

NONRESIDENTIAL SITE PLAN APPLICATION
City of Rochester, New Hampshire

Date: 08/28/2020 Is a conditional use needed? Yes: X No: Unclear:
(If so, we encourage you to submit an application as soon as possible.)

Property information

Tax map #: 243; Lot #(s): 36 & 37; Zoning district: General Industrial

Property address/location: 109 Airport Drive

Name of project (if applicable): Pella Windows and Doors of New England

Size of site: 3.53 & 1.10 acres; overlay zoning district(s)? Conservation Overlay and Aviation Overlay

Property owner

Name (include name of individual): Spectex Realty LLC c/o Victor J. Pisinski

Mailing address: 1 Progress Drive, Unit 1, Dover NH 03820

Telephone #: 603 330-3334 Email: vpisinski@spectex.com

Applicant/developer (if different from property owner)

Name (include name of individual): Pella Windows and Doors of New England, c/o David Hadley

Mailing address: 137 Brown Road, Tuftonboro, NH

Telephone #: 603-986-2979 Email: Hadleydavid04@gmail.com

Engineer/designer

Name (include name of individual): Norway Plains Associates, Inc. c/o Scott Lawler, PE

Mailing address: PO Box 249, Rochester NH 03866-0249

Telephone #: 603 335-3948 Fax #: vpisinski@spectex.com

Email address: slawler@norwayplains.com Professional license #: PE 10026

Proposed activity (check all that apply)

New building(s): X Site development (other structures, parking, utilities, etc.): X

Addition(s) onto existing building(s): Demolition: Change of use:

Describe proposed activity/use: Construction of a 24,000 sf executive office and distribution building for a major window and door manufacturing and distribution company.

Describe existing conditions/use (vacant land?): The site is undeveloped and mostly wooded

Utility information

City water? yes ☒ no ☐; How far is City water from the site? _____

City sewer? yes ☒ no ☐; How far is City sewer from the site? _____

If City water, what are the estimated total daily needs? 250 gallons per day

If City water, is it proposed for anything other than domestic purposes? yes ☐ no ☒

If City sewer, do you plan to discharge anything other than domestic waste? yes ☐ no ☒

Where will stormwater be discharged? Treated stormwater will either infiltrate in the ground or discharged toward the northeast corner

Building information

Type of building(s): Steel Building

Building height: 22'-3" Finished floor elevation: 281.00'

Other information

parking spaces: existing: 0 total proposed: 43; Are there pertinent covenants? _____

Number of cubic yards of earth being removed from the site Less than 500 cy

Number of existing employees: 0; number of proposed employees total: 25

Check any that are proposed: variance ☐; special exception ☐; conditional use ☒

Wetlands: Is any fill proposed? No; area to be filled: N/A; buffer impact? ☒

Proposed <u>post-development</u> disposition of site (should total 100%)		
	Square footage	% overall site
Building footprint(s) – give for each building	24,000	11.9%
Parking and vehicle circulation	65,833	32.6%
Planted/landscaped areas (excluding drainage)	72,241	35.8%
Natural/undisturbed areas (excluding wetlands)	34,470	17.1%
Wetlands	2,790	1.4%
Other – drainage structures, outside storage, etc.	2,348	1.2%

Comments

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

A waiver to the overall number of parking spaces is being requested

Submission of application

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

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

Signature of property owner: _____

Victor J. Pisarski
Victor J. Pisarski Date: Aug. 31, 2020

Signature of applicant/developer: _____

DAVID E. HADLEY
DAVID E. HADLEY Date: 9.1.20

Signature of agent: _____

SCOTT LAWLER
SCOTT LAWLER Date: 9/7/20

Authorization to enter subject property

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

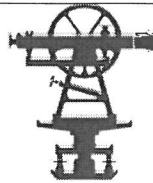
Signature of property owner: _____

Date: _____

NORWAY PLAINS ASSOCIATES, INC.

LAND SURVEYORS • SEPTIC SYSTEM DESIGNERS • CIVIL ENGINEERS

P.O. Box 249
Continental Blvd. (03867)
Rochester, NH 03866-0249
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Alton, NH 03809
www.norwayplains.com
Phone & Fax (603) 875-3948
rtetreault@norwayplains.com

September 7, 2020

Seth Creighton, Chief Planner
Planning Department
City of Rochester
33 Wakefield Street
Rochester, NH 03867

Re: Non- Residential Site Plan Application; Pella Windows and Doors of New England.; Airport Drive, Map 243, Lots 36 & 37.

Dear Mr. Creighton:

On behalf of Pella Windows and Doors of New England and Spectex Realty LLC, we hereby submit plans and nonresidential site plan application for a proposed executive office and distribution facility located off Airport Drive. The parcels, Tax Map 243, Lots 36 & 37 comprising of 4.63 acres and are currently owned by the Spectex Realty LLC. The parcels are slated to be sold to the applicate shortly after approval from the Rochester Planning Board and will be merged into a single lot.

The parcels are located within the Granite State Business Park (GSBP) and in the Industrial (GI) zoning district. Located northerly of the properties is NH Northcoast Railroad with a vacant parcel owned by the city across the tracks. To the east is the city land with a municipal sewage pump station that services the industrial park. West of the parcel is another manufacturing parcel, which should be starting shortly as LDI Solutions, LLC. Across Airport Drive are parcels owned by Albany International Techniwave Inc and Albany Engineering Composite Inc. Access to the project will be from a single driveway located off Airport Drive.

The subject lots are mostly wooded and vacant with the exception of utilities running overhead and underground along the front and rear of the lots. The land sloped generally from southwest to northeast, with a couple small wetland complexes at the toe of the parcel along the NH Northcoast Railroad. Jurisdictional wetlands were delineated by B.H. Keith Associates on July 3, 2020. The site-specific soils were evaluated on the vacant lots by Joseph Noel, Certified soil scientist in July 2020.

Pella Windows and Doors of New England is proposing to construct a 120' by 2000' (24,000 square feet print) building on the parcels. This building will have two units, with one being approximately one third (45,000 sq. ft.) the size of the main facility. The larger west end of the building will be approximately 18,000 square feet of warehouse and distribution space. The eastern end of the building will consist of two-story office space and meeting space. The proposed building will be steel framed and metal sided with a gradual slopped roof from the front towards the rear.

Pella Windows and Doors of New England are planning operating with 15 to 20 employees, eventually increasing to approximately 30 to 35 employees in the future. The general hours of operation will be 6:00am to 6:00pm, Monday through Friday with limited hours on the weekends. The business expects about 2 to 4 tractor trailers entering and existing the facility a week, which may fluctuate a little with seasonality. They anticipate that several much smaller box trucks will leave during the day for delivers to the local building supply businesses.

As mentioned above, access to the facility will be from a new driveway to be constructed off Airport Drive. Once into the site, a parking lot will be constructed on the right side which will consist of 43 parking spaces. Of which, 3 spaces have been designated as accessible parking spaces with accessible aisles in accordance with the ADA guidelines. According to the Rochester Site Review Regulations, the total number of required parking spaces for the proposed building would be 51. As such, a waiver is being requested to allow for a reduction of 8 parking spaces below the suggested amount outlined within the regulations.

The stormwater from the new impervious surfaces will be collected via closed drainage system consisting of catch basins and drainage pipes. The runoff collected from the site will be directed towards a StormTech chamber detention/infiltration system below the pavement. The initial first of stormwater which carries majority of the small particles will be sent into isolation rows at either end of the field. The majority of the stormwater from the larger events will be directed to the interior rows of StormTech chambers. All of the chambers retain the stormwater and allow for infiltration back into the groundwater. An overflow pipe will discharge the additional stormwater northeasterly towards the ditch line along the railroad right of way. In all, the post development stormwater management system will attenuate the peak runoff rates and total volume such that they are equal or less than the corresponding Pre-development runoff conditions for all storm events.

In order to construct the parking lot on the east side of the parcels, there will still be some minor grading within the Conservation Overall district. As such, a Conditional Use Permit application is herewith attached to request minor site grading in the outer 25 feet of the CO district and for the direct impacts of jurisdictional wetlands. There is no proposed direct impacts to the wetlands as part of this site development.

The proposed facility will be serviced by City water and sewer. A new water service will be connected to the City water main on Airport Drive. Domestic sanitary waste will be directed toward the municipal sewer main that is located between these lots and the adjacent lot owned by LDI Solutions, LLC. A new manhole will be installed on the City main which will service both new developments. The building will be sprinklered

Snow storage will be located on the eastern side of the access roadway and on the northern side of the parking lot. All utilities will be run underground to the building. Natural gas will also be extended to the proposed building. Lighting fixtures will be mounted on poles and on the building, all meeting the requirements of the City of Rochester lighting standards. A patio will be constructed at the rear of the office space off the employee breakroom. The site will be nicely landscaped to enhance the appearance of the building facade.

The proposed project will require several State and Federal permits. From the State of New Hampshire

Department of Environmental Services (NHDES), an Alteration of Terrain Permit is required based on the overall earth disturbance from the development. A cursory review from the Pease Development Authority (PDA) for the proposed development to comply with the Aviation Overlay District. From a federal permit aspect, approval from the Federal Aviation Administration (FAA) for the permeant building will be necessary to ensure it meets their requirements for obstruction. A temporary permit from FAA is likely for any crane activity associated with the construction of the building. Since there will be a point source discharge of stormwater and the project impacting more than an acre of land, a Construction General Permit from the EPA as part of the National Discharge Pollution Elimination Systems (NDPES). The latter permit will be sought by the general contractor and site contractor within 14-days of the start of construction.

We look forward to discussing this project with staff and the Planning Board. Thank you for your consideration Sincerely,

NORWAY PLAINS ASSOCIATES, INC.

A handwritten signature in black ink, appearing to read "Scott A. Lawler", written in a cursive style.

By:
Scott A. Lawler, PE, Project Engineer

cc: Pella Windows and Doors of New England
Spectex Realty LLC

Application for Conditional Use
Conditional Uses and Buffer Reductions
Section 42.19 - Conservation Overlay District
City of Rochester, NH

Date: 08/28/2020

Property information

Tax map #: 243; Lot #(s): 36 & 37; Zoning district: General Industrial

Property address/location: 109 Airport Drive

Name of project (if applicable): Pella Windows and Doors of New England

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Name (include name of individual): Spectex Realty LLC c/o Victor J. Pisinski

Mailing address: 1 Progress Drive, Unit 1, Dover NH 03820

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Name (include name of individual): Pella Windows and Doors of New England, c/o David Hadley

Mailing address: 137 Brown Road, Tuftonboro, NH

Telephone #: 603-986-2979 Fax #: Hadleydavid04@gmail.com

Engineer/designer

Name (include name of individual): Norway Plains Associates, Inc. c/o Scott Lawler, PE

Mailing address: PO Box 249, Rochester NH 03866-0249

Telephone #: 603 335-3948 Fax #: n/a

Email address: slawler@norwayplains.com Professional license #: PE 10026

Proposed Project

Please describe the proposed project: Construction of a 24,000 sf corporate office and warehouse building
for a major window and door manufacturing and distribution company.

Please describe the existing conditions: The site is undeveloped and mostly wooded

(continued Conditional Use application Tax Map: 243 Lot: 36 & 37)

Please fill in **one of the next two sections – for either Conditional Uses or Buffer Reductions**

Conditional Uses

For Conditional Uses only, justify the proposal in terms of each of the criteria below (in accordance with subsection 42.19 (i) (1) (A)). All four criteria must be satisfied.

(i) The proposed construction is essential to the productive use of land not in the COD.

The proposed impacts to the COD will be for the construction of a parking lot associated with the proposed corporate office and warehousing facility. Given the size of the lots, existing topography and proposed building, the location of the proposed parking lot is the essential to the development of the land outside of the COD.

(ii) Design and construction methods will be such as to minimize impact upon the wetlands and will include restoration of the site consistent with the permitted use.

The impacts to the COD are associated with the site grading of the parking lot. The parking lot will have curbing to prevent untreated stormwater leaving the pavement and discharging into the COD. The land being impacted within the COD will be revegetated with grasses once completed.

(iii) There is no feasible alternative route on land controlled by the applicant that does not cross the CO District nor has less detrimental impact on the wetlands. Nothing in this Section shall limit the applicant from exploring alternatives with abutting property owners.

There will be no impacts to the Wetlands and all the work in the CO District is associated with site grading and will be in the outer 25 feet of the buffer.

(iv) Economic advantage is not the sole reason for the proposed location of work.

The site has been designed to best utilize the land outside the Conservation Overall District and the limited impacts within the COD are associated with the site grading of the parking lot. Avoidance to the jurisdictional wetlands was a contributing factor to the design of the project.

(Buffer Reductions on next page)

Buffer Reductions

For Buffer Reductions only, justify the proposal in terms of each of the criteria below (in accordance with subsection 42.19 (i) (2) (B)). All four criteria must be satisfied.

(i) The structure for which the exception is sought cannot feasibly, after consideration of all reasonable alternatives, be constructed on a portion or portions of the lot, which lie outside the CO district, **or** the application of the CO district eliminates greater than 50% of the buildable area located on the parcel **or** in the judgment of the Planning Board, the proposed site layout would result in a significantly higher quality design.

(ii) The proposed structure and use must be consistent with the purpose and intent of Section 42.19 and provisions must be made to ensure that drainage from the structure will not adversely impact any wetlands.

(iii) There shall be no impervious areas for parking within the reduced buffer for which the Conditional Use Approval is sought.

(iv) The maximum building coverage is limited to 50% of the outer half of the buffer zone, as shown in the diagram below.

(v) Best management practices must be demonstrated to the satisfaction of the Planning Board.

Submission of application

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

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

Signature of property owner: _____

Victor J. Pinski

Date: Aug 31, 2020

Signature of applicant/developer: _____

DAVID E. HADLEY

Date: 9.1.20

Signature of agent: _____

SCOTT LAWLER

Date: 9/7/20

Authorization to enter subject property

I hereby authorize members of the Rochester Conservation Commission and Planning Board, and other pertinent City departments, boards and agencies to enter my property for the purpose of evaluating this application including performing any appropriate inspections. This authorization applies specifically to those particular individuals legitimately involved in evaluating, reviewing, or inspecting this specific application/project. It is understood that these individuals must use all reasonable care, courtesy, and diligence when entering the property. (It is not necessary to sign this provision if a Planning Board application has been submitted.)

Signature of property owner: _____

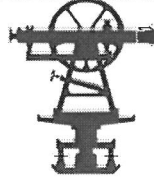
Victor J. Pinski

Date: Aug 31, 2020

NORWAY PLAINS ASSOCIATES, INC.

LAND SURVEYORS • SEPTIC SYSTEM DESIGNERS • CIVIL ENGINEERS

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rtetreault@norwayplains.com

September 7, 2020

Rochester Conservation Commission
Department of Planning and Development
Second Floor, City Hall
31 Wakefield Street
Rochester, NH 03867-1917

Re: Conditional Use Application - Proposed Non-residential Site Plan – Airport Drive - Tax Map 243, Lots 36 & 37.

Dear Members,

On behalf of the Pella Windows and Doors of New England and Spectex Realty LLC, Norway Plains Associates, Inc. is pleased to submit plans and Conditional Use application for a proposed executive office and distribution facility located off Airport Drive. The parcels, Tax Map 243, Lots 36 & 37 are comprised of 4.63 acres and is currently owned by Spectex Realty LLC. The parcels are slated to be sold to the applicant shortly after approval from the Rochester Planning Board and will be merged into a single lot. This Conditional Use application is being submitted in conjunction with a proposed Non-residential Site Plan application to the Rochester Planning Board.

The parcels are located within the Granite State Business Park (GSBP) and in the Industrial (GI) zoning district. Located northerly of the properties is NH Northcoast Railroad with a vacant parcel owned by the city across the tracks. To the east is the city land with a municipal sewage pump station that services the industrial park. West of the parcel is another manufacturing parcel, which should be starting shortly as LDI Solutions, LLC. Across Airport Drive are parcels owned by Albany International Techniwave Inc and Albany Engineering Composite Inc. Access to the project will be from a single driveway located off Airport Drive.

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The project will require approval from NHDES Alteration of Terrain Bureau for the proposed earth disturbance associated with the construction of the facility. There will not be any direct impacts to the jurisdictional wetlands. Minor grading for the proposed parking lot is proposed within the outer 25 feet of the Conservation Overlay district, totaling approximately 5,825 square feet. With the use of a retaining wall and stabilized 2:1 slope, along the northern and eastern edges of the development, there is no impact in the inner 25 feet of the CO.

Should the Commission need additional information or have any questions, please feel free to contact our office. Otherwise we look forward to discussing this project with staff and the Conservation Commission. Thank you for your consideration

Sincerely,

NORWAY PLAINS ASSOCIATES, INC.



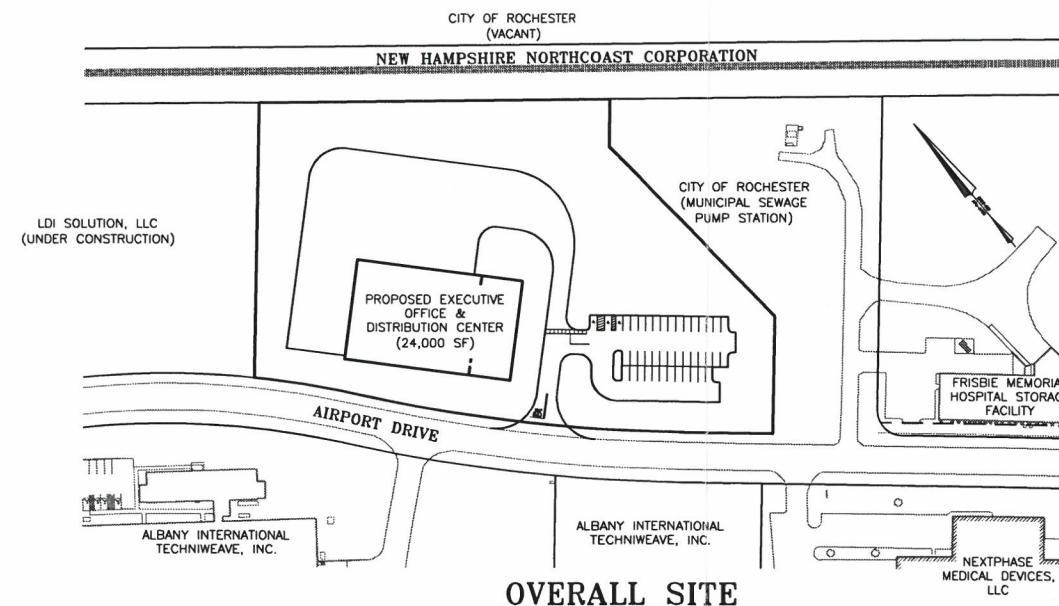
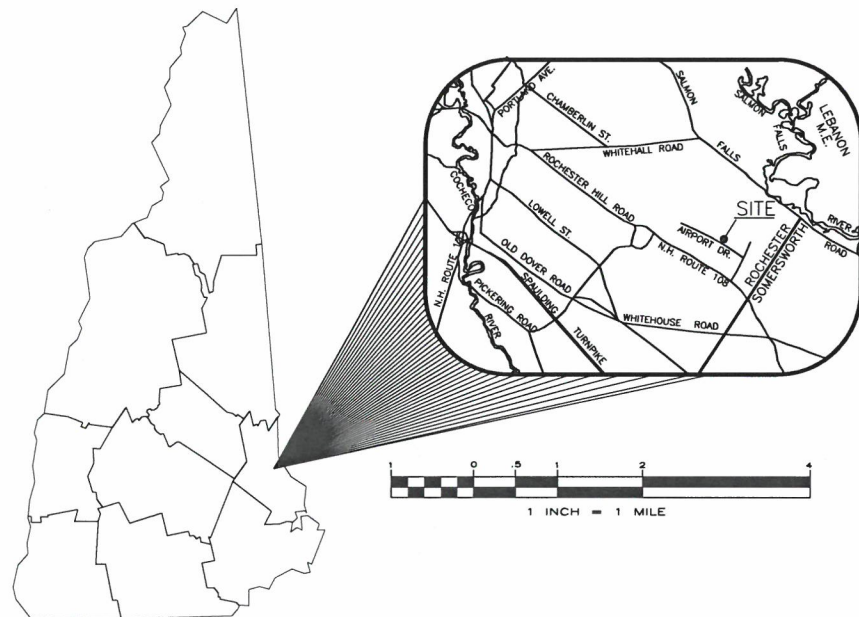
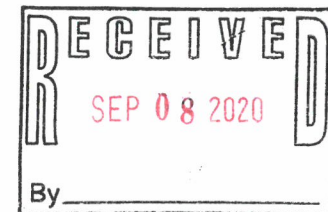
By:

Scott A. Lawler, PE, Project Engineer

cc: Pella Doors and Windows of New England
Spectex Reality LLC



PROPOSED EXECUTIVE OFFICES AND DISTRIBUTION CENTER FOR PELLA WINDOWS AND DOORS OF NEW ENGLAND 109 AIRPORT DRIVE ROCHESTER, N.H. 03867 SEPTEMBER 2020



CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITHIN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.

