WATER SUPPLY AGREEMENT BETWEEN TOWN OF DERRY & LORDEN COMMONS, LLC

This Water Supply Agreement Between Town of Derry & Lorden Commons, LLC is made this ____ day of _____, 2018 ("Agreement") by and between the **TOWN OF DERRY**, a New Hampshire municipal corporation and **LORDEN COMMONS, LLC**, a New Hampshire limited liability company (together, the "Parties").

RECITALS

The Town of Derry ("Derry") through its Water Department manages and maintains certain water facilities and equipment to deliver municipal water to Derry residents and a limited number of customers located in abutting towns..

Manchester Water Works ("MWW") sells Derry a specific volume of water in accordance with the Derry Wholesale Water Agreement, dated March 26, 2013, ("Wholesale Agreement") which restricts Derry from reselling that water outside its jurisdiction without permission from MWW.

Lorden Commons, LLC ("Lorden") is a real estate holding company which owns a large tract of land located to the west of Old Derry Road in the Town of Londonderry, New Hampshire, within close proximity to the Derry/Londonderry town line.

The Town of Londonderry Planning Board approved Phase I of Lorden's proposed subdivision ("Lorden Commons") with individual, private wells providing water to the lots. This phase has been constructed and consists of 50 homes ("Existing Homes").

Lorden has requested and Derry has agreed to provide water service to eighty-three (83) homes proposed in phases 2, 3, and 4 of Lorden Commons and an unknown number of Existing Homes, in the event these Existing Homes request public water service in the future.

Final approval of phases 2, 3, and 4 from the Town of Londonderry, approval of Derry's provision of water service in the Town of Londonderry from the New Hampshire Public Utilities Commission ("NHPUC"), and approval from the New Hampshire Department of Environmental Services ("NHDES") are conditions precedent to the commitments contained herein.

Now, therefore, and in consideration of the Parties' mutual promises and covenants set forth below, the Parties, their representatives, successors, and assigns agree as follows:

ARTICLE I. Definitions

1. "Derry" means the Town of Derry, a New Hampshire, a municipal corporation with a mailing address of 14 Manning Street, Derry, New Hampshire, 03038.

2. "Franchise Area" means the green-shaded and red-shaded area within the Town of Londonderry shown on Exhibit A attached to this Agreement.

3. "Lorden" means Lorden Commons, LLC.

4. "Lorden Commons" means the residential subdivision located to the west of Old Derry Road in the Town of Londonderry that is being developed by Lorden. The development consists of 50 lots in phase 1, 58 total lots in phases 2 and 3, and 25 lots in phase 4.

5. "MWW" means Manchester Water Works.

6. "MSDC" means the Merrimack Source Development Charge, a capital charge assessed by MWW used to develop new water sources to expand municipal water service to meet growing demand.

7. "Waterworks" means water mains, hydrants, facilities, storage vessels, pipes, supply, distribution, treatment, pumping, master meters, customer meters, curb stops, customer service lines, and other devices and equipment used to transmit water.

8. "Water" means potable water supplied for domestic use meeting the standards set by the State of New Hampshire and the U.S. Environmental Protection Agency.

ARTICLE II. Obligations of Parties

The following obligations shall bind the Parties to this Agreement:

TOWN OF DERRY

9. Derry shall apply for and secure all necessary approvals from the Derry Town Council and MWW, allowing Lorden to extend a 12" water main located on Old Manchester Road at the Derry/Londonderry town line, to Lorden Commons in Londonderry in accordance with Derry's *Water Main Specifications*; *Town of Derry, NH Water Rates and Fees*; and the plans submitted by Keach Nordstrom Associates, Inc. ("KNA") approved by the Town of Derry and attached as Exhibit B.

10. Derry agrees to prepare and submit all applications for permits and approvals required from NHPUC, NHDES, and other governmental bodies to enlarge its water system.

11. Derry agrees to negotiate in good faith to purchase 28,000 gallons per day ("GPD") from MWW to increase Derry's maximum permitted average daily flow ("Max ADF") to serve the 83 homes and an unspecified number Existing Homes within Lorden Commons who may no longer be served by private wells and who are approved by the Town of Derry to be connected to the Derry public water system.

12. The provision of service by Derry within Lorden Commons shall be in accordance with Derry's approved rates, fares, and charges, this agreement, any wholesale water supply agreements, and any applicable state and federal laws.

13. After inspection by Derry and after Lorden constructs the Waterworks according to Derry's specifications, with the exception of individual customer service lines connecting the curb stop to the customer's meter, Derry agrees to accept and assume full ownership of all the Waterworks installed by Lorden within Lorden Commons and along Old Derry Road to the point of interconnection with Derry's water system and to assume full responsibility for operation, maintenance, and repair of same.

14. Derry agrees to inspect all Waterworks installed by Lorden, retain copies of those inspections and any calibration reports associated with those inspections, and make those reports available to Lorden upon request during normal business hours as may be required.

15. Derry agrees to inspect all Waterworks for compliance with its specifications within a reasonable time, provided Lorden satisfies all Derry's permit and construction requirements.

16. With the exception of the Existing Homes, Derry agrees to provide water service to homes in Lorden Commons at the expected pace of 25 homes in 2018, 25 homes in 2019, 25 homes in 2020, and 8 homes in 2021.

17. Derry agrees to provide water service to the Existing Homes within Lorden Commons who may no longer be served by private wells and who are approved by the Town of Derry to be connected to the Derry public water system.

18. Derry agrees to provide water service that meets the water quality standards and criteria set by the State of New Hampshire and the United States Environmental Protection Agency.

19. If requested or required, Derry shall test and certify as to the accuracy of any metering device at any time in accordance with the Town of Derry's terms of service.

LORDEN COMMONS, LLC

20. Lorden shall reimburse Derry for all reasonable attorney fees, regulatory expenses, and out of pocket costs incurred to secure the above-described regulatory approvals.

21. Lorden shall submit plans to Derry, the Town of Londonderry, NHDES, and other agencies as may be required for approval to effectuate this Agreement.

22. Lorden shall absorb all costs associated with KNA preparing plans attached as Exhibit B as well as all engineering support during the construction, installation, and inspection of the Waterworks.

23. Upon request by Derry, Lorden shall deliver a bond to secure its completion of the Waterworks shown on Exhibit B.

24. Lorden agrees to absorb all costs associated with the construction of the Waterworks including the payment of inspection fees to the Town of Derry. Such inspection fees will be set aside in escrow in accordance with the rules and regulations of Derry's planning board.

25. Lorden agrees to construct the Waterworks within Lorden Commons and from Lorden Commons to the point of interconnection with Derry's water system on Old Derry Road in accordance with Derry's *Water Main Specifications*, customary engineering practices, State and local rules and regulations, and the *Town of Derry, NH Water Rates and Fees*.

26. Lorden shall install a meter pit at or near the Derry and Londonderry town line or as may be determined by Derry pursuant to Derry's *Water Main Specifications* and *Town of Derry NH, Water Rates and Fees.*

27. Lorden agrees to convey the Waterworks, with the exception of customer service lines connecting the curb stop to the customer's meter, to Derry.

28. Lorden agrees to pay Derry the MSDC fees associated with the increased Max ADF according to the following schedule:

    a) 2018. Prior to the activation of the Derry-Londonderry Old Derry Road interconnection, Lorden agrees to pay Derry $30,077.25 (25 homes at 337 GPD times current MSDC rate of $3.57/GPD).

    b) Future Connections. After 2018, and prior to the installation and connection of any home within Lorden Commons to Derry's public water system, Lorden will pay Derry the MSDC fee associated with each home (using the calculated GPD per home of 337) times the MSDC rate in existence at the time the customer's service is sought.

29. Lorden agrees to not extend water service to the Existing Homes unless Lorden obtains express written consent from Derry.

ARTICLE IV. General Provisions

30. Notices. All notices and other writings sent pursuant to this Agreement shall be addressed to the parties as follows:

Town of Derry
Attn: Thomas A. Carrier
14 Manning Street
Derry, NH 03038

Lorden Commons, LLC
Attn: Paul Kerrigan
3 Penstock Way
Newmarket, NH 03857

With copies to:

NH Brown Law
Attn: Marcia A. Brown
P.O. Box 1623
Concord, NH 03302-1623

Keach-Nordstrom Associates, Inc.
10 Commerce Park No. Suite 3
Bedford, NH 03110

Panciocco Law, LLC
Attn: Patricia M. Panciocco
One Club Acre Lane
Bedford, NH 03110

31. Amendment. This Agreement may be modified only by a written amendment; executed with the same formality as this Agreement.

32. Assignment. No assignment by either party of its rights or duties under this Agreement shall be binding on the other party unless the other party consents.

33. Waiver. Failure of either party to exercise any right under this Agreement shall not be deemed a waiver of such right.

34. Effective Date. The terms of this Agreement are subject to approval by the NHPUC, NHDES, and the Town of Londonderry Planning Board and shall become effective immediately upon the passage of the last appeal date.

35. Duration. This Agreement shall remain in effect and binding until such time as all obligations of the Parties have been met, all lots within Phases II, III, and IV of Lorden Commons eligible to be developed have been connected Derry's public water system, except that Derry shall remain obligated to own and operate the Waterworks (with the exception of individual customer service lines connecting the curb stop to the customer's meter) and provide water service to the lots within Lorden Commons.

36. Construction. This Agreement, except where the context clearly indicates otherwise, shall be construed as follows: definitions include both singular and plural and pronouns include both singular and plural and include both genders.

37. Governing Law. This Agreement shall be governed by the laws of the State of New Hampshire.

38. Termination. With the exception of payment by Lorden of the 2018 MSDC fees, the Parties may terminate this Agreement by mutual consent.

39. Breach. In the event either party breaches the covenants or duties imposed by this Agreement, the non-breaching party shall provide the offending party written notice of the claimed violation and allow a thirty (30) day cure period. In the event the breach is not remedied, the non-breaching party shall be entitled to immediately terminate this Agreement

by written notice to the non-breaching party. The remedy provided within this paragraph shall not preclude either party from pursuing other remedies available at law or in equity.

40. Severability. If any clause or provision in this Agreement is held invalid or unlawful, by a Court of competent jurisdiction, its remaining provisions shall remain enforceable.

41. Dispute Resolution. The Parties shall first attempt to resolve any dispute with regard to the terms of this Agreement between themselves informally by negotiation between themselves or by non-binding mediation as described herein. Either party may initiate non-binding mediation by giving the other party written notice of the need to mediate setting forth a list of no more than 3 names and qualifications of neutrals who the initiating party believes would be qualified as a mediator for the dispute. Within 15 calendar days after the delivery of the mediation notice, the receiving party shall provide notice to the initiating party designating a person to serve as the mediator from among 3 persons listed by the initiating party. If no response is received, the initiating party may select the neutral from among the list of 3. The mediator shall schedule the mediation session within 2 weeks of being contacted. The parties shall make themselves available to attend the mediation session as scheduled by the mediator. The mediation shall be conducted according to the procedures determined by the mediator selected. All disclosures, discussions, and any determinations or proposals by the mediator made pursuant to this mediation clause is confidential and shall be treated as compromise and settlement negotiations and both parties hereby stipulate and agree shall not be offered or be admissible as evidence in any other proceeding. The expenses of the mediation shall be shared by the parties equally.

In Witness whereof, this Agreement is executed in multiple counterparts each of which shall be deemed an original this ____ day of _____, 2018.

TOWN OF DERRY

_____
Witness

_____
By: David Caron
Its: Town Administrator
Duly Authorized

LORDEN COMMONS, LLC

_____
Witness

_____
By:
Its:
Duly Authorized

<END OF DOCUMENT>

Attachment A
Exhibit A

The proposed franchise area located in Londonderry, NH to be conveyed to the Town of Derry shall include the area shaded in green, labeled as Lorden Commons and the area shaded in red, labeled as Existing Lots.
The intent is to serve Lorden Commons with water from the Town of Derry. The area of Existing Lots will be included in the franchise area for potential future needs per a discussion with the Londonderry Planning Board.

Proposed water connection

Lorden Commons

Existing Lots

Town of Londonderry
New Hampshire

Parcel Atlas
April, 2017

18-9 — Parcel ID
100 — Parcel Dimension
50 (256) — Parcel Frontage
Parcel Address
Tax Map Divisions

Paved Roads
Unpaved Roads
Buildings
Outbuildings or other structures
Utility Easements
Power Transmission Lines
Natural Gas Lines
Ponds
Wetlands
Towers
Named Streams
Un-named Streams

Zoning Districts

Agricultural-Residential (AR-I)
Multi-Family Residential (R-III)
Commercial I (C-I)
Commercial II (C-II)
Commercial III (C-III)
Commercial IV (C-IV)
Mixed Use Commercial (MUC)
Gateway Business (GB)
Industrial I (IND-I)
Industrial II (IND-II)
Rte 28 Performance Overlay District
Rte 102 Performance Overlay District
Airport Overlay District (AD)
Historic Overlay District
Woodmont Commons PUD (PUD-1)
MHT Noise Contours

400 0 400 Feet
1 inch = 400 feet

Tax Map 016

Source:

Parcel lines are current as of April 1, 2017 and were mapped using aerial photo interpretation, AutoCAD engineering files or recorded deeds as reference. Base features were mapped by Infotech, LLC from aerial photography captured in Spring, 2010. Regular updates to both parcels and landbase features are performed as new development or lot adjustments are approved.

These maps have been prepared for assessment purposes only and are not intended for legal description or conveyance.

Project: TaxMaps2017
Printed: 6/19/2017

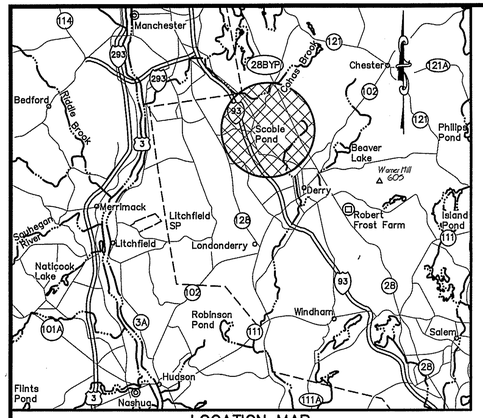
Attachment A, Exhibit B

Keach-Nordstrom Associates, Inc.

Draft Plans

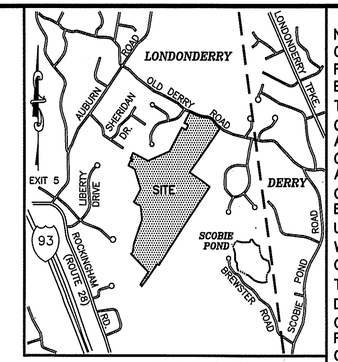
Lorden Commons

CONSERVATION SUBDIVISION
LORDEN COMMONS
PHASES II, III & IV
TAX MAP 16 LOT 38
17 OLD DERRY ROAD
LONDONDERRY, NEW HAMPSHIRE



LOCATION MAP
NOT TO SCALE

DIG SAFE
CALL 811 TWO BUSINESS DAYS IN ADVANCE
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM



VICINITY PLAN
SCALE: 1" = 2,500'±

TITLE	SHEET No.
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INDEX OF SHEETS

ABUTTERS

MAP 13 LOT 46
STATE OF NEW HAMPSHIRE
PO BOX 483
CONCORD, NH 03301–0483

MAP 13 LOT 61
SAMARA PROPERTIES, LLC
7 BARTLETT ROAD
STRATHAM, NH 03885

MAP 13 LOT 103
PUBLIC SERVICE COMPANY OF NH
PO BOX 330
MANCHESTER, NH 03105–0330

MAP 13 LOT 128
STATE OF NEW HAMPSHIRE
PO BOX 483
CONCORD, NH 03301–0483

MAP 16 LOT 23
TOWN OF LONDONDERRY
268B MAMMOTH ROAD
LONDONDERRY, NH 03053

MAP 16 LOT 23–3
BERTHA G. ROUNDY
52 OLD DERRY ROAD
LONDONDERRY, NH 03053

MAP 16 LOT 23–4
JOSEPH R. GORTON, JR.
50 OLD DERRY ROAD
LONDONDERRY, NH 03053

MAP 16 LOT 23–5
GERALD E. BAKER &
ROXANNE BAKER, TRUSTEES
BAKER REVOCABLE TRUST
48 OLD DERRY ROAD
LONDONDERRY, NH 03053

MAP 16 LOT 23–6
RONALD & CATHERINE RUEL
46 OLD DERRY ROAD
LONDONDERRY, NH 03053

MAP 16 LOT 23–7
TIMOTHY J. MOORE
44 OLD DERRY ROAD
LONDONDERRY, NH 03053

MAP 16 LOT 23–8
SHANE M. & NICOLE DIZER
42 OLD DERRY ROAD
LONDONDERRY, NH 03053

MAP 16 LOT 23–9
TIMOTHY L. & LISA LEBLANC
40 OLD DERRY ROAD
LONDONDERRY, NH 03053

MAP 16 LOT 23–10
HOMER R. PICHE
PO BOX 169
LONDONDERRY, NH 03053

MAP 16 LOT 23–11
CHRISTOPHER D. RENAUD
36 OLD DERRY ROAD
LONDONDERRY, NH 03053

MAP 16 LOT 23–12
JEFFREY M. BAER
34 OLD DERRY ROAD
LONDONDERRY, NH 03053

MAP 16 LOT 23–13
JESSICA SKORUPSKI
32 OLD DERRY ROAD
LONDONDERRY, NH 03053

MAP 16 LOT 27
ROBERT A. & FAY A. CIULLA
14 OLD DERRY ROAD
LONDONDERRY, NH 03053

MAP 16 LOT 32–32
HOPE ELIZABETH FITZGERALD
16 MALLARD LANE
LONDONDERRY, NH 03053

MAP 16 LOT 32–33
AMY E. BAHAN
14 MALLARD LANE
LONDONDERRY, NH 03053

MAP 16 LOT 32–37
PAUL C. &
STACEY C. SHANNON, TRUSTEES
SHANNON FAMILY REV. TRUST OF 2006
12 MALLARD LANE
LONDONDERRY, NH 03053

MAP 16 LOT 36
TIMOTHY P. BOYLE, TRUSTEE
BOYLE FAMILY IRREVOCABLE TRUST II
15 OLD DERRY ROAD
LONDONDERRY, NH 03053

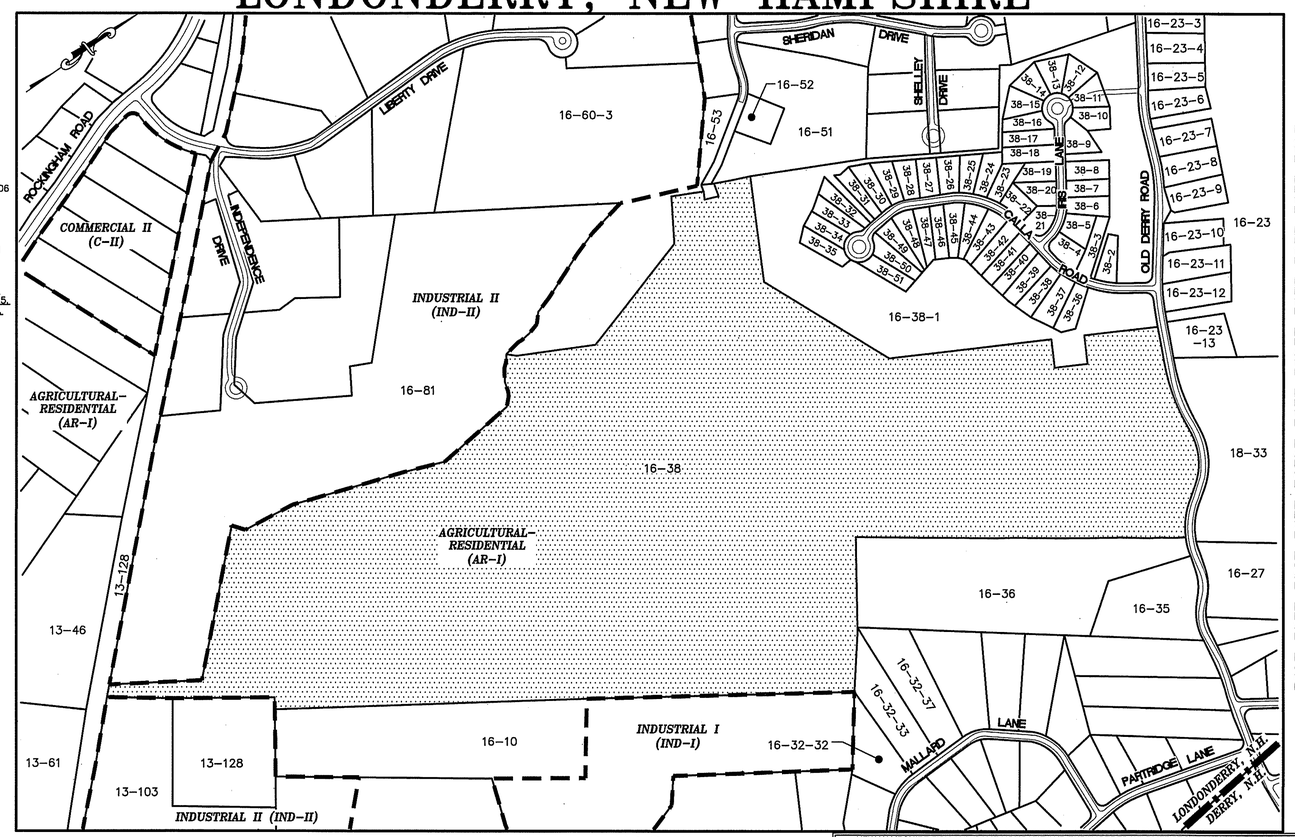
MAP 16 LOTS 38–1 TO 38–3, 38–8, 38–11, 38–16, 38–22, 38–24, 38–25, 38–27 TO 38–36, 38–38 TO 38–44, 38–46, 38–47, 38–50 & 38–51
LORDEN COMMONS, LLC
3 PENSTOCK WAY
NEWMARKET, NH 03587

MAP 16 LOT 38–4
RICHARD T. & MEAGHAN M. IVEY
8 CALLA ROAD
LONDONDERRY, NH 03053

MAP 16 LOT 38–5
CHARLES J. & MARJORIE N. ARMSTRONG
4 IRIS LANE
LONDONDERRY, NH 03053

MAP 16 LOT 38–6
STEPHEN P. & TERRI L. LANDRY
6 IRIS LANE
LONDONDERRY, NH 03053

MAP 16 LOT 38–7
JAMES E. & LINDA REA
8 IRIS LANE
LONDONDERRY, NH 03053



TAX MAP PLAN
SCALE: 1" = 400'±

ABUTTERS

MAP 16 LOT 38–9
JASON & JENNIFER AYOTTE
12 IRIS LANE
LONDONDERRY, NH 03053

MAP 16 LOT 38–10
DONALD P. & CELESTE L. BOURQUE
14 IRIS LANE
LONDONDERRY, NH 03053

MAP 16 LOT 38–12
ROBERT W. & NANCY WILKES
18 IRIS LANE
LONDONDERRY, NH 03053

MAP 16 LOT 38–13
MATTHEW G. & DANIELLE M. LEBLANC
17 IRIS LANE
LONDONDERRY, NH 03053

MAP 16 LOT 38–14
RICHARD & KELLY ANGEVINE, TRUSTEES
ANGEVINE FAMILY LIVING TRUST
15 IRIS LANE
LONDONDERRY, NH 03053

MAP 16 LOT 38–15
KELLY GALAN
13 IRIS LANE
LONDONDERRY, NH 03053

MAP 16 LOT 38–17
AMANDA L. SIDERIS &
BRIANNA L. FARRELL
9 IRIS LANE
LONDONDERRY, NH 03053

MAP 16 LOT 38–18
ROBERT J. KELLY
7 IRIS LANE
LONDONDERRY, NH 03053

MAP 16 LOT 38–19
CLIFTON & ELENA HALL
5 IRIS LANE
LONDONDERRY, NH 03053

MAP 16 LOT 38–20
NEAL C. & DONNA L. WHITE
3 IRIS LANE
LONDONDERRY, NH 03053

MAP 16 LOT 38–21
JOHN A. & KARIN SULLIVAN
1 IRIS LANE
LONDONDERRY, NH 03053

MAP 16 LOT 38–23
SCOTT M. & JILLIAN VAILLANCOURT
14 CALLA ROAD
LONDONDERRY, NH 03053

MAP 16 LOT 38–26
JAMES M. & BARBARA L. TULLIS
20 CALLA ROAD
LONDONDERRY, NH 03053

MAP 16 LOT 38–37
DANA & LOUISE LITCHFIELD, TRUSTEES
LITCHFIELD FAMILY TRUST
5 CALLA ROAD
LONDONDERRY, NH 03053

MAP 16 LOT 38–45
DALE CUNNINGHAM
21 CALLA ROAD
LONDONDERRY, NH 03053

MAP 16 LOT 38–48
RAYMOND C. & ANN M. ADAMS
27 CALLA ROAD
LONDONDERRY, NH 03053

MAP 16 LOT 38–49
DAVID J. CIRELLI & GREGORY D. STONE
29 CALLA ROAD
LONDONDERRY, NH 03053

MAP 16 LOT 39
JEFFREY MOUSSEAU
51 OLD DERRY ROAD
LONDONDERRY, NH 03053

MAP 16 LOT 42–4
GARDOCKI FAMILY TRUST
10 SHERIDAN DRIVE
LONDONDERRY, NH 03053

MAP 16 LOT 50C–5A
PAUL S. & KARA A. CLEARY
PO BOX 853
MERRIMACK, NH 03054

MAP 16 LOT 50C–5B
JEFFREY M. & ABIGAIL J. KELLY
3B SHELLEY DRIVE
LONDONDERRY, NH 03053

MAP 16 LOT 50C–7A
PAMELA ZANNINI
6A SHELLEY DRIVE
LONDONDERRY, NH 03053

MAP 16 LOT 50C–7B
PAMELA ZANNINI
6A SHELLEY DRIVE
LONDONDERRY, NH 03053

MAP 16 LOT 50–4
JAMES R. & CAROLE M. GODIN
1 SHELLEY DRIVE
LONDONDERRY, NH 03053

MAP 16 LOT 50–6
JONATHAN C. & KAYLEE E. ESPOSITO
5 SHELLEY DRIVE
LONDONDERRY, NH 03053

MAP 16 LOT 51
MARION A. KELTGEN ET AL.
25 MARLBORO ROAD
WOBURN, MA 01801

MAP 16 LOT 53
KIMBERLY A. PATTERSON
22 WOODS AVENUE
LONDONDERRY, NH 03053–2203

MAP 16 LOT 60–3
WASTE MANAGEMENT OF NH, INC.
PO BOX 1450
CHICAGO, IL 60690–1450

MAP 16 LOT 81
JAMES F. SCAIA, TRUSTEE
19 INDEPENDENCE DRIVE REALTY
PO BOX 2489, 181 NEW BOSTON STREET
WOBURN, MA 01888

MAP 16 LOT 81–3
WORDEN LIMITED PARTNERSHIP
9 COMMERCIAL STREET
HUDSON, NH 03051

TOWN OF LONDONDERRY
CONSERVATION COMMISSION
268B MAMMOTH ROAD
LONDONDERRY, NH 03053

MAP 16 LOT 100
STATE OF NEW HAMPSHIRE
PO BOX 483
CONCORD, NH 03301–0483

MAP 18 LOT 33
SIMARD FAMILY TRUST
GEORGE E. SIMARD, TRUSTEE
PO BOX 85
DERRY, NH 03038

OWNER OF RECORD:
LORDEN COMMONS, LLC
3 PENSTOCK WAY
NEWMARKET, NH 03857
BK. 5338 PG. 2930

APPLICANT
CHINBURG PROPERTIES, INC.
3 PENSTOCK WAY
NEWMARKET, NH 03857

APPROVED BY THE LONDONDERRY, NH PLANNING BOARD FOR PHASE _____
ON DATE: _____
CERTIFIED BY:
_____

ENGINEER/SURVEYOR:
KEACH–NORDSTROM ASSOCIATES, INC.
10 COMMERCE PARK NORTH, SUITE 3
BEDFORD, NEW HAMPSHIRE 03110
(603) 627–2881

TRAFFIC ENGINEER:
STEPHEN G. PERNAW & CO., INC.
PO BOX 1721
CONCORD, NEW HAMPSHIRE 03302
(603) 228–5750

WETLAND CONSULTANT:
WEST ENVIRONMENTAL, INC.
48 STEVENS HILL ROAD
NOTTINGHAM, NEW HAMPSHIRE 03290
(603) 734–4298

SOIL SCIENTIST:
JOHN P. HAYES III, CSS, CWS
7 LIMESTONE WAY
NORTH HAMPTON, NEW HAMPSHIRE 03820

HYDROGEOLOGIC CONSULTANT:
HYDROTERRA ENVIRONMENTAL SERVICES
272 1/2 DOVER POINT ROAD
DOVER, NEW HAMSPHIRE 03820
(603) 743–5728

BENCHMARK DATA

LOCATION	DATUM	DESCRIPTION
N:153812.13, E:1067525.21	ELEV.=404.80 (NAVD 88)	BENCHMARK #1 – PK SET
N:152907.29, E:1067123.84	ELEV.=362.07 (NAVD 88)	BENCHMARK #2 – SPIKE FOUND
N:152317.73, E:1066831.40	ELEV.=361.91 (NAVD 88)	BENCHMARK #3 – SPIKE SET
N:153480.25, E:1067627.79	ELEV.=390.76 (NAVD 88)	BENCHMARK #4 – SPIKE FOUND
N:153038.71, E:1067754.75	ELEV.=375.79 (NAVD 88)	BENCHMARK #5 – SPIKE FOUND
N:155039.75, E:1068542.72	ELEV.=359.93 (NAVD 88)	BENCHMARK #6 – PK IN POLE
N:150212.65, E:1066961.36	ELEV.=343.66 (NAVD 88)	BENCHMARK #7 – SPIKE SET
N:151826.67, E:1067881.47	ELEV.=368.78 (NAVD 88)	BENCHMARK #8 – PK SET
N:152177.14, E:1068021.66	ELEV.=384.30 (NAVD 88)	BENCHMARK #9 – PK SET IN TREE
N:153117.43, E:1068405.00	ELEV.=375.83 (NAVD 88)	BENCHMARK #10 – SPIKE FOUND
N:152749.08, E:1067992.02	ELEV.=371.12 (NAVD 88)	BENCHMARK #11 – SPIKE SET
N:153639.98, E:1068724.55	ELEV.=387.08 (NAVD 88)	BENCHMARK #12–PK SET IN TREE
N:154068.80, E:1069075.60	ELEV.=403.05 (NAVD 88)	BENCHMARK #13–PK SET IN TREE
N:154196.87, E:1069522.65	ELEV.=357.22 (NAVD 88)	BENCHMARK #14–PK SET IN TREE
N:154531.69, E:1069636.62	ELEV.=337.45 (NAVD 88)	BENCHMARK #15–PK SET IN POLE
N:150329.28, E:150329.28	ELEV.=374.44 (NAVD 88)	BENCHMARK #16 – HUB SET
N:151065.67, E:1068353.25	ELEV.=343.48 (NAVD 88)	BENCHMARK #17 – HUB SET
N:152639.90, E:1069105.52	ELEV.=340.50 (NAVD 88)	BENCHMARK #18 – SPIKE SET

STATE OF NEW HAMPSHIRE LICENSED LAND SURVEYOR No. 714 MICHAEL R. DAHLBERG SIGNATURE 3-19-18

STATE OF NEW HAMPSHIRE STEVEN B. KEACH No. 7659 LICENSED PROFESSIONAL ENGINEER

KNA PROJECT NO.: 15–0904–2
DATE: MARCH 15, 2016

NEW HAMPSHIRE FISH AND GAME NONGAME AND ENDANGERED WILDLIFE PROGRAM GUIDELINES FOR PROTECTION OF BLANDING'S TURTLES

NHB16-0888
THE NATURAL HERITAGE BUREAU DATABASE INDICATED BLANDING'S TURTLES (EMYDOIDEA BLANDINGII) IN THE VICINITY OF THE PROJECT. THE NEW HAMPSHIRE FISH AND GAME NONGAME AND ENDANGERED WILDLIFE PROGRAM HAS DEFINED THE FOLLOWING REQUIREMENTS FOR THE PROJECT:

CONSTRUCTION ACTIVITIES MUST BE UNDERTAKEN WITH CARE. BLANDING'S TURTLES UTILIZE UPLAND AREAS SURROUNDING THE WETLANDS. EARTH MOVING ACTIVITIES MAY DESTROY TURTLE NESTS. NESTING SEASON EXTENDS FROM LATE MAY THROUGH THE END OF JUNE. ALL PERSONNEL ON-SITE SHALL BE MADE AWARE OF THE POTENTIAL TO ENCOUNTER BLANDING'S TURTLES IN THE WORK ZONE AND OF THE FOLLOWING REQUIREMENTS:

- A SPECIES PROFILE AND PHOTO MAY BE FOUND AT: HTTP://WWW.WILDLIFE.STATE.NH.US/WILDLIFE/NONGAME/REPTILES_AMPHIBIANS.HTM
- IF A TURTLE NEST IS FOUND CONTACT KIM TUTTLE AT 603-271-6544 OR MIKE MARCHAND AT 603-271-3016 FOR FURTHER INSTRUCTIONS.
- IF A BLANDING'S TURTLE IS ENCOUNTERED PHOTOS AND A REPORT SHALL BE MADE TO THE NH REPTILE AND AMPHIBIAN REPORTING PROGRAM (RAARP) IN ONE OF THREE WAYS.
  1. MAIL YOUR RAARP REPORTING SLIP.
  2. EMAIL DETAILS OF OBSERVATION TO RAARP@WILDLIFE.NH.GOV OR
  3. ENTER YOUR OBSERVATION ONLINE AT HTTP://NHWILDLIFESIGHTINGS.UNH.EDU

WHEN CONSTRUCTION ACTIVITIES TAKE PLACE OUTSIDE OF THE NESTING SEASON (MAY 15 - JULY 15), A BIOLOGIST MUST BE ON-SITE WHEN CONSTRUCTION IS OCCURRING WHEN WITHIN 100 FEET OF ANY VERNAL POOLS OR WETLAND AREAS CONTAINING STANDING WATER.
SOILS THAT ARE EXPOSED AND THAT WILL BE LATER IMPACTED SHALL BE MONITORED OR FENCED DURING THE NESTING SEASON (MAY 15-JULY 15) TO IDENTIFY OR EXCLUDE NESTING TURTLES.

LEGEND

- EXISTING PROPERTY LINE
- EXISTING EDGE OF PAVEMENT
- DISTRICT BOUNDARY
- TOWN BOUNDARY

STATE OF NEW HAMPSHIRE LICENSED LAND SURVEYOR No. 714 MICHAEL R. DAHLBERG SIGNATURE

CERTIFICATION:
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION. FURTHER, THIS PLAN IS BASED ON AN ACTUAL FIELD SURVEY MADE BY THIS OFFICE DURING NOVEMBER OF 2015 AND APRIL THROUGH JUNE OF 2016. SAID SURVEY HAS A RELATIVE ERROR OF CLOSURE OF ONE PART IN TEN THOUSAND (1/10,000) OR BETTER.

LICENSED LAND SURVEYOR — DATE 3-19-18

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	11/01/16	REVISED PER TOWN COMMENTS	JDL
2	02/13/17	REVISED PER WATER MAIN EXTENSION	BJC
3	04/11/17	REVISED PER TOWN COMMENTS	KMB
4	05/26/17	REVISED PER NHDES COMMENTS	JDL
5	03/12/18	ISSUED FOR LONDONDERRY AND DERRY REVIEW	JDL

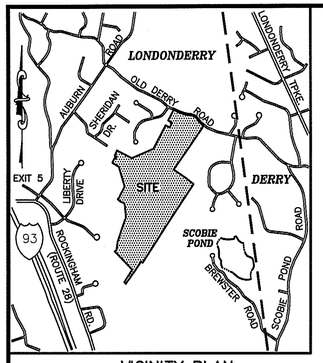
COVER

LORDEN COMMONS
PHASES II, III & IV
MAP 16 LOT 38 – 17 OLD DERRY ROAD
LONDONDERRY, NEW HAMPSHIRE

KNA KEACH–NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627–2881

PROJ. NO: 15–0904–2
DATE: JUILY 15, 2016
SCALE: AS SHOWN
FILE NO.:
SHEET NO. COVER

R:_proj\c\15090242\Dwg\Production Drawings\15090242-DETAILS.dwg, DETAILS, 3/19/2018 11:30:57 AM



VICINITY PLAN
SCALE: 1" = 2,500'±

SEE SHEET 1 FOR NOTES & REFERENCES PLANS

NOTE:
1. REFERENCE IS MADE TO THE DISCONTINUANCE, SUBJECT TO GATES AND BARS, OF "THE ROAD LEADING FROM THE AUBURN ROAD SOUTHERLY TO SCOBIE'S POND," BY THE TOWN WARRANT OF LONDONDERRY IN MARCH 1932 (CLASS VI ROAD). A 450'± SECTION OF CLASS VI ROAD WAS APPROVED FOR DEED TO ABUTTERS BY TOWN COUNCIL ON MAY 16, 2011, RESOLUTION 2011-04.

