

85 Portsmouth Avenue, PO Box 219, Stratham, NH 03885 603,772,4746 - JonesandBeach.com

January 21, 2020

Portsmouth Planning Board Attn: Dexter Legg 1 Junkins Avenue, Suite 3rd Floor Portsmouth, NH 03801

RE: Response Letter 2 – TAC Comments
3110 Lafayette Road & 65 Ocean Road, Portsmouth, NH
Tax Map 292, Lots 151-1 & 151-2
JBE Project No. 18165

Dear Mr. Legg,

We are in receipt of comments from Jillian Harris dated January 7, 2020. Review comments are listed below with our responses in bold.

1. The proposed driveway will not be allowed by NHDOT. How will you be providing access to the site?

RESPONSE: We are in discussions with NHDOT about upgrading the current access on Ocean Road. We are ultimately removing one curb cut on Lafayette Rad and this parcel & house is the original so we feel strongly that we are allowed one driveway.

- 2. Truck turning plan based on should be Portsmouth Fire Department's Tower 5. RESPONSE: The attached truck turning plan was designed using the Portsmouth Fire Department's Tower 5 truck.
- 3. Support brackets should be considered for the doorway canopies. RESPONSE: Support brackets have been added to the doorway canopies.
- 4. The lot line adjustment and consolidation plan has already been approved by Planning Board.

RESPONSE: No response necessary.

5. It would be preferable to the City that the sewerage leaving the site get routed to Ocean Road. If sewer is routed to Lafayette Road as shown, it needs to flow by gravity all the way to Rye only to get pumped back to the manhole at Ocean and Lafayette.

RESPONSE: The sewer was analyzed to flow gravity to Ocean but unfortunately does have adequate cover. We have included exhibits for your review and have kept the design the same as previously submitted.

6. We are still not convinced that the stormwater management area will not increase the groundwater elevation on the adjacent property causing them permanent impact. While the adjacent monument "store" has no basement, the home 50' away from the system does. A groundwater mounding analysis must be performed and reviewed by third party. Third party should also review the stormwater design for the parcel.

RESPONSE: A groundwater mounding analysis has been performed and is included with this submission.

7. Sewer laterals entering the common private sewer need to be spread out a bit so that they are constructible.

RESPONSE: Sewer laterals entering the common private sewer have been spread out so they are in separate trenches instead of one trench.

Included with this response letter are the following:

- 1. Three (3) Revised Full Size Plan Set Folded.
- 2. Seven (7) Revised Half Size Plan Set Folded.
- 3. Truck Turning Plan.
- 4. Groundwater Mounding Analysis.
- 5. Sewer Exhibits.

Thank you very much for your time.

Very truly yours,

JONES & BEACH ENGINEERS, INC.

The state of the s

Joseph Coronati Vide President

cd: Tuck Realty Corp., Applicant (letter and plans via email)

Tim Phoenix (letter and plans via email)

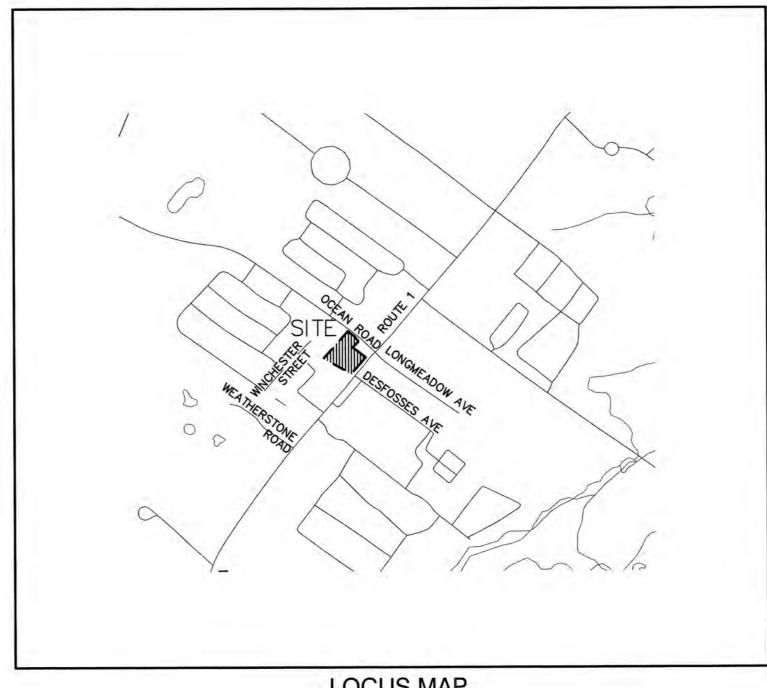
Mike Keane (letter and plans via email)

GENERAL LEGEND

DESCRIPTION SETBACK LINES FRESHWATER WETLANDS LINE TIDAL WETLANDS LINE STREAM CHANNEL STONEWALL BARBED WIRE FENCE AQUIFER PROTECTION LINE EASEMENT MAJOR CONTOUR MINOR CONTOUR EDGE OF PAVEMENT VERTICAL GRANITE CURB SLOPE GRANITE CURB CAPE COD BERM POURED CONCRETE CURB SILT FENCE DRAINAGE LINE SEWER LINE SEWER FORCE MAIN GAS LINE WATER SERVICE OVERHEAD ELECTRIC UNDERGROUND ELECTRIC GUARDRAIL UNDERDRAIN FIRE PROTECTION LINE THRUST BLOCK IRON PIPE/IRON ROD DRILL HOLE IRON ROD/DRILL HOLE STONE/GRANITE BOUND 100x0 x 100.00 SPOT GRADE × 100.00 PAVEMENT SPOT GRADE CURB SPOT GRADE BENCHMARK (TBM) DOUBLE POST SIGN SINGLE POST SIGN TEST PIT FAILED TEST PIT MONITORING WELL PERC TEST PHOTO LOCATION TREES AND BUSHES UTILITY POLE LIGHT POLES DRAIN MANHOLE SEWER MANHOLE HYDRANT WATER SHUT OFF REDUCER SINGLE GRATE CATCH BASIN DOUBLE GRATE CATCH BASIN TRANSFORMER CULVERT W/WINGWALLS **====**)-D-CULVERT W/FLARED END SECTION D-D-⊏=== CULVERT W/STRAIGHT HEADWALL H-D-==== STONE CHECK DAM DRAINAGE FLOW DIRECTION 4K SEPTIC AREA WETLAND IMPACT (XXXXX) VEGETATED FILTER STRIP RIPRAP OPEN WATER जीह जीह जीह FRESHWATER WETLANDS •••• TIDAL WETLANDS STABILIZED CONSTRUCTION **ENTRANCE** CONCRETE GRAVEL

CONDOMINIUM SITE PLAN OCEAN ROAD CONDOS

TAX MAP 292, LOTS 151-1, 151-2 & 153 65 OCEAN ROAD & 3110 LAFAYETTE ROAD PORTSMOUTH, NH 03801



LOCUS MAP SCALE 1" = 1000'

CIVIL ENGINEER / SURVEYOR

JONES & BEACH ENGINEERS, INC. 85 PORTSMOUTH AVENUE PO BOX 219 STRATHAM, NH 03885 (603) 772-4746 CONTACT: JOSEPH CORONATI EMAIL: JCORONATI@JONESANDBEACH.COM

TRAFFIC ENGINEER STEPHEN G. PERNAW AND COMPANY, INC. P.O. BOX 1721 CONCORD, NH 03302 CONTACT: STEPHEN G. PERNAW

LANDSCAPE DESIGNER

LM LAND DESIGN, LLC 11 SOUTH ROAD BRENTWOOD, NH 03833 603-770-7728 CONTACT: LISE McNAUGHTON

ARCHITECT:

PO Box 219

Stratham, NH 03885

MICHAEL J. KEANE ARCHITECTS, PLLC 101 KENT PLACE NEWMARKET, NH 03857 (603) 292-1400 EXT. 102 CONTACT: MICHAEL KEANE

ELECTRIC

EVERSOURCE ENERGY 74 OLD DOVER ROAD ROCHESTER, NH 03867 (603) 555-5334 CONTACT: NICHOLAI KOSKO

TELEPHONE

FAIRPOINT COMMUNICATIONS 1575 GREENLAND ROAD GREENLAND, NH 03840 (603) 427-5525 CONTACT: JOE CONSIDINE

FAX: 603-772-0227

E-MAIL: JBE@JONESANDBEACH.COM

CABLE TV

COMCAST COMMUNICATION CORPORATION 334-B CALEF HIGHWAY EPPING, NH 03042-2325 (603) 679-5695

SHEET INDEX

COVER SHEET

EXISTING CONDITIONS PLAN

DEMOLITION PLAN

SITE PLAN

GRADING AND DRAINAGE PLAN

UTILITY PLAN

PLAN AND ROAD PROFILE

PLAN AND SEWER PROFILE

LANDSCAPE PLAN

LIGHTING PLAN

DETAIL SHEETS

EROSION AND SEDIMENT CONTROL DETAILS

APPLICANT TUCK REALTY CORP. 149 EPPING ROAD, SUITE 2A EXETER, NH 03833

> TOTAL LOT AREA 80,266 SQ. FT. 1.84 ACRES

APPROVED - PORTSMOUTH, NH

PLANNING BOARD

DATE:

WEEKS REALTY TRUST, WEEKS KALEY E. TRUSTEE

Design: JAC Draft: LAZ Checked: JAC | Scale: AS NOTED | Project No.: 18165 Drawing Name: 18165-PLAN.dwg

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE.



SNOW STORAGE

RETAINING WALL

2	01/22/20	REVISED PER TOWN COMMENTS	LAZ
1	12/20/19	REVISED PER TOWN COMMENTS	LAZ
0	10/29/19	ISSUED FOR REVIEW	LAZ
REV.	DATE	REVISION	BY

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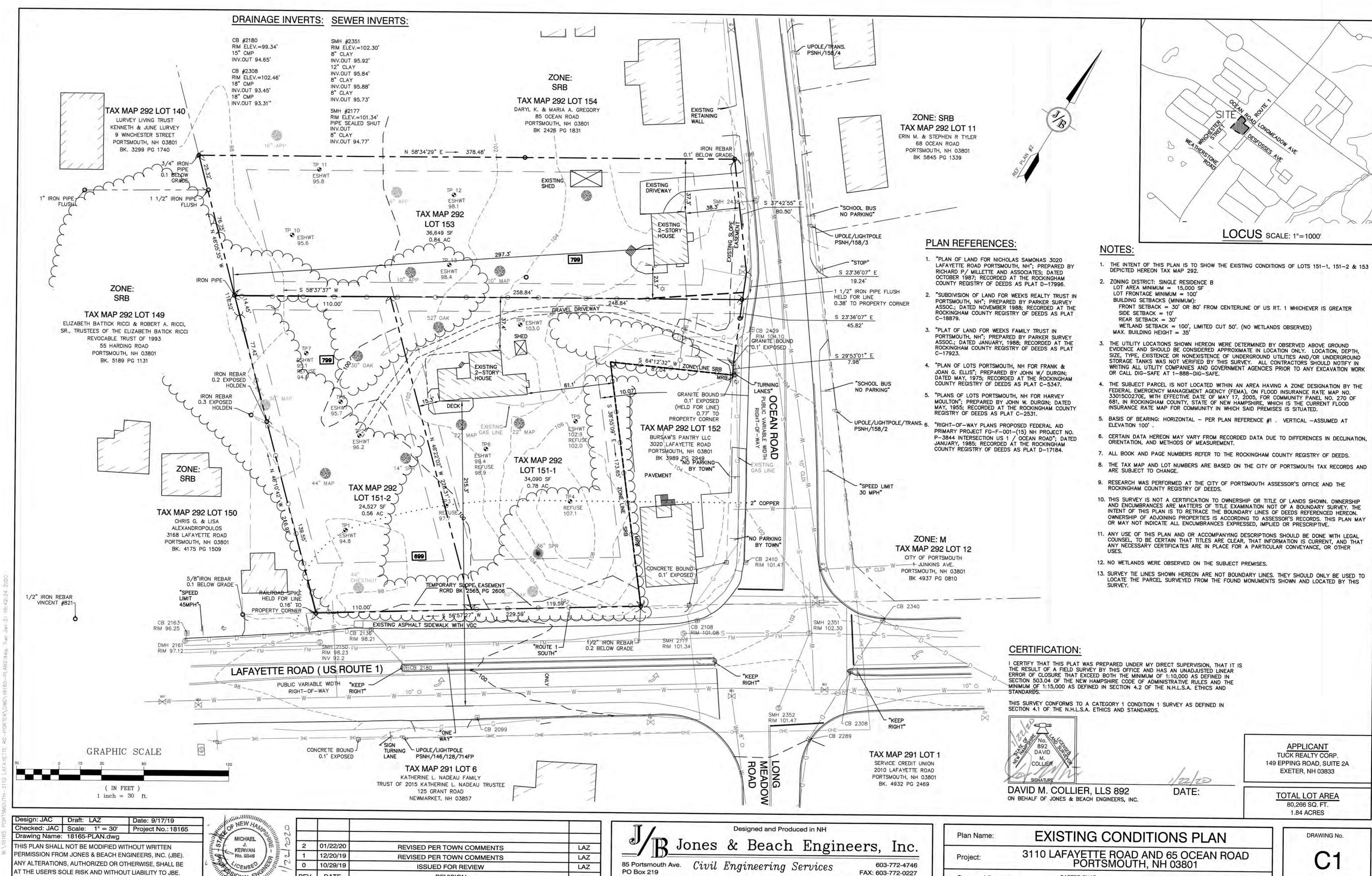
COVER SHEET

3110 LAFAYETTE ROAD AND 65 OCEAN ROAD Project: PORTSMOUTH, NH 03801

Owner of Record:
65 OCEAN ROAD SUITE 21 PORTSMOUTH, NH 03801 PO BOX 100, HAMPTON FALLS, NH 03844

SHEET 1 OF 15 JBE PROJECT NO. 18165

DRAWING No.



DATE

REVISION

BY

Stratham, NH 03885

REV.

SHEET 2 OF 15 JBE PROJECT NO. 18165

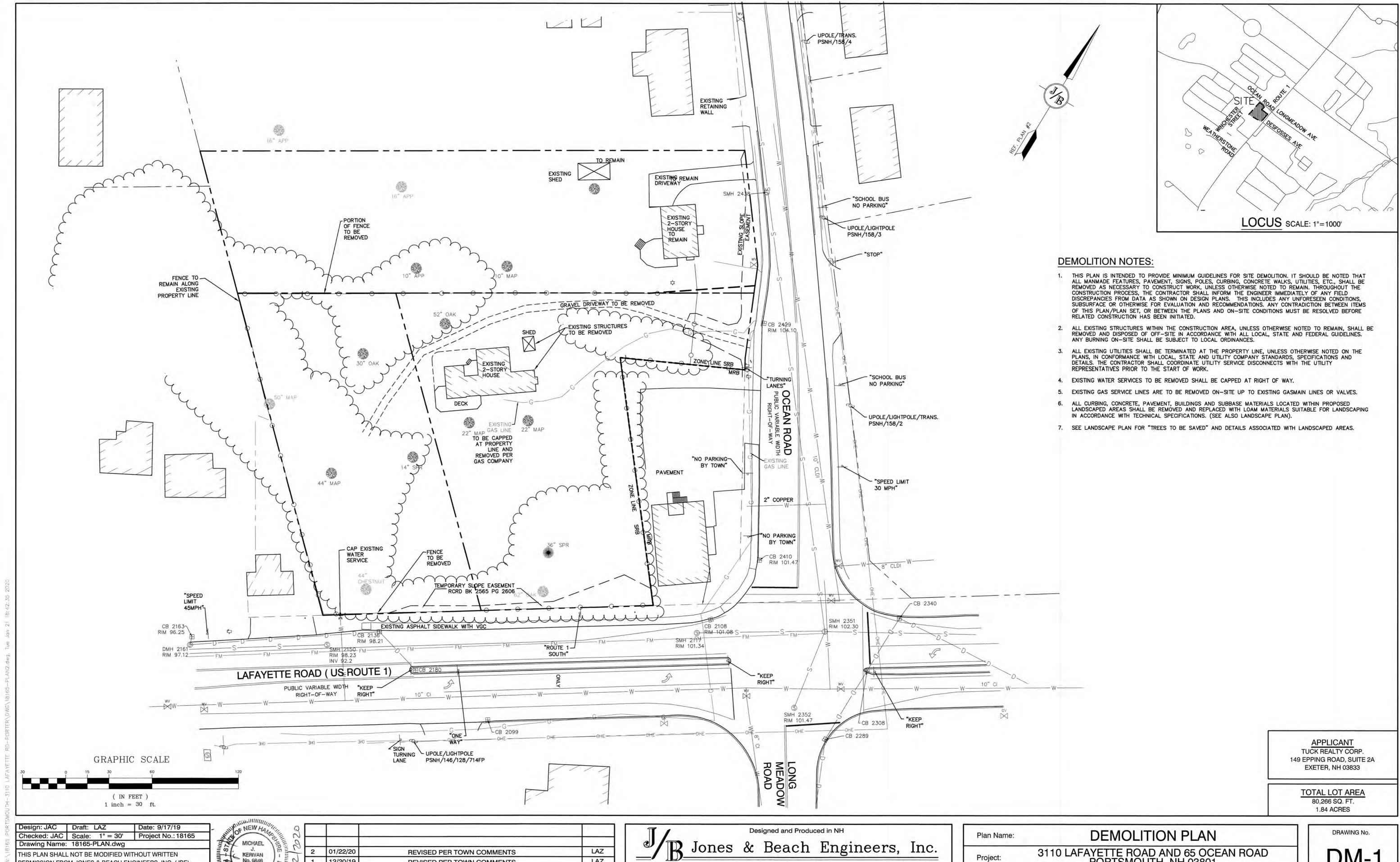
WEEKS REALTY TRUST, WEEKS KALEY E. TRUSTEE

CARTER CHAD

65 OCEAN ROAD SUITE 21 PORTSMOUTH, NH 03801 PO BOX 100, HAMPTON FALLS, NH 03844

Owner of Record:

E-MAIL: JBE@JONESANDBEACH.COM



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No. 9848

LAZ 12/20/19 REVISED PER TOWN COMMENTS LAZ 10/29/19 ISSUED FOR REVIEW DATE REVISION BY REV.