CIVIL ENGINEERS
NORWAY PLAINS ASSOCIATES, INC.
2 CONTINENTAL BOULEVARD
ROCHESTER, NEW HAMPSHIRE 03867
(603) 335-3948

OWNER OF RECORD
TAX MAP 243, LOT 36 & LOT 37
OWNER OF RECORD:
SPECTEX REALTY LLC
1 PROGRESS DRIVE
DOVER, NH 03820-5450
SCRD BOOK 3340, PAGE 690

APPLICANT
PELLA WINDOWS AND DOORS OF NEW ENGLAND
137 BROWN ROAD
TUFROTNBORO, NH 03816
(603) 986-2979

STATE AND FEDERAL PERMITS:
STATE OF NEW HAMPSHIRE PERMIT NUMBERS:
NHDES ALTERATION OF TERRAIN: REQUIRED
NHDES WETLANDS PERMIT: NOT REQUIRED
NHDES DAM PERMIT: NOT REQUIRED
NHDES SUBDIVISION PERMIT: NOT REQUIRED
NHDES SUBSURFACE SYSTEMS PERMIT: NOT REQUIRED
NHDES WASTEWATER PERMIT: NOT REQUIRED
NHDOT DRIVEWAY/ENTRANCE PERMIT: NOT REQUIRED

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES):
NPDES PERMITS ARE ONLY REQUIRED FOR PROJECTS MEETING THE DISTURBED AREA CRITERIA BELOW AND HAVING A POINT SOURCE STORMWATER DISCHARGE FROM THE SITE TO AN ADJACENT WETLAND OR WATER BODY (I.E. CULVERT, SWALE, ETC. OUTLETING TO A WETLAND, CREEK, STREAM OR RIVER).
NPDES PERMIT: REQUIRED
NPDES PERMITS CONSIST OF A NOTICE OF INTENT (NOI) FILED WITH THE ENVIRONMENTAL PROTECTION AGENCY AT LEAST 14 DAYS PRIOR TO CONSTRUCTION COMMENCING AND A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) BEING PREPARED, KEPT ON SITE AND FOLLOWED BY THE CONTRACTOR.
FOR STATUS OF THIS PERMIT, CONTACT THE PROJECT GENERAL CONTRACTOR.

FINAL APPROVAL BY
ROCHESTER PLANNING BOARD

CERTIFIED BY: _____ DATE: _____

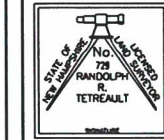
SHEET INDEX		
SHEET	COVER	
E-1	EXISTING FEATURES	1" = 40'
C-1	OVERALL SITE PLAN	1" = 40'
C-2	SITE LAYOUT PLAN	1" = 40'
C-3	GRADING AND DRAINAGE PLAN	1" = 40'
C-4	EROSION AND SEDIMENTATION CONTROL PLAN	1" = 40'
C-5	UTILITY PLAN	1" = 40'
C-6	PARKING AND SIDEWALK DETAILS	AS SHOWN
C-7	CONSTRUCTION DETAILS	AS SHOWN
C-8	DRAINAGE DETAILS	AS SHOWN
C-9	STORMTECH DETAILS	AS SHOWN
C-10	TEMPORARY EROSION AND SEDIMENTATION CONTROL DETAILS	AS SHOWN
C-11	PERMANENT EROSION AND SEDIMENTATION CONTROL DETAILS	AS SHOWN
C-12	UTILITY DETAILS	AS SHOWN
C-13	SEWER DETAILS	AS SHOWN
L-1	LIGHTING PLAN AND DETAILS	1" = 40'
L-2	SITE LANDSCAPING PLAN	1" = 40'
A1.1	GROUND FLOOR	1/8" = 1'-0"
A1.2	SECOND FLOOR	1/8" = 1'-0"
A2.1	EXTERIOR ELEVATIONS	1/8" = 1'-0"
A2.2	EXTERIOR ELEVATIONS	1/8" = 1'-0"

FILE NO. 104
PLAN NO. C-3085
DWC. NO. 20108 SP-1
P.B. NO.

LAND SURVEYORS

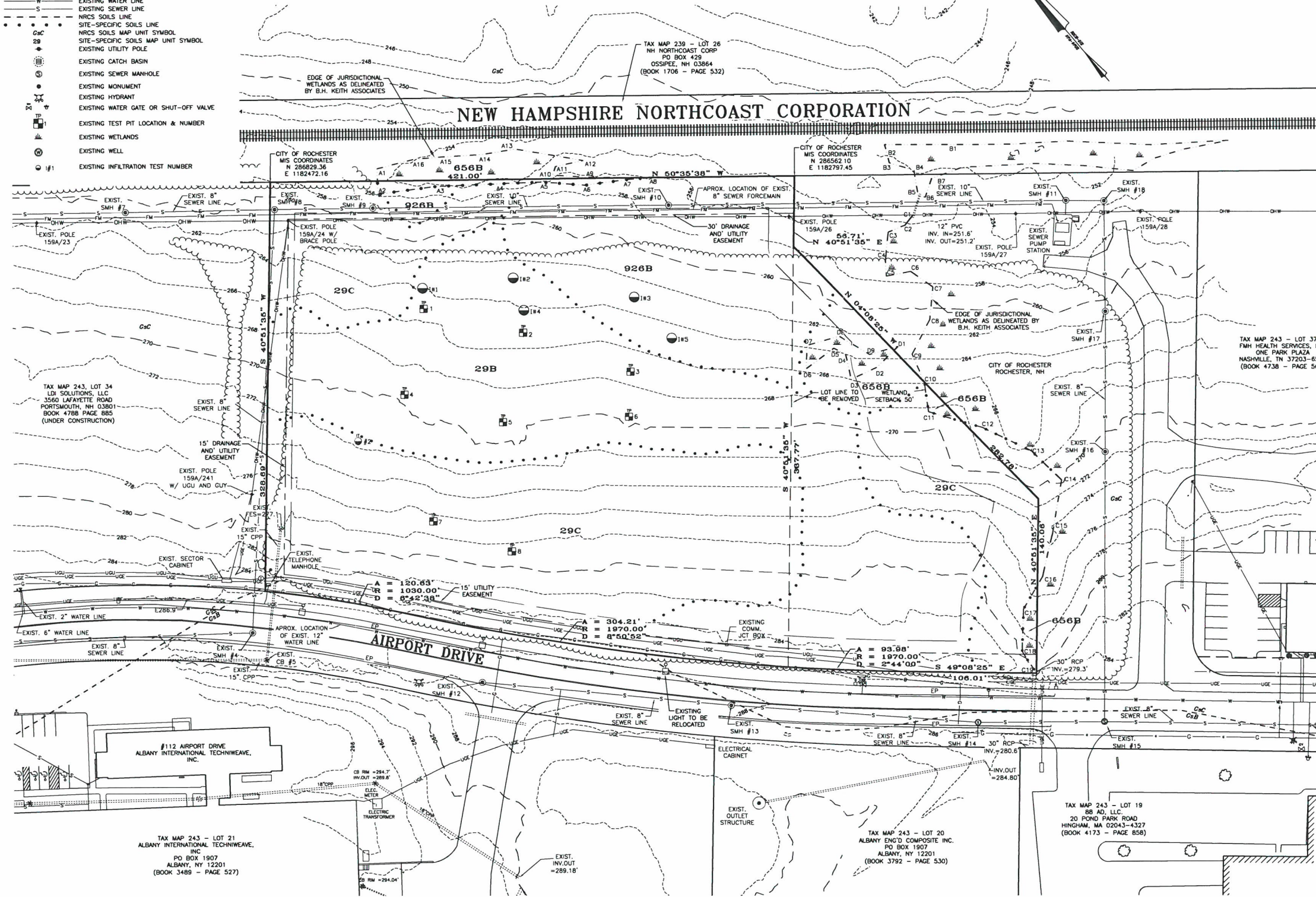


CIVIL ENGINEERS



- LEGEND**
- PROPERTY LINE
 - LIMITS OF JURISDICTIONAL WETLANDS
 - BUILDING SETBACKS
 - EXISTING EDGE OF PAVEMENT
 - EXISTING TREE LINE
 - EXISTING STONEWALLS
 - EXISTING RAILROAD TRACKS
 - EXISTING CONTOUR LINE
 - EXISTING DRAIN LINE
 - EXISTING OVERHEAD WIRES
 - EXISTING WATER LINE
 - EXISTING SEWER LINE
 - NRCS SOILS LINE
 - SITE-SPECIFIC SOILS LINE
 - NRCS SOILS MAP UNIT SYMBOL
 - SITE-SPECIFIC SOILS MAP UNIT SYMBOL
 - EXISTING UTILITY POLE
 - EXISTING CATCH BASIN
 - EXISTING SEWER MANHOLE
 - EXISTING MONUMENT
 - EXISTING HYDRANT
 - EXISTING WATER GATE OR SHUT-OFF VALVE
 - EXISTING TEST PIT LOCATION & NUMBER
 - EXISTING WETLANDS
 - EXISTING WELL
 - EXISTING INFILTRATION TEST NUMBER

CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITHIN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.



- GENERAL NOTES:**
- THIS PARCEL IS LOCATED IN THE GRANITE STATE BUSINESS PARK AND IN THE GENERAL INDUSTRIAL ZONE(G) ZONE AND AVIATION OVERLAY DISTRICT (AOD).
 - TOTAL PARCEL AREA:
MAP 243 - LOT 36 = 3.53 ACRES
MAP 243 - LOT 37 = 1.10 ACRES
 - MINIMUM LOT REQUIREMENTS WITH WATER AND SEWER:
LOT AREA = 20,000 SQ.FT.
FRONTAGE = 100 FT.
SIDE = 25 FT.
REAR = 25 FT.
MAXIMUM LOT COVERAGE = 75%
MAXIMUM BUILDING HEIGHT = 55 FT.
 - THE LOTS ARE CURRENTLY UNDEVELOPED.
 - THE PARCEL IS NOT LOCATED WITHIN THE 100 YEAR FLOOD ZONE AS SHOWN ON THE FLOOD INSURANCE RATE MAP DATED MAY 17, 2005 COMMUNITY PANEL 3307C0216D.
 - VERTICAL DATUM AND CONTOURS ARE DERIVED FROM LIDAR DATA ACQUIRED BY NOAA IN 2011 (NAVD83) (GEOD18).
 - HORIZONTAL DATUM IS NH STATE PLANE NAD83 (2007).
 - SITE-SPECIFIC SOIL MAP WAS PREPARED BY JOSEPH NOEL, CCS #17 ON JULY 10, 2020.
 - TEST PITS WERE PREPARED BY JOSEPH NOEL, CCS #17 ON JULY 10, 2020.
 - JURISDICTIONAL WETLANDS WERE DELINEATED BY B.H. KEITH, CWS #87 ON JULY 3, 2020.
 - INFILTRATION TESTING WAS CONDUCTED BY S.W. COLE ENGINEERING ON JULY 14, 2020.

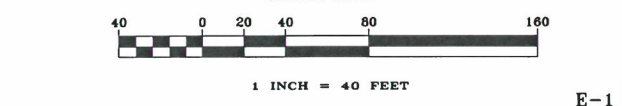
- WETLAND NOTES**
- STATE AND FEDERAL JURISDICTIONAL WETLANDS WERE DELINEATED BY N.H. CERTIFIED WETLAND SCIENTIST, BARRY H. KEITH, ON JULY 3, 2020. WETLANDS MAPPING WAS DONE BY N.H. LICENSED LAND SURVEYORS, NORWAY PLAINS ASSOCIATES, INC., IN ACCORDANCE WITH THE FOLLOWING GUIDANCE DOCUMENTS:
- N.H. CODE OF ADMINISTRATIVE RULES (ENV-WT 301.01) WITH THE TECHNIQUES OUTLINED IN THE 1987 U.S. ARMY CORPS OF ENGINEERS WETLAND DELINEATION MANUAL, TECHNICAL REPORT Y-87-1.
 - U.S. ARMY CORPS OF ENGINEERS, 2008, "REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHEASTERN AND NORTHWESTERN REGION," U.S. ARMY CORPS OF ENGINEERS RESEARCH AND DEVELOPMENT CENTER, ENVIRONMENTAL LABORATORY ERDC/EL TR-09-19.
 - U.S. ARMY CORPS OF ENGINEERS, 2012, "NATIONAL LIST OF PLANT SPECIES THAT OCCUR IN WETLANDS: NORTHEAST REGION," U.S. ARMY CORPS OF ENGINEERS RESEARCH AND DEVELOPMENT CENTER, ENVIRONMENTAL LABORATORY.
 - N.H. CODE OF ADMINISTRATIVE RULES (ENV-WT 301.02) WITH THE U.S. FISH AND WILDLIFE SERVICE MANUAL FWS/OBS-79/31 ENTITLED "CLASSIFICATION OF WETLANDS AND DEEPWATER HABITATS OF THE UNITED STATES," COWARDIN ET AL., 1979.
 - NEW ENGLAND HYDRIC SOILS TECHNICAL COMMITTEE, 2004, 3RD ED., "FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND," NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION, LOWELL, MA.
 - U.S. DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, 2010, "FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, VERSION 7.0," L.M. VASILAS, G.W. HURT, AND C.V. NOBLE (EDS.), USDA, NRCS, IN COOPERATION WITH THE NATIONAL TECHNICAL COMMITTEE FOR HYDRIC SOILS.



SEWER STRUCTURES	EXIST. SMH #9	EXIST. SMH #14	DRAINAGE STRUCTURES
EXIST. SMH #3 RIM = 287.7' INV. IN = 280.4' INV. OUT = 280.4'	RIM = 259.8' INV. IN = 253.1'(W) INV. IN = 254.1'(S) INV. OUT = 253.0'	RIM = 286.66' EXIST. SMH #15 RIM = 286.02' EXIST. SMH #16 RIM = 275.66' EXIST. SMH #17 RIM = 264.53' EXIST. SMH #11 RIM = 255.2' EXIST. SMH #12 RIM = 255.2'(S) EXIST. SMH #13 RIM = 288.07'	EXIST. CB #4 RIM = 284.9' EXIST. CB #5 RIM = 286.6' EXIST. CB #6 RIM = 281.8' EXIST. CB #7 RIM = 243.68' EXIST. CB #8 RIM = 245.48' EXIST. CB #9 RIM = 245.45'

TAX MAP 243, LOT 36 & LOT 37
OWNER OF RECORD:
SPECTEX REALTY LLC
1 PROGRESS DRIVE
DOVER, NH 03820-5450
SCRD BOOK 3340, PAGE 690

EXISTING FEATURES PLAN
TAX MAP 243, LOTS 36 & 37
109 AIRPORT DRIVE
ROCHESTER, NH
PREPARED FOR:
PELLA WINDOWS AND DOORS
OF NEW ENGLAND
SEPTEMBER 2020
GRAPHIC SCALE



FILE NO. 104
PLAN NO. C-3085
DWG. NO. 20108 SP-1
F.B. NO.

REFERENCE PLAN:
 1. "RE-SUBDIVISION PLAN GRANITE STATE BUSINESS PARK, ROCHESTER, N.H. FOR GRANITE STATE BUSINESS PARK, INC." DATED FEBRUARY 1994 BY NORWAY PLAINS ASSOCIATES, INC. AND RECORDED AT THE STRAFFORD COUNTY REGISTRY OF DEEDS, PLAN 44-46.

31 Mooney Street, Alton, N.H. 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

FINAL APPROVAL BY
ROCHESTER PLANNING BOARD

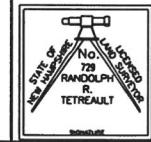
CERTIFIED BY: _____ **DATE:** _____

2 Continental Blvd., Rochester, N.H. 603-335-3948

LAND SURVEYORS



CIVIL ENGINEERS



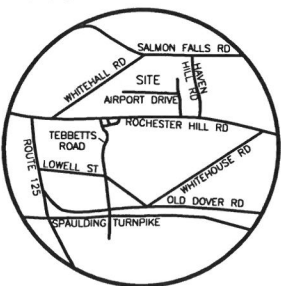
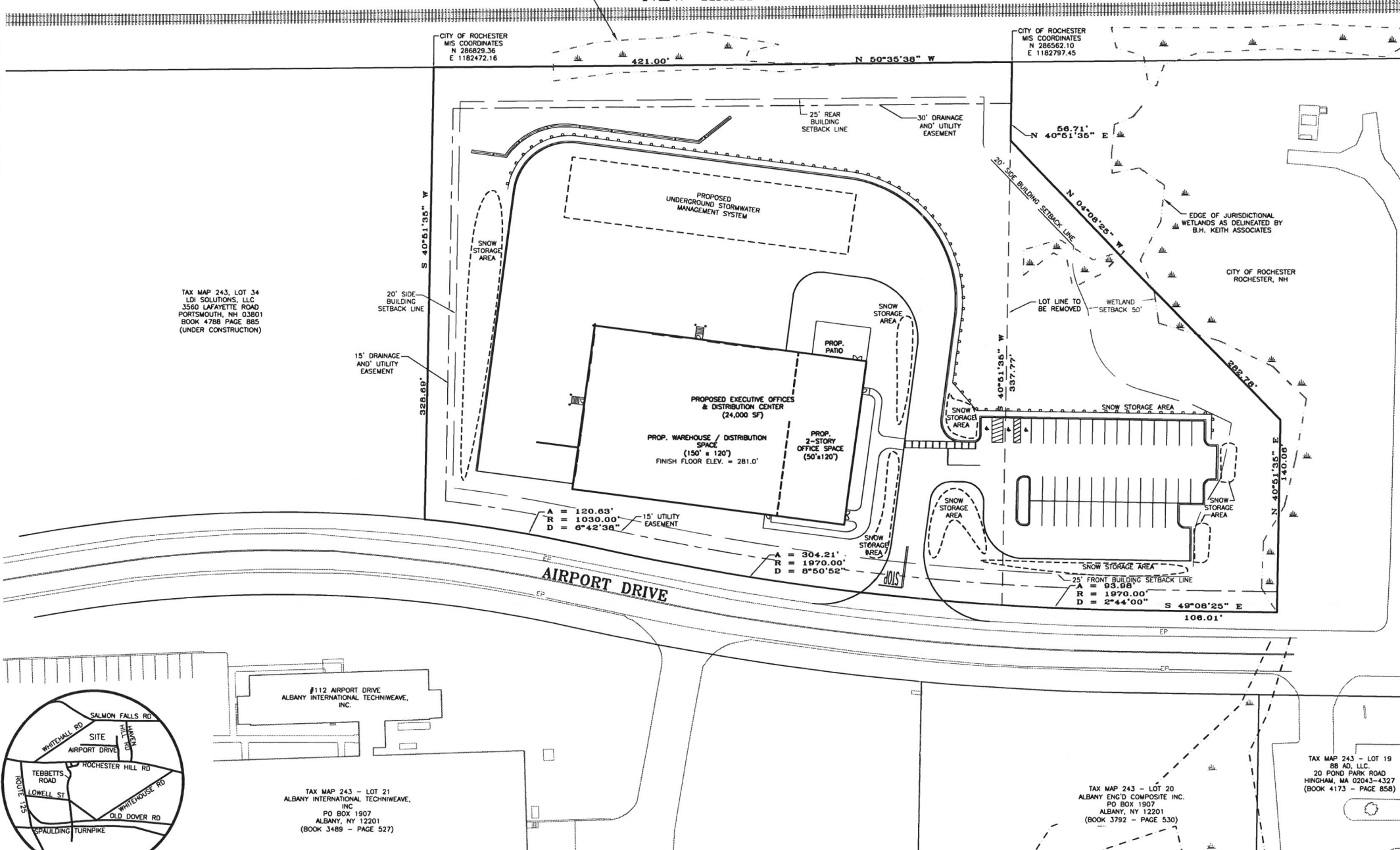
- LEGEND**
- N 50°35'38" W 421.00' PROPERTY LINE
 - JURISDICTIONAL WETLANDS
 - WETLAND SETBACK
 - EXISTING TREE LINE
 - EXISTING OVERHEAD WIRES
 - EXISTING HYDRANT
 - EXISTING WATER GATE OR SHUT-OFF VALVE
 - EXISTING UTILITY POLE
 - EXISTING SEWER MAN HOLE
 - EXISTING CATCH BASIN
 - EXISTING LIGHT POLES
 - PROPOSED BUILDING
 - PROPOSED PAVEMENT
 - PROPOSED PAVEMENT WITH CURBING

TAX MAP 242 - LOT 5
CITY OF ROCHESTER
31 WAKEFIELD STREET
ROCHESTER, NH 03866
(BOOK 3963 - PAGE 25)

TAX MAP 239 - LOT 26
NH NORTHCOAST CORP
PO BOX 429
OSSIPPE, NH 03864
(BOOK 1706 - PAGE 532)

EDGE OF JURISDICTIONAL
WETLANDS AS DELINEATED
BY B.H. KEITH ASSOCIATES

NEW HAMPSHIRE NORTHCOAST CORPORATION



TAX MAP 243 - LOT 21
ALBANY INTERNATIONAL TECHNWEAVE,
INC.
PO BOX 1907
ALBANY, NY 12201
(BOOK 3489 - PAGE 527)

TAX MAP 243 - LOT 20
ALBANY ENDO COMPOSITE INC.
PO BOX 1907
ALBANY, NY 12201
(BOOK 3792 - PAGE 530)

TAX MAP 243 - LOT 19
88 AD, LLC
20 POND PARK ROAD
HINGHAM, MA 02043-4327
(BOOK 4173 - PAGE 858)

LOCATION MAP

NOT TO SCALE

FILE NO. 104
PLAN NO. C-3085
DWG. NO. 20108 SP-1
F.B. NO.