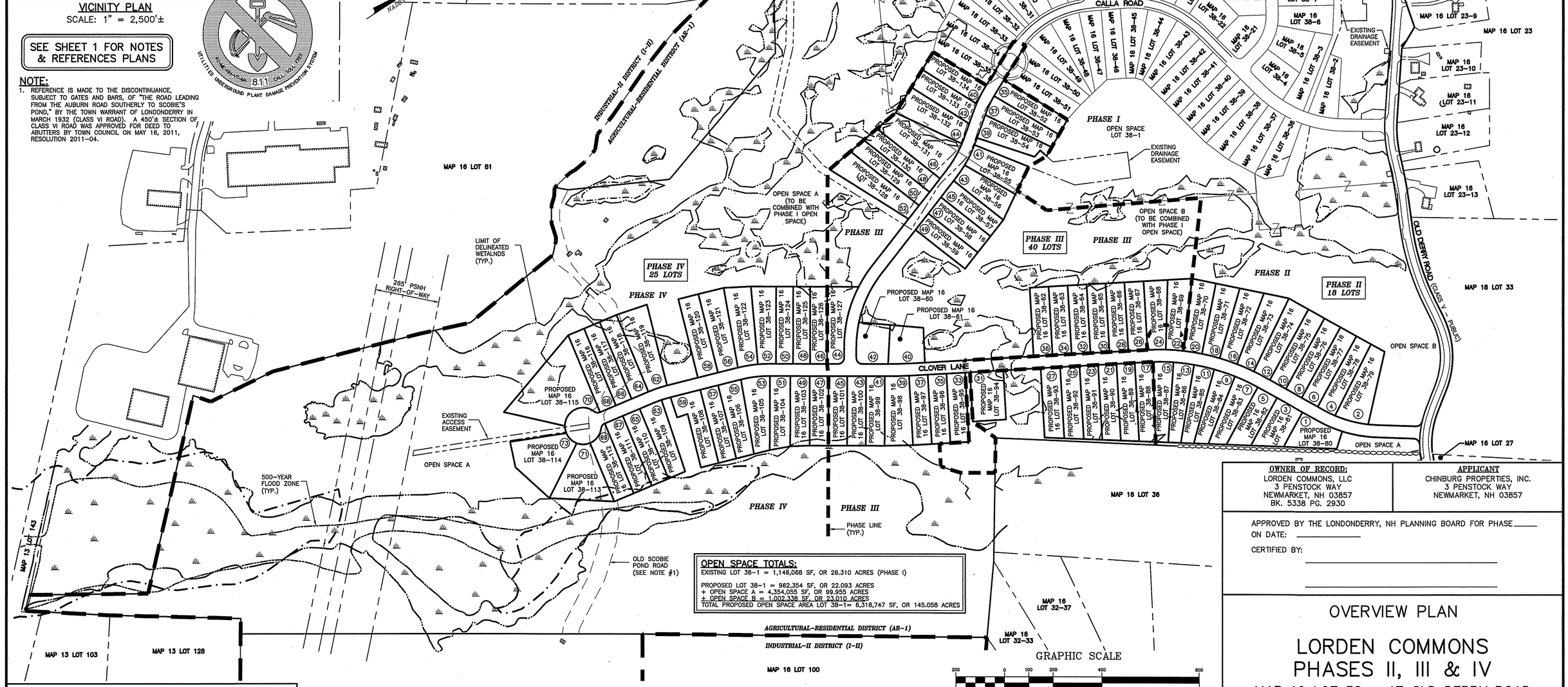
STATE OF NEW HAMPSHIRE
MARK WEST
No. 010
CERTIFIED WETLAND SCIENTIST
3-19-18

MARK WEST, CERTIFIED WETLAND SCIENTIST #010 OF WEST ENVIRONMENTAL, INC. OF NOTTINGHAM, NH PERFORMED THE DELINEATION OF JURISDICTIONAL WETLANDS DURING SPRING OF 2005 AND FIELD VERIFIED AND REFLAGGED CRITICAL AREAS DURING THE SPRING OF 2016 USING THE TECHNICAL CRITERIA IN THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL (TECHNICAL REPORT Y-87-1, JANUARY 1987).

OWNER OF MAP 16 LOT 38
SIGNATURE: _____ FOR LORDEN COMMONS, LLC
DATE: 8/1/16

DIG SAFE
811
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM

NPDES NOTE
THIS PROJECT DISTURBS IN EXCESS OF 1-ACRE OF LAND. THEREFORE IT WILL BE REQUIRED TO OBTAIN NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT COVERAGE AS ISSUED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA). THE OWNER/DEVELOPER AND "OPERATOR" (GENERAL CONTRACTOR) SHALL EACH BE REQUIRED TO PREPARE AND SUBMIT A NOTICE OF INTENT (NOI) TO THE EPA PRIOR TO THE START OF CONSTRUCTION AND SHALL BE RESPONSIBLE FOR THE PREPARATION AND IMPLEMENTATION OF A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) MEETING THE REQUIREMENTS OF THE CURRENT CONSTRUCTION GENERAL PERMIT.
AS A CONDITION OF THE NHDES ALTERATION OF TERRAIN PERMIT THE SWPPP SHALL LIMIT THE AREA OF DISTURBANCE TO 5 ACRES OR LESS AT ANY TIME. THE PLAN SHALL DEFINE HOW THE DISTURBED AREA IS TO BE STABILIZED PRIOR TO MOVING ON TO SUCCESSIVE PHASES.



OPEN SPACE TOTALS:
EXISTING LOT 38-1 = 1,146,068 SF, OR 26.310 ACRES (PHASE I)

PROPOSED LOT 38-1 = 962,354 SF, OR 22.093 ACRES
+ OPEN SPACE A = 4,354,055 SF, OR 99.955 ACRES
+ OPEN SPACE B = 1,002,338 SF, OR 23.010 ACRES
TOTAL PROPOSED OPEN SPACE AREA LOT 38-1= 6,318,747 SF, OR 145.058 ACRES

OWNER OF RECORD:
LORDEN COMMONS, LLC
3 PENSTOCK WAY
NEWMARKET, NH 03857
BK. 5338 PG. 2930

APPLICANT
CHINBURG PROPERTIES, INC.
3 PENSTOCK WAY
NEWMARKET, NH 03857

APPROVED BY THE LONDONDERRY, NH PLANNING BOARD FOR PHASE _____
ON DATE: _____
CERTIFIED BY: _____

OVERVIEW PLAN

LORDEN COMMONS
PHASES II, III & IV
MAP 16 LOT 38 – 17 OLD DERRY ROAD
LONDONDERRY, NEW HAMPSHIRE

LEGEND
- (#) HOUSE NUMBER
- ABUTTER LINE
- EXISTING PROPERTY LINE
- WETLAND
- PHOTO INTERPRETED WETLAND
- EDGE OF PAVEMENT
- EXISITNG EASEMENT
- FLOOD HAZARD ZONE X
- ZONE LINE
- PROPOSED PROPERTY LINE
- PHASE LINE

BENCHMARK DATA

LOCATION	DATUM	DESCRIPTION

STATE OF NEW HAMPSHIRE
No. 714
MICHAEL R. DAHLBERG
LICENSED LAND SURVEYOR
SIGNATURE

CERTIFICATION:
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION. FURTHER, THIS PLAN IS BASED ON AN ACTUAL FIELD SURVEY MADE BY THIS OFFICE DURING NOVEMBER OF 2015 AND APRIL THROUGH JUNE OF 2016. SAID SURVEY HAS A RELATIVE ERROR OF CLOSURE OF ONE PART IN TEN THOUSAND (1:10,000) OR BETTER.

LICENSED LAND SURVEYOR — DATE 3-19-18

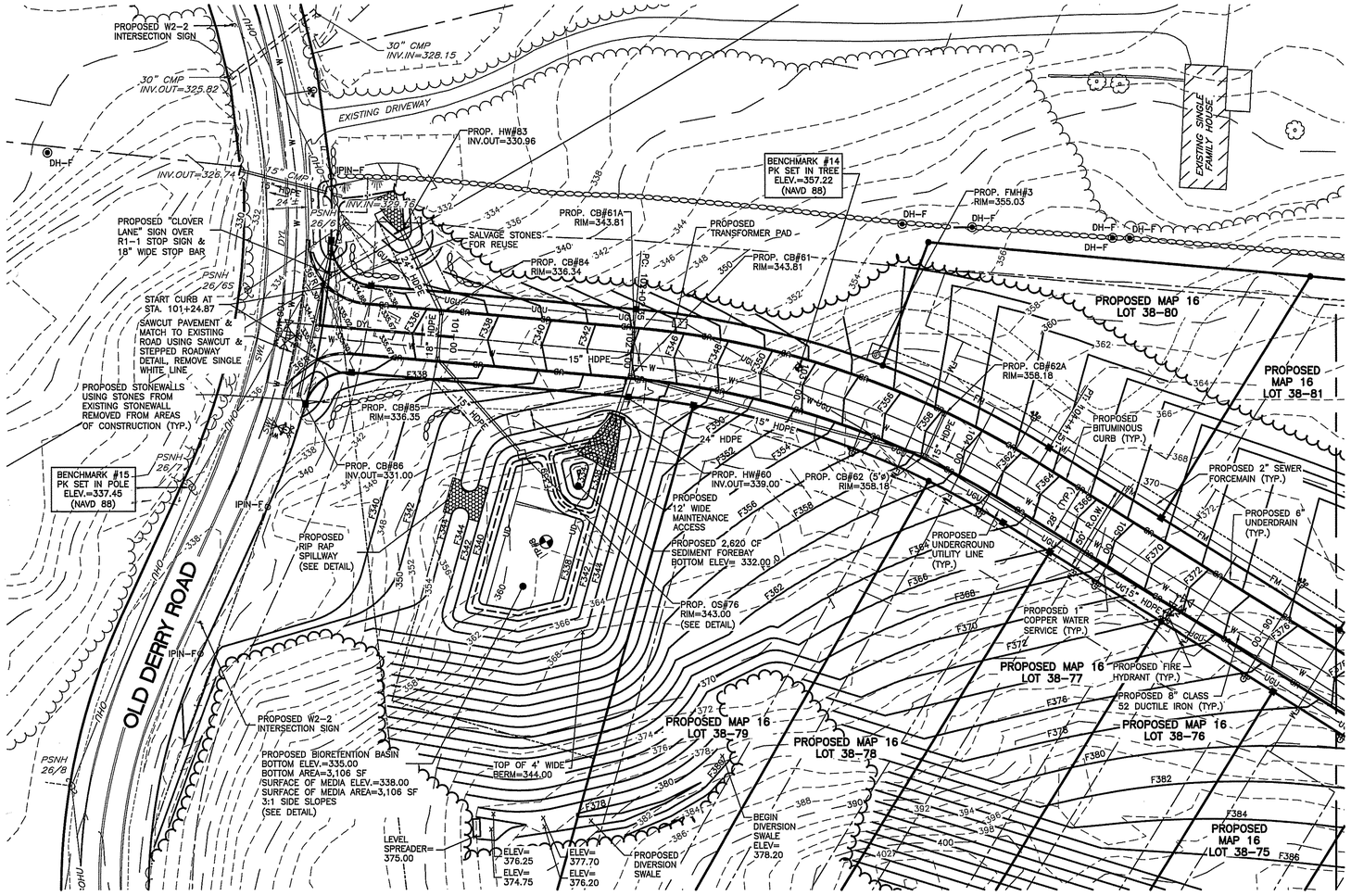
REVISIONS

NO.	DATE	DESCRIPTION	BY
1	11/01/16	REVISED PER TOWN COMMENTS	JDL
2	02/13/17	REVISED PER WATER MAIN EXTENSION	BJC
3	04/11/17	REVISED PER TOWN COMMENTS	KMB
4	05/26/17	REVISED PER NHDES COMMENTS	JDL
5	03/12/18	ISSUED FOR LONDONDERRY AND DERRY REVIEW	JDL

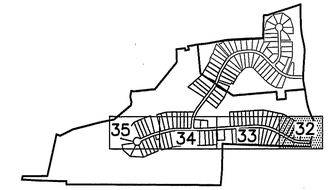
KNA KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

PROJ. NO: 15-0904-2
DATE: JUILY 15, 2016
SCALE: 1" = 200'
FILE NO.:
SHEET NO. 2 OF 71

R:_project\15090412\dwg\Production Drawings\15090412-SLBPLAN.dwg, OVERVIEW, 3/19/2018 11:37:06 AM



CLOVER LANE ROADWAY PLAN
SCALE: 1" = 40'



CLOVER LANE ROADWAY KEY PLAN
SCALE: 1" = 1,500'

SEE SHEET 1 FOR NOTES

LOAM & SEED ALL DISTURBED AREAS (TYP.)

SEE SHEET 36 FOR ROADWAY PROFILE

NAD88

DIG SAFE
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM
811 CALL BEFORE YOU DIG

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

LEGEND

GB-F	GRANITE BOUND FOUND		PROPERTY LINE
IPIN-F	IRON PIN FOUND		PREVIOUSLY APPROVED PROPERTY LINE
DH-F	DRILL HOLE FOUND		STREAM
DH-S	DRILL HOLE SET		WETLAND
IPP-F	IRON PIPE FOUND		VERNAL POOL
RRS-F	RAILROAD SPIKE FOUND		DRAINAGE LINE
BND-TBS	BOUND TO BE SET		EDGE OF GRAVEL
RB-TBS	5/8" REBAR TO BE SET		10' CONTOUR
	UTILITY POLE		2' CONTOUR
	WELL		BUILDING SETBACK
	SEWER MANHOLE		WETLAND BUFFER
	DRAINAGE MANHOLE		EXISTING EASEMENT
	CATCH BASIN		PROPOSED PROPERTY LINE
OHU	OVERHEAD UTILITIES		PROPOSED EASEMENT
S	SEWER LINE		PROPOSED DRAINAGE LINE
	TREELINE		PROP. EDGE OF PAVEMENT
	STONEWALL		PROP. BITUMINOUS CURB
	EDGE OF PAVEMENT		PROPOSED 2' CONTOUR
	BITUMINOUS CURB		PROPOSED GUARDRAIL
UGU	PROP. UNDERGROUND UTILITIES		
S	PROPOSED SEWER LINE		
FM	PROPOSED FORCEMAIN		
UD	PROPOSED UNDERDRAIN		

BENCHMARK DATA

LOCATION	DATUM	DESCRIPTION
N:154196.87, E:1069522.65	ELEV.=357.22 (NAVD 88)	BENCHMARK #14-PK SET IN TREE
N:154531.69, E:1069636.62	ELEV.=337.45 (NAVD 88)	BENCHMARK #15-PK SET IN POLE

STATE OF NEW HAMPSHIRE
STEVEN B. KEACH
No. 7659
LICENSED
PROFESSIONAL ENGINEER
03-06-18

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	11/01/16	REVISED PER TOWN COMMENTS	JDL
2	02/13/17	REVISED PER WATER MAIN EXTENSION	BJC
3	04/11/17	REVISED PER TOWN COMMENTS	KMB
4	05/26/17	REVISED PER NHDES COMMENTS	JDL
5	03/12/18	ISSUED FOR LONDONDERRY AND DERRY REVIEW	JDL

OWNER OF RECORD:
LORDEN COMMONS, LLC
3 PENSTOCK WAY
NEWMARKET, NH 03857
BK. 5338 PG. 2903

APPLICANT
CHINBURG PROPERTIES, INC.
3 PENSTOCK WAY
NEWMARKET, NH 03857

CLOVER LANE ROADWAY PLAN
(STA. 100+00 TO STA. 106+50)
LORDEN COMMONS
PHASES II, III & IV

MAP 16 LOT 38 – 17 OLD DERRY ROAD
LONDONDERRY, NEW HAMPSHIRE

KNA KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

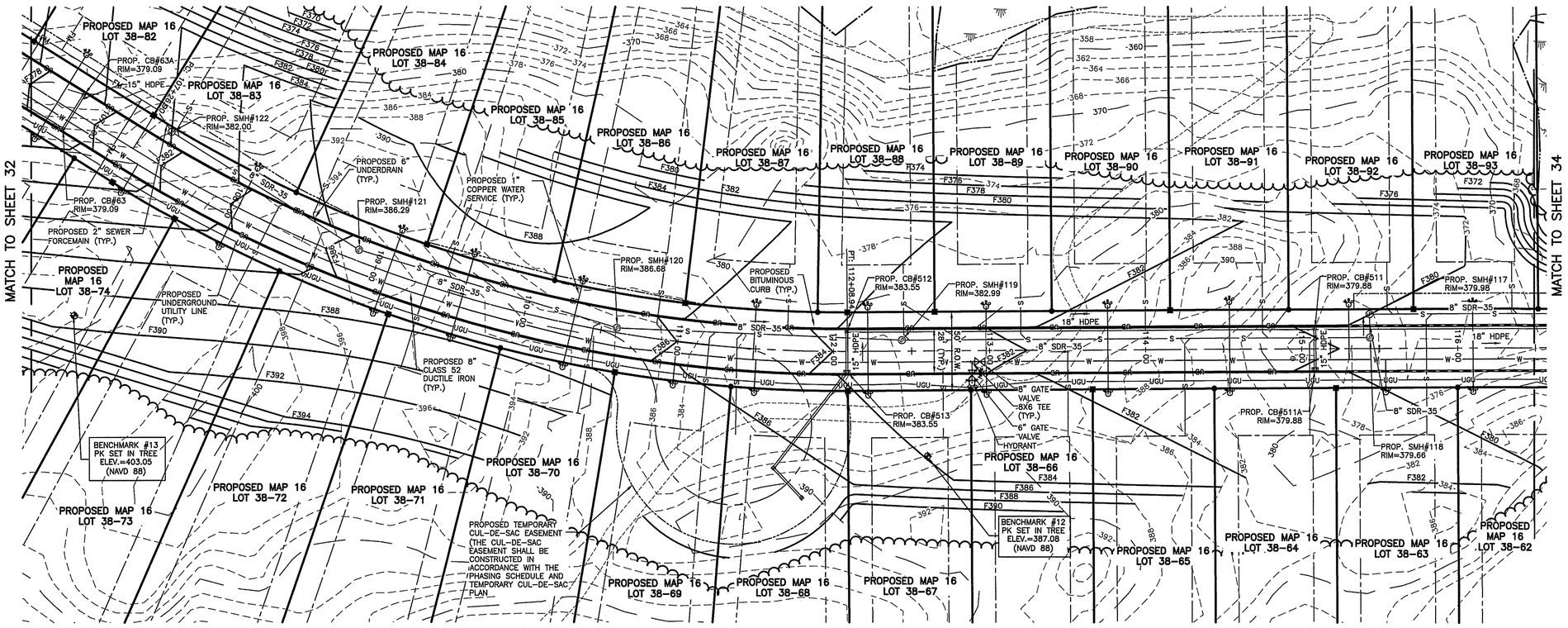
PROJ. NO: 15-0904-2
DATE: JULY 15, 2016
SCALE: 1" = 40'
FILE NO.:
SHEET NO. 32 OF 71

R:_project\1509042\dwg\Production Drawings\1509042-ROADWAY.dwg, CLOVER, 3/6/2018 3:39:43 PM

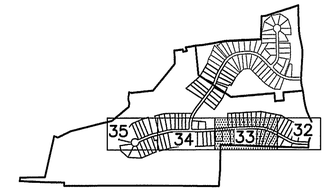
SEE SHEET 1 FOR NOTES

SEE SHEET 37 FOR ROADWAY PROFILE

LOAM & SEED ALL DISTURBED AREAS (TYP.)



CLOVER LANE ROADWAY PLAN
SCALE: 1" = 40'



CLOVER LANE ROADWAY KEY PLAN
SCALE: 1" = 1,500'

DIG SAFE
811
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

LEGEND

GB-F	GRANITE BOUND FOUND		PROPERTY LINE
IPIN-F	IRON PIN FOUND		PREVIOUSLY APPROVED PROPERTY LINE
DH-F	DRILL HOLE FOUND		STREAM
DH-S	DRILL HOLE SET		WETLAND
IPP-F	IRON PIPE FOUND		VERNAL POOL
RRS-F	RAILROAD SPIKE FOUND		DRAINAGE LINE
BND-TBS	BOUND TO BE SET		EDGE OF GRAVEL
RB-TBS	5/8" REBAR TO BE SET		10' CONTOUR
	UTILITY POLE		2' CONTOUR
W	WELL		BUILDING SETBACK
S	SEWER MANHOLE		WETLAND BUFFER
D	DRAINAGE MANHOLE		EXISTING EASEMENT
	CATCH BASIN		PROPOSED PROPERTY LINE
OHU	OVERHEAD UTILITIES		PROPOSED EASEMENT
S	SEWER LINE		PROPOSED DRAINAGE LINE
	TREELINE		PROP. EDGE OF PAVEMENT
	STONEWALL		PROP. BITUMINOUS CURB
	EDGE OF PAVEMENT		PROPOSED 2' CONTOUR
	BITUMINOUS CURB		PROPOSED GUARDRAIL
UGU	PROP. UNDERGROUND UTILITIES		
S	PROPOSED SEWER LINE		
FM	PROPOSED FORCEMAIN		
UD	PROPOSED UNDERDRAIN		

BENCHMARK DATA

LOCATION	DATUM	DESCRIPTION
N:153639.98, E:1068724.55	ELEV.=387.08 (NAVD 88)	BENCHMARK #12-PK SET IN TREE

STATE OF NEW HAMPSHIRE
STEVEN B. KEACH No. 7919
LICENSED PROFESSIONAL ENGINEER
9 JUL 16

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	11/01/16	REVISED PER TOWN COMMENTS	JDL
2	02/13/17	REVISED PER WATER MAIN EXTENSION	BJC
3	04/11/17	REVISED PER TOWN COMMENTS	KMB
4	05/26/17	REVISED PER NHDES COMMENTS	JDL
5	03/12/18	ISSUED FOR LONDONDERRY AND DERRY REVIEW	JDL

OWNER OF RECORD:
LORDEN COMMONS, LLC
3 PENSTOCK WAY
NEWMARKET, NH 03857
BK. 5338 PG. 2903

APPLICANT
CHINBURG PROPERTIES, INC.
3 PENSTOCK WAY
NEWMARKET, NH 03857

CLOVER LANE ROADWAY PLAN (STA. 106+50 TO STA. 116+50)
LORDEN COMMONS PHASES II, III & IV

MAP 16 LOT 38 – 17 OLD DERRY ROAD
LONDONDERRY, NEW HAMPSHIRE

KNA KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

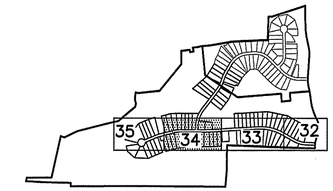
PROJ. NO: 15-0904-2
DATE: JULY 15, 2016
SCALE: 1" = 40'
FILE NO.:
SHEET NO. 33 OF 71

R:_project\15090942\dwg\Production Drawings\15090942-ROADWAY.dwg, CLOVER, 3/8/2018 3:40:07 PM

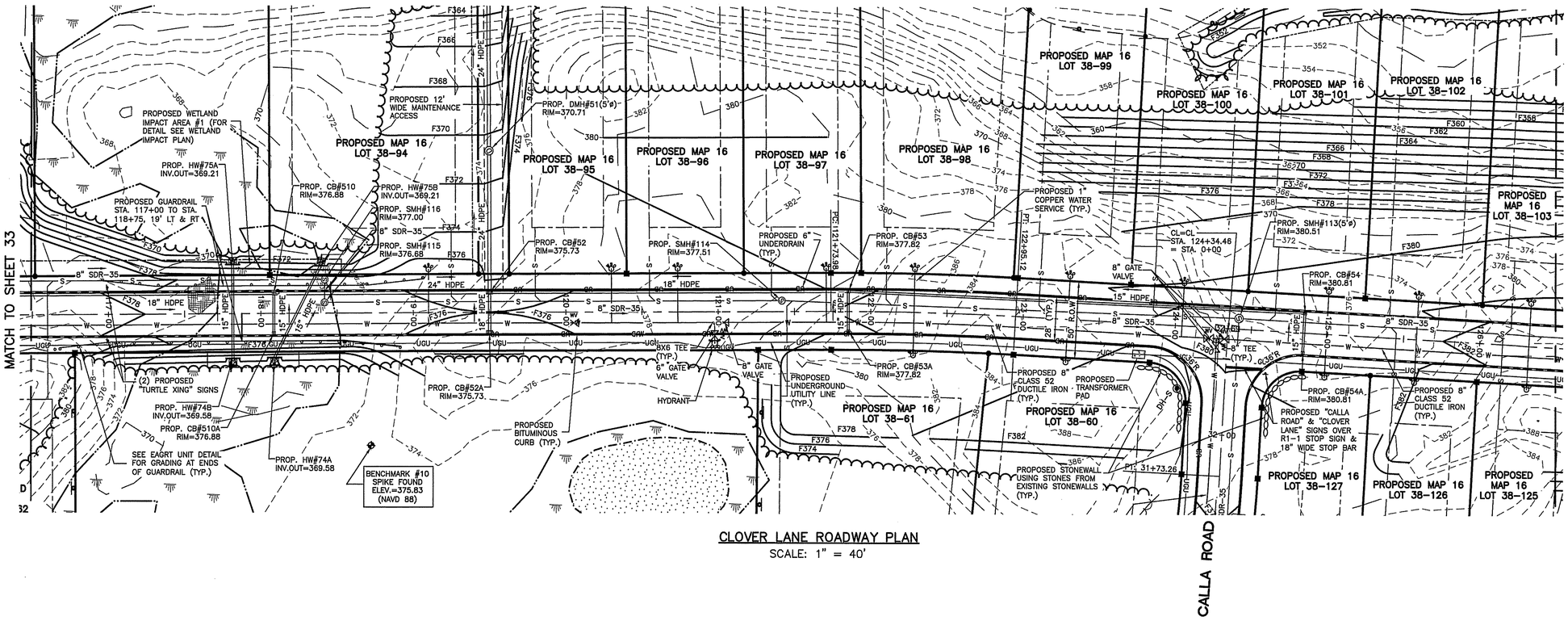
SEE SHEET 1 FOR NOTES

SEE SHEET 38 FOR ROADWAY PROFILE

LOAM & SEED ALL DISTURBED AREAS (TYP.)



CLOVER LANE ROADWAY KEY PLAN
SCALE: 1" = 1,500'



CLOVER LANE ROADWAY PLAN
SCALE: 1" = 40'

DIG SAFE
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM
888-DIG-SAFE (344-7233)
811

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

LEGEND

GB-F	GRANITE BOUND FOUND		PROPERTY LINE
IPIN-F	IRON PIN FOUND		PREVIOUSLY APPROVED PROPERTY LINE
DH-F	DRILL HOLE FOUND		STREAM
DH-S	DRILL HOLE SET		WETLAND
IPP-F	IRON PIPE FOUND		VERNAL POOL
RRS-F	RAILROAD SPIKE FOUND		DRAINAGE LINE
BND-TBS	BOUND TO BE SET		EDGE OF GRAVEL
RB-TBS	5/8" REBAR TO BE SET		10' CONTOUR
	UTILITY POLE		2' CONTOUR
	WELL		BUILDING SETBACK
	SEWER MANHOLE		WETLAND BUFFER
	DRAINAGE MANHOLE		EXISTING EASEMENT
	CATCH BASIN		PROPOSED PROPERTY LINE
OHU	OVERHEAD UTILITIES		PROPOSED EASEMENT
S	SEWER LINE		PROPOSED DRAINAGE LINE
	TREELINE		PROP. EDGE OF PAVEMENT
	STONEWALL		PROP. BITUMINOUS CURB
	EDGE OF PAVEMENT		PROPOSED 2' CONTOUR
	BITUMINOUS CURB		PROPOSED GUARDRAIL
UGU	PROP. UNDERGROUND UTILITIES		
S	PROPOSED SEWER LINE		
FM	PROPOSED FORCEMAIN		
UD	PROPOSED UNDERDRAIN		

BENCHMARK DATA

LOCATION	DATUM	DESCRIPTION
N:153117.43, E:1068405.00	ELEV.=375.83 (NAVD 88)	BENCHMARK #10 – SPIKE FOUND

STATE OF NEW HAMPSHIRE – STEVEN B. KEACH – No. 8139 – LICENSED PROFESSIONAL ENGINEER – 03.28.18

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	11/01/16	REVISED PER TOWN COMMENTS	JDL
2	02/13/17	REVISED PER WATER MAIN EXTENSION	BJC
3	04/11/17	REVISED PER TOWN COMMENTS	KMB
4	05/26/17	REVISED PER NHDES COMMENTS	JDL
5	03/12/18	ISSUED FOR LONDONDERRY AND DERRY REVIEW	JDL

OWNER OF RECORD:
LORDEN COMMONS, LLC
3 PENSTOCK WAY
NEWMARKET, NH 03857
BK. 5338 PG. 2903

APPLICANT
CHINBURG PROPERTIES, INC.
3 PENSTOCK WAY
NEWMARKET, NH 03857

CLOVER LANE ROADWAY PLAN
(STA. 116+50 TO STA. 126+50)
LORDEN COMMONS
PHASES II, III & IV

MAP 16 LOT 38 – 17 OLD DERRY ROAD
LONDONDERRY, NEW HAMPSHIRE

KNA KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

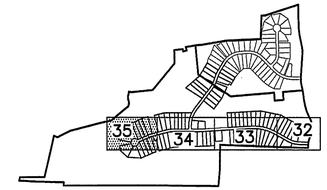
PROJ. NO: 15-0904-2
DATE: JULY 15, 2016
SCALE: 1" = 40'
FILE NO.:
SHEET NO. 34 OF 71

R:_project\1509042\dwg\Production Drawings\1509042-ROADWAY.dwg, CLOVER, 3/8/2018 3:40:33 PM

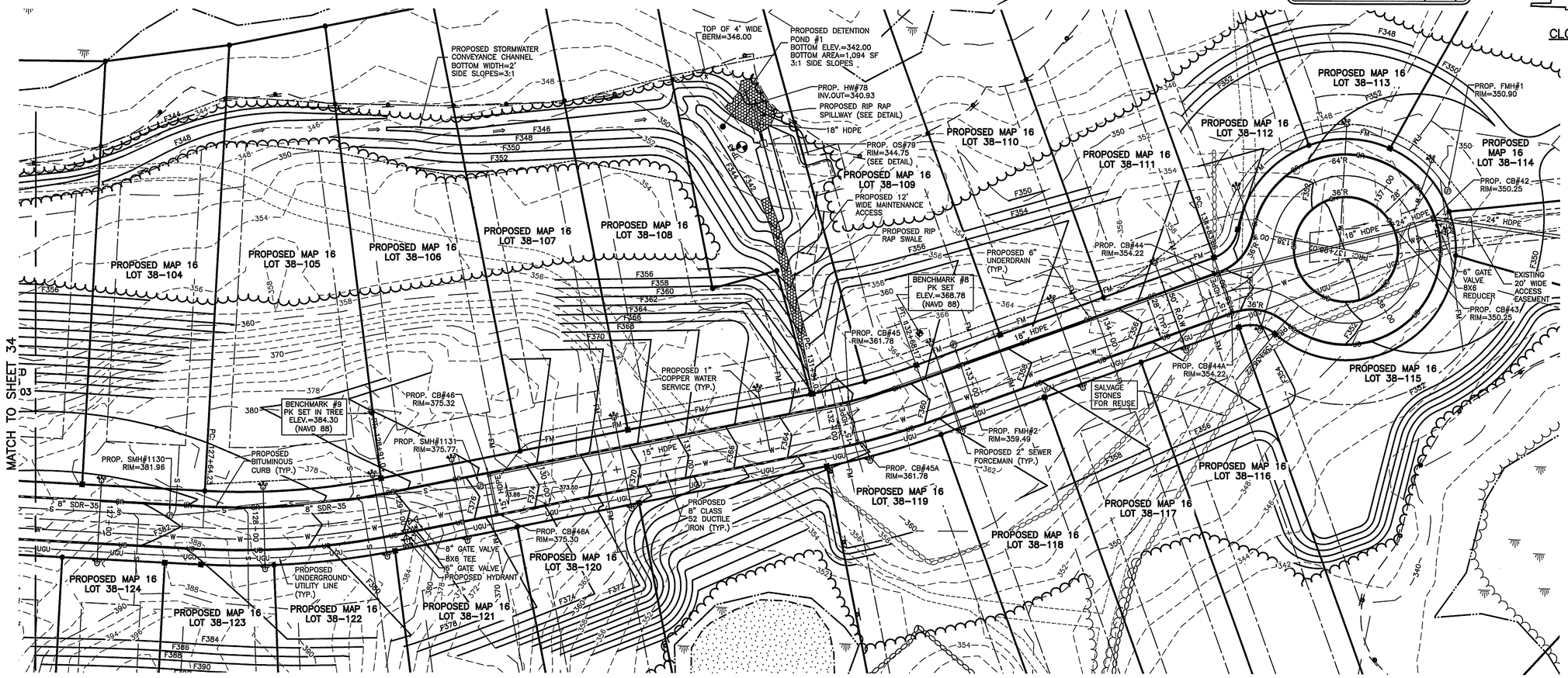
SEE SHEET 1 FOR NOTES

SEE SHEET 39 FOR ROADWAY PROFILE

LOAM & SEED ALL DISTURBED AREAS (TYP.)



CLOVER LANE ROADWAY KEY PLAN
SCALE: 1" = 1,500'



CLOVER LANE ROADWAY PLAN
SCALE: 1" = 40'

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

LEGEND

GB-F	GRANITE BOUND FOUND		PROPERTY LINE
IPIN-F	IRON PIN FOUND		PREVIOUSLY APPROVED PROPERTY LINE
DH-F	DRILL HOLE FOUND		STREAM
DH-S	DRILL HOLE SET		WETLAND
IPP-F	IRON PIPE FOUND		VERNAL POOL
RRS-F	RAILROAD SPIKE FOUND		DRAINAGE LINE
BND-TBS	BOUND TO BE SET		EDGE OF GRAVEL
RB-TBS	5/8" REBAR TO BE SET		10' CONTOUR
	UTILITY POLE		2' CONTOUR
	WELL		BUILDING SETBACK
	SEWER MANHOLE		WETLAND BUFFER
	DRAINAGE MANHOLE		EXISTING EASEMENT
	CATCH BASIN		PROPOSED PROPERTY LINE
OHU	OVERHEAD UTILITIES		PROPOSED EASEMENT
S	SEWER LINE		PROPOSED DRAINAGE LINE
	TREELINE		PROP. EDGE OF PAVEMENT
	STONEWALL		PROP. BITUMINOUS CURB
	EDGE OF PAVEMENT		PROPOSED 2' CONTOUR
	BITUMINOUS CURB		PROPOSED GUARDRAIL
UGU	PROP. UNDERGROUND UTILITIES		
S	PROPOSED SEWER LINE		
FM	PROPOSED FORCEMAIN		
UD	PROPOSED UNDERDRAIN		

BENCHMARK DATA

LOCATION	DATUM	DESCRIPTION
N:151826.67, E:1067881.47	ELEV.=368.78 (NAVD 88)	BENCHMARK #8 – PK SET
N:152177.14, E:1068021.66	ELEV.=384.30 (NAVD 88)	BENCHMARK #9 – PK SET IN TREE

STATE OF NEW HAMPSHIRE
STEVEN B. KEACH
No. 7959
LICENSED
PROFESSIONAL ENGINEER
07/12/18

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	11/01/16	REVISED PER TOWN COMMENTS	JDL
2	02/13/17	REVISED PER WATER MAIN EXTENSION	BJC
3	04/11/17	REVISED PER TOWN COMMENTS	KMB
4	05/26/17	REVISED PER NHDES COMMENTS	JDL
5	03/12/18	ISSUED FOR LONDONDERRY AND DERRY REVIEW	JDL

OWNER OF RECORD:
LORDEN COMMONS, LLC
3 PENSTOCK WAY
NEWMARKET, NH 03857
BK. 5338 PG. 2903

APPLICANT
CHINBURG PROPERTIES, INC.
3 PENSTOCK WAY
NEWMARKET, NH 03857

CLOVER LANE ROADWAY PLAN
(STA. 126+50 TO STA. 138+50.38)
LORDEN COMMONS
PHASES II, III & IV

MAP 16 LOT 38 – 17 OLD DERRY ROAD
LONDONDERRY, NEW HAMPSHIRE

KNA KEACH–NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

PROJ. NO: 15-0904-2
DATE: JULY 15, 2016
SCALE: 1" = 40'
FILE NO.:
SHEET NO. 35 OF 71

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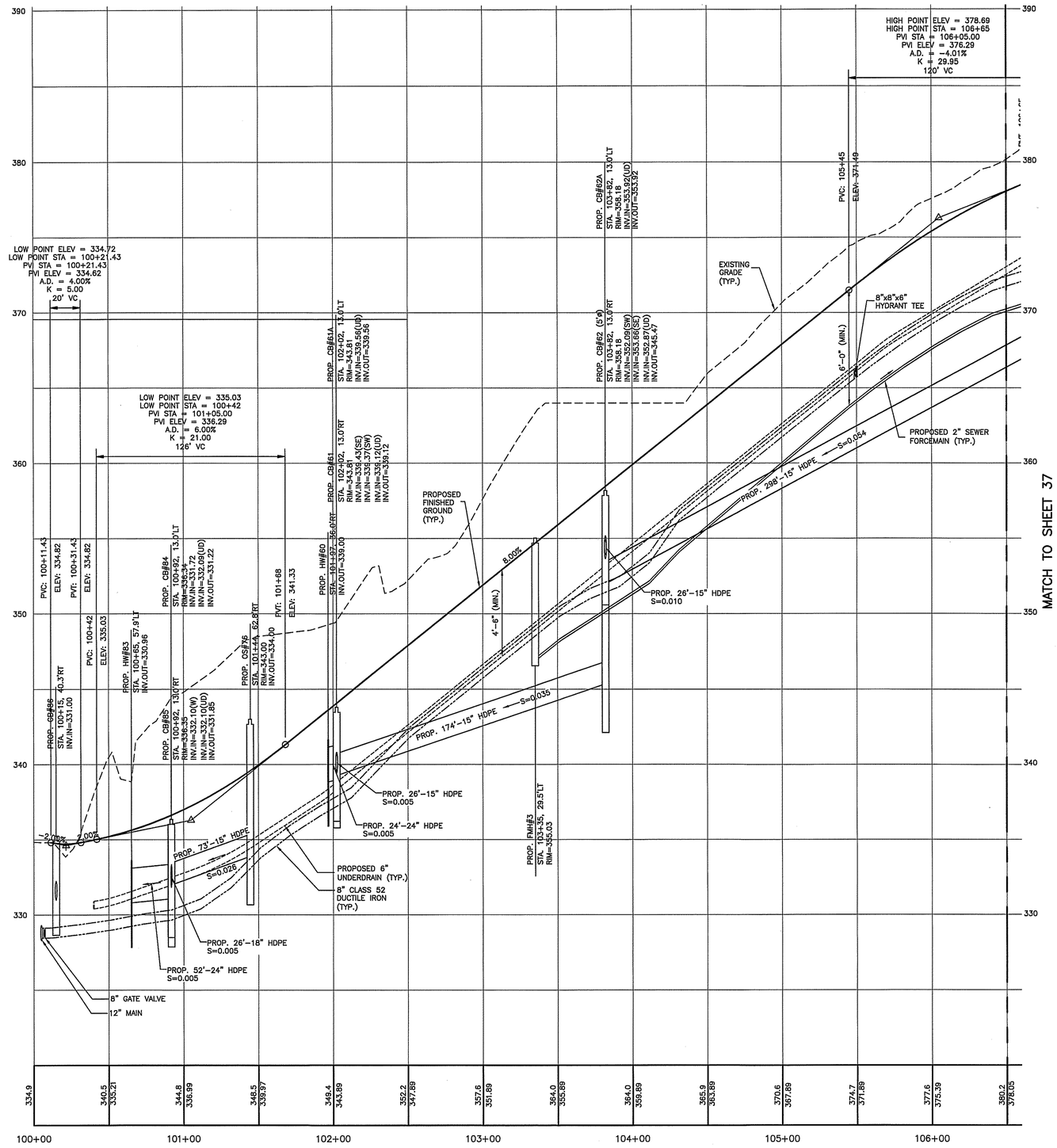

CLOVER LANE ROADWAY PROFILE
SCALE: 1" = 40' (HORIZ.)
1" = 4' (VERT.)