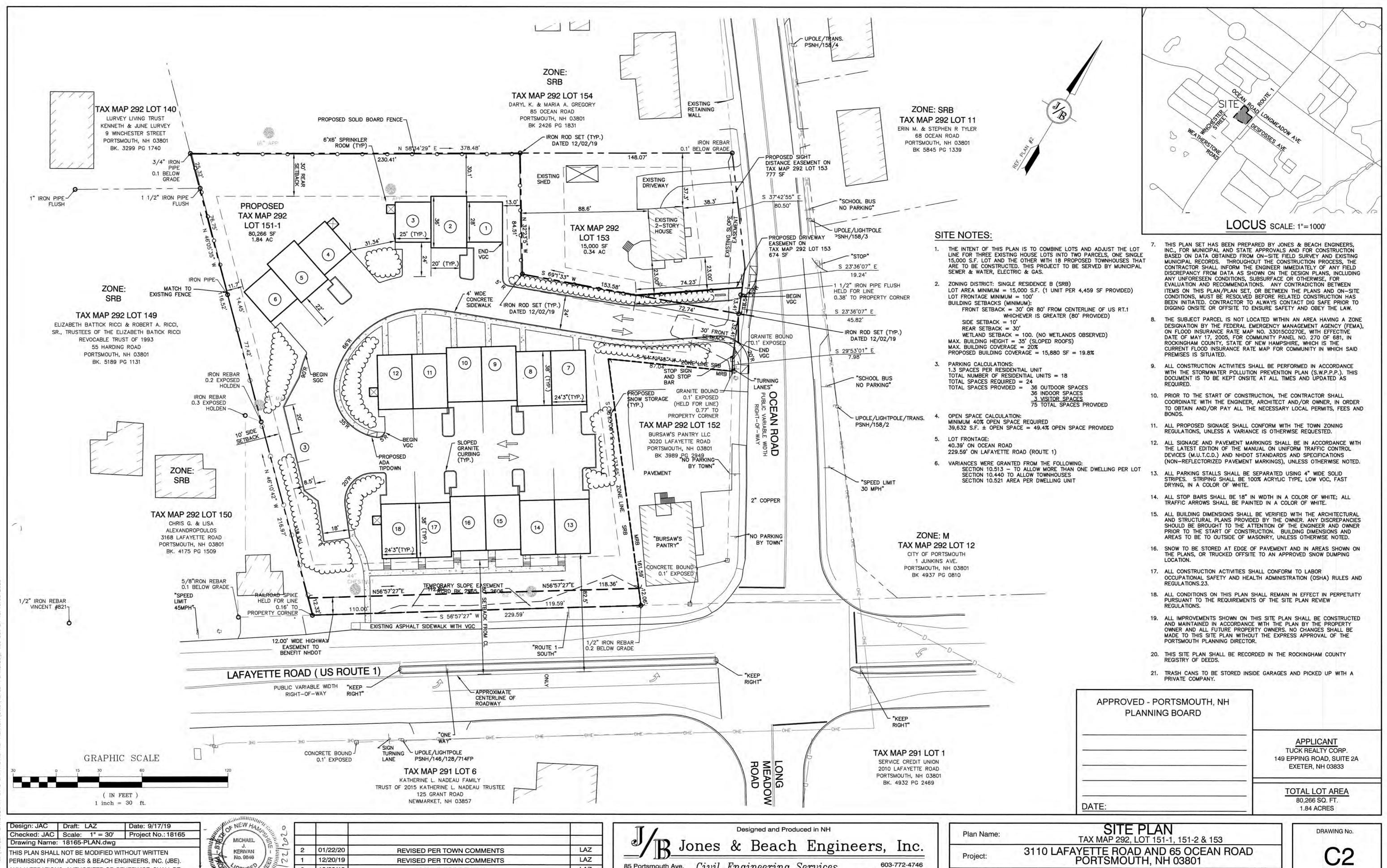
Civil Engineering Services PO Box 219 Stratham, NH 03885

603-772-4746 FAX: 603-772-0227 Owner of Record:
65 OCEAN ROAD SUITE 21 PORTSMOUTH, NH 03801 PO BOX 100, HAMPTON FALLS, NH 03844 E-MAIL: JBE@JONESANDBEACH.COM

3110 LAFAYETTE ROAD AND 65 OCEAN ROAD PORTSMOUTH, NH 03801

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SHEET 3 OF 15 JBE PROJECT NO. 18165



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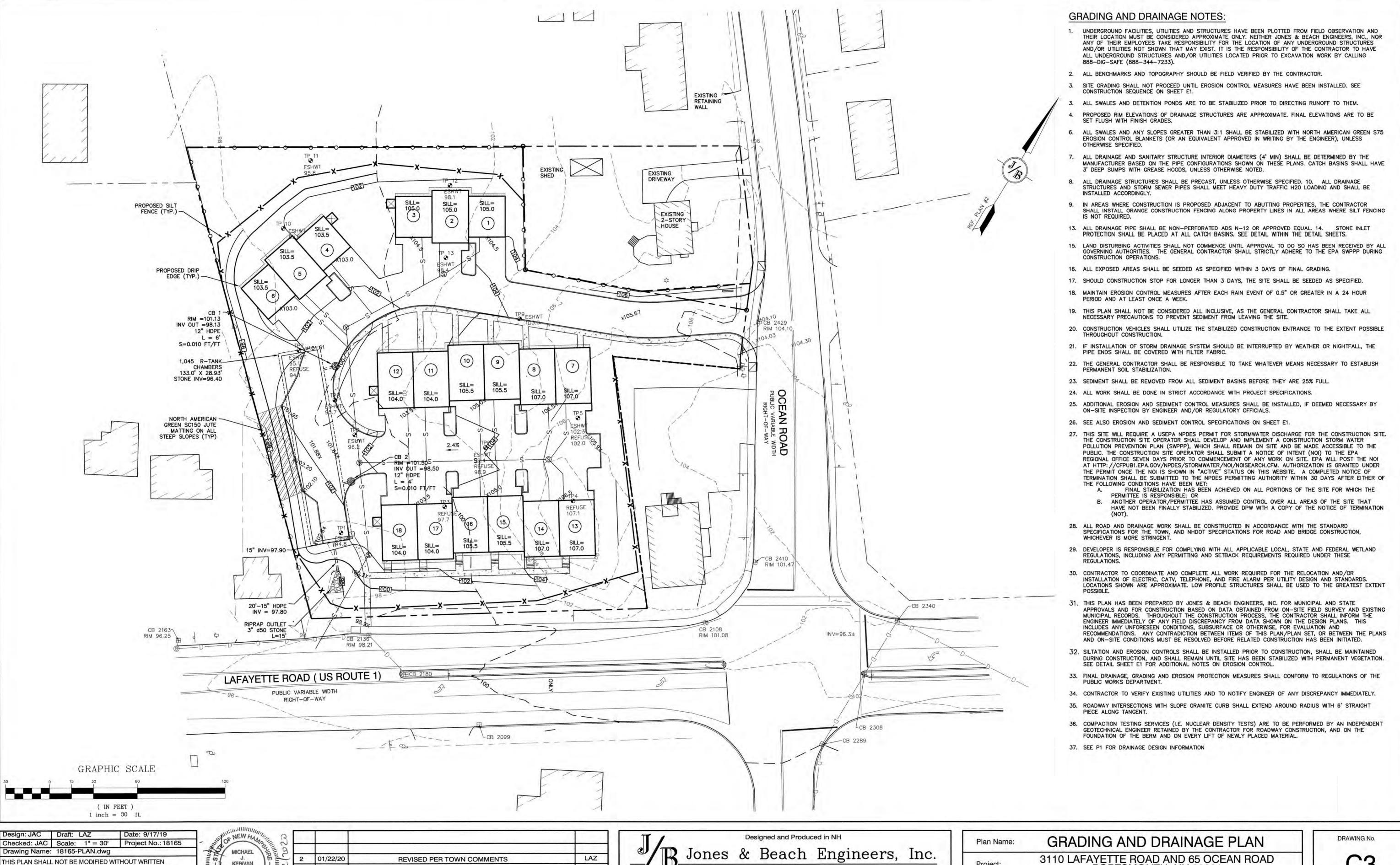
Civil Engineering Services 85 Portsmouth Ave. PO Box 219 Stratham, NH 03885 E-MAIL: JBE@JONESANDBEACH.COM

FAX: 603-772-0227

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SHEET 4 OF 15

JBE PROJECT NO. 18165



3110 LAFAYETTE ROAD AND 65 OCEAN ROAD PORTSMOUTH, NH 03801 KERIVAN Project: 12/20/19 LAZ REVISED PER TOWN COMMENTS No. 9846 85 Portsmouth Ave. Civil Engineering Services 603-772-4746 LAZ 0 10/29/19 ISSUED FOR REVIEW FAX: 603-772-0227 PO Box 219 WEEKS REALTY TRUST, WEEKS KALEY E. TRUSTEE CARTER CHAD Owner of Record:
65 OCEAN ROAD SUITE 21 PORTSMOUTH, NH 03801 PO BOX 100, HAMPTON FALLS, NH 03844 E-MAIL: JBE@JONESANDBEACH.COM REVISION BY REV. DATE Stratham, NH 03885

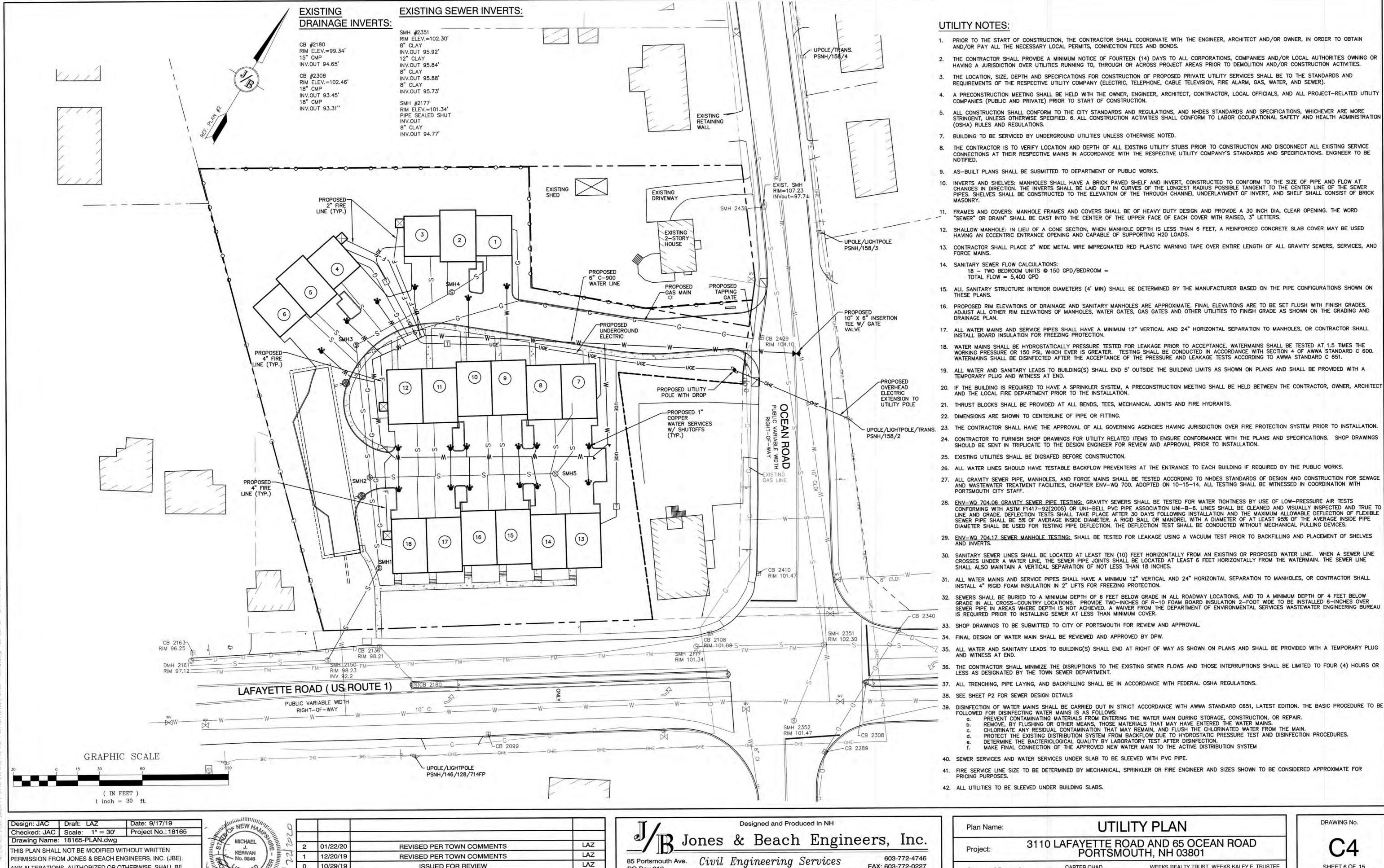
SHEET 5 OF 15

JBE PROJECT NO. 18165

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PO Box 219

Stratham, NH 03885

10/29/19

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REVISION

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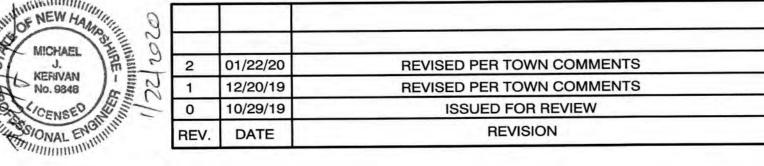
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PO BOX 100, HAMPTON FALLS, NH 03844



LAZ

LAZ BY

Date: 9/17/19 Design: JAC Draft: LAZ Date: 9/17/19
Checked: JAC Scale: 1" = 30' Project No.:18165 Drawing Name: 18165-PLAN.dwg THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE.



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Civil Engineering Services
E-MAIL: JBE@C 603-772-4746 FAX: 603-772-0227

E-MAIL: JBE@JONESANDBEACH.COM

Plan Name:	PLAN AND ROAD PROFILE
Project:	3110 LAFAYETTE ROAD AND 65 OCEAN ROAD PORTSMOUTH, NH 03801

Owner of Record:
65 OCEAN ROAD SUITE 21 PORTSMOUTH, NH 03801 PO BOX 100, HAMPTON FALLS, NH 03844

CARTER CHAD

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SHEET 7 OF 15 JBE PROJECT NO. 18165

DRAWING No.



P Jones & Beach Engineers, Inc. 3110 LAFAYETTE ROAD AND 65 OCEAN ROAD PORTSMOUTH, NH 03801 LAZ REVISED PER TOWN COMMENTS Project: 2 01/22/20 LAZ 85 Portsmouth Ave. Civil Engineering Services
PO Box 219 603-772-4746 1 12/20/19 REVISED PER TOWN COMMENTS FAX: 603-772-0227 E-MAIL: JBE@JONESANDBEACH.COM LAZ CARTER CHAD 0 10/29/19 ISSUED FOR REVIEW Owner of Record: CARTER CHAD

Owner of Record: PO BOX 100, HAMPTON FALLS, NH 03844 BY Stratham, NH 03885 REVISION REV. DATE

Drawing Name: 18165-PLAN.dwg

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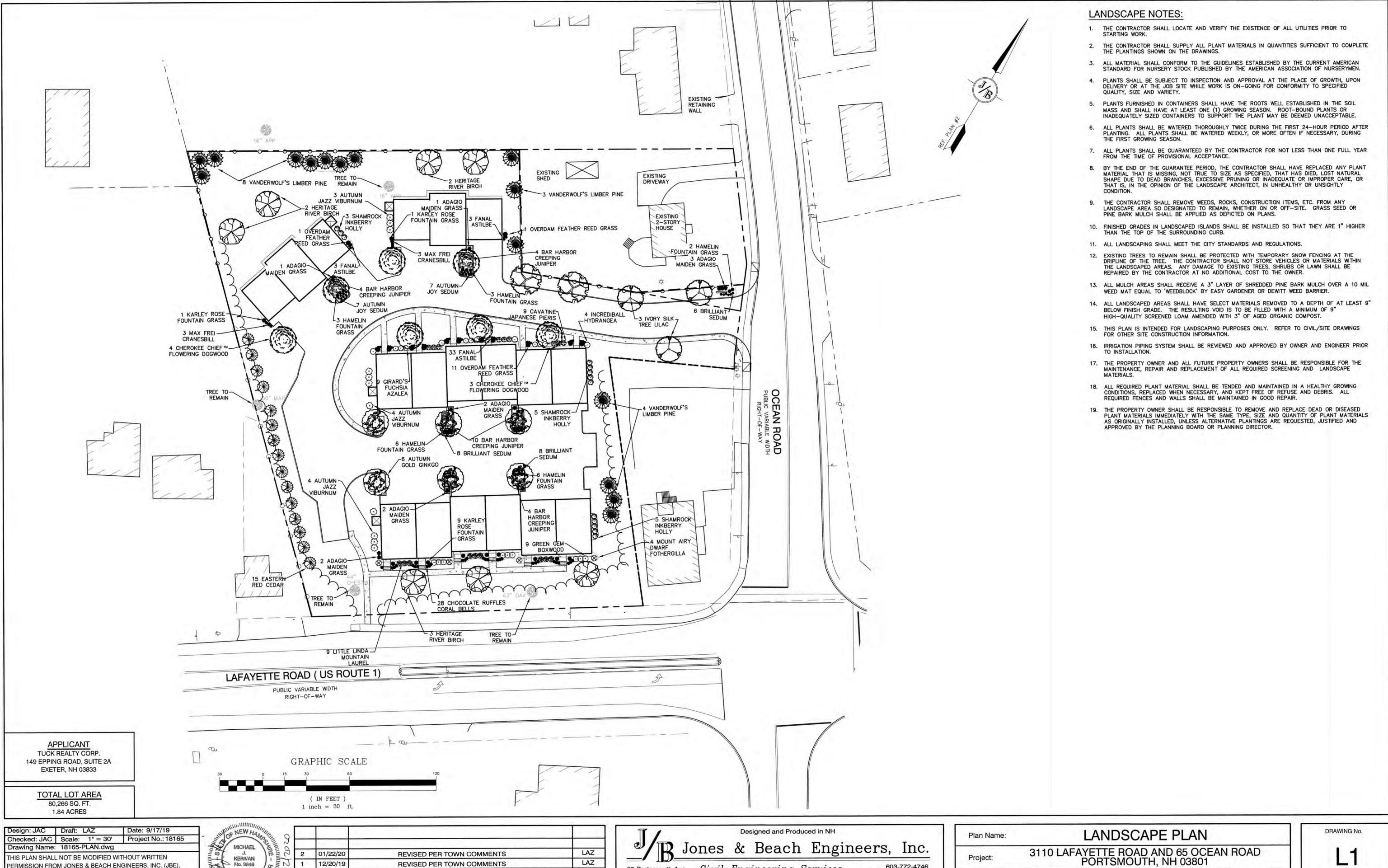
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P2 SHEET 8 OF 15 JBE PROJECT NO. 18165

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PO BOX 100, HAMPTON FALLS, NH 03844