SITE REVIEW APPROVAL

WHETHER OR NOT OTHERWISE EXPRESSLY RECITED ON THIS SITE REVIEW PLAN, THE SITE REVIEW APPROVAL GRANTED IS CONDITIONED ON FAITHFUL AND DILIGENT ADHERENCE BY THE OWNER/DEVELOPER TO ALL WRITTEN AND VERBAL REPRESENTATIONS MADE REGARDING SUCH MATTERS AS USE, NUMBER OF EMPLOYEES, DRAINAGE, CONSTRUCTION, ETC. AS WELL AS ALL OTHER TERMS, CONDITIONS, PROVISIONS, REQUIREMENTS AND SPECIFICATIONS OF THE SITE PLAN REVIEW REGULATIONS OF THE CITY OF ROCHESTER, N.H., AS AMENDED, IN EFFECT ON THE DATE OF APPROVAL. ANY VARIATION FROM THE PROPOSAL AS APPROVED MAY ALSO REQUIRE THE SUBMISSION AND APPROVAL OF A NEW SITE REVIEW APPLICATION.

31 Mooney Street, Alton, N.H. 603-875-3948

FINAL APPROVAL BY
ROCHESTER PLANNING BOARD

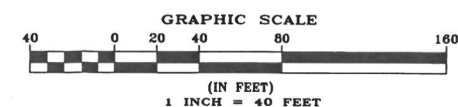
CERTIFIED BY: _____ DATE: _____

- GENERAL SITE PLAN NOTES**
- THIS PARCEL IS LOCATED IN THE GRANITE STATE BUSINESS PARK AND IN THE GENERAL INDUSTRIAL (GI) ZONE AVIATION OVERLAY DISTRICT (AOD).
 - TOTAL PARCEL AREA:
MAP 243 - LOT 36 = 3.53 ACRES
MAP 243 - LOT 37 = 1.10 ACRES
 - THE PURPOSE OF THIS PLAN IS TO DEPICT A PROPOSED COMBINED WAREHOUSE DISTRIBUTION CENTER AND OFFICE FOOT PRINT OF 24,000 SQUARE FEET; 18,000 SQUARE FOOT WAREHOUSE BUILDING WITH 11,000 SQUARE FEET OF OFFICE SPACE.
 - ALL EXISTING UTILITIES LOCATIONS ARE APPROXIMATE AS SHOWN. THE CONTRACTOR SHALL VERIFY THEIR EXACT LOCATION PRIOR TO ANY WORK BEING PERFORMED.
 - THESE PLANS SHOW ONLY THOSE FEATURES THAT WERE VISIBLE APPARENT ON THE DATE OF THE SURVEY (JULY 2020) THE ABSENCE OF SUBSURFACE STRUCTURES, UTILITIES, ETC. FROM THESE PLANS, BUT IN EXISTENCE, IS NOT INTENDED OR IMPLIED.
 - DIMENSIONAL REGULATIONS PER ZONING ORDINANCE:
GENERAL INDUSTRIAL (GI) ZONE:
MINIMUM LOT SIZE (WITH WATER AND SEWER) = 20,000 SF
MINIMUM LOT FRONTAGE = 100 FEET
MINIMUM YARD SETBACKS:
FRONT = 25'
SIDE = 20'
REAR = 25'
MAXIMUM LOT COVERAGE = 75%
MAXIMUM BUILDING HEIGHT = 55'
 - ORIENTATION:
VERTICAL DATUM AND CONTOURS ARE DERIVED FROM LIDAR DATA ACQUIRED BY NOAA IN 2011 (NAVD88) (GEOID18) HORIZONTAL DATUM IS NH STATE PLANE NAD83 (2007).
 - SITE-SPECIFIC SOIL MAP WAS PERFORMED BY JOSEPH NOEL, CCS #17 ON JULY 10, 2020.
 - JURISDICTIONAL WETLANDS WERE DELINEATED BY B.H. KEITH, CWS #87 ON JULY 3, 2020.
 - PARCEL IS NOT LOCATED WITHIN ZONE A (100YR FLOOD) AS SHOWN ON FEDERAL EMERGENCY MANAGEMENT AGENCY MAP #33017C02160 EFFECTIVE DATE MAY 17, 2005.
 - FOR MORE INFORMATION ABOUT THIS SITE PLAN, CONTACT THE CITY OF ROCHESTER PLANNING DEPARTMENT, 33 WAKEFIELD ST., ROCHESTER, NH 03867, (603) 335-1338.
 - PARKING REQUIREMENTS (SITE PLAN REGULATIONS; SECTION 10 (A)):
WAREHOUSE USE:
SPACE PER 1,000 GROSS SQUARE FEET PLUS
3 SPACES PER 1,000 GROSS SQUARE FEET OF OFFICES OR RETAIL SALES:
18,000 SF GFA X 1 SPACE / 1,000 SF GFA = 18 SPACES
PLUS:
11,000 SF OFFICE SPACE X 3 SPACES / 1,000 SF = 33 SPACES
TOTAL REQUIRED SPACES = 51 SPACES
TOTAL PROVIDED SPACES = 43 SPACES
 - ACCESSIBLE PARKING (SITE PLAN REGULATIONS SECTION 10(D)(2)):
THE SPACES ARE PART OF THE TOTAL ABOVE.
ACCESSIBLE PARKING SPACES = 26 TO 50 = 2 SPACES
TOTAL PROVIDED SPACES = 3 SPACES
 - THIS DEVELOPMENT MUST BE IN COMPLIANCE WITH ALL APPLICABLE LAW - INCLUDING ALL PERTINENT PROVISIONS OF THE CITY OF ROCHESTER SITE PLAN REGULATIONS - UNLESS OTHERWISE WAIVED.
 - THE APPLICANT SHALL OBTAIN A STORMWATER MANAGEMENT PERMIT FROM THE PUBLIC WORKS DEPARTMENT (UNLESS DETERMINED TO BE UNNECESSARY BY THE CITY ENGINEER) AND FOLLOW THE REQUIREMENTS OF THE CITY ORDINANCE CHAPTER 218. THE PERMITTEE SHALL PREPARE A WRITTEN PLAN FOR MANAGING STORMWATER THAT ENTERS THE CONSTRUCTION SITE AND SHALL PRESENT IT TO THE INSPECTION ENGINEER AT THE PRE-CONSTRUCTION MEETING. THE PERMITTEE SHALL FOLLOW BEST MANAGEMENT PRACTICES TO PREVENT EROSION IN AREAS WHERE SOIL HAS BEEN DISTURBED.
 - ACCESS TO THE SITE FOR FIRE APPARATUS MUST BE MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION PROCESS. THIS IS THE SOLE RESPONSIBILITY OF THE APPLICANT/DEVELOPER TO MAINTAIN THIS ACCESS. PLEASE CONTACT THE FIRE DEPARTMENT AT 330-7182 WITH ANY QUESTIONS ABOUT ACCESS REQUIREMENTS.
 - SNOW SHALL NOT BE PILED IN A MANNER AS TO BLOCK THE VISIBILITY OF THE VEHICLES ON AIRPORT DRIVE AND ALL EXCESS SNOW SHALL BE REMOVED FROM THE SITE.
 - ALL OUTSIDE CONSTRUCTION ACTIVITY RELATED TO THE DEVELOPMENT OF THIS SITE IS RESTRICTED TO THE HOURS OF 7:00 A.M. TO 6:00 P.M. MONDAY THROUGH FRIDAY AND 8:00 A.M. TO 6:00 P.M. SATURDAY.
 - ALL UTILITIES MUST BE UNDERGROUND, INCLUDING UTILITIES EXTENDED ONTO THE SITE FROM EXISTING POLES NEAR THE SITE. HOWEVER, IF THE ONLY POLE NEARBY IS ACROSS THE STREET, ONE ADDITIONAL POLE MAY BE PLACED ON/NEAR THE PROPERTY TO ALLOW FOR OVERHEAD EXTENSION OF WIRES ACROSS THE STREET. UTILITIES EXTENDING FROM ANY SUCH NEW POLE MUST BE UNDERGROUND. THE APPLICANT MAY WORK WITH THE CITY STAFF AS APPROPRIATE TO ADDRESS THIS REQUIREMENT.
 - THE CODE ENFORCEMENT OFFICER ADMINISTERS THE CITY OF ROCHESTER SIGN ORDINANCE. SIGNAGE SUBMITTED AS PART OF THIS SITE PLAN PACKAGE IS STILL SUBJECT TO HIS REVIEW TO ENSURE COMPLIANCE WITH THAT ORDINANCE AND OTHER APPLICABLE CODES, INDEPENDENT FROM THIS SITE PLAN REVIEW. IN ADDITION, IF ANY SIGNIFICANT CHANGE OR EXPANSION IS PROPOSED TO THE DESIGN OF THE APPROVED PRESTANDING SIGN OR TO THE OVERALL ADVERTISING SIGNAGE FOR THE SITE (NOT INCLUDING ACCESSORY SIGNAGE, SUCH AS HANDICAP PARKING SIGNS), THE PROPOSED SIGN DESIGNS MUST BE PRESENTED TO THE PLANNING BOARD FOR REVIEW PRIOR TO ISSUANCE OF THOSE SIGN PERMITS. A SIGN PERMIT MUST BE OBTAINED PRIOR TO INSTALLATION OF ANY SIGNS ON SITE.
 - ALL ELEMENTS SHOWN ON THE APPROVED SITE PLAN MUST BE PROPERLY COMPLETED PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY. IN LESS APPROPRIATE SURETY IS PLACED WITH THE PLANNING DEPARTMENT.
 - NOTE THAT THIS APPROVAL IS FOR THE SITE PLAN ONLY. LIFE SAFETY CODE AND BUILDING CODE REVIEW WILL BE REQUIRED AS PART OF THE BUILDING PERMIT PROCESS WHEN THE CONSTRUCTION PLANS ARE SUBMITTED. VARIOUS REQUIREMENTS REGARDING THE BUILDING DESIGN POSSIBLY INCLUDING A SPRINKLER SYSTEM - MAY BE SPECIFIED AT THAT TIME.
 - THE FOLLOWING PERMITS WILL BE REQUIRED BY THE DEPARTMENT OF PUBLIC WORKS PRIOR TO ISSUANCE OF A BUILDING PERMIT OR A CERTIFICATE OF OCCUPANCY:
A. STORMWATER PERMIT;
B. WATER CONNECTION PERMIT;
C. WASTEWATER CONNECTION PERMIT;
D. CURB-CUT PERMIT;
E. SEWER ASSESSMENT & QUESTIONNAIRE.
 - THIS PROJECT PROPOSED TO DISTURB OVER ONE ACRE OF EXISTING GROUND COVER AND MEETS OTHER SPECIFIC REQUIREMENTS RELATED TO PERMIT CRITERIA FOR EPA NPDES COMPLIANCE. THE CONTRACTOR IS RESPONSIBLE FOR DEVELOPMENT AND IMPLEMENTATION OF A STORM WATER POLLUTION PREVENTION PLAN (SWPPP). SUBMISSION OF A NOTICE OF INTENT (NOI) TO EPA, INSPECTIONS AND MAINTENANCE OF SEDIMENT CONTROL MEASURES, DOCUMENTATION OF MAINTENANCE ACTIVITIES, AND SUBMISSION OF A NOTICE OF TERMINATION (NOT) TO EPA. THE CONTRACTOR IS ALSO RESPONSIBLE TO COMPLY WITH ANY OR ALL OTHER ASPECTS OF THE CURRENT FEDERAL, STATE AND LOCAL STORM WATER OR NPDES REGULATIONS OR REQUIREMENTS.
 - THE CONTRACTOR MUST SUBMIT A PAA FORM 7460-1 A MINIMUM OF 60-DAYS PRIOR TO THE START OF CONSTRUCTION TO ENSURE THAT IT WILL NOT NEGATIVELY IMPACT FLIGHTS IN AND AROUND SKYHAVEN AIRPORT. THE APPLICATION MUST INCLUDE ANY CRANES THAT MIGHT BE USED.
 - SNOW STORAGE CALCULATIONS:
1 SQUARE FOOT OF STORAGE AREA FOR EVERY 5 TO 10 SQUARE FEET OF AREA TO BE CLEARED
SNOW STORAGE REQUIRED = 66,086 SF/10 = 6,608 SQUARE FEET
SNOW STORAGE PROVIDED = 8,000 SQUARE FEET

TAX MAP 243, LOT 36 & LOT 37
OWNER OF RECORD:
SPECTEX REALTY LLC
1 PROGRESS DRIVE
DOVER, NH 03820-5450
SCRD BOOK 3340, PAGE 690

OVERALL SITE PLAN
TAX MAP 243, LOTS 36 & 37
109 AIRPORT DRIVE
ROCHESTER, NH

PREPARED FOR:
PELLA WINDOWS AND DOORS
OF NEW ENGLAND
SEPTEMBER 2020



NORWAY PLAINS ASSOCIATES, INC.

2 Continental Blvd., Rochester, N.H. 603-335-3948

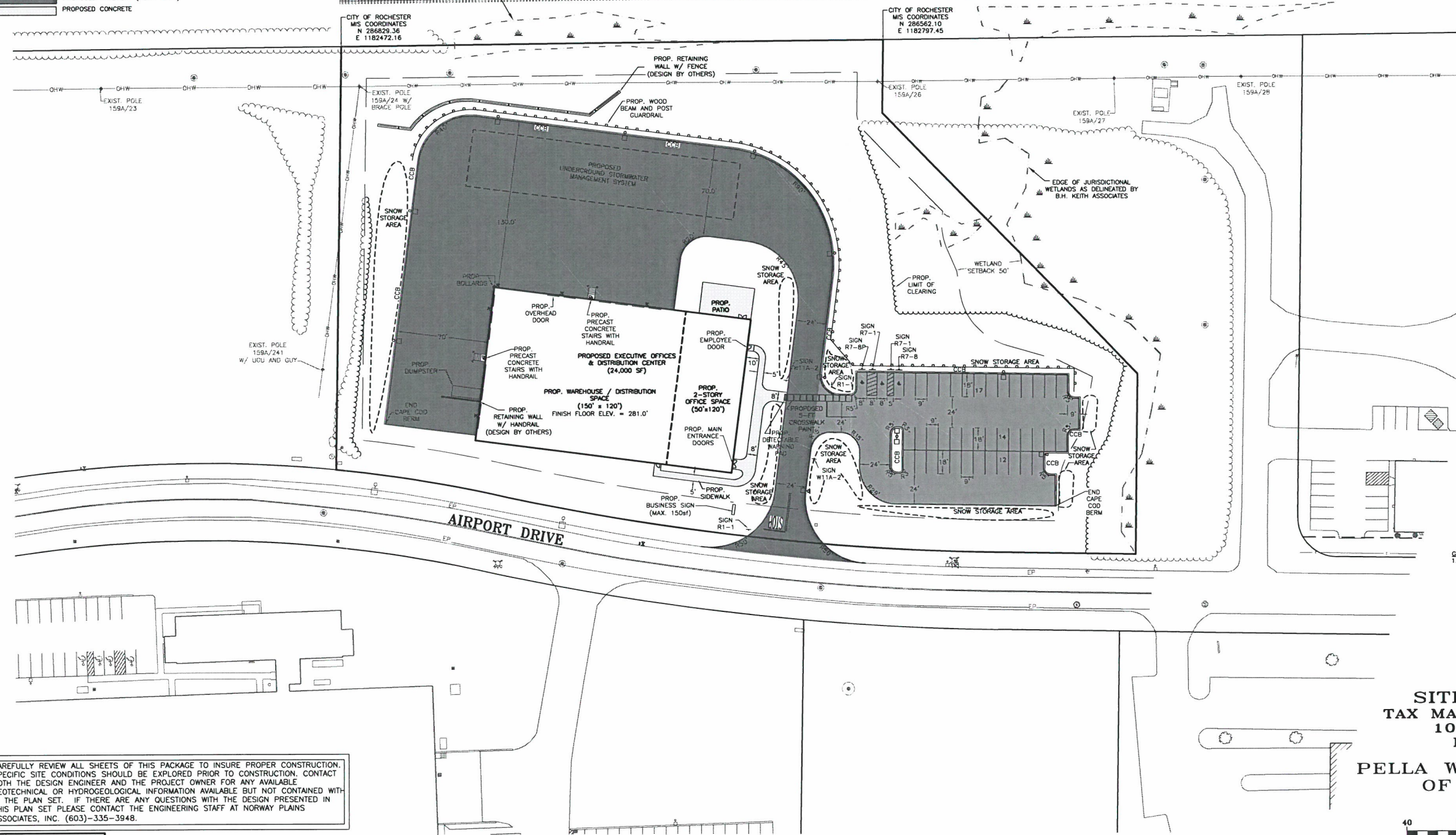
C-1

LEGEND

—	PROPERTY LINE	—	PROPOSED DETECTABLE WARNING PAVERS
- - -	JURISDICTIONAL WETLANDS	- - -	PROPOSED SIGNS
- - -	WETLAND SETBACK		
- - -	EXISTING TREE LINE		
- - -	EXISTING OVERHEAD WIRES		
- - -	EXISTING HYDRANT		
- - -	EXISTING WATER GATE OR SHUT-OFF VALVE		
- - -	EXISTING UTILITY POLE		
- - -	EXISTING SEWER MAN HOLE		
- - -	EXISTING CATCH BASIN		
- - -	EXISTING LIGHT POLES		
- - -	PROPOSED BUILDING		
- - -	PROPOSED PAVEMENT		
- - -	PROPOSED PAVEMENT WITH CURBING		
- - -	PROPOSED TREE LINE		
- - -	PROPOSED GUARDRAIL		
- - -	PROPOSED BLOCK RETAINING WALL		
- - -	PROPOSED PAVEMENT (STANDARD)		
- - -	PROPOSED PAVEMENT (HEAVY DUTY)		
- - -	PROPOSED CONCRETE		

EDGE OF JURISDICTIONAL WETLANDS AS DELINEATED BY B.H. KEITH ASSOCIATES

NEW HAMPSHIRE NORTHCOAST CORPORATION

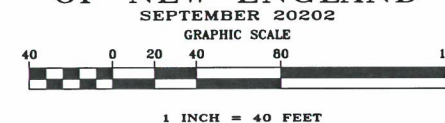


GENERAL CONSTRUCTION NOTES:
1. ALL DETECTABLE WARNING PAVERS SHALL BE CAST IN PLACE ARMOR-TILE TACTILE SYSTEM, YELLOW IN COLOR, OR APPROVED EQUAL.

CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITHIN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.

FILE NO. 104
PLAN NO. C-3085
DWG. NO. 20108 SP-1
F.B. NO.

SITE LAYOUT PLAN
TAX MAP 243, LOTS 36 & 37
109 AIRPORT DRIVE
ROCHESTER, NH
PREPARED FOR:
PELLA WINDOWS AND DOORS
OF NEW ENGLAND



LAND SURVEYORS



CIVIL ENGINEERS

LEGEND

- PROPERTY LINE
- - - JURISDICTIONAL WETLANDS
- - - EXISTING TREE LINE
- - - EXISTING DRAIN LINE
- - - 232 EXISTING CONTOUR LINE
- - - EXISTING CATCH BASIN
- - - EXISTING TEST PIT
- - - 234.1' EXISTING SPOT GRADE
- - - P234.25' PROPOSED SPOT GRADE
- - - PROPOSED TREE LINE
- - - PROPOSED DRAIN LINE
- - - 232 PROPOSED CONTOUR LINE
- - - PROPOSED CATCH BASIN
- - - PROPOSED DRAIN MANHOLE
- - - PROPOSED FLARED END SECTION (FES)
- - - CPP CORRUGATED POLYETHYLENE PIPE
- - - CB CATCH BASIN
- - - AD AREA DRAIN
- - - TW TOP OF WALL
- - - BW BOTTOM OF WALL
- - - TC TOP OF CURB
- - - BC BASE OF CURB
- - - PROPOSED OUTLET PROTECTION

CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITHIN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.