SEE SHEET 1 FOR NOTES

SEE SHEET 32 FOR ROADWAY PLAN

DIG SAFE
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM
811
1-888-DIG-SAFE

OWNER OF RECORD:	APPLICANT
LORDEN COMMONS, LLC 3 PENSTOCK WAY NEWMARKET, NH 03857 BK. 5338 PG. 2903	CHINBURG PROPERTIES, INC. 3 PENSTOCK WAY NEWMARKET, NH 03857

CLOVER LANE ROADWAY PROFILE
(STA. 100+00 TO STA. 106+50)
LORDEN COMMONS
PHASES II, III & IV

MAP 16 LOT 38 – 17 OLD DERRY ROAD
LONDONDERRY, NEW HAMPSHIRE

STATE OF NEW HAMPSHIRE
STEVEN B. KEACH
No. 7659
LICENSED
PROFESSIONAL ENGINEER
09-13-18

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	11/01/16	REVISED PER TOWN COMMENTS	JDL
2	02/13/17	REVISED PER WATER MAIN EXTENSION	BJC
3	04/11/17	REVISED PER TOWN COMMENTS	KMB
4	05/26/17	REVISED PER NHDES COMMENTS	JDL
5	03/12/18	ISSUED FOR LONDONDERRY AND DERRY REVIEW	JDL

KNA KEACH–NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

PROJ. NO: 15-0904-2
DATE: JULY 15, 2016
SCALE: AS SHOWN
FILE NO.:
SHEET NO. 36 OF 71

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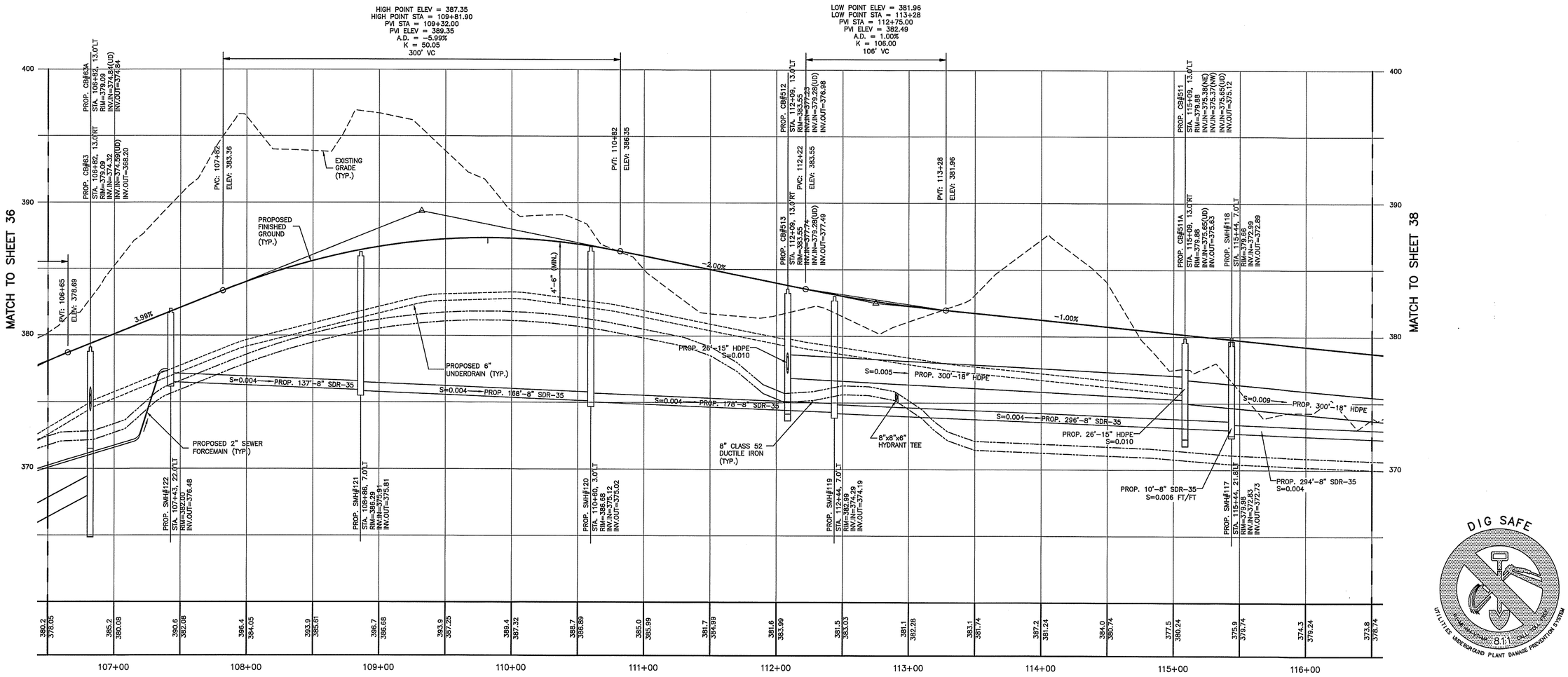
SEE SHEET 1 FOR NOTES

SEE SHEET 33 FOR ROADWAY PLAN



CLOVER LANE ROADWAY PROFILE

SCALE: 1" = 40' (HORIZ.)
1" = 4' (VERT.)

DIG SAFE
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM
811

OWNER OF RECORD:	APPLICANT
LORDEN COMMONS, LLC 3 PENSTOCK WAY NEWMARKET, NH 03857 BK. 5338 PG. 2903	CHINBURG PROPERTIES, INC. 3 PENSTOCK WAY NEWMARKET, NH 03857

CLOVER LANE ROADWAY PROFILE
(STA. 106+50 TO STA. 116+50)
LORDEN COMMONS
PHASES II, III & IV

MAP 16 LOT 38 – 17 OLD DERRY ROAD
LONDONDERRY, NEW HAMPSHIRE

STATE OF NEW HAMPSHIRE
STEVEN B. KEACH
No. 7659
LICENSED
PROFESSIONAL ENGINEER
03-12-18

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	11/01/16	REVISED PER TOWN COMMENTS	JDL
2	02/13/17	REVISED PER WATER MAIN EXTENSION	BJC
3	04/11/17	REVISED PER TOWN COMMENTS	KMB
4	05/26/17	REVISED PER NHDES COMMENTS	JDL
5	03/12/18	ISSUED FOR LONDONDERRY AND DERRY REVIEW	JDL

KNA KEACH–NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

PROJ. NO: 15–0904–2
DATE: JULY 15, 2016
SCALE: AS SHOWN
FILE NO.:
SHEET NO. 37 OF 71

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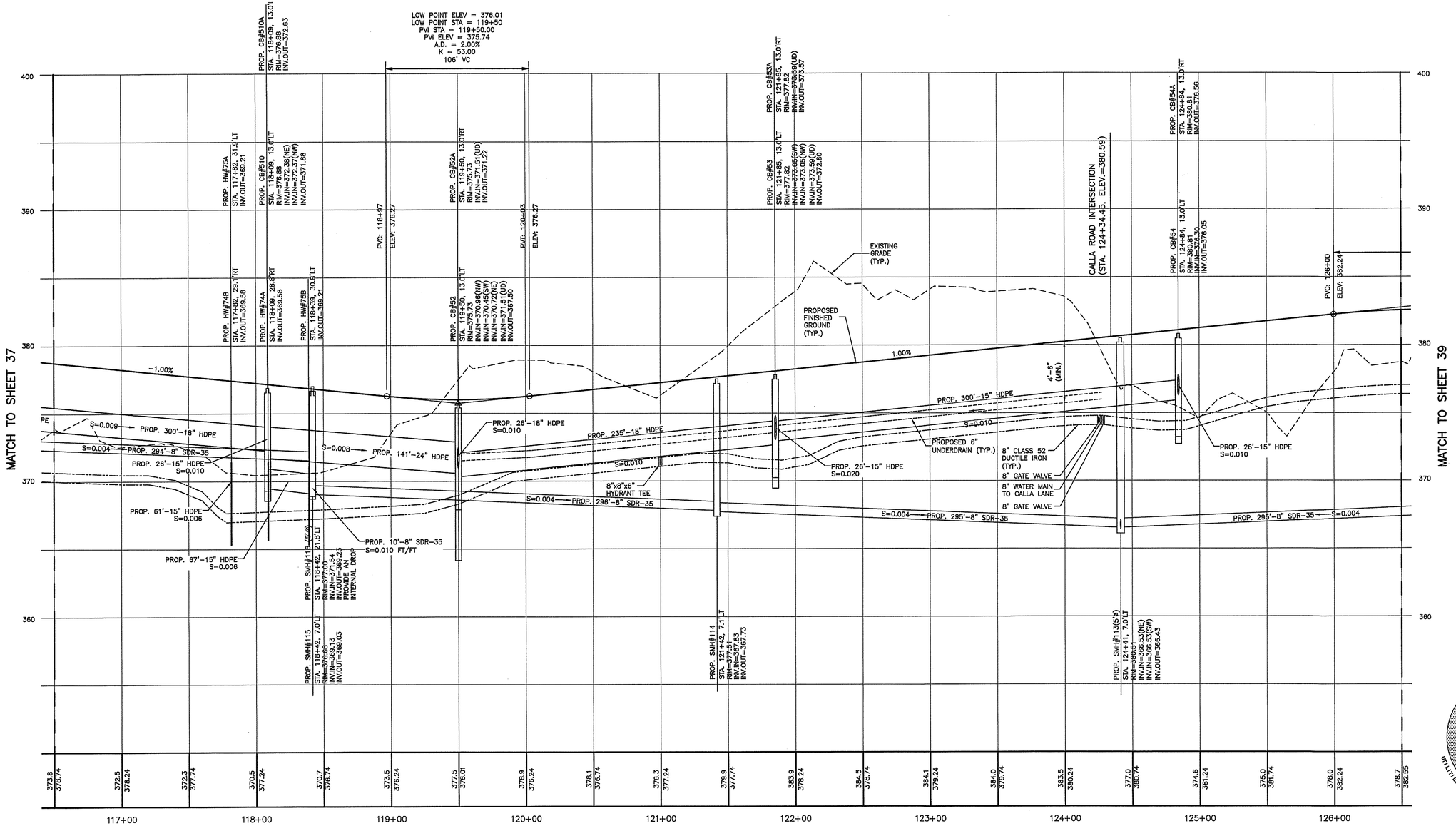

CLOVER LANE ROADWAY PROFILE

SCALE: 1" = 40' (HORIZ.)
1" = 4' (VERT.)

SEE SHEET 1 FOR NOTES

SEE SHEET 34 FOR ROADWAY PLAN

OWNER OF RECORD:
LORDEN COMMONS, LLC
3 PENSTOCK WAY
NEWMARKET, NH 03857
BK. 5338 PG. 2903

APPLICANT
CHINBURG PROPERTIES, INC.
3 PENSTOCK WAY
NEWMARKET, NH 03857

CLOVER LANE ROADWAY PROFILE (STA. 116+50 TO STA. 126+50)
LORDEN COMMONS PHASES II, III & IV

MAP 16 LOT 38 – 17 OLD DERRY ROAD
LONDONDERRY, NEW HAMPSHIRE

STATE OF NEW HAMPSHIRE
STEVEN B. KEACH No. 7959 LICENSED PROFESSIONAL ENGINEER
03-20-18

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	11/01/16	REVISED PER TOWN COMMENTS	JDL
2	02/13/17	REVISED PER WATER MAIN EXTENSION	BJC
3	04/11/17	REVISED PER TOWN COMMENTS	KMB
4	05/26/17	REVISED PER NHDES COMMENTS	JDL
5	03/12/18	ISSUED FOR LONDONDERRY AND DERRY REVIEW	JDL

KNA KEACH–NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

PROJ. NO: 15–0904–2
DATE: JULY 15, 2016
SCALE: AS SHOWN
FILE NO.:
SHEET NO. 38 OF 71

DIG SAFE
811 UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM

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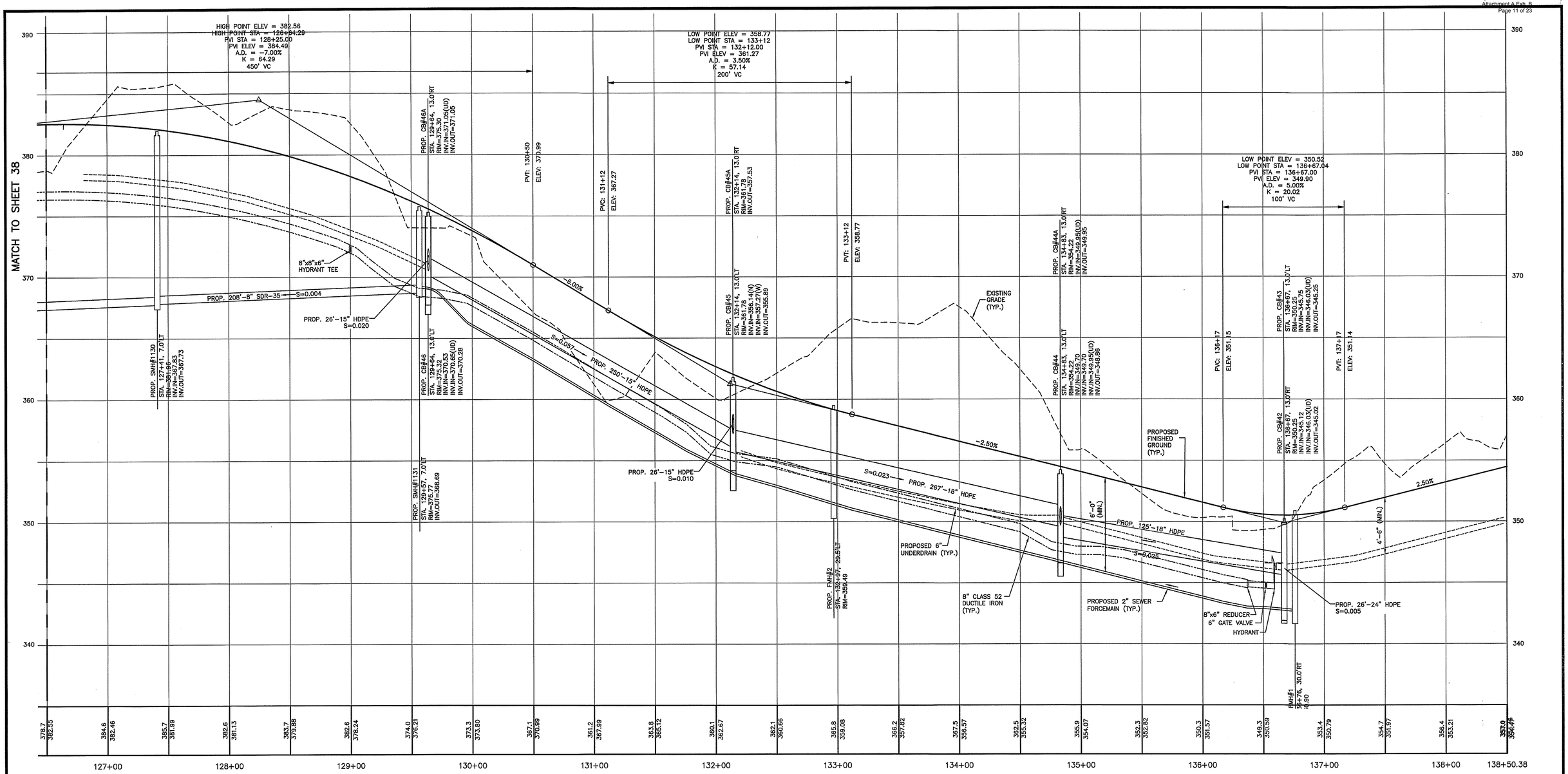


CLOVER LANE ROADWAY PROFILE

SCALE: 1" = 40' (HORIZ.)
1" = 4' (VERT.)

SEE SHEET 1 FOR NOTES

SEE SHEET 35 FOR ROADWAY PLAN

DIG SAFE
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM
811

OWNER OF RECORD:	APPLICANT
LORDEN COMMONS, LLC 3 PENSTOCK WAY NEWMARKET, NH 03857 BK. 5338 PG. 2903	CHINBURG PROPERTIES, INC. 3 PENSTOCK WAY NEWMARKET, NH 03857

CLOVER LANE ROADWAY PROFILE
(STA. 126+50 TO STA. 138+50.38)
LORDEN COMMONS
PHASES II, III & IV

MAP 16 LOT 38 – 17 OLD DERRY ROAD
LONDONDERRY, NEW HAMPSHIRE

STATE OF NEW HAMPSHIRE
STEVEN B. KEACH
NO. 7659
LICENSED
PROFESSIONAL ENGINEER

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	11/01/16	REVISED PER TOWN COMMENTS	JDL
2	02/13/17	REVISED PER WATER MAIN EXTENSION	BJC
3	04/11/17	REVISED PER TOWN COMMENTS	KMB
4	05/26/17	REVISED PER NHDES COMMENTS	JDL
5	03/12/18	ISSUED FOR LONDONDERRY AND DERRY REVIEW	JDL

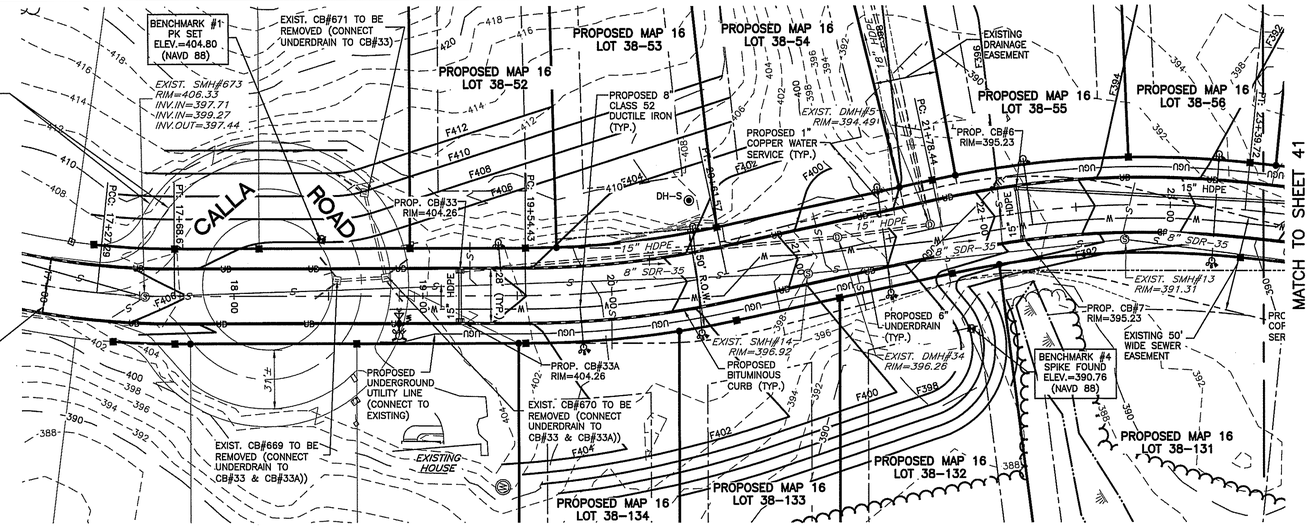
KNA KEACH–NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

PROJ. NO: 15–0904–2
DATE: JULY 15, 2016
SCALE: AS SHOWN
FILE NO.:
SHEET NO. 39 OF 71

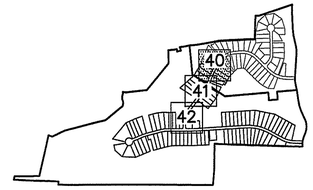
R:_project\1509042\dwg\Production Drawings\1509042-ROADWAY.dwg, CLOVER, 3/8/2018 3:42:21 PM

EXISTING CUL-DE-SAC SHALL BE REMOVED PER THE PHASING SCHEDULE. UPON REMOVAL OF PAVEMENT, REGRADING AND LOAM AND SEED THE EASEMENTS ON LOTS 38-33, 38-34, 38-35, 38-50 AND 38-51 SHALL BE AUTOMATICALLY EXTINGUISHED IN ACCORDANCE WITH NOTE #5 ON SHEET A9 OF PLAN REFERENCE #1.

BEGIN CONSTRUCTION AT STA. 17+00 (SAWCUT PAVEMENT AND MATCH TO EXISTING ROAD USING SAWCUT AND STEPPED ROADWAY DETAIL)



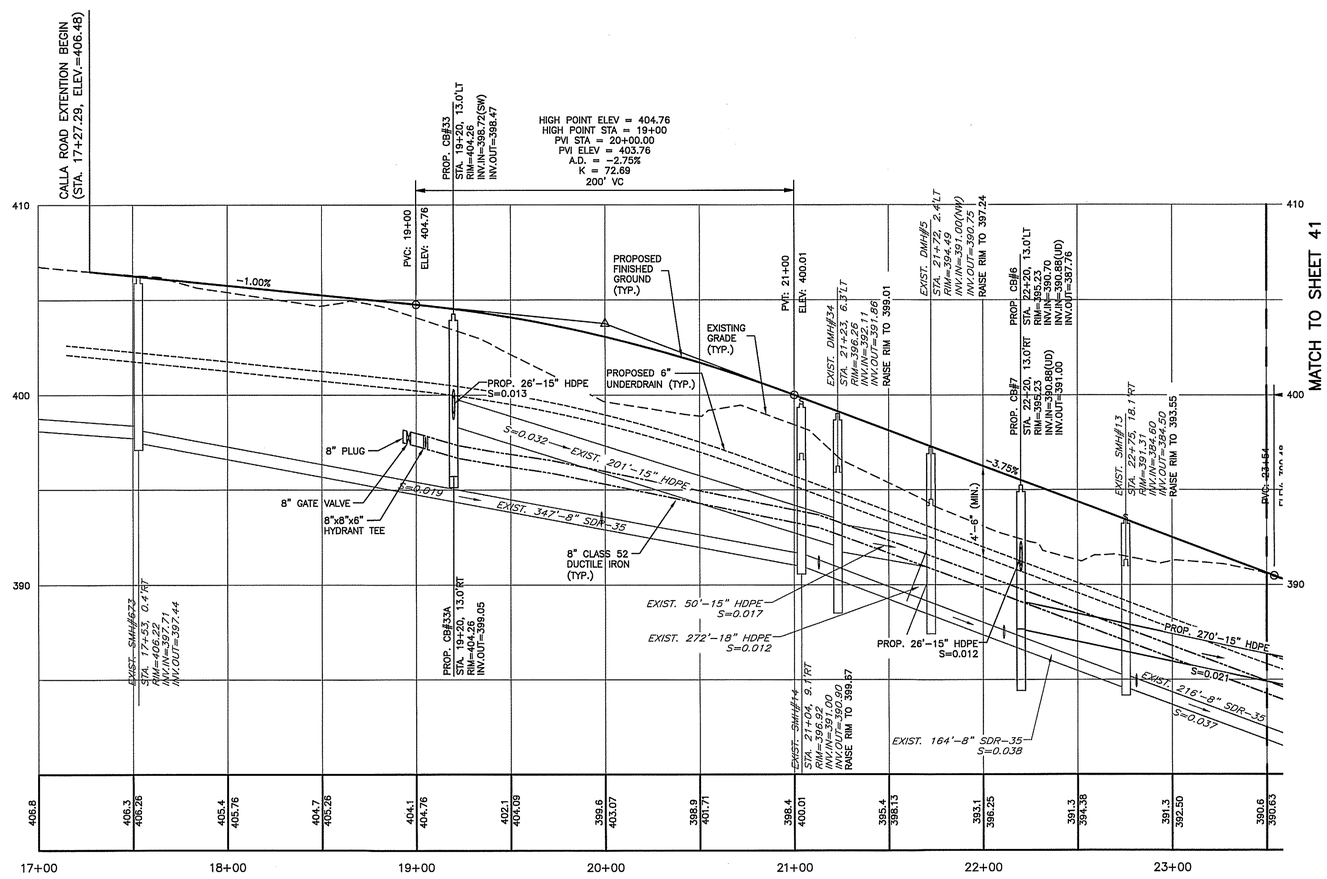
CALLA ROAD ROADWAY EXTENSION PLAN
SCALE: 1" = 40'



ROADWAY KEY PLAN
SCALE: 1" = 1,500'

SEE SHEET 1 FOR NOTES

LOAM & SEED ALL DISTURBED AREAS (TYP.)



CALLA ROAD ROADWAY EXTENSION PROFILE
SCALE: 1" = 40' (HORIZ.)
1" = 4' (VERT.)

DIG SAFE
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM
CALL BEFORE YOU DIG
888-DIG-SAFE (344-7233)

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

LEGEND

GB-F	GRANITE BOUND FOUND		PROPERTY LINE
IPIN-F	IRON PIN FOUND		PREVIOUSLY APPROVED PROPERTY LINE
DH-F	DRILL HOLE FOUND		STREAM
DH-S	DRILL HOLE SET		WETLAND
IPP-F	IRON PIPE FOUND		VERNAL POOL
RRS-F	RAILROAD SPIKE FOUND		DRAINAGE LINE
BND-TBS	BOUND TO BE SET		EDGE OF GRAVEL
RB-TBS	5/8" REBAR TO BE SET		10' CONTOUR
	UTILITY POLE		2' CONTOUR
	WELL		BUILDING SETBACK
	SEWER MANHOLE		WETLAND BUFFER
	DRAINAGE MANHOLE		EXISTING EASEMENT
	CATCH BASIN		PROPOSED PROPERTY LINE
OHU	OVERHEAD UTILITIES		PROPOSED EASEMENT
S	SEWER LINE		PROPOSED DRAINAGE LINE
	TREELINE		PROP. EDGE OF PAVEMENT
	STONEWALL		PROP. BITUMINOUS CURB
	EDGE OF PAVEMENT		PROP. 2' CONTOUR
	BITUMINOUS CURB		PROPOSED GUARDRAIL
UGU	PROP. UNDERGROUND UTILITIES		
S	PROPOSED SEWER LINE		
FM	PROPOSED FORCEMAIN		
UD	PROPOSED UNDERDRAIN		

BENCHMARK DATA

LOCATION	DATUM	DESCRIPTION
N:153812.13, E:1067525.21	ELEV.=404.80 (NAVD 88)	BENCHMARK #1 - PK SET
N:153480.25, E:1067627.79	ELEV.=390.76 (NAVD 88)	BENCHMARK #4 - SPIKE FOUND

STATE OF NEW HAMPSHIRE
STEVEN D. KEACH
No. 7659
LICENSED
PROFESSIONAL ENGINEER

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	11/01/16	REVISED PER TOWN COMMENTS	JDL
2	02/13/17	REVISED PER WATER MAIN EXTENSION	BJC
3	04/11/17	REVISED PER TOWN COMMENTS	KMB
4	05/26/17	REVISED PER NHDES COMMENTS	JDL
5	03/12/18	ISSUED FOR LONDONDERRY AND DERRY REVIEW	JDL

OWNER OF RECORD:
LORDEN COMMONS, LLC
3 PENSTOCK WAY
NEWMARKET, NH 03857
BK. 5338 PG. 2903

APPLICANT
CHINBURG PROPERTIES, INC.
3 PENSTOCK WAY
NEWMARKET, NH 03857

CALLA ROAD EXTENSION PLAN AND PROFILE
(STA. 17+00 TO STA. 23+50)
LORDEN COMMONS
PHASES II, III & IV
MAP 16 LOT 38 - 17 OLD DERRY ROAD
LONDONDERRY, NEW HAMPSHIRE

KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

PROJ. NO: 15-0904-2
DATE: JULY 15, 2016
SCALE: AS SHOWN
FILE NO.:
SHEET NO. 40 OF 71

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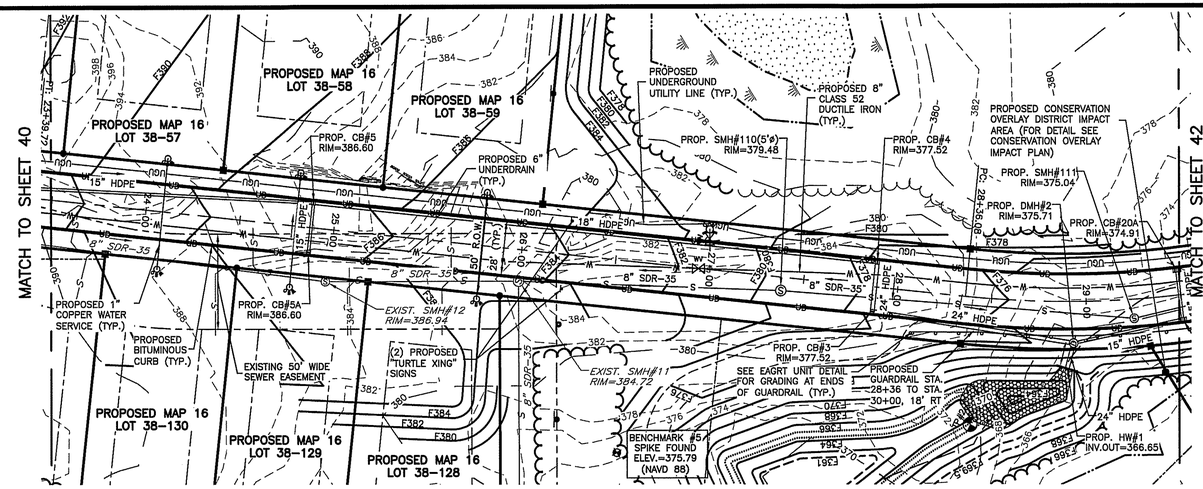

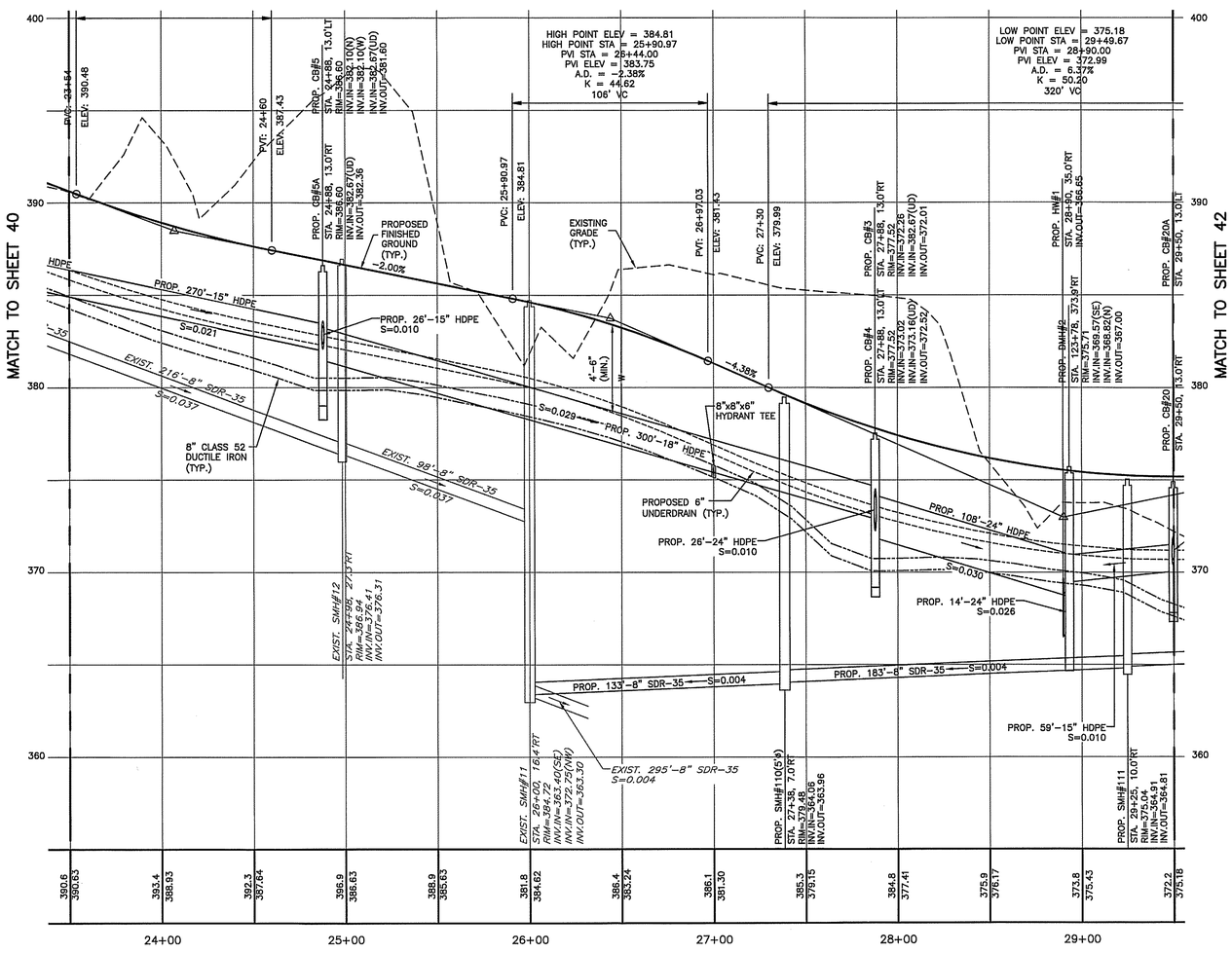

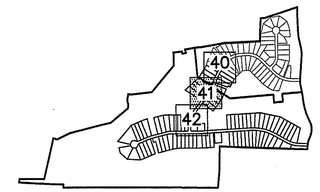

ROADWAY KEY PLAN
SCALE: 1" = 1,500'

CALLA ROAD ROADWAY EXTENSION PLAN
SCALE: 1" = 40'

SEE SHEET 1 FOR NOTES

LOAM & SEED ALL DISTURBED AREAS (TYP.)

DIG SAFE
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM
8.11

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

LEGEND

GB-F	GRANITE BOUND FOUND		PROPERTY LINE
IPIN-F	IRON PIN FOUND		PREVIOUSLY APPROVED PROPERTY LINE
DH-F	DRILL HOLE FOUND		STREAM
DH-S	DRILL HOLE SET		WETLAND
IPP-F	IRON PIPE FOUND		VERNAL POOL
RRS-F	RAILROAD SPIKE FOUND		DRAINAGE LINE
BND-TBS	BOUND TO BE SET		EDGE OF GRAVEL
RB-TBS	5/8" REBAR TO BE SET		10' CONTOUR
	UTILITY POLE		2' CONTOUR
	WELL		BUILDING SETBACK
	SEWER MANHOLE		WETLAND BUFFER
	DRAINAGE MANHOLE		EXISTING EASEMENT
	CATCH BASIN		PROPOSED PROPERTY LINE
OHU	OVERHEAD UTILITIES		PROPOSED EASEMENT
S	SEWER LINE		PROPOSED DRAINAGE LINE
	TREELINE		PROP. EDGE OF PAVEMENT
	STONEWALL		PROP. BITUMINOUS CURB
	EDGE OF PAVEMENT		PROPOSED 2' CONTOUR
	BITUMINOUS CURB		PROPOSED GUARDRAIL
UGU	PROP. UNDERGROUND UTILITIES		
S	PROPOSED SEWER LINE		
FM	PROPOSED FORCEMAIN		
UD	PROPOSED UNDERDRAIN		

BENCHMARK DATA

LOCATION	DATUM	DESCRIPTION
N:153038.71, E:1067754.75	ELEV.=375.79 (NAVD 88)	BENCHMARK #5 – SPIKE FOUND

CALLA ROAD ROADWAY EXTENSION PROFILE
SCALE: 1" = 40' (HORIZ.)
1" = 4' (VERT.)