FAX: 603-772-0227

E-MAIL: JBE@JONESANDBEACH.COM

Civil Engineering Services

LAZ

BY

PO Box 219

Stratham, NH 03885

No. 9846

10/29/19

REV. DATE

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ISSUED FOR REVIEW

REVISION

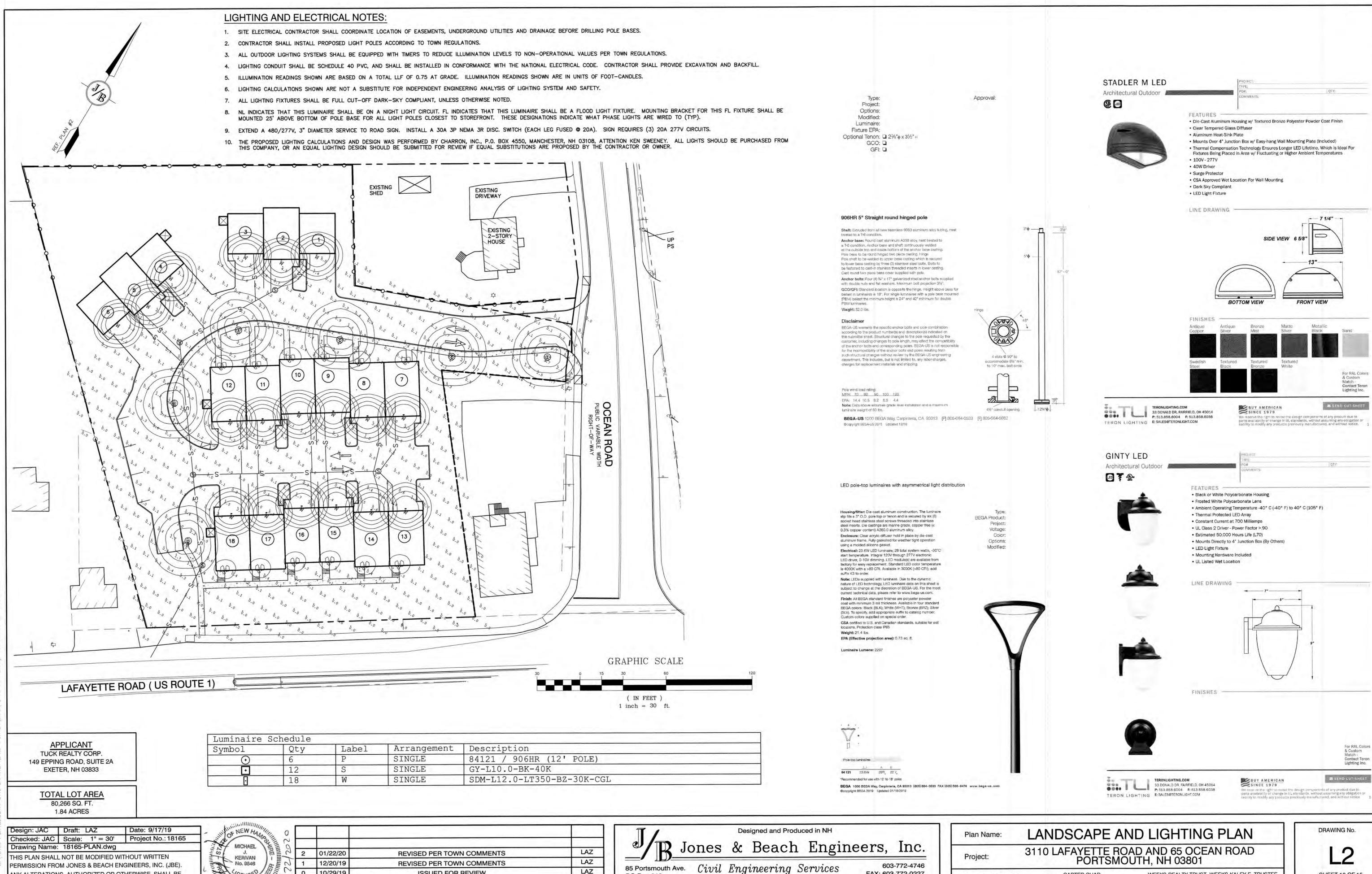
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SHEET 9 OF 15 JBE PROJECT NO. 18165

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E-MAIL: JBE@JONESANDBEACH.COM

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SHEET 10 OF 15 JBE PROJECT NO. 18165

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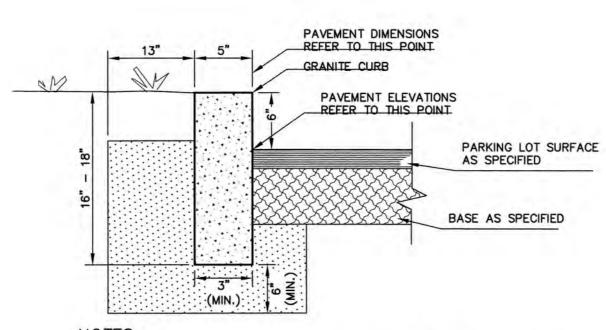
CARTER CHAD

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65 OCEAN ROAD SUITE 21 PORTSMOUTH, NH 03801 PO BOX 100, HAMPTON FALLS, NH 03844

TYPICAL BITUMINOUS PAVEMENT

95% COMPACTED SUBGRADE OR ROCK FILL

NOT TO SCALE



NOTES:

1. EDGING TO BE PLACED PRIOR TO PLACING TOP SURFACE COURSE.

2. JOINTS BETWEEN STONES SHALL BE MORTARED.

VERTICAL GRANITE CURB

NOT TO SCALE

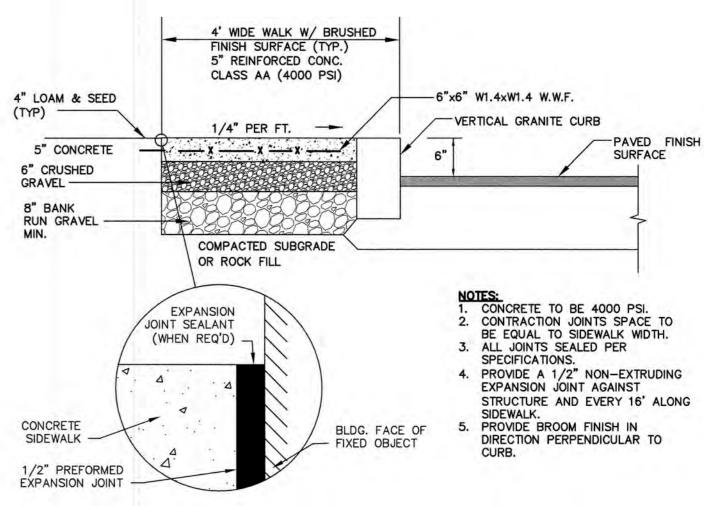
VARIES

NOTES:

1. ALL STOP BARS TO BE SOLID WHITE REFLECTIVE TRAFFIC PAINT AS PER DIMENSIONS ABOVE.

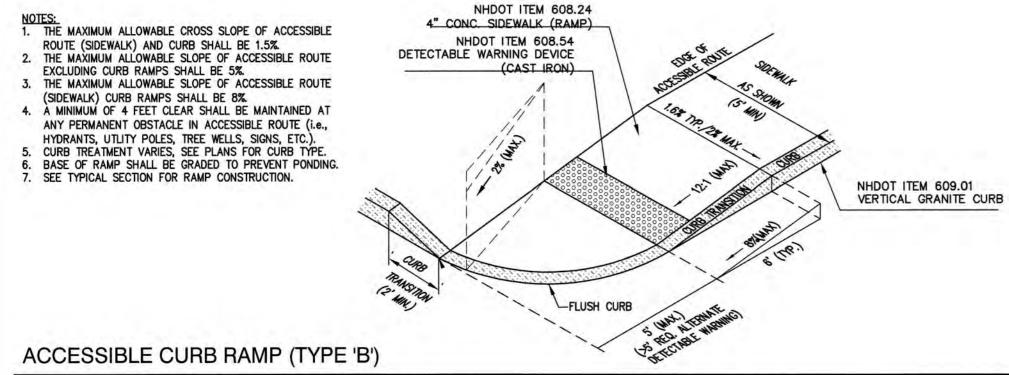
STOP BAR

NOT TO SCALE

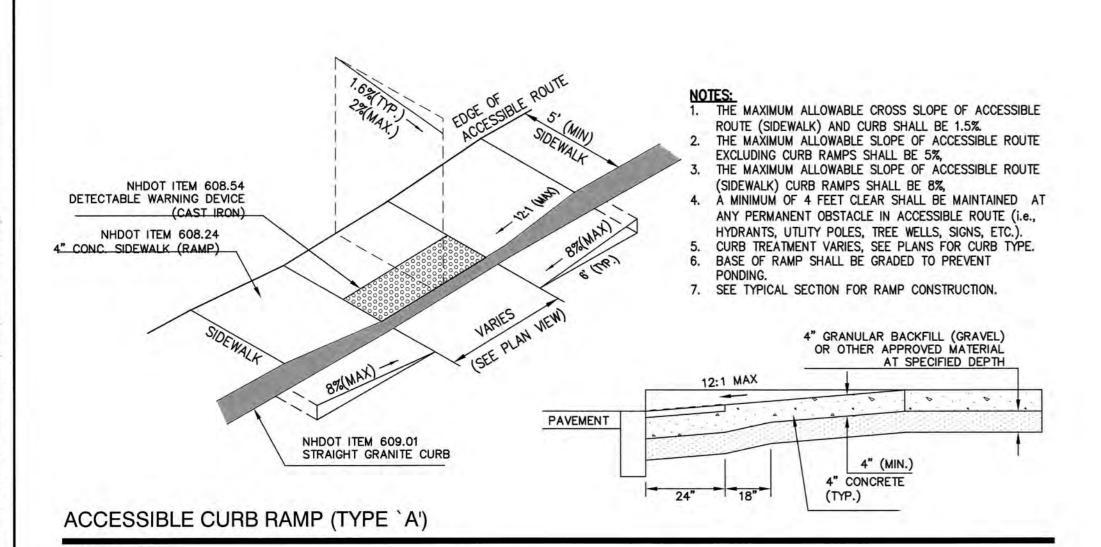


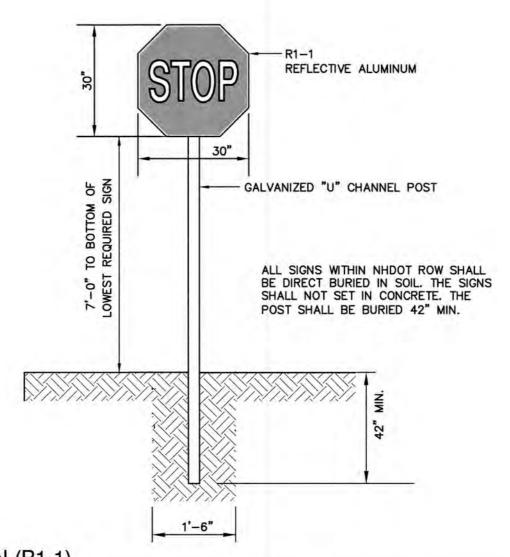
CONCRETE SIDEWALK W/ VERTICAL GRANITE CURB

NOT TO SCALE



NOT TO SCALE





STOP SIGN (R1-1)

NOT TO SCALE

ALL SIGNAGE SHALL BE TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS AND NHDOT STANDARDS.

2. SIGN, HARDWARE, AND INSTALLATION TO CONFORM TO 2016 NHDOT STANDARD SPECIFICATION,

SECTION 615 - TRAFFIC SIGNS. 3. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS/CATALOG CUTS TO THE ENGINEER FOR

REVIEW AND APPROVAL PRIOR TO ERECTING SIGNS.

4. THE LOCATION OF THE SIGNS SHALL BE AS INDICATED ON THE DRAWINGS AND/OR AS DIRECTED BY THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS.

GRANITE CURB--PAVED FINISH SURFACE -BINDER COURSE GRAVEL SUBBASE -3000 PSI CONCRETE NOTES: 1. CURB TO BE PLACED PRIOR TO PLACING TOP SURFACE COURSE. 2. JOINTS BETWEEN STONES SHALL BE MORTARED.

SLOPED GRANITE CURB

NOT TO SCALE

Designed and Produced in NH

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85 Portsmouth Ave. Civil Engineering Services PO Box 219

Stratham, NH 03885

603-772-4746 FAX: 603-772-0227 E-MAIL: JBE@JONESANDBEACH.COM

DETAIL SHEET Plan Name: 3110 LAFAYETTE ROAD AND 65 OCEAN ROAD PORTSMOUTH, NH 03801 Project: CARTER CHAD WEEKS REALTY TRUST, WEEKS KALEY E. TRUSTEE Owner of Record:
65 OCEAN ROAD SUITE 21 PORTSMOUTH, NH 03801 PO BOX 100, HAMPTON FALLS, NH 03844

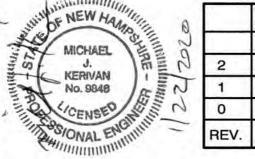
DRAWING No. SHEET 11 OF 15

JBE PROJECT NO. 18165

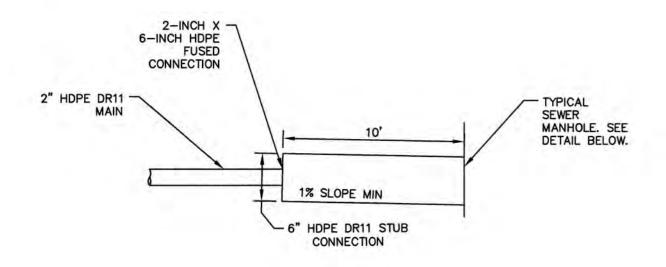
Design: JAC Draft: LAZ Date: 9/17/19 Checked: JAC | Scale: AS NOTED | Project No.: 18165 Drawing Name: 18165-PLAN.dwg THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE

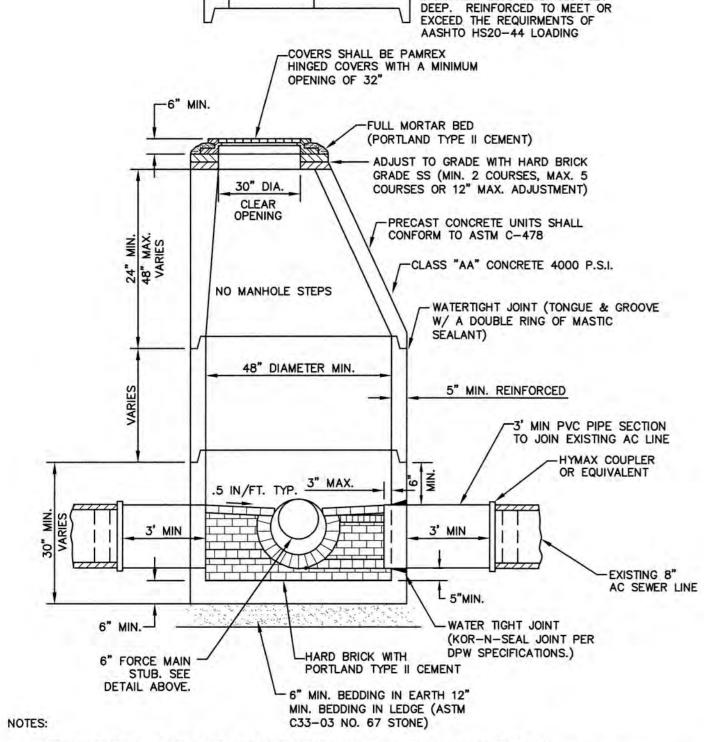
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2 01/22/20 LAZ REVISED PER TOWN COMMENTS LAZ 1 | 12/20/19 REVISED PER TOWN COMMENTS LAZ 0 10/29/19 ISSUED FOR REVIEW REVISION BY REV. DATE





ALTERNATE TOP SLAB FOR MANHOLES LESS THAN SIX FEET

- PER NHDES ENV-WQ 704.13(C), THE MORTAR SPECIFICATION SHALL BE AS FOLLOWS: . MORTAR SHALL BE COMPOSED OF PORTLAND CEMENT AND SAND WITH OR WITHOUT HYDRATED LIME ADDITION; 2. PROPORTIONS IN MORTAR OF PARTS BY VOLUMES SHALL BE:
 - A. 4.5 PARTS SAND AND 1.5 PARTS CEMENT; OR
- B. 4.5 PARTS SAND, ONE PART CEMENT AND 0.5 PART HYDRATED LIME; 3. CEMENT SHALL BE TYPE II PORTLAND CEMENT CONFORMING TO ASTM C150-05;
- 4. HYDRATED LIME SHALL BE TYPE S CONFORMING TO THE ASTM C207-06 'STANDARD SPECIFICATIONS FOR HYDRATED LIME FOR MASONRY PURPOSES";
- 5. SAND SHALL CONSIST OF INERT NATURAL SAND CONFORMING TO THE ASTM C33-03 STANDARD SPECIFICATIONS FOR CONCRETE, FINE AGGREGATES";
- 2. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPED TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL IN ACCORDANCE WITH ENV-WQ 704.12 (K).
- 3. ALL MANHOLES SHALL BE TESTED FOR LEAKAGE IN ACCORDANCE WITH ENV-WQ 704.17 (a) THROUGH (e).
- 4. SEWER MANHOLE COVERS SHALL CONFORM TO ASTM A48 WITH A CASTING EQUAL TO CLASS 30 IN ACCORDANCE WITH ENV-WQ 704.13 (a).
- 5. ALL ASBESTOS CONTAINING WASTE MATERIALS MUST BE PROPERLY IDENTIFIED, PACKAGED AND DELIVERED TO A LANDFILL LICENCED BY THE NHDES SOLID WASTE MANAGEMENT PROGRAM FOR DISPOSAL. CALL (603) 271-2925 FOR MORE INFORMATION.
- 6. PORTSMOUTH STANDARD SEWER MANHOLE SHALL BE USED.
- 7. CONTRACTOR TO PURCHASE SEWER MANHOLE COVERS FROM THE CITY OF PORTSMOUTH DIRECTLY.
- 8. MANHOLE BASE SECTIONS SHALL BE MONOLITHIC TO A POINT AT LEAST 6" ABOVE THE HIGHEST INCOMING SEWER PIPE PER ENV-WQ 704.12 (e).
- 9. MANHOLE CASTINGS SHALL CONFORM TO ASTM A48 PER ENV-WQ 704.13 (a) (8).

Date: 9/17/19

PORTSMOUTH SEWER MANHOLE

Checked: JAC | Scale: AS NOTED | Project No.: 18165

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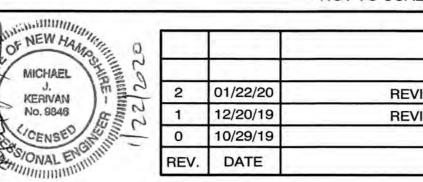
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NOT TO SCALE

Design: JAC Draft: LAZ

Drawing Name: 18165-PLAN.dwg



LOAM AREA PAVED AREA 4" COMPACTED LOAM - SEE NOTES 1 AND 2 SUITABLE BACKFILL 95% COMPACTED AS - CRUSHED GRAVEL SPECIFIED -- ROADWAY BACKFILL SHALL CONFORM TO STANDARD SPECIFICATIONS 12" CLEAN - METAL IMPREGNATED MARKING TAPE TO AID IN LOCATING BURIED PIPE WITH METAL SAND BLANKET (SEE NOTE #6) DETECTING EQUIPMENT - 2" RIGID FOAM INSULATION PLACED 0.5' ABOVE 8" SDR 35 PVC . ASTM D3034-04a SEWER PIPE WHERE INDICATED ON THE PLANS. UNDISTURBED SOIL T CRUSHED STONE (ASTM C33/c33M STONE SIZE NO. 67 IN ACCORDANCE WITH Env-Wg 704.11(a) BEDDING FOR FULL WIDTH OF THE PIPE 6" BELOW PIPE IN EARTH 12" BELOW PIPE IN LEDGE LEDGE W = WDTH

NOTES:

1. PAVEMENT REPAIR IN EXISTING ROADWAYS SHALL CONFORM TO PAVEMENT DETAILS.

- 2. NEW ROADWAY CONSTRUCTION SHALL CONFORM TO SUBDIVISION SPECIFICATIONS.
- 3. TRENCH BACKFILL SHALL CONFORM WITH ENV. Wq 704.11(h) AND BE FREE OF DEBRIS, PAVEMENT, ORGANIC MATTER, TOP SOIL, WET OR SOFT MUCK, PEAT OR CLAY, EXCAVATED LEDGE OR ROCKS OVER SIX INCHES.
- DIAMETER OR LESS, WIDTH SHALL BE NO MORE THAN 36"; FOR PIPES GREATER THAN 15 INCHES NOMINAL DIAMETER, WIDTH SHALL BE 24 INCHES PLUS PIPE O.D. WIDTH SHALL ALSO BE THE PAYMENT WIDTH FOR LEDGE EXCAVATION AND FOR ORDERED EXCAVATION BELOW GRADE.

