPARED FOR:  
**J&L TERRA HOLDINGS, INC.**  
79 EXETER ROAD  
N. HAMPTON, N.H. 03862

**BEALS · ASSOCIATES PLLC**

70 PORTSMOUTH AVE, STRATHAM, N.H. 03885  
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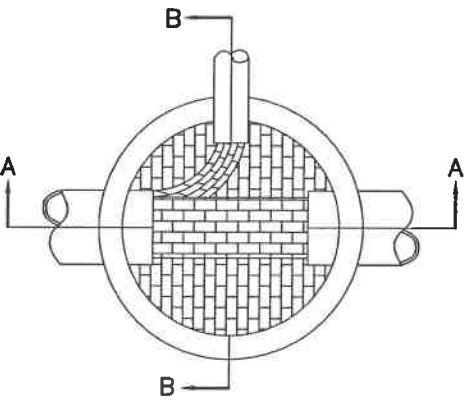
NOTES

- IT IS THE INTENTION OF THE COMMISSION THAT THE MANHOLE, INCLUDING ALL COMPONENT PARTS, HAVE ADEQUATE SPACE, STRENGTH AND LEAKPROOF QUALITIES CONSIDERED NECESSARY BY THE COMMISSION FOR THE INTENDED SERVICE SPACE REQUIREMENTS AND CONFIGURATIONS, SHALL BE AS SHOWN ON THE DRAWING. MANHOLES MAY BE AN ASSEMBLY OF PRECAST SECTIONS, WITH OR WITHOUT STEEL REINFORCEMENT, WITH ADEQUATE JOINTING, OR CONCRETE CAST MONOLITHICALLY IN PLACE WITH OR WITHOUT REINFORCEMENT. IN ANY APPROVED MANHOLE, THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND LOADS OF 8 TONS (H-20 LOADING) WITHOUT FAILURE AND PREVENT LEAKAGE IN EXCESS OF ONE GALLON PER DAY PER VERTICAL FOOT OF MANHOLE, CONTINUOUSLY FOR THE LIFE OF THE STRUCTURE. A PERIOD GENERALLY IN EXCESS OF 25 YEARS IS TO BE UNDERSTOOD IN BOTH CASES.
- BARRELS AND CONE SECTIONS SHALL BE PRECAST REINFORCED OR NON- REINFORCED CONCRETE, OR POURED IN PLACE REINFORCED OR NON REINFORCED CONCRETE.
- PRECAST CONCRETE BARREL SECTIONS, CONES AND BASES SHALL CONFORM TO ASTM C478
- LEAKAGE TEST:  
A) ALL NEW SEWERS, MANHOLES AND FORCE MAINS SHALL BE TESTED FOR WATER TIGHTNESS BY THE USE OF EITHER WATER OR LOW-PRESSURE AIR TESTS.  
B) LOW PRESSURE AIR TESTING SHALL BE IN ACCORDANCE WITH ASTM C828.  
C) FORCE MAINS SHALL BE TESTED IN ACCORDANCE WITH SECTION 4 OF AWWA C600, AT A PRESSURE EQUAL TO 150% OF THE DESIGN OPERATING TOTAL DYNAMIC HEAD.
- INVERTS AND SHELVES: MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW AT CHANGES IN DIRECTION, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE THROUGH CHANNEL UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY.
- FRAMES AND COVERS: MANHOLE FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30 INCH DIA. CLEAR OPENING. THE WORD "SEWER" OR "DRAIN" SHALL BE CAST INTO THE CENTER OF THE UPPER FACE OF EACH COVER WITH RAISED, 3" LETTERS.
- CONCRETE FOR DROP SHOULDER SHALL CONFORM TO THE REQUIREMENT FOR CLASS "A" (3000#) CONCRETE OF THE NEW HAMPSHIRE DEPARTMENT OF PUBLIC WORKS AND HIGHWAY STANDARD SPECIFICATIONS AS FOLLOWS:  
CEMENT: 6.0 BAGS PER CUBIC YARD.  
WATER: 5.75 GALLONS PER BAG OF CEMENT.  
MAXIMUM SIZE OF AGGREGATE: (1) INCH.
- FLEXIBLE JOINT: A FLEXIBLE JOINT SHALL BE PROVIDED WITHIN THE FOLLOWING DISTANCES:  
R.C.P. & C.I. PIPE - ALL SIZES - 48"  
P.V.C. PIPE - ALL SIZES - 48"  
P.F. PIPE - ALL SIZES - 48"  
D.I. PIPE - NONE REQUIRED
- SHALLOW MANHOLE: IN LIEU OF A CONE SECTION, WHEN MANHOLE DEPTH IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER MAY BE USED HAVING AN ECCENTRIC ENTRANCE OPENING AND CAPABLE OF SUPPORTING (H-20 LOADS).
- WATER TIGHT MANHOLE COVERS WILL BE REQUIRED FOR ALL MANHOLES WITH RIMS SET AT OR BELOW ELEV. 11.00' (M.S.L.)
- CONTRACTOR SHALL PLACE 2" WIDE METAL WIRE IMPREGNATED RED PLASTIC WARNING TAPE OVER ENTIRE LENGTH OF ALL GRAVITY SEWERS, HOUSE SERVICES, AND FORCE MAINS.

SEWER/LIGHTING DETAILS

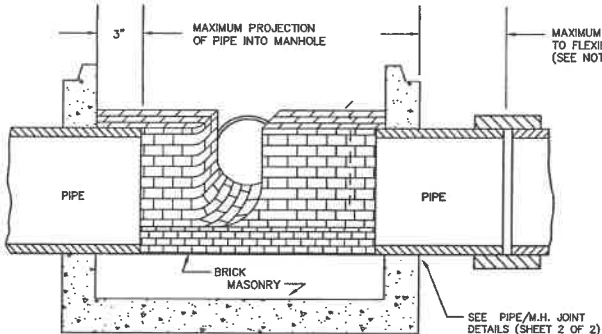
MEADOW COURT  
RESIDENTIAL DEVELOPMENT  
SALMON FALLS ROAD  
ROCHESTER, NH

DATE: AUG, 2017 SCALE: NTS  
PROJ. NO: NH-1007 SHEET NO. 14 OF 19



- NOTES:
- CARE SHALL BE TAKEN TO INSURE THAT THE BRICK INVERT IS A SMOOTH CONTINUATION OF THE SEWER INVERT. INVERT BRICKS SHALL BE LAID ON EDGE.
  - INVERT AND SHELF TO BE PLACED AFTER LEAKAGE TEST.

SECTION B-B

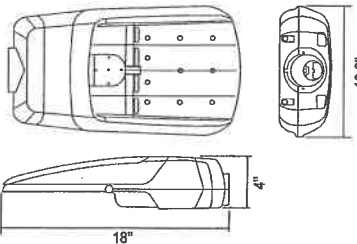


SECTION A-A

NOTES

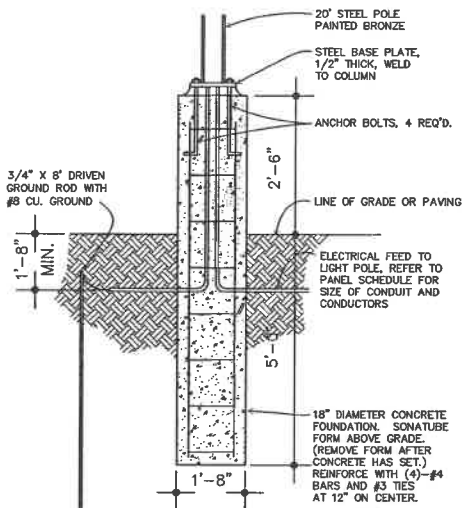
- IT IS THE INTENTION THAT THE MANHOLE, INCLUDING ALL COMPONENT PARTS, HAVE ADEQUATE SPACE, STRENGTH AND LEAKPROOF QUALITIES CONSIDERED NECESSARY BY THE COMMISSION FOR THE INTENDED SERVICE SPACE REQUIREMENTS AND CONFIGURATIONS, SHALL BE AS SHOWN ON THE DRAWING. MANHOLES MAY BE AN ASSEMBLY OF PRECAST SECTIONS, WITH STEEL REINFORCEMENT, WITH ADEQUATE JOINTING, OR CONCRETE CAST MONOLITHICALLY IN PLACE WITH REINFORCEMENT. IN ANY APPROVED MANHOLE, THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND LOADS OF 8 TONS (H-20 LOADING) WITHOUT FAILURE AND PREVENT LEAKAGE IN EXCESS OF ONE GALLON PER DAY PER VERTICAL FOOT OF MANHOLE, CONTINUOUSLY FOR THE LIFE OF THE STRUCTURE. A PERIOD GENERALLY IN EXCESS OF 25 YEARS IS TO BE UNDERSTOOD IN BOTH CASES.
- BARRELS AND CONE SECTIONS SHALL BE PRECAST REINFORCED CONCRETE, OR POURED IN PLACE REINFORCED CONCRETE.
- PRECAST CONCRETE BARREL SECTIONS, CONES AND BASES SHALL CONFORM TO ASTM C478
- LEAKAGE TEST SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS.
- INVERTS AND SHELVES: MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW AT CHANGES IN DIRECTION, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE THROUGH CHANNEL UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY.
- FRAMES AND COVERS: MANHOLE FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30 INCH DIA. CLEAR OPENING. THE WORD "SEWER" OR "DRAIN" SHALL BE CAST INTO THE CENTER OF THE UPPER FACE OF EACH COVER WITH RAISED, 3" LETTERS.
- BEDDING: MINIMUM 12" SAND BLANKET AS SPECIFIED AND REMAINING FILL AS SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATERIAL AND MEETING ASTM C-33 STONE SIZE No. 67  
100% PASSING 1 INCH SCREEN  
90-100% PASSING 3/4 INCH SCREEN  
20-50% PASSING 3/8 INCH SCREEN  
0-10% PASSING No. 4 SIEVE  
0-5% PASSING No. 8 SIEVE  
WHERE ORDERED BY THE ENGINEER TO STABILIZE THE TRENCH BASE, GRADED SCREENED GRAVEL OR CRUSHED STONE 3/4 INCH TO 1-1/2 INCH SHALL BE USED.
- FLEXIBLE JOINT: A FLEXIBLE JOINT SHALL BE PROVIDED WITHIN THE FOLLOWING DISTANCES:  
R.C.P. & C.I. PIPE - ALL SIZES - 48"  
P.V.C. PIPE - ALL SIZES - 48"  
P.F. PIPE - ALL SIZES - 48"  
D.I. PIPE - NONE REQUIRED
- CONTRACTOR SHALL PLACE 2" WIDE METAL WIRE IMPREGNATED RED PLASTIC WARNING TAPE OVER ENTIRE LENGTH OF ALL SEWERS.
- ALL SEWER LINES SHALL BE AIR TESTED, MANDREL AND LAMP TESTED TO THE APPROVAL OF THE SEWER COMMISSION.