STATE OF NEW HAMPSHIRE
STEVEN B. KEACH No. 7639 LICENSED PROFESSIONAL ENGINEER
03-20-18

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	11/01/16	REVISED PER TOWN COMMENTS	JDL
2	02/13/17	REVISED PER WATER MAIN EXTENSION	BJC
3	04/11/17	REVISED PER TOWN COMMENTS	KMB
4	05/26/17	REVISED PER NHDES COMMENTS	JDL
5	03/12/18	ISSUED FOR LONDONDERRY AND DERRY REVIEW	JDL

OWNER OF RECORD:
LORDEN COMMONS, LLC
3 PENSTOCK WAY
NEWMARKET, NH 03857
BK. 5338 PG. 2903

APPLICANT
CHINBURG PROPERTIES, INC.
3 PENSTOCK WAY
NEWMARKET, NH 03857

CALLA ROAD EXTENSION PLAN AND PROFILE
(STA. 23+50 TO STA. 29+50)
LORDEN COMMONS
PHASES II, III & IV
MAP 16 LOT 38 – 17 OLD DERRY ROAD
LONDONDERRY, NEW HAMPSHIRE

KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

PROJ. NO: 15-0904-2
DATE: JULY 15, 2016
SCALE: AS SHOWN
FILE NO.:
SHEET NO. 41 OF 71

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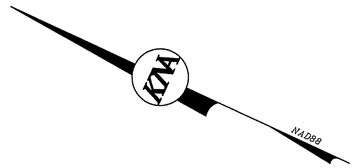
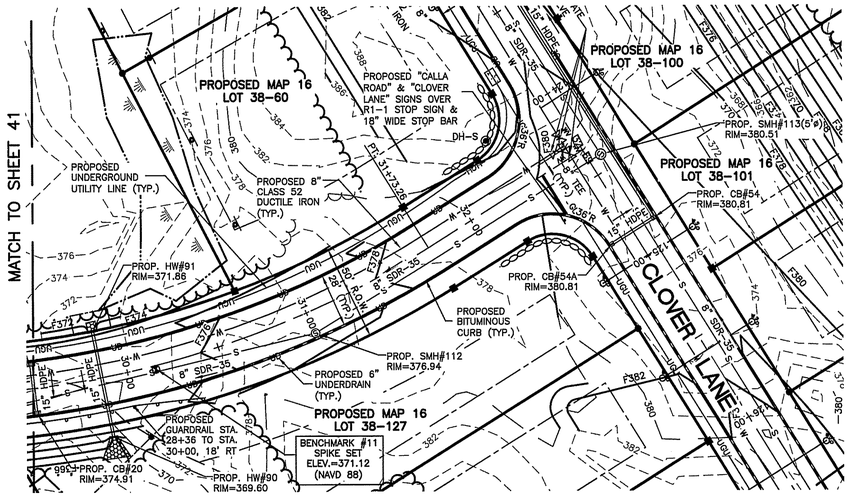
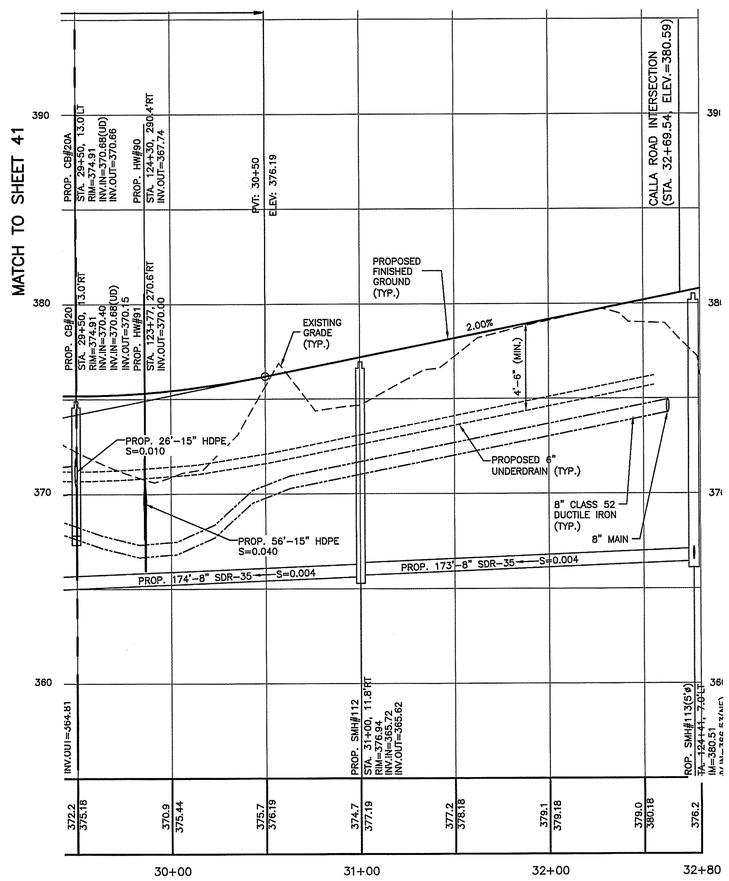
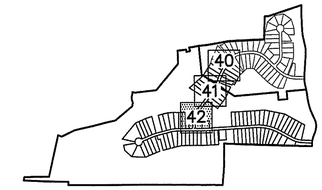




CALLA ROAD ROADWAY EXTENSION PLAN
SCALE: 1" = 40'



CALLA ROAD ROADWAY EXTENSION PROFILE
SCALE: 1" = 40' (HORIZ.)
1" = 4' (VERT.)



ROADWAY KEY PLAN
SCALE: 1" = 1,500'

SEE SHEET 1 FOR NOTES

LOAM & SEED ALL DISTURBED AREAS (TYP.)

DIG SAFE
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM
CALL 1-888-DIG-SAFE
RSA 374:48 - 374:54 CHAPTER 6.1.1

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

LEGEND

GB-F	GRANITE BOUND FOUND		PROPERTY LINE
IPIN-F	IRON PIN FOUND		PREVIOUSLY APPROVED PROPERTY LINE
DH-F	DRILL HOLE FOUND		STREAM
DH-S	DRILL HOLE SET		WETLAND
IPP-F	IRON PIPE FOUND		VERNAL POOL
RRS-F	RAILROAD SPIKE FOUND		DRAINAGE LINE
BND-TBS	BOUND TO BE SET		EDGE OF GRAVEL
RB-TBS	5/8" REBAR TO BE SET		10' CONTOUR
	UTILITY POLE		2' CONTOUR
	WELL		BUILDING SETBACK
	SEWER MANHOLE		WETLAND BUFFER
	DRAINAGE MANHOLE		EXISTING EASEMENT
	CATCH BASIN		PROPOSED PROPERTY LINE
OHU	OVERHEAD UTILITIES		PROPOSED EASEMENT
S	SEWER LINE		PROPOSED DRAINAGE LINE
	TREELINE		PROP. EDGE OF PAVEMENT
	STONEWALL		PROP. BITUMINOUS CURB
	EDGE OF PAVEMENT		PROPOSED 2' CONTOUR
	BITUMINOUS CURB		PROPOSED GUARDRAIL
UGU	PROP. UNDERGROUND UTILITIES		
S	PROPOSED SEWER LINE		
FM	PROPOSED FORCEMAIN		
UD	PROPOSED UNDERDRAIN		

BENCHMARK DATA

LOCATION	DATUM	DESCRIPTION
152749.082, E:1067992.02	ELEV.=371.12 (NAVD 88)	BENCHMARK #11 – SPIKE SET

STATE OF NEW HAMPSHIRE
STEVEN B. KEACH No. 7859
LICENSED PROFESSIONAL ENGINEER
03/12/18

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	11/01/16	REVISED PER TOWN COMMENTS	JDL
2	02/13/17	REVISED PER WATER MAIN EXTENSION	BJC
3	04/11/17	REVISED PER TOWN COMMENTS	KMB
4	05/26/17	REVISED PER NHDES COMMENTS	JDL
5	03/12/18	ISSUED FOR LONDONDERRY AND DERRY REVIEW	JDL

OWNER OF RECORD:
LORDEN COMMONS, LLC
3 PENSTOCK WAY
NEWMARKET, NH 03857
BK. 5338 PG. 2903

APPLICANT
CHINBURG PROPERTIES, INC.
3 PENSTOCK WAY
NEWMARKET, NH 03857

CALLA ROAD EXTENSION PLAN AND PROFILE (STA. 29+50 TO STA. 32+69.54)
LORDEN COMMONS PHASES II, III & IV
MAP 16 LOT 38 – 17 OLD DERRY ROAD
LONDONDERRY, NEW HAMPSHIRE

KNA KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

PROJ. NO: 15-0904-2
DATE: JULY 15, 2016
SCALE: AS SHOWN
FILE NO.:
SHEET NO. 42 OF 71

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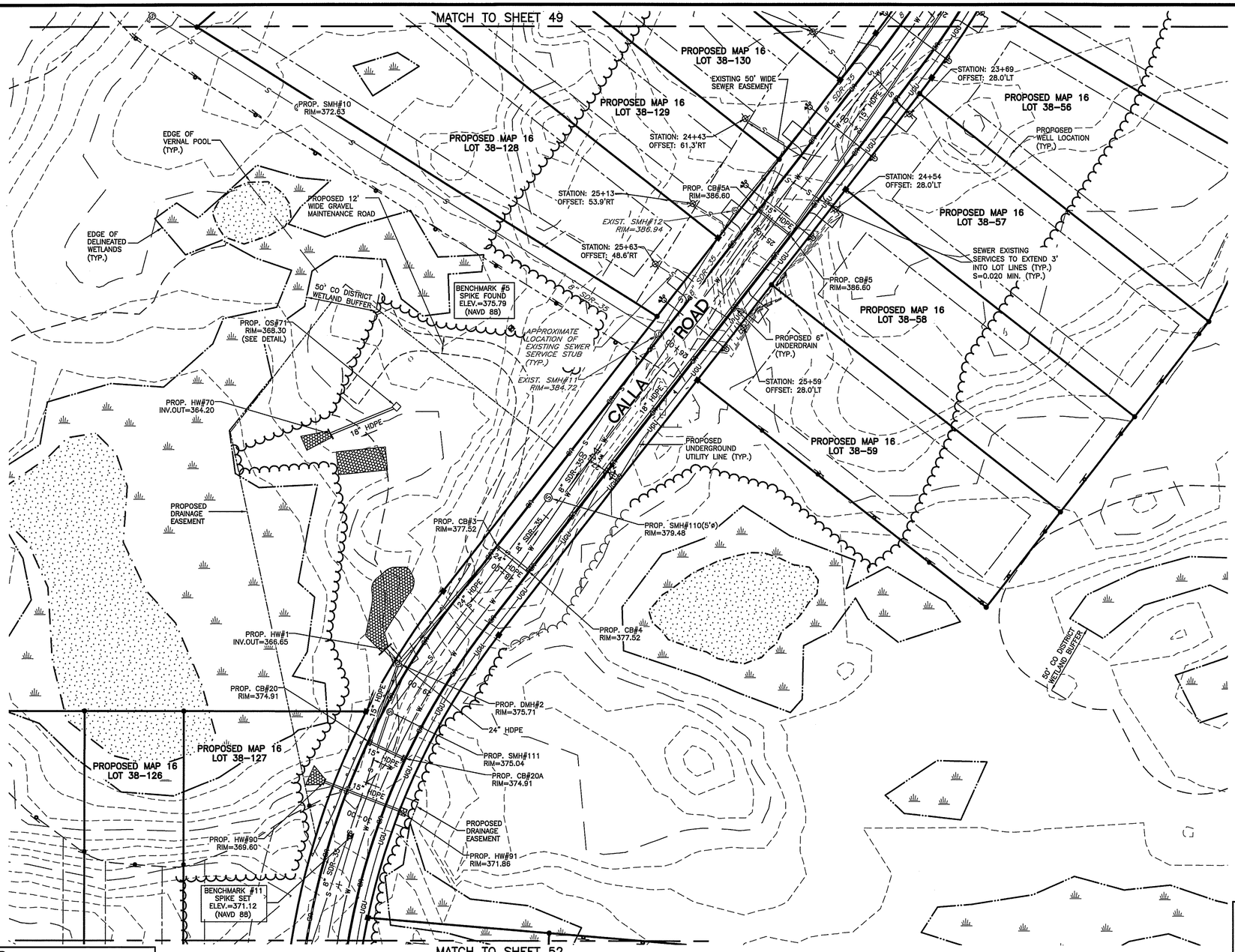

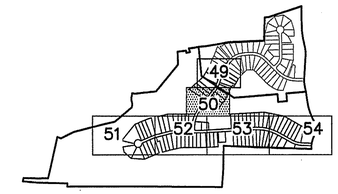

EASEMENT KEY PLAN
SCALE: 1" = 1,500'

SEE SHEET 1 FOR NOTES

NAD88

LEGEND

GB-F	GRANITE BOUND FOUND		ABUTTER LINE
IPIN-F	IRON PIN FOUND		PROPERTY LINE
DH-F	DRILL HOLE FOUND		PREVIOUSLY APPROVED PROPERTY LINE
DH-S	DRILL HOLE SET		STREAM
IPP-F	IRON PIPE FOUND		WETLAND
RRS-F	RAILROAD SPIKE FOUND		VERNAL POOL
BND-TBS	BOUND TO BE SET		DRAINAGE LINE
RB-TBS	5/8" REBAR TO BE SET		EDGE OF GRAVEL
	UTILITY POLE		BUILDING SETBACK
	WELL		WETLAND BUFFER
	SEWER MANHOLE		EXISTING EASEMENT
	DRAINAGE MANHOLE		PROPOSED PROPERTY LINE
	CATCH BASIN		PROPOSED DRAINAGE LINE
OHU	OVERHEAD UTILITIES		PROP. EDGE OF PAVEMENT
S	SEWER LINE		PROP. BITUMINOUS CURB
	TREELINE		PROPOSED GUARDRAIL
	STONEWALL		
	EDGE OF PAVEMENT		
	BITUMINOUS CURB		
UGU	PROP. UNDERGROUND UTILITIES		
S	PROPOSED SEWER LINE		
FM	PROPOSED FORCEMAIN		
UD	PROPOSED UNDERDRAIN		

BENCHMARK DATA

LOCATION	DATUM	DESCRIPTION
N:153038.71, E:1067754.75	ELEV.=375.79 (NAVD 88)	BENCHMARK #5 – SPIKE FOUND
152749.082, E:1067992.02	ELEV.=371.12 (NAVD 88)	BENCHMARK #11 – SPIKE SET

DIG SAFE
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM
811

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

STATE OF NEW HAMPSHIRE
STEVEN B. KEACH No. 7859 LICENSED PROFESSIONAL ENGINEER
03/12/18

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	11/01/16	REVISED PER TOWN COMMENTS	JDL
2	02/13/17	REVISED PER WATER MAIN EXTENSION	BJC
3	04/11/17	REVISED PER TOWN COMMENTS	KMB
4	05/26/17	REVISED PER NHDES COMMENTS	JDL
5	03/12/18	ISSUED FOR LONDONDERRY AND DERRY REVIEW	JDL

OWNER OF RECORD:
LORDEN COMMONS, LLC
3 PENSTOCK WAY
NEWMARKET, NH 03857
BK. 5338 PG. 2903

APPLICANT
CHINBURG PROPERTIES, INC.
3 PENSTOCK WAY
NEWMARKET, NH 03857

UTILITY PLAN

LORDEN COMMONS
PHASES II, III & IV

MAP 16 LOT 38 – 17 OLD DERRY ROAD
LONDONDERRY, NEW HAMPSHIRE

KNA KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

PROJ. NO: 15-0904-2
DATE: JULY 15, 2016
SCALE: 1" = 40'
FILE NO.:
SHEET NO. 50 OF 71

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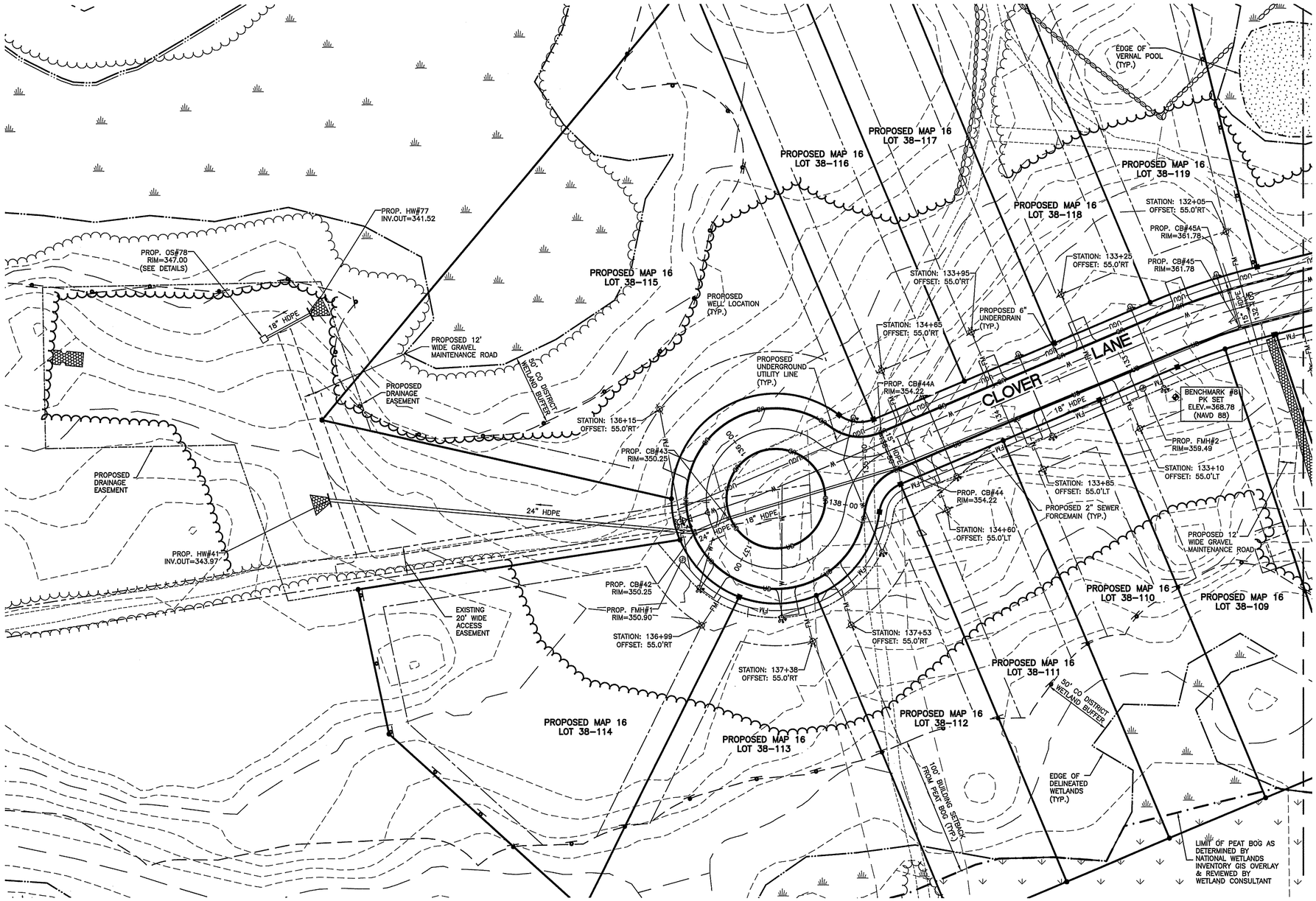
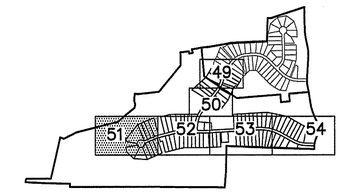
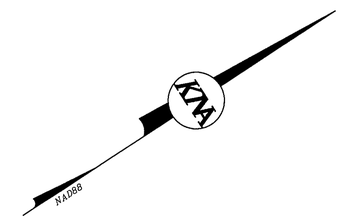




EASEMENT KEY PLAN
SCALE: 1" = 1,500'

SEE SHEET 1 FOR NOTES



LEGEND

GB-F	GRANITE BOUND FOUND
IPIN-F	IRON PIN FOUND
DH-F	DRILL HOLE FOUND
DH-S	DRILL HOLE SET
IPP-F	IRON PIPE FOUND
RRS-F	RAILROAD SPIKE FOUND
BND-TBS	BOUND TO BE SET
RB-TBS	5/8" REBAR TO BE SET
	UTILITY POLE
	WELL
	SEWER MANHOLE
	DRAINAGE MANHOLE
	CATCH BASIN
OHU	OVERHEAD UTILITIES
S	SEWER LINE
	TREELINE
	STONEWALL
	EDGE OF PAVEMENT
	BITUMINOUS CURB
UGU	PROP. UNDERGROUND UTILITIES
S	PROPOSED SEWER LINE
FM	PROPOSED FORCEMAIN
UD	PROPOSED UNDERDRAIN
	ABUTTER LINE
	PROPERTY LINE
	PREVIOUSLY APPROVED PROPERTY LINE
	STREAM
	WETLAND
	VERNAL POOL
	DRAINAGE LINE
	EDGE OF GRAVEL
	BUILDING SETBACK
	WETLAND BUFFER
	EXISTING EASEMENT
	PROPOSED PROPERTY LINE
	PROPOSED DRAINAGE LINE
	PROP. EDGE OF PAVEMENT
	PROP. BITUMINOUS CURB
	PROPOSED GUARDRAIL

BENCHMARK DATA

LOCATION	DATUM	DESCRIPTION
N:151826.67, E:1067881.47	ELEV.=368.78 (NAVD 88)	BENCHMARK #8 – PK SET

DIG SAFE
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM
811
CALL TOLL FREE

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

STATE OF NEW HAMPSHIRE
STEVEN B. KEACH No. 7659
LICENSED PROFESSIONAL ENGINEER
03-05-18

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	11/01/16	REVISED PER TOWN COMMENTS	JDL
2	02/13/17	REVISED PER WATER MAIN EXTENSION	BJC
3	04/11/17	REVISED PER TOWN COMMENTS	KMB
4	05/26/17	REVISED PER NHDES COMMENTS	JDL
5	03/12/18	ISSUED FOR LONDONDERRY AND DERRY REVIEW	JDL

OWNER OF RECORD:
LORDEN COMMONS, LLC
3 PENSTOCK WAY
NEWMARKET, NH 03857
BK. 5338 PG. 2903

APPLICANT
CHINBURG PROPERTIES, INC.
3 PENSTOCK WAY
NEWMARKET, NH 03857

UTILITY PLAN

LORDEN COMMONS PHASES II, III & IV

MAP 16 LOT 38 – 17 OLD DERRY ROAD
LONDONDERRY, NEW HAMPSHIRE

KNA KEACH–NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

PROJ. NO: 15–0904–2
DATE: JULY 15, 2016
SCALE: 1" = 40'
FILE NO.:
SHEET NO. 51 OF 71

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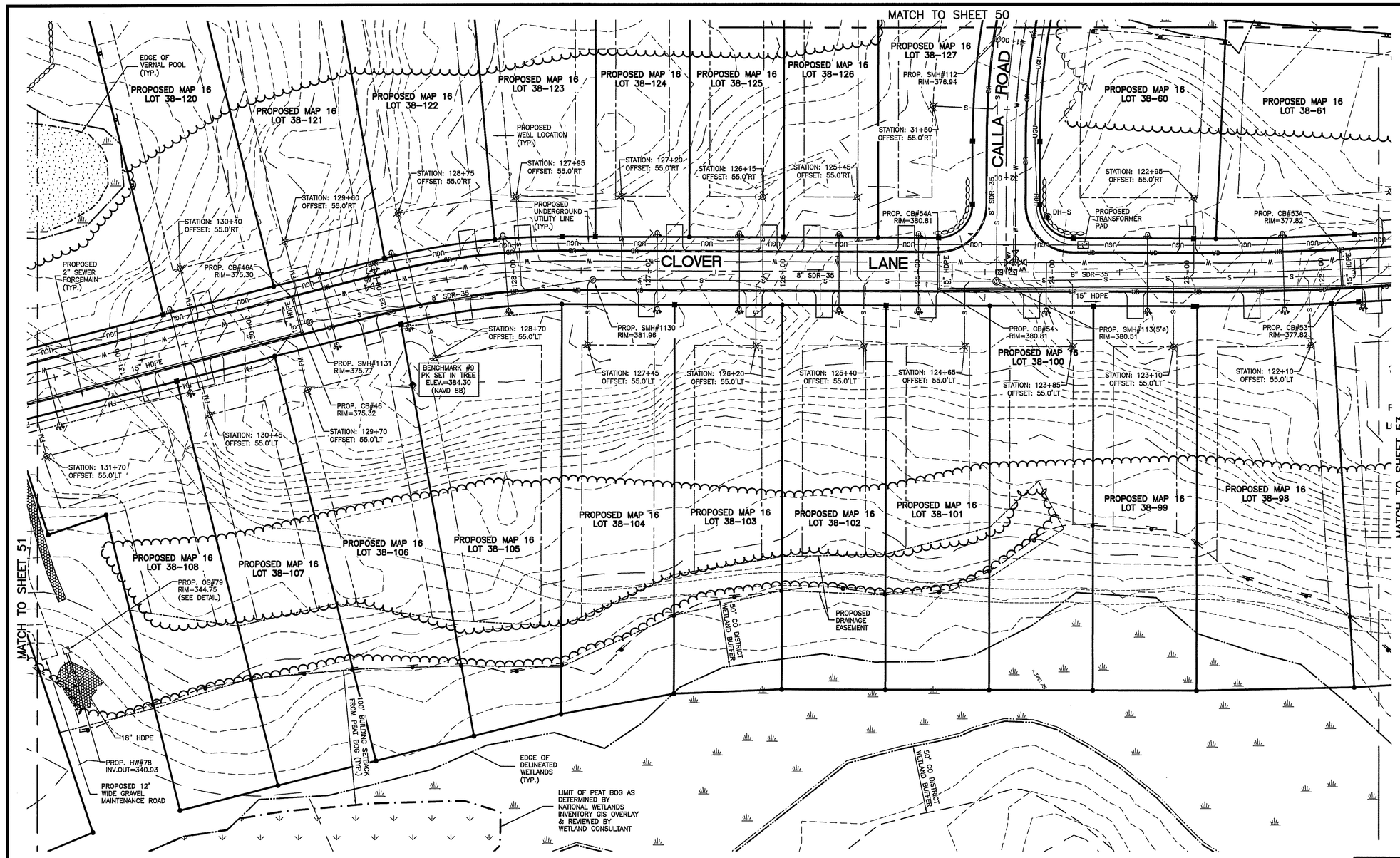

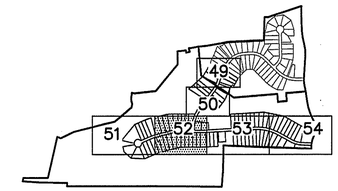

EASEMENT KEY PLAN
SCALE: 1" = 1,500'

SEE SHEET 1 FOR NOTES

NAD88

LEGEND

GB-F	GRANITE BOUND FOUND		ABUTTER LINE
IPIN-F	IRON PIN FOUND		PROPERTY LINE
DH-F	DRILL HOLE FOUND		PREVIOUSLY APPROVED PROPERTY LINE
DH-S	DRILL HOLE SET		STREAM
IPP-F	IRON PIPE FOUND		WETLAND
RRS-F	RAILROAD SPIKE FOUND		VERNAL POOL
BND-TBS	BOUND TO BE SET		DRAINAGE LINE
RB-TBS	5/8" REBAR TO BE SET		EDGE OF GRAVEL
	UTILITY POLE		BUILDING SETBACK
	WELL		WETLAND BUFFER
	SEWER MANHOLE		EXISTING EASEMENT
	DRAINAGE MANHOLE		PROPOSED PROPERTY LINE
	CATCH BASIN		PROPOSED DRAINAGE LINE
OHU	OVERHEAD UTILITIES		PROP. EDGE OF PAVEMENT
S	SEWER LINE		PROP. BITUMINOUS CURB
	TREELINE		PROPOSED GUARDRAIL
	STONEWALL		
	EDGE OF PAVEMENT		
	BITUMINOUS CURB		
UGU	PROP. UNDERGROUND UTILITIES		
S	PROPOSED SEWER LINE		
FM	PROPOSED FORCEMAIN		
UD	PROPOSED UNDERDRAIN		

BENCHMARK DATA

LOCATION	DATUM	DESCRIPTION
N:152177.14, E:1068021.66	ELEV.=384.30 (NAVD 88)	BENCHMARK #9 – PK SET IN TREE

DIG SAFE
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM
811

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

STATE OF NEW HAMPSHIRE
STEVEN E. KEACH No. 7698
PROFESSIONAL ENGINEER
DENSCO

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	11/01/16	REVISED PER TOWN COMMENTS	JDL
2	02/13/17	REVISED PER WATER MAIN EXTENSION	BJC
3	04/11/17	REVISED PER TOWN COMMENTS	KMB
4	05/26/17	REVISED PER NHDES COMMENTS	JDL
5	03/12/18	ISSUED FOR LONDONDERRY AND DERRY REVIEW	JDL

OWNER OF RECORD:
LORDEN COMMONS, LLC
3 PENSTOCK WAY
NEWMARKET, NH 03857
BK. 5338 PG. 2903

APPLICANT
CHINBURG PROPERTIES, INC.
3 PENSTOCK WAY
NEWMARKET, NH 03857

UTILITY PLAN

LORDEN COMMONS
PHASES II, III & IV

MAP 16 LOT 38 – 17 OLD DERRY ROAD
LONDONDERRY, NEW HAMPSHIRE

KNA KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

PROJ. NO: 15-0904-2
DATE: JULY 15, 2016
SCALE: 1" = 40'
FILE NO.:
SHEET NO. 52 OF 71

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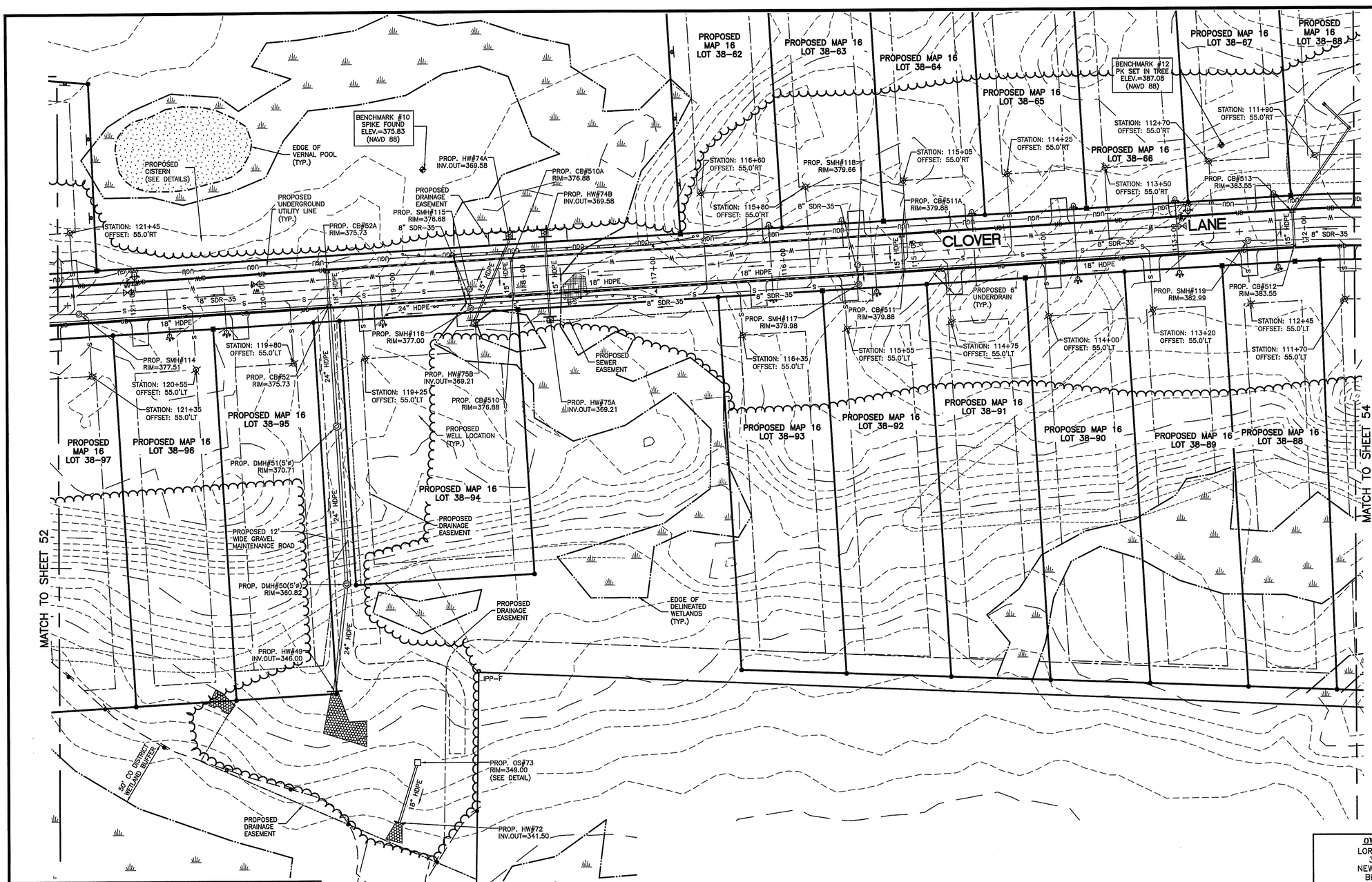

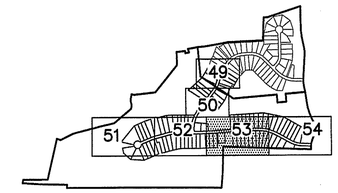

EASEMENT KEY PLAN
SCALE: 1" = 1,500'

SEE SHEET 1 FOR NOTES

LEGEND

GB-F	GRANITE BOUND FOUND
IPIN-F	IRON PIN FOUND
DH-F	DRILL HOLE FOUND
DH-S	DRILL HOLE SET
IPP-F	IRON PIPE FOUND
RRS-F	RAILROAD SPIKE FOUND
BND-TBS	BOUND TO BE SET
RB-TBS	5/8" REBAR TO BE SET
	UTILITY POLE
	WELL
	SEWER MANHOLE
	DRAINAGE MANHOLE
	CATCH BASIN
OHU	OVERHEAD UTILITIES
S	SEWER LINE
	TREELINE
	STONEWALL
	EDGE OF PAVEMENT
	BITUMINOUS CURB
UGU	PROP. UNDERGROUND UTILITIES
S	PROPOSED SEWER LINE
FM	PROPOSED FORCEMAIN
UD	PROPOSED UNDERDRAIN
	ABUTTER LINE
	PROPERTY LINE
	PREVIOUSLY APPROVED PROPERTY LINE
	STREAM
	WETLAND
	VERNAL POOL
	DRAINAGE LINE
	EDGE OF GRAVEL
	BUILDING SETBACK
	WETLAND BUFFER
	EXISTING EASEMENT
	PROPOSED PROPERTY LINE
	PROPOSED DRAINAGE LINE
	PROP. EDGE OF PAVEMENT
	PROP. BITUMINOUS CURB
	PROPOSED GUARDRAIL

BENCHMARK DATA

LOCATION	DATUM	DESCRIPTION
N:153117.43, E:1068405.00	ELEV.=375.83 (NAVD 88)	BENCHMARK #10 – SPIKE FOUND
N:153639.98, E:1068724.55	ELEV.=387.08 (NAVD 88)	BENCHMARK #12–PK SET IN TREE

DIG SAFE
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM
CALL 811 BEFORE YOU DIG

STATE OF NEW HAMPSHIRE
STEVEN B. KEACH No. 7659 LICENSED PROFESSIONAL ENGINEER

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	11/01/16	REVISED PER TOWN COMMENTS	JDL
2	02/13/17	REVISED PER WATER MAIN EXTENSION	BJC
3	04/11/17	REVISED PER TOWN COMMENTS	KMB
4	05/26/17	REVISED PER NHDES COMMENTS	JDL
5	03/12/18	ISSUED FOR LONDONDERRY AND DERRY REVIEW	JDL

OWNER OF RECORD:
LORDEN COMMONS, LLC
3 PENSTOCK WAY
NEWMARKET, NH 03857
BK. 5338 PG. 2903

APPLICANT
CHINBURG PROPERTIES, INC.
3 PENSTOCK WAY
NEWMARKET, NH 03857

UTILITY PLAN

LORDEN COMMONS
PHASES II, III & IV

MAP 16 LOT 38 – 17 OLD DERRY ROAD
LONDONDERRY, NEW HAMPSHIRE

KEACH–NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

PROJ. NO: 15-0904-2
DATE: JULY 15, 2016
SCALE: 1" = 40'
FILE NO.:
SHEET NO. 53 OF 71

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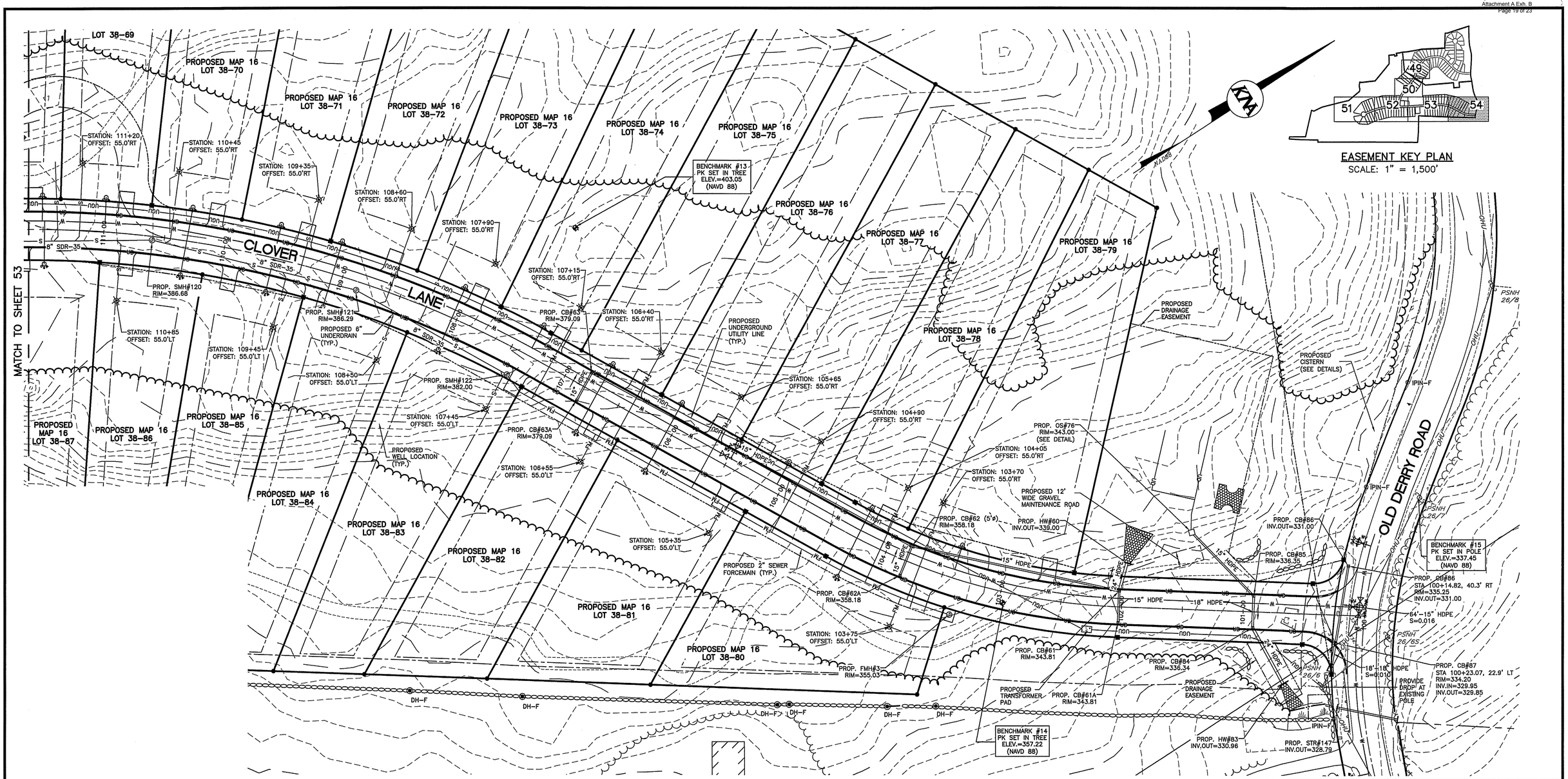

SEE SHEET 1 FOR NOTES

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

OWNER OF RECORD:	APPLICANT
LORDEN COMMONS, LLC 3 PENSTOCK WAY NEWMARKET, NH 03857 BK. 5338 PG. 2903	CHINBURG PROPERTIES, INC. 3 PENSTOCK WAY NEWMARKET, NH 03857

UTILITY PLAN

LORDEN COMMONS PHASES II, III & IV

MAP 16 LOT 38 – 17 OLD DERRY ROAD
LONDONDERRY, NEW HAMPSHIRE

LEGEND

GB-F	GRANITE BOUND FOUND
IPIN-F	IRON PIN FOUND
DH-F	DRILL HOLE FOUND
DH-S	DRILL HOLE SET
IPP-F	IRON PIPE FOUND
RRS-F	RAILROAD SPIKE FOUND
BND-TBS	BOUND TO BE SET
RB-TBS	5/8" REBAR TO BE SET
	UTILITY POLE
W	WELL
S	SEWER MANHOLE
D	DRAINAGE MANHOLE
	CATCH BASIN
OHU	OVERHEAD UTILITIES
S	SEWER LINE
	TREELINE
	STONEWALL
	EDGE OF PAVEMENT
	BITUMINOUS CURB
UGU	PROP. UNDERGROUND UTILITIES
S	PROPOSED SEWER LINE
FM	PROPOSED FORCEMAIN
UD	PROPOSED UNDERDRAIN
	ABUTTER LINE
	PROPERTY LINE
	PREVIOUSLY APPROVED PROPERTY LINE
	STREAM
	WETLAND
	VERNAL POOL
	DRAINAGE LINE
	EDGE OF GRAVEL
	BUILDING SETBACK
	WETLAND BUFFER
	EXISTING EASEMENT
	PROPOSED PROPERTY LINE
	PROPOSED DRAINAGE LINE
	PROP. EDGE OF PAVEMENT
	PROP. BITUMINOUS CURB
	PROPOSED GUARDRAIL

BENCHMARK DATA

LOCATION	DATUM	DESCRIPTION
N:154068.80, E:1069075.60	ELEV.=403.05 (NAVD 88)	BENCHMARK #13-PK SET IN TREE
N:154196.87, E:1069522.65	ELEV.=357.22 (NAVD 88)	BENCHMARK #14-PK SET IN TREE
N:154531.69, E:1069636.62	ELEV.=337.45 (NAVD 88)	BENCHMARK #15-PK SET IN POLE

DIG SAFE
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM
811

STATE OF NEW HAMPSHIRE
STEVEN B. KEACH
No. 7969
LICENSED
PROFESSIONAL ENGINEER

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	11/01/16	REVISED PER TOWN COMMENTS	JDL
2	02/13/17	REVISED PER WATER MAIN EXTENSION	BJC
3	04/11/17	REVISED PER TOWN COMMENTS	KMB
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KNA KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

PROJ. NO: 15-0904-2
DATE: JULY 15, 2016
SCALE: 1" = 40'
FILE NO.:
SHEET NO. 54 OF 71

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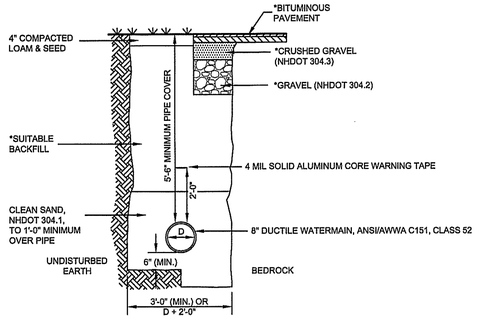
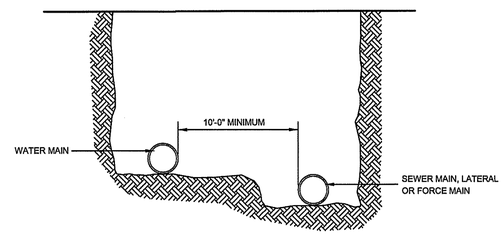


* PER APPLICABLE STATE, CITY OR TOWN SPECIFICATION.