4. W= MAXIMUM ALLOWABLE TRENCH WIDTH TO A PLANE 12" INCHES ABOVE THE PIPE. FOR PIPES 15 INCHES NOMINAL

- 5. RIGID FOAM INSULATION TO BE PROVIDED WHERE COVER IN THE ROADWAY IS LESS THAN 6' AND CROSS COUNTRY IS LESS THAN 4', PURSUANT TO DES WAIVER BEING ISSUED.
- 6. PIPE SAND BLANKET MATERIAL SHALL BE GRADED SAND, FREE FROM ORGANIC MATERIALS, GRADED SUCH THAT 100% PASSES A 1/2 " SIEVE AND A MAXIMUM OF 15% PASSES A #200 SIEVE IN ACCORDANCE WITH Env-Wq 704.11(b).
- 7. JOINT SEALS FOR PVC PIPE SHALL BE OIL RESISTANT COMPRESSION RINGS OF ELASTOMERIC MATERIAL AND CERTIFIED BY THE MANUFACTURER AS CONFORMING TO THE ASTM D3212 STANDARD IN EFFECT WHEN THE JOINT SEALS WERE MANUFACTURED, AND SHALL BE PUSH-ON, BELL-AND-SPIGOT TYPE PER Env-Wq 704.05 (e).

SEWER TRENCH

NOT TO SCALE

LAZ LAZ 85 Portsmouth Ave. LAZ PO Box 219 BY Stratham, NH 03885

Designed and Produced in NH Jones & Beach Engineers, Inc. Civil Engineering Services 603-772-4746

FINISHED

GATE VALVE WITH

36" (12" MIN.)

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

E-MAIL: JBE@JONESANDBEACH.COM

FAX: 603-772-0227

EXCAVATION AND BACKFILL

COMPANY STANDARDS

- CATV CABLE

(PVC-SCH

IN ACCORDANCE WITH UTILITY

OR EQUAL

RODDING .

5/8" MIN.

-VALVE BOX AND COVER KENNEDY VALVE FIG. 571-X

THRUST BLOCK

GRADE

BURIED GATE VALVE DETAIL

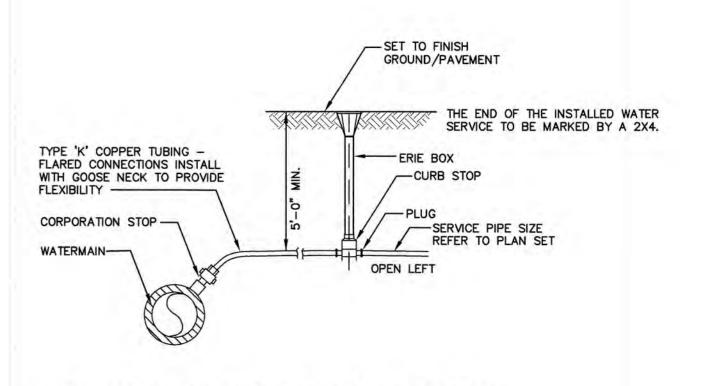
WATER

NOT TO SCALE

DETAIL SHEET Plan Name: 3110 LAFAYETTE ROAD AND 65 OCEAN ROAD PORTSMOUTH, NH 03801 Project: WEEKS REALTY TRUST, WEEKS KALEY E. TRUSTEE Owner of Record:
65 OCEAN ROAD SUITE 21 PORTSMOUTH, NH 03801 PO BOX 100, HAMPTON FALLS, NH 03844

CROSS-COUNTRY | IN PAVEMENT --- PAVEMENT 4" LOAM AND SEED - GRAVEL ROAD BASE OR APPROVED SLOPE (AS SPECIFIED) SUITABLE BACKFILL 95% COMPACTED (ASTM D1557) -SAND BEDDING PIPE 12" MAX - C-900 SERVICE PIPE 6" MIN: WATER SYSTEM TRENCH

NOT TO SCALE



WATER SERVICE CONNECTION-COPPER PIPE

NOT TO SCALE

UTILITY TRENCH

NOT TO SCALE

PLASTIC MARKER

ELECTRIC SERVICE

LESS PVC-SCH 40 -

CABLES 250 VAC OR

TAPE ABOVE CABLES

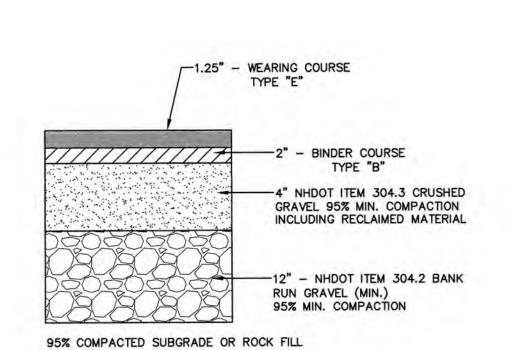
SHEET 12 OF 15

DRAWING No.

JBE PROJECT NO. 18165

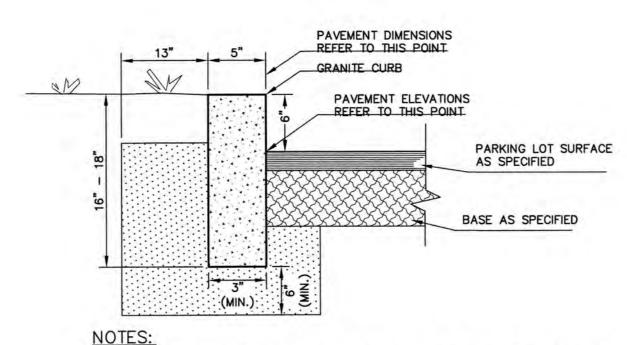
REVISED PER TOWN COMMENTS REVISED PER TOWN COMMENTS ISSUED FOR REVIEW

REVISION



TYPICAL BITUMINOUS PAVEMENT

NOT TO SCALE

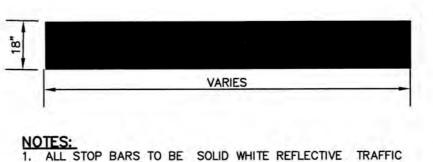


1. EDGING TO BE PLACED PRIOR TO PLACING TOP SURFACE COURSE.

2. JOINTS BETWEEN STONES SHALL BE MORTARED.

VERTICAL GRANITE CURB

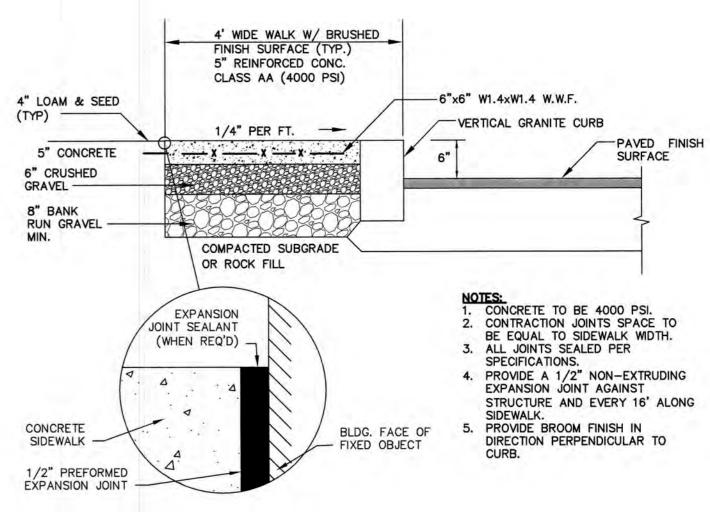
NOT TO SCALE



PAINT AS PER DIMENSIONS ABOVE.

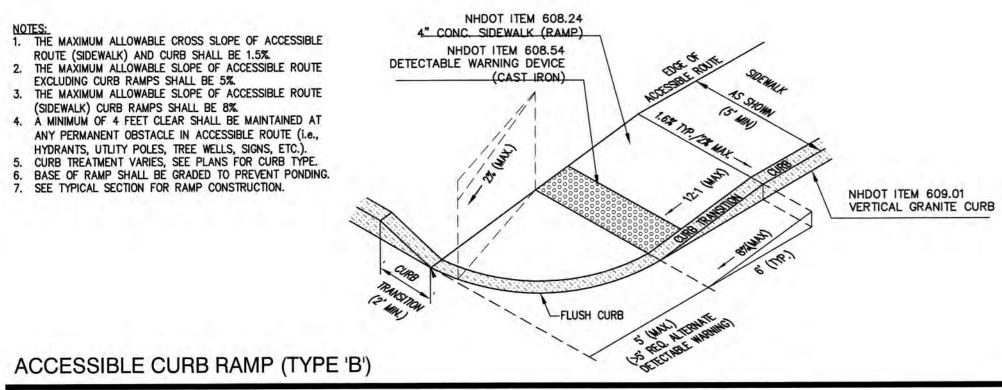
STOP BAR

NOT TO SCALE

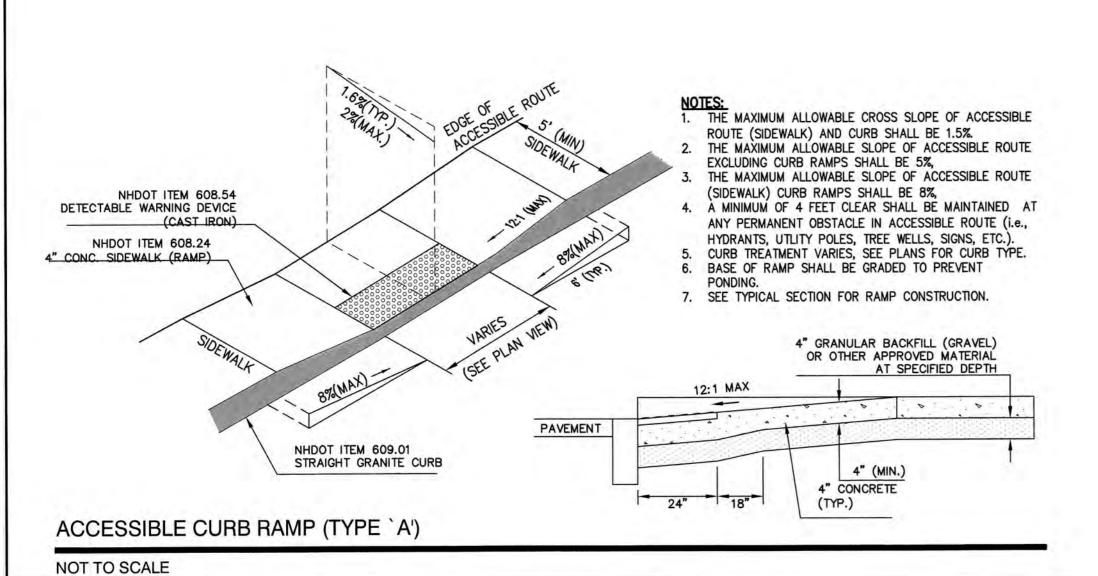


CONCRETE SIDEWALK W/ VERTICAL GRANITE CURB

NOT TO SCALE



NOT TO SCALE



R1-1
REFLECTIVE ALUMINUM GALVANIZED "U" CHANNEL POST ALL SIGNS WITHIN NHDOT ROW SHALL BE DIRECT BURIED IN SOIL. THE SIGNS SHALL NOT SET IN CONCRETE. THE POST SHALL BE BURIED 42" MIN. 1'-6"

STOP SIGN (R1-1)

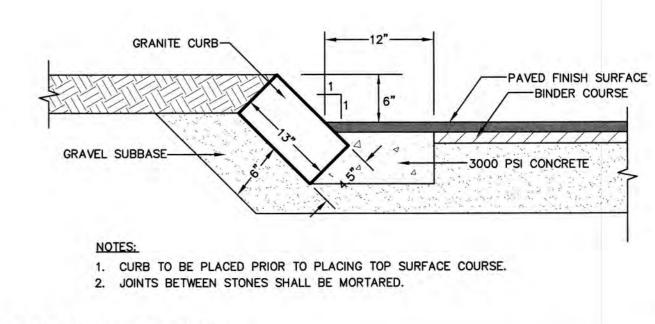
NOT TO SCALE

NOTES:

1. ALL SIGNAGE SHALL BE TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)

STANDARDS AND NHDOT STANDARDS.

2. SIGN, HARDWARE, AND INSTALLATION TO CONFORM TO 2016 NHDOT STANDARD SPECIFICATION, SECTION 615 - TRAFFIC SIGNS. 3. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS/CATALOG CUTS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ERECTING SIGNS. 4. THE LOCATION OF THE SIGNS SHALL BE AS INDICATED ON THE DRAWINGS AND/OR AS DIRECTED BY THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS.

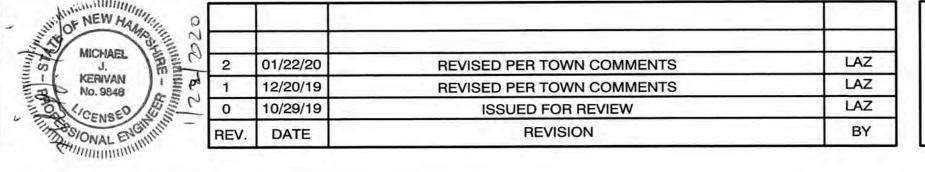


SLOPED GRANITE CURB

NOT TO SCALE

Design: JAC	Draft: LAZ	Date: 9/17/19
Checked: JAC	Scale: AS NOTED	Project No.: 18165
	18165-PLAN.dwg	
	the second secon	

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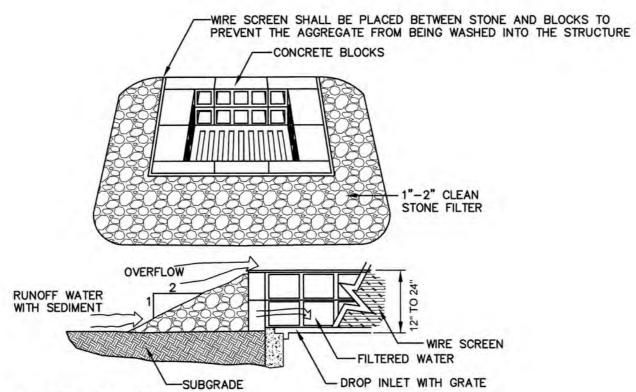


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603-772-4746 85 Portsmouth Ave. Civil Engineering Services FAX: 603-772-0227 PO Box 219 E-MAIL: JBE@JONESANDBEACH.COM Stratham, NH 03885

Plan Name:	DETAIL S	HEET
Project:	3110 LAFAYETTE ROAD A PORTSMOUTH	
Owner of Reco	ord: CARTER CHAD V 65 OCEAN ROAD SUITE 21 PORTSMOUTH, NH 03801	VEEKS REALTY TRUST, WEEKS KALEY E. TRUSTEE PO BOX 100, HAMPTON FALLS, NH 03844

DRAWING No. SHEET 11 OF 15 JBE PROJECT NO. 18165

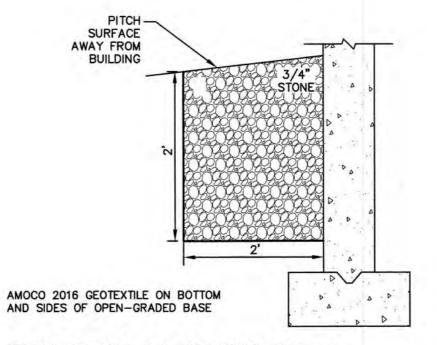


MAINTENANCE NOTE:

 ALL STRUCTURES SHOULD BE INSPECTED AFTER EVERY RAINFALL AND REPAIRS MADE AS NECESSARY. SEDIMENT SHOULD BE REMOVED FROM TRAPPING DEVICES AFTER THE SEDIMENT HAS REACHED A MAXIMUM OF ONE HALF THE DEPTH OF THE TRAP. THE SEDIMENT SHOULD BE DISPOSED IN A SUITABLE UPLAND AREA AND PROTECTED FROM EROSION BY EITHER STRUCTURE OR VEGETATIVE MEANS. THE TEMPORARY TRAPS SHOULD BE REMOVED AND THE AREA REPAIRED AS SOON AS THE CONTRIBUTING DRAINAGE AREA TO THE INLET HAS BEEN COMPLETELY STABILIZED.

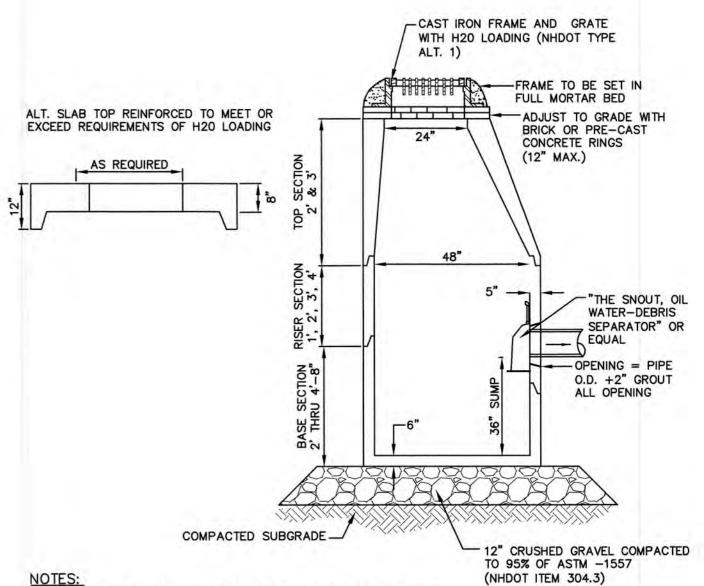
TEMPORARY CATCH BASIN INLET PROTECTION (Block and Gravel Drop Inlet Sediment Filter)

NOT TO SCALE



DRIP EDGE INFILTRATION DETAIL

NOT TO SCALE

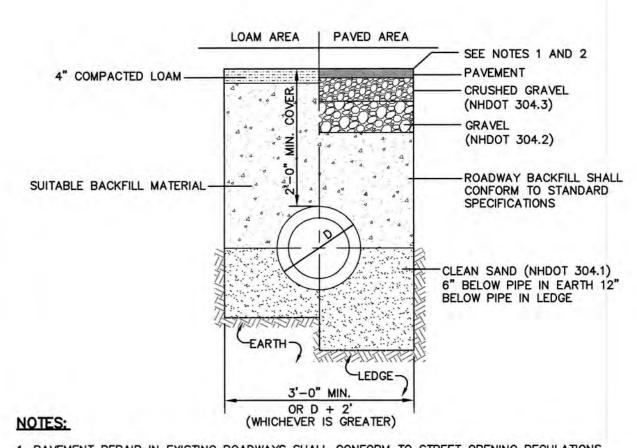


1. BASE SECTION SHALL BE MONOLITHIC WITH 48" INSIDE DIAMETER.

- 2. ALL SECTIONS SHALL BE DESIGNED FOR H20 LOADING.
- 3. CONCRETE SHALL BE COMPRESSIVE STRENGTH 4000 PSI, TYPE II CEMENT.
- 4. FRAMES AND GRATES SHALL BE HEAVY DUTY AND DESIGNED FOR H20 LOADING
- 5. PROVIDE "V" KNOCKOUTS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE
- OF PIPE. MORTAR ALL PIPE CONNECTIONS SO AS TO BE WATERTIGHT. 6. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE BUTYL RUBBER.
- 7. ALL CATCH BASIN FRAMES AND GRATES SHALL BE NHDOT CATCH BASIN TYPE ALTERNATE 1 OR NEENAH R-3570 OR APPROVED EQUAL (24"x24" TYPICAL).
- 8. STANDARD CATCH BASIN FRAME AND GRATE(S) SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM, BUT NO MORE THAN 12"), OR PRECAST CONCRETE 'DONUTS'.
- 9. ALL CATCH BASINS ARE TO BE FITTED WITH GREASE HOODS.