AFFINIT LIGHTING  
S800 SERIES ROADWAY LUMINAIRE



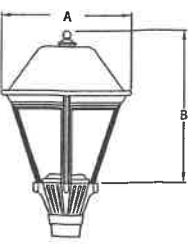
Product Specifications					
EXAMPLE: S800-300W-300K-TS-10-10-30-M → S800-400W-400K-TS-10-10-30-M					
MODEL	POWER	COLOR	DISTRIBUTION	CONTROL OPTION	FINISH
S800	300W	3000K	T2: Type II	10: 0-10V Dimming	GR: Grey White
S801	400W	4000K	T3: Type III	10: 0-10V Dimming	GR: Grey White
S801	600W	6000K	T5: Type V	10: 0-10V Dimming	GR: Grey White

CHESLEY HILL INTERSECTION STREET LIGHT DETAIL



POLE FOUNDATION  
LIGHT BASE DETAIL  
SCALE: NONE

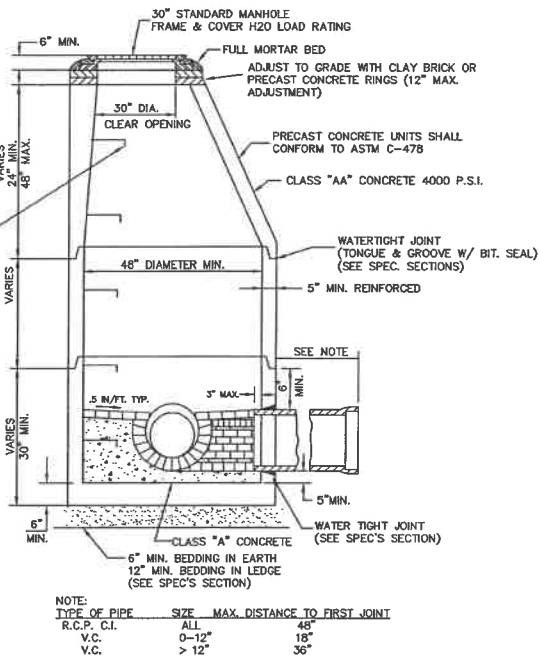
SUN VALLEY LIGHTING  
SIGMA SERIES LED



FIXTURE	A	B
SIG 1	24"	37"
SIG 2	18.5"	28"

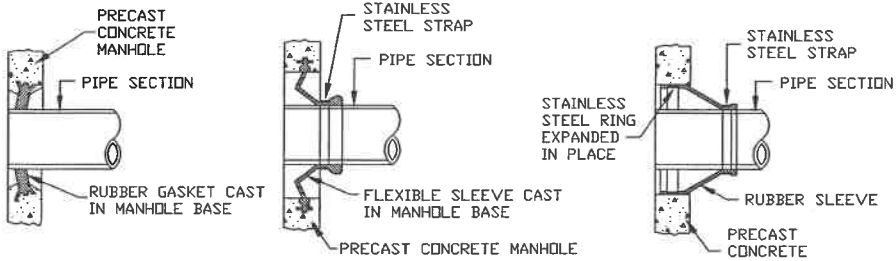
INTERIOR STREETS LIGHT DETAIL

SEWER MANHOLE  
TYPICAL SECTION

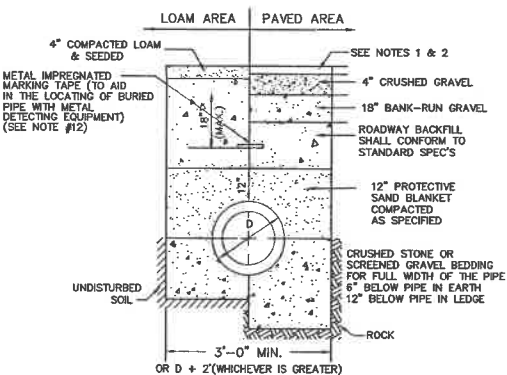


IRON STEP BARS TO BE CAST INTO MANHOLES WITH OVERALL INTERIOR HEIGHT GREATER THAN 6' AT 1' INTERVALS ON NON-ECCENTRIC SIDE OF STRUCTURE. (ASTM C-478).

NOT TO SCALE



MANHOLE SEAL DETAILS  
N.T.S.

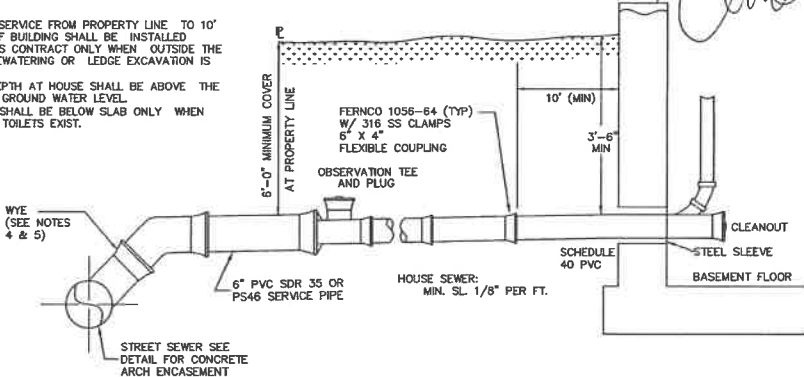


- NOTE:
- PAVEMENT REPAIR IN EXISTING ROADWAYS SHALL CONFORM TO STREET OPENING REGULATIONS.
  - NEW ROADWAY CONSTRUCTION SHALL CONFORM TO SUBDIVISION SPECS.

TYPICAL SEWER TRENCH DETAIL

NOT TO SCALE

- NOTES:
- SEWER SERVICE FROM PROPERTY LINE TO 10' OUTSIDE OF BUILDING SHALL BE INSTALLED UNDER THIS CONTRACT ONLY WHEN OUTSIDE THE TRENCH DEWATERING OR LEDGE EXCAVATION IS REQUIRED.
  - PIPE DEPTH AT HOUSE SHALL BE ABOVE THE SEASONAL GROUND WATER LEVEL.
  - SEWER SHALL BE BELOW SLAB ONLY WHEN BASEMENT TOILETS EXIST.