NEW HAMPSHIRE NORTHCOAST CORPORATION

PROPOSED DRAINAGE STRUCTURES

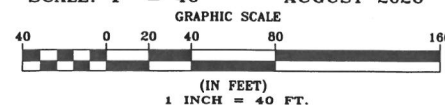
CB1 RIM = 283.50' INV. OUT = 276.85' (CB2) SUMP = 272.85' L = 74.5' 12" CPP	AD1 RIM = 281.50' (BEE HIVE GRATE) INV. OUT = 277.5' (CB4) L = 60' 12" CPP
CB2 RIM = 279.44' INV. IN = 275.94' (CB1) INV. OUT = 275.83' (CB3) SUMP = 271.83' L = 158.0' 12" CPP	AD2 RIM = 280.50' (BEE HIVE GRATE) INV. OUT = 277.50' (AD3) L = 80' 12" CPP
CB3 RIM = 281.75' INV. IN = 275.00' (CB2) INV. OUT = 274.90' (CB4) SUMP = 270.90' L = 28.0' 12" CPP	AD3 RIM = 280.50' (BEE HIVE GRATE) INV. IN = 277.00' INV. OUT = 276.50' L = 34.0' 12" CPP
CB4 RIM = 282.00' INV. IN = 274.73' (CB3) INV. OUT = 276.00' (AD-1) INV. OUT = 276.00' (AD-3) SUMP = 274.63' (CB5) L = 80.0' 12" CPP	DMH1 RIM = 277.12' INV. IN = 272.60' (CB5) INV. IN = 272.85' (ROOF DRAIN) INV. OUT = 267.30' (ISOLATOR ROW) INV. OUT = 268.50' (MANFOLD) SUMP = 263.30' L = 2.2' 24" CPP
CB5 RIM = 279.00' INV. IN = 274.23' (CB4) INV. OUT = 274.00' (DMH1) ELIMINATOR SUMP = 270.00' L = 84.8' 15" CPP	DMH2 RIM = 275.37' INV. IN = 271.00' (CB7) INV. OUT = 267.30' (ISOLATOR ROW) INV. OUT = 268.50' (MANFOLD) SUMP = 263.30' L = 2.2' 24" CPP
CB6 RIM = 275.83' INV. IN = 272.83' (CB7) SUMP = 268.83' L = 190.0' 12" CPP	DMH3 RIM = 276.42' INV. IN = 271.80' (CB6) INV. OUT = 271.50' (DMH2) ELIMINATOR SUMP = 267.50' L = 10.0' 24" CPP
CB7 RIM = 274.33' INV. IN = 271.80' (CB6) INV. OUT = 271.50' (DMH2) ELIMINATOR SUMP = 267.50' L = 10.0' 24" CPP	

PROPOSED DRAINAGE PIPES

- A) PROP. 12" CPP L = 74.5'
- B) PROP. 12" CPP L = 150'
- C) PROP. 12" CPP L = 60'
- D) PROP. 12" CPP L = 80'
- E) PROP. 12" CPP L = 35'
- F) PROP. 15" CPP L = 80'
- G) PROP. 15" CPP L = 85'
- H) PROP. 12" CPP L = 190'
- I) PROP. 18" CPP L = 10'
- J) PROP. 24" CPP L = 60'
- K) PROP. ROOF DRAIN 12" CPP L = 80'

- DRAINAGE NOTES:**
- DRAINAGE STRUCTURES SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS SHOWN ON SHEET C-8.
 - ALL CORRUGATED PLASTIC PIPE (CPP) USED SHALL BE DUAL WALLED HIGH DENSITY POLYETHYLENE.
 - ALL MATERIALS SHALL BE AS SPECIFIED. ANY CHANGES SHALL BE APPROVED BY THE DESIGN ENGINEER.
 - SEE SHEET C-9 FOR STORMTECH DETAILS.

GRADING AND DRAINAGE PLAN
TAX MAP 243, LOTS 36 & 37
109 AIRPORT DRIVE
ROCHESTER, NH
 PREPARED FOR:
PELLA WINDOWS AND DOORS
OF NEW ENGLAND
 SCALE: 1" = 40' AUGUST 2020



FILE NO. 104
 PLAN NO. C-3085
 DWG. NO. 20108 SP-1
 F.B. NO.

NORWAY PLAINS ASSOCIATES, INC.

2 Continental Blvd., Rochester, N.H. 603-335-3948

LEGEND

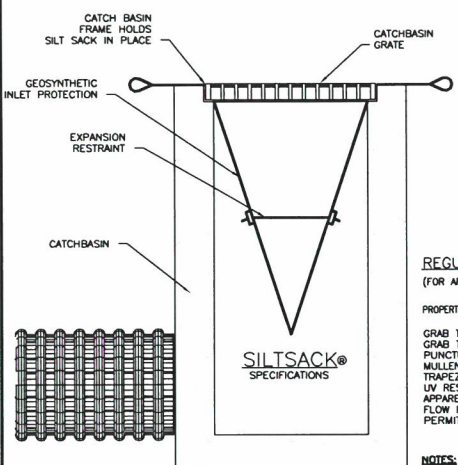
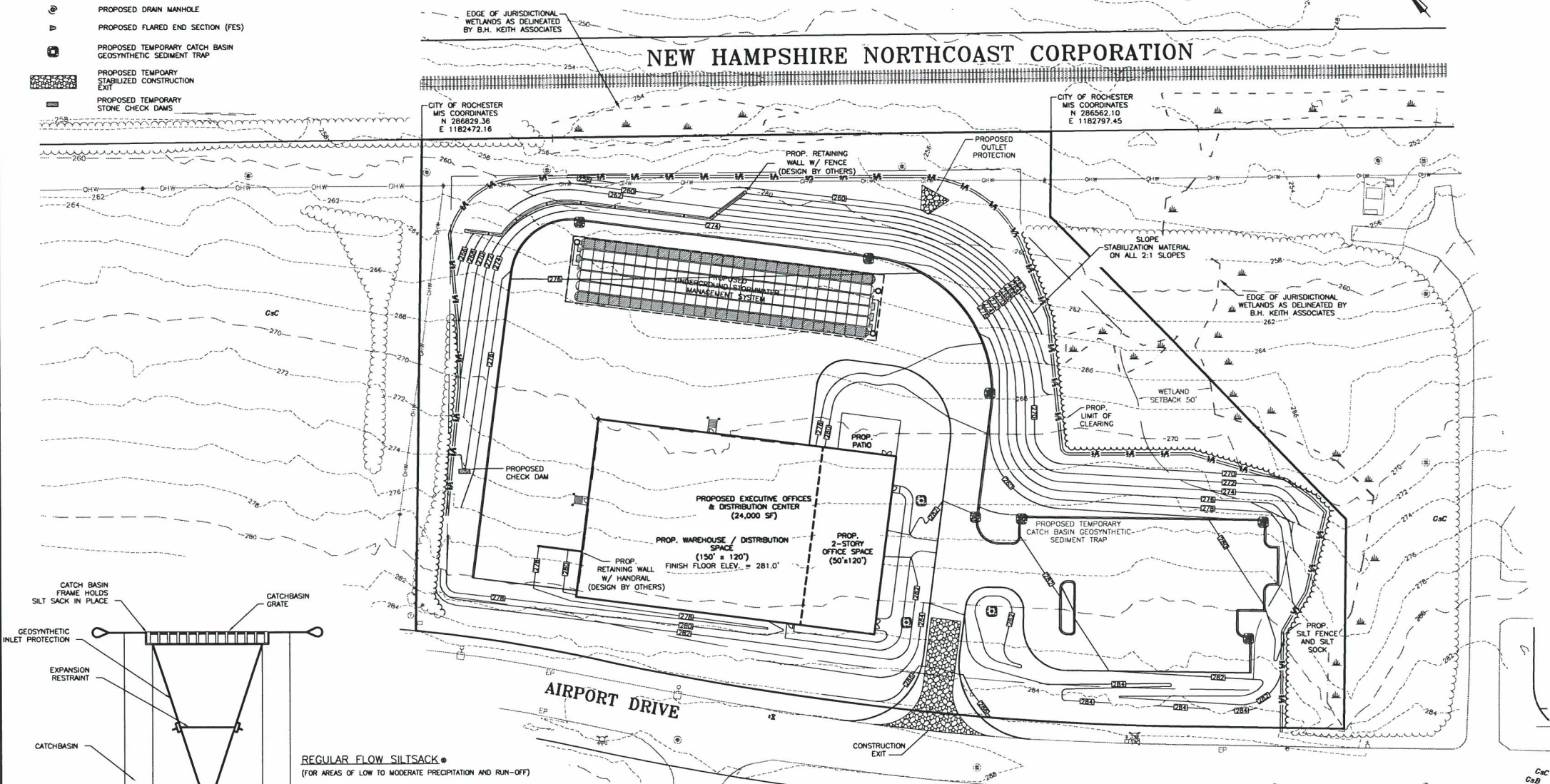
- PROPERTY LINE
- - - JURISDICTIONAL WETLANDS
- EXISTING TREE LINE
- EXISTING DRAIN LINE
- EXISTING CONTOUR LINE
- EXISTING CATCH BASIN
- PROPOSED TREE LINE
- PROPOSED DRAIN LINE
- PROPOSED CONTOUR LINE
- PROPOSED SILTATION FENCE
- ⊙ PROPOSED CATCH BASIN
- ⊙ PROPOSED DRAIN MANHOLE
- ⊙ PROPOSED FLARED END SECTION (FES)
- ⊙ PROPOSED TEMPORARY CATCH BASIN
- ⊙ GEOSYNTHETIC SEDIMENT TRAP
- ⊙ PROPOSED TEMPORARY STABILIZED CONSTRUCTION EXIT
- ⊙ PROPOSED TEMPORARY STONE CHECK DAMS



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NEW HAMPSHIRE NORTHCOAST CORPORATION



REGULAR FLOW SILTSACK®

(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4633	120 LBS
MULLER BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80 %
APPROXIMATE OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	0.55 SEC -1
PERMITTIVITY	ASTM D-4491	0.55 SEC -1

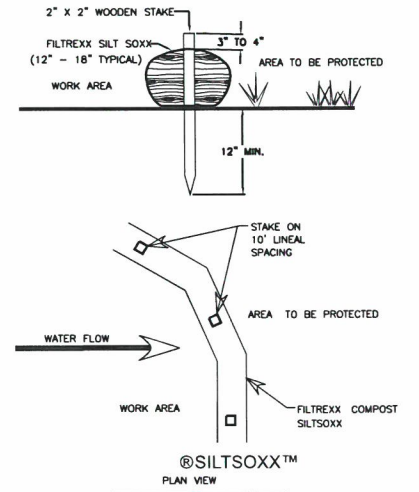
NOTES:

1. GEOSYNTHETIC SEDIMENT FILTER TRAP SHALL BE 'REGULAR FLOW SILTSACK®' OR APPROVED EQUAL. SPECIFICATIONS FOR SILTSACK® ARE DETAILED.
2. FILTER TRAPS SHALL BE INSPECTED AFTER EVERY RAIN EVENT OF 0.25" OR GREATER AND SEDIMENTS SHALL BE REMOVED FROM TRAP WHEN SEDIMENT HAS REACHED TWO THIRDS OF THE DEPTH OF THE TRAP, OR IF PONDING OF WATER AT SURFACE BEGINS TO OCCUR. DO NOT PUNCTURE FILTER TRAP TO MITIGATE PONDING.
3. INSTALL SILT SACKS IN CATCH BASIN UPON INSTALLATION OF STRUCTURE.

CATCH BASIN GEOSYNTHETIC SEDIMENT TRAP

NOT TO SCALE

FILE NO. 104
PLAN NO. C-3085
DWG. NO. 20108 SP-1
F.B. NO.

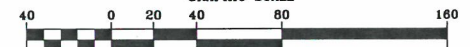


NOTES:

1. ALL MATERIAL TO MEET SPECIFICATIONS
2. COMPOST MATERIAL TO BE DISPERSED ON SITE UP SLOPE FROM PROTECTED AREA.

SILTsoxx DETAIL
N.T.S.

EROSION AND SEDIMENTATION
CONTROL PLAN
TAX MAP 243, LOTS 36 & 37
109 AIRPORT DRIVE
ROCHESTER, NH
PREPARED FOR:
PELLA WINDOWS AND DOORS
OF NEW ENGLAND
SEPTEMBER 2020
GRAPHIC SCALE



1 INCH = 40 FT.

LAND SURVEYORS

CIVIL ENGINEERS

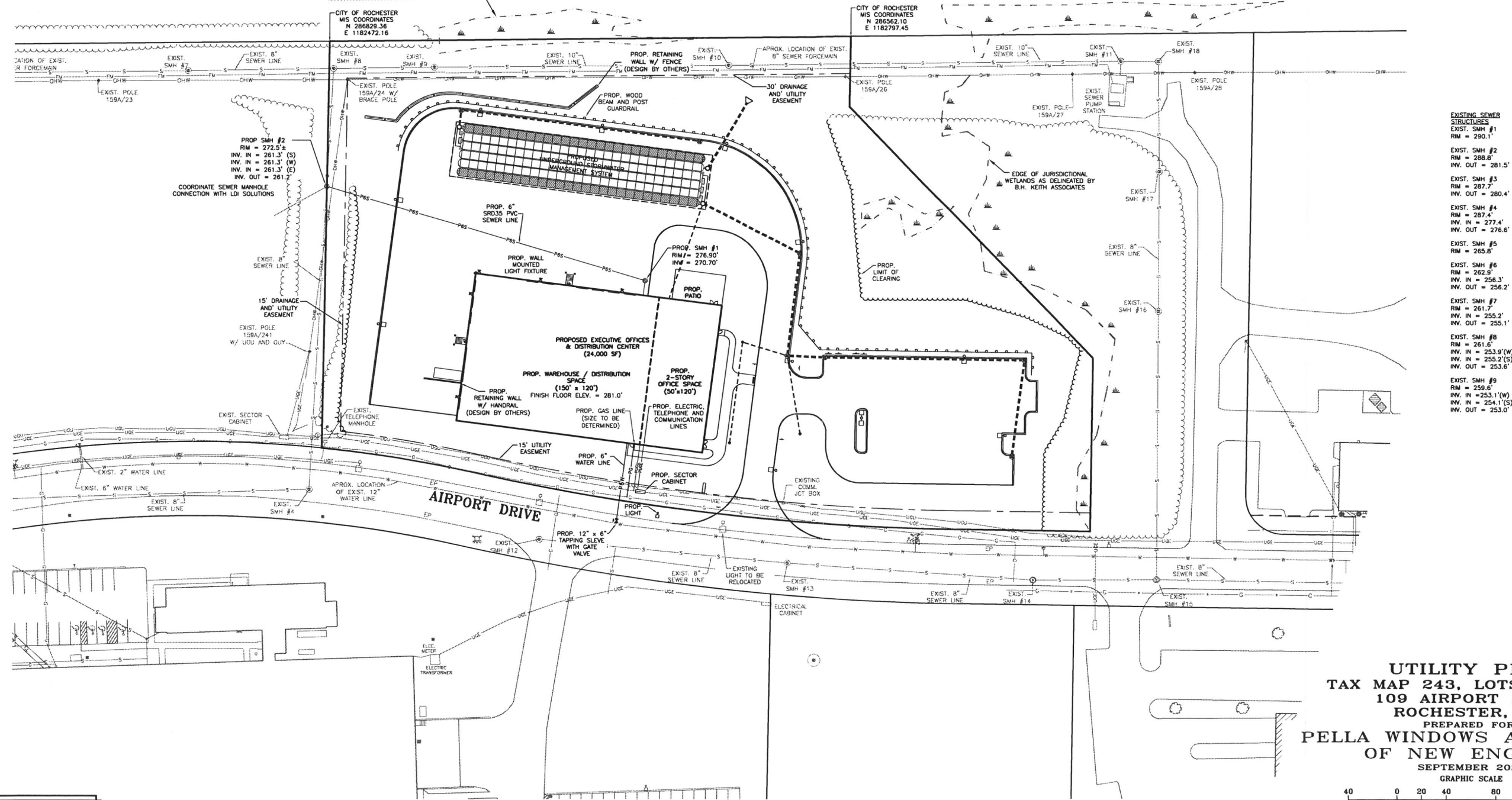
LEGEND

—	PROPERTY LINE	---	PROPOSED DRAIN LINE
- - -	JURISDICTIONAL WETLANDS	PW	PROPOSED WATER SERVICE
OH	EXISTING OVERHEAD WIRES	PS	PROPOSED SEWER LINE
W	EXISTING WATER MAIN	PG	PROPOSED PROPANE GAS LINE
S	EXISTING GRAVITY SEWER MAIN	PUGU	PROPOSED UNDERGROUND UTILITY WIRES
FM	EXISTING SEWER FORCE MAIN	PUGC	PROPOSED UNDERGROUND ELECTRIC WIRES
UCE	EXISTING UNDERGROUND ELECTRIC WIRES	WV	PROPOSED WATER VALVE
UGU	EXISTING UNDERGROUND UTILITY WIRES	WSM	PROPOSED SEWER MANHOLE
G	EXISTING GAS PIPE	DM	PROPOSED DRAIN MANHOLE
---	EXISTING DRAIN LINE	CB	PROPOSED CATCH BASIN
HY	EXISTING HYDRANT		
WGV	EXISTING WATER GATE OR SHUT-OFF VALVE		
UP	EXISTING UTILITY POLE		
SM	EXISTING SEWER MANHOLE		
CB	EXISTING CATCH BASIN		
LP	EXISTING LIGHT POLES		
PLP	PROPOSED LIGHT POLES		
BLF	PROPOSED BUILDING LIGHT FIXTURES		

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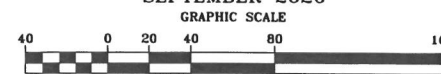


NEW HAMPSHIRE NORTHCOAST CORPORATION



EXISTING SEWER STRUCTURES	
EXIST. SMH #1	RIM = 290.1'
EXIST. SMH #2	RIM = 288.0'
	INV. OUT = 281.5'
EXIST. SMH #3	RIM = 287.7'
	INV. OUT = 280.4'
EXIST. SMH #4	RIM = 287.4'
	INV. IN = 277.4'
	INV. OUT = 276.6'
EXIST. SMH #5	RIM = 265.8'
EXIST. SMH #6	RIM = 262.9'
	INV. IN = 256.3'
	INV. OUT = 256.2'
EXIST. SMH #7	RIM = 261.7'
	INV. IN = 255.2'
	INV. OUT = 255.1'
EXIST. SMH #8	RIM = 261.6'
	INV. IN = 253.9'(W)
	INV. IN = 255.2'(S)
	INV. OUT = 253.6'
EXIST. SMH #9	RIM = 258.6'
	INV. IN = 253.1'(W)
	INV. IN = 254.1'(S)
	INV. OUT = 253.0'

UTILITY PLAN
TAX MAP 243, LOTS 36 & 37
109 AIRPORT DRIVE
ROCHESTER, NH
PREPARED FOR:
PELLA WINDOWS AND DOORS
OF NEW ENGLAND
SEPTEMBER 2020



1 INCH = 40 FT.

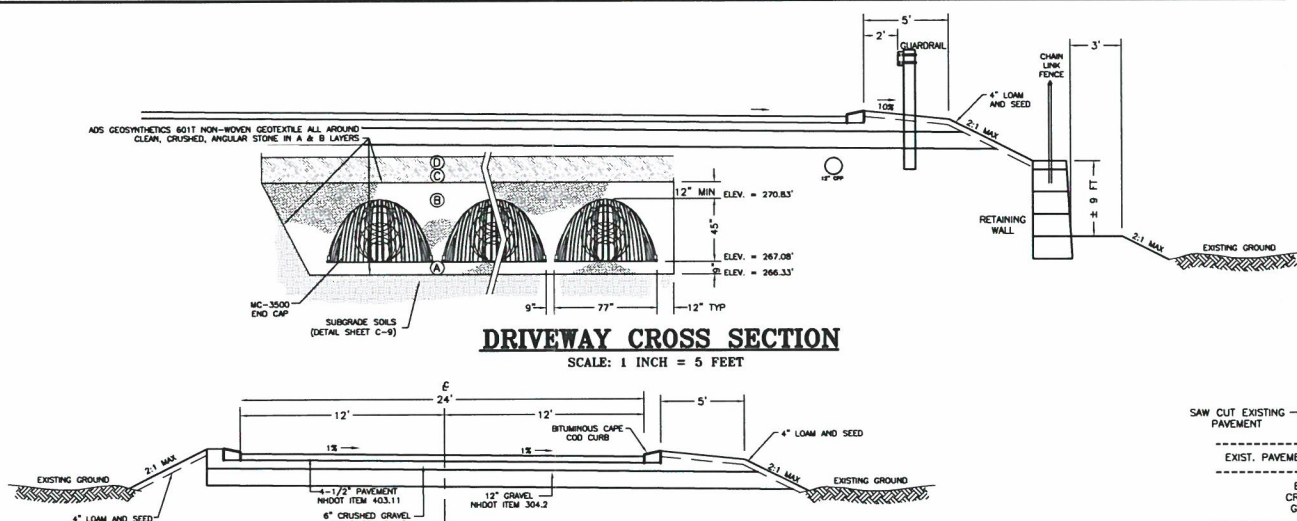
FILE NO. 104
PLAN NO. C-3085
DWG. NO. 20108 SP-1
F.B. NO.

NORWAY PLAINS ASSOCIATES, INC.

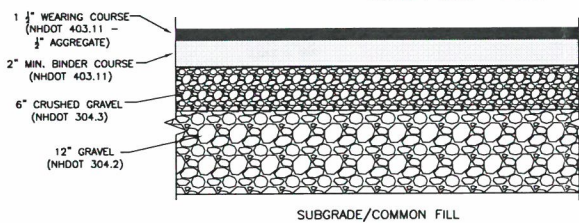
2 Continental Blvd., Rochester, N.H. 603-335-3948



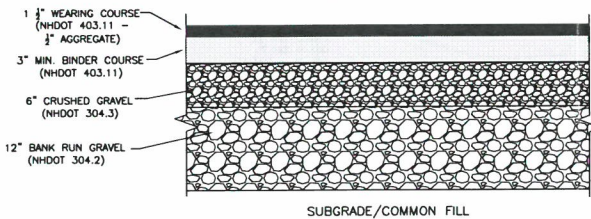
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DRIVEWAY CROSS SECTION
SCALE: 1 INCH = 5 FEET

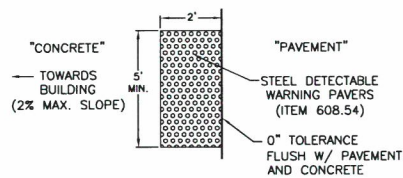


PARKING LOT CROSS-SECTIONS
NOT TO SCALE



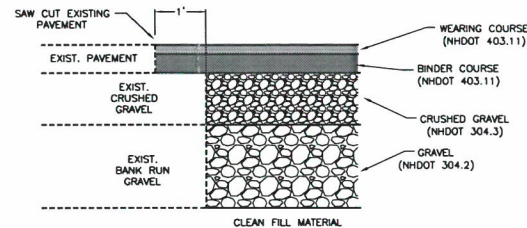
HEAVY DUTY PAVEMENT CROSS-SECTIONS
NOT TO SCALE

- PAVEMENT NOTES:**
1. PLACE COMMON FILL IN 12 INCH LIFTS. COMPACT COMMON FILL TO 95% MAXIMUM PROCTOR DENSITY.
 2. PLACE GRAVEL IN MAXIMUM 8 INCH LIFTS. COMPACT TO 95% MAXIMUM PROCTOR DENSITY.
 3. PLACE CRUSHED GRAVEL IN MAXIMUM 8 INCH LIFTS. COMPACT TO 95% MAXIMUM PROCTOR DENSITY.
 4. PAVEMENT MUST BE INSTALLED IN TWO COURSES, A BINDER COURSE AND A WEARING COURSE.