CATCH BASIN WITH GREASE HOOD

NOT TO SCALE



- 1. PAVEMENT REPAIR IN EXISTING ROADWAYS SHALL CONFORM TO STREET OPENING REGULATIONS.
- 2. NEW ROADWAY CONSTRUCTION SHALL CONFORM WITH PROJECT AND TOWN SPECIFICATIONS.
- 3. ALL MATERIALS ARE TO BE COMPACTED TO 95% OF ASTM D-1557.

DRAINAGE TRENCH

NOT TO SCALE

DETAIL SHEET

3110 LAFAYETTE ROAD AND 65 OCEAN ROAD PORTSMOUTH, NH 03801

DRAWING No. D3 SHEET 13 OF 15 JBE PROJECT NO. 18165

Date: 9/17/19 Design: JAC Draft: LAZ Checked: JAC | Scale: AS NOTED | Project No.: 18165 Drawing Name: 18165-PLAN.dwg THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN

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LAZ 2 01/22/20 REVISED PER TOWN COMMENTS LAZ 1 12/20/19 REVISED PER TOWN COMMENTS LAZ 0 10/29/19 ISSUED FOR REVIEW REV. DATE BY **REVISION**

P Jones & Beach Engineers, Inc.

Designed and Produced in NH

85 Portsmouth Ave. Civil Engineering Services PO Box 219 Stratham, NH 03885

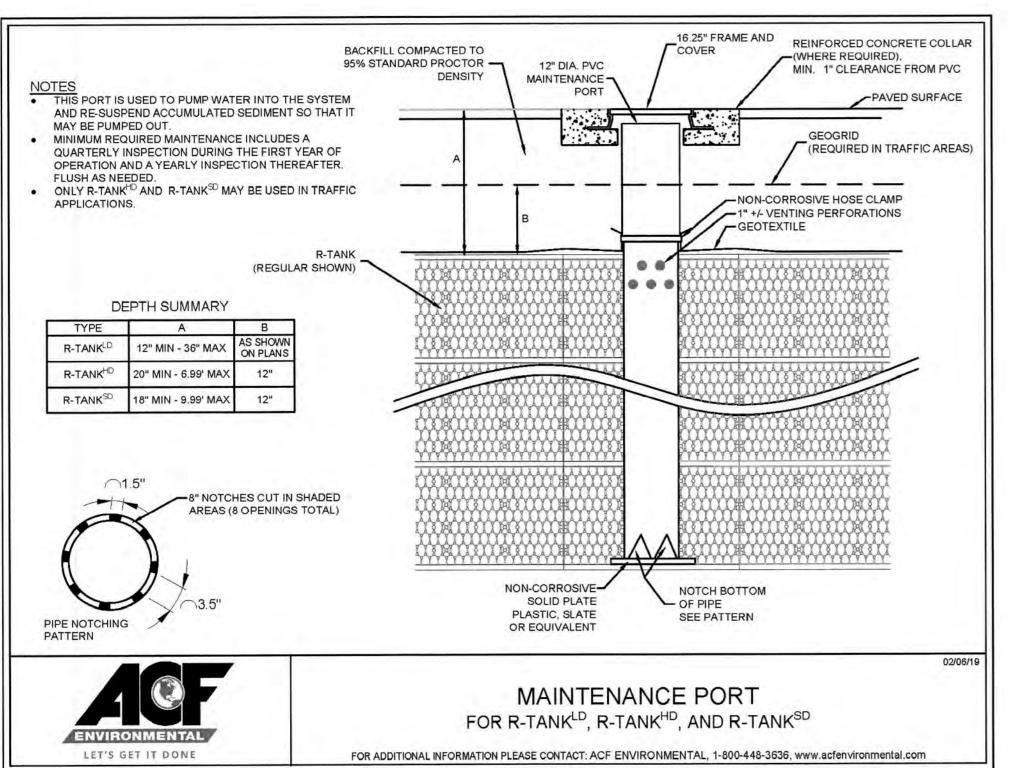
E-MAIL: JBE@JONESANDBEACH.COM

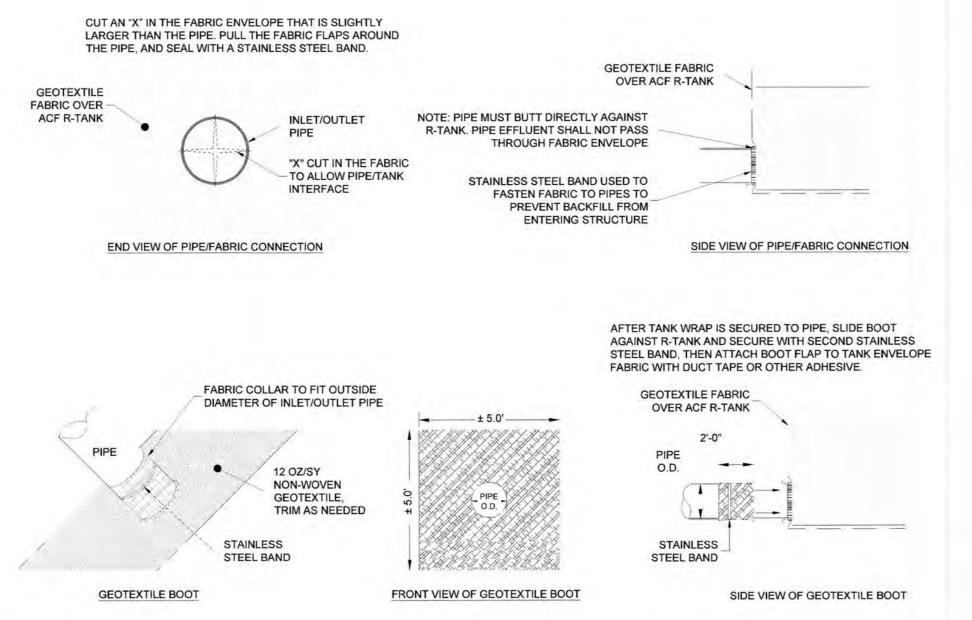
603-772-4746 FAX: 603-772-0227

Plan Name:

Project:

WEEKS REALTY TRUST, WEEKS KALEY E. TRUSTE CARTER CHAD Owner of Record:
65 OCEAN ROAD SUITE 21 PORTSMOUTH, NH 03801 PO BOX 100, HAMPTON FALLS, NH 03844





R-TANK TYPICAL INLET/OUTLET

W/ GEOTEXTILE BOOT

CUT A ROUND HOLE IN THE LINER ENVELOPE AND GEOTEXTILE PROTECTION FABRIC THAT IS SLIGHTLY LARGER THAN THE PIPE. IMPERMEABLE LINER BETWEEN TWO LAYERS OF NON-WOVEN GEOTEXTILE FABRIC OVER ACF R-TANK 30 MIL. PVC LINER OVER ACF R-TANK INLET/OUTLET NOTE: PIPE MUST BUTT DIRECTLY PIPE AGAINST R-TANK ROUND HOLE IN THE LINER TO ALLOW PIPE/TANK INTERFACE END VIEW OF PIPE/LINER CONNECTION IMPERMEABLE LINER BETWEEN TWO LAYERS OF 30 MIL. PVC COLLAR TO FIT NON-WOVEN GEOTEXTILE FABRIC OVER ACF R-TANK OUTSIDE DIAMETER OF INLET/OUTLET PIPE 30 MIL. PVC. TRIM AS NEEDED STAINLESS STEEL BAND W/ STRIP OF NEOPRENE UNDER BAND BETWEEN STAINLESS STEEL BAND PIPE AND BOOT FRONT VIEW OF 30 MIL. PVC BOOT 30 MIL. PVC BOOT

LET'S GET IT DONE

07/26/19

ISOMETRIC VIEW

HS25, (WITH ACF COVER SYSTEM)

FAX: 603-772-0227

E-MAIL: JBE@JONESANDBEACH.COM

R-TANK TYPICAL INLET/OUTLET W/ 30 MIL PVC BOOT

SEAL END OF BOOT

NECK WITH SILICONE

SIDE VIEW OF PIPE/LINER CONNECTION

STRIP OF NEOPRENE UNDER

SIDE VIEW OF 30 MIL PVC BOOT

BAND BETWEEN PIPE AND BOOT

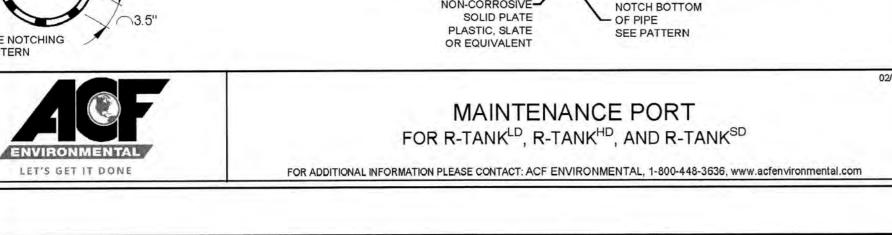
07/26/19

AFTER LINER IS CUT AND PIPE INSTALED, SLIDE BOOT AGAINST TANK AND SECURE WITH STAINLESS STEEL BAND, THEN BOND BOOT TO TANK LINER AND SEAL END OF BOOT WITH SILICONE.

REPLACE ANY GEOTEXTILE PROTECTION FABRIC REMOVED

DURING BOOT INSTALLATION PROCESS.

FOR ADDITIONAL INFORMATION PLEASE CONTACT: ACF ENVIRONMENTAL, 1-800-448-3636, www.acfenvironmental.com



FOOTPRINT.

1. FOR COMPLETE MODULE DATA, SEE APPROPRIATE R-TANKHD MODULE SHEET

FOR ADDITIONAL INFORMATION PLEASE CONTACT: ACF ENVIRONMENTAL, 1-800-448-3636,

WWW.ACFENVIRONMENTAL.COM

2014 WITH 2015 AND 2016 INTERIM REVISIONS.

PRE-TREATMENT STRUCTURES NOT SHOWN

2. INSTALLATIONS PER THIS DETAIL MEET GUIDELINES OF HL-93 LOADING PER THE

4. FOR INFILTRATION APPLICATIONS, GEOTEXTILE ENVELOPING R-TANK SHALL BE ACF

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, CUSTOMARY U.S. UNITS, 7TH EDITION,

M200 (PER SPEC SECTION 2.02A) AND BASE SHALL BE 4" MIN. UNCOMPACTED FREE

DRAINING BACKFILL (SPEC SECTION 2.03A) TO PROVIDE A LEVEL BASE. SURFACE

MUST BE SMOOTH, FREE OF LUMPS OR DEBRIS, AND EXTEND 2' BEYOND R-TANKHD

GEOGRID (ACF BX-12) PLACED 12" ABOVE THE R-TANKHD SYSTEM. OVERLAP ADJACENT PANELS BY 18" MIN. GEOGRID

TOTAL COVER: 20" MINIMUM 7

AND 84" MAXIMUM. FIRST 12" MUST BE FREE DRAINING

CLASS GW, GP, SW OR SP). ADDITIONAL FILL MAY BE

PLASTICITY INDEX OF 4. A MIN. 12" COVER MUST BE

STRUCTURAL FILL (SPEC SECTION 2.03C): STONE OR SOIL

(USCS CLASS SM, SP, SW, GM, GP OR GW) WITH MAX CLAY

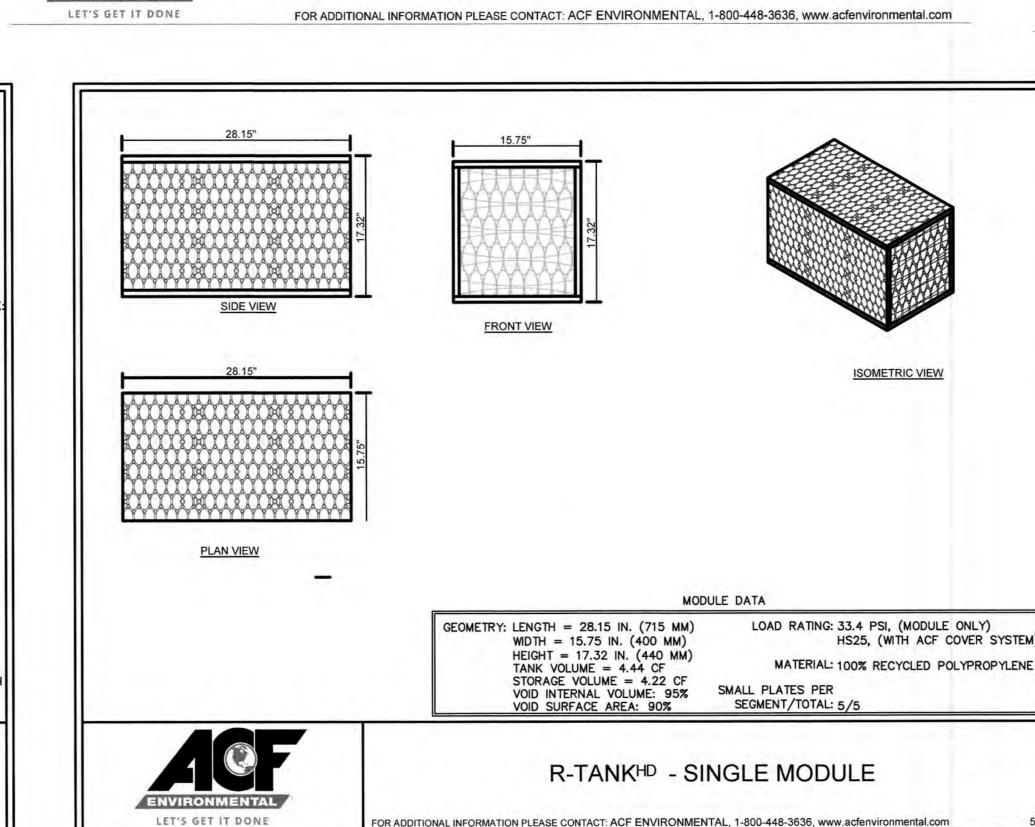
CONTENT<10%, MAX 25% PASSING NO. 200 SIEVE, AND MAX

MAINTAINED BETWEEN BACKFILL EQUIPMENT AND THE TOP OF

THE R-TANK™ SYSTEM AT ALL TIMES. TOTAL HEIGHT OF TOP BACKFILL SHOULD NOT EXCEED 7'. CONTACT ACF

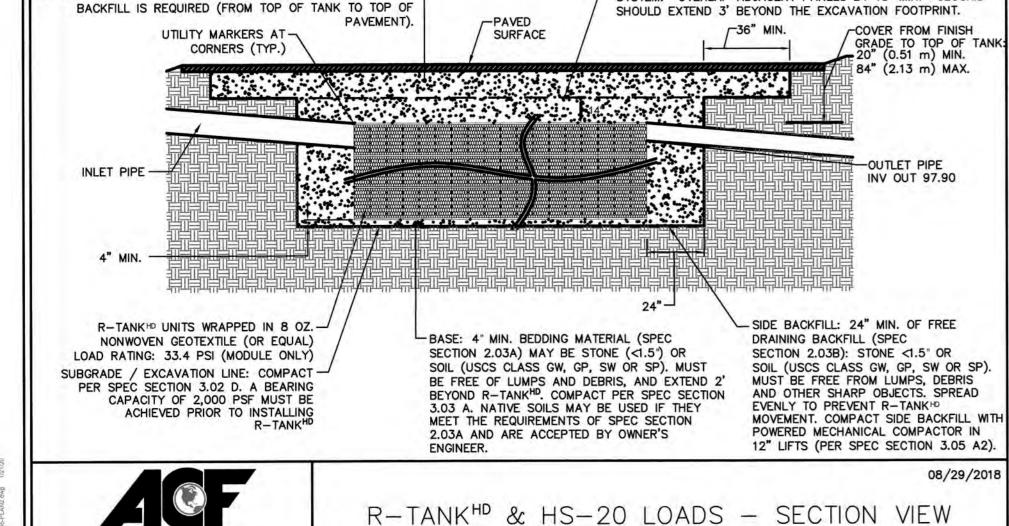
ENVIRONMENTAL IF MORE THAN 7' OR LESS THAN 20" OF TOP

BACKFILL (SPEC SECTION 2.03B): STONE <1.5" OR SOIL (USCS



PO Box 219

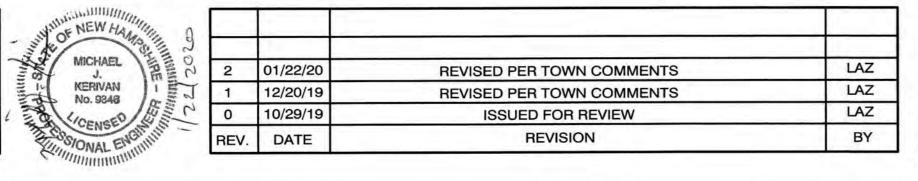
Stratham, NH 03885



Design: JAC Draft: LAZ Date: 9/17/19 Checked: JAC | Scale: AS NOTED | Project No.: 18165 Drawing Name: 18165-PLAN.dwg

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DETAIL SHEET Plan Name: 3110 LAFAYETTE ROAD AND 65 OCEAN ROAD Project: PORTSMOUTH, NH 03801 WEEKS REALTY TRUST, WEEKS KALEY E. TRUSTEI

65 OCEAN ROAD SUITE 21 PORTSMOUTH, NH 03801 PO BOX 100, HAMPTON FALLS, NH 03844

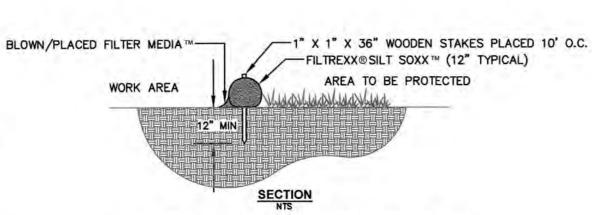
SHEET 14 OF 15 JBE PROJECT NO. 18165

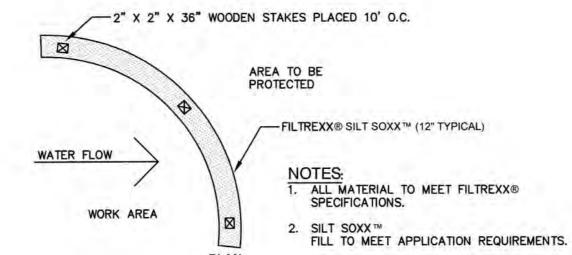
DRAWING No.