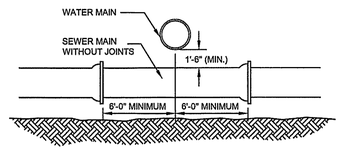
PIPE SHALL HAVE 1'-0" MINIMUM CLEARANCE TO BEDROCK.

WATER LINE TRENCH DETAIL

NOT TO SCALE



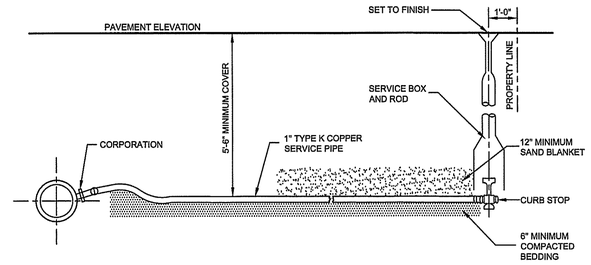
PARALLEL INSTALLATION



MAIN CROSSINGS

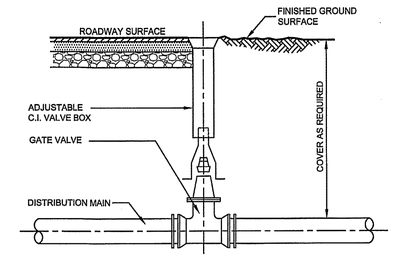
WATER PIPE/SEWER PIPE SEPARATION

NOT TO SCALE
(MARCH 2008)



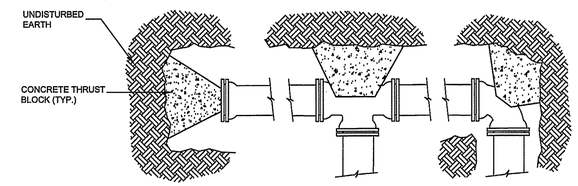
WATER SERVICE CONNECTION

NOT TO SCALE
(MARCH 2008)

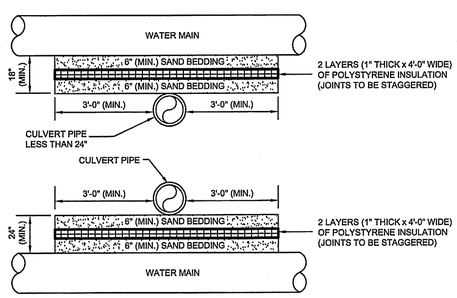


WATER GATE VALVE

NOT TO SCALE
(MARCH 2008)



PLAN - HORIZONTAL BENDS, TEES AND PLUGS

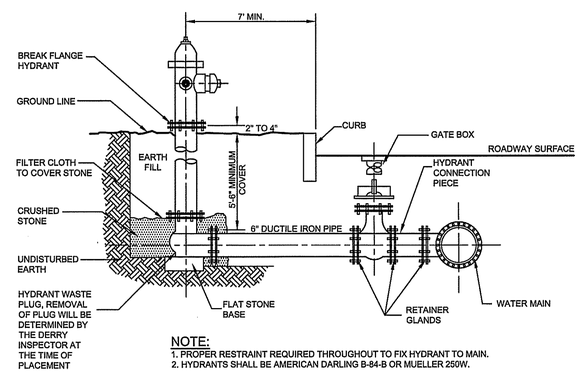


NOTES:

1. INSULATION TO BE USED WHERE PIPE SEPARATION IS 24" OR LESS.

WATER PIPE CROSSING INSULATION DETAIL

NOT TO SCALE
(JUNE 2012)

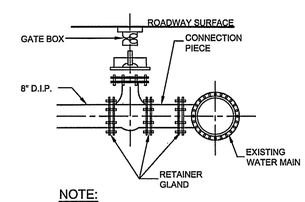


NOTE:

1. PROPER RESTRAINT REQUIRED THROUGHOUT TO FIX HYDRANT TO MAIN.
2. HYDRANTS SHALL BE AMERICAN DARLING B-84-B OR MUELLER 250W.

HYDRANT INSTALLATION

NOT TO SCALE
(MARCH 2008)

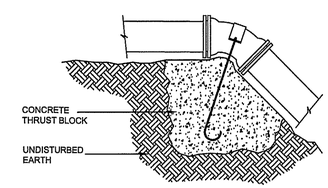


NOTE:

PROVIDE "WET-TAP" OR AS APPROVED BY WATER WORKS DEPARTMENT

WATER MAIN CONNECTION DETAIL

NOT TO SCALE
(MARCH 2008)



ELEVATION - VERTICAL BENDS

NOTES

1. THRUST BLOCK DIMENSIONS TO BE DETERMINED IN FIELD BY ENGINEER BASED ON PIPE SIZE, WATER PRESSURE AND SOIL TYPE.
2. STONE BACKING MAY BE SUBSTITUTED FOR CONCRETE THRUST BLOCKS PROVIDED THE STONE(S) ARE OF EQUAL SIZE AND BEAR ON UNDISTURBED EARTH.
3. USE OF JOINT RESTRAINT SYSTEMS SHALL NOT ELIMINATE THRUST BLOCK REQUIREMENTS (WHERE POSSIBLE).

THRUST BLOCKS

NOT TO SCALE
(MARCH 2008)

OWNER OF RECORD:	APPLICANT
LORDEN COMMONS, LLC 3 PENSTOCK WAY NEWMARKET, NH 03857 BK. 5338 PG. 2903	CHINBURG PROPERTIES, INC. 3 PENSTOCK WAY NEWMARKET, NH 03857

CONSTRUCTION DETAILS

LORDEN COMMONS PHASES II, III & IV

MAP 16 LOT 38 – 17 OLD DERRY ROAD
LONDONDERRY, NEW HAMPSHIRE

STATE OF NEW HAMPSHIRE
STEVEN B. KEACH
No. 7839
LICENSED
PROFESSIONAL ENGINEER
3/12/18

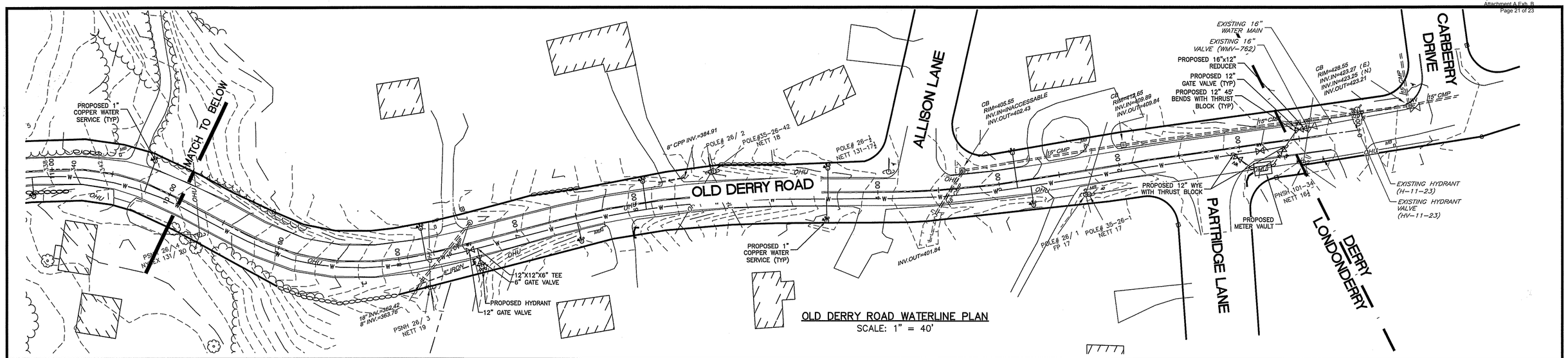
REVISIONS

NO.	DATE	DESCRIPTION	BY
1	11/01/16	REVISED PER TOWN COMMENTS	JDL
2	02/13/17	REVISED PER WATER MAIN EXTENSION	BJC
3	04/11/17	REVISED PER TOWN COMMENTS	KMB
4	05/26/17	REVISED PER NHDES COMMENTS	JDL
5	03/12/18	ISSUED FOR LONDONDERRY AND DERRY REVIEW	JDL

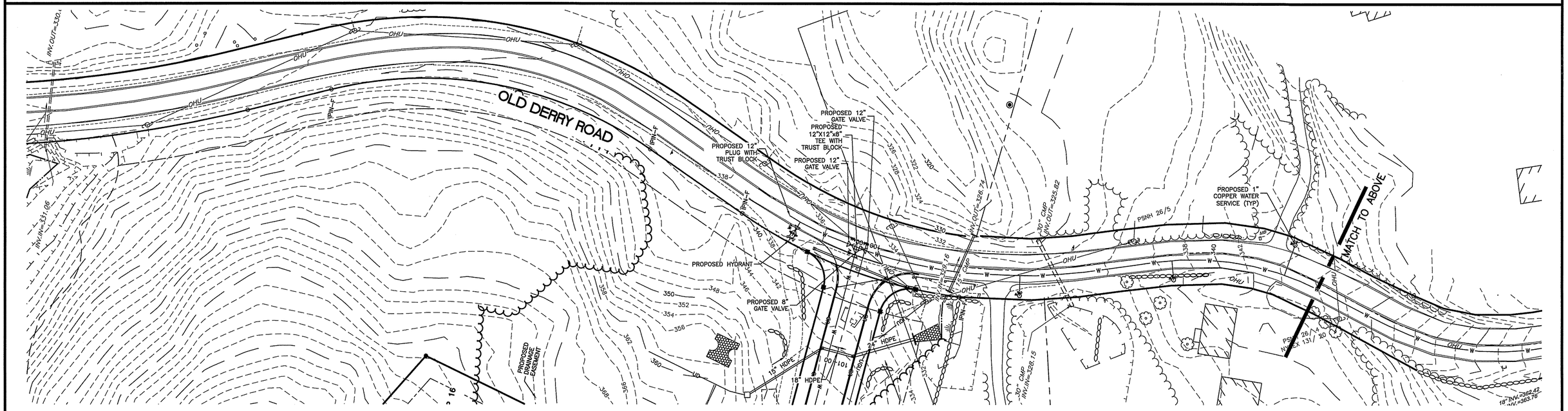
KNA KEACH–NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

PROJ. NO: 15–0904–2
DATE: JULY 15, 2016
SCALE: AS SHOWN
FILE NO.:
SHEET NO. 68 OF 71

R:_projec\1509042\dwg\Production Drawings\1509042-DETAILS.dwg, DETAILS, 3/8/2018 3:48:44 PM



OLD DERRY ROAD WATERLINE PLAN
SCALE: 1" = 40'



OLD DERRY ROAD WATERLINE PLAN
SCALE: 1" = 40'

OWNER OF RECORD:	APPLICANT
LORDEN COMMONS, LLC 3 PENSTOCK WAY NEWMARKET, NH 03857 BK. 5338 PG. 2903	CHINBURG PROPERTIES, INC. 3 PENSTOCK WAY NEWMARKET, NH 03857

OLD DERRY ROAD WATERLINE EXTENSION PLAN
LORDEN COMMONS PHASES II, III & IV
MAP 16 LOT 38 – 17 OLD DERRY ROAD
LONDONDERRY, NEW HAMPSHIRE

LEGEND

GB-F	GRANITE BOUND FOUND
IPIN-F	IRON PIN FOUND
DH-F	DRILL HOLE FOUND
DH-S	DRILL HOLE SET
IPP-F	IRON PIPE FOUND
RRS-F	RAILROAD SPIKE FOUND
BND-TBS	BOUND TO BE SET
RB-TBS	5/8" REBAR TO BE SET
	UTILITY POLE
	WELL
	SEWER MANHOLE
	DRAINAGE MANHOLE
	CATCH BASIN
OHU	OVERHEAD UTILITIES
S	SEWER LINE
	TREELINE
	STONEWALL
	EDGE OF PAVEMENT
	BITUMINOUS CURB
UGU	PROP. UNDERGROUND UTILITIES
S	PROPOSED SEWER LINE
FM	PROPOSED FORCEMAIN
UD	PROPOSED UNDERDRAIN
	ABUTTER LINE
	PROPERTY LINE
	PREVIOUSLY APPROVED PROPERTY LINE
	STREAM
	WETLAND
	VERNAL POOL
	DRAINAGE LINE
	EDGE OF GRAVEL
	BUILDING SETBACK
	WETLAND BUFFER
	EXISTING EASEMENT
	PROPOSED PROPERTY LINE
	PROPOSED DRAINAGE LINE
	PROP. EDGE OF PAVEMENT
	PROP. BITUMINOUS CURB
	PROPOSED GUARDRAIL

SEE SHEET 1 FOR NOTES

BENCHMARK DATA

LOCATION	DATUM	DESCRIPTION
N:154068.80, E:1069075.60	ELEV.=403.05 (NAVD 88)	BENCHMARK #13-PK SET IN TREE
N:154196.87, E:1069522.65	ELEV.=357.22 (NAVD 88)	BENCHMARK #14-PK SET IN TREE
N:154531.69, E:1069636.62	ELEV.=337.45 (NAVD 88)	BENCHMARK #15-PK SET IN POLE

DIG SAFE
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM
811

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

STATE OF NEW HAMPSHIRE
STEVEN B. KEACH
No. 7659
LICENSED
PROFESSIONAL ENGINEER
05/05/16

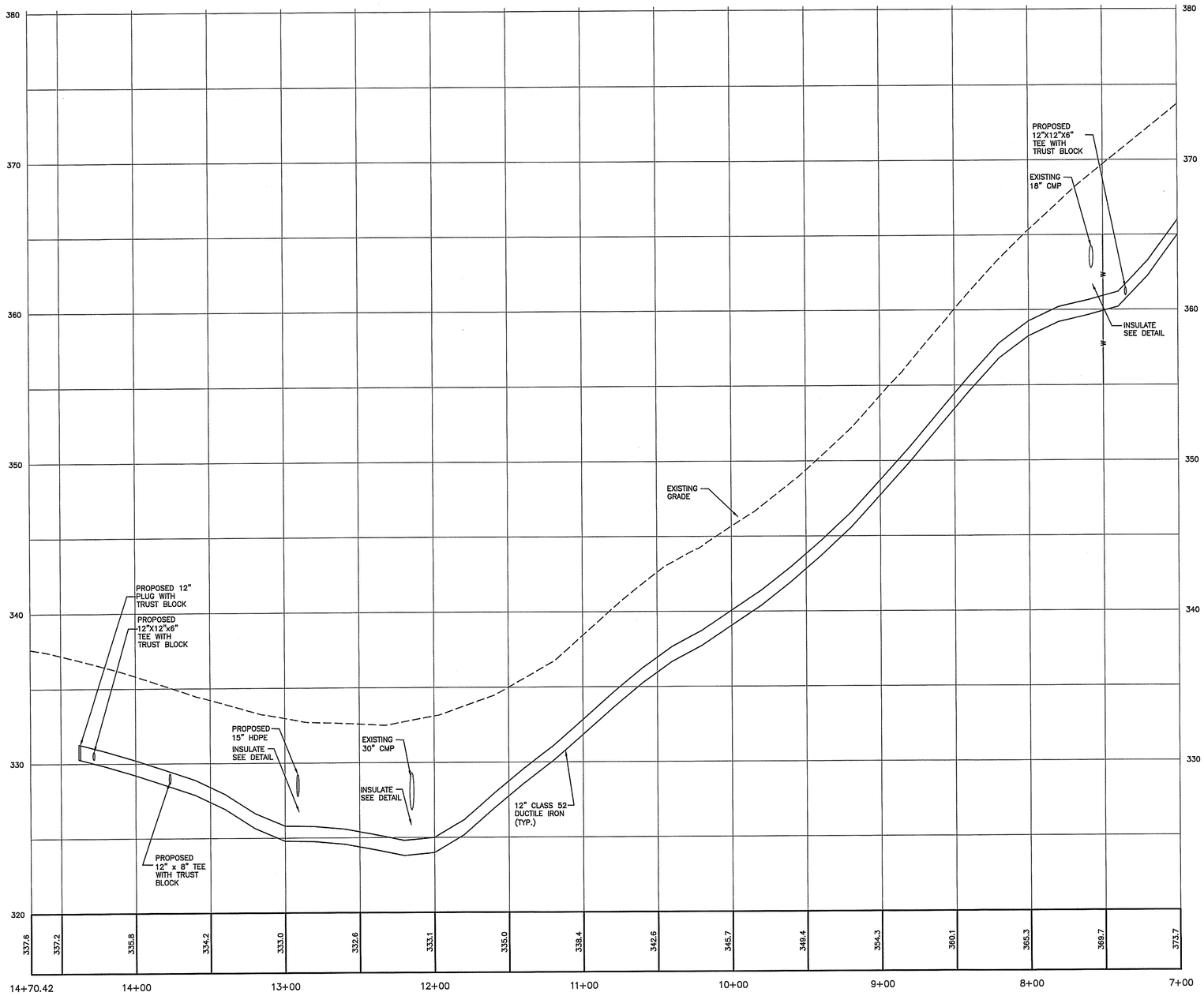
REVISIONS

NO.	DATE	DESCRIPTION	BY
1	11/01/16	REVISED PER TOWN COMMENTS	JDL
2	02/13/17	REVISED PER WATER MAIN EXTENSION	BJC
3	04/11/17	REVISED PER TOWN COMMENTS	KMB
4	05/26/17	REVISED PER NHDES COMMENTS	JDL
5	03/12/18	ISSUED FOR LONDONDERRY AND DERRY REVIEW	JDL

KNA KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

PROJ. NO: 15-0904-2
DATE: JULY 15, 2016
SCALE: 1" = 40'
FILE NO.:
SHEET NO. W1 OF W3

R:_project\1509042\dwg\Production Drawings\1509042-WATER EXTENSION.dwg, UTILITY, 3/8/2018 3:37:43 PM



OLD DERRY ROAD WATERLINE PROFILE
SCALE: 1" = 40' (HORIZ.)
1" = 4' (VERT.)

DIG SAFE
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM
811

SEE SHEET 1 FOR NOTES

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

OWNER OF RECORD:	APPLICANT
LORDEN COMMONS, LLC 3 PENSTOCK WAY NEWMARKET, NH 03857 BK. 5338 PG. 2903	CHINBURG PROPERTIES, INC. 3 PENSTOCK WAY NEWMARKET, NH 03857

OLD DERRY ROAD WATERLINE EXTENSION PROFILE
LORDEN COMMONS PHASES II, III & IV
MAP 16 LOT 38 – 17 OLD DERRY ROAD LONDONDERRY, NEW HAMPSHIRE

STATE OF NEW HAMPSHIRE
STEVEN B. KEACH No. 7859
LICENSED PROFESSIONAL ENGINEER
8-Apr-18

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	11/01/16	REVISED PER TOWN COMMENTS	JDL
2	02/13/17	REVISED PER WATER MAIN EXTENSION	BJC
3	04/11/17	REVISED PER TOWN COMMENTS	KMB
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5	03/12/18	ISSUED FOR LONDONDERRY AND DERRY REVIEW	JDL

KNA KEACH–NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

PROJ. NO: 15–0904–2
DATE: JULY 15, 2016
SCALE: 1" = 40'
FILE NO.:
SHEET NO. W2 OF W3

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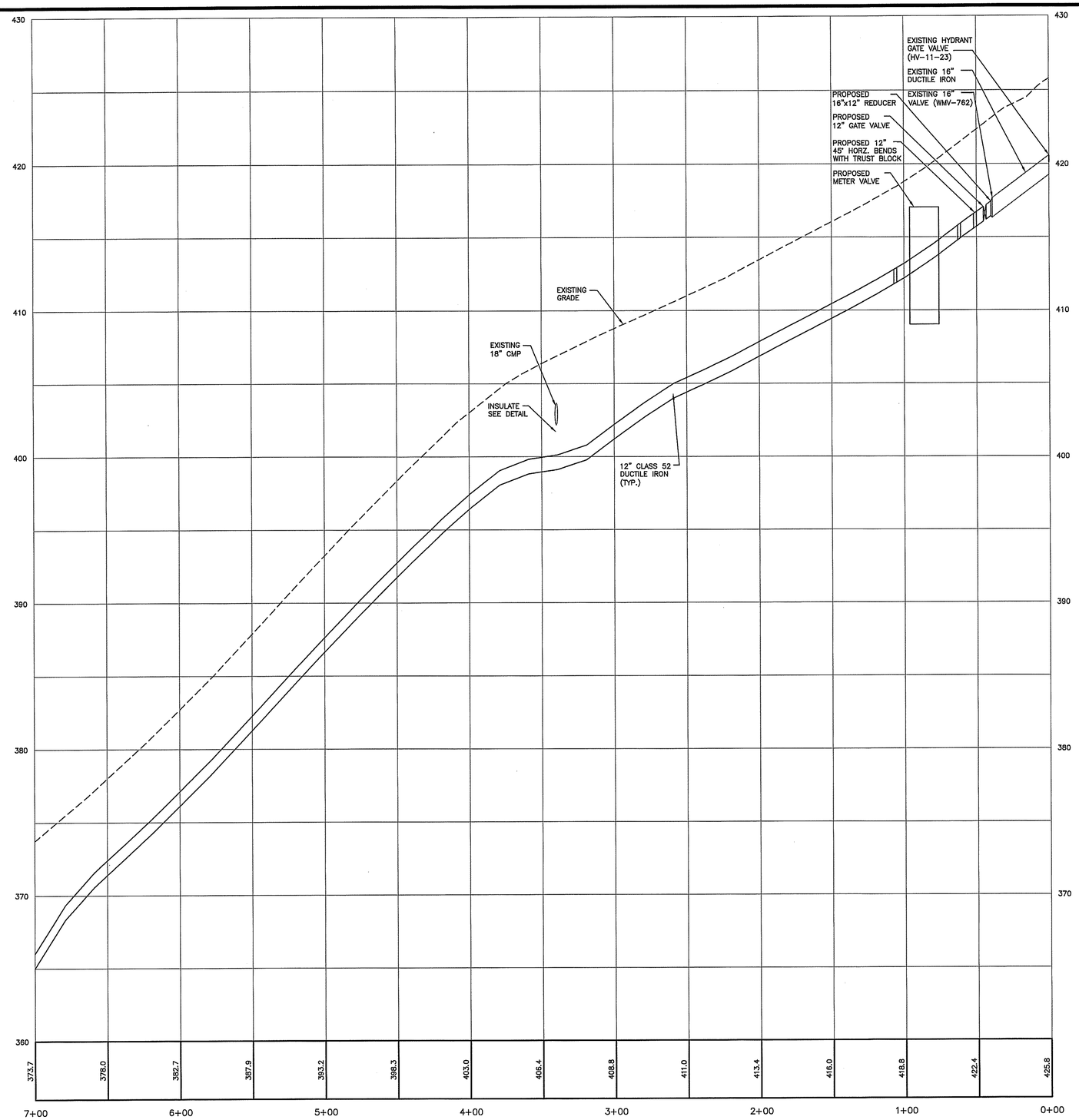

OLD DERRY ROAD WATERLINE PROFILE
SCALE: 1" = 40' (HORIZ.)
1" = 4' (VERT.)

DIG SAFE
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM
811

SEE SHEET 1 FOR NOTES

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

OWNER OF RECORD:	APPLICANT
LORDEN COMMONS, LLC 3 PENSTOCK WAY NEWMARKET, NH 03857 BK. 5338 PG. 2903	CHINBURG PROPERTIES, INC. 3 PENSTOCK WAY NEWMARKET, NH 03857

OLD DERRY ROAD WATERLINE EXTENSION PROFILE
LORDEN COMMONS PHASES II, III & IV
MAP 16 LOT 38 – 17 OLD DERRY ROAD LONDONDERRY, NEW HAMPSHIRE

STATE OF NEW HAMPSHIRE
STEVEN B. KEACH No. 7659
LICENSED PROFESSIONAL ENGINEER
03-28-18

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	11/01/16	REVISED PER TOWN COMMENTS	JDL
2	02/13/17	REVISED PER WATER MAIN EXTENSION	BJC
3	04/11/17	REVISED PER TOWN COMMENTS	KMB
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5	03/12/18	ISSUED FOR LONDONDERRY AND DERRY REVIEW	JDL

KNA KEACH–NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

PROJ. NO: 15-0904-2
DATE: JULY 15, 2016
SCALE: 1" = 40'
FILE NO.:
SHEET NO. W3 OF W3

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Lots within the Franchise Area

* Lot number, address and deed reference are per Town records as of Dec. 2017

Lorden Commons

Map	Lot	Parent Parcel:	Deed Book	Deed Page
16	38 through 38-51		5340	985

Existing Lots

Map	Lot	Address	Deed Book	Deed Page
16	27	14 Old Derry Road	5724	218
16	30	8 Old Derry Road	3293	1253
16	30-1	4 Old Derry Road	3866	2364
16	30-2	3 Allison Lane	3292	2738
16	30-3	5 Allison Lane	3329	2426
16	30-4	7 Allison Lane	3484	1875
16	30-5	12 Old Derry Road	3803	2331
16	30-6	10 Old Derry Road	4572	1956
16	32	2 Partridge Lane	3512	971
16	32-1	3 Partridge Lane	2688	2730
16	32-2	5 Partridge Lane	5791	1005
16	32-3	6 Partridge Lane	5655	884
16	32-4	8 Partridge Lane	4322	228
16	32-5	2 Mallard Lane	3164	975
16	32-6	7 Partridge Lane	5679	2383
16	32-7	9 Partridge Lane	5210	1531
16	32-8	11 Partridge Lane	2607	898
16	32-9	1 Mallard Lane	2784	134
16	32-10	14 Partridge Lane	4848	1542
16	32-11	16 Partridge Lane	5479	2371
16	32-12	13 Partridge Lane	5481	2653
16	32-13	15 Partridge Lane	5545	1717
16	32-14	17 Partridge Lane	5033	2283
16	32-15	18 Partridge Lane	5344	1120
16	32-16	20 Partridge Lane	5715	793
16	32-17	19 Partridge Lane	3170	1927
16	32-18	1 Cardinal Circle	3304	530
16	32-19	3 Cardinal Circle	2793	1831
16	32-20	5 Cardinal Circle	4805	907
16	32-21	7 Cardinal Circle	3089	2358
16	32-22	9 Cardinal Circle	5682	1039

16	32-23	8 Cardinal Circle	5739	612
16	32-24	6 Cardinal Circle	3315	630
16	32-25	4 Cardinal Circle	3317	1455
16	32-27	23 Partridge Lane	5241	131
16	32-28	22 Partridge Lane	5561	725
16	32-29	13 Mallard Lane	5590	93
16	32-30	25 Partridge Lane	5009	1513
16	32-31	18 Partridge Lane	3651	1279
16	32-32	16 Mallard Lane	5368	2274
16	32-33	14 Mallard Lane	5312	907
16	32-34	11 Mallard Lane	4318	1697
16	32-35	9 Mallard Lane	5757	339
16	32-36	7 Mallard Lane	3176	1633
16	32-37	12 Mallard Lane	5290	1016
16	32-38	10 Mallard Lane	5548	2127
16	32-39	8 Mallard Lane	5328	782
16	32-40	6 Mallard Lane	5768	1106
16	32-41	5 Mallard Lane	5582	361
16	32-42	3 Mallard Lane	5721	320
16	32-43	4 Mallard Lane	4845	1414
16	33	5 Old Derry Road	3699	382
16	33-1	7 Old Derry Road	5257	364
16	33-2	3 Old Derry Road	5414	1500
16	35	11 Old Derry Road	2246	153
16	36	15A Old Derry Road	5110	109
16	99-1	27 Partridge Lane	4877	1692
16	99-2	29 Partridge Lane	4048	128
16	99-3	28 Partridge Lane	3665	1336

2012 JUL 30 PM 1:47
Rerecording
037530

~~BK 5338 PG 2903~~

BK 5340 PG 0985

Please return to:
Lorden Commons, LLC
8 Newmarket Road
Durham, NH 03824

ROCKINGHAM COUNTY
REGISTRY OF DEEDS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF REVENUE ADMINISTRATION
REAL ESTATE TRANSFER TAX
***45 Thousand 0 Hundred 00 Dollars
DATE 07/30/2012 RO022218 AMOUNT $ ***45000.00

C/H
L-CHIP
ROA165834

STATE OF NEW HAMPSHIRE
DEPARTMENT OF REVENUE ADMINISTRATION
REAL ESTATE TRANSFER TAX
***450 Thousand 0 Hundred 00 Dollars
DATE 07/25/2012 RO022089 AMOUNT $ ***450000.00

C/H
L-CHIP
ROA165834

036714

2012 JUL 25 PM 2:38

ROCKINGHAM COUNTY
REGISTRY OF DEEDS

FIDUCIARY DEED

Lorraine G. Lorden and Thomas H. Lorden, as Trustees of the Kenneth A. Lorden 2001 Trust, with a mailing address is 60 Stable Road, Milford, NH 03055 (the "**Grantor**"),

FOR CONSIDERATION PAID, grant to:

Lorden Commons, LLC, a New Hampshire liability company, with a mailing address of 8 Newmarket Road, Suite 2, Durham, NH 03824 (the "**Grantee**"),

WITH FIDUCIARY COVENANTS

A certain lot or parcel of land situated along the southerly sideline of Old Derry Road, so-called in the Town of Londonderry, County of Rockingham and State of New Hampshire and being shown as Map 16 Lot 38, on a Plat entitled "Plan of Land prepared for Chinburg Builders, Inc. and Kenneth A. Lorden 2001 Trust", dated August 25, 2010, prepared by McEneaney Survey Associates, Inc., signed and sealed by Kevin M. McEneaney recorded at the Rockingham County Registry of Deeds (the "**Registry**") as Plat D-36750; also shown as a portion of parcel A on a Plat entitled "Road To Scobie Pond – Discontinuance prepared for Chinburg Builders, Inc. and Kenneth A. Lorden 2001 Trust and Waste Management of New Hampshire, Inc.", dated April 27, 2011, prepared by McEneaney Survey Associates, Inc., signed and sealed by Kevin M. McEneaney recorded at the Registry as Plat D-37083; also shown as parcel A on a Plat entitled "Lot Line Adjustment Plan of Land prepared for Chinburg Builders, Inc. and Kenneth A. Lorden 2001 Trust and Waste Management of New Hampshire, Inc.", dated July 1, 2009, prepared by

~~BK 5338 PG 2304~~

BK 5340 PG 0986

McEneaney Survey Associates, Inc., signed and sealed by Kevin M. McEneaney recorded at the Registry as Plat D-37084; and more particularly bounded and described as follows:

Beginning at a point, being an iron rod, at the most northwesterly corner of the lot herein described, along the southerly sideline of Old Derry Road, so-called, being the northeasterly corner of land now or formerly of William and Gail Gardocki:

Thence running S **54°37'55"** E, along the southerly sideline of said Old Derry Road, so-called, a distance of **25.59 feet** to an iron rod;

Thence running **Southeasterly**, along a tangent curve to the left, along the southerly side of said Old Derry Road, so-called, having a radius of **2225.00 feet,** an included angle of **4°40'38",** an arc length of **181.64 feet**, a chord of S 56°58'14" E 181.59 feet to an iron rod;

Thence running S **59°18'33"** E, continuing along the southerly sideline of said Old Derry Road, so-called, a distance of **268.11 feet**, to an iron rod;

Thence running **Southeasterly**, along a tangent curve to the left, continuing along the southerly side of said Old Derry Road, so-called, having a radius of **650.00 feet,** an included angle of **9°56'49",** an arc length of **112.85 feet**, a chord of S 64°16'58" E 112.70 feet to an iron rod;

Thence running S **69°15'22"** E, continuing along the southerly sideline of said Old Derry Road, so-called, a distance of **214.40 feet** to an iron rod;

Thence running **Southeasterly**, along a tangent curve to the right, continuing along the southerly side of said Old Derry Road, so-called, having a radius of **500.00 feet,** an included angle of **16°06'54",** an arc length of **140.63 feet**, a chord of S 61°11'55" E 140.17 feet to an iron rod;

Thence running S **53°08'29"E**, continuing along the southerly sideline of said Old Derry Road, so-called, a distance of **441.28 feet** to an iron rod;

Thence running **Southeasterly**, along a tangent curve to the left, continuing along the southerly side of said Old Derry Road, so-called, having a radius of **550.00 feet,** an included angle of **17°10'42",** an arc length of **164. 90 feet**, a chord of S 61°43'49" E 164.28 feet to an iron rod;

Thence running S **70°19'10"** E, continuing along the southerly sideline of said Old Derry Road, so-called, a distance of **28.83 feet** to an iron rod;

Thence running **Southeasterly**, along a tangent curve to the right, continuing along the southerly side of said Old Derry Road, so-called, having a radius of **1570.00 feet,** an included angle of **5°23'07",** an arc length of **147.57 feet**, a chord of S 67°37'37" E 147.51 feet to an iron rod;

Thence running S **64°56'03"** E, continuing along the southerly sideline of said Old Derry Road, so-called, a distance of **111.57 feet** to an iron rod;