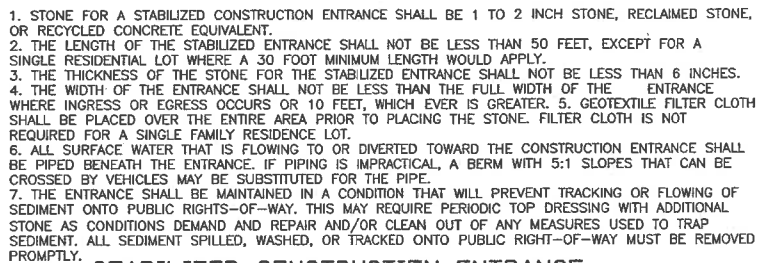
DETAIL OF HOUSE SEWER SERVICE



1. THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, BUT NO MORE THAN 5 ACRES OF LAND SHALL BE EXPOSED BEFORE DISTURBED AREAS ARE STABILIZED\*.
2. EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND AT LOCATIONS AS REQUIRED OR DIRECTED BY THE ENGINEER ALL DISTURBED AREAS SHALL BE RETURNED TO ORIGINAL GRADES AND ELEVATIONS.
3. DISTURBED AREAS SHALL BE LOADED WITH A MINIMUM OF 4" OF LOAM AND SEEDED WITH NOT LESS THAN 1.10 POUNDS OF SEED PER 1000 SQUARE FEET OF AREA. (48 POUNDS PER ACRE) SEE SEED SPECIFICATIONS THIS SHEET.
4. SILT FENCES AND OTHER EROSION CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER EVERY RAIN EVENT GREATER THAN 0.25" DURING THE LIFE OF THE PROJECT. ALL DAMAGED AREAS SHALL BE REPAIRED, SEDIMENT DEPOSITS SHALL PERIODICALLY BE REMOVED AND DISPOSED OF.
5. AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED, THE TEMPORARY EROSION CONTROL MEASURES ARE TO BE REMOVED AND THE AREA DISTURBED BY THE REMOVAL SMOOTHED AND RE-VEGETATED.
6. AREAS MUST BE SEEDED AND MULCHED IMMEDIATELY UPON FINAL GRADING, PERMANENTLY STABILIZED WITHIN 14 DAYS OF FINAL GRADING, OR TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF SOIL. (IMMEDIATELY MEANS AS SOON AS PRACTICABLE, BUT NO LATER THAN THE END OF THE NEXT WORK DAY, FOLLOWING THE DAY EARTH DISTURBING ACTIVITIES TEMPORARILY OR PERMANENTLY CEASED. \* AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
  - BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED.
  - A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED.
  - A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS RIPRAP HAS BEEN INSTALLED.
  - EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

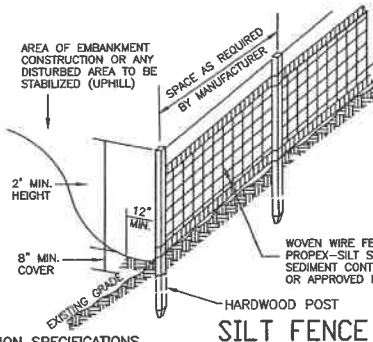
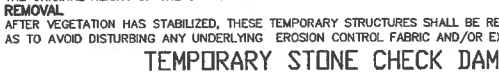
1. STRUCTURES SHALL BE INSTALLED ACCORDING TO THE DIMENSIONS SHOWN ON THE PLANS AT THE APPROPRIATE SPACING.
2. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER SO THAT EROSION AND AIR AND WATER POLLUTION WILL BE MINIMIZED.
3. WHEN HAY BALES ARE USED, THE BALES SHALL BE EMBEDDED AT LEAST 4 INCHES INTO THE SOIL. WHEN TIMBER STRUCTURES ARE USED, THE TIMBER SHALL EXTEND AT LEAST 18" INTO THE SOIL.
4. HAY OR STRAW BALES SHALL BE ANCHORED INTO THE SOIL USING 2" X 2" STAKES DRIVEN THROUGH THE BALES AND AT LEAST 18 INCHES IN TO THE SOIL.
5. SEEDING, FERTILIZING, AND MULCHING SHALL CONFORM TO THE RECOMMENDATIONS IN THE APPROPRIATED VEGETATIVE BMP.
6. STRUCTURES SHALL BE REMOVED FROM THE CHANNEL WHEN THEIR USEFUL LIFE HAS BEEN COMPLETED.
7. THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES THE CONTRACTOR SHALL TAKE PRECAUTIONS AND INSTRUCTIONS FROM THE PLANNING DEPARTMENT IN ORDER TO PREVENT, ABATE AND CONTROL THE EMISSION OF FUGITIVE DUST INCLUDING BUT NOT LIMITED TO WETTING, COVERING, SHIELDING, OR VACUUMING.
8. THE NH COMMISSIONER OF AGRICULTURE PROHIBITS THE COLLECTION, POSSESSION, IMPORTATION, TRANSPORTATION, SALE, PROPAGATION, TRANSPLANTATION, OR CULTIVATION OF PLANTS BANNED BY NH LAW RSA 430:53 AND NH CODE ADMINISTRATIVE RULES AGR 3800. THE PROJECT SHALL MEET ALL REQUIREMENTS AND THE INTENT OF RSA 430:53 AND AGR 3800 RELATIVE TO INVASIVE SPECIES
9. THIS PROJECT IS REGULATED UNDER EPA NPDES CONSTRUCTION GENERAL PERMIT. THE CONSTRUCTION SITE OPERATOR AND OWNER SHALL SUBMIT A NOTICE OF INTENT (NOI) TO USEPA, WASHINGTON, DC, STORMWATER NOTICE PROCESSING CENTER AT LEAST SEVEN DAYS PRIOR TO COMMENCEMENT OF WORK ON SITE. EPA WILL POST THE NOI AT <http://cfpub.epa.gov/npdes/stormwater/noi/noisearch.cfm>. AUTHORIZATION IS GRANTED UNDER THE PERMIT ONCE THE NOI IS SHOWN IN "ACTIVE STATUS".

1. CUT AND REMOVE TREES IN CONSTRUCTION AREAS AS REQUIRED OR DIRECTED.
2. CONSTRUCT AND/OR INSTALL TEMPORARY AND PERMANENT SEDIMENT EROSION AND DETENTION CONTROL FACILITIES AS REQUIRED. EROSION, SEDIMENT AND DETENTION CONTROL FACILITIES SHALL BE INSTALLED AND STABILIZED PRIOR TO ANY EARTH MOVING OPERATION AND PRIOR TO DIRECTING RUNOFF TO THEM.
3. CLEAR, CUT, GRUB AND DISPOSE OF DEBRIS IN APPROVED FACILITIES. STUMPS AND DEBRIS ARE TO BE REMOVED FROM SITE AND DISPOSED OF PER STATE AND LOCAL REGULATIONS IN PHASES AS DIRECTED.
4. EXCAVATE AND STOCKPILE TOPSOIL /LOAM. STOCKPILING SHALL NOT TAKE PLACE ON SLOPES GREATER THAN 10%. ALL AREAS SHALL BE STABILIZED IMMEDIATELY AFTER GRADING.
5. CONSTRUCT TEMPORARY CULVERTS AS REQUIRED OR DIRECTED.
6. CONSTRUCT THE ROADWAY/DRIVEWAYS AND ITS ASSOCIATED DRAINAGE STRUCTURES. ALL ROADWAYS, PARKING AREAS, AND CUT/FILL SLOPES SHALL BE STABILIZED AND/OR LOAMED AND SEEDED WITHIN 72-HOURS OF ACHIEVING FINISH GRADE AS APPLICABLE.
7. INSTALL PIPE AND CONSTRUCTION ASSOCIATED APPURTENANCES AS REQUIRED OR DIRECTED. ALL DISTURBED AREAS SHALL STABILIZED IMMEDIATELY AFTER GRADING.
8. BEGIN PERMANENT AND TEMPORARY SEEDING AND MULCHING. ALL CUT AND FILL SLOPES AND DISTURBED AREAS SHALL BE SEEDER OR MULCHED AS REQUIRED, OR DIRECTED.
9. DAILY OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINAGE CHECK DAMS, DITCHES, SEDIMENT TRAPS, ETC. TO PREVENT EROSION ON THE SITE AND PREVENT ANY SILTATION OF ADJUTING WATERS OR PROXIMATE AREAS.
10. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION
11. COMPLETE PERMANENT SEEDING AND LANDSCAPING
12. REMOVE TEMPORARY EROSION CONTROL DEVICES AFTER THE AREAS ARE STABILIZED AND ESTABLISHED THEMSELVES TO NO LESS THEN 85%, AS DETERMINED BY THE CITY OF LACONIA PLANNING DEPARTMENT IN CONJUNCTION WITH THE SITE ENGINEER. NO EROSION CONTROL DEVICES CAN BE REMOVED UNLESS INSPECTED BY THE ENGINEER AND PLANNING DEPARTMENT.
13. ALL SWALES AND DRAINAGE STRUCTURES WILL BE CONSTRUCTED AND STABILIZED PRIOR TO HAVING RUNOFF DIRECTED TO THEM.
14. FINISH PAVING ALL ROADWAYS/DRIVEWAYS.
15. LOT DISTURBANCE OTHER THAN THAT SHOWN ON THE APPROVED PLANS SHALL NOT COMMENCE UNTIL THE ROADWAY HAS THE BASE COURSE TO DESIGN ELEVATION AND THE ASSOCIATED DRAINAGE IS COMPLETE AND STABLE.