TEMPORARY EROSION CONTROL NOTES

THE SMALLEST PRACTICAL AREA OF LAND SHALL BE EXPOSED AT ANY ONE TIME. AT NO TIME SHALL AN AREA IN EXCESS OF 5 ACRES BE EXPOSED AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED.

- EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND AT LOCATIONS AS REQUIRED, DIRECTED BY THE ENGINEER.
- ALL DISTURBED AREAS SHALL BE RETURNED TO PROPOSED GRADES AND ELEVATIONS. DISTURBED AREAS SHALL BE LOAMED WITH A MINIMUM OF 6" OF SCREENED ORGANIC LOAM AND SEEDED WITH SEED MIXTURE 'C' AT A RATE NOT LESS THAN 1.10 POUNDS OF SEED PER 1,000 S.F. OF AREA (48 LBS. / ACRE).
- SILT FENCES AND OTHER BARRIERS SHALL BE INSPECTED EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 0.5" OR GREATER. ALL DAMAGED AREAS SHALL BE REPAIRED, AND SEDIMENT DEPOSITS SHALL PERIODICALLY BE REMOVED
- AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED, THE TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED AND THE AREA DISTURBED BY THE REMOVAL SMOOTHED AND RE-VEGETATED.
- AREAS MUST BE SEEDED AND MULCHED OR OTHERWISE PERMANENTLY STABILIZED WITHIN 3 DAYS OF FINAL GRADING, OR TEMPORARILY STABILIZED WITHIN 14 DAYS OF THE INITIAL DISTURBANCE OF SOIL. ALL AREAS SHALL BE STABILIZED WITHIN 45
- ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING NORTH AMERICAN GREEN S75 EROSION CONTROL BLANKETS (OR AN EQUIVALENT APPROVED IN WRITING BY THE ENGINEER) ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
- ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
- AFTER NOVEMBER 15th, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3" OF CRUSHED GRAVEL PER NHDOT ITEM 304.3.
- 10. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
 - BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
 - b. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
 - c. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH STONE OR RIPRAP HAS BEEN INSTALLED; OR
 - d. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
- FUGITIVE DUST CONTROL IS REQUIRED TO BE CONTROLLED IN ACCORDANCE WITH ENV-A 1000, AND THE PROJECT IS TO MEET THE REQUIREMENTS AND INTENT OF RSA 430:53 AND AGR 3800 RELATIVE TO INVASIVE SPECIES.
- 2. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR'S NAME, ADDRESS, AND PHONE NUMBER SHALL BE SUBMITTED TO DES
- PRIOR TO CONSTRUCTION, A PHASING PLAN THAT DELINEATES EACH PHASE OF THE PROJECT SHALL BE SUBMITTED. ALL TEMPORARY SEDIMENT BASINS THAT WILL BE NEEDED FOR DEWATERING WORK AREAS SHALL BE LOCATED AND IDENTIFIED ON THIS
- IN ORDER TO ENSURE THE STABILITY OF THE SITE AND EFFECTIVE IMPLEMENTATION OF THE SEDIMENT AND EROSION CONTROL MEASURES SPECIFIED IN THE PLANS FOR THE DURATION OF CONSTRUCTION, THE CONTRACTOR SHALL BE IN STRICT COMPLIANCE WITH THE FOLLOWING INSPECTION AND MAINTENANCE REQUIREMENTS IN ADDITION TO THOSE CALLED FOR IN THE SWPPP:
 - a. A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL OR A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE ("MONITOR") SHALL BE EMPLOYED TO INSPECT THE SITE FROM THE START OF ALTERATION OF TERRAIN ACTIVITIES UNTIL THE SITE IS IN FULL COMPLIANCE WITH THE SITE SPECIFIC PERMIT ("PERMIT").
 - b. DURING THIS PERIOD, THE MONITOR SHALL INSPECT THE SUBJECT SITE AT LEAST ONCE A WEEK, AND IF POSSIBLE, DURING ANY 1/2 INCH OR GREATER RAIN EVENT (I.E. 1/2 INCH OF PRECIPITATION OR MORE WITHIN A 24 HOUR PERIOD). IF UNABLE TO BE PRESENT DURING SUCH A STORM, THE MONITOR SHALL INSPECT THE SITE WITHIN 24 HOURS OF THIS
 - THE MONITOR SHALL PROVIDE TECHNICAL ASSISTANCE AND RECOMMENDATIONS TO THE CONTRACTOR ON THE APPROPRIATE BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROLS REQUIRED TO MEET THE REQUIREMENTS OF RSA 485 A:17 AND ALL APPLICABLE DES PERMIT CONDITIONS.
 - d. WITHIN 24 HOURS OF EACH INSPECTION, THE MONITOR SHALL SUBMIT A REPORT TO DES VIA EMAIL (RIDGELY MAUCK AT: RIDGELY.MAUCK@DES.NH.GOV).
 - e. THE MONITOR SHALL MEET WITH DES TO DECIDE UPON A REPORT FORMAT. THE REPORT FORMAT SHALL BE REVIEWED AND APPROVED BY DES PRIOR TO THE START OF CONSTRUCTION.





3. COMPOST MATERIAL TO BE DISPERSED ON SITE,

AS DETERMINED BY ENGINEER.

LAZ

LAZ

LAZ

BY

85 Portsmouth Ave.

Stratham, NH 03885

PO Box 219

FILTREXX® SILT SOXX

NOT TO SCALE

AREA OF EMBANKMEN' CONSTRUCTION OR ANY DISTURBED AREA TO BE STABILIZED (UPHILL) -GEOTEXTILE FENCE WITH PROPEX-SILT STOP SEDIMENT CONTROL FABRIC OR APPROVED EQUAL 48" HARDWOOD 16" POST DEPTH (MIN)

CONSTRUCTION SPECIFICATIONS:

- WOVEN FABRIC FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. FILTER CLOTH SHALL BE FASTENED TO WOVEN WIRE EVERY 24" AT TOP, MID AND BOTTOM AND EMBEDDED IN THE GROUND A MINIMUM OF 8" AND THEN COVERED WITH SOIL.
- 2. THE FENCE POSTS SHALL BE A MINIMUM OF 48" LONG, SPACED A MAXIMUM 10' APART, AND DRIVEN A MINIMUM OF 16" INTO THE GROUND.
- 3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THE ENDS OF THE FABRIC SHALL BE OVERLAPPED 6", FOLDED AND STAPLED TO PREVENT SEDIMENT FROM BY-PASSING.
- 4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SEDIMENT REMOVED AND PROPERLY DISPOSED OF WHEN IT IS 6" DEEP OR VISIBLE 'BULGES' DEVELOP IN THE SILT FENCE.
- 5. PLACE THE ENDS OF THE SILT FENCE UP CONTOUR TO PROVIDE FOR SEDIMENT STORAGE. 6. SILT FENCE SHALL REMAIN IN PLACE FOR 24 MONTHS.

SILT FENCE

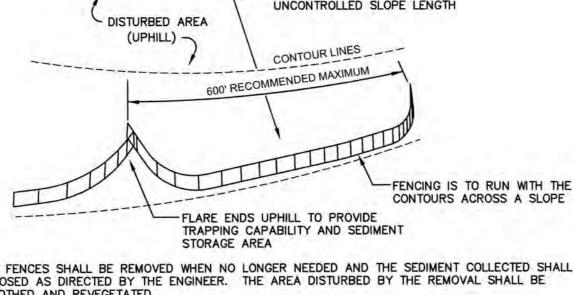
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Design: JAC Draft: LAZ

Date: 9/17/19

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Checked: JAC | Scale: AS NOTED | Project No.: 18165 MICHAEL Drawing Name: 18165-PLAN.dwg KERIVAN THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN No. 9848 PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE.



-MAXIMUM RECOMMENDED

7. SILT FENCES SHALL BE REMOVED WHEN NO LONGER NEEDED AND THE SEDIMENT COLLECTED SHALL BE DISPOSED AS DIRECTED BY THE ENGINEER. THE AREA DISTURBED BY THE REMOVAL SHALL BE SMOOTHED AND REVEGETATED.

MAINTENANCE:

01/22/20

12/20/19

10/29/19

DATE

0

REV.

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

REVISED PER TOWN COMMENTS

REVISED PER TOWN COMMENTS

ISSUED FOR REVIEW

REVISION

SEEDING SPECIFICATIONS

- GRADING AND SHAPING A. SLOPES SHALL NOT BE STEEPER THAN 2:1 WITHOUT APPROPRIATE EROSION CONTROL MEASURES AS
- SPECIFIED ON THE PLANS (3:1 SLOPES OR FLATTER ARE PREFERRED). B. WHERE MOWING WILL BE DONE, 3:1 SLOPES OR FLATTER ARE RECOMMENDED.

2. SEEDBED PREPARATION

- A. SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS B. STONES LARGER THAN 4 INCHES AND TRASH SHOULD BE REMOVED BECAUSE THEY INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, THE SOIL SHOULD BE TILLED TO A
- DEPTH OF ABOUT 4 INCHES TO PREPARE A SEEDBED AND FERTILIZER AND LIME MIXED INTO THE SOIL. THE SEEDBED SHOULD BE LEFT IN A REASONABLY FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.

- A. LIME AND FERTILIZER SHOULD BE APPLIED PRIOR TO OR AT THE TIME OF SEEDING AND INCORPORATED INTO THE SOIL. TYPES AND AMOUNTS OF LIME AND FERTILIZER SHOULD BE BASED ON AN EVALUATION OF SOIL TESTS. WHEN A SOIL TEST IS NOT AVAILABLE, THE FOLLOWING MINIMUM AMOUNTS SHOULD BE
- AGRICULTURAL LIMESTONE, 2 TONS PER ACRE OR 100 LBS. PER 1,000 SQ.FT. NITROGEN(N), 50 LBS. PER ACRE OR 1.1 LBS. PER 1,000 SQ.FT.
- PHOSPHATE(P205), 100 LBS. PER ACRE OR 2.2 LBS. PER 1,000 SQ.FT.
- POTASH(K2O), 100 LBS. PER ACRE OR 2.2 LBS. PER 1,000 SQ.FT. (NOTE: THIS IS THE EQUIVALENT OF 500 LBS. PER ACRE OF 10-20-20 FERTILIZER OR 1,000 LBS. PER
- ACRE OF 5-10-10.) B. SEED SHOULD BE SPREAD UNIFORMLY BY THE METHOD MOST APPROPRIATE FOR THE SITE. METHODS INCLUDE BROADCASTING, DRILLING AND HYDROSEEDING. WHERE BROADCASTING IS USED, COVER SEED WITH
- .25 INCH OF SOIL OR LESS, BY CULTIPACKING OR RAKING. C. REFER TO THE 'SEEDING GUIDE' AND 'SEEDING RATES' TABLES ON THIS SHEET FOR APPROPRIATE SEED MIXTURES AND RATES OF SEEDING. ALL LEGUMES (CROWNVETCH, BIRDSFOOT, TREFOIL AND FLATPEA)
- MUST BE INOCULATED WITH THEIR SPECIFIC INOCULANT PRIOR TO THEIR INTRODUCTION TO THE SITE. WHEN SEEDED AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDED AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20th OR FROM AUGUST 10th TO SEPTEMBER 1st.

A. HAY, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER SEEDING. B. MULCH WILL BE HELD IN PLACE USING APPROPRIATE TECHNIQUES FROM THE BEST MANAGEMENT PRACTICE FOR MULCHING. HAY OR STRAW MULCH SHALL BE PLACED AT A RATE OF 90 LBS PER 1000 S.F.

5. MAINTENANCE TO ESTABLISH A STAND

- A. PLANTED AREAS SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED
- B. FERTILIZATION NEEDS SHOULD BE DETERMINED BY ONSITE INSPECTIONS. SUPPLEMENTAL FERTILIZER IS USUALLY THE KEY TO FULLY COMPLETE THE ESTABLISHMENT OF THE STAND BECAUSE MOST PERENNIALS TAKE 2 TO 3 YEARS TO BECOME FULLY ESTABLISHED.
- C. IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED, ANNUAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION.

USE	SEEDING MIXTURE 1/	DROUGHTY	WELL DRAINED	MODERATELY WELL DRAINED	POORLY
STEEP CUTS AND	Α	FAIR	GOOD	GOOD	FAIR
FILLS, BORROW	B	POOR	GOOD	FAIR	FAIR
AND DISPOSAL AREAS	C	POOR	GOOD	EXCELLENT	GOOD
ANLAS	D	FAIR	EXCELLENT	EXCELLENT	POOR
WATERWAYS, EMERGENCY	Y A	GOOD	GOOD	GOOD	FAIR
SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER.	С	GOOD	EXCELLENT	EXCELLENT	FAIR
LIGHTLY USED PARKING	A	GOOD	GOOD	GOOD	FAIR
LOTS, ODD AREAS,	В	GOOD	GOOD	FAIR	POOR
UNUSED LANDS, AND LOW INTENSITY USE RECREATION SITES.	С	GOOD	EXCELLENT	EXCELLENT	FAIR
PLAY AREAS AND ATHLETIC FIELDS. (TOPSOIL IS ESSENTIAL FOR GOOD TURF.)	E F	FAIR FAIR	EXCELLENT EXCELLENT	EXCELLENT EXCELLENT	2/ 2/

GRAVEL PIT, SEE NH-PM-24 IN APPENDIX FOR RECOMMENDATION REGARDING RECLAMATION OF SAND AND GRAVEL PITS.

7 POORLY DRAINED SOILS ARE NOT DESIRABLE FOR USE AS PLAYING AREA AND ATHLETIC FIELDS.

REFER TO SEEDING MIXTURES AND RATES IN TABLE BELOW.

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

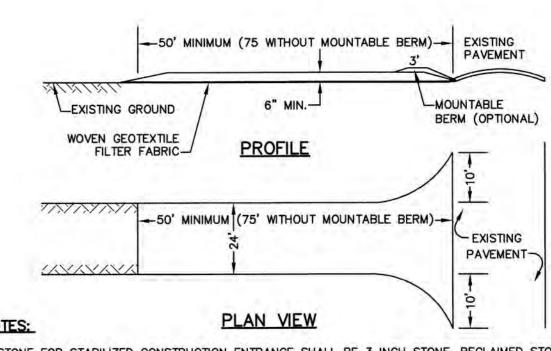
SEEDING GUIDE

MIXTURE	POUNDS PER ACRE	POUNDS PER 1,000 Sq. Ft.,
A. TALL FESCUE	20	0.45
CREEPING RED FESCUE	20	0.45
RED TOP	2	0.05
TOTAL	42	0.95
B. TALL FESCUE CREEPING RED FESCUE CROWN VETCH OR	15 10 15	0.35 0.25 0.35
FLAT PEA	30	0.75
TOTAL	40 OR 55	0.95 OR 1.35
C. TALL FESCUE CREEPING RED FESCUE BIRDS FOOT TREFOIL TOTAL	20 20 <u>8</u> 48	0.45 0.45 <u>0.20</u> 1.10
D. TALL FESCUE	20	0.45
FLAT PEA	30	0.75
TOTAL	50	1.20
E. CREEPING RED FESCUE 1/	50	1.15
KENTUCKY BLUEGRASS 1/	50	1.15
TOTAL	100	2.30
F. TALL FESCUE 1	150	3.60

SEEDING RATES

FAX: 603-772-0227

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- 1. STONE FOR STABILIZED CONSTRUCTION ENTRANCE SHALL BE 3 INCH STONE, RECLAIMED STONE, OR
- RECYCLED CONCRETE EQUIVALENT. 2. THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 50 FEET, 75' WITHOUT A MOUNTABLE BERM, AND EXCEPT FOR A SINGLE RESIDENTIAL LOT WHERE A 30 FOOT MINIMUM LENGTH
- 3. THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6 INCHES.
- 4. THE WIDTH OF THE ENTRANCE SHALL NOT BE LESS THAN THE FULL WIDTH OF THE ENTRANCE WHERE
- INGRESS OR EGRESS OCCURS, OR 10 FEET, WHICHEVER IS GREATER.

 5. GEOTEXTILE FILTER FABRIC SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE.
- FILTER FABRIC IS NOT REQUIRED FOR A SINGLE FAMILY RESIDENTIAL LOT. ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A STONE BERM WITH 5:1 SLOPES THAT CAN BE
- CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE. 7. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED, OR TRACKED ONTO THE PUBLIC RIGHT-OF-WAY MUST BE

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

REMOVED PROMPTLY.

CONSTRUCTION SEQUENCE

PRIOR TO THE START OF ANY ACTIVITY, IT IS THE RESPONSIBILITY OF THE SITE'S SITE DEVELOPER (OR OWNER) TO FILE A NOTICE OF INTENT (NOI) FORM WITH THE ENVIRONMENTAL PROTECTION AGENCY (EPA) IN ORDER TO GAIN COVERAGE UNDER THE NPDES GENERAL PERMIT FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES. A PRE CONSTRUCTION MEETING IS TO BE HELD WITH ALL DEPARTMENT HEADS PRIOR TO THE START OF CONSTRUCTION.