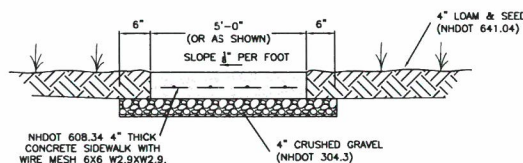
DETECTABLE WARNING PAVER DETAIL
NOT TO SCALE

- DETECTABLE WARNING PAVER NOTES:**
1. THE MAXIMUM CROSS OF CONCRETE WALKWAY SLOPE IS 2%. THE SLOPE OF THE LANDING SHALL NOT EXCEED 2% IN ANY DIRECTION.
 2. TRANSITIONS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.
 3. DETECTABLE WARNING PAVERS (ITEM 608.54) SHALL BE USED ON CONCRETE RAMPS AS SHOWN. EACH TACTICAL WARNING STRIP PANEL SHALL A TRUNCATED DOMED SURFACE AT LEAST 2'-0" IN WIDTH, MEASURED FROM THE BACK OF THE CURB TIP DOWN, AND 5'-0" IN LENGTH MEASURED PERPENDICULAR TO THE DIRECTION OF PEDESTRIAN TRAVEL.
 4. ALL DETECTABLE WARNING PAVERS SHALL BE CAST IN PLACE ARMOR-TILE TACTILE SYSTEM, YELLOW IN COLOR, OR APPROVED EQUAL.

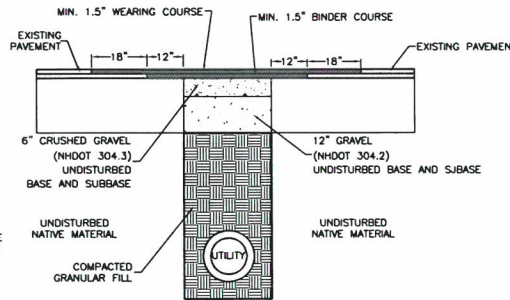


- PAVEMENT SAWCUT NOTES:**
1. SAWCUT THROUGH DEPTH OF PAVEMENT AT LEAST 1 FT. FROM EDGE OR GREATER IF REQUIRED.
 2. INSTALL AND COMPACT CRUSHED GRAVEL TO GRADE.
 3. PLACE BINDER COURSE.
 4. GRIND OR SAWCUT EXISTING PAVEMENT 1 FT. WIDE TO A DEPTH NECESSARY TO PROPERLY MATCH NEW WEARING COURSE PAVEMENT.
 5. TACK COAT ALL EXISTING PAVEMENT SURFACES WITH EMULSIFIED ASPHALT (MS-1) PRIOR TO PLACING NEW PAVEMENT.

TYPICAL PAVEMENT SAWCUT DETAIL

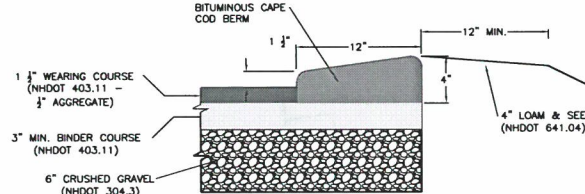


CONCRETE SIDEWALK DETAIL

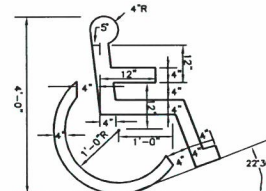


- NOTES:**
1. PAVEMENT EDGES SHALL BE DEFINED BY A STRAIGHT EDGE FORMED BY A MACHINED SAW CUT.
 2. TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH GRANULAR FILL AND COMPACTED TO 95% OF ITS DRY DENSITY.
 3. TOP 18" OF BACKFILL SHALL BE 6" OF COMPACTED 3/4" CRUSHED GRAVEL (NHDOT 304.3) SUPPORTED BY 12" OF COMPACTED GRAVEL (NHDOT 304.2).
 4. ALL VERTICAL AND HORIZONTAL JOINTS BETWEEN PAVEMENTS SHALL BE TACK COATED.
 5. PAVEMENT THICKNESS SHALL MATCH EXISTING BUT IN NOT CASE SHALL BE LESS THAN 3" THICK TOTAL.
 6. PAVEMENT SHALL BE PLACED IN TWO PLACES.
 - 6.1 THE FIRST PHASE SHALL CONSIST OF CUTTING BACK THE FULL DEPTH OF PAVEMENT 12" BEYOND THE EDGES OF THE DISTURBED TRENCH AND PAVING A BINDER COURSE THE FULL DEPTH OF THE PAVEMENT AS TO BRING THE PATCH FLUSH WITH THE EXISTING ROAD SURFACE.
 - 6.2 THE SECOND PHASE SHALL BE CONDUCTED THE FOLLOWING YEAR AND SHALL CONSIST OF MILLING OVER THE EDGES OF THE PREVIOUS PATCH BY A MINIMUM OF 18" IN ALL DIRECTIONS TO A DEPTH OF 1.5". WEARING COURSE PAVEMENT SHALL BE USED TO CREATE A SMOOTH SURFACE WITH THE ROADWAY OVER THE EXTENTS OF THE MILLED AREA.
 7. ANY TRENCH PATCH REQUIRES PRE-APPROVAL BY DPW AND IS SUBJECT TO INSPECTION TO ENSURE COMPLIANCE WITH CITY STANDARDS.

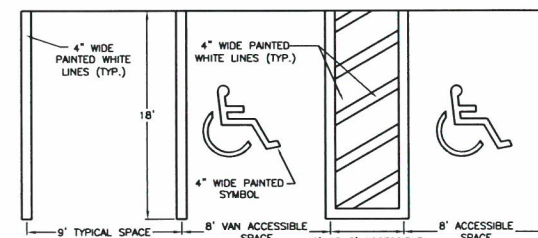
TRENCH PATCH PROFILE
NOT TO SCALE



BITUMINOUS CAPE COD BERM DETAIL
NOT TO SCALE



ACCESSIBLE SYMBOL



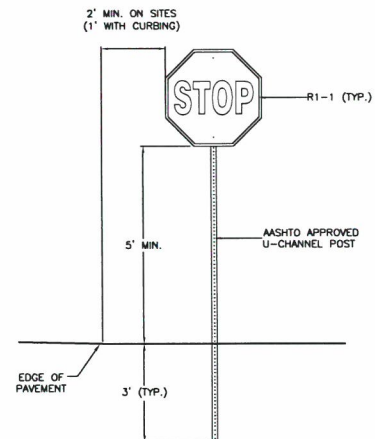
- NOTE:**
1. HANDICAP GRAPHIC SYMBOL (PAINTED WHITE) TO BE CENTERED IN SPACE. SYMBOL TO BE PAINTED ON ASPHALT AS PER DETAIL.

STALL STRIPING DETAIL
NOT TO SCALE

ITEM NO.	SIGN SIZE		TEXT	NO. SIGNS REQ'D
	HEIGHT	WIDTH		
R1-1	30"	30"	STOP	1
R7-8a	18"	12"	RESERVED PARKING	3
R7-8b	6"	12"	VAN ACCESSIBLE	1

- NOTES:**
1. ALL SIGNS SHALL BE PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION.

SIGN SCHEDULE
NOT TO SCALE



- NOTES:**
1. SIGN POST SHALL BE ASHTO APPROVED U-CHANNEL OR OTHER PER ASHTO "SPECIFICATIONS FOR STRUCTURAL SUPPORT OF HIGHWAY SIGNS, LUMINARIES AND SIGNALS", LATEST EDITION.
 2. SIGNS SHALL BE MOUNTED 5 FT FROM GROUND TO BOTTOM EDGE WHERE PARKING AND PARKING LOT MOVEMENTS TAKE PLACE.
 3. SIGNS SHALL BE PLACED SO THAT NEAREST EDGE IS 2 FT. FROM EDGE OF PAVEMENT UNLESS CURBED.

TYPICAL TRAFFIC SIGN
NOT TO SCALE

PARKING AND SIDEWALK DETAILS

TAX MAP 243, LOTS 36 & 37
109 AIRPORT DRIVE
ROCHESTER, NH

PREPARED FOR:
PELLA WINDOWS AND DOORS
OF NEW ENGLAND
SEPTEMBER 2020

FILE NO. 104
PLAN NO. C-3085
DWG. NO. 20108 SP-1
F.B. NO.

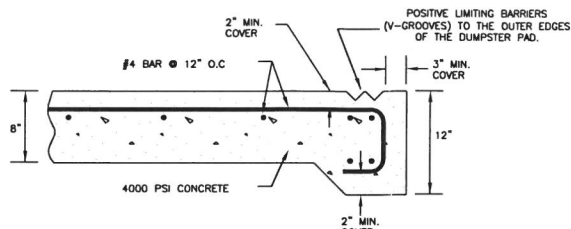
31 Mooney Street, Alton, N.H. 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

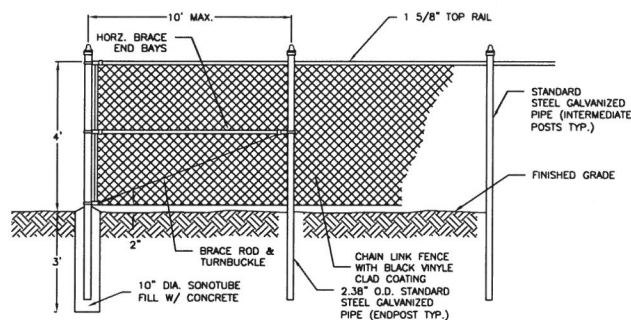
2 Continental Blvd., Rochester, N.H. 603-335-3948



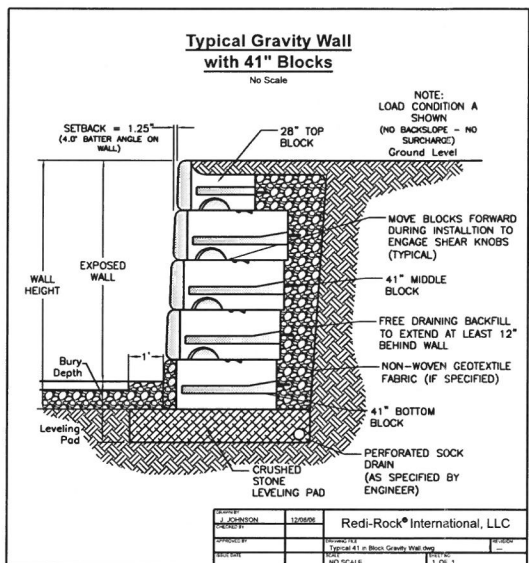
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DUMPSTER PAD DETAIL
NOT TO SCALE

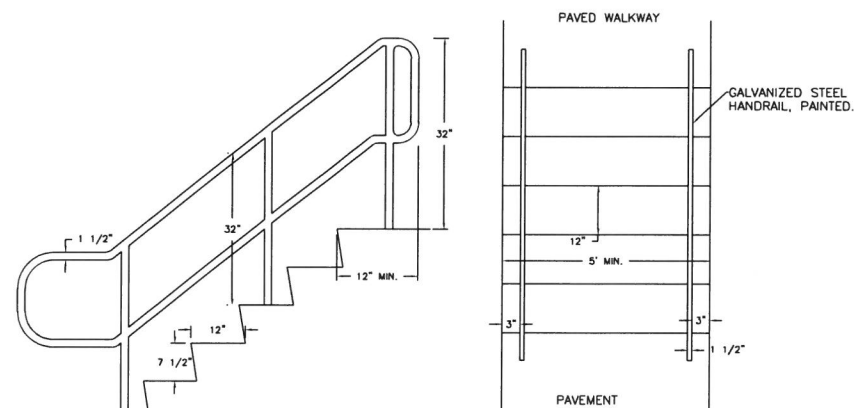


TYPICAL CHAINLINK FENCE
NOT TO SCALE

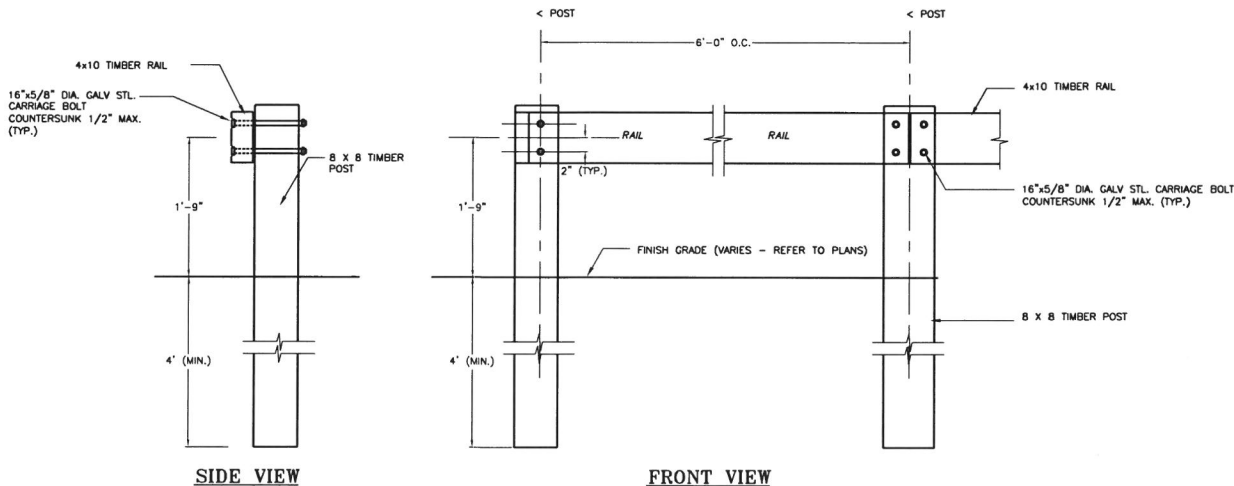


TYPICAL BLOCK RETAINING WALL DETAIL
NOT TO SCALE

- NOTES:
1. DESIGN OF RETAINING WALLS TO BE PROVIDED BY MANUFACTURE AND INSTALLED PER THE MANUFACTURES REQUIREMENTS.
 2. SHOP DRAWINGS SHALL BE SUBMITTED PRIOR TO ORDERING AND APPROVED BY NORWAY PLAINS ASSOCIATES, INC.
 3. CHAINLINK FENCE SHALL BE INSTALLED ON TOP OF WALL WHERE THE VERTICAL DROP IS GREATER THAN 2 FEET OR AS REQUIRED BY CODES.



RAIL & STAIR DETAIL
NOT TO SCALE



WOOD GUARDRAIL DETAIL
NOT TO SCALE

FILE NO. 104
PLAN NO. C-3085
DWG. NO. 20108 SP-1
F.B. NO.

31 Mooney Street, Alton, N.H. 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

CONSTRUCTION DETAILS
TAX MAP 243, LOTS 36 & 37
109 AIRPORT DRIVE
ROCHESTER, NH

PREPARED FOR:
PELLA WINDOWS AND DOORS
OF NEW ENGLAND
SEPTEMBER 2020

2 Continental Blvd., Rochester, N.H. 603-335-3948

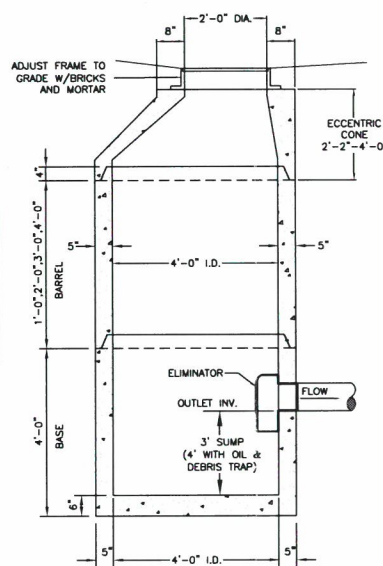


DRAIN LINE DIAMETER	SUM OF DRAIN LINE DIAMETER	CATCH BASIN DIAMETER
15" to 18"	LESS THAN 54"	4'
21" to 27"	LESS THAN 72"	5'
30" to 33"	LESS THAN 90"	6'
36" & LARGER	GREATER THAN 90"	REFER TO THE STANDARD

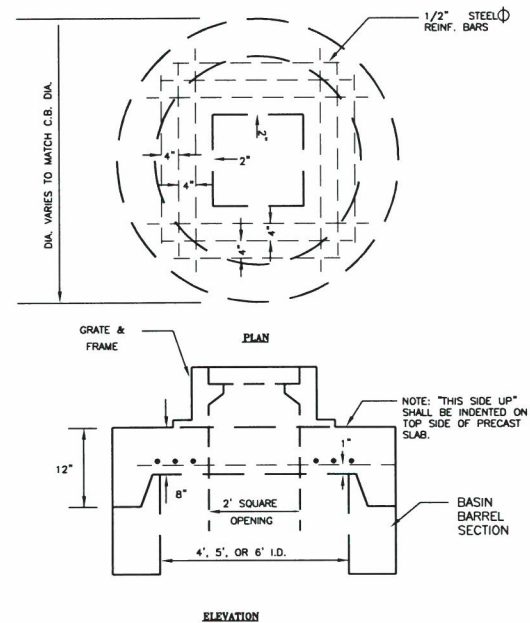
NOTES:

1. CONCRETE: 4,000 PSI AFTER 28 DAYS.
2. REINFORCING: SHALL BE PROVIDED FOR H-20 LOADING.
3. SHIPLAP JOINTS SEALED WITH 1 STRIP OF BUTYL RUBBER SEALANT.
4. PIPE OPENINGS CAST IN AS REQUIRED.
5. RISER HEIGHT VARIES 1', 2', 3' OR 4' TO REACH DESIRED DEPTH.
6. PIPE CONNECTIONS SHALL BE MORTARED.
7. JOINT SECTIONS SHALL CONFORM TO ASTM C-478.
8. SEE SLAB TOP DETAIL FOR STRUCTURES REQUIRING SLAB TOPS, I.E. DOUBLE GRATE AND FRAME STRUCTURES.

NOT TO SCALE



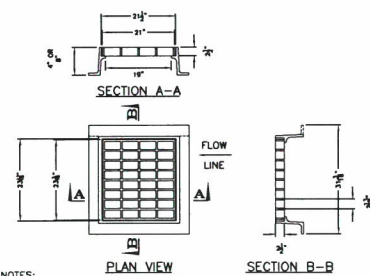
SECTION VIEW



NOTE:

1. SLAB TO BE PLACED IN LIEU OF TAPERED SECTION WHERE PIPE WOULD OTHERWISE ENTER INTO TAPERED SECTION OF THE STRUCTURE AND WHERE PERMITTED.
2. SLAB TOP MAY BE CASTED WITH MINIMUM OR NO INTERLOCKING CHANNEL. HOWEVER, THE CONTRACTOR MUST ENSURE THE SLAB TOP IS FIRMLY ATTACHED TO THE STRUCTURE.

NOT TO SCALE



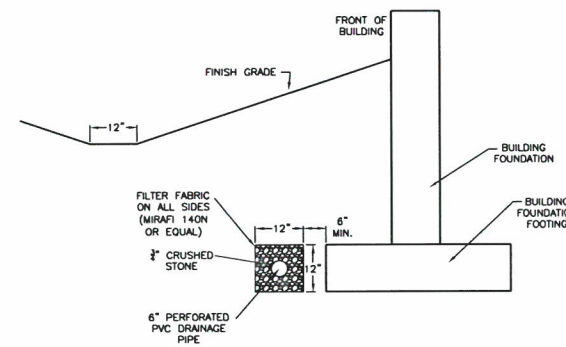
PLAN VIEW SECTION B-B

NOTES:

1. FRAME AND GRATE SHALL BE CAST IRON.
2. FRAME AVAILABLE IN 4" OR 8" HEIGHTS.
3. USE 3 FLANGE FRAME IF INSTALLED ADJACENT TO GRANITE CURB
4. ALL DIMENSIONS ARE NOMINAL.

GRATE DETAIL

NOT TO SCALE



FOUNDATION AND DRIP EDGE DRAIN DETAIL



DIMENSIONS (INCHES)				
PIPE DIAMETERS	A	B	C	D
10" / 12"	42	14.5	33	6
15"	41	19	34	6
18"	49	22	43	6
24"	59.5	28	48	6
30"	88	36	63.5	6
36"	88	43	66.5	6

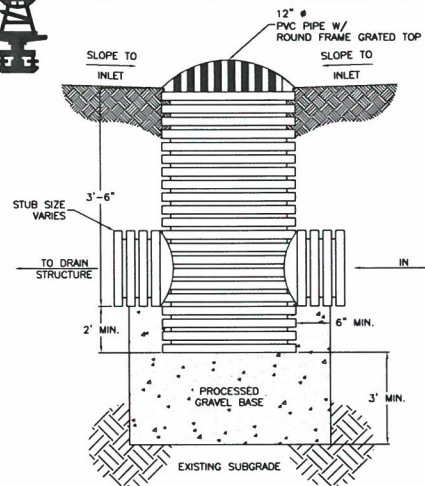


FLAIED END SECTION DETAIL

NOT TO SCALE

FILE NO. 104
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DWG. NO. 20108 SP-1
F.B. NO.