1. ALL DISTURBED AREAS THAT DO NOT HAVE AT LEAST 85% VEGETATIVE COVERAGE PRIOR TO OCTOBER 15TH, SHALL BE STABILIZED BY APPLYING MULCH AT A RATE OF 3-4 TONS PER ACRE. ALL SIDE SLOPES, STEEPER THAN 4:1, THAT ARE NOT DIRECTED TO SWALES OR DETENTION BASINS, SHALL BE LINED WITH BIODEGRADABLE/PHOTODEGRADABLE "JUTE MATTING" (EXCELSIOR'S CURLEX II OR EQUAL). ALL OTHER SLOPES SHALL BE MULCHED AND TACKED AT A RATE OF 3-4 TONS PER ACRE. THE APPLICATION OF MULCH AND/OR JUTE MATTING SHALL NOT OCCUR OVER EXISTING SNOW COVER. IF THE SITE IS ACTIVE AFTER NOVEMBER 15TH, ANY SNOW THAT ACCUMULATES ON DISTURBED AREAS SHALL BE REMOVED. PRIOR TO SPRING THAW ALL AREAS WILL BE STABILIZED, AS DIRECTED ABOVE.
2. ALL SWALES THAT DO NOT HAVE FULLY ESTABLISHED VEGETATION SHALL BE EITHER LINED WITH NORTH AMERICAN GREEN MATTING OR TEMPORARY STONE CHECK DAMS (APPROPRIATELY SPACED). STONE CHECK DAMS WILL BE MAINTAINED THROUGHOUT THE WINTER MONTHS. IF THE SWALES ARE TO BE MATTED WITH PERMANENT LINERS OR RIPRAP WITH ENGINEERING FABRIC, THIS SHALL BE COMPLETED PRIOR TO WINTER SHUTDOWN OR AS SOON AS THEY ARE PROPERLY GRADED AND SHAPED.
3. PRIOR TO NOV. 15TH ALL ROADWAY AND PARKING AREAS SHALL BE BROUGHT UP TO AND THROUGH THE BANK RUN GRAVEL APPLICATION. IF THESE AREAS' ELEVATIONS ARE PROPOSED TO REMAIN BELOW THE PROPOSED SUBGRADE ELEVATION, THE SUBGRADE MATERIAL SHALL BE ROUGHLY CROWNED AND A 3" LAYER OF CRUSHED GRAVEL SHALL BE PLACED AND COMPACTED. THIS WILL ALLOW THE SUBGRADE TO SHED RUNOFF AND WILL REDUCE ROADWAY EROSION. THIS CRUSHED GRAVEL DOES NOT HAVE TO CONFORM TO NH DOT 304.3, BUT SHALL HAVE BETWEEN 15-25% PASSING THE #200 SIEVE AND THE LARGEST STONE SIZE SHALL BE 2". IF THE SITE IS ACTIVE AFTER NOVEMBER 15TH, ANY ACCUMULATED SNOW SHALL BE REMOVED FROM ALL ROADWAY AND PARKING AREAS.
4. AFTER OCTOBER 15TH, THE END OF NEW HAMPSHIRE'S AVERAGE GROWING SEASON, NO ADDITIONAL LOAM SHALL BE SPREAD ON SIDE SLOPES AND SWALES. THE STOCKPILES THAT WERE LEFT UNDISTURBED PRIOR TO SPRING SHALL BE COVERED BY THE DATE OF OCTOBER 15TH. ANY NEW OR DISTURBED PILES SHALL BE MULCHED AT A RATE OF 3-4 TONS PER ACRE. ALL STOCKPILES WILL REMAIN THROUGHOUT THE WINTER SHALL BE SURROUNDED WITH SILT FENCING.

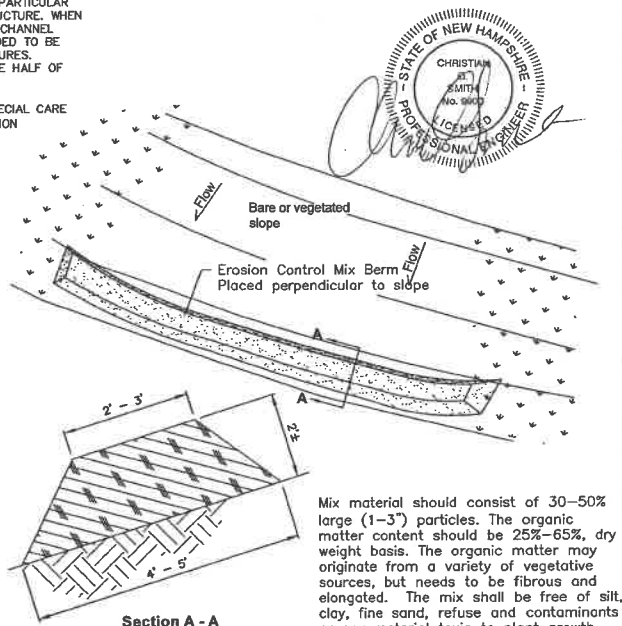
1. GRADING AND SHAPING
  - A. SLOPES SHOULD NOT BE STEEPER THAN 2:1; 3:1 SLOPES OR FLATTER ARE PREFERRED. WHERE MOWING WILL BE DONE, 3:1 SLOPES OR FLATTER ARE RECOMMENDED.
2. SEEDBED PREPARATION
  - A. SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
  - B. STONES LARGER THAN 4 INCHES AND TRASH SHOULD BE REMOVED BECAUSE THEY INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, THE SOIL SHOULD BE TILLED TO A DEPTH OF ABOUT 4 INCHES TO PREPARE A SEEDBED AND MIX FERTILIZER AND LIME INTO THE SOIL. THE SEEDBED SHOULD BE LEFT IN REASONABLY FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.
3. ESTABLISHING A STAND
  - A. LIME AND FERTILIZER SHOULD BE APPLIED PRIOR TO OR AT THE TIME OF SEEDING AND INCORPORATED INTO THE SOIL. KINDS AND AMOUNTS OF LIME AND FERTILIZER SHOULD BE BASED ON AN EVALUATION OF SOIL TESTS. WHEN A SOIL TEST IS NOT AVAILABLE, THE FOLLOWING MINIMUM AMOUNTS SHOULD BE APPLIED:  
AGRICULTURAL LIMESTONE, 2 TONS PER ACRE OR 100 LBS PER 1,000 SQ. FT..  
NITROGEN(N), 50 LBS PER ACRE OR 1. 1 LBS PER 1,000 SQ.FT.  
PHOSPHATE(P2O5), 100 LBS PER ACRE OR 2. 2 LBS PER 1,000 SQ.FT.  
POTASH(K2O), 100 LBS PER ACRE OR 2. 2 LBS PER 1,000 SQ.FT.  
(NOTE: THIS IS THE EQUIVALENT OF 500 LBS PER ACRE OF 10-20-20 FERTILIZER OR 1,000 LBS PER ACRE OF 5-10-10.)
  - B. SEED SHOULD BE SPREAD UNIFORMLY BY THE METHOD MOST APPROPRIATE FOR THE SITE. METHODS INCLUDE BROADCASTING, DRILLING AND HYDROSEEDING. WHERE BROADCASTING IS USED, COVER SEED WITH .25 INCH OF SOIL OR LESS, BY CULTIPACKING OR RAKING.
  - C. REFER TO TABLE(G-E1 THIS SHEET) FOR APPROPRIATE SEED MIXTURES AND TABLE(H-E1 THIS SHEET) FOR RATES OF SEEDING. ALL LEGUMES (CROWN VETCH, BIRDS FOOT TREFOIL, AND FLAT PEA) MUST BE INOCULATED WITH THEIR SPECIFIC INOCULANT.
  - D. WHEN SEEDBED AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDBED AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20 OR FROM AUGUST 10 TO SEPTEMBER 1.
4. MULCH
  - A. HAY, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER SEEDING.
  - B. MULCH WILL BE HELD IN PLACE USING APPROPRIATE TECHNIQUES FROM THE BEST MANAGEMENT PRACTICE FOR MULCHING. HAY OR STRAW MULCH SHALL BE PLACED AT A RATE OF 90 LBS PER 1000 SQ. FT.
5. MAINTENANCE TO ESTABLISH A STAND
  - A. PLANTED AREA SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH.
  - B. FERTILIZATION NEEDS SHOULD BE DETERMINED BY ONSITE INSPECTIONS. SUPPLEMENTAL FERTILIZER IS USUALLY THE KEY TO COMPLETE THE ESTABLISHMENT OF THE STAND BECAUSE MOST PERENNIAL STAKE 2 TO 3 YEARS TO BECOME ESTABLISHED.
  - C. IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED, OCCASIONAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION.