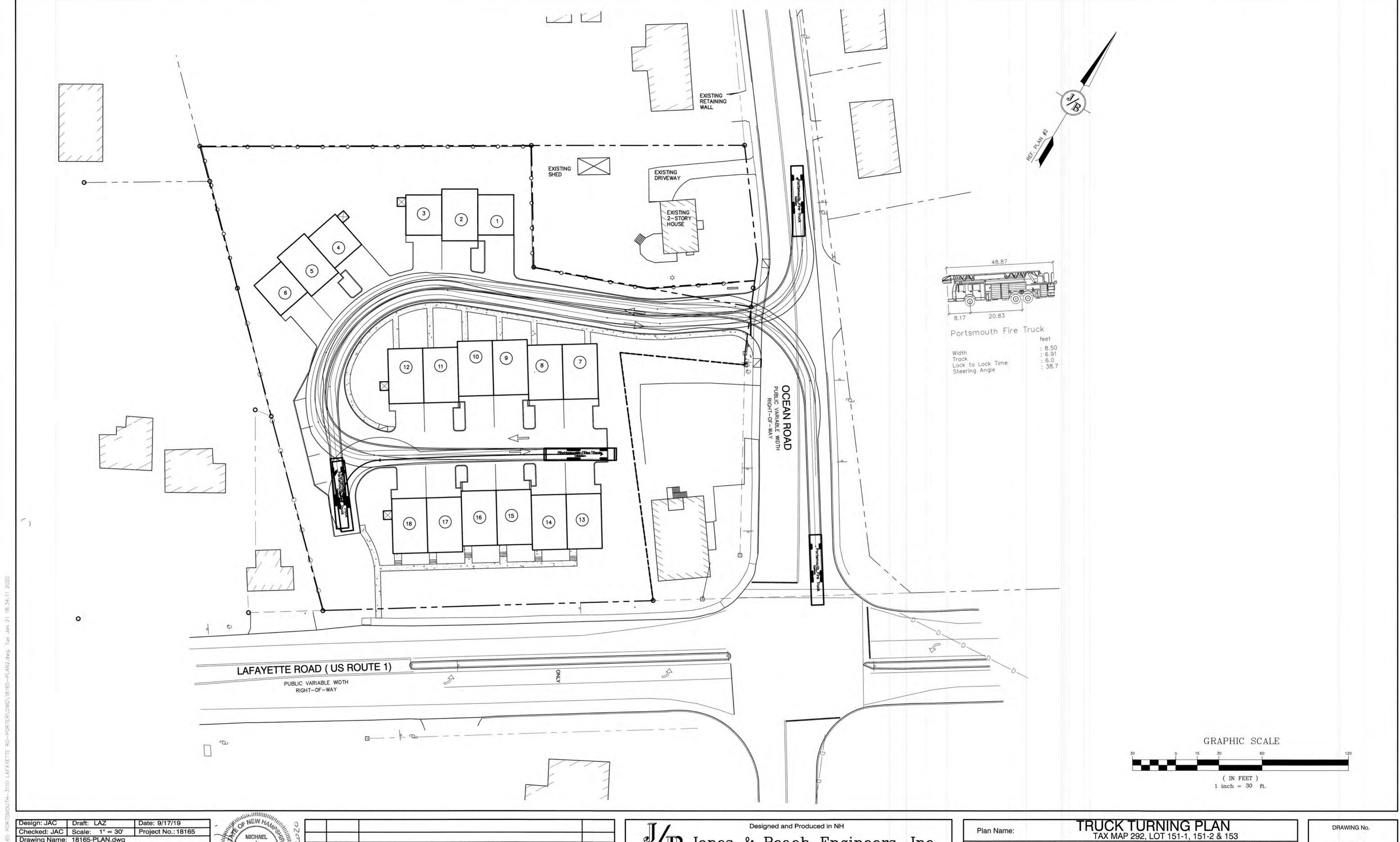
- CUT AND REMOVE TREES IN CONSTRUCTION AREA AS REQUIRED OR DIRECTED.
- 3. INSTALL SILT FENCING, HAY BALES AND CONSTRUCTION ENTRANCES PRIOR TO THE START OF CONSTRUCTION. THESE ARE TO BE MAINTAINED UNTIL THE FINAL PAVEMENT SURFACING AND LANDSCAPING AREAS ARE ESTABLISHED.
- CLEAR, CUT, GRUB AND DISPOSE OF DEBRIS IN APPROVED FACILITIES. THIS INCLUDES ANY REQUIRED DEMOLITION OF EXISTING STRUCTURES, UTILITIES, ETC.
- CONSTRUCT AND/OR INSTALL TEMPORARY OR PERMANENT SEDIMENT AND/OR DETENTION BASIN(S) AS REQUIRED. THESE FACILITIES SHALL BE INSTALLED AND STABILIZED PRIOR TO DIRECTING RUN-OFF TO THEM. STRIP LOAM AND PAVEMENT, OR RECLAIM EXISTING PAVEMENT WITHIN LIMITS OF WORK PER THE RECOMMENDATIONS OF THE PROJECT
- ENGINEER AND STOCKPILE EXCESS MATERIAL. STABILIZE STOCKPILE AS NECESSARY.
- PERFORM PRELIMINARY SITE GRADING IN ACCORDANCE WITH THE PLANS, INCLUDING THE CONSTRUCTION OF ANY RETAINING WALLS
- PREPARE BUILDING PAD(S) TO ENABLE BUILDING CONSTRUCTION TO BEGIN.
- INSTALL THE SEWER AND DRAINAGE SYSTEMS FIRST, THEN ANY OTHER UTILITIES IN ACCORDANCE WITH THE PLAN AND DETAILS. ANY CONFLICTS BETWEEN UTILITIES ARE TO BE RESOLVED WITH THE INVOLVEMENT AND APPROVAL OF THE ENGINEER.
- 10. INSTALL INLET PROTECTION AT ALL CATCH BASINS AS THEY ARE CONSTRUCTED IN ACCORDANCE WITH DETAILS.
- 11. ALL SWALES AND DRAINAGE STRUCTURES ARE TO BE CONSTRUCTED AND STABILIZED PRIOR TO HAVING RUN-OFF DIRECTED TO THEM
- 12. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINAGE DITCHES, CHECK DAMS, SEDIMENT TRAPS, ETC., TO PREVENT EROSION ON THE SITE AND PREVENT ANY SILTATION OF ABUTTING WATERS AND/OR PROPERTY.
- 13. PERFORM FINAL FINE GRADING, INCLUDING PLACEMENT OF 'SELECT' SUBGRADE MATERIALS.
- 14. PAVE ALL PARKING LOTS AND ROADWAYS WITH INITIAL 'BASE COURSE'.
- 15. PERFORM ALL REMAINING SITE CONSTRUCTION (i.e. BUILDING, CURBING, UTILITY CONNECTIONS, ETC.).
- 16. LOAM AND SEED ALL DISTURBED AREAS AND INSTALL ANY REQUIRED SEDIMENT AND EROSION CONTROL FACILITIES (i.e. RIP RAP, EROSION CONTROL BLANKETS, ETC.).
- 17. FINISH PAVING ALL ROADWAYS AND PARKING AREAS WITH 'FINISH' COURSE.
- 18. ALL ROADWAYS AND PARKING LOTS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
- 19. ALL CUT AND FILL SLOPES SHALL BE SEEDED/LOAMED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
- 20. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
- 21. REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER SEEDING AREAS HAVE BEEN 75%-85% ESTABLISHED AND SITE IMPROVEMENTS ARE COMPLETE. SMOOTH AND RE-VEGETATE ALL DISTURBED AREAS.
- 22. CLEAN SITE AND ALL DRAINAGE STRUCTURES, PIPES AND SUMPS OF ALL SILT AND DEBRIS.
- 23. INSTALL ALL PAINTED PAVEMENT MARKINGS AND SIGNAGE PER THE PLANS AND DETAILS.
- 24. ALL EROSION CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER EVERY HALF-INCH OF RAINFALL.
- 25. UPON COMPLETION OF CONSTRUCTION, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY ANY RELEVANT PERMITTING AGENCIES THAT THE CONSTRUCTION HAS BEEN FINISHED IN A SATISFACTORY MANNER.

Designed and Produced in NH Jones & Beach Engineers, Inc. 603-772-4746 Civil Engineering Services

Plan Name: EROSION AND SEDIMENT CONTROL DETAILS 3110 LAFAYETTE ROAD AND 65 OCEAN ROAD Project: PORTSMOUTH, NH 03801 WEEKS REALTY TRUST, WEEKS KALEY E. TRUSTEE Owner of Record:
65 OCEAN ROAD SUITE 21 PORTSMOUTH, NH 03801 PO BOX 100, HAMPTON FALLS, NH 03844

SHEET 15 OF 15 JBE PROJECT NO. 18165

DRAWING No.



Design: JAC Draft: LAZ
Checked: JAC Scale: 1" = 30'
Drawing Name: 18165-PLAN.dwg Project No.: 18165

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2	01/22/20	REVISED PER TOWN COMMENTS	LAZ
1	12/20/19	REVISED PER TOWN COMMENTS	LAZ
0	10/29/19	ISSUED FOR REVIEW	LAZ
REV.	DATE	REVISION	BY

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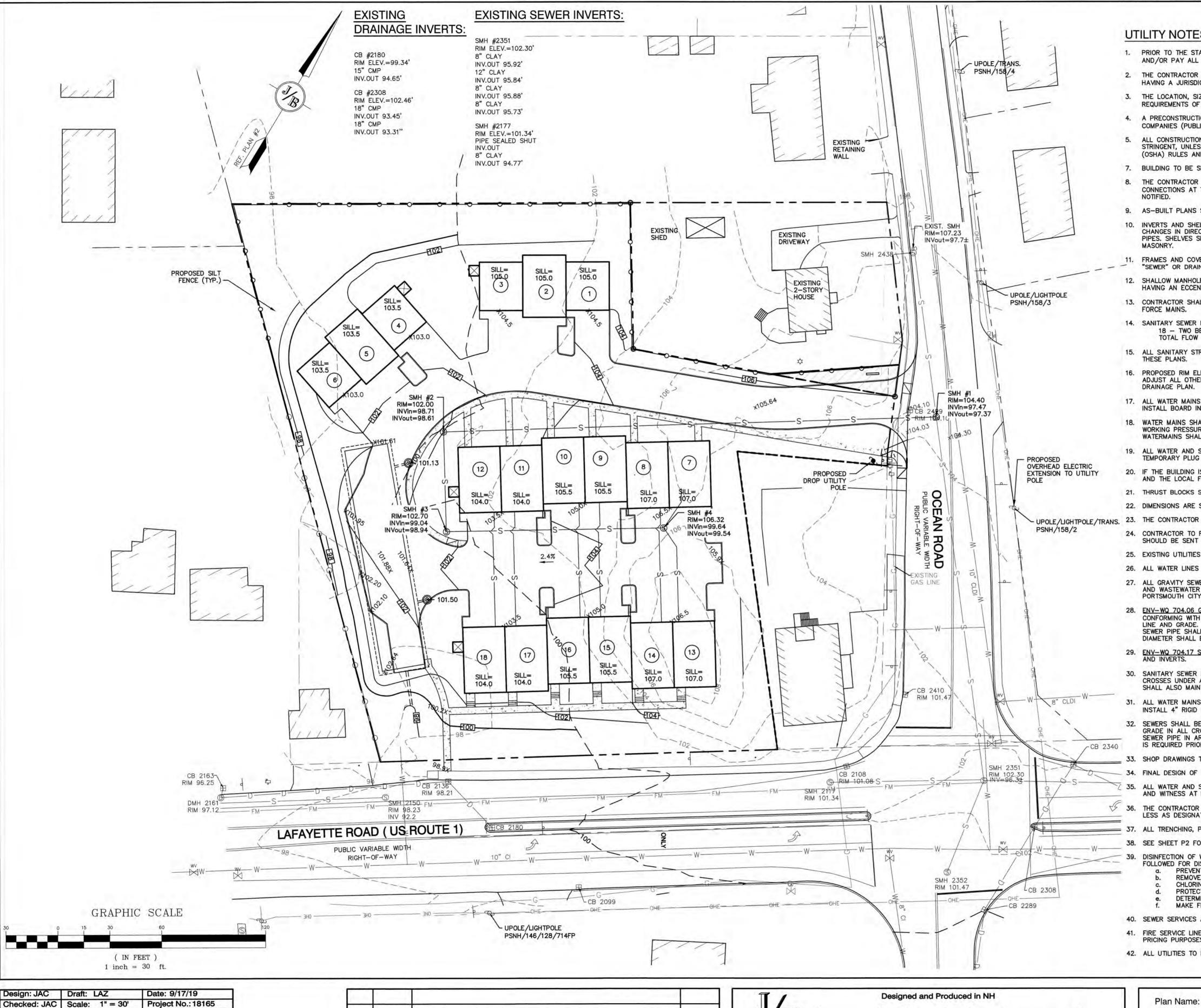
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Civil Engineering Services
E-MAIL: JBE@ Services 603-772-4746 FAX: 603-772-0227 E-MAIL: JBE@JONESANDBEACH.COM Plan Name:

3110 LAFAYETTE ROAD AND 65 OCEAN ROAD PORTSMOUTH, NH 03801 Project:

CARTER CHAD

SHEET 1 OF 1 JBE PROJECT NO. 18165 WEEKS REALTY TRUST, WEEKS KALEY E. TRUSTEE



UTILITY NOTES:

- 1. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER, ARCHITECT AND/OR OWNER, IN ORDER TO OBTAIN AND/OR PAY ALL THE NECESSARY LOCAL PERMITS, CONNECTION FEES AND BONDS.
- 2. THE CONTRACTOR SHALL PROVIDE A MINIMUM NOTICE OF FOURTEEN (14) DAYS TO ALL CORPORATIONS, COMPANIES AND/OR LOCAL AUTHORITIES OWNING OR HAVING A JURISDICTION OVER UTILITIES RUNNING TO, THROUGH OR ACROSS PROJECT AREAS PRIOR TO DEMOLITION AND/OR CONSTRUCTION ACTIVITIES.
- THE LOCATION, SIZE, DEPTH AND SPECIFICATIONS FOR CONSTRUCTION OF PROPOSED PRIVATE UTILITY SERVICES SHALL BE TO THE STANDARDS AND REQUIREMENTS OF THE RESPECTIVE UTILITY COMPANY (ELECTRIC, TELEPHONE, CABLE TELEVISION, FIRE ALARM, GAS, WATER, AND SEWER).
- 4. A PRECONSTRUCTION MEETING SHALL BE HELD WITH THE OWNER, ENGINEER, ARCHITECT, CONTRACTOR, LOCAL OFFICIALS, AND ALL PROJECT-RELATED UTILITY COMPANIES (PUBLIC AND PRIVATE) PRIOR TO START OF CONSTRUCTION.
- ALL CONSTRUCTION SHALL CONFORM TO THE CITY STANDARDS AND REGULATIONS, AND NHDES STANDARDS AND SPECIFICATIONS, WHICHEVER ARE MORE STRINGENT, UNLESS OTHERWISE SPECIFIED. 6. ALL CONSTRUCTION ACTIVITIES SHALL CONFORM TO LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) RULES AND REGULATIONS.
- 7. BUILDING TO BE SERVICED BY UNDERGROUND UTILITIES UNLESS OTHERWISE NOTED.
- THE CONTRACTOR IS TO VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITY STUBS PRIOR TO CONSTRUCTION AND DISCONNECT ALL EXISTING SERVICE CONNECTIONS AT THEIR RESPECTIVE MAINS IN ACCORDANCE WITH THE RESPECTIVE UTILITY COMPANY'S STANDARDS AND SPECIFICATIONS. ENGINEER TO BE
- 9. AS-BUILT PLANS SHALL BE SUBMITTED TO DEPARTMENT OF PUBLIC WORKS.
- 10. INVERTS AND SHELVES: MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW AT CHANGES IN DIRECTION. THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE THROUGH CHANNEL UNDERLAYMENT OF INVERT, AND SHELF SHALL CONSIST OF BRICK
- FRAMES AND COVERS: MANHOLE FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30 INCH DIA, CLEAR OPENING. THE WORD "SEWER" OR DRAIN" SHALL BE CAST INTO THE CENTER OF THE UPPER FACE OF EACH COVER WITH RAISED, 3" LETTERS.
- 12. SHALLOW MANHOLE: IN LIEU OF A CONE SECTION, WHEN MANHOLE DEPTH IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER MAY BE USED HAVING AN ECCENTRIC ENTRANCE OPENING AND CAPABLE OF SUPPORTING H20 LOADS.
- 13. CONTRACTOR SHALL PLACE 2" WIDE METAL WIRE IMPREGNATED RED PLASTIC WARNING TAPE OVER ENTIRE LENGTH OF ALL GRAVITY SEWERS, SERVICES, AND FORCE MAINS.
- 14. SANITARY SEWER FLOW CALCULATIONS:
 - 18 TWO BEDROOM UNITS @ 150 GPD/BEDROOM = TOTAL FLOW = 5,400 GPD
- 15. ALL SANITARY STRUCTURE INTERIOR DIAMETERS (4' MIN) SHALL BE DETERMINED BY THE MANUFACTURER BASED ON THE PIPE CONFIGURATIONS SHOWN ON
- 16. PROPOSED RIM ELEVATIONS OF DRAINAGE AND SANITARY MANHOLES ARE APPROXIMATE. FINAL ELEVATIONS ARE TO BE SET FLUSH WITH FINISH GRADES. ADJUST ALL OTHER RIM ELEVATIONS OF MANHOLES, WATER GATES, GAS GATES AND OTHER UTILITIES TO FINISH GRADE AS SHOWN ON THE GRADING AND
- 17. ALL WATER MAINS AND SERVICE PIPES SHALL HAVE A MINIMUM 12" VERTICAL AND 24" HORIZONTAL SEPARATION TO MANHOLES, OR CONTRACTOR SHALL INSTALL BOARD INSULATION FOR FREEZING PROTECTION.
- 18. WATER MAINS SHALL BE HYDROSTATICALLY PRESSURE TESTED FOR LEAKAGE PRIOR TO ACCEPTANCE. WATERMAINS SHALL BE TESTED AT 1.5 TIMES THE WORKING PRESSURE OR 150 PSI, WHICH EVER IS GREATER. TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH SECTION 4 OF AWWA STANDARD C 600. WATERMAINS SHALL BE DISINFECTED AFTER THE ACCEPTANCE OF THE PRESSURE AND LEAKAGE TESTS ACCORDING TO AWWA STANDARD C 651.
- 19. ALL WATER AND SANITARY LEADS TO BUILDING(S) SHALL END 5' OUTSIDE THE BUILDING LIMITS AS SHOWN ON PLANS AND SHALL BE PROVIDED WITH A TEMPORARY PLUG AND WITNESS AT END.
- 20. IF THE BUILDING IS REQUIRED TO HAVE A SPRINKLER SYSTEM, A PRECONSTRUCTION MEETING SHALL BE HELD BETWEEN THE CONTRACTOR, OWNER, ARCHITEC' AND THE LOCAL FIRE DEPARTMENT PRIOR TO THE INSTALLATION.
- 21. THRUST BLOCKS SHALL BE PROVIDED AT ALL BENDS, TEES, MECHANICAL JOINTS AND FIRE HYDRANTS.
- 22. DIMENSIONS ARE SHOWN TO CENTERLINE OF PIPE OR FITTING.
- UPOLE/LIGHTPOLE/TRANS. 23. THE CONTRACTOR SHALL HAVE THE APPROVAL OF ALL GOVERNING AGENCIES HAVING JURISDICTION OVER FIRE PROTECTION SYSTEM PRIOR TO INSTALLATION.
 - 24. CONTRACTOR TO FURNISH SHOP DRAWINGS FOR UTILITY RELATED ITEMS TO ENSURE CONFORMANCE WITH THE PLANS AND SPECIFICATIONS. SHOP DRAWINGS SHOULD BE SENT IN TRIPLICATE TO THE DESIGN ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
 - 25. EXISTING UTILITIES SHALL BE DIGSAFED BEFORE CONSTRUCTION.
 - 26. ALL WATER LINES SHOULD HAVE TESTABLE BACKFLOW PREVENTERS AT THE ENTRANCE TO EACH BUILDING IF REQUIRED BY THE PUBLIC WORKS.
 - 27. ALL GRAVITY SEWER PIPE, MANHOLES, AND FORCE MAINS SHALL BE TESTED ACCORDING TO NHDES STANDARDS OF DESIGN AND CONSTRUCTION FOR SEWAGE AND WASTEWATER TREATMENT FACILITIES, CHAPTER ENV-WQ 700. ADOPTED ON 10-15-14. ALL TESTING SHALL BE WITNESSED IN COORDINATION WITH
 - 28. ENV-WQ 704.06 GRAVITY SEWER PIPE TESTING: GRAVITY SEWERS SHALL BE TESTED FOR WATER TIGHTNESS BY USE OF LOW-PRESSURE AIR TESTS CONFORMING WITH ASTM F1417-92(2005) OR UNI-BELL PVC PIPE ASSOCIATION UNI-B-6. LINES SHALL BE CLEANED AND VISUALLY INSPECTED AND TRUE TO LINE AND GRADE. DEFLECTION TEST'S SHALL TAKE PLACE AFTER 30 DAYS FOLLOWING INSTALLATION AND THE MAXIMUM ALLOWABLE DEFLECTION OF FLEXIBLE SEWER PIPE SHALL BE 5% OF AVERAGE INSIDE DIAMETER. A RIGID BALL OR MANDREL WITH A DIAMETER OF AT LEAST 95% OF THE AVERAGE INSIDE PIPE DIAMETER SHALL BE USED FOR TESTING PIPE DEFLECTION. THE DEFLECTION TEST SHALL BE CONDUCTED WITHOUT MECHANICAL PULLING DEVICES.
 - 29. ENV-WQ 704.17 SEWER MANHOLE TESTING: SHALL BE TESTED FOR LEAKAGE USING A VACUUM TEST PRIOR TO BACKFILLING AND PLACEMENT OF SHELVES AND INVERTS.
 - 30. SANITARY SEWER LINES SHALL BE LOCATED AT LEAST TEN (10) FEET HORIZONTALLY FROM AN EXISTING OR PROPOSED WATER LINE. WHEN A SEWER LINE CROSSES UNDER A WATER LINE, THE SEWER PIPE JOINTS SHALL BE LOCATED AT LEAST 6 FEET HORIZONTALLY FROM THE WATERMAIN. THE SEWER LINE SHALL ALSO MAINTAIN A VERTICAL SEPARATION OF NOT LESS THAN 18 INCHES.
 - ALL WATER MAINS AND SERVICE PIPES SHALL HAVE A MINIMUM 12" VERTICAL AND 24" HORIZONTAL SEPARATION TO MANHOLES, OR CONTRACTOR SHALL INSTALL 4" RIGID FOAM INSULATION IN 2" LIFTS FOR FREEZING PROTECTION.
 - 32. SEWERS SHALL BE BURIED TO A MINIMUM DEPTH OF 6 FEET BELOW GRADE IN ALL ROADWAY LOCATIONS, AND TO A MINIMUM DEPTH OF 4 FEET BELOW GRADE IN ALL CROSS-COUNTRY LOCATIONS. PROVIDE TWO-INCHES OF R-10 FOAM BOARD INSULATION 2-FOOT WIDE TO BE INSTALLED 6-INCHES OVER SEWER PIPE IN AREAS WHERE DEPTH IS NOT ACHIEVED. A WAIVER FROM THE DEPARTMENT OF ENVIRONMENTAL SERVICES WASTEWATER ENGINEERING BUREAU IS REQUIRED PRIOR TO INSTALLING SEWER AT LESS THAN MINIMUM COVER.
 - 33. SHOP DRAWINGS TO BE SUBMITTED TO CITY OF PORTSMOUTH FOR REVIEW AND APPROVAL.
 - 34. FINAL DESIGN OF WATER MAIN SHALL BE REVIEWED AND APPROVED BY DPW.
 - ALL WATER AND SANITARY LEADS TO BUILDING(S) SHALL END AT RIGHT OF WAY AS SHOWN ON PLANS AND SHALL BE PROVIDED WITH A TEMPORARY PLUG AND WITNESS AT END.
 - 36. THE CONTRACTOR SHALL MINIMIZE THE DISRUPTIONS TO THE EXISTING SEWER FLOWS AND THOSE INTERRUPTIONS SHALL BE LIMITED TO FOUR (4) HOURS OR LESS AS DESIGNATED BY THE TOWN SEWER DEPARTMENT.
 - 37. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
 - 38. SEE SHEET P2 FOR SEWER DESIGN DETAILS
 - DISINFECTION OF WATER MAINS SHALL BE CARRIED OUT IN STRICT ACCORDANCE WITH AWWA STANDARD C651, LATEST EDITION. THE BASIC PROCEDURE TO BE FOLLOWED FOR DISINFECTING WATER MAINS IS AS FOLLOWS:
 - PREVENT CONTAMINATING MATERIALS FROM ENTERING THE WATER MAIN DURING STORAGE, CONSTRUCTION, OR REPAIR.
 - REMOVE, BY FLUSHING OR OTHER MEANS, THOSE MATERIALS THAT MAY HAVE ENTERED THE WATER MAINS. CHLORINATE ANY RESIDUAL CONTAMINATION THAT MAY REMAIN. AND FLUSH THE CHLORINATED WATER FROM THE MAIN.
 - PROTECT THE EXISTING DISTRIBUTION SYSTEM FROM BACKFLOW DUE TO HYDROSTATIC PRESSURE TEST AND DISINFECTION PROCEDURES.
 - DETERMINE THE BACTERIOLOGICAL QUALITY BY LABORATORY TEST AFTER DISINFECTION MAKE FINAL CONNECTION OF THE APPROVED NEW WATER MAIN TO THE ACTIVE DISTRIBUTION SYSTEM
 - 40. SEWER SERVICES AND WATER SERVICES UNDER SLAB TO BE SLEEVED WITH PVC PIPE.
 - 41. FIRE SERVICE LINE SIZE TO BE DETERMINED BY MECHANICAL, SPRINKLER OR FIRE ENGINEER AND SIZES SHOWN TO BE CONSIDERED APPROXIMATE FOR
 - 42. ALL UTILITIES TO BE SLEEVED UNDER BUILDING SLABS