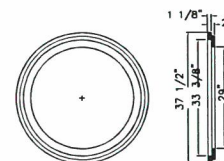
31 Mooney Street, Alton, N.H. 603-875-3948



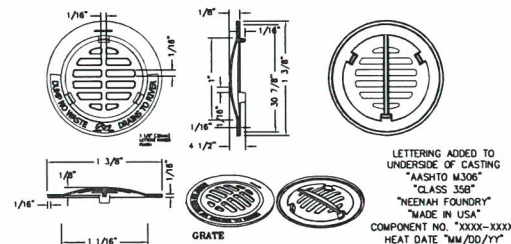
NOTES:

1. AREA DRAINS TO BE ADS PIPE TEE & RISER SECTIONS WITH GRATES, OR EQUAL.
2. AREA DRAINS SHALL BE SET ON 3 FT OF PROCESSED GRAVEL BASE, COMPACTED TO 95% PROCTOR DENSITY.
3. USE EITHER CLEAN GRANULAR FILL OR NHDOT CRUSHED GRAVEL FOR THE PROCESSED GRAVEL BASE (SEE C6).

NOT TO SCALE

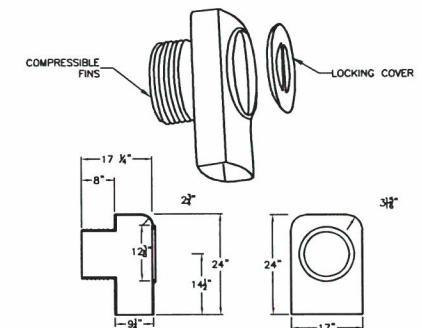


FRAM



NOT TO SCALE

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SIDE VIEW

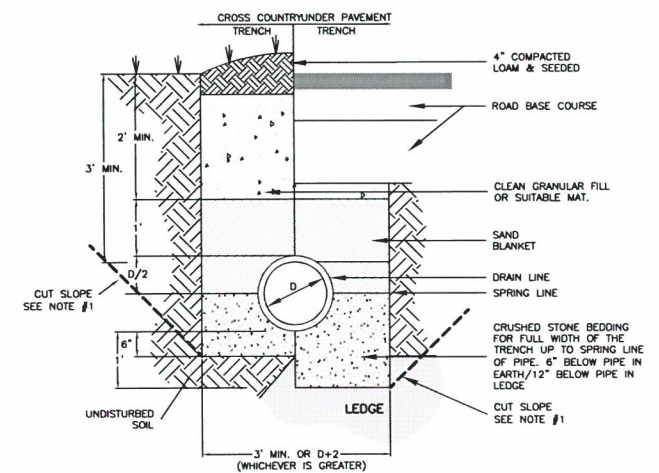
FRONT VIEW

ELIMINATOR CATCH BASIN OIL AND DEBRIS TRAP DETAIL

NOT TO SCALE

NOTES:

1. HOOD SHALL BE "THE ELIMINATOR" OIL & FLOATING DEBRIS TRAP AS MANUFACTURED BY GROUND WATER RESCUE, INC., QUINCY, MA., TEL. 617-773-1128 ON THE WEB @ WWW.KLEANSTREAM.COM
2. AVAILABLE IN 8", 10", 12", 15" AND 18" DIAMETERS.



NOTES:

1. PIPES MAY BE INSTALLED BY EXCAVATING AN OPEN TRENCH WITH SIDE SLOPES OF 1:1 MAXIMUM TO A DEPTH OF 4-FT. INSTALLATIONS DEEPER THAN 4-FT REQUIRE THE USE OF A TRENCH BOX.
2. PIPE MATERIALS SHALL BE AS SPECIFIED ON THE DESIGN PLAN.
3. SAND BLANKET MAY BE OMITTED FOR REINFORCED CONCRETE PIPE.

DRAINAGE PIPE TRENCH INSTALLATION DETAIL

NOT TO SCALE

DRAINAGE DETAILS
TAX MAP 243, LOTS 36 & 37
109 AIRPORT DRIVE
ROCHESTER, NH

PREPARED FOR:
PELLA WINDOWS AND DOORS
OF NEW ENGLAND

SEPTEMBER 2020

C-8

NORWAY PLAINS ASSOCIATES, INC.

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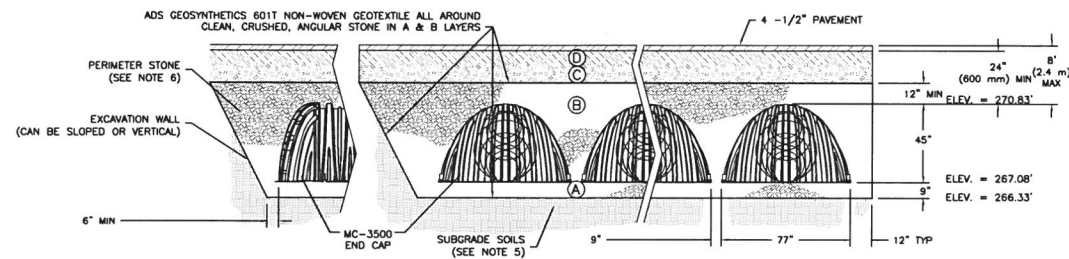
LAND SURVEYORS

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE 'B' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	ASHTO M145 A-1, A-2-4, A-3 OR ASHTO M43 3, 3S7, 4, 4S7, 5, 5S, 57, 6, 67, 6S, 7, 7S, 8, 8S, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 93% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	ASHTO M43 3, 4	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	ASHTO M43 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.

PLEASE NOTE:

- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (ASHTO M43) STONE".
- STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
- WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.

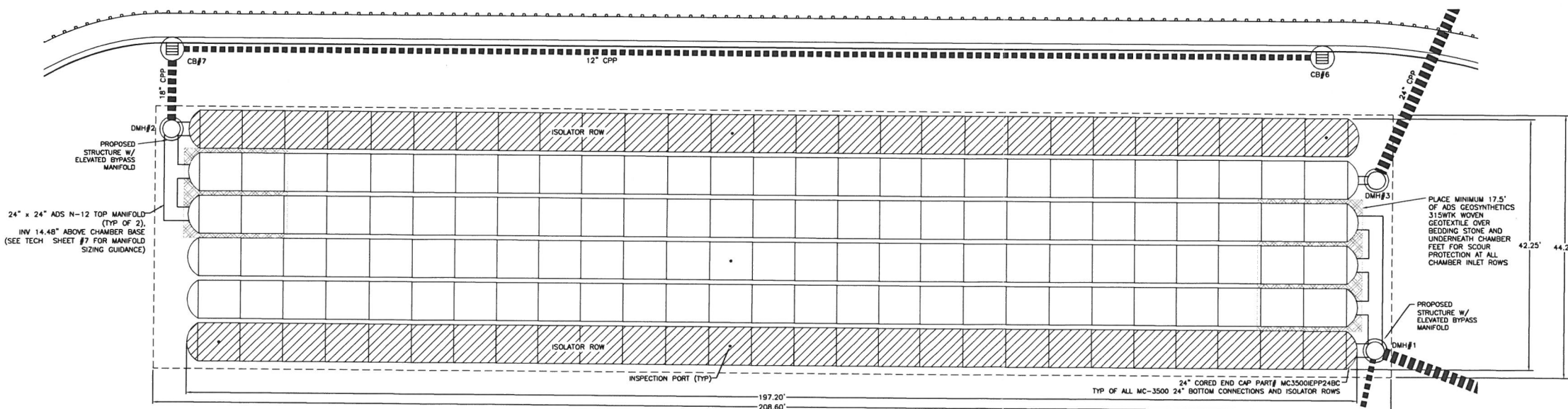


NOTES:

- MC-3500 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
- THE "SITE DESIGN ENGINEER" REFERS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN AND LAYOUT OF THE STORMTECH CHAMBERS FOR THIS PROJECT.
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

MC-3500 CROSS SECTION AND END SECTION

NOT TO SCALE



PLAN VIEW OF STORMTECH CHAMBERS

1" = 10'

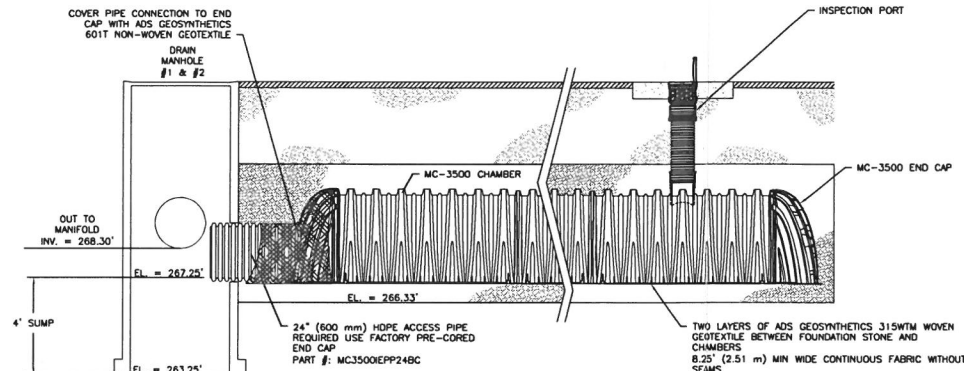
FILE NO. 104
PLAN NO. C-3085
DWG. NO. 20108 SP-1
F.B. NO.

31 Mooney Street, Alton, N.H. 603-875-3948



CIVIL ENGINEERS

CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITHIN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.



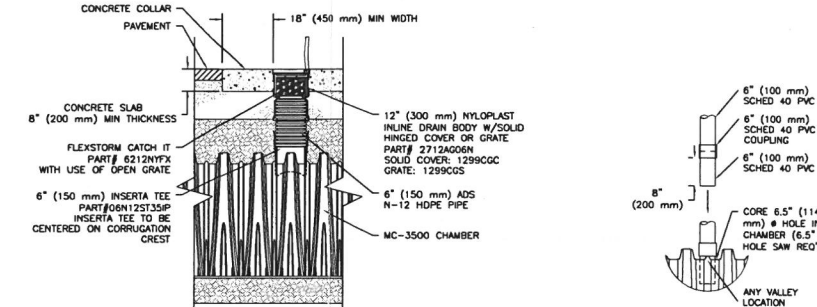
MC-3500 ISOLATOR ROW DETAIL

INSPECTION & MAINTENANCE

- STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
- INSPECTION PORTS (IF PRESENT)
 - REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
 - REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
 - USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
 - LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
 - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR ROWS
- REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
 - USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE "J" MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY "J" FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
 - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
 - APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKLASH WATER IS CLEAN
 - VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.
- STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
- CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



CONNECTION DETAIL

NOT TO SCALE

MC-3500 6" INSPECTION PORT DETAIL

NOT TO SCALE

SUMMARY LAYOUT

(182) STORMTECH MC-3500 CHAMBERS
(12) STORMTECH MC-3500 END CAPS
INSTALLED WITH 12" COVER STONE, 9" BASE STONE, 40% STONE VOID
INSTALLED SYSTEM VOLUME: 31103 CF
PERIMETER OF SYSTEM: 506 FT

PROPOSED ELEVATIONS

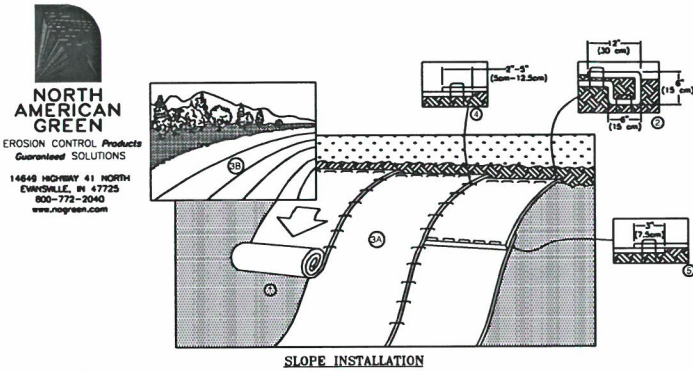
MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED): 278.83
MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC): 272.83
MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC): 272.33
MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT): 272.33
MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT): 271.83
TOP OF STONE: 270.83
TOP OF CHAMBER: 268.46
24" TOP CONNECTION INVERT: 267.25
24" BOTTOM CONNECTION INVERT (ISOLATOR ROW): 267.08
BOTTOM OF CHAMBER: 266.33
BOTTOM OF STONE: 266.33

STORMWATER MANAGEMENT SYSTEM

TAX MAP 243, LOTS 36 & 37
109 AIRPORT DRIVE
ROCHESTER, NH

PREPARED FOR:
PELLA WINDOWS AND DOORS
OF NEW ENGLAND
SEPTEMBER 2020

LAND SURVEYORS



SLOPE INSTALLATION

MAINTENANCE REQUIREMENTS:

- ALL BLANKET AND MATS SHALL BE INSPECTED WEEKLY DURING THE CONSTRUCTION PERIOD, AND AFTER ANY RAINFALL EVENT EXCEEDING 1/2 INCH IN A 24-HOUR PERIOD.
- ANY FAILURE SHALL BE REPAIRED IMMEDIATELY. IF WASHOUT OF THE SLOPE, DISPLACEMENT OF THE MAT, OR DAMAGE TO THE MAT OCCURS, THE AFFECTED SLOPE SHALL BE REPAIRED AND RESEED, AND THE AFFECTED AREA OF MAT SHALL BE RE-INSTALLED.

CONSTRUCTION SPECIFICATIONS:

MANUFACTURE'S INSTALLATION INSTRUCTIONS:

- PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (REC-P), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
- BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE REC-P'S IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30CM) OF REC-P EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE REC-P'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF REC-P BACK OVER SEED AND COMPACTED SOIL. SECURE REC-P'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE REC-P'S.
- ROLL THE REC-P'S (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. REC-P'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL REC-P'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHALL BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
- THE EDGES OF PARALLEL REC-P'S MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) OVERLAP DEPENDING ON REC-P TYPE.
- CONSECUTIVE REC-P'S SPUNCE DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE REC-P WIDTH.
NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE REC-P'S.

SITE PREPARATION:

- PROPER SITE PREPARATION IS ESSENTIAL TO ENSURE COMPLETE CONTACT OF THE PROTECTION MATTING WITH THE SOIL.
- GRADE AND SHAPE AREA IF INSTALLATION.
- REMOVE ALL ROCKS, CLODS, TRASH, VEGETATION OR OTHER OBSTRUCTIONS SO THAT THE INSTALLED BLANKETS WILL HAVE DIRECT CONTACT WITH THE SOIL.
- PREPARE SEEDBED BY LOOSENING 2-3 INCHES OF TOPSOIL ABOVE FINAL GRADE.
- INCORPORATE AMENDMENTS, SUCH AS LIME AND FERTILIZER, INTO SOIL ACCORDING TO SOIL TEST AND THE SEEDING PLAN.

SEEDING:

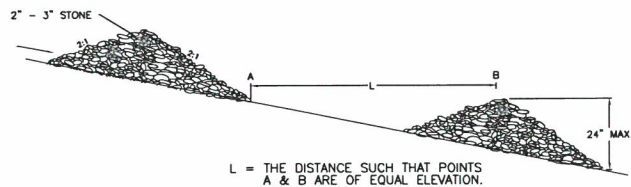
- SEED AREA BEFORE BLANKET INSTALLATION FOR EROSION CONTROL AND REVEGETATION. SEEDING AFTER MAT INSTALLATION IS OFFEN SPECIFIED FOR TURF REINFORCEMENT APPLICATIONS. WHEN SEEDING PRIOR TO BLANKET INSTALLATION, ALL CHECK SLOTS AND OTHER AREAS DISTURBED DURING INSTALLATION MUST BE RESEED.
- WHEN SOIL FILLING IS SPECIFIED, SEED THE MATTING AND THE ENTIRE DISTURBED AREA AFTER INSTALLATION AND PRIOR TO FILLING THE MAT WITH SOIL.

TEMPORARY EROSION CONTROL BLANKET DETAIL

NOT TO SCALE

SPACING BETWEEN CHECK DAMS		
SLOPE (FT/FT)	LENGTH (FT)	
0.020	75	
0.030	60	
0.040	37	
0.050	30	
0.080	19	
0.100	15	
0.120	13	
0.150	10	

DRAINAGE WAY CROSS-SECTION



SPACING BETWEEN STONE CHECK DAMS

CONSTRUCTION SPECIFICATIONS:

- STRUCTURES SHALL BE INSTALLED ACCORDING TO THE DIMENSIONS SHOWN ON THE PLANS AT THE APPROPRIATE SPACING.
- CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER SO THAT EROSION, AIR AND WATER POLLUTION WILL BE MINIMIZED.
- STRUCTURES SHALL BE REMOVED FROM THE CHANNEL WHEN THEIR USEFUL LIFE HAS BEEN COMPLETED.

MAINTENANCE NOTES:

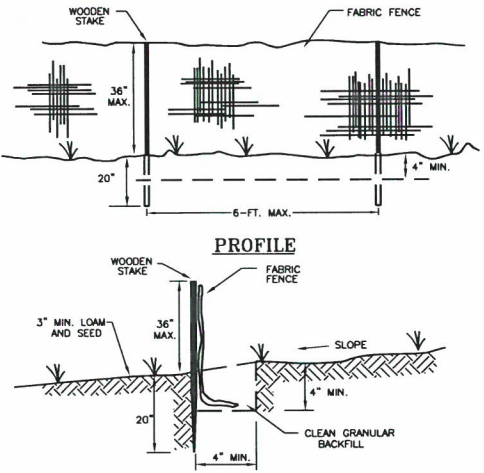
- TEMPORARY GRADE STABILIZATION STRUCTURES SHALL BE INSPECTED AFTER EACH STORM AND DAILY DURING PROLONGED STORM EVENTS. ANY DAMAGE TO THE STRUCTURES SHALL BE REPAIRED IMMEDIATELY. PARTICULAR ATTENTION SHALL BE GIVEN TO END RUN AND EROSION AT THE DOWNSTREAM TOE OF THE STRUCTURE.
- WHEN REMOVING THE STRUCTURES, THE DISTURBED AREAS SHALL BE BROUGHT UP TO EXISTING CHANNEL. GRADE AND THE AREAS PREPARED, SEED, MULCH, AND MULCHED.
- SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRUCTURES WHEN IT REACHES 1/2 THE ORIGINAL HEIGHT OF THE STRUCTURE.

STONE CHECK DAM INSTALLATION DETAIL

NOT TO SCALE

FILE NO. 104
PLAN NO. C-3085
DWG. NO. 20108 SP-1
F.B. NO.

31 Mooney Street, Alton, N.H. 603-875-3948



CROSS-SECTION

MAINTENANCE REQUIREMENTS:

- FENCES SHALL BE INSPECTED AND MAINTAINED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALLS.
- SEDIMENT DEPOSITION SHALL BE REMOVED, AT A MINIMUM, WHEN DEPOSITION ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FENCE, AND MOVED TO AN APPROPRIATE LOCATION SO THE SEDIMENT IS NOT READILY TRANSPORTED BACK TOWARD THE FENCE.
- SILT FENCES SHALL BE REPAIRED IMMEDIATELY IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES OF THE BARRIER, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, SEDIMENT BARRIERS SHALL BE REPLACED WITH A TEMPORARY CHECK DAM.
- SHALL THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL IS NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
- ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE PREPARED AND SEED.
- IF THERE IS EVIDENCE OF END FLOW ON PROPERLY INSTALLED BARRIERS, EXTEND BARRIERS UPHILL OR CONSIDER REPLACING THEM WITH OTHER MEASURES, SUCH AS TEMPORARY DIVERSIONS AND SEDIMENT TRAPS.
- SILT FENCES HAVE A USEFUL LIFE OF ONE SEASON, ON LONGER CONSTRUCTION PROJECTS, SILT FENCE SHALL BE REPAIRED PERIODICALLY AS REQUIRED TO MAINTAIN EFFECTIVENESS.