1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES AND FILTER CLOTH SHALL BE FASTENED TO WOVEN WIRE EVERY 24" AT TOP MID AND BOTTOM SECTIONS AND BE EMBEDDED INTO GROUND A MINIMUM OF 8". 2. THE FENCE POSTS SHALL BE A MINIMUM 48" LONG, SPACED A MAXIMUM 10' APART, AND DRIVEN A MINIMUM OF 16" INTO THE GROUND.
3. WHEN THE SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THE ENDS OF THE FABRIC SHALL BE OVERLAPPED BY SIX INCHES, FOLDED AND STAPLED TO PREVENT SEDIMENT FROM BY-PASSING.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SEDIMENT REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE AND PROPERLY DISPOSED OF.
5. PLACE THE ENDS OF THE SILT FENCE UP CONTOUR TO PROVIDE FOR SEDIMENT STORAGE.
6. SILT FENCES SHALL BE REMOVED WHEN NO LONGER NEEDED AND THE SEDIMENT ACCUMULATED SHALL BE PROPERLY DISPOSED OF BY AN ENGINEER. THE AREA DISTURBED BY THE REMOVAL SHALL BE SMOOTHED AND RE-VEGETATED.

1. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
2. IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER.
4. REMOVED SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REPLACED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

NOTE: TEMPORARY SEED MIX FOR STABILIZATION OF TURF SHALL BE WINTER RYE OR OATS AT A RATE OF 2.5 LBS. PER 1000 S.F. AND SHALL BE PLACED PRIOR TO OCT. 15, IF PERMANENT SEEDING NOT YET COMPLETE.



Mix material should consist of 30–50% large (1–3") particles. The organic matter content should be 25%–65%, dry weight basis. The organic matter may originate from a variety of vegetative sources, but needs to be fibrous and elongated. The mix shall be free of silt, clay, fine sand, refuse and contaminants or any material toxic to plant growth. Erosion Control Mix berms are effective filters for overland flow conditions and should not be used to filter concentrated flow such as that found in drainage ditches, streams, etc.

MIXTURE	POUNDS PER ACRE	POUNDS PER 1,000 Sq. Ft.
A. TALL FESCUE	20	0.45
CREeping RED FESCUE	20	0.45
RED TOP	2	0.04
TOTAL	42	0.95
B. TALL FESCUE	10	0.35
CREeping RED FESCUE	10	0.35
CROWN VETCH	15	0.35
OR		
FLAT PEA	30	0.75
TOTAL	40 OR 55	0.95 OR 1.35
C. TALL FESCUE	20	0.45
CREeping RED FESCUE	20	0.45
BIRDS FOOT TREFOIL	48	0.20
TOTAL	88	1.10
D. TALL FESCUE	20	0.45
FLAT PEA	30	0.75
TOTAL	50	1.20
E. CREeping RED FESCUE 1/	50	1.15
KENTUCKY BLUEGRASS 1/2	50	1.15
TOTAL	100	2.30
F. TALL FESCUE 1	150	3.60

1/ FOR HEAVY USE ATHLETIC FIELDS CONSULT THE UNIVERSITY OF NEW HAMPSHIRE SPECIALTIES AND EXTENSION TURF SPECIALIST FOR CURRENT VARIETIES AND SEEDING RATES.

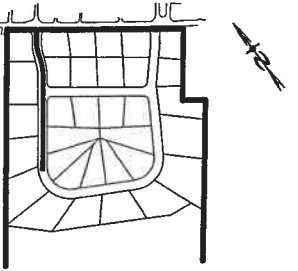
REVISIONS:		DATE:					
<div>EROSION &amp; SEDIMENTATION</div> <div>MEADOW COURT RESIDENTIAL DEVELOPMENT SALMON FALLS ROAD ROCHESTER, NH</div> <table><tr><td>DATE: AUG, 2017</td><td>SCALE: NTS</td></tr><tr><td>PROJ. NO: NH-1007</td><td>SHEET NO. 15 OF 19</td></tr></table>				DATE: AUG, 2017	SCALE: NTS	PROJ. NO: NH-1007	SHEET NO. 15 OF 19
DATE: AUG, 2017	SCALE: NTS						
PROJ. NO: NH-1007	SHEET NO. 15 OF 19						

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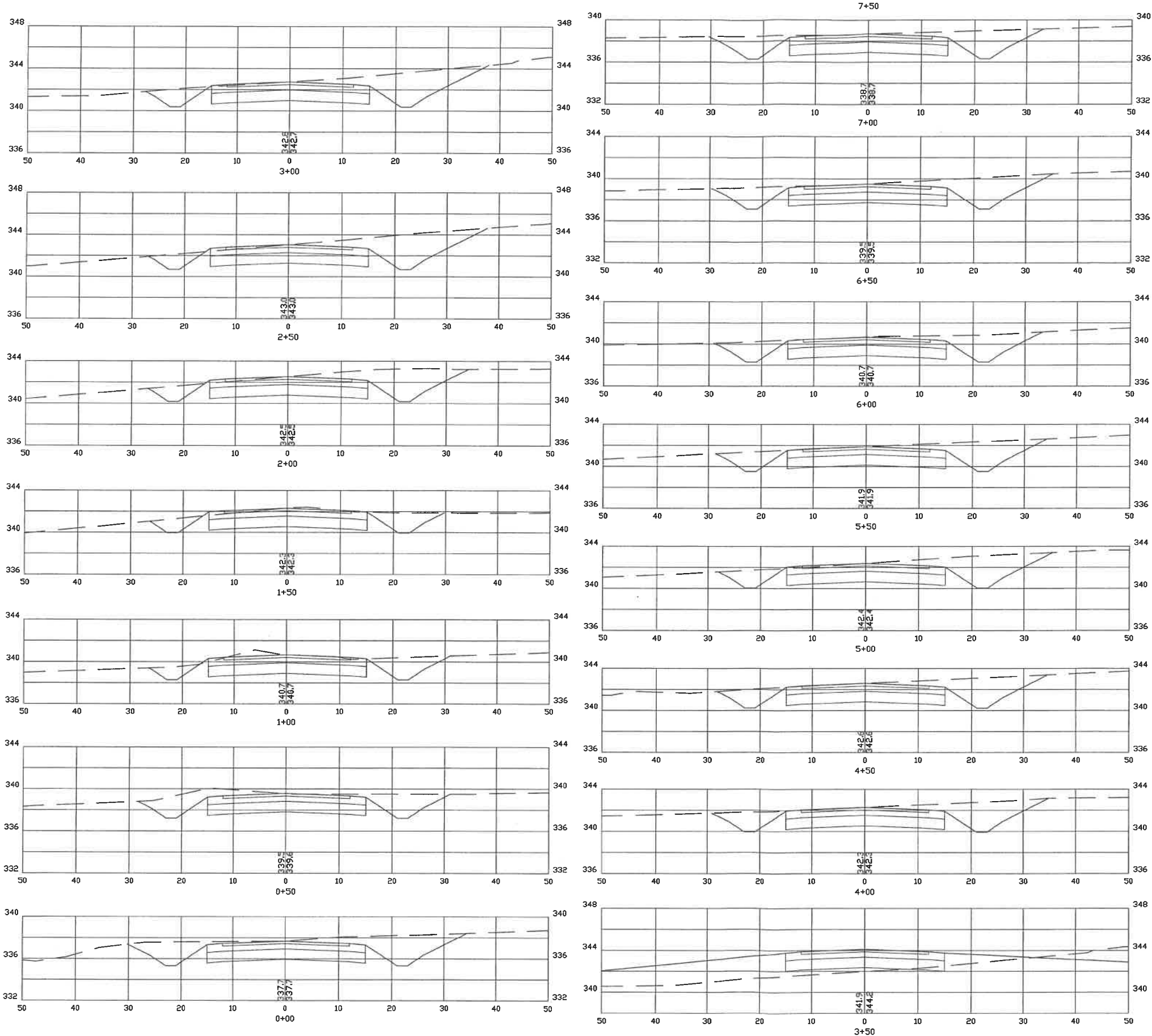
J&L TERRA HOLDINGS, INC.  
79 EXETER ROAD  
N. HAMPTON, N.H. 03862

**BEALS ASSOCIATES PLLC**

70 PORTSMOUTH AVE, STRATHAM, N.H. 03885  
PHONE: 603-583-4860, FAX: 603-583-4863



LOCATION LEGEND 1"=500'



CROSS SECTION SCALES:  
HORIZONTAL: 1"=10'  
VERTICAL: 1"=5'