Project:

— UTILITY PLAN 3110 LAFAYETTE ROAD AND 65 OCEAN ROAD

PORTSMOUTH, NH 03801 CARTER CHAD

DRAWING No.

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Drawing Name: 18165-PLAN.dwg

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SHEET 6 OF 15 JBE PROJECT NO. 18165



mjk

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CONSULTANTS

REVISIONS

APPROVALS

PLANNING BOARD APPLICATION 12/19/2019

DT 13.2020 AWHANG ROOF BRACKETS ACCIDED

12.19.19 REAR ELEVATION AWNINGS

Accept: only original stamp and signature

PROJECT

3110 LAFAYETTE ROAD AND 65 OCEAN ROAD PORTSMOUTH, NH

FOR TUCK REALTY CORP

1149 EPPING ROAD, SUITE 2A EXETER NH 03833

TITLE

CONCEPT ELEVATIONS A

DRAWN BY: MJK

DATE: 1/13/2020

SCALE: DRAWING NO.

A-1



85 Portsmouth Avenue, PO Box 219, Stratham, NH 03885 603.772.4746 - JonesandBeach.com

January 21, 2020

Portsmouth Planning Board Attn: Dexter Legg 1 Junkins Avenue, Suite 3rd Floor Portsmouth, NH 03801

RE: Groundwater Mounding Analysis
3110 Lafayette Road & 65 Ocean Road, Portsmouth, NH
Tax Map 292, Lots 151-1 & 151-2
JBE Project No. 18165

Dear Mr. Legg,

Jones & Beach Engineers, Inc., has performed a Groundwater Mounding Analysis for the subject site utilizing the Hantush Equation.

The parameters used in the Hantush Analysis utilize on-site testing and published values. Groundwater mounding calculations were derived using a Microsoft Excel document supplied by the USGS that acts as a supplement to the USGS report titled "Simulation of Groundwater Mounding Beneath Hypothetical Stormwater Infiltration Basins". This document can be found at the following web address:

http://pubs.usgs.gov/sir/2010/5102/support/sir2010-5102.pdf

The results of the groundwater mounding calculations for the proposed subsurface infiltration system consisting of R-Tanks is included with this document.

The input values were gathered from testing results and assumed values taken from published documents.

The infiltration rate, or saturated hydraulic conductivity (Ksat) value was determined using the 'Ksat Values for New Hampshire Soils', SSSNNE Special Publication No. 5, September, 2009. The in-situ soil in the area of infiltration is Urban Land-Canton Complex which has a minimum Ksat value of 6.0 inches/hour. A factor of safety of 2 was applied and a Ksat value of 3.0 inches/hour (6.0 ft/day) was used in the analysis. A 10:1 ratio of horizontal to vertical hydraulic conductivity is used per the USGS Report.

The time used for the groundwater mounding calculations is the drawdown time calculated for the infiltration system using the NH DES BMP Worksheet for Infiltration Practice Criteria (attached).

The Saturated Thickness value used for the mounding calculations was chosen using the USGS Document and a more conservative value of 10' is used (as opposed to 20' or 40' which yield lesser mounding values).

The specific yield for the groundwater calculations was chosen at 17% using the USGS Report and the test pit logs which show a sandy material.

These calculations show that a groundwater mound of 2.4' will occur underneath the center of the system. The closest foundation to the center of system is 72' away. Interpolating the Groundwater Mounding Table within the Groundwater Mounding Analysis, at a distance of 72' from the center of the basin there will be a 0.048' mound. This relates to 0.6", basically one-half an inch. This slight increase in groundwater elevation should not cause any problems with the adjacent foundation.

This proposed site development will have minimal adverse effect on abutting infrastructures or properties by way of stormwater infiltration if properly constructed in accordance with the Drainage Analysis and approved project plan set.





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GROUNDWATER MOUNDING ANALYSIS

Project:

Ocean Road Condominiums

Location:

3110 LaFayette Road/ 65 Ocean Raod

By:

Jones and Beach Engineers, Inc.

Date:

01/22/2020

Project #:

18165

Input Values

6.0000	R	Recharge (infiltration) rate (feet/day)
0.170	Sy	Specific yield, Sy (dimensionless, between 0 and 1)
60.00	K	Horizontal hydraulic conductivity, Kh (feet/day)
12.500	х	1/2 length of basin (x direction, in feet)
64.500	У	1/2 width of basin (y direction, in feet)
0.150	t	duration of infiltration period (days)
10.000	hi(0)	initial thickness of saturated zone (feet)

Solution

12.407	h(max)	maximum thickness of saturated zone
2.407	Δh(max)	maximum groundwater mounding*

* Beneath center of basin at end of infiltration period

Table & Chart

Ground-	Distance from		Gro	undwa	ater Mo	oundin	g, in fe	et	
water Mounding, in feet	center of basin in x direction,	3.000						****	
mieet	in feet	2.500						Mark and a second	
2.407	0	2.000 -				-			
1.381	20	2.000							
0.467	40	1.500 -		Ar and are			,		
0.243	50		No.						
0.119	60	1.000 -							
0.054	70								
0.024	80	0.500							
0.010	90				M				
0.005	100	0.000			-			-	
0.002	120	(20	40	60	80	100	120	140



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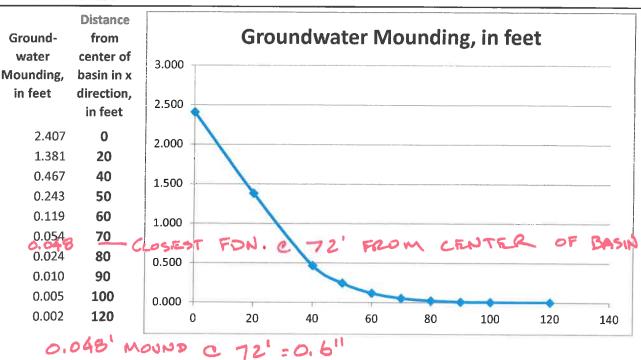
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* Beneath center of basin at end of infiltration period

Table & Chart





INFILTRATION PRACTICE CRITERIA (Env-Wq 1508.06)

Type/Node Name:

Enter the type of infiltration practice (e.g., basin, trench) and the node name in the drainage analysis, if applicable

Have you reviewed Env-Wq 1508.06(a) to ensure that infiltration is allowed? O.93 ac A = Area draining to the practice O.80 ac A _I = Impervious area draining to the practice I = percent impervious area draining to the practice, in decimal form	
0.80 ac A _I = Impervious area draining to the practice 0.86 decimal I = percent impervious area draining to the practice, in decimal form	
0.86 decimal I = percent impervious area draining to the practice, in decimal form	
D D CC CC :	
0.82 unitless $Rv = Runoff coefficient = 0.05 + (0.9 x I)$	i i
0.77 ac-in WQV= 1" x Rv x A	
2,796 cf WQV conversion (ac-in x 43,560 sf/ac x 1ft/12")	
699 cf 25% x WQV (check calc for sediment forebay volume)	
Method of pretreatment? (not required for clean or roof runoff)	
cf V_{SED} = sediment forebay volume, if used for pretreatment $\leftarrow \geq 25\%W$	QV
$\boxed{4,356} \text{ cf} \qquad V = \text{volume}^1 \text{ (attach a stage-storage table)} \qquad \qquad \bigstar \geq WQV$	
$A_{SA} = \text{surface area of the bottom of the pond}$	
$3.00 \text{ iph} \qquad \text{Ksat}_{\text{DESIGN}} = \text{design infiltration rate}^2 = 2$	
3.5 hours $T_{DRAIN} = \text{drain time} = V / (A_{SA} * I_{DESIGN}) = U = 0.15 \text{ Ays}$ $t \le 72\text{-hrs}$	
feet E_{BTM} = elevation of the bottom of the basin	
feet E_{SHWT} = elevation of SHWT (if none found, enter the lowest elevation of the test pit)	
feet E_{ROCK} = elevation of bedrock (if none found, enter the lowest elevation of the test pit)	
- feet D_{SHWT} = separation from SHWT	
feet D_{ROCK} = separation from bedrock	
ft D_{amend} = Depth of amended soil, if applicable due high infiltation rate $\leftarrow \geq 24$ "	:
ft D_T = depth of trench, if trench proposed \leftarrow 4 - 10 ft	
Yes/No If a trench or underground system is proposed, observation well provided ⁴	
If a trench is proposed, material in trench	
If a basin is proposed, basin floor material	
Yes/No If a basin is proposed, the perimeter should be curvilinear, basin floor shall be flat.	
:1 If a basin is proposed, pond side slopes ← ≥3:1	
ft Peak elevation of the 10-year storm event (infiltration can be used in analysis)	
ft Peak elevation of the 50-year storm event (infiltration can be used in analysis)	
ft Elevation of the top of the practice (if a basin, this is the elevation of the berm)	
10 peak elevation ≤ Elevation of the top of the trench?	
If a basin is proposed, 50-year peak elevation ≤ Elevation of berm?	

- 1. Volume below the lowest invert of the outlet structure and excludes forebay volume
- $2. \ \ Ksat_{DESIGN} \ includes \ a \ factor \ of \ safety. \ See \ Env-Wq \ 1504.14 \ for \ requirements \ for \ determining \ the \ infiltr. \ rate$
- 3. 1' separation if treatment not required; 4' for treatment in GPAs & WSIPAs; & 3' in all other areas.
- 4. Clean, washed well graded diameter of 1.5 to 3 inches above the in-situ soil.
- 5. If 50-year peak elevation exceeds top of trench, the overflow must be routed in HydroCAD as secondary discharge.

Designer's Notes:	 	 	 	

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Stage-Area-Storage for Pond 3P: R-TANKS

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)	
96.40	0.088	0.000	99.00	0.088	0.151	
96.45	0.088	0.002	99.05	0.088	0.152	
96.50	0.088	0.004	99.10	0.088	0.154	
96.55	0.088	0.005	99.15	0.088	0.156	
96.60	0.088	0.007	99.20	0.088	0.158	
96.65	0.088	0.009	99.25	0.088	0.159	
96.70	0.088	0.011	99.30	0.088	0.161	
96.75	0.088	0.013				
96.80	0.088	0.017				
96.85	0.088	0.021	İ			
96.90	0.088	0.024 0.028				
96.95 97.00	0.088 0.088	0.028				
97.05	0.088	0.032				
97.10	0.088	0.040	ĺ			
97.15	0.088	0.043				
97.20	0.088	0.047				
97.25	0.088	0.051				
97.30	0.088	0.055				
97.35	0.088	0.059				
97.40	0.088	0.062				
97.45	0.088	0.066				
97.50	0.088	0.070				
97.55	0.088	0.074				
97.60	0.088	0.078				
97.65	0.088	0.081				
97.70	0.088	0.085				
97.75 97.80	0.088 0.088	0.089 0.093				
97.85	0.088	0.093		_		
97.90	0.088	0.100	15" INV	. = 97.9	0	
97.95	0.088	0.104	(3) 1100		0 43,560 SF A C F AVAILAGE	
98.00	0.088	0.108	0100	Ac. fx X	77,760 /	
98.05	0.088	0.112	0,100		AC	
98.10	0.088	0.116		11		
98.15	0.088	0.119	= '	45560	+ AVAILAS	316
98.20	0.088	0.122			STORAG	E
98.25	0.088	0.124				
98.30	0.088	0.126				
98.35	0.088	0.128				
98.40	0.088	0.129 0.131				
98.45 98.50	0.088 0.088	0.131				
98.55	0.088	0.135				
98.60	0.088	0.136				
98.65	0.088	0.138				
98.70	0.088	0.140				
98.75	0.088	0.142				
98.80	0.088	0.143				
98.85	0.088	0.145				
98.90	0.088	0.147				
98.95	0.088	0.149				

18165-PROPOSED

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Summary for Pond 3P: R-TANKS

Inflow Area = 0.934 ac, 86.08% Impervious, Inflow Depth > 6.13" for 50-YR STORM event
Inflow = 6.08 cfs @ 12.08 hrs, Volume= 0.477 af
Outflow = 2.52 cfs @ 12.31 hrs, Volume= 0.477 af, Atten= 59%, Lag= 13.7 min
Discarded = 0.66 cfs @ 12.31 hrs, Volume= 0.403 af
Primary = 1.86 cfs @ 12.31 hrs, Volume= 0.074 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 98.76' @ 12.31 hrs Surf.Area= 0.088 ac Storage= 0.142 af

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 65.9 min (833.0 - 767.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	96.40'	0.061 af	28.93'W x 133.02'L x 2.94'H Field A
			0.260 af Overall - 0.107 af Embedded = 0.153 af x 40.0% Voids
#2A	96.73'	0.101 af	ACF R-Tank HD 1 x 1045 Inside #1
			Inside= 15.7"W x 17.3"H => 1.80 sf x 2.35'L = 4.2 cf
			Outside= 15.7"W x 17.3"H => 1.89 sf x 2.35'L = 4.4 cf
			19 Rows of 55 Chambers
		0.163 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	96.40'	3.000 in/hr Exfiltration over Surface area
			Conductivity to Groundwater Elevation = 94.80'
#2	Primary	97.90'	15.0" Round Culvert
			L= 20.0' CPP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 97.90' / 97.80' S= 0.0050 '/' Cc= 0.900
			n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Discarded OutFlow Max=0.66 cfs @ 12.31 hrs HW=98.76' (Free Discharge) —1=Exfiltration (Controls 0.66 cfs)

Primary OutFlow Max=1.86 cfs @ 12.31 hrs HW=98.76' TW=0.00' (Dynamic Tailwater) 2=Culvert (Barrel Controls 1.86 cfs @ 2.93 fps)