CONSTRUCTION SPECIFICATIONS:

- FENCES SHALL BE USED IN AREAS WHERE EROSION WILL OCCUR ONLY IN THE FORM OF SHEET EROSION AND THERE IS NO CONCENTRATION OF WATER IN A CHANNEL OR DRAINAGE WAY ABOVE THE FENCE. SEDIMENT BARRIERS SHALL BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM.
- THE MAXIMUM CONTRIBUTING DRAINAGE AREA ABOVE THE FENCE SHALL BE LESS THAN 1 ACRE PER 100 LINEAR FEET OF FENCE.
- THE MAXIMUM LENGTH OF SLOPE ABOVE THE FENCE SHALL BE 100 FEET.
- THE MAXIMUM SLOPE ABOVE THE FENCE SHALL BE 2:1.
- FENCES SHALL BE INSTALLED FOLLOWING THE CONTOUR OF THE LAND AS CLOSELY AS POSSIBLE, AND
A. THE ENDS OF THE FENCE SHALL BE FLARED UPSLOPE.
B. THE FABRIC SHALL BE EMBEDDED A MINIMUM OF 4 INCHES IN DEPTH AND INCHES IN WIDTH IN A TRENCH EXCAVATED INTO THE GROUND, OR IF SITE CONDITIONS INCLUDE FROZEN GROUND, LEDGE, OR THE PRESENCE OF HEAVY ROOTS, THE BASE OF THE FABRIC SHALL BE EMBEDDED WITH A MINIMUM THICKNESS OF 8 INCHES OF 3/4-INCH STONE.
C. THE SOIL SHALL BE COMPACTED OVER THE EMBEDDED FABRIC.
D. SUPPORT POSTS SHALL BE SIZED AND ANCHORED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS WITH MAXIMUM POST SPACING OF 6 FEET.
- ADJOINING SECTIONS OF THE FENCE SHALL BE OVERLAPPED BY A MINIMUM OF 6 INCHES (24 INCHES IS PREFERRED), FOLDED AND STAPLED TO A SUPPORT POST. IF METAL POSTS ARE USED, FABRIC SHALL BE WIRE-TIED DIRECTLY TO THE POSTS WITH THREE DIAGONAL TIES.
- SILT FENCING SHALL NOT BE STAPLED OR NAILED TO TREES.
- THE FILTER FABRIC SHALL BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE YARN AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER.
- THE FILTER FABRIC SHALL CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 DEGREES FAHRENHEIT TO 120 DEGREES FAHRENHEIT.
- POSTS FOR SILT FENCES SHALL BE EITHER 1/2 INCH DIAMETER WOOD OR 1.33 POUNDS PER LINEAR FOOT STEEL WITH A MINIMUM LENGTH OF 5 FEET. STEEL POSTS SHALL HAVE PROJECTIONS FOR FASTENING WIRE TO THEM. POSTS SHALL BE PLACED ON THE DOWN SLOPE SIDE OF THE FABRIC.
- THE HEIGHT OF A SILT FENCE SHALL NOT EXCEED 36 INCHES AS HIGHER FENCES MAY IMPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE.
- THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPUNCE TOGETHER ONLY AT SUPPORT POST, WITH A MINIMUM 6-INCH OVERLAP, AND SECURELY SEALED.
- A MANUFACTURED SILT FENCE SYSTEM WITH INTEGRAL POSTS MAY BE USED.
- POST SPACING SHALL NOT EXCEED 6 FEET.
- A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES WIDE AND 4 INCHES DEEP ALONG THE LINE OF POSTS AND UP GRADIENT FROM THE BARRIER.
- THE STANDARD STRENGTH OF FILTER FABRIC SHALL BE STAPLED OR WIRE TO THE POST, AND 8 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
- THE TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE FILTER FABRIC.
- SILT FENCE MAY BE INSTALLED BY "SLICING" USING MECHANICAL EQUIPMENT SPECIFICALLY DESIGNED FOR THIS PROCEDURE. THE SLICING METHOD USES AN IMPLEMENT TOWED BEHIND A TRACTOR TO "PLOW" OR SLICE THE SILT FENCE MATERIAL INTO THE SOIL. THE SLICING METHOD MINIMALLY DISRUPTS THE SOIL UPWARD AND SLIGHTLY DISPLACES THE SOIL, MAINTAINING THE SOIL'S PROFILE AND CREATING AN OPTIMAL CONDITION FOR SUBSEQUENT MECHANICAL COMPACTION.
- SILT FENCES SHALL BE INSTALLED WITH "SMILES" OR "J-HOOKS" TO REDUCE THE DRAINAGE AREA THAT ANY SEGMENT WILL IMPOUND.
- THE ENDS OF THE FENCE SHALL BE TURNED UPHILL.
- SILT FENCES PLACED AT THE TOE OF A SLOPE SHALL BE SET AT LEAST 6 FEET FROM THE TOE TO ALLOW SPACE FOR SHALLOW PONDING AND TO ALLOW FOR MAINTENANCE ACCESS WITHOUT DISTURBING THE SLOPE.
- SILT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED.

SILTATION CONTROL FENCE DETAIL

NOT TO SCALE

TEMPORARY VEGETATION SEEDING RECOMMENDATIONS

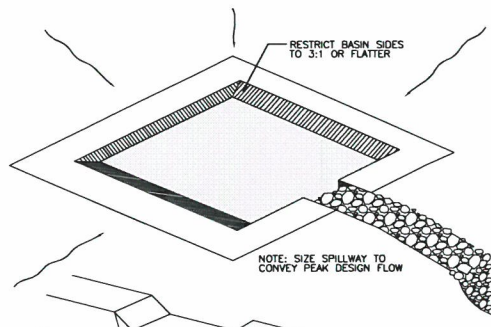
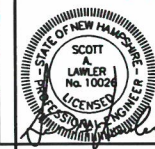
SPECIES	PER ACRE BUSHELS (BU) OR POUNDS (LBS.)	PER 1,000-SF	REMARKS
WINTER RYE	2.5 BU OR 112 LBS.	2.5 LBS.	BEST FOR FALL SEEDING. SEED FROM AUGUST 15 TO SEPTEMBER 15 FOR BEST COVER. SEED TO A DEPTH OF 1 INCH.
OATS	2.5 BU OR 80 LBS.	2.0 LBS.	BEST FOR SPRING SEEDING. SEED NO LATER THAN MAY 15 FOR SUMMER PROTECTION. SEED TO A DEPTH OF 1 INCH.
ANNUAL RYE GRASS	40 LBS.	1.0 LB.	GROWS QUICKLY, BUT IS OF SHORT DURATION. USE WHERE APPEARANCES ARE IMPORTANT. SEED EARLY SPRING AND/OR BETWEEN AUGUST 15 AND SEPTEMBER 15. COVER THE SEED WITH NO MORE THAN 0.25 INCH OF SOIL.
PERENNIAL RYE GRASS	30 LBS.	0.7 LBS.	BEST FOR FALL SEEDING. SEED FROM AUGUST 15 TO SEPTEMBER 15 FOR BEST COVER. SEED TO A DEPTH OF 1 INCH.

SOURCES:
1. NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3, TABLE 4-1
2. MINNICK, E.L. AND H.T. MARSHALL, (AUGUST 1992)

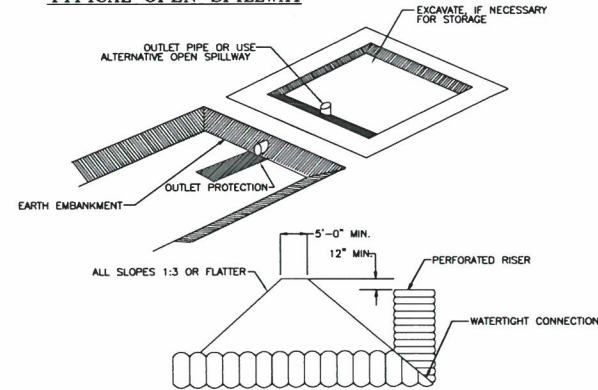


CIVIL ENGINEERS

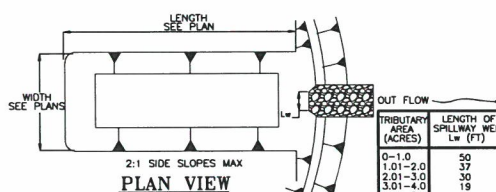
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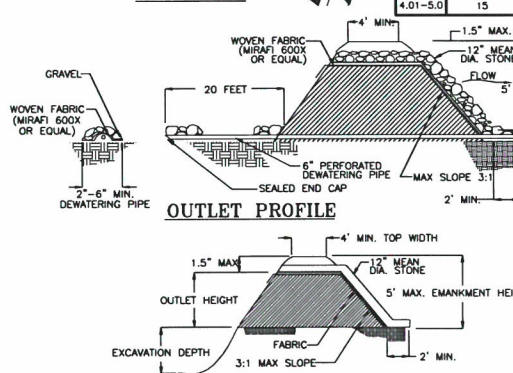
TYPICAL OPEN SPILLWAY



EMBANKMENT SECTION THRU RISER



PLAN VIEW



ALTERNATE OUTLET PROFILE

SEDIMENT TRAP

TEMPORARY VEGETATION:

SPECIFICATIONS:

SITE PREPARATION:

- INSTALL NEEDED EROSION AND SEDIMENT CONTROL MEASURES SUCH AS SILTATION BARRIERS, DIVERSIONS, AND SEDIMENT TRAPS.
- GRADE AS NEEDED FOR THE ACCESS OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING.
- RUNOFF SHALL BE DIVERTED FROM THE SEEDBED AREA.
- ON SLOPES 4:1 OR STEEPER, THE FINAL PREPARATION SHALL INCLUDE CREATING HORIZONTAL GROOVES PERPENDICULAR TO THE DIRECTION OF THE SLOPE TO CATCH SEED AND REDUCE RUNOFF.

SEEDING PREPARATION:

- STONES AND TRASH SHALL BE REMOVED SO AS NOT TO INTERFERE WITH THE SEEDING AREA.
- WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED.
- IF APPLICABLE, FERTILIZER AND ORGANIC SOIL AMENDMENTS SHALL BE APPLIED DURING THE GROWING SEASON.
- APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS. FERTILIZER SHALL BE RESTRICTED TO LIME, WOOD ASH OR LOW PHOSPHATE AND SLOW RELEASE NITROGEN VARIETIES, UNLESS A SOIL TEST WARRANTS OTHERWISE. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL FERTILIZER AND LIMESTONE MAY BE APPLIED AT THE FOLLOWING RATES:

LIMESTONE APPLICATION RATE = 3 TONS/ACRE (138 LB./1,000-SF)*
*EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE

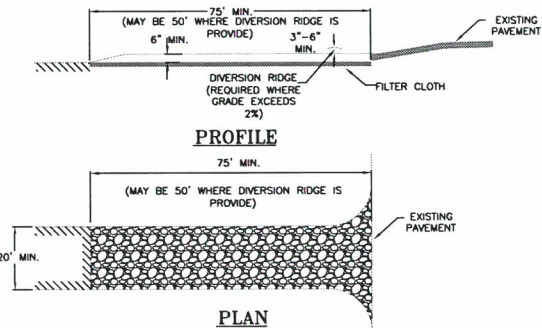
FERTILIZER APPLICATION RATE = 870 LB./ACRE (20 LB./1,000-SF)*
*LOW PHOSPHATE FERTILIZER (6-0-4) OR EQUIVALENT

SEEDING:

- APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDRO SEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH. HYDROSEEDING THAT INCLUDES MULCH MAY BE LEFT ON SOIL SURFACE. SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING.
- TEMPORARY SEED SHALL TYPICALLY OCCUR PRIOR TO SEPTEMBER 15.
- AREAS SEEDING BETWEEN MAY 15 AND AUGUST 15 SHALL BE COVERED WITH HAY OR STRAW MULCH, ACCORDING TO THE "TEMPORARY AND PERMANENT MULCHING" PRACTICE DESCRIBED IN THE NHSSM, VOL. 3.
- VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA SHALL BE ACHIEVED PRIOR TO OCTOBER 15. IF THIS CONDITION IS NOT ACHIEVED, IMPLEMENT OTHER TEMPORARY STABILIZATION MEASURES FOR OVER WINTER PROTECTION.

MAINTENANCE REQUIREMENTS:

- TEMPORARY SEEDING SHALL BE INSPECTED WEEKLY AFTER ANY RAINFALL EXCEEDING 1/2 INCH IN 24 HOURS ON ACTIVE CONSTRUCTION SITES. TEMPORARY SEEDING SHALL BE INSPECTED JUST PRIOR TO SEPTEMBER 15, TO ASCERTAIN WHETHER ADDITIONAL SEEDING IS REQUIRED TO PROVIDE STABILIZATION OVER THE WINTER PERIOD.
- BASED ON INSPECTION, AREAS SHALL BE RESEED TO ACHIEVE FULL STABILIZATION OF EXPOSED SOILS. IF IT IS TOO LATE IN THE PLANTING SEASON TO APPLY ADDITIONAL SEED, THEN OTHER TEMPORARY STABILIZATION MEASURES SHALL BE IMPLEMENTED.
- IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND AREAS SHALL BE RESEED, WITH OTHER TEMPORARY MEASURES (I.E. MULCH, ETC.) USED TO PROVIDE EROSION PROTECTION DURING THE PERIOD OF VEGETATION ESTABLISHMENT.



PROFILE

PLAN

TEMPORARY CONSTRUCTION EXIT

NOT TO SCALE

MAINTENANCE REQUIREMENTS:

- WHEN THE CONTROL PAD BECOMES INEFFECTIVE, THE STONE SHALL BE REMOVED ALONG WITH THE COLLECTED SAND AND MATERIAL, REGRADED ON SITE, AND STABILIZED. THE ENTRANCE SHALL THEN BE RECONSTRUCTED.
- THE CONTRACTOR SHALL SWEEP THE PAVEMENT AT EXITS WHENEVER SOIL MATERIALS ARE TRACKED ONTO THE ADJACENT PAVEMENT, TRAVELED WAY.
- WHEN WHEEL WASHING IS REQUIRED, IT SHALL BE CONDUCTED ON AN AREA STABILIZED WITH AGGREGATE, WHICH DRAINS INTO AN APPROVED SEDIMENT-TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS.

CONSTRUCTION SPECIFICATIONS:

- THE MINIMUM STONE USED SHALL BE 3-INCH CRUSHED STONE.
- THE MINIMUM LENGTH OF THE PAD SHALL BE 75 FEET, EXCEPT THAT THE MINIMUM LENGTH MAY BE REDUCED TO 50 FEET IF A 3-INCH TO 6-INCH BERM IS INSTALLED AT THE ENTRANCE OF THE PROJECT SITE.
- THE PAD SHALL BE THE FULL WIDTH OF CONSTRUCTION ACCESS ROAD OR 10 FEET, WHICHEVER IS GREATER.
- THE PAD SHALL SLOPE AWAY FROM THE EXISTING ROADWAY.
- THE PAD SHALL BE AT LEAST 6 INCHES THICK.
- THE GEOTEXTILE FILTER FABRIC SHALL BE PLACED BETWEEN THE STONE PAD AND THE EARTH SURFACE BELOW THE PAD.
- THE PAD SHALL BE MAINTAINED OR REPLACED WHEN MUD AND SOIL PARTICLES CLOG THE VOIDS IN THE STONE SUCH THAT MUD AND SOIL PARTICLES ARE TRACKED OFF-SITE.
- NATURAL DRAINAGE THAT CROSSES THE LOCATION OF THE STONE PAD SHALL BE INTERCEPTED AND PIPED BENEATH THE PAD, AS NECESSARY, WITH SUITABLE OUTLET PROTECTION.

TEMPORARY EROSION AND SEDIMENTATION CONTROL

TAX MAP 243, LOT 36 & 37

109 AIRPORT DRIVE

ROCHESTER, NH

PREPARED FOR:

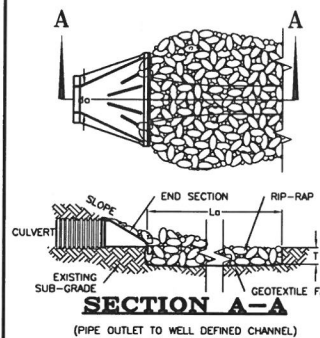
PELLA WINDOWS AND DOORS OF
NEW ENGLAND

SEPTEMBER 2020

2 Continental Blvd., Rochester, N.H. 603-335-3948

C-10

NORWAY PLAINS ASSOCIATES, INC.



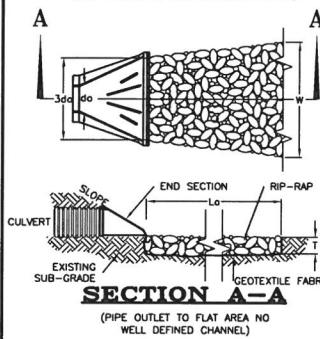
RIP-RAP GRADATION

d50 = 3"		
% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE (INCHES)	
100	5	TO 6
85	4	TO 5
50	3	TO 5
15	1	TO 2

d50 = 4"		
% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE (INCHES)	
100	6	TO 8
85	5	TO 7
50	4	TO 6
15	1	TO 2

d50 = 6"		
% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE (INCHES)	
100	9	TO 12
85	7.8	TO 10.8
50	6	TO 9
15	1.8	TO 3

d50 = 9"		
% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE (INCHES)	
100	13.5	TO 18
85	11.7	TO 16.2
50	9	TO 13.5
15	2.7	TO 4.5



APRON DIMENSION TABLE

OUTLET PROT. #	PIPE OUTLET	W ₆	W	L ₆	T	d50
1	24" CPP	6'	21'	15'	9"	3"

NOTES:

- ALL PIPE CULVERTS SHALL HAVE END SECTIONS OR HEADWALLS. END SECTION MATERIAL AND MANUFACTURER SHALL MATCH THAT OF THE PIPE CULVERT.
- THE LARGEST RIP-RAP SIZE DETERMINED DURING HYDROLOGIC ANALYSIS HAS BEEN USED FOR ALL OUTLETS FOR ECONOMY AND SIMPLICITY.
- APRON LENGTHS, WIDTHS AND THICKNESSES HAVE BEEN ROUNDED UP TO WHOLE NUMBERS FOR EASE OF CONSTRUCTION.

CONSTRUCTION SPECIFICATIONS:

- PREPARE THE SUB-GRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIP-RAP TO THE GRADES SHOWN ON THE PLANS.
- MINIMUM 6" SAND/GRAVEL BEDDING OR GEOTEXTILE FABRIC REQUIRED UNDER ALL ROCK RIP-RAP.
- THE ROCK OR GRAVEL USED FOR FILTER OR RIP-RAP SHALL CONFORM TO THE SPECIFIED GRADATION.
- GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF ROCK RIP-RAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO (2) PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
- STONE FOR THE RIP-RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.
- RIP-RAP SIZE CHOSEN FOR THE WORST CASE OF ALL OUTLETS. ALL RIP-RAP USED FOR PIPE OUTLET PROTECTION WILL HAVE THE SAME GRADATION AND THICKNESS.

MAINTENANCE NOTES:

- OUTLETS SHALL BE INSPECTED AND CLEANED ANNUALLY AND AFTER ANY MAJOR STORM EVENT. ANY EROSION OR DAMAGE TO THE RIP-RAP SHALL BE REPAIRED IMMEDIATELY.
- THE CHANNEL IMMEDIATELY DOWNSTREAM FROM THE OUTLET SHOULD BE CHECKED TO SEE THAT NO EROSION IS OCCURRING.
- THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS, AND SEDIMENT THAT COULD CHANGE FLOW PATTERNS AND/OR TAILWATER DEPTHS ON THE PIPES. REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO THE OUTLET PROTECTION APRON.

PIPE OUTLET PROTECTION DETAIL

DUST CONTROL PRACTICES:

- APPLY DUST CONTROL MEASURES AS NECESSARY TO MAINTAIN CONTROL OF DUST ON SITE.
- WATER APPLICATION:
 - MOISTEN EXPOSED SOIL SURFACES PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST.
 - AVOID EXCESSIVE APPLICATION OF WATER THAT WOULD RESULT IN MOBILIZING SEDIMENT AND SUBSEQUENT DEPOSITION IN NATURAL WATERBODIES.
- STONE APPLICATION:
 - COVER SURFACE WITH CRUSHED OR COARSE GRAVEL.
 - IN AREAS NEAR WATERWAYS USE ONLY CHEMICALLY STABILIZED OR WASHED AGGREGATE.
- REFER TO "NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3 CONSTRUCTION PHASE EROSION AND SEDIMENT CONTROLS, DECEMBER 2008" FOR OTHER ALLOWABLE DUST CONTROL PRACTICES (I.E. COMMERCIAL TACKIFIERS OR CHEMICAL TREATMENTS SUCH AS CALCIUM CHLORIDE, ETC.)

STOCKPILE PRACTICES:

- LOCATE STOCKPILES A MINIMUM OF 50-FT. AWAY FROM CONCENTRATED FLOWS OF STORMWATER, DRAINAGE COURSES OR INLETS.
- PROTECT ALL STOCKPILES FROM STORMWATER RUN-ON USING TEMPORARY PERIMETER MEASURES SUCH AS DIVERSIONS, BERMS, SANDBAGS OR OTHER APPROVED PRACTICES.
- STOCKPILES SHALL BE SURROUNDED BY SEDIMENT BARRIERS AS DESCRIBED ON THE PLANS AND IN NHSM VOL. 3, TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILE.
- IMPLEMENT WIND EROSION CONTROL PRACTICES AS APPROPRIATE ON ALL STOCKPILED MATERIAL.
- PLACE BAGGED MATERIALS ON PALLETS OR UNDERCOVER.
- PROTECTION OF INACTIVE STOCKPILES:
 - INACTIVE SOIL STOCKPILES SHALL BE COVERED WITH ANCHORED TARPS OR PROTECTED WITH SOIL STABILIZATION MEASURES (TEMPORARY SEED AND MULCH OR OTHER TEMPORARY STABILIZATION PRACTICE) AND TEMPORARY PERIMETER SEDIMENT BARRIERS (I.E. SILT FENCE, ETC.) AT ALL TIMES.
 - INACTIVE STOCKPILES OF CONCRETE RUBBLE, ASPHALT CONCRETE RUBBLE, AGGREGATE MATERIALS, AND SIMILAR MATERIALS SHALL BE PROTECTED WITH TEMPORARY SEDIMENT PERIMETER BARRIERS (I.E. SILT FENCE, ETC.) AT ALL TIMES. IF THE MATERIALS ARE A SOURCE OF DUST, THEY SHALL ALSO BE COVERED.
- PROTECTION OF ACTIVE STOCKPILES:
 - ALL STOCKPILES SHALL BE SURROUNDED WITH TEMPORARY LINEAR SEDIMENT BARRIERS (I.E. SILT FENCE, ETC.) PRIOR TO THE ONSET OF PRECIPITATION. PERIMETER BARRIERS SHALL BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIAL FROM THE STOCKPILE. THE INTEGRITY OF THE BARRIER SHALL BE INSPECTED AT THE END OF EACH WORKING DAY.
 - WHEN A STORM IS PREDICTED, STOCKPILES SHALL BE PROTECTED WITH AN ANCHORED PROTECTIVE COVERING.