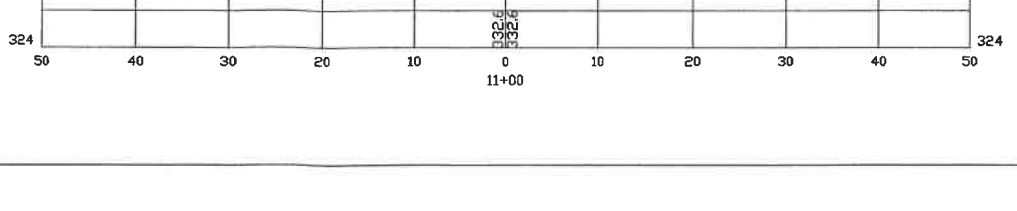
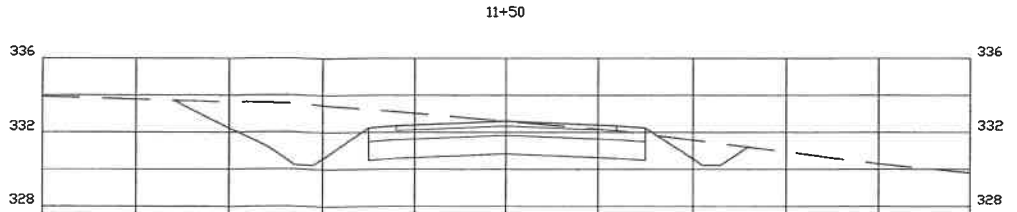
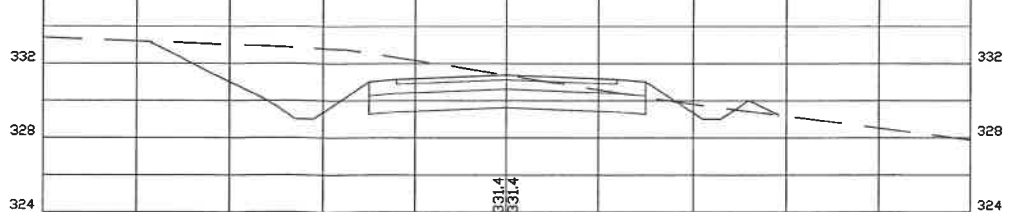
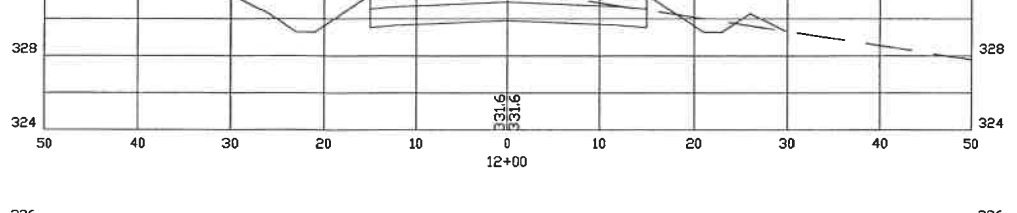
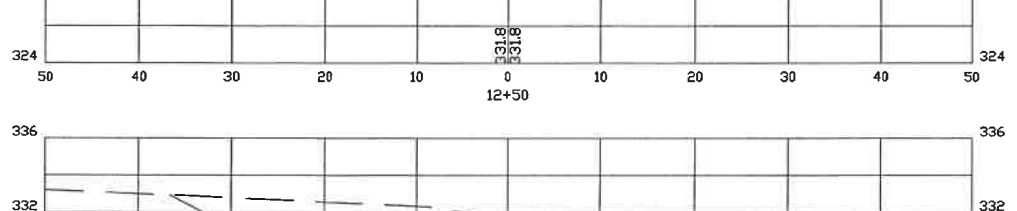
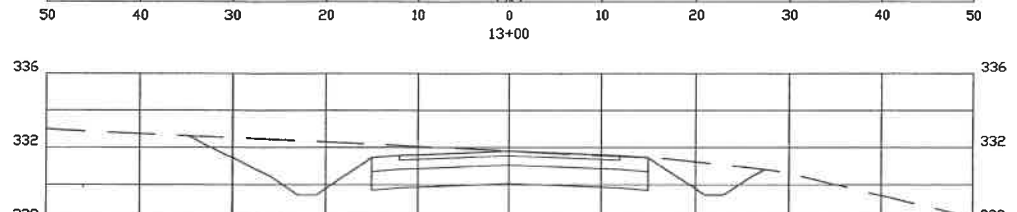
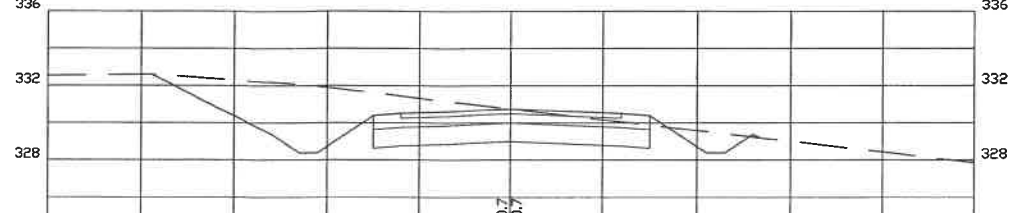
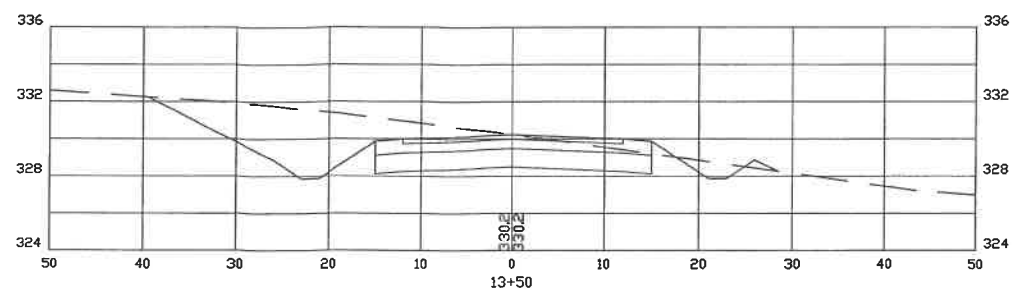
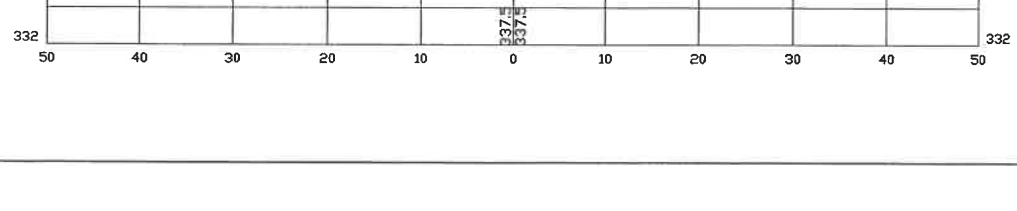
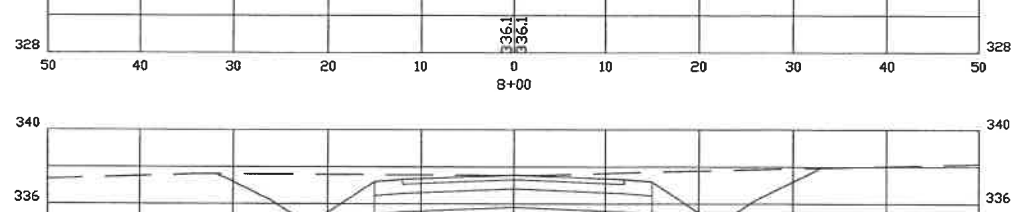
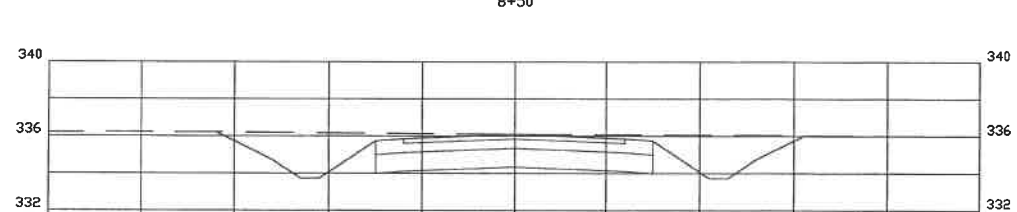
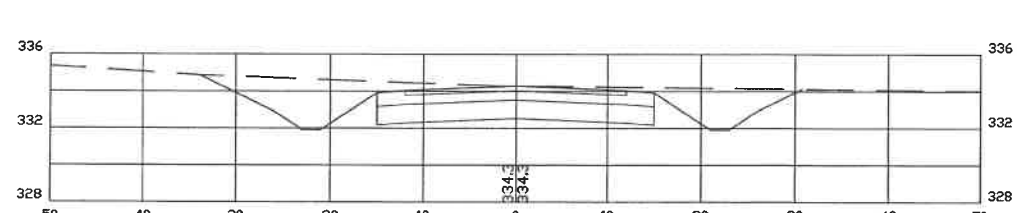
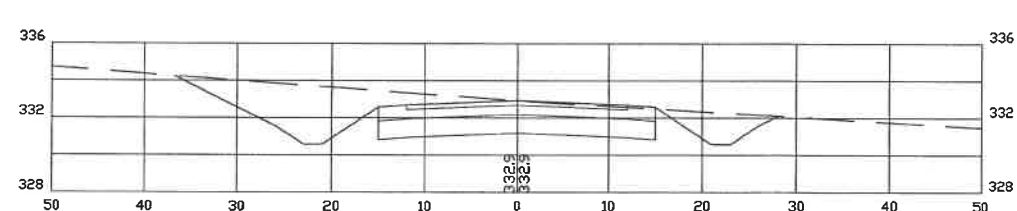
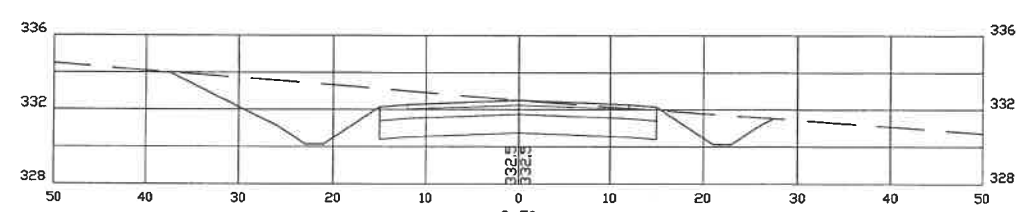
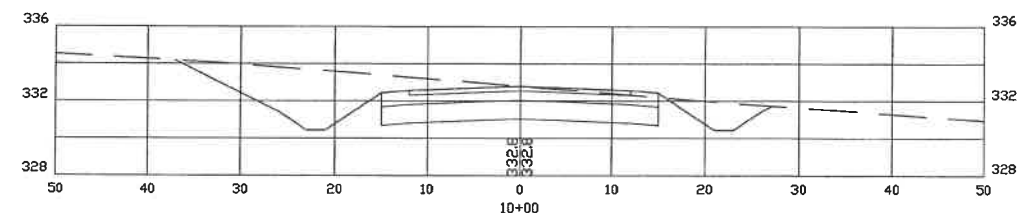
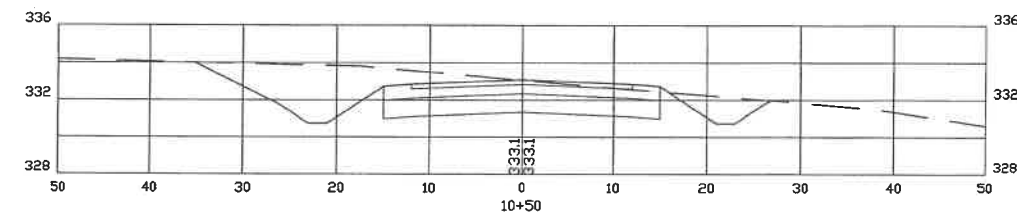
REVISIONS: \_\_\_\_\_ DATE: \_\_\_\_\_