Thence running **Southeasterly**, along a tangent curve to the left, continuing along the southerly side of said Old Derry Road, so-called, having a radius of **1025.00 feet,** an included angle of **18°45'02"**, an arc length of **335.44 feet**, a chord of S 74°18'34" E 333.95 feet to an iron rod;

Thence running **S 83'41'06" E**, continuing along the southerly sideline of said Old Derry Road, so-called, a distance of **70.90 feet** to an iron rod;

Thence running **Southeasterly**, along a tangent curve to the right, continuing along the southerly side of said Old Derry Road, so-called, having a radius of **325.00 feet,** an included angle of **48°24'47"**, an arc length of **274.61 feet**, a chord of S 59°28'42" E 266.52 feet to an iron rod;

Thence running **S 35'16'19" E**, continuing along the southerly sideline of said Old Derry Road, so-called, a distance of **91.59 feet** to a point;

Thence running **Southeasterly**, along a tangent curve to the left, continuing along the southerly side of said Old Derry Road, so-called, having a radius of **400.00 feet,** an included angle of **27°38'29"**, an arc length of **192.97 feet**, a chord of S 49°05'34" E 191.11 feet to an iron rod at or near the intersection of a stone wall and being at land now or formerly of Boyle Family Irrevocable Trust;

Thence turning and running **S 31°36'24" W**, by a stone wall and land of said Boyle Family Irrevocable Trust, a distance of **56.19 feet** to a point;

Thence running **S 35°34'39" W**, continuing by said stone wall and land of said Boyle Family Irrevocable Trust, a distance of **42.46 feet** to a point;

Thence running **S 37°33'35" W**, continuing by said stone wall and land of said Boyle Family Irrevocable Trust, a distance of **27.42 feet** to a point;

Thence running **S 32°03'25" W**, continuing by said stone wall and land of said Boyle Family Irrevocable Trust, a distance of **49.38 feet** to a point;

Thence running **S 34°54'01" W**, continuing by said stone wall and land of said Boyle Family Irrevocable Trust, a distance of **72.89 feet** to a point;

Thence running **S 36°25'42" W**, continuing by said stone wall and land of said Boyle Family Irrevocable Trust, a distance of **58.36 feet** to a point;

Thence running **S 35°19'09" W**, continuing by said stone wall and land of said Boyle Family Irrevocable Trust, a distance of **50.69 feet** to the end of the stone wall;

Thence running **S 29°26'33" W**, continuing by land of said Boyle Family Irrevocable Trust, a distance of **10.19 feet** to a drill hole at the beginning of a stone wall;

Thence running **S 34°14'02" W**, by said stone wall and land of said Boyle Family Irrevocable

Trust, a distance of **80.55 feet** to a drill hole;

Thence running S **30°55'02" W**, continuing by said stone wall and land of said Boyle Family Irrevocable Trust, a distance of **9.77 feet** to a drill hole;

Thence running S **34°44'03" W**, continuing by said stone wall and land of said Boyle Family Irrevocable Trust, a distance of **209.52 feet** to a drill hole;

Thence running S **35°54'28" W**, continuing by said stone wall and land of said Boyle Family Irrevocable Trust, a distance of **92.51 feet** to a drill hole;

Thence running S **35°10'13" W**, continuing by said stone wall and land of said Boyle Family Irrevocable Trust, a distance of **153.76 feet** to a drill hole;

Thence running S **33°55'45" W**, continuing by said stone wall and land of said Boyle Family Irrevocable Trust, a distance of **89.30 feet** to a drill hole at the end of the stone wall;

Thence running S **35°24'32" W**, continuing by land of said Boyle Family Irrevocable Trust, a distance of **743.63 feet** to an iron pipe and being the most westerly corner of the land of said Boyle Family Irrevocable Trust;

Thence turning and running S **56°07'41" E**, continuing by land of said Boyle Family Irrevocable Trust, a distance of **502.43** feet to a field stone bound at land now or formerly of Shannon Family Revocable Trust 2006 and land now or formerly of Jason A. and Amy E. Bahan;

Thence running S **51°59'02" E**, continuing by said land now or formerly of Jason A. and Amy E. Bahan, a distance of **313.18 feet** to a point at land now or formerly of Jon D. Weigler;

Thence turning and running S **33°30'23" W**, by said land now or formerly of Jon D. Weigler, a distance of **1416.51 feet** to an iron rod with cap at land now or formerly of James Adams;

Thence running S **32°59'01" W**, by said land now or formerly of James Adams, a distance of **263.57 feet** to a point on the northerly sideline of a Class VI Road subject to gates and bars and known as the Road from Auburn Road to Scobie Pond;

Thence running S **32°59'01" W**, across said Class VI Road, a distance of **67.02 feet** to a point on the southerly sideline of said Road at land now or formerly of the Heirs of Susie Fogg;

Thence running S **32°59'01" W**, by said land now or formerly of the Heirs of Susie Fogg, a distance of **1321.44 feet** to an iron rod with cap at land now or formerly of Frank Hardy;

Thence turning and running N **55°58'15" W**, by land now or formerly of Frank Hardy, a distance of **63.19 feet** to a point;

Thence turning and running S **34°24'09" W**, continuing by land of said Frank Hardy, a distance

of **538.67 feet** to a point at land now or formerly of PSNH;

Thence running S **36°00'56" W,** by land now or formerly of PSNH, distance of **280.00 feet** to a point at land now or formerly of the State of New Hampshire Department of Transportation;

Thence running S **36°00'56" W,** by land of said State of New Hampshire Department of Transportation, a distance of **68.00 feet** to a point;

Thence turning and running **N 44°07'59" W,** continuing by land of said State of New Hampshire Department of Transportation, a distance of **67.15 feet** to a point;

Thence turning and running **N 32°22'29" E**, continuing by land of said State of New Hampshire Department of Transportation and by land nor or formerly 19 Independence Drive Realty, a distance of **489.41 feet** to an upright railroad rail;

Thence turning and running **N 44°05'29" W**, continuing by land of said 19 Independence Drive Realty, a distance of **829.05 feet** to an iron rod with cap;

Thence turning and running **N 51°54'31" E,** continuing by land of said 19 Independence Drive Realty, a distance of **76.00 feet** to a point;

Thence turning and running **N 07°16'16" E,** continuing by land of said 19 Independence Drive Realty, a distance of **282.28 feet** to an iron rod;

Thence running **N 18°46'16" E**, continuing by land of said 19 Independence Drive Realty, a distance of **622.23 feet** to a point;

Thence running **N 20°46'16" E**, continuing by land of said 19 Independence Drive Realty, a distance of **215.21 feet** to a granite bound with drill hole;

Thence running **N 06°17'59" W**, continuing by land of said 19 Independence Drive Realty, a distance of **437.45 feet** to an iron rod at westerly sideline of previously described Class VI Road subject to gates and bars;

Thence running **N 45°01'18" W**, continuing by said Class VI Road, a distance of **56.78 feet** to a drill hole at the beginning of a stone wall;

Thence running **N 55°41'46" W**, by said stone wall and continuing by said Class VI Road, a distance of **17.93 feet** to an iron rod with cap;

Thence running **N 74°43'05" W**, continuing by said stone wall and Class VI Road, a distance of **7.21 feet** to a point;

Thence running **N 74°43'05" W**, continuing by said stone wall and Class VI Road, a distance of **52.61 feet** to a drill hole at end of the stone wall;

~~BK 5338 PG 2908~~

BK 5340 PG 0990

Thence running **N 57°10'40" W**, continuing by said Class VI Road, a distance of **71.88 feet** to a drill hole at the beginning of a stone wall;

Thence running **N 40°15'29" W,** by said stone wall and continuing by said Class VI Road, a distance of **38.86 feet** to a drill hole;

Thence running **N 53°57'27" W** , continuing by said stone wall and said Class VI Road, a distance of **36.50 feet** to a drill hole;

Thence turning and running **N 42°52'41" E** , across said Class VI Road, a distance of **56.82 feet** to a drill hole in stone wall on the easterly sideline of said Class VI Road;

Thence running **N 26°58'38" E** , along the division line between the lot herein described and parcel "A" as shown on Lot Line Adjustment Plan, a distance of **418.95 feet** to an iron rod;

Thence running **N 16°52'39" W**, continuing along said division line, a distance of **675.53 feet** to an iron rod;

Thence turning and running **N 58°38'45" W** , continuing along said division line, a distance of **231.13 feet** to a drill hole in stone wall at the easterly sideline of said Class VI Road;

Thence running **N 61°11'35" W** , across parcel "A" as shown on Discontinuance Plan and being a division line as shown on Lot Line Adjustment Plan, a distance of **18.33 feet** to an iron rod at parcel "B" as shown on said, Discontinuance Plan;

Thence turning and running **N 26°10'48" E**, by said parcel "B", a distance of **173.49 feet** to an iron rod;

Thence turning and running **N 62°15'59" W** , continuing by said parcel "B", a distance of **37.03 feet** to a point at land of Waste Management of New Hampshire, Inc. and land now or formerly of Marion A. Keltgen, et als;

Thence turning and running **N 51°58'20" E** , by land now or formerly of Marion A. Keltgen, et als, a distance of **19.57 feet** to the beginning of a stone wall;

Thence running **N 21°19'31" E** , by said stone wall and continuing by land now or formerly of Marion A. Keltgen, et als, a distance of **42.16 feet** to the end of the stone wall;

Thence running **N 24°18'01" E** , continuing by land now or formerly of Marion A. Keltgen, et als, a distance of **92.20 feet** to the beginning of a stone wall;

Thence running **N 22°36'40" E** , by said stone wall and continuing by land now or formerly of Marion A. Keltgen, et als, a distance of **102.72 feet** to a point;

Thence running **N 27°59'17" E** , continuing by said stone wall and land now or formerly of Marion A. Keltgen, et als, a distance of **147.11 feet** to a point;

Thence running **N 23°50'50" E** , continuing by said stone wall and land now or formerly of Marion A. Keltgen, et als, a distance of **234.09 feet** to a point;

Thence running **N 22°40'41" E** , continuing by said stone wall and land now or formerly of Marion A. Keltgen, et als, a distance of **101.80** feet to a drill hole;

Thence running **N 22°26'33" E** , continuing by said stone wall and land now or formerly of Marion A. Keltgen, et als, a distance of **115.91 feet** to the end of said stone wall at land now or formerly of Pamela Seppy;

Thence running **N 30°27'26" E** , by land of said Pamela Seppy, a distance of **343.86 feet** to a granite bound with drill hole at the end of Shelly Drive;

Thence running **N 30°26'07" E** , the end of Shelly Drive, a distance of **49.99 feet** to a granite bound with drill hole at land now or formerly of Dexter Pierce;

Thence running **N 30°17'59" E**, by land now or formerly of Dexter Pierce, a distance of **310.93 feet** to a mag spike;

Thence turning and running **N 54°46'55" W**, continuing by land now or formerly of Dexter Pierce, a distance of **218.08 feet** to an iron pipe at land now or formerly Paul S. & Kara A. Cleary;

Thence running **N 54°37'18" W** , by land of said Paul S. & Kara A. Cleary, a distance of **205.45 feet** to an iron pipe at land now or formerly of James R. & Carole M. Godin;

Thence running **N 55°13'26" W**, by land of said James R. & Carole M. Godin, a distance of **17.60 feet** to a mag nail and stones;

Thence turning and running **N 31°00'29" E** , continuing by land of said James R. & Carole M. Godin, a distance of **70.41 feet** to a mag nail in stones at land now or formerly of William & Gail Gardocki;

Thence running **N 15°27'24" E**, by said of William & Gail Gardocki, a distance of **691.39 feet** to the **point of beginning**;

Containing 229.42 acres more or less

Together with: any right, title and interest the grantors may have in the discontinued Class VI Road, leading from the Auburn Road southerly to Scobie's Pond. Reference is made to the Londonderry Town Meeting on March 8 of 1932 at which, Warrant Article 13 was passed to "discontinue, subject to gates and bars, the Road leading from Auburn Road southerly to

Scobie's Pond." As a result of this vote, the Road then became a Class VI Road according to New Hampshire Statute RSA 231:45. Reference is made to the executed petition for a full and complete discontinuance to abandon any and all public rights to the former road for a portion of Scobie Pond Road, between Woods Avenue and Brewster Road, as defined by RSA 231:43.

Subject to: any right, title and interest others may have in the discontinued Class VI Road, leading from Auburn Road southerly to Scobie's Pond. Reference is made to the Londonderry Town Meeting on March 8 of 1932 at which Warrant Article 13 was passed to "discontinue, subject to gates and bars." As a result of this vote, the Road then became a Class VI Road according to New Hampshire Statute RSA 231:45. Reference is made to the petition for discontinuance of a portion Scobie Pond Road, between Woods Avenue and Brewster Road, dated May 16, 2011. As a result of this vote, a portion of the Class VI Road was discontinued. **Subject to:** any residual Proprietor rights, title and interest in the roads situated in the second division for Nutfield, now the Town of Londonderry within the boundaries described above. Reference is also made to the Town of Londonderry Proprietor's Books on file at the New Hampshire State Archives Book 1 Page 11, Warrant Article dated February 2, 1727/8, and Book 1 Page 12 vote record dated March 5, 1727/8), if any, as same was affected by the discontinuance of Scobie Pond Road in 1932 and 2011.

Subject to: the RIGHT and EASEMENT for the benefit of Public Service Company of New Hampshire, currently known as (PSNH) Public Service of New Hampshire, see deed from Donald L. Northway and Mildred E. Northway dated September 11, 1956, and recorded at the Registry at Book 1413, Page 135.

Subject to: a 20 FOOT WIDE ACCESS EASEMENT for Ingress-Egress for the benefit of Public Service of New Hampshire, but in common with the grantees and its successors and assigns of the servient estate. See Easement dated January 18, 2012, and recorded at the Registry at Book 5288, Page 1002. Reference is made to a plan titled "Plan of Proposed Easement, prepared for Chinburg Builders, Inc., and Kenneth A. Lorden, Trust, and Public Service Company of New Hampshire, Tax Map 16, Lot Number 38, Old Derry Road, Town of Londonderry, County of Rockingham, State of New Hampshire," prepared by McEneaney Survey Associates., Inc., Dover, New Hampshire, dated April 27, 2011, and sealed and signed by Kevin M. McEneaney, LLS, recorded at the Registry as Plat D-37051.

Together with: a 30 FOOT WIDE SEWER EASEMENT for the benefit of the Grantor and Lorden Commons Sewer Company, LLC, and their successors and assigns, described in an Easement Agreement dated January 17, 2012 and recorded at the Registry at Book 5288, Page 994 and as shown on a Plat titled "Lot Line Adjustment Plan of Land prepared for Chinburg Builders, Inc. and Kenneth A. Lorden 2001 Trust and Waste Management of New Hampshire, Inc.", dated July 1, 2009, prepared by McEneaney Survey Associates, Inc., signed and sealed by Kevin M. McEneaney and recorded at the Registry as Plat D-37084, and more particularly bounded and described as follows:

Beginning at a point, being an iron rod, along the southeasterly sideline of Liberty Drive, so-called, as shown on said plat, said point being **S35°16'45"W** a distance of **36.56 feet** from a

granite bound with drill hole found along the said, southeasterly sideline of said, Liberty Drive;

Thence running **N89°40'21"E**, across Tax Map 16 Lot 60-3 and along the northerly line of said, 30' Wide Sewer Easement, herein described as shown on said plat a distance of **233.69 feet** to an iron pipe found;

Thence running **N63°45'09"E**, continuing across said, Tax Map 16 Lot 60-3 and along the northeasterly line of said, 30' Wide Sewer Easement, a distance of **274.69 feet** to an iron rod;

Thence running **N40°48'13"E**, continuing across said, Tax Map 16 Lot 60-3 and along the northeasterly line of said, 30' Wide Sewer Easement, a distance of **176.42 feet** to an iron rod;

Thence running **N36°43'02"E**, continuing across said, Tax Map 16 Lot 60-3 and along the northeasterly line of said, 30' Wide Sewer Easement, a distance of **280.88 feet** to an iron rod;

Thence turning and running **S68°06'08"E**, across said, Tax Map 16 Lot 60-3 and along the northerly line of said, 30' Wide Sewer Easement, a distance of **299.51 feet** to an iron rod;

Thence turning and running **S32°52'13"E**, across said, Tax Map 16 Lot 60-3 and along the southeasterly line of said, 30' Wide Sewer Easement, a distance of **204.11 feet** to an iron rod, on the westerly line of land conveyed by deed from the Town of Londonderry, a municipal corporation, to Kenneth A. Lorden 2001 Trust;

Thence turning and running **S26°10'48"W**, along the southerly line of said, 30' Wide Sewer Easement, being the westerly line of land conveyed by deed from the Town of Londonderry, a municipal corporation, to Kenneth A. Lorden 2001 Trust, a distance of **34.98 feet** to an iron rod;

Thence turning and running **N32°52'13"W**, across said, Tax Map 16 Lot 60-3 and along the northwesterly line of said, 30' Wide Sewer Easement, a distance of **212.57 feet** to an iron rod;

Thence turning and running **N68°06'08"W**, across said, Tax Map 16 Lot 60-3 and along the southerly line of said, 30' Wide Sewer Easement, a distance of **266.89 feet** to an iron rod;
Thence turning and running **S36°43'02"W**, across said, Tax Map 16 Lot 60-3 and along the southwesterly line of said, 30' Wide Sewer Easement, a distance of **258.86 feet** to an iron rod;

Thence running **S40°48'13"W**, across said, Tax Map 16 Lot 60-3 and along the southwesterly line of said, 30' Wide Sewer Easement, a distance of **183.58 feet** to an iron rod;

Thence running **S63°45'09"W**, across said, Tax Map 16 Lot 60-3 and along the southwesterly line of said, 30' Wide Sewer Easement, a distance of **287.68 feet** to an iron rod;

Thence running **S89°40'21"W**, across said, Tax Map 16 Lot 60-3 and along the southerly line of said, 30' Wide Sewer Easement, a distance of **262.08 feet** to an iron rod, on the southeasterly sideline of said, Liberty Road, so-called;

Thence turning and running **N35°16'45"E**, along the southeasterly sideline of said, Liberty Drive, so-called, a distance of **36.90 feet** to the **point of beginning**;

Containing 44,114 square feet or 1.01 acres more or less.

Meaning and intending to convey the right, title and interest that was conveyed to the Grantor by a warranty deed dated September 23, 2003, and recorded at the Registry at Book 4165 Page 0633, excepting therefrom Parcel A deeded to Waste Management of New Hampshire, Inc. by the Grantor by a fiduciary deed dated January 11, 2012, and recorded at the Registry in Book 5288, Page 985, and the ROW deeded to Waste Management of New Hampshire, Inc. by Grantor by a deed without covenants dated January 11, 2012, and recorded at the Registry at Book 5288, Page 989. Meaning and intending to describe and convey tracts 8, 9, and a portion of tract 10, as described in the deed from Lorden Lumber Co., Inc., to Kenneth A. Lorden dated November 13, 1986, and recorded at the Registry at Book 2643 Page 1949. Also meaning and intending to convey the right, title and interest that was conveyed to the Grantor by the Town of Londonderry by deed without covenants dated January 16, 2012 and recorded at the Registry at Book 5282, Page 2724.

Subject to: a lien for current use tax assessment pursuant to New Hampshire RSA 79-A, and the grantee shall be responsible for use change tax which may be assessed.

The undersigned trustees, as trustees of the Kenneth A. Lorden 2001 Trust, declare and certify that as trustees they have full and absolute power in said trust agreement to convey any interest in real estate and improvements thereon, including but not limited to deeds and mortgages held in said trust and no purchaser, mortgagee or third party shall be bound to inquire whether the trustees have said power or are properly exercising said power or to see to the application of any trust asset paid to the trustees for a conveyance thereof. We certify that the trust is in full force and effect, and that we are empowered to act as trustees on the date of this certificate.

This is not homestead property.

Dated: July 23, 2012.

[Signatures follow on the next two pages.]

~~BK 5338 PG 2913~~

BK 5340 PG 0995

Grantor:
The Kenneth A. Lorden 2001 Trust

Lorraine G. Lorden

Lorraine G. Lorden, as Trustee of the Kenneth A. Lorden 2001 Trust

STATE OF FLORIDA
COUNTY OF COLLIER

July 23, 2012

Personally appeared Lorraine G. Lorden, as Trustee of the Kenneth A. Lorden 2001 Trust, known to me or satisfactorily proven to be the person whose name is subscribed to the foregoing instrument and acknowledged that she executed the same for the purposes therein contained on behalf of said Trust.

Janet M. Perri

Notary Public
Name: Janet M. Perri
My Commission Expires: 6/11/14

JANET M. PERRI
MY COMMISSION # DD 997388
EXPIRES: June 11, 2014
Bonded Thru Notary Public Underwriters

BK 5338 PG 2914

BK 5340 PG 0996

Grantor:
The Kenneth A. Lorden 2001 Trust

Thomas H. Lorden, as Trustee of the Kenneth A. Lorden 2001 Trust

STATE OF NEW HAMPSHIRE
COUNTY OF HILLSBOROUGH

July 27, 2012

Personally appeared Thomas H. Lorden, as Trustee of the Kenneth A. Lorden 2001 Trust, known to me or satisfactorily proven to be the person whose name is subscribed to the foregoing instrument and acknowledged that he executed the same for the purposes therein contained on behalf of said Trust.

Notary Public

ANNE M. CROTTY
Notary Public - New Hampshire
My Commission Expires October 21, 2014

Town of Derry, NH Water Rates and Fees

Revised February 7, 2017

1. Meter Retail Service Rates (all customer classes)

These rates are for metered retail service.

CONSUMPTION RATE:

2.55 per 100 Cu. Ft. (748 gals.) (Revised 2/7/17, Eff. 9/1/17)

MINIMUM BASE CHARGES (Revised 2/7/17, Eff. 9/1/17)

RESIDENTIAL:

$23.28 per billing cycle per residential living unit (as assessed by the Derry Tax Dept).: includes first 500 cft. of usage.

COMMERCIAL, INDUSTRIAL, INSTITUTIONAL, IRRIGATION or other non-residential domestic metered connection: includes first 500 cft. of usage.

$23.28 per quarter for ¾ inch metered services,

$34.55 per quarter for 1 inch metered services,

$57.58 per quarter for 1 ½ inch metered services,

$115.15 per quarter for 2 inch metered services,

$230.30 per quarter for 3 inch and larger metered services.

TERMS OF PAYMENT

a. Bills shall be rendered quarterly and shall be due and payable upon presentation.

b. Billing cycle is defined as the period between each bill issuance for a particular property as authorized by the Town Administrator and Chief Financial Officer or as otherwise requested by the property owner. Typical billing cycles are either quarterly or, in the case of final bills for property transfers, the period between the previous quarterly billing and the date of final bill issuance.

c. Late payment charges and other expenses shall be computed as specified under Miscellaneous Charges.

2. Fire Protection - Municipal

This rate is for municipal fire service in Derry and Londonderry.

Town of Derry, NH Water Rates and Fees

Revised February 7, 2017

RATE:
The annual charge, billed annually in arrears, for municipal fire service to the Town shall be as follows:

Rate Per Year DERRY: $376,356.42/YR (Municipal Core System)

LONDONDERRY: $19,111.85/YR

3. Rate Schedule - Miscellaneous Service Charges

1. Applicability

The charge shall apply to regular service and private fire service provided to all customers.

2. Application Fee for Fire and Domestic Service

(1) Water Service.....$50.00

3. Late Payment Charges

(a) A finance charge shall be added to any bill where payment therefore has not been received by the Utility within thirty (30) days of issuance, and shall be one and one half percent (1 ½ %) of any unpaid balance per month that said balance remains unpaid.

(b) A late payment charge shall be added to any bill where payment therefore has not been received by the Town of Derry within sixty (60) days of issuance, and shall be $5.00 and subject to the same shut-off provisions as for non-payment of bills.

(c) A shut-off service charge of $36.00 shall be applied to each account with outstanding balances of sixty (60) days or more and whose account is placed on the final water shut-off list developed in accordance with the Town's Water Shut-Off Policy dated August 25, 2005. This charge shall cover the shut-off and restoration of service if applicable once satisfactory payment provisions have been made with by the Town.

(d) Job Works bills are due and payable when rendered and subject to the same shutoff provisions as for nonpayment of bills. Terms are Net 30 days. A finance charge of 1½% (18% per year) will be charged 30 days after the date of bills.

4. Seasonal Use

A charge of fifteen ($15.00) dollars shall be applied to the customer's bill for installing the meter and turning on the water, and a separate charge of fifteen ($15.00) dollars shall be applied to the customer's bill for removing the meter and turning off the water.

5. Restoration of Service

Town of Derry, NH Water Rates and Fees

Revised February 7, 2017

A charge of thirty-six dollars ($36.00) shall be applied to the customer's bill when water service or private fire service is restored after being shut off for reasons other than non-payment of a utility bill including service repair, fraudulent use, or as requested by the customer or for any other reason specified in this tariff. (Charge includes initial shut-off.)

6. Repairs to Frozen Meters

The Customer shall be charged the full costs of repairing or replacing a frozen meter located on his premises, but in no case shall such charge be less than fifty ($50.00) for each repair.

7. Bad Checks

Whenever any check issued to the Town of Derry for payment of taxes, permit fees, licenses, special assessments, water or sewer bills, for any combination of these or for any other municipal services is returned to the Town as uncollectible, the Town of Derry shall charge a fee of twenty-five dollars ($25.00) plus all protest, bank, and legal fees in addition to the mount of said check to the person who issued such check to cover the cost of collecting the debt that the check was issued to pay.

8. Testing of Backflow Prevention Devices

A charge shall be applied to a customer's bill for each test conducted by the Utility of the customer's backflow prevention device as follows:

PVB (all sizes) .....$ 17.50
RPZ </= 2 inch.....$ 38.00
RPZ > 2 inch.....$ 45.00

DC </= 2 inch.....$ 38.00
DC . 2 inch.....$ 45.00

9. Hydrants or Other Temporary Services

(a) The charge for water supplied from the connection in the Utility connection on Transfer Lane or from a hydrant shall be applied as follows:

$4.00 per 1,000 gallons

(b) The charges for use of any hydrant or other temporary water source shall be as follows:

(1) Adapter deposit (excluding pool filling): $ 150.00
(i) 2½ inch adapter $150.00
(ii) ¾ inch adapter 50.00

(2) Application fee for bulk water haulers: Twenty-five dollars ($25.00) per year

(3) Adapter Installation or Removal During Normal Working Hours

(i) 2½ inch adapter $35.00
(ii) ¾ inch adapter or pool filling $35.00

Town of Derry, NH Water Rates and Fees

Revised February 7, 2017

10. Connection of Service Pipe to a Main

(a) The following connection charges shall be paid at the time of service application by all customers. The charges, as specified below, shall be based upon the type service provided to the premises and the size of the service pipe and meter to be installed.

(1) A Hook-up fee to the Town of Derry for connection to the public water system (Fees are based on size of service entering the building. For installations where an oversized service is necessary due to pressure considerations, the charge will be based on the size of the service required under normal pressure conditions, as determined by the Town of Derry DPW.):

Meter Size .....Charge
5/8 x 3/4 inch.....$619.20
1 inch.....$1,100.60
1 1/2 inch.....$2,476.80
2 inch.....$4,403.20
3 inch.....$10,062.00
4 inch.....$17,612.80
>4 inch..... to be calculated based upon $619.20 per equivalent ¾ inch connection

(2) A charge for supplying and installing the meter and outside reader/remote transponder unit is as follows:

Meter Size .....Charge
5/8 x 3/4 inch.....$209.90
1 inch.....$265.45
1 1/2 inch..... $435.58

A charge for the meter and remote transponder unit is as follows:
Meter Size .....Charge
2 inch disc.....$601.00
2 inch turbo.....Invoice cost + 10%
2 inch compound.....Invoice cost + 10%
3 inch and larger .....Invoice cost + 10%

(3) A charge for meter horn assembly as follows:

¾ inch.....$154.95

Backflow prevention assemblies must meet the Town of Derry and State of New Hampshire standards and may be purchased from the Town or directly from an approved supplier. Costs charged by the Town shall be the cost to the Town plus 10%.

11. Fire Hydrant Assemblies: $2,085.11/EA

12. Additional Charges

Town of Derry, NH Water Rates and Fees

Revised February 7, 2017

The following charges shall be applied by the Utility for services rendered:

(b) Up-to-date billing on ownership change (includes meter reading) $15.00

(d) Turn-on service request by customer
during Utility's regular working hours (includes initial shut-off and service restoration) $36.00

(e) Emergency request by customer to turn on or shut
off water service other than during the Utility's
regular working hours. $49.12/HR up to 3 hour minimum charge.

(f) Customer requested meter testing shall be the actual cost per test but not less than $30.00
except at no cost should the meter be found to over-register.

13. Service Disconnection

Upon request by the customer for termination of service, the Town of Derry shall, in its sole discretion, determine if the disconnection poses risk or liability to either the Town or the public. If it determines risk or liability is possible, the Town may, at the Customer's expense, take such actions as may be appropriate to reduce the risk or liability.

4. Merrimack Source Development Charge

This charge is to recover payments made by the Town of Derry to Manchester Water Works for the development of the Merrimack River as a second source of supply.

RATES:

The one-time charge will be based on the size of the water service entering the building that is required to meet flow requirements at the installation.
Meter Size .....MSD Charge

3/4 inch.....$ 721.00
1 inch.....$ 2,069.00
1 1/2 inch.....$ 5,429.00
2 inch.....$ 9,589.00

For installations 3" and larger, the charge will be $2.36 per gallon, per day. The flow, gallons/day, will be determined by the Town of Derry. For installations where an oversized service is necessary due to pressure considerations, the charge will be based on the size of the meter required under normal pressure conditions, as determined by the Utility.

TERMS

Bills for this service shall be rendered in advance and payment shall be received before service is installed or service upgraded.

5. Water Use Restrictions And Penalties

The following penalties for violations of water use restrictions are applicable only during a severe drought or other water supply shortage during a declared Emergency or Disaster by the Derry Town Council. Once declared, the need for continuation of such restrictions shall be reviewed monthly by the Town and notice of which shall be published in the Manchester Union Leader and/or Derry News. The primary purpose of such declaration and issuing penalties by the Derry Town Council shall be to protect, preserve and maintain the public health, safety and welfare of the customers and communities served.

Declared Emergency -Level III
After continued violation of restriction confirmed by the Town of Derry following written warning, the customer shall be assessed a penalty in the amount of $50.00/day. Continued violations shall result in service termination in accordance with the Derry Water use Ordinance.

Declared Disaster –Level IV
After confirmation by the Town of Derry of a violation of restriction, the customer shall be assessed a penalty in the amount of $100/day and service shall be immediately terminated in accordance with the Derry Water Use Ordinance.

Restrictions that include but shall not be limited or restricted to which may be imposed by the Town of Derry depending on the drought severity are lawn irrigation, curbside vehicle washing, pool filling, hosing of hard surfaces and use of water from public or private hydrants for non-emergency purposes.

This water rate schedule has been duly adopted by the Town Council acting as Water Commissioners of the Town of Derry, in Rockingham County, State of New Hampshire, at a duly noticed and duly held session of the Derry Town Council.

TOWN OF DERRY

Certificate

The Derry Town Council after duly noticed Public Hearing held on October 4, 2005 approved to amend the Code of the Town of Derry, Section 156, in accordance with RSA 38, to include a Water Shut-Off Policy.

John P. Dowd, Chair
Derry Town Council

Marjorie Swanson, Town Clerk
Clerk to Town Council

Received and Recorded October 13, 2005, Marjorie Swanson
Town Clerk

Effective Date: November 3, 2005

Town of Derry, New Hampshire
Municipal Water Service
Shut-Off Policy
September 1, 2005

(for nonpayment of water and/or sewer bills)

Amendment to the Town of Derry Administrative Code Chapter 156-17

B. "Water Shut Off Policy"

(1) Bills:

For the purposes of this Policy, bills shall refer to any periodic water or sewer service bill for water customers who have both municipal water and sewer service.

Bills are issued no less frequent than quarterly in September, December, March and June of each fiscal year for all water and sewer customers. All bills are issued and mailed to the owner of record of the property serviced and are due upon presentation. Property Owners may request a "Copy to" bill to be forwarded to the tenant of the property. "Copy to" bills may be issued at the discretion of the Superintendent and at an additional fee of $ 1.00 per billing period per tenant.

(2) Notices

No sooner than the 30th day following the issuance of a bill the Public Works Office shall issue a Notice of Past Due Water and Sewer Bill to all customer accounts with outstanding water or sewer balances of thirty (30) days or more. The Notice shall clearly indicate that any account whose outstanding balance continues for sixty (60) days or more shall be subject to, without further notice, discontinuation of municipal water service.

No sooner than the 60th day following the issuance of a bill the Public Works Office shall make a list of all accounts with outstanding balances of 60 days or more. A Late payment charge ($5.00) shall be applied to each of the accounts on this list in accordance with paragraph 3.b of the Derry Water Use Ordinance Rate Schedule.

This "Shut-off Notice" list shall then be reviewed by the Superintendent and the Tax Collector. The Tax Collector may exempt any customer from the "Shut-off Notice" list in accordance with Section (4) below.

Once the "Shut-off Notice" list is approved by the Superintendent and Tax Collector, the Public Works Department shall provide no less than seven days written notice to the property resident(s) on the "Shut-off Notice" list by placing a door tag at the most conspicuous door location of the service property. Such tags shall clearly note that a seven day notice is given that water service shall be discontinued to the property without further notice. For multifamily properties, door tags shall be placed at the main entrance door to each building to which service is being terminated. In addition, a door tag shall be posted on a back or side door to which the Town has reasonable access, or in a

common area of each building. For commercial, industrial or institutional properties tags shall be given in person to the business manager, property superintendent or other responsible person if available. Such tags shall be delivered in a professional, discrete nonpublic manner. For vacant properties, tags shall be placed at the most conspicuous door location.

All questions regarding payments shall be referred to the Office of the Tax Collector, including current balance due inquiries. Questions regarding specific charges shall be referred to the Public Works Department.

The Tax Collector's Office and the Public Works Office shall make every effort to update customer charges and payments and to notify each other of such updates as they are applied during the "Shut-off" process.

(3) Shut-offs

No less than seven days after Notice has been provided to the property, the Department of Public Works shall make a list of all customers with outstanding balances of sixty (60) days or more and who were provided a "seven day" Shut-off" Notice. This list shall again be reviewed by the Superintendent and Tax Collector. The Tax Collector may exempt properties from this "Final Shut-off" list in accordance with Section (4) below. Once the "Final Shut-off" list is approved by the Tax Collector and Superintendent a "Shut-off Service Charge" shall be applied to each account in accordance with Section (5) below. The list shall then be provided to the Water Division with an order to discontinue service. Division field employees shall terminate service to those properties with individual accessible shut-off curb valves. Division employees shall not accept payment in the field nor cause any delay in the discontinuance of service. All questions shall be referred to the Office of the Tax Collector.

An informational copy of the "Final Shut-off" list shall be provided to the Chief Financial Officer, the Code Enforcement Officer, the Fire Department and the Human Services Department who shall respectively review the list and inform the Tax Collector and Superintendent of any concerns.

Water Division employees shall immediately notify the Public Works Office upon shut-off of water service.

Discontinuation of water service may only be conducted when followed by a regular business day (i.e. not on Fridays or days before a holiday)

No water service which shall affect any fire suppression system shall be shut-off without permission from the Fire Department.

(4) Exemptions

The Tax Collector shall revise the "Shut-off" list to ensure compliance with Federal Law and State RSA's relative to bankruptcy protection. Customers who have made payment plans in accordance with Section (6) may, at the discretion of the Tax Collector, be exempted from the shut-off list. Customers with financial hardship may be referred to the Office of Human Services. Upon

recommendation from the Director of Human Services, the Tax Collector may exempt a customer from the shut-off list. Occupancy, health and landlord/tenant issues shall be referred to the Director of Code Enforcement (or Health Officer). Upon recommendation of the Code Enforcement Officer, the Tax Collector may exempt a customer from the Final Shut-off list.

(5) Shut-off Service Charge

Once the "Final Shut-off" list is approved, a "Shut-off Service Charge" ($36.00) shall be applied to each outstanding bill on the list. The "Shut-off Service Charge" shall include costs necessary to develop the "Final Shut-off" list, and to terminate and restore service (if applicable). The "Shut-off Service Charge" is applicable whether service is actually shut-off or not.

(6) Payment Plans:

Customers with a financial hardship may be permitted, at the discretion of the Tax Collector, to make payment installments over a predetermined period. Customers shall sign a "Payment Plan Agreement" with the Tax Collector's Office noting the amount of the bill, the amount , frequency and term of payment and any other additional requirements as deemed appropriate by the Tax Collector. Customers who fail to meet the terms of the Agreement or have checks returned for insufficient funds which are not resolved in ten (10) days (per Town of Derry Administrative Regulation #20 Section III.D), shall be subject to discontinuance of water service after a seven day written Notice.

(7) Restoration of Service

Service shall not be restored unless approved by the Tax Collector and upon satisfactory payment of all outstanding charges including the late payment charge, the "Shut-off Service Charge" and, if applicable, any after duty hours call out charges associated with the shut-off. If service restoration is requested after regular duty hours (of water Division field employees) the customer may contact the water Division Emergency On-call person by calling the Derry Fire Department or Police Department. Service may be restored if the customer or tenant agrees to make payment of all outstanding charges as well as a call out charge in accordance with the attached rate schedule prior to 8:00 am the next business day. If payment is not made water service shall again be discontinued and a second "Shut-off Service Charge" applied. The On-call person shall not restore service unless the customer signs a service restoration request form. This form shall be provided to the Public Works Office at the opening of the next business day. The total amount of the call out charge shall be immediately billed and become due.

(8) Tax Lien Process

Nothing in this article shall preclude the Town from remanding outstanding balances to the Tax Collector for Lien in accordance with applicable State Statutes.

(9) Customer Balance Inquiries

Any customer requesting account balance information may be referred to the Tax Collector whenever possible during the "shut-off" process. Account balances shall be determined from the Bill Inquiry Screen of the Account Master or A/R Inquiries and Reports screens of the MUNIS module.