**ROADWAY CROSS SECTIONS**

MEADOW COURT  
RESIDENTIAL DEVELOPMENT  
SALMON FALLS ROAD  
ROCHESTER, NH

DATE: AUG, 2017 SCALE: 1" = 10'  
PROJ. NO: NH-1007 SHEET NO. 16 OF 19

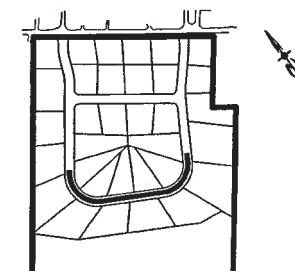




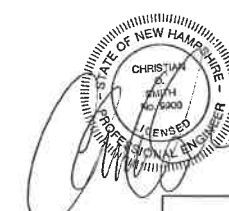
PREPARED FOR:  
J&L TERRA HOLDINGS, INC.  
79 EXETER ROAD  
N. HAMPTON, N.H. 03862

**BEALS ASSOCIATES PLLC**

70 PORTSMOUTH AVE, STRATHAM, N.H. 03885  
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LOCATION LEGEND 1"=500'



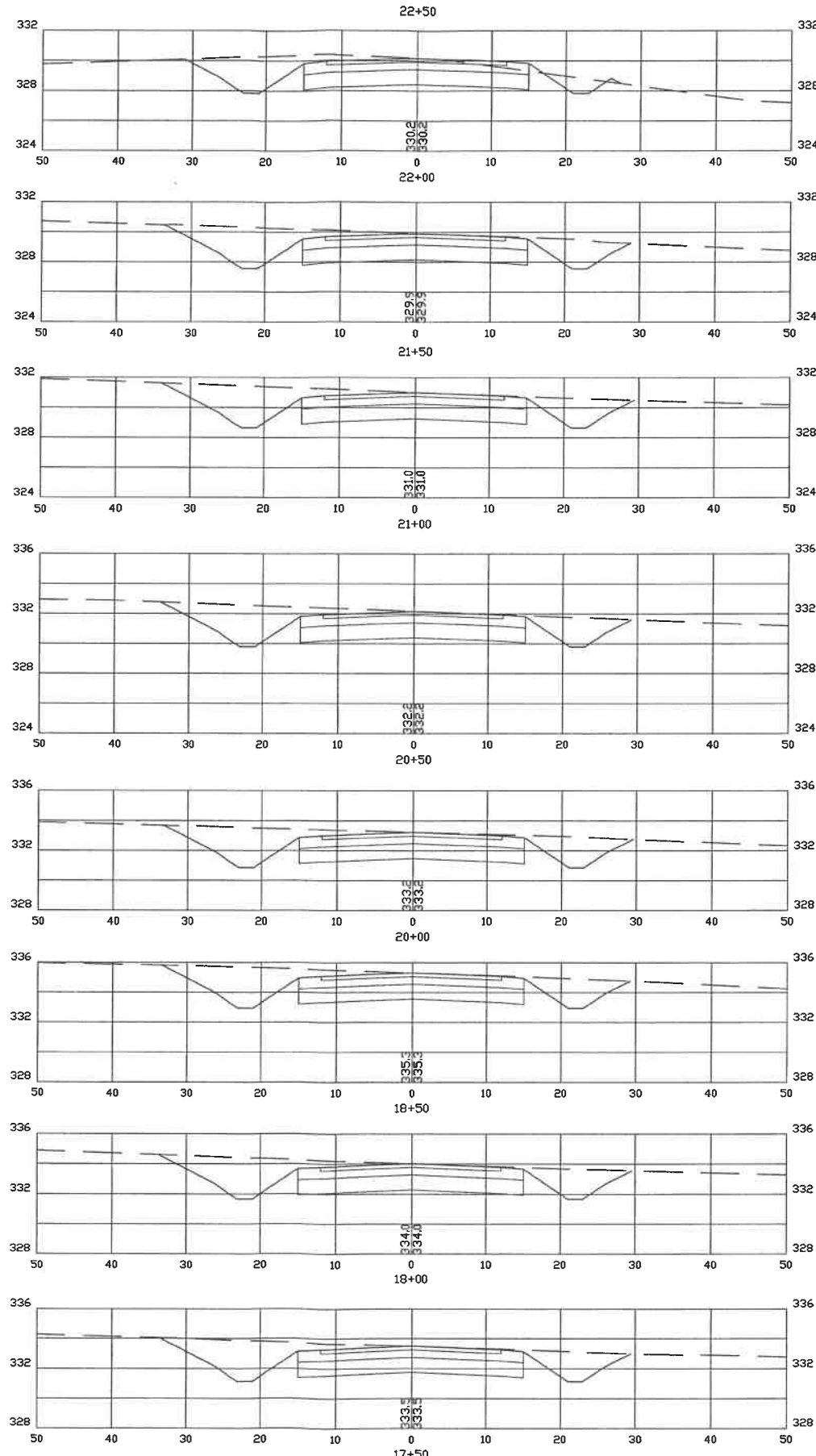
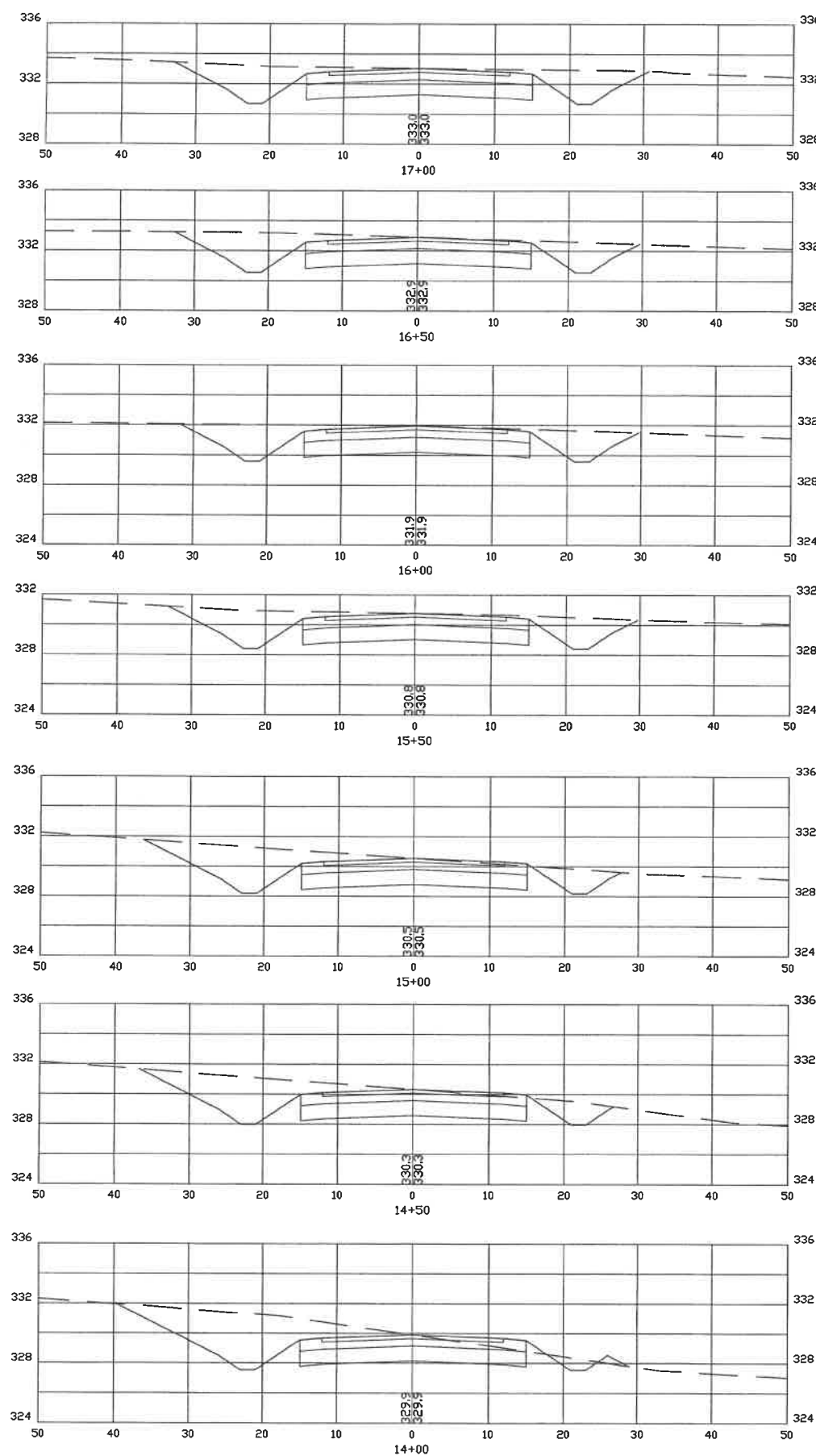
CROSS SECTION SCALES:  
HORIZONTAL: 1"=10'  
VERTICAL: 1"=5'

REVISIONS: DATE:

## ROADWAY CROSS SECTIONS

MEADOW COURT  
RESIDENTIAL DEVELOPMENT  
SALMON FALLS ROAD  
ROCHESTER, NH

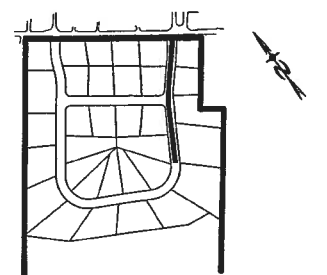
DATE: AUG, 2017 SCALE: 1" = 10'  
PROJ. NO: NH-1007 SHEET NO. 17 OF 19



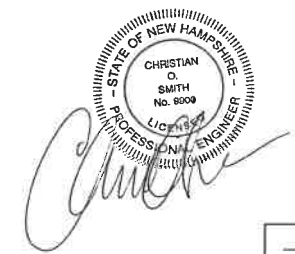
33  
32  
32  
3E

PREPARED FOR:  
J&L TERRA HOLDINGS, INC.  
79 EXETER ROAD  
N. HAMPTON, N.H. 03862

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LOCATION LEGEND 1"=500'



CROSS SECTION SCALES:  
HORIZONTAL: 1"=10'  
VERTICAL: 1"=5'

REVISIONS:	DATE:

ROADWAY CROSS SECTIONS	
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MEADOW COURT RESIDENTIAL DEVELOPMENT SALMON FALLS ROAD ROCHESTER, NH	
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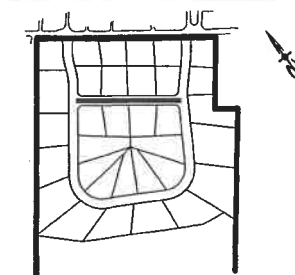
DATE: AUG, 2017	SCALE: 1" = 10'
PROJ. NO: NH-1007	SHEET NO. 18 OF 19

PREPARED FOR:

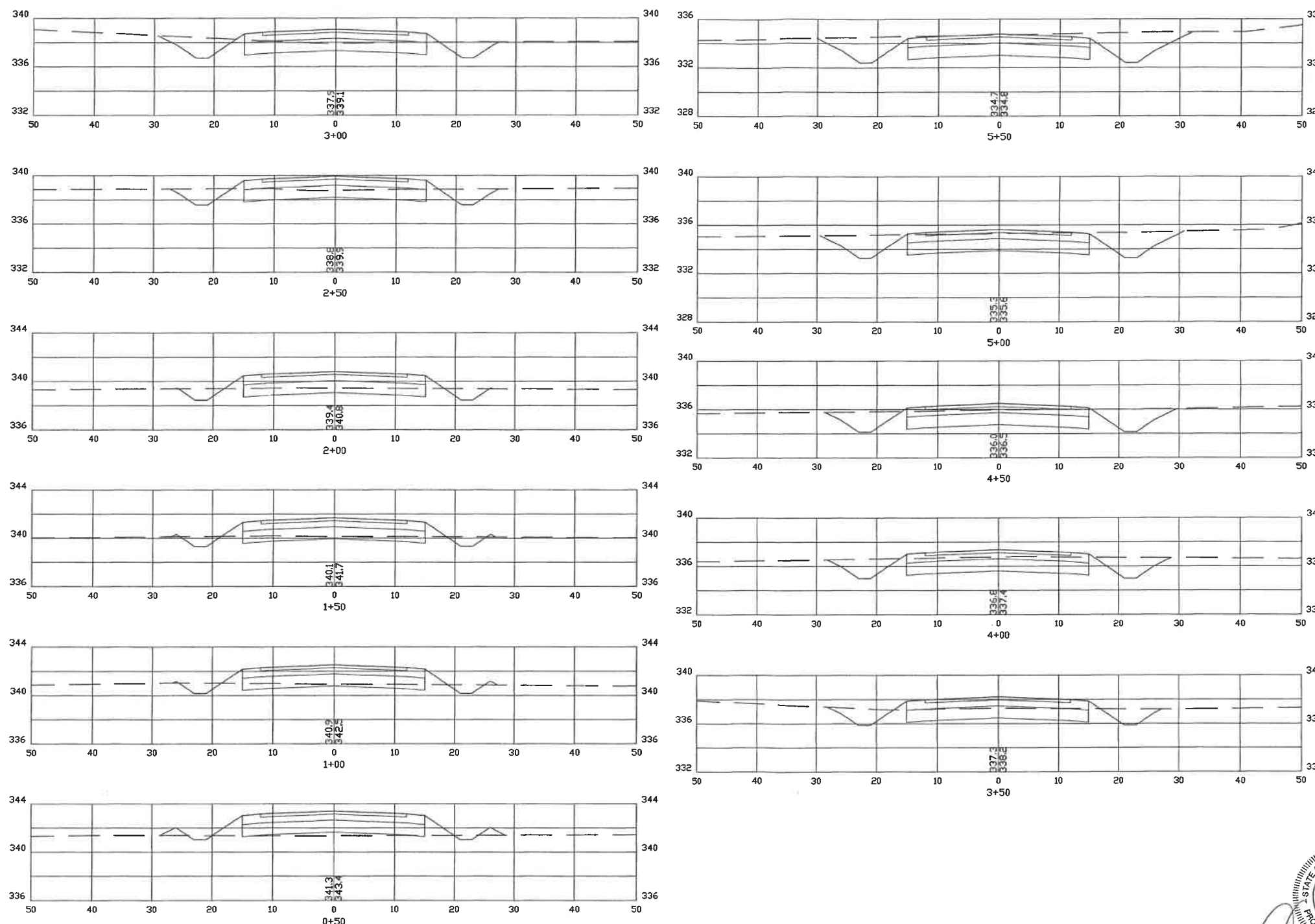
J&L TERRA HOLDINGS, INC.  
79 EXETER ROAD  
N. HAMPTON, N.H. 03862

**BEALS ASSOCIATES PLLC**

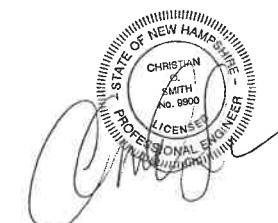
70 PORTSMOUTH AVE, STRATHAM, N.H. 03885  
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LOCATION LEGEND 1"=500'



CROSS SECTION SCALES:  
HORIZONTAL: 1"=10'  
VERTICAL: 1"=5'



REVISIONS: \_\_\_\_\_ DATE: \_\_\_\_\_

### ROADWAY CROSS SECTIONS

MEADOW COURT  
RESIDENTIAL DEVELOPMENT  
SALMON FALLS ROAD  
ROCHESTER, NH

DATE: AUG, 2017 SCALE: 1" = 10'  
PROJ. NO: NH-1007 SHEET NO. 19 OF 19