(10) Tenants' Rights

In accordance with NH RSA 38:31 the Town shall not terminate service to a rental property if so requested by the tenant provided the tenant agrees to be responsible for service provided as of the date of the tenant's request.

Approved this 5 day of Oct. 2005 by:

The Council of the Town of Derry

John P. Dowd, Chairman

Russell R. Marcoux, Town Administrator

Received and recorded this 6th day of October, 2005

By: Nancy E. Britto Deputy
Marjorie Swanson, Town Clerk

WATER MAIN SPECIFICATIONS

DERRY, NEW HAMPSHIRE

APRIL 1993

Including Amendments and Revisions to
February 1998
March 2001

DEPARTMENT OF PUBLIC WORKS

MIKE FOWLER, P.E., DIRECTOR

THOMAS A. CARRIER, WATER/WASTEWATER SUPERINTENDENT

SECTION 100

DEFINITIONS AND TERMS

1.01 - Meaning of Terms:

Wherever in these specifications the following terms or pronouns in place of them, are used, the intent and meaning shall be interpreted as follows:

TOWN OR OWNER: The Town of Derry, New Hampshire

DEPARTMENT: The Department of Public Works of the Town of Derry New Hampshire acting for the Town.

DIRECTOR: The Director of the Department of Public Works acting directly or through an authorized representative, such representative acting within the scope of the particular duties entrusted to him.

ENGINEER: The Engineering Technician in charge of New Construction for the Town of Derry, New Hampshire or authorized agent or officer.

CONTRACTOR: Any individual, firm or corporation employed by a developer to complete work in a subdivision or contracted by the Town of Derry, New Hampshire.

MATERIAL: Any substances proposed to be used in connection with the construction of any integral part and/or any appurtenant part and/or any incidental part of the proposed project.

SPECIFICATIONS: The directions, provisions and requirements contained herein, designated as the water main specifications together with all written agreements made or to be made pertaining to the method and manner or performing the work, or the quantities and qualities or materials to be furnished under these provisions.

WORK: All performance, including the furnishing of materials, labor, tools equipment and incidentals, required of the Contractor under the terms of these provisions.

THE WORD: "As directed", "as required" or words of like effect shall mean that the direction, permission or requirement of the Director is intended, and similarly the words "approved", "acceptable", "satisfactory", or words of like import shall mean approved by or acceptable or satisfactory to the Director unless otherwise provided herein. The words "necessary", "suitable", or words of like import shall mean necessary, suitable or equal in the opinion of the Director. The words "complete in place" shall mean the inclusion of all works, including incidentals, mentioned or implied in the Specifications and on the plans, or work that may reasonably be inferred as necessary to the proper execution of the item, unless payment for any portion of the work is otherwise specifically provided for.

1.02 - Abbreviations: Whenever the following abbreviations are used in these specifications or on the plans, they are to be construed the same as the respective expressions represented:

AAN - American Association of Nurserymen

AAR - Association of American Railroads

AASHTO - American Association of State Highway and Transportation Officials

ACI - American Concrete Institute

AGC - Association General Contractors of America

AIA - American Institute of Architects

AISC - American Institute of Steel Construction

ANSI - American national Standards Institute

ARA - American Railway Association

AREA - American Railway Engineering Association

ASCE - American Society of Civil Engineering

ASLA - American Society of Landscape Architects

ASME - American Society of Mechanical Engineers

ASTM - American Society for Testing and Materials

AWPA - American Wood Preservers Association

AWWA - American Water Works Association

AWS - American Welding Society

DOT/FHWA - Department of Transportation, Federal Highway Administration

FSS - Federal Specifications and Standards, General Services Administration

MUTCD - Manual on Uniform Traffic Control Devices

NEMA - National Electrical Manufacturers Association

NH/DOT - The State of New Hampshire Department of Transportation

RSA - The New Hampshire Revised Statutes Annotated, 1955 together with all revisions amending same to date of invitation of bids

SAE - Society of Automotive Engineers

SSPC - Steel Structures Painting Council

SECTION 200

MAINTENANCE OF TRAFFIC

2.01 General

A. This work shall include all operations necessary to maintain traffic flow, and to maintain access to all properties adjacent to the work. This work shall include, but not limited to; use of **Uniform Traffic Control and Flaggers**, furnishing, erecting, moving, and dismantling barricades, signs, and temporary lighting, to inform the general public of hazards existing near the site of work.

B. The **CONTRACTOR** shall facilitate the passage of school buses and provide safe access to all school bus stops, and notify the Police chief, Fire chief, and School Superintendent at least 72 hours in advance where the **CONTRACTOR** intends to work and the location of all detours.

2.02 Materials

A. Road construction approach signs shall be built, erected, and located in accordance with New Hampshire Department of Public Works and Highway Standards. Cost for all sign packages and barricades required shall be borne by the **CONTRACTOR**.

B. Traffic paddles and Flagger's equipment shall conform to those described in the MUTCD of New Hampshire Traffic Control HandBook, as appropriate.

C. Traffic Control personnel shall use two-way radio communication at all times, when two Traffic control people are used.

2.03 Personnel

A. 1) Uniformed Officers shall be attired with regulation duty uniforms, headgear, reflective vests, and an exposed badge. Flaggers shall be attired with blaze orange caps and vests.

2) Uniformed Officers and flaggers shall possess the following qualifications: at least average intelligence and alertness, good sight and hearing, courteous but firm manner, neat and presentable appearance, pleasing personality, and a sense of responsibility.

3) Uniformed Officers and flaggers shall have been given specific instructions by the **CONTRACTOR** as to their duties and responsibilities, both to the public and to their fellow workers on the job. They shall direct traffic in accordance with Section 618 of the NHDPW&H Standard Specification entitled "Uniform Officers and Flagmen."

4) Uniformed Officers and flaggers shall not be paid under a separate pay item but shall be absorbed under various pay items.

2.04 Execution

A. At the preconstruction meeting, the **CONTRACTOR** shall submit a traffic control plan to the Town for approval. The Traffic Control Plan shall be approved prior to any construction.

B. Except where permitted by the **TOWN** as part of an approved detour plan, all streets where work is being performed shall be left in a passable condition at night.

C. No open trenches shall be left open overnight. Excavations shall be backfilled and compacted, as specified for temporary trench pavement, including all roadway base course gravels.

D. The **CONTRACTOR** shall spread water or calcium chloride for Dust Control as directed by the Engineer. Cost for this procedure shall be absorbed under various pay items

E. The **CONTRACTOR** shall provide a field supervisor or equivalent to rectify problems within traveled ways; if they develop. The field supervisor or equivalent shall be available 24 hours per day, seven days per week during the time of the contract. The field supervisor or equivalent shall have the appropriate equipment, tools and materials available to immediately resolve any problems which represent a safety hazard to the residents of the **TOWN.** The **CONTRACTOR** shall provide the Town a means of reaching the field supervisor during non-business hours. (such as a paging service, etc)

F. The Director of Public Works and the Chief of Police shall retain the authority to suspend all or part of the **CONTRACTOR'S** operation, as he may deem necessary in the interest of public safety. The **CONTRACTOR** shall make no claim for additional compensation or time on account of such suspension.

SECTION 300

DUCTILE IRON PIPE AND FITTINGS

3.01 General

A. Furnish all labor, materials, equipment and incidentals required, and install ductile iron pipe and fittings complete as shown on the Drawings and as specified herein.

3.02 Materials

A. Ductile Iron Pipe: shall conform to ANSI/AWWA C151, class 52. The pipe shall be supplied in lengths not in excess of 20 feet. All proposed water mains shall be a minimum 8" in diameter unless otherwise approved by the Director. The pipe shall be subject to rejection at any time on account of failure to meet any of the specification requirements, even though pipes may have been accepted as satisfactory at the place of manufacture. Pipe rejected after delivery shall be marked for identification and shall immediately be removed form the job.

B. Non-restrained Joint Pipe: shall conform to ANSI/AWWA Type push-on joint, as manufactured by the American Cast Iron Pipe Company, U.S. Pipe and Foundry Company, or Lok-Fast Joint by American Cast Iron Pipe Company.

C. Restrained Joint Pipe: shall be wedge action retainer glands or grip rings or equivalent and be manufactured of ductile iron conforming to ASTM A536-80. They shall have a working pressure of at least 350 psi in sizes 3" through 16" and 250 psi in sizes 18" through 48" with a minimum safety factor of 2:1. Tee head bolts shall conform to the requirements of ANSI/AWWA A21.11/C111 and ANSI/AWWA.A21.53/C153 of latest revision. Twist off nuts on wedge action retainer glands shall be used to insure proper actuating of the restraining devices. **Under no circumstances shall the use of set screw retainer glands be used during installation.**

3.03 Execution

A. All pipe or fittings shall be examined before laying, and no piece shall be installed which is found to be defective. Pipe or fittings shall not be dropped. Any damage to the pipe lining or coatings shall be cause for rejection of pipe. All rejected pipe shall be promptly removed from the site and replaced with sound pipe at the **CONTRACTOR'S** expense. Hauling and laying of pipe and fittings shall be in accordance with the manufacturer's instruction.

B. All pipe and fittings shall be thoroughly cleaned before laying and shall be kept clean until they are used in work, and when laid, shall conform to the lines and grades required. A firm, even bearing throughout the length of the pipe placed in not less than 3 separate lifts shall be constructed by tamping selected material at the sides of the pipe up to 1 ft. over the top of the pipe. Blocking will not be permitted. If any defective pipe is discovered after it has been laid, it shall be removed and replaced with a sound pipe in a satisfactory manner by the Contractor at his own expense.

C. The Pipe Embodiment Zone shall consist of sand as that stipulated by Section 6.05 here in unless otherwise requested by the Town's Engineer.

D. When pipe laying is not in progress, the open ends of the pipe shall be closed by watertight plugs or other approved means.

E. Good alignment shall be preserved in laying. The deflection at joints shall not exceed that recommended by the manufacturer.

F. Pipe and fittings shall be laid with a minimum of 5 feet of cover over the top of the pipe.

G. Wedge Action Retainer Glands and or Grip ring mechanical joint pipe restraints or equal, along with concrete thrust blocks shall be installed at all fittings and other locations as indicated on the Contract Drawings or as directed by the Engineer. Minimum bearing area for thrust blocks shall be as shown on the drawings. Joints shall be protected by felt roofing or polyethylene sheet paper prior to placing concrete. Concrete shall be placed against undisturbed material, and shall not cover joints, bolts, or nuts, or interfere with the removal of any joint. Wooden side forms or sandbags shall be provided for thrust blocks.

H. Warning tape: shall have a minimum thickness of 4 mils with a solid aluminum core to ensure continuity. It shall have a minimum width of 4" and be installed directly over the pipe with an approximate 2' vertical separation.

3.04 Testing

A. The **CONTRACTOR** shall furnish a test pump, gauges, and any other equipment required in conjunction with carrying out the hydrostatic test. All labor and taps associated with testing shall be included under the bid item for testing.

B. All pipelines shall be subjected to a hydrostatic pressure of **200 psi**. This pressure shall be maintained for a **minimum of one hour**. Any loss of pressure will be unacceptable. Before testing begins, the **CONTRACTOR** shall notify the **ENGINEER.** The **ENGINEER** shall follow closely the progress of the pressure test.

3.05 Chlorinating of Pipelines

A. Before being placed in service, all new water mains shall be chlorinated using the continuous feed method specified in AWWA C601. The procedure shall be approved by the Engineer in advance.

B. 1) The location of the chlorinating and sampling points will be determined by the Engineer in the field. Taps for chlorination and sampling shall be installed by the contractor.

2) Any materials such as corporations and copper pipe will be provided by the Contractor and be paid under the lump sum item for testing and chlorination. The **CONTRACTOR** shall excavate, remove testing lines and backfill taps following approval by the Engineer.

C. The general procedure for Chlorination shall be first to flush all dirty or discolored water from the lines, and then introduce chlorine in approved dosages through a tap at one end, while

water is being withdrawn at the other end of the line. The chlorine solution shall remain in the pipeline at **50 parts per million (PPM) for 24 hours**. The chlorine solution must be purged from the pipeline no later than 36 hours following initial injection.

D. Following the chlorination period, all treated water shall be flushed from the lines at their extremities, and replaced with water from the distribution system. All treated water flushed from the lines shall be disposed of by discharging to the nearest sanitary sewer or by other approved means. No discharge to any natural watercourse will be allowed. The **CONTRACTOR** shall obtain samples of replacement water for bacteriological analysis by an approved laboratory in full accordance with AWWA Specification C601. The **CONTRACTOR** will be required to rechlorinate, if necessary, and the line shall not be placed in service until the requirements of the New Hampshire Department of Environmental Services, Water Supply and Pollution Control Division are met, and the **ENGINEER** is provided with a copy of the results from the approved laboratory.

E. All costs associated with the disinfection of water mains, including all lab analysis shall be borne by the **CONTRACTOR.**

SECTION 300-A

POLYETHYLENE ENCASEMENT FOR DUCTILE IRON PIPE AND FITTINGS

3.01-A General

A. Furnish all labor, materials, equipment and incidentals required, to encase ductile iron pipe and fittings with polyethylene material complete as shown on the Drawings and as specified herein.

3.02-A Materials

A. Polyethylene film: shall conform to ANSI/AWWA C105/A21.5-99 section 4.1.2 for High-density, cross-laminated polyethylene film. The polyethylene shall be tubular with a minimum thickness or 4 mil. Tube size shall be according to table 1 of the above mentioned standard.

B. Marking of the polyethylene film shall be at a minimum of every 2-ft along its length, containing the following information:

a. Manufacturer's name or trademark.
b. Year of manufacture
c. ANSI/AWWA C105/A21.5
d. Minimum film thickness and material type (HDCLPE).
e. Applicable range of nominal pipe diameter size(s).
f. Warning—Corrosion Protection—Repair Any Damage

3.03-A Execution

A. The polyethylene encasement shall prevent contact between the pipe and the surrounding backfill and bedding material, but it is not intended to be a completely airtight or watertight enclosure. During installation, soil or embedment material shall not be trapped between the pipe and the polyethylene. The polyethylene film shall be fitted to the contour of the pipe creating a snug but not tight, encasement with minimum space between the polyethylene and the pipe. Sufficient slack shall be provided in contouring to prevent stretching the polyethylene where it bridges irregular surfaces, such as bell-spigot interfaces, bolted joints, or fittings and to prevent damage to the polyethylene caused by backfilling operations. Overlaps and ends shall be secured with adhesive tape, or plastic tie straps. Also, circumferential wraps of tape should be placed at 2 ft intervals along the barrel of the pipe to minimize the space between the polyethylene and the pipe.

B. 1) Specific installation of the polyethylene film shall be according to ANSI/AWWA C105/A21.5-99 section 4.4.2.1 Method A.

2) Cut polyethylene tube to a length approximately 2 ft longer than the pipe section. Slip the tube around the pipe, centering it to provide a 1-ft overlap on each adjacent pipe section and bunching it accordion-fashion lengthwise until it clears the pipe ends.

3) Lower the pipe into the trench and make up the pipe joint with the preceding section of pipe. A shallow bell hole must be made at the joints to facilitate installation of the polyethylene tube.

4) After assembling the pipe joint, make the overlap of the polyethylene tube. Pull the bunched polyethylene from the preceding length of pipe, slip it over the end of the new length of pipe, and secure it in place. Then slip the end of the polyethylene from the new pipe section over the end of the first wrap until it overlaps the joint at the end of the preceding length of pipe. Secure the overlap in place. Take up the slack width at the top of the pipe to make a snug but not tight fit along the barrel of the pipe, securing the fold at quarter points.

5) When it is not practical to wrap valves, tees, crosses, and other odd shaped pieces in a tube, wrap with a split the length of the polyethylene tube by passing the sheet under the appurtenance and bringing the sheet around the body. Make seams by bringing the edges of the polyethylene sheet together, folding them over twice, and taping them. Tape the polyethylene securely in place at the valve stem and other penetrations.

6) Repair cuts, tears, punctures, or damage to polyethylene with adhesive tape or with a short length of polyethylene tube cut open, wrapped around the pipe to cover the damaged area, and secured in place.

7) Provide openings for branches, service taps, blowoffs, air valves, and similar appurtenances by cutting an X in the polyethylene and temporarily folding back the film. After the appurtenance is installed, tape the slack securely to the appurtenance, and repair the cut and any other damaged areas in the polyethylene with tape. Direct service taps may also be made through the polyethylene, with any resulting damaged areas being repaired as described previously. To make direct service taps, apply two or three wraps of adhesive tape completely around the polyethylene encased pipe to cover the area where the tapping machine and chain will be mounted. This method minimizes possible damage to the polyethylene during the direct tapping procedure. After the tapping machine is mounted, the corporation stop is installed directly through the tape and polyethylene.

8) Where polyethylene wrapped pipe joins an adjacent pipe that is not wrapped, extend the wrap to cover the adjacent pipe for a distance of at least 3 ft. Service lines of dissimilar metals shall be wrapped with polyethylene for a minimum clear distance of 3 ft away from the ductile iron pipe.

SECTION 400

VALVES AND APPURTENANCES

4.01 General

A. Furnish and install gate valves, valve boxes, tapping sleeves and valves, hydrants, and appurtenances complete as shown on the Drawings and/or specified herein.

4.02 Materials

A. 1. Gate valves 4" to 12" shall conform to Standard Specification AWWA AC-509 for resilient wedge gate valves in so far as applicable. The body shall be completely manufactured of lightweight, high-strength ductile iron with a wall thickness, which meets or exceeds the requirements of AWWA C-153. Wedge shall be constructed of ductile iron, fully encapsulated in synthetic rubber per AWWA C-509. Valve body and bonnet shall be fusion bonded epoxy coated inside and out per AWWA C-550.

Gate valves larger than 12" shall conform to Standard Specification AWWA C-504 for Butterfly Valves, in so far as applicable. The Valve body shall be ASTM-A48; Class 40 or A126, Class B Cast Iron. The Butterfly valve disc, shall be of the "offset" design to provide a full 360° seating surface, uninterrupted by shaft holes. Disc shall be constructed of ASTM A56, Grade 65-45-12 ductile iron. Valve shafts shall be single piece "through" type and shall be of round 18-8 stainless steel, type, 304 material. All internal and external surfaces of valve body shall be shop painted with two coats of asphalt varnish (Federal Specification TT-V-51C). Valve actuators shall be furnished with standard 2" AWWA operating nuts. Each valve shall be tested per AWWA C-504, including hydrostatic, performance, and leakage tests.

All valves shall have mechanical joint ends and shall open left (**counter clockwise**).

2. Each gate valve shall be accompanied by a valve box of the two section, adjustable type of heavy pattern, constructed of cast iron and provided with cast iron cover. Boxes shall be of lengths consistent with pipe depths.

B. Tapping valves shall meet the requirements of AWWA C500. The valves shall all be flanged by mechanical joint outlet with non-rising stem, designed for vertical burial and shall open left or counterclockwise. Stuffing boxes shall be the "0-Ring" type. Operating nut shall be AWWA Standard 2-inches square. The valve shall be provided with an overloaded seat to permit the use of full size cutters. Gaskets shall cover the entire area of flange surfaces.

C. Tapping sleeves shall be manufactured of 18-8 stainless steel with minimum 5/8" 18-8 stainless steel nuts and bolts coated with fluorocarbon. The flange shall conform to AWWA C207 Class D-ANSI 150 lb. drilling. A 3/4" 18-8 stainless steel testing plug shall be provided so that the sleeve may be tested for a positive seal before tapping. The gasket shall be made of virgin GPR compounded for water service meeting the requirements of ASTMD2000.80M 4AA607. Tapping sleeves shall be rated for 200 PSI minimum working pressure.

D. Hydrants shall be American Darling B-84-B conforming to AWWA C-502. Standard depth of bury shall be 5'0". All hydrants shall be open left and weep holes plugged. The **ENGINEER** shall determine whether or not that the plugs be removed based on ground water conditions.

E. All hydrant laterals shall be 6" ductile iron pipe and conform to ANSI/AWWA C-151, Class 52. (**No domestic taps shall be permitted on fire hydrant laterals**.) Need confetti

4.03 Execution

A. Gate valves shall be set vertically aligned on a firm foundation and supported by tamping selected excavated material under and at the sides of the valve. Gaskets shall be properly tightened around the flange to create an adequate seal. All gate valves should be closed prior to installation.

B. Valve boxes shall be installed vertically, centered over the operating nut, and the elevation of the top shall be adjusted to conform to the finished surface of roadway or other surface at the completion of the contract. Boxes shall be adequately supported during backfilling to maintain vertical alignment.

C. Hydrants, as detailed on the Drawings shall be set at the location designated by the **ENGINEER** and shall be bedded on a firm foundation. A drainage pit 3 ft. in diameter and to the limits shown on the Drawings shall be filled with 3/4" crushed stone and satisfactorily compacted. Each hydrant shall be set in true vertical alignment and shall be properly braced. Concrete thrust blocks shall be placed between the back of the hydrant inlet and undisturbed soil at the end of the trench providing at least the minimum bearing as shown on the Contracted Drawings. The hydrant shall be tied to the pipe with suitable stainless steel rods or clamps. Wedge action retainer glands or grip ring mechanical joint restraints must be used to join all pipes and fittings, from the tee at the main, to the hydrant.

D. Reconnecting existing hydrants to new water mains as indicated on the drawings shall include all new pipe and fittings up to the hydrant base. The use of grip couplings shall not be permitted. The contractor shall adjust the location of the existing hydrant for proper alignment with the new lateral. (No bell joints shall be permitted along hydrant laterals less than 20 feet from the hydrant.)

E. 1. The tapping operation shall be conducted by workmen thoroughly experienced in the installation of tapping sleeves and valves, and under supervision of qualified personnel furnished by the manufacturer. The tapping machine shall be furnished by the Contractor.

2. Installation shall be made under pressure and the flow of water through the existing main shall be maintained at all times. The tapping valves and sleeves shall be tested through the sleeve plug at **200 psi for 15 minutes using water or 100 psi for 15 minutes using air** prior to tapping the existing main.

3. The **CONTRACTOR** shall determine the location of the existing main to be tapped to confirm the fact that the proposed position for the tapping sleeves will be satisfactory and no interference will be encountered such as the occurrence of existing utilities or of a

joint or fitting at the location proposed for the connection. **No tap will be made closer than 3 ft from the pipe joint**.

4. Tapping sleeves and valves with boxes shall be set vertically and squarely centered on the main to be tapped. Adequate support shall be provided under the sleeve and valve during the tapping operation. Thrust blocks shall be provided behind all tapping sleeves. Proper tamping of supporting earth around and under the valve and sleeves is mandatory.

SECTION 500

WATER SERVICES

5.01 General

A. Furnish all labor, materials, equipment and incidentals required to install copper pipe and fittings complete as shown on the drawings and as specified herein.

5.02 Materials

A. All Water services must be at least 3/4" - Type K copper tubing with compression type fittings. All proposed water services greater than 100 feet in length shall be a minimum 1" – type K Copper tubing.

B. Corporation stops shall be tapered AWWA thread (CC) inlets with compression pack joint (CPPJ) outlet. They must meet or exceed AWWA specification C-800 and possess a working pressure of 300 psi.

C. Curb stops must be of a ball curb type (brass ball with Teflon coating) without drain.
They must meet or exceed AWWA specification C-800and possess a working pressure of 300 psi.

D. The water service curb box is made up of three basic components: the cover, the service box, and the rod.

1. The plug type cover must have a brass pentagon plug with coarse "rope" thread to enable quick and easy removal.

2. The service box shall be adjusted to 1' - 0" within its height range. It must be adjusted to final grade flush with either pavement or grass surface.

3. The rod must offset for centering in the pipe and be provided with a heavy ductile iron end yoke with brass cotter pin. The pin assembly must be attached to the curb stop prior to backfill.

E. Three-piece coupling shall be of compression type pack-joint (CPPJ) on both ends to connect lengths of copper service piping. The CPPJ coupling must be of a type with a split clamp device.

F. Saddles must be of Ductile Iron meeting ASTM A-536-80 Grade 65-45-12 (Threads shall be CC). The finish shall be 10 mils of fusion applied nylon. Straps, bolts, nuts and washers shall be Mayari-R (Corten) high tensile strength, type 304 (18-8) stainless steel. Threads must be Teflon coated and GMAW welds must be passivated for resistance to corrosion. The gasket shall be virgin NBR compounded for water.

5.03 Execution

A. All materials shall be inspected prior to installation. Water service connections shall be extended to the Right of Way as shown on the drawings or as directed by the Engineer.

B. 1. Sand bedding must be placed and completed to **provide cover a minimum of 6" below and 12" above the service connection pipe.**

2. Copper tubing, available in **100' rolls shall be used** to minimize the use of unions during installation.

3. Extra care shall be taken in bending the tubing. Any tubing **having irregularities such as kinks shall be replaced at the Contractor's expense.**

C. Corporation stops must be installed only after the water main is tested and chlorinated, and must be installed under full service pressure by threading the corporation directly into the main. The corporations must be installed at an angle of 66 degrees away from top of the pipe by an approved type of **"Tapping Machine".** Tapping new mains or old by a makeshift hand drill shall not be allowed.

D. After the water service connection to the main is completed the water service line is laid up to the property line of the homeowner and the curb stop is installed. This line will be laid without bends whenever possible.

E. Curb boxes must be set vertically level and must be cleaned and "Blown-out" prior to acceptance by the Town of Derry.

F. Taps into ductile or cast iron mains shall be made without tapping saddles, by an approved type of "Tapping Machine". If a saddle is required due to a leaky direct tap, then all materials and labor expenses associated with the repair shall be borne by the **CONTRACTOR**. All other pipe materials such as transite and PVC shall require the use of a saddle.

G. When reconnecting existing water services to new water mains, caution shall be exercised to ensure proper alignment of the new service tap in relation to the existing water service. Any extra pipe and fittings required to complete this work, shall be included within the bid item.

H. Service connections shall be installed with a **minimum six feet of cover**.

I. Trench excavation and backfill shall be the same as that stipulated by section 600 herein.

J. Trench repair shall be the same as that stipulated in Section 700 herein.

K. Sewer and Water services shall maintain a minimum horizontal separation of 10 feet.

L. Duplexes or other multi-unit dwellings shall have separate connections to the main as well as separate shut-offs and be installed as outlined herein.

SECTION 600

TRENCH EXCAVATION AND BACKFILL

6.01 General

A. Furnish all labor, materials, equipment and incidentals necessary for trenching of utilities and appurtenances, including back-filling, test pits, and disposal of surplus materials.

6.02 Location of Utilities

A. Once the Contractor is awarded it shall be the Contractor's sole responsibility to contact Dig Safe prior to construction.

B. Prior to construction, the Town shall mark out location of existing water, sewer and drainage utilities based on best available information. This shall not in any way relieve the contractor from damages to the existing utilities. The **CONTRACTOR** shall be responsible for maintaining and recording all utility locations during construction. The **CONTRACTOR** shall be charged by the Town for any relocating of existing utilities.

6.03 Trench Excavating

A 1. The Contractor shall make excavations in such manner and to such widths as will give suitable room for laying, jointing, and bedding the pipe, furnish and place sheeting, as necessary, and for de-watering and maintaining the trench in a dry condition.

2. It is the **CONTRACTOR'S** responsibility to satisfy all Federal, State, and local regulations such as those of OSHA.

B. 1. The top of the trench shall be the ground elevation as determined by the Engineer prior to excavation. In general trenches for pipelines are calculated to give such depth as will provide 5.5 feet of earthen cover.

2. The allowable trench width shall be 2.0 feet greater than the normal pipe size or a minimum of 3 feet, whichever is greater.

C. 1. All pavement is to be cut prior to excavation. The **CONTRACTOR** shall at all times exercise care not to excavate outside the trench limiting lines as shown on the drawings. No extra allowance will be given for back filling, rock removal, paving, or other work resulting from excavation beyond these lines.

2. If the **CONTRACTOR** excavates below grade through error or his own convenience, or through failure to properly de-water the trench, or disturbs the sub-grade before de-watering is sufficiently complete, may be directed by the **ENGINEER** to excavate below grade, in which case the work of excavating below grade and furnishing

and placing the refill shall be performed at his own expense.

D. 1. If in the opinion of the Engineer, the material at or below the normal grade of the bottom of the trench is unsuitable for foundation, it shall be removed to the depth directed by the **ENGINEER** and replaced by an approved second gravel.

2. Surplus material excavated from trench and abandoned pipe and utilities, broken pavement, masonry, reinforced concrete, and other materials encountered in the excavation and not suitable for landfill, becomes the property of the **CONTRACTOR** and must be disposed of appropriately.

E. The **CONTRACTOR** shall furnish all labor, materials, equipment, and incidentals required to repair any existing utilities damaged during construction. Any assistance rendered to the **CONTRACTOR** by the **TOWN** in isolating or repairing damaged utilities, shall be appropriately deducted from the contract bid price.

6.04 Trench Ledge Excavation and Disposal

A. 1. Rock excavation shall consist of all solid rock which cannot be removed without blasting or ripping. It shall consist of boulders and parts of masonry structures when found to measure 1 cubic yard or more.

2. Material which can be loosened and removed such as loose or fractured rock, frozen materials, shale, hardpan, and the like which is outside of the limits of measurements allowed shall not be measured or classified as rock excavation.

3. Where rock is encountered, it shall be uncovered but not excavated until measurements have been made by the **ENGINEER**. All ledges within the trench limitations will be removed and disposed of off the site by the **CONTRACTOR**. All ledge excavated from the trench will be replaced with suitable material approved by the **ENGINEER**.

B. 1. All blasting operations shall be conducted in full compliance with all the laws of the State, all local ordinances, and with all possible care so as to avoid injury to persons and property.

2. The **CONTRACTOR** shall perform a pre-blast survey of the area where blasting is required. He shall record existing conditions in written form, sketches, photographs, videotapes, or any other form. All nearby buildings, foundations, driveways, roadways, and other existing structures shall be inspected for cracks, loose masonry, and any other conditions which might be attributable to blasting at a later date. A copy of said survey shall be provided to the **ENGINEER** before blasting commences.

3. The **CONTRACTOR** shall record the location, depth, and size of each hole. A copy of the said blasting record shall be provided to the **ENGINEER** at the conclusion of blasting rock.

4. No blasting will be permitted under or adjacent to any street, roads, or highway

unless permission has been received in writing from the authority having jurisdiction.

5. Conform to all Municipal, State, Federal, and other ordinances and codes relating to the storage and handling of explosives. Particular attention is called adherence to requirements of the electric, gas, and other utilities which may be located in the project area.

6. Damages and costs of whatever nature resulting form the work specified herein shall be borne solely by the **CONTRACTOR.**

6.05 Select Materials for Pipe Embedment

A. From the bottom of the trench to a minimum of 12 inches above the pipe crown, shall referred to as the pipe embodiment zone. Select material shall be specified elsewhere or as indicated on the drawings. The select material shall be hand tamped around the pipe so that each section shall have a firm bearing through out its entire length.

B. Select materials shall conform to the following standards:

1. Sand - shall be free from stone or any organic matter.

Sieve Size	Percent Passing By Weight
3”	100
#4	70- 100
#200	0- 12

2. Bank Run Gravel - shall be graded such that the maximum size of stone particles shall not exceed 3/4 of the compacted depth of the layer being placed. In no case shall the stone size be larger than 6 inches.

Sieve Size	Percent Passing By Weight
6”	100
#4	25 - 70
#200	0 - 12

3. Crushed Gravel - at least 50 percent of the material retained on the 1 inch sieve shall have a fractured face.

Sieve Size	Percent Passing By Weight
3”	100
2”	95 - 100
1”	55 - 85
#4	27 - 52
#200	0 - 12

4. Crushed Stone - shall consist of clean durable ledge and rock. It shall be free from thin elongated pieces.

Sieve Size	**Percent Passing By Weight**
1”	100
3/4”	85 - 100
1/2”	15 - 45
#4	0 - 5
#3	0 - 5
#50	0 - 5
#200	0 - 5

6.06 Backfill

A. The material above the pipe embedment zone shall be selected backfill or common fill as specified on the plans. All trenches within the limits of a roadway, shoulder, sidewalk, or other paved areas shall be thoroughly compacted by hand or mechanical means in layers not to exceed twelve (12) inches. Each backfill layer shall be at 95% of its optimum.

B. All backfill material shall be free from all organic matter and debris. No stone or rock fragments larger than 6” shall be deposited in the backfill.

C. Any trench areas improperly backfilled or having excessive settlement, shall be reopened to the depth required, then refilled, compacted, restored to the required grade, mounded over and smoothed or repaved as necessary.

D. All digging up, protecting, and replacing of hedges, shrubs, trees, and plants, along with stripping and stockpiling of all topsoil where it exists, and replacement of the original earth cover including regrading and clean-up shall be the sole responsibility of the **CONTRACTOR.**

SECTION 700

TRENCH REPAIR

7.01 General

A. Furnish all labor, material, equipment, and incidentals required to replace all pavement removed over trenches or otherwise disturbed by the **CONTRACTOR'S** operation.

B. Streets, driveways, parking areas or sidewalk pavement, damaged or disturbed by, the **CONTRACTOR'S** operation shall be repaired, replaced, or restored, by the **CONTRACTOR** in accordance with the requirements specified herein, and as directed by the **ENGINEER,** at no additional expense of the owner.

C. Except as otherwise specified herein, the material and construction shall be in accordance with the "Standard Specifications for Road and Bridge Construction", New Hampshire Department of Transportation (NHDOT), latest edition, including all addendum.

7.02 Materials

A. Bank Run Gravel shall meet the requirements of Section 600 herein.

B. Crushed Gravel shall meet the requirements of Section 600 herein.

C. 1. Base course pavement shall be 3/4" Type B as specified in the NHDPW & H "Standard Specifications for Road and Bridge Construction.

2. Wearing course shall be 1/2" Type E as specified in the Standard specifications referenced above.

3. Temporary pavement shall be 1/2" Type C as specified in the Standard specification referenced above.

7.03 Temporary Pavement

A. All trenches shall be paved immediately following construction unless otherwise noted on the plans or directed by the Engineer.

B. The **CONTRACTOR** shall provide a mechanical sweeper and shall "sweep" roads used or in the construction areas as requested by the **ENGINEER**. This shall be done as construction progresses to further control the dust nuisance caused by unpaved trenches in roadways and other areas. Upon completion of all road work, the **CONTRACTOR** shall sweep clean the final work.

C. 1. Trenches shall be backfilled to within 22 inches of final grades as specified herein.

2. The **CONTRACTOR** shall place **12" of Bank run gravel, 8" crushed gravel**, **and 2" of Temporary pavement**. Gravel materials shall be thoroughly compacted by hand or

mechanical means in layers not to exceed six (6) inches. Each backfill layer shall be 95% of its optimum density.

3. Temporary patches shall remain in place for a minimum of **60 days** but not more than **120 days**. The **CONTRACTOR** shall have the responsibility to periodically inspect temporary pavement areas and repair as necessary, especially during the winter months when the temporary pavement remains in place for an extended period.

4. Use of Cold Patch materials is specifically prohibited for Temporary Patch.

7.04 Permanent Trench Pavement Repair

A. At the end of the stabilization period the temporary patch will be cut out and the trench trimmed with neat straight and square corners a minimum distance of (12) inches beyond the limits of temporary patch or areas of observed settlement, whichever, is greater. The **CONTRACTOR** will insure this requirement is adhered too.

B. The **CONTRACTOR** shall remove the temporary asphalt and crushed gravel as needed to obtain the 4" of permanent pavement required. A tack coat shall be applied along all joints.

C. Supply and place (2 1/2) inches of 3/4" Type B Base course asphalt and (1 1/2) inches of 1/2" Type E Finish course asphalt. Paving shall be allowed if the air temperature is at least 45 degrees F and rising, and the area is exposed to the sun.

D. Rolling shall be done with a self-propelled roller weighing not less than 8 tons and shall continue until a firm even surface true to the lines and grades is obtained.

E. Newly paved trenches shall be either bonded to the existing pavements by an approval means of infra-red heat sealing, or overlaid by 1" of Type F pavement over the entire area.

F. All trenches shall be overlaid the entire width of roadway and 50 ft beyond the edges of the trench along the length of the roadway. The new pavement shall be keyed into the existing pavement as directed by the **ENGINEER**. Finish course paving shall be placed by machine method in accordance with the Derry Roadway Construction Specifications.

7.05 Sidewalks

A. All sidewalks, whether bituminous concrete or cement concrete, interfered with during the construction of sanitary sewer and/or water service connections shall be rebuilt by the **CONTRACTOR** in accordance with the following specifications:

1. Cement Concrete: The foundation shall be at least six (6) inches of well - compacted bank run gravel. The concrete shall be 3000 lb. strength, 4 inches in thickness, reinforced with No 4, 4" X 6" mesh and wood flat finished. Expansion joints (3/4" open) shall be scored into walk every 4 feet. Base gravel material shall be of an approved type. It shall be compacted to 95% of its optimum density.

2. Bituminous Concrete: The foundation shall be twelve (12) inches of bank run gravel as specified above, and the wearing surface shall be laid in two courses, a 1 1/2 inch bottom course and a 1 inch top course, thickness measured after compaction. The material and application shall conform to the Specifications outlined for roadway surfacing. All edges of the walks shall be formed with wood screeds which are securely anchored and left in place. The sidewalk shall meet existing sidewalk widths and have a slope of 1/4 inch per foot from back edge of sidewalk towards roadway.

SECTION 800

AS-BUILTS

8.01 General

A. The CONTRACTOR must submit all asbuilts for Water/Sewer mains and Water/Sewer services. All cost for as-built drawings shall be included with pipeline installation bid prices.

8.02 Requirements

A. The below list is the minimum requirement which must be provided:

1) House location

2) Installed sewer and/or water service location

3) Driveway location

4) Water main location

5) Sewer main location

6) Drain location (if any)

7) Catch basin location (if any)

8) Sewer Manhole location (if any)

9) Retaining wall location (if any)

10) Other Public Utilities (Electric, Telephone, etc)

11) Existing trees within 12 feet of proposed Service (if any)
(Figure 1 illustrates an example of a typical as-built site.)

B. Original site plans may be used in drawing as-builts for sewer and water mains. The actual pipeline installed shall be drawn in red pencil or red ink, as will notes and swing ties.

C. All newly installed water main gate boxes and hydrant gate boxes must be accurately located and "tied off" from permanent building structures only. Ties taken from poles, catch basins, manholes, other gate boxes, trees and property boundaries are not acceptable. The above requirement may be modified if one "tie" distance is greater than one hundred feet (100').

D. 1) Service "as built" must show the exact location and depths of new water/sewer services in relation to the building that it serves. All depths between the top of the services and existing ground must be noted.

2) Water service connection "as-builts" must include "tie" from the building corners to the corporation, the service box, unions, and any points at which the service changes direction. In addition, distances from corporations to curb stops, curb stops to unions, and the point at which the service enters the foundation.

3) Sewer service connection "as-builts" must include "ties" from the building corners to the tap or wye, and to the clean out. In addition, distances from the "tap or wye" to the clean out and from the clean out to point at which "tap or wye" to the upstream sewer manhole in the public sewer main shall also be noted.

E. Distances must be accurate to the nearest length of a foot (plus or minus 0.10 foot). Accurate "as-built" plans are dependent on good location and measurements prior to backfill.

F. Before the Town releases final monies from bid items or escrow accounts, complete "as-built" plans must be submitted to the Department of Public Works, 14 Manning Street, Derry, New Hampshire.

SECTION 900

TEMPORARY WATER MAINS AND SERVICES

9.01 General

A. Furnish all labor, materials, equipment and incidentals required to install, maintain, and remove temporary water service as shown on the drawings and as specified herein.

9.02 Materials

A. Restrained Joint PVC Pressure Pipe: shall be certainties Yelomine PVC Pipe or equivalent and be made from Polyvinyl Chloride, Type I, Grade 1, 2,000 psi design stress material, class 12454B in accordance with ASTM D-1784. It shall be pressure rated for 200 psi according to ASTM D-2241 and impact strength shall meet the requirements of ASTM Standard 10-2444.

B. Restrained PVC Joints: shall be certainties Yelomine certa-Lok or equivalent and meet ASTM D-3139. Rubber O rings shall meet ASTM F-477, standard specification for Elastomeric seals for joining PVC pipe.

C. Restrained Joint PVC fittings; shall meet or exceed all specifications for certainties Yelomine PVC Pipe or equivalent.

D. Polyethylene Pressure Pipe: shall be made from high density, extra high molecular weight compound equaling a PE 3408 designation and shall conform to ASTM-1248 and ASTM-3350; with a cell classification of 345434C. All pipe and fittings shall be pressure rated for a minimum of 200 psi.

E. Ball valves: shall meet or exceed AWWA Specification C-800 and possess a working pressure of 300 psi.

9.03 Execution

A. Handling and laying of pipe and fittings shall be in accordance with the manufacturer's instruction. All pipe and fittings shall be kept clean and free from debris during installation.

B. All temporary pipe shall be laid on top of the ground unless otherwise noted on the plans. When the pipe crosses driveways and walkways, stone dust shall be placed and properly ramped to maintain access during construction. The pipe shall be installed a minimum of 12 inches below pavement when crossing roadways.

C. The Contractor shall be responsible for shutting appropriate valves within buildings to ensure that water does not back feed into existing water main or leak out through any draining curb stops that may exist, as well as shutting off the curb stops themselves.

D. The Contractor shall attempt to blow off service lines through temporary connections prior to reconnection of services to new watermain. (Note: This requirement may be waived if a backflow device prevents water from flowing in reverse direction.)

E. If any special modifications are required due to absence of sill cocks or sill cocks with built in backflow preventers, the contractor shall perform the work and bear all the costs required to make connections and appropriate repairs during disconnections.

9.04 Chlorination of Pipelines

A. All temporary water mains shall be disinfected as specified in Section 3.05 herein.

Section 1000

Easement Construction

10.01 General

A. Furnish all Labor, materials, equipment, and incidentals required to construct easements that will allow access to maintenance and construction equipment.

10.02 Materials

A. 1) Woven Geotextile shall be a woven polypropylene product. It shall meet or exceed the following physical requirements.

Geotextile Property	Test Method	Minimum Property Requirements
Apparent Opening Size (US Standard Sieve Size)	ASTM D4751-87	No. 30 Sieve
Permittivity (1/second)	ASTM D4491-85	0.02
Grab Tensile Strength (Pounds)	ASTM D4632-86	270
Puncture Strength (Pounds)	ASTM D4833	100
Mullen Burst (psi)	ASTM D3786	550
Trapezoid Tear (pounds)	ASTM D4533-85	100

2) To prevent damaging the fabric, the Contractor shall exercise necessary care while transporting, storing and installing the fabric. Prior to installation, the fabric shall be protected from weather, direct sunlight or other ultra-violet exposure, and from dust, mud, dirt, debris and other elements which may affect its performance. Fabric which is torn, punctured or otherwise damaged shall not be placed. After placement, fabric shall be covered within 5 days. Traffic or construction equipment will not be permitted directly on the geotextile.

B. Bank Run Gravel: shall meet the requirements of Section 600 herein.

C. Crushed Gravel: shall meet the requirements of Section 600 herein.

10.03 Construction Easement

A. A 50' wide construction easement shall be cleared and grubbed according to Plans or as specified by the Town's Engineer. Caution shall be exercised by the Contractor so as not to disturb areas outside the limits of work.

B. All loam shall be stripped within the limits of the 20' permanent utility easement and stock piled for future use in an authorized area.

10.04 Access Drive

A. All utility lines and structures shall be installed and tested as outlined herein.

B. 1) A 12 foot wide access drive shall be constructed directly over the center of the utility main installed within the 20 foot permanent easement. Drainage culverts shall be installed according to plans or as directed by the Town's Engineer.

2) The access drive shall be cut to subgrade at a minimum of 18 inches from finished grade or as specified on the Plans. The geotextile shall be placed in accordance with the plans and manufacturer's requirements. Prior to placement of the fabric, the site shall be prepared to provide a smooth surface which is free from debris, obstruction, and depressions which could result in gaps, tears or punctures in the fabric during cover operations. The fabric shall be unrolled loosely and positioned as evenly as possible on the surface to eliminate wrinkles and folds. Pins or staples may be used to anchor the fabric as directed by the Engineer. The fabric should be pinned in a loose condition so that it easily conforms to the ground surface and will give to the inward movement of the overlying material. Fabric which is damaged after placement shall be replaced, repaired by stitching or patched. Patches shall be of the same material as the placed geotextile. The patch shall be joined to the existing fabric using overlapped seams as directed by the Engineer.

3) 12 inches of Bank run gravel shall be placed over the fabric in accordance with the plans. Fabric which is damaged as a result of careless or improper placement of gravel, grading techniques or equipment traffic above the fabric shall be repaired or replaced at the expense of the Contractor. 6 inches of crushed gravel shall be placed over the Bank run gravel and be graded to match the surrounding topography or as directed by the Town's Engineers.

4) Screened loam at an average depth of 2 inches shall be placed over the access drive and shall be seeded to discourage use by unauthorized vehicles.

/jmt 7/9/96
/smt revised 1/20/98
/mrl revised 3/29/01
/mrl revised 4/12/05

The State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES

Robert R. Scott, Commissioner

April 27, 2018

THOMAS CARRIER
DEPUTY DIRECTOR
DEPARTMENT OF PUBLIC WORKS
14 MANNING STREET
DERRY NH 03038

Subject: Derry: Derry Water Department PWS # 0611010
Franchise and Water System Expansion
Lorden Commons/Old Derry Road Londonderry

Dear Mr. Carrier:

The New Hampshire Department of Environmental Services (DES) is in receipt of the Town of Derry's request to expand its franchise water service area into northern Londonderry along Old Derry Road. This expansion will allow the Town of Derry to provide municipal water service to a proposed single family development located off of Old Derry Road in Londonderry. It is the intent of the Town to petition the Public Utilities Commission for the franchise which will also include existing homes and undeveloped lots in Lorden Commons as well as other existing homes off of Old Derry Road. DES approves this franchise expansion as to the suitability and availability of water for the proposed development.

In addition, the DES approves the plans for the proposed 83 single family lot subdivision entitled" Lorden Commons" with the following conditions:

1. Town of Derry is granted franchise area by PUC.
2. All water main construction shall conform to AWWA standards.
3. As built plans shall be provided to the Town of Derry at the time of completion of construction of the water utilities.
4. Horizontal and vertical separation of the water and sewer shall be maintained in accordance with Ten State Standards.

If you have any questions or comments please contact me at 271-2948 or Richard.skarinka@des.nh.gov.

Sincerely:

Richard Skarinka

Richard Skarinka, P.E.
Drinking Water and Groundwater Bureau

Town of Londonderry

Town Managers Office

268B Mammoth Rd

Londonderry, NH 03053-3416

Website: www.londonderrynh.org

Debra A. Howland, Executive Director
N.H. Public Utilities Commission
21 South Fruit Street, Suite 10
Concord, New Hampshire 03301-2429

Re: Petition of Town of Derry for Franchise in Town of Londonderry-Lorden Commons

Dear Director Howland:

Please be advised that the Town of Londonderry has been notified of the proposed petition by the Town of Derry to provide water supply services in the Town of Londonderry in the vicinity of Lorden Commons on Old Derry Road. The area to be served is located within Tax Map 16.

The Town of Londonderry supports the franchise request by the Town of Derry to provide water service in the requested area of the Town of Londonderry.

Dated: 4/30/18

Kevin H. Smith, Town Manager
Town of Londonderry
268B Mammoth Road
Londonderry, NH 03053
(603) 432-1100, ext. 120
townmanager@londonderrynh.org

cc: Town of Derry

Old Derry Road, Londonderry Franchise Wholesale Water Agreement
and
Merrimack Source Development Charge Agreement
Between
Town of Derry and Manchester Water Works

This AGREEMENT, made this 1ST day of JUNE, 2018, by and between the Town of Derry New Hampshire, a duly formed municipal entity established and existing under the laws of the State of New Hampshire (hereinafter "Derry") and the City of Manchester New Hampshire, a duly formed municipal entity established and existing under the laws of the State of New Hampshire, acting through Manchester Water Works (hereinafter "Manchester").

Whereas Derry owns and operates a public water system in the Town of Derry, including the section of Derry near the Londonderry town line on Old Manchester Road in Derry.

Whereas Derry has been asked to provide water service to phases of a development, known as Lorden Commons, located off Old Derry Road in the Town of Londonderry, NH.

Whereas the Lorden Commons development is subject to approval and conditions set forth by the Londonderry Planning Board.

Whereas the provision of water service by Derry to Lorden Commons and the expansion of Derry's franchise to include Old Derry Road ("Old Derry Road Franchise") is conditioned upon the prior approval by the New Hampshire Department of Environmental Services and the New Hampshire Public Utilities Commission of such service.

Whereas the Town of Londonderry supports the provision of public water service by Derry outside of its' municipal corporate boundary to the Lorden Commons development.

Whereas Derry desires to purchase up to 28,000 gallons per day ("GPD") of Merrimack Source Development Charge (hereinafter "MSDC") capacity credits (the projected peak two-month maximum average day flow hereinafter referred to as "Max ADF" for the Old Derry Road Franchise. from Manchester.

Whereas Derry has a contract to purchase MSDC Max ADF capacity credits from Manchester through a separate written agreement with Manchester entitled Derry Wholesale Water Agreement, ("2013 Agreement") dated March 26, 2013.

Whereas Derry desires to purchase the 28,000 GPD so as not to utilize the MSDC capacity credits it previously purchased under the 2013 Agreement.

Whereas Manchester is aware of the intent of Derry to provide water service outside of its municipal corporate boundary and agrees to be bound as indicated herein.

NOW THEREFORE, for good and valuable consideration, the sufficiency of which being acknowledged, all parties agree as follows:

1. Pursuant to Article 201.4 of the 2013 Agreement, Manchester approves of Derry's provision of water service outside of its municipal corporate bounds subject to the conditions specified herein.

2. Subject to applicable rates, terms of service (including Derry's *Water Main Specifications),* and state and federal laws, Derry agrees to assume ownership of the water distribution system in its Old Derry Road franchise area including the Lorden Commons development from the developer at the time Derry commences water service to the development.

3. Manchester agrees to increase the Max ADF noted in the 2013 Agreement (2.9 million gallons per day) by 28,000 GPD in increments commensurate with the payment schedule described in Paragraph 4.

4. Derry agrees to pay Manchester the MSDC fees associated with the increased Max ADF according to the following schedule:

a) 2018. Prior to the activation of the Derry-Londonderry Old Derry Road interconnection, Derry will pay Manchester $30,077.25 for 8,425 gallons of MSDC capacity at the current MSDC rate of $3.57/GPD.

b) Future MSDC payments. When usage exceeds an ADF in excess of the 8,425 GPD, Derry will pay Manchester for the additional MSDC capacity at the prevailing MSDC rate up to the maximum 28,000 GPD allowed.

c) Derry may at any time pay for the entire balance of capacity (28,000 GPD) at the prevailing MSDC per gallon rate.

5. Derry agrees to install a meter at the Old Derry Road Derry-Londonderry town line servicing the Old Derry Road Franchise area. Derry further agrees that;

a) Manchester will be allowed to install a meter reading device and allowed access to the meter to read the meter at a minimum monthly or as necessary from time to time to monitor usage.

b) Derry agrees to be responsible for and have the metering device maintained pursuant to the terms of Section 202.5 of the 2013 Agreement.

6. Should Derry require water from MWW in excess of the limits specified above, Derry shall pay the MSDC due immediately for such excess usage. Said capacity will be calculated by multiplying the excess usage less the previous limit as specified above, times the prevailing MSDC rate. MWW in its absolute discretion will determine whether Derry's excess usage is to be added to or used against the existing excess capacity indicated in Section 201.3 of the 2013 Agreement. If the excess usage is used against the existing excess capacity of the 2013 Agreement, Derry agrees to pay the difference in MSDC between the rate paid for the previously paid capacity and the prevailing MSDC rate times the excess usage. Nothing shall be construed as giving Derry a right to any water in excess of the limits specified in this agreement. MWW shall have sole and exclusive discretion as to the determination of the availability of water in excess of the amount stated in this agreement and the determination of the length of any prolonged emergency use in excess of the amounts herein.

7. Manchester is not obligated to refund any portion of the MSDC payments for any reason including lower than expected flows.

8. Derry reserves the right to utilize any unused MSDC capacity purchased under this agreement at its sole discretion within the Old Derry Road Franchise.

IN WITNESS WHEREOF, Manchester has caused Philip W. Croasdale, the duly authorized Director of the Manchester Water Works, to execute this Agreement on behalf of Manchester, and Derry has caused David Caron, its duly authorized Town Administrator, to execute this Agreement on behalf of Derry the day and year first above written.

Date: June 1, 2018

Witness

MANCHESTER WATER WORKS

By:
William R. Trombly, Jr.
President, Board of Water Commissioners
Manchester Water Works

Date: June 6, 2018

Witness

TOWN OF DERRY

By:
David Caron,
Town Administrator
Town of Derry

<END OF DOCUMENT>

DERRY WHOLESALE WATER AGREEMENT

Agreement made and entered into this 26th day of March, 2013 ("Agreement"), by and between the MANCHESTER WATER WORKS ("MWW"), a duly established municipal water works, and the Town of Derry ("Derry"), a municipal association duly established and existing under New Hampshire Revised Statutes Annotated ("RSA") Chapter 31.

Recitals.

1. MWW and Derry have existing waterworks systems;

2. Derry desires to purchase from MWW certain volumes of water on a wholesale basis;

3. MWW has supplied water to Derry under a Wholesale Water Contract dated May 27, 1998 amended June 29, 2005, and due to expire May 27, 2013, which contract each party wishes to terminate; and

4. MWW and Derry have determined to enter into this legally binding Agreement to establish the conditions for wholesale supply of water.

NOW THEREFORE, in consideration of the mutual promises and covenants herein set forth, and in order to secure the services described below, the parties hereto, each binding itself, its respective representatives, successors, and assigns, agree as follows:

ARTICLE 1. SHORT TITLE, DEFINITIONS AND INTERPRETATIONS

Section 101. Short Title. This Agreement may be referred to as the "Derry Wholesale Water Agreement".

Section 102. Meanings and Construction.

102.1. Definitions. For all purposes of this Agreement, including any amendments, the terms shall have the meanings set forth below.

102.1.1. "Anniversary Date" means the day and month on which the Agreement was signed in each year.

102.1.2. "Average Daily Flow" means the total volume of water measured in gallons or cubic feet at a metering station or stations during any two consecutive monthly billing periods divided by the actual number of days in the billing period.

102.1.3. "Maximum Daily Flow" means the highest total volume of water measured in gallons or cubic feet at all metering stations over any consecutive twenty-four (24) hour period.

102.1.4. "MSDC" means the Merrimack Source Development Charge which is a capital charge for contribution for the development of new water sources to maintain and extend service in circumstances of growing demand.

102.1.5. "NHPUC" means the Public Utilities Commission of the State of New Hampshire.

102.1.6. "Period" means any length of time.

102.1.7. "Person" means any individual, firm, company, association, society, corporation, political subdivision, fire district, or group.

102.1.8. "Tariff" means the Rules and Regulations of MWW as approved by the NHPUC.

102.1.9. "Waterworks" means facilities for collection, storage, supply, distribution, treatment, pumping, metering, or transmission of water.

102.1.10 "Water" means potable water.

Section 103. Construction. This Agreement, except where the context clearly indicates otherwise, shall be construed as follows:

103.1 Definitions include both singular and plural;

103.2 Pronouns include both singular and plural and include both genders.

Section 104. Governing Law. This Agreement shall be governed by the laws of the State of New Hampshire.

ARTICLE 2. TERMS OF SUPPLY

Section 201. Obligations of Derry. Derry agrees to the following obligations and limitations made in return for MWW's agreement to permit connection and supply of water into Derry's waterworks.

201.1. Limitation of Rights. Nothing in this Agreement is intended as a grant by MWW of any exclusive right or privilege. In any period in which Derry receives water pursuant to this Agreement, Derry shall comply in all respects with MWW's Tariff, except as otherwise specified herein.

201.2. Charges and Fees. Derry shall make timely payment of all charges described in this Agreement in accordance with Sections 305, 306 and 307 below.

201.3 Quantity of Water. Derry shall limits its usage of MWW's waterworks to the following:

Average Daily Flow	2.9 MGD
Maximum Daily Flow	4.0 MGD

MWW shall have no responsibility to supply water in excess of these stated amounts.

201.4 Right to Receive Water Not Assignable. Derry may not assign its contract right to the quantities of water specified in paragraph 201.3 above to another party without the express written consent of MWW. If Derry makes such an assignment of rights without consent, this Agreement shall be null and void. Derry may only use or distribute water purchased from MWW pursuant to this Agreement within the Derry jurisdictional limits as now or hereafter duly constituted, and may not directly or indirectly resell nor supply the water outside the limits of Derry without the express written consent of MWW. MWW acknowledges the existing water

supply agreements between Derry and Pennichuck Water Works dated November 1, 1983, December 21, 2000, August 5, 2008 and April 21, 2010 as amended.

201.5. Control of System Leaks and Wasteful Use. Derry shall operate and maintain its waterworks in accordance with customary engineering practices and with the guidelines set forth below.

201.5.1. Derry shall minimize any wasteful use of water within its service area.

201.5.2. In any period in which Derry receives water pursuant to this Agreement, Derry shall impose the same voluntary or mandatory restrictions on water use by its customers (e.g. sprinkling bans) as MWW shall impose on its customers within one week of such imposition by MWW. The imposition and removal of any restrictions shall be within the sole and exclusive discretion of MWW, but nothing in this Agreement shall prevent Derry from imposing its own restrictions which are more restrictive than those imposed by MWW.

201.6. Conformance of Law. Derry shall comply and shall ensure that its customers and any private water systems connected to Derry waterworks comply with all applicable laws of the United States and of the State of New Hampshire, including but not limited to all rules and regulations of the New Hampshire Department of Environmental Services, and all rules and regulations of the NHPUC,. If, after (60) days written notice from MWW of a known violation, Derry fails to comply or to make prompt, substantial or reasonable efforts to comply within such time with this Section 201 MWW may discontinue all services to Derry until such time as Derry demonstrates its compliance.

201.7. Quality of Water. MWW shall make all reasonable effort and shall maintain and operate the supply system so as to supply water meeting the drinking water quality criteria established from time to time by the United States Environmental Protection Agency and the State of New Hampshire, Department of Environmental Services.

Section 202. Obligations of MWW. MWW agrees to the following obligations and limitations in return for the timely payment by Derry of the charges specified in this Agreement.

202.1. Metering Point. MWW shall supply water to Derry on New Hampshire Route 28 at the Londonderry-Derry town line subject to the limitations contained herein. Additional metering points may be added by mutual agreement and subject to the provisions of this Agreement.

202.2 Measurement of Flows. The measurement of water delivered to Derry shall be undertaken by MWW. Such flow measurements shall be made by one or more metering devices placed at locations selected by MWW.

202.3. Construction of Connection. Any and all connections between MWW's waterworks and Derry's waterworks, including modifications or upgrades which may be necessary to effectuate the Derry Wholesale Water Construction Contract and this Agreement, including but not limited to meter vaults and metering devices, shall be designed by MWW, or after notification to Derry constructed by any subcontractors as MWW shall choose to employ subject to the requirements of MWW's municipal procurement code, such decision to be made by MWW. The cost of all construction undertaken to construct, modify or upgrade the connection of MWW's waterworks to Derry's waterworks, including the purchase of metering devices and appurtenances, shall be paid by Derry. The necessity of and selection of all materials and equipment and the location thereof shall be within the sole discretion of MWW.

202.4. Ownership of Connection Facilities. MWW shall own all pipes laid from its presently existing waterworks to within ten (10) feet of the downstream outside wall of the metering vault and it shall own the metering device. All other waterworks, piping, valves and vaults constructed to make the connection necessary to effectuate this Agreement shall be the property of Derry and shall be maintained by Derry in a manner satisfactory to MWW.

202.5. Maintenance of Metering Devices.

202.5.1. Any and all metering devices installed pursuant to this Agreement shall be inspected and calibrated in the manner provided by regulations of the NHPUC. A copy of any inspection and calibration reports shall be filed at MWW's offices and shall be available for examination by Derry at the offices of MWW during normal business hours.

202.5.2. Derry may request MWW to test and certify as to the accuracy of any metering device at any time. If the metering device reads within specifications accepted by the NHPUC, the cost of such tests shall be borne by Derry. If the average error over different test rates is greater than that allowed by the NHPUC, the cost of the tests shall be paid by MWW.

202.5.3. In the case of missing or inaccurate flow records, due to faulty metering device operation or other circumstances, an estimate of flow shall be made by MWW based on past records for a comparable period. The estimates shall be used by MWW to calculate the payments due from Derry. Such payments shall be subject to the provisions of Sections 303, 304, 305, 306 and 307 hereof below.

202.6 Record, Accounts and Audits. MWW shall maintain records of all financial transactions with Derry, and these records shall be available for inspection by Derry or any customer of Derry at the office of MWW during normal business hours. Said records shall be available for inspection by other parties only upon presentation to MWW of a written authorization from Derry. The financial statements of MWW shall be available for inspection by Derry within a reasonable time after it has been accepted by the MWW's Board of Water Commissioners.

Section 203. Responsibility for System Operation and Maintenance. MWW assumes no responsibility for operation and maintenance of waterworks constructed and owned by Derry including those described in Sections 202.3 and 202.4 hereof. MWW's sole duty hereunder

shall be to supply water up to the maximum amounts specified in Section 201.3 at the locations specified in Section 202.1 subject to the terms and conditions contained herein.

Section 204. Limitation of Liability.

204.1 Liability for Non-Negligent Acts. If MWW shall be unable to supply some or all of the water demanded by Derry under this Agreement for any reason other than MWW's own negligence, MWW shall not be liable to Derry by any damages arising out of such failure to supply water. Derry hereby waives any rights it might have to any damages against MWW, however Derry reserves the right to seek damages against any party, other than MWW, for injuries suffered by Derry, including joining with MWW in any action it might bring against other parties.

204.2 Impairment of Supply. Existing customers of MWW have first right to any water supplied by MWW, and this Agreement shall not impair the supply of water to them. If MWW is unable to supply both its other customers and Derry with water for any reason other than the negligence of MWW, Derry cannot compel MWW to supply it with water, nor shall it be entitled to any damages from MWW as a result of MWW's failure to supply it with water. MWW shall not make such demand upon Derry until it has made reasonable attempts to seek reductions in demand from its existing customers unless the cause of such impairment is isolated to Derry's supply from MWW. In addition, MWW cannot be compelled to furnish Derry with water if MWW's waterworks or the source upon which MWW is dependent for its supply of water is impaired, and Derry shall be entitled to no damages from MWW as a result of MWW's failure to supply it with water. MWW shall be the sole judge as to whether the water available to it is adequate to supply both Derry and MWW's other customers and whether MWW's water-works or source of supply is impaired. MWW's decision shall be final and binding on Derry. Notwithstanding the foregoing, if MWW reduces the amount of water which it supplies to Derry pursuant to this Section 204.2, such reduction shall be proportional to reductions made to each

other wholesale customer of MWW, based on the average amount of water received by each wholesale customer during the ninety (90) days preceding such reduction from MWW, however Derry reserves the right to seek damages from parties other than MWW for injuries suffered from the impairment of supply to Derry.

204.3 Liability for Accident. Neither MWW nor Derry shall be liable in damages or otherwise for failure to perform any obligation under this Agreement, which failure is occasioned by or in consequence of any act of God, act of public enemy, wars, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes, drought, fires, storms, floods, winter freeze, washouts, vandalism, arrests and restraints of rulers and peoples, civil disturbances, labor strikes, power failures, explosions, breakage or accident to machinery or lines of pipe, failure or want of water supply, the binding order of any court or governmental authority which has been resisted in good faith by all reasonable legal means, and any other cause, whether of the kind herein enumerated or otherwise, not within the control of such party and which act, omission or circumstances such party is unable to prevent or overcome by the exercise of reasonable care.

204.4 Liability Resulting from Negligence. Neither Derry nor MWW shall be relieved of liability for loss resulting from its negligence, intentional actions, or its failure to use due diligence to remedy the situation and remove the cause in an adequate manner and with all reasonable dispatch, nor shall such causes or contingencies affecting performance relieve Derry from its obligations to make payments of amounts then due with respect to water theretofore supplied.

204.5 Derry's Liability for Capital Expenditures and for Water Supplied. Nothing herein shall be construed as relieving Derry under any circumstances from its duty to pay for capital expenditures made by MWW pursuant to Section 202.3 hereof or for water supplied pursuant to this Agreement.

Section 205. Indemnification and Insurance. Derry shall exonerate, indemnify and save harmless MWW from all claims and demands for injuries to persons, loss of life, damage to property or other losses arising out of or connected with the performance of this Agreement in Derry, New Hampshire, which MWW is legally bound to pay excepting, however, such claims and demands as shall result from negligence on the part of MWW. The phrase "claims and demands" shall include, but shall not be limited to, damages, judgments, settlements, costs and defense of legal actions, claims or proceedings and appeal therefrom. Derry shall maintain liability insurance in the amount of $1,000,000 bodily injury and property damage (each occurrence), together with a $1,000,000 umbrella policy. Derry agrees to furnish certificate(s) of the above-mentioned insurance to the City of Manchester within fourteen (14) days from the date of this agreement and, with respect to the renewals of the current insurance policies, at least thirty (30) days in advance of each renewal date. Such certificates shall name the City of Manchester and the Manchester Water Works as an additional insured (except Workers Compensation) and shall state that in the event of cancellation or material change, written notice shall be given to the City of Manchester, Manchester Water Works, 281 Lincoln Street, Manchester, New Hampshire, 03103, at least thirty (30) days in advance of such cancellation or change. For its part, MWW agrees to and does exonerate, indemnify and save harmless Derry from all claims or demands for injuries to persons, loss of life, damage to property or other losses arising out of or connected with the performance of this Agreement to the extent such claims and demands resulted from the negligence or fault of MWW. MWW shall provide Derry with a Certificate of Coverage as evidence that MWW and the City of Manchester meet the statutory requirement for municipalities maintaining a Self-Insured Program.

Section 206. Notices. All notices and other writings sent pursuant to this Agreement shall be addressed to the Director of MWW at:

Manchester Water Works
Attention: Director
281 Lincoln Street
Manchester, NH 03103

and to Derry at:

Derry Department of Public Works
Attention: Director
14 Manning Street
Derry, NH 03038

or at such other address as is indicated by written notice to the other party.

ARTICLE 3. PAYMENTS FOR SERVICES

Section 301. Basis for Payments. Derry shall pay MWW for each hundred cubic feet of water supplied to Derry at the locations stated in Section 202.1 hereof at the rate specified in Section 302 and 304 and subject to the Merrimack Source Development Charge (MSDC) specified in Section 303 hereof. Payment shall be made in accordance with the provisions of Sections 305, 306 and 307 hereof. The volume of water supplied to Derry shall be determined by means of one or more metering devices which shall meet all the requirements of Federal and State law, and which shall be owned, installed and maintained by MWW at one or more locations selected by it in its discretion.

Section 302. Rates.

302.1 Rate Per 100 Cubic Feet. The rate charged for water supplied to Derry shall be $0.988 per hundred cubic feet ($1,320.86 per million gallons).

302.2 Service Charge. The rate shall be in accordance with the MWW rate schedule as approved by the Board of Water Commissioners and based upon the size of the meter or meters required by Derry.

302.3 Adjustments in Rate. The rate established in Section 302.1 and 302.2 shall be adjusted each time a new permanent rate for MWW's customers living outside the City of Manchester is approved. The rate charged under this Agreement shall be increased by the same percentage as the metered water rates to customers residing outside the City of Manchester are increased and shall be the same as all other wholesale customers seeking the same level of service. Such increases in the rate charged under the Agreement shall be effective as of the same date on which the increase in rates charged to customers residing outside the City of Manchester is effective.

Section 303. MSDC. Derry may purchase additional MSDC "Capacity" above the limits as specified in section 201.3 Quantity of Water. Said future purchase of "Capacity" will be calculated by multiplying, the requested "Capacity" less the previous limit as specified in section 201.3, times the MSDC rate in effect at the time of the request. **D**Section 304. Emergency Use. Should Derry require water from MWW in excess of the limits specified in Section 201.3, and MWW in its absolute discretion agrees to supply such water to Derry, Derry shall pay two (2) times the rate specified in Section 302.1 for each gallon in excess of the Average Daily Flow specified in Section 201.3 which Derry consumes. Nothing in this section, however, shall be construed as giving Derry a right to any water in excess of the limits specified in Section 201.3. MWW shall have sole and exclusive discretion as to the determination of the availability of water in excess of the amount stated in Section 201.3, and the determination of the length of any prolonged emergency use in excess of the amounts stated in Section 201.3.

Section 305. Billing Cycle. MWW shall bill Derry on a monthly basis in arrears for amounts due under Section 302. Payment on bills shall be due upon presentation.

Section 306. Delinquent Bills. Bills remaining unpaid for thirty (30) days or longer from the billing date shall be subject to one and one-half (1 1/2) percent interest per month on the unpaid balance from the original due date. If bills or payments to be made pursuant to this

agreement remain unpaid for thirty (30) days or longer after the due date, MWW may issue a notice of intent to discontinue service to Derry and to the NHPUC. If the bill remains unpaid for five (5) days or longer after the date of the notice of intent to discontinue service described above, all supply of water by MWW to Derry shall cease and said supply shall not be renewed until all outstanding bills are paid in full at the office of MWW. In lieu of such discontinuance, MWW may require Derry to post a deposit and make payments more frequently than at monthly intervals.

Section 307. Charge for Resumption of Service. If MWW ceases to supply water to Derry pursuant to Section 201.6 or Section 306 above, MWW may impose a reasonable charge for resumption of said supply of water equal to 5% of the unpaid balance.

Section 308. Expansion and/or Upgrading of MWW. In all cases, MWW shall be the sole judge as to all improvements, additions or expansions to its waterworks, provided that the undertaking of such improvements, additions or expansions does not impair the ability of MWW to provide water to Derry pursuant to this Agreement.

Section 309. Capital Expenditures. Derry shall pay for any capital expenditures made by MWW which MWW reasonably believes are necessary or advisable in order to provide or continue services to Derry under this Agreement as opposed to capital improvement benefiting customers other than Derry, even though such expenditures are made outside the boundaries of Derry; provided, however, that MWW shall give written notice to Derry of any such capital expenditure at least six months prior to Derry's budget approval date. Said notice shall include a brief description of the purpose of the capital expenditure, its total costs and Derry's pro rata share of the total costs. Derry shall have sixty (60) days from the date of said notice in which to commit itself to pay or to refuse to pay its pro rata share of the capital expenditure as stated in said notice. A refusal by Derry to pay its pro rata share of the capital expenditure as stated in said notice must be made in writing in accordance with Section 206 hereof. Failure by Derry to

notify MWW in writing within sixty (60) days after the date of said notice that Derry refuses to pay its pro rata share of the capital expenditure as stated in said notice shall constitute a commitment by Derry to pay said pro rata share. If Derry has failed to properly notify MWW and refuses to pay its pro rata share of the capital expenditure, this Agreement shall terminate at the end of the quarter in which such refusal shall be made in accordance with Section 407 hereof.

ARTICLE 4. ASSIGNMENT, AMENDMENT AND TERMINATION

Section 401. Amendment. The provisions, terms and conditions of this Agreement may be modified only by written amendments, executed with the same formality as this Agreement.

Section 402. Assignment. No assignment by Derry of its rights or duties under this Agreement shall be binding on MWW, unless MWW consents to such an assignment in writing.

Section 403. Waiver. Failure of either party hereto to exercise any right hereunder shall not be deemed a waiver of such party to exercise at some future time said rights or another right it may have hereunder.

Section 404. Date Effective, Supersession and Duration. This Agreement shall be effective as of the date of execution first written above. This Agreement shall supersede and replace all prior Agreements between the parties with respect to the subject matter hereto, including the Derry Wholesale Water Agreement of May 27, 1998, which shall be considered terminated and have no further force or effect from the date of execution of this Agreement. This Agreement shall be in full force and effect and shall be exclusive and binding on the parties for twenty-five (25) years from the date of execution first written above, as long as Derry is in compliance with its obligations hereunder or has taken the necessary measures to remedy any items in default after notice from MWW.

Section 405. Termination. Either party may terminate this Agreement prior to the time specified in Section 404 by giving written notice to the other party at least twelve (12) months prior to the Anniversary Date. Termination of this Agreement by Derry under this Section 405

shall not relieve Derry of its obligation to pay MWW for any services rendered, capital expenditures made pursuant to this Agreement prior to the date of termination or the MSDC charge specified in Section 303 for the year in which the agreement is terminated. In the event that MWW terminates this agreement pursuant to this section, Derry shall be entitled to reimbursement of its pro-rata share of capital expenditures less any depreciation using the straight line method of depreciation (or a mutually agreed upon method) made by Derry for MWW's Water works.

Section 406. Breach. Either party may terminate this Agreement prior to the time specified in Section 404 if the other party has violated any of the covenants undertaken herein, or any of the duties imposed upon it by this Agreement; provided that the party seeking to terminate for such cause shall give the offending party sixty (60) days written notice, specifying the particulars of the violation claimed; and if at the end of such time the party so notified has not removed the cause of complaint, or remedied or used prompt, reasonable and substantial efforts to come into compliance with its obligations during such time the purported violation, then the termination of this Agreement shall be deemed complete for the year in which the agreement is terminated. In the event that MWW terminates this agreement pursuant to this section, Derry shall be entitled to reimbursement of its pro-rata share of capital expenditures less any depreciation using the straight line method of depreciation (or a mutually agreed upon method) made by Derry for MWW's Waterworks.

Section 407. Termination Pursuant to Section 309. If this Agreement is terminated pursuant to Section 309 hereof by Derry's refusal to pay its pro rata share of a capital expenditure, Derry shall not be relieved of its obligation to pay MWW for any services rendered or capital expenditures made pursuant to this Agreement prior to its termination, other than those capital expenditures for which Derry refused to pay pursuant to Section 309.

ARTICLE 5. MISCELLANEOUS PROVISIONS

Section 501. Status of Former Agreements. This Agreement supersedes all former or currently existing contracts for water services between MWW and Derry and constitutes the entire contract between MWW and Derry.

Section 502. Severability. If any clause or provision of this Agreement or application thereof shall be held unlawful or invalid, no other clause or provision or its application shall be affected, and this Agreement shall be construed and enforced as if such unlawful or invalid clause or provision had not been contained herein.

Section 503. Exercise of Judgment. Where MWW is directly or implicitly authorized to exercise its judgment under this Agreement, its judgment shall be valid unless clearly unreasonable.

Section 504. Status of Legal Representatives, Successors, and Assigns. The benefits and burdens of this Agreement shall inure to and be binding upon the respective legal successors to the parties hereto.

Section 505. Third Parties. MWW assumes no responsibility for any facility not included in its waterworks, and in the event that a facility of a third party shall be involved in the furnishing of service to, or the receipt of service from Derry, Derry shall look solely to such third party for any such services. Derry assumes sole responsibility for compliance with this Agreement by all third party users or customers of its waterworks. MWW shall deal directly with Derry which shall, in turn, make certain that all users and customers comply with this Agreement and with all applicable rules and regulations.

Section 506. Disputes, Arbitration. Disputes, including but not limited to those related to supply of water, connection facilities, operation and maintenance, impairment of supply, and charges and payment, shall be submitted to binding arbitration under the statutory provisions of New Hampshire Revised Statutes Annotated Chapter 542. MWW and Derry shall submit disputes to arbitration through the American Arbitration Association or other mutually acceptable

arbitration service. In the event that MWW and Derry can not agree on an arbitration service other than the American Arbitration Association, then arbitration shall proceed through the American Arbitration Association.

IN WITNESS WHEREOF, this Agreement is executed in multiple counterparts each of which shall be deemed an original this 26th day of March, 2013.

In the Presence of:

Witness

Witness

Witness

Witness

Witness

Witness

Witness

TOWN OF DERRY
By its Councilors

MANCHESTER WATER WORKS
By its Director

Witness