FILE NO. 104
PLAN NO. C-3085
DWG. NO. 20108 SP-1
F.B. NO.

PERMANENT VEGETATION:

SPECIFICATIONS:

SITE PREPARATION:

- INSTALL NEEDED EROSION AND SEDIMENT CONTROL MEASURES SUCH AS SILTATION BARRIERS, DIVERSIONS, AND SEDIMENT TRAPS.
- GRADE AS NEEDED FOR THE ACCESS OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING.
- RUNOFF SHALL BE DIVERTED FROM THE SEEDBED AREA.
- ON SLOPES 4:1 OR STEEPER, THE FINAL PREPARATION SHALL INCLUDE CREATING HORIZONTAL GROOVES PERPENDICULAR TO THE DIRECTION OF THE SLOPE TO CATCH SEED AND REDUCE RUNOFF.

SEEDBED PREPARATION:

- WORK TIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING TOOTH HARROW OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OPERATION SHALL BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED. ALL BUT CLAY AND SILT SOILS SHALL BE ROLLED TO FIRM THE SEEDBED WHEREVER FEASIBLE.
- REMOVE FROM THE SURFACE ALL STONES 2 INCHES OR LARGER IN ANY DIMENSION. REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, CONCRETE CLODS, LUMPS, TRASH OR OTHER UNSUITABLE MATERIAL.
- INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED; THE AREA MUST BE TILLED AND FIRMED AS ABOVE.
- WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED.
- IF APPLICABLE, FERTILIZER AND ORGANIC SOIL AMENDMENTS SHALL BE APPLIED DURING THE GROWING SEASON.
- APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS. FERTILIZER SHALL BE RESTRICTED TO LIME, WOOD ASH OR LOW PHOSPHATE AND SLOW RELEASE NITROGEN VARIETIES, UNLESS A SOIL TEST WARRANTS OTHERWISE. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER AND LIMESTONE MAY BE APPLIED AT THE FOLLOWING RATES:

LIMESTONE APPLICATION RATE = 3 TONS/ACRE (138 LB./1,000-SF)
*EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE

FERTILIZER APPLICATION RATE = 870 LB./ACRE (20 LB./1,000-SF)
*LOW PHOSPHATE FERTILIZER (6-0-4) OR EQUIVALENT

SEEDING:

- INOCULATE ALL LEGUME SEED WITH THE CORRECT TYPE OF INOCULANT.
- APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL CULTPACKER TYPE SEEDER OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH. HYDROSEEDING THAT INCLUDES MULCH MAY BE LEFT ON SOIL SURFACE.
- WHERE FEASIBLE EXCEPT WHERE EITHER CULTPACKER TYPE SEEDER OR HYDROSEEDER IS USED, THE SEEDBED SHALL BE FIRMED FOLLOWING SEEDING OPERATIONS WITH A ROLLER, OR LIGHT DRAG.
- SPRING SEEDING USUALLY GIVES THE BEST RESULTS FOR ALL SEED MIXES OR WITH LEGUMES. PERMANENT SEEDING SHALL BE COMPLETED AS DAYS PRIOR TO FIRST KILLING FROST. WHEN CROWN VETCH IS SEEDING IN LATE SUMMER AT LEAST 35% OF THE SEED SHALL BE HARD SEED (UNSCARIFIED). IF SEEDING CANNOT BE DONE WITHIN THE SPECIFIED SEEDING DATES, MULCH ACCORDING TO THE "TEMPORARY AND PERMANENT MULCHING" PRACTICE DESCRIBED IN THE NHSM, VOL. 3, AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
- AREAS SEEDING BETWEEN MAY 15 AND AUGUST 15 SHALL BE COVERED WITH HAY OR STRAW MULCH, ACCORDING TO THE "TEMPORARY AND PERMANENT MULCHING" PRACTICE DESCRIBED IN THE NHSM, VOL. 3.
- VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA SHALL BE ACHIEVED PRIOR TO OCTOBER 15. IF THIS CONDITION IS NOT ACHIEVED, IMPLEMENT OTHER TEMPORARY STABILIZATION MEASURES FOR OVER WINTER PROTECTION.

HYDROSEEDING:

- WHEN HYDROSEEDING (HYDRALIC APPLICATION), PREPARE THE SEEDBED AS SPECIFIED ABOVE OR BY HAND RAKING TO LOOSEN AND SMOOTH THE SOIL AND REMOVE SURFACE STONES LARGER THAN 2 INCHES IN DIAMETER.
- SLOPES MUST BE NO STEEPER THAN 2:1 (2 FEET HORIZONTALLY BY 1 FOOT VERTICALLY).
- LIME AND FERTILIZER MAY BE APPLIED SIMULTANEOUSLY WITH THE SEED. THE USE OF FIBER MULCH ON CRITICAL AREAS IS NOT RECOMMENDED (UNLESS IT IS USED TO HOLD STRAW OR HAY). BETTER PROTECTION IS GAINED BY USING STRAW MULCH AND HOLDING IT WITH ADHESIVE MATERIALS OR 500 POUNDS PER ACRE OF WOOD FIBER MULCH.
- SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING.

MAINTENANCE REQUIREMENTS:

- PERMANENT SEEDING AREAS SHALL BE INSPECTED AT LEAST MONTHLY DURING THE COURSE OF CONSTRUCTION. INSPECTION, MAINTENANCE AND CORRECTIVE ACTIONS SHALL CONTINUE UNTIL THE OWNER ASSUMES PERMANENT OPERATION OF THE SITE.
- SEEDING AREAS SHALL BE MOWED AS REQUIRED TO MAINTAIN A HEALTHY STAND OF VEGETATION. MOWING HEIGHT AND FREQUENCY DEPEND OF TYPE OF GRASS COVER.
- BASED ON INSPECTION, AREAS SHALL BE RESEEDING TO ACHIEVE FULL STABILIZATION OF EXPOSED SOILS.
- AT A MINIMUM 85% OF THE SOIL SURFACE SHALL BE COVERED BY VEGETATION.
- IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND AREAS SHALL BE RESEEDING, WITH OTHER TEMPORARY MEASURES (I.E. MULCH, ETC.) USED TO PROVIDE EROSION PROTECTION DURING THE PERIOD OF VEGETATION ESTABLISHMENT.

PERMANENT VEGETATION SEEDING RECOMMENDATIONS

USE	MIXTURE	SPECIES	LBS./ACRE	LBS./1,000-SF
STEEP CUTS AND FILLS, BORROW AREAS	A	TALL FESCUE	20	0.45
		CREeping RED FESCUE	20	0.45
		REDTOP	2	0.05
		TOTAL	42	0.95
WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER	A	TALL FESCUE	20	0.45
		CREeping RED FESCUE	20	0.45
		REDTOP	2	0.05
		TOTAL	42	0.95
LIGHTLY USED PARKING LOTS, GOOD AREAS, UNUSED LANDS, AND LOW INTENSITY RECREATION SITES	A	TALL FESCUE	20	0.45
		CREeping RED FESCUE	20	0.45
		REDTOP	2	0.05
		TOTAL	42	0.95
PLAY AREAS AND ATHLETIC FIELDS (TOPSOIL ESSENTIAL FOR GOOD TURF)	F	CREeping RED FESCUE	50	1.15
		KENTUCKY BLUEGRASS	50	1.15
		TOTAL	100	2.30

SOURCES:

- NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3, TABLES 4-2 AND 4-3
- MINNICK, E.L. AND H.T. MARSHALL, (AUGUST 1992)

GENERAL CONSTRUCTION PHASING:

1. STABILIZATION:

- A SITE IS DEEMED STABILIZED WHEN IT IS IN A CONDITION IN WHICH THE SOIL ON SITE WILL NOT EXPERIENCE ACCELERATED OR UNNATURAL EROSION UNDER THE CONDITIONS OF A 10-YEAR STORM EVENT, SUCH AS BUT NOT LIMITED TO:

a) AREAS THAT WILL NOT BE PAVED:

- A MINIMUM OF 85% VEGETATIVE COVER HAS BEEN ESTABLISHED;
- A MINIMUM OF 3-INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR A CERTIFIED COMPOST BLANKET HAS BEEN INSTALLED; OR;
- EROSION CONTROL BLANKETS HAVE BEEN INSTALLED.

b) AREAS TO BE PAVED:

- BASE COURSE GRAVELS HAVE BEEN INSTALLED.

2. TEMPORARY STABILIZATION:

- ALL AREAS OF EXPOSED OR DISTURBED SOIL SHALL BE TEMPORARILY STABILIZED AS SOON AS PRACTICABLE BUT NO LATER THAN 45 DAYS FROM THE TIME OF INITIAL DISTURBANCE, UNLESS A SHORTER TIME IS SPECIFIED BY LOCAL AUTHORITIES. THE CONSTRUCTION SEQUENCE APPROVED AS PART OF THE ISSUED PERMIT OR AN INDEPENDENT MONITOR.

3. PERMANENT STABILIZATION:

- ALL AREAS OF EXPOSED OR DISTURBED SOIL SHALL BE PERMANENTLY STABILIZED AS SOON AS PRACTICABLE BUT NO LATER THAN 3 DAYS FOLLOWING FINAL GRADING.

a) MAXIMUM AREA OF DISTURBANCE:

- THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION. NO MORE THAN 5 ACRES SHALL BE DISTURBED (NOT STABILIZED) AT ANY TIME.
- ONLY DISTURB, CLEAR, OR GRADE AREAS NECESSARY FOR CONSTRUCTION.

b) EXCLUDE VEHICLES AND CONSTRUCTION EQUIPMENT FROM THESE AREAS TO PRESERVE NATURAL VEGETATION.

- ALL GRADED OR DISTURBED AREAS INCLUDING SLOPES SHALL BE PROTECTED DURING CLEARING AND CONSTRUCTION IN ACCORDANCE WITH THE APPROVED GRADING AND DRAINAGE PLAN DEPICTED ON SHEET C-3.

7. ALL EROSION AND SEDIMENT CONTROL PRACTICES AND MEASURES SHALL BE CONSTRUCTED, APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN DEPICTED ON SHEET C-3.

- ALL AREAS OF EXPOSED OR DISTURBED SOIL SHALL BE STOCKPILED IN THE AMOUNT NECESSARY TO COMPLETE FINISHED GRADING AND BE PROTECTED FROM EROSION.

8. STOCKPILES, BORROW AREAS AND SPOILS SHALL BE STABILIZED AS DESCRIBED UNDER "SOIL STOCKPILE PRACTICES".

- SLOPES SHALL NOT BE CREATED SO CLOSE TO PROPERTY LINES AS TO ENDANGER ADJACENT AREAS. SLOPES SHALL BE PROTECTED AGAINST SEDIMENTATION, EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED DAMAGE.

- AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREE VEGETATION, ROOTS AND/OR OTHER OBJECTIONABLE MATERIALS.

- AREAS SHALL BE SOAKED TO A MINIMUM DEPTH OF 3-INCHES PRIOR TO PLACEMENT OF TOPSOIL. TOPSOIL SHALL BE PLACED WITHOUT SIGNIFICANT COMACTION TO PROVIDE A LOOSE BEDDING FOR PLACEMENT OF SEED.

- ALL FILLS SHALL BE COMPACTED IN ACCORDANCE WITH PROJECT SPECIFICATIONS TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES, SITE UTILITIES, CONDUITS AND OTHER FACILITIES, SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.

- IN GENERAL, FILLS SHALL BE COMPACTED IN LAYERS RANGING FROM 6 TO 24 INCHES IN THICKNESS. THE CONTRACTOR SHALL REVIEW THE PROJECT GEOTECHNICAL REPORT AND/OR THE "PROJECT SPECIFIC PHASING NOTES" FOR SPECIFIC GUIDANCE.

- ANY AND ALL FILL MATERIAL SHALL BE FREE OF BRUSH, RUBBISH, ROCKS (LARGER THAN 3/4" THE DEPTH OF THE LIFT BEING INSTALLED), LOGS, STUMPS, BUILDING DEBRIS, FROZEN MATERIAL AND OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY LIFTS.

- FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE (I.E. CLAY, SILT) MATERIALS ARE SUSCEPTIBLE TO ACCELERATED SETTLEMENT AND POTENTIAL ACCELERATED EROSION. WORK IN AREAS OF THESE MATERIALS SHALL BE PERFORMED UNDER THE DIRECTION OF A PROFESSIONAL ENGINEER.

- THE OUTER FACE OF THE FILL SLOPE SHALL BE ALLOWED TO STAY LOOSE, NOT ROLLED OR COMPACTED, OR BLADE SMOOTHED. A BULLDOZER MAY RUN UP AND DOWN THE FILL SLOPE SO THE DOZER TREADS (CLEAT TRACKS) CREATE GROOVES PERPENDICULAR TO THE SLOPE. IF THE SOIL IS NOT TOO MOIST, EXCESSIVE COMPACTION WILL NOT OCCUR. SEE "SURFACE ROUGHENING" IN THE NHSM, VOL. 3.

- ROUGHEN THE SURFACE OF ALL SLOPES DURING THE CONSTRUCTION OPERATION TO RETAIN WATER, INCREASE INFILTRATION AND FACILITATE VEGETATION ESTABLISHMENT.

- USE SLOPE BREAKS, SUCH AS DIVERSIONS, BENCHES, OR CONTOUR FURROWS AS APPROPRIATE TO REDUCE THE LENGTH OF CUT-FILL SLOPES TO LIMIT SHEET AND RILL EROSION AND PREVENT GULLY EROSION. ALL BENCHES SHALL BE KEPT FREE OF SEDIMENT DURING ALL PHASES OF CONSTRUCTION.

- SEDS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE EVALUATED BY A PROFESSIONAL ENGINEER (PREFERABLY THE DESIGN ENGINEER) TO DETERMINE IF THE PROPOSED DESIGN SHALL BE REVISED TO PROPERLY MANAGE THE CONDITION.

- IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND AREAS SHALL BE RESEEDING, WITH OTHER TEMPORARY MEASURES (I.E. MULCH, ETC.) USED TO PROVIDE EROSION PROTECTION DURING THE PERIOD OF VEGETATION ESTABLISHMENT.

- ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.

- THE PROJECT SHALL BE CONSTRUCTED TO MEET ALL REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER ARG 3800 RELATIVE TO INVASIVE SPECIES.

- ABOVE NOTES EXCEPTED, ADAPTED AND REFERENCED FROM "NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3 CONSTRUCTION PHASE EROSION AND SEDIMENT CONTROLS, DECEMBER 2008" (NHSM, VOL. 3)

PROJECT SPECIFIC CONSTRUCTION PHASING:

- REFER TO THE "GENERAL CONSTRUCTION PHASING" NOTES PRIOR TO COMMENCING CONSTRUCTION IN ACCORDANCE WITH THE FOLLOWING PHASING. THE "GENERAL CONSTRUCTION PHASING" NOTES APPLY TO THE OVERALL CONSTRUCTION AND SHALL BE ADHERED TO.

- INSTALL ALL TEMPORARY SEDIMENT CONTROL BARRIERS (I.E. SILT FENCE, EROSION CONTROL MIX BERM, STONE CHECK DAMS, ETC.) AROUND THE OUTER PERIMETER OF THE CONSTRUCTION SITE AS DEPICTED ON SHEET C-4 PRIOR TO EARTH MOVING OPERATIONS.

- INSTALL ORANGE SNOW FENCE AROUND THE PERIMETER OF THE INFILTRATION BASINS AND THE FENCE SHALL REMAIN IN PLACE UNTIL CONSTRUCTION OF THE BASINS HAS STARTED.

- CLEAR, GRUB AND STRIP THE SITE. STUMPS, BRUSH AND OTHER ORGANIC WASTE SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.

- INSTALL A TEMPORARY CONSTRUCTION EXIT AT THE LOCATION OF THE PROPOSED AIRPORT DRIVE CONNECTION TO AIRPORT DRIVE. MAINTAIN AS DIRECTED BY THE TEMPORARY CONSTRUCTION EXIT DETAIL.

- STOCKPILE STRIPPED TOPSOIL AND CUT MATERIAL TO BE REUSED ON SITE IN AN APPROPRIATE LOCATION IN ACCORDANCE WITH THE "SOIL STOCKPILES PRACTICES". MAINTAIN THE STOCKPILES AS DIRECTED IN THE "SOIL STOCKPILE PRACTICES".

- PERFORM THE NECESSARY CUTS AND FILLS TO CONSTRUCT THE STORMTECH SYSTEM AS DEPICTED ON SHEET C-3 AND IN ACCORDANCE WITH THE STORMTECH SYSTEM DETAILS SHOWN ON SHEET C-3.

- CONSTRUCT THE STORMTECH SYSTEM, BACK FILL AND COMPACT AS NOTED IN THE DETAIL SHEETS.

- ALL DITCHES/SWALES/AND BASINS SHALL BE STABILIZED PRIOR TO THAW OR SPRING MELT EVENT.

- PERFORM THE NECESSARY CUTS AND FILLS TO SUBGRADE IN THE BUILDING AND PARKING LOT AREAS.

- INSTALL REQUIRED FILLS IN MAXIMUM 8-INCH LIFTS AND COMPACT EACH LIFT TO 95% MAXIMUM PROCTOR DENSITY.

- AS SUBGRADE IS ACHIEVED INSTALL REMAINING SEDIMENT CONTROL BARRIERS WITHIN THE SITE (I.E. ADDITIONAL SILT FENCE, CHECK DAMS AND SEDIMENT CONTROLS AND CATCH BASINS, ETC.).

- INSTALL ALL UTILITIES AND CLOSED DRAINAGE SYSTEM COMPONENTS (I.E. PIPE CULVERTS, CATCH BASINS AND REMAINING WATER MAIN) PER THE CORRESPONDING DETAILS AND AS SHOWN ON SHEET C-3 AND C-8. AS EACH STRUCTURE IS COMPLETED INSTALL THE CORRESPONDING SEDIMENT CONTROL MEASURE.

- ALL CUT AND FILL SLOPES AND LAWN AREAS NOT TO BE PAVED SHALL BE LOADED AND SEEDED FOR PERMANENT VEGETATION AND STABILIZATION AS DESCRIBED UNDER THE "PERMANENT VEGETATION PRACTICES" WITHIN 3 DAYS OF ACHIEVING FINAL GRADE.

- INSTALL ALL GRAVEL BASE AND CRUSHED GRAVEL MATERIALS FOR THE PARKING AREA AS SPECIFIED IN THE CORRESPONDING DETAILS.

- THE PARKING AREAS SHALL BE STABILIZED (CONSTRUCTED TO GRAVEL BASE COURSE) WITHIN 3 DAYS OF ACHIEVING FINISHED SUBGRADE ELEVATIONS.

- INSTALL PAVEMENT SURFACES AS SOON AS POSSIBLE AFTER THE INSTALLATION OF THE GRAVEL BASE AND CRUSHED GRAVEL, IN ORDER TO LIMIT THE SOIL EROSION AND POLLUTION OF THE GRAVEL MATERIALS WITH ORGANIC MATERIALS. IN NO CASE SHALL AREAS BE LEFT UN-PAVED BE LEFT UNPROTECTED THROUGHOUT THE WINTER MONTHS.

- ALL DISTURBED AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE. IN NO CASE SHALL ANY DISTURBED AREA BE LEFT UN-STABILIZED FOR LONGER THAN 21 DAYS. IF NECESSARY TEMPORARY STABILIZATION MEASURES AS DISCUSSED IN THE "GENERAL CONSTRUCTION PHASING NOTES" AND NHSM, VOL. 3 SHOULD BE EMPLOYED.

- DURING CONSTRUCTION ALL TEMPORARY AND PERMANENT SEDIMENT, EROSION CONTROL, AND STORMWATER MANAGEMENT PRACTICES SHOULD BE INSPECTED WEEKLY, AFTER EVERY 1/2 INCH OF RAINFALL, AND ANNUALLY. EXCESS SEDIMENT SHOULD BE REMOVED FROM TEMPORARY SEDIMENT, EROSION CONTROL, AND STORMWATER MANAGEMENT PRACTICES WHEN IT REACHES PRESCRIBED THRESHOLDS DISCUSSED IN THE DETAILS FOR EACH PRACTICE.

- ALL DAMAGED TEMPORARY AND PERMANENT SEDIMENT, EROSION CONTROL, AND STORMWATER MANAGEMENT PRACTICES SHOULD BE REPAIRED OR REPLACED IMMEDIATELY UPON NOTICE.

- SEDIMENT SHALL BE DISPOSED OF PROPERLY EITHER ON SITE OR OFF SITE. PROJECT COMPLETION AND STABILIZATION.

- UPON PROJECT COMPLETION, ONCE THE SITE IS DEEMED STABILIZED (VEGETATION IS GERMINATED), THE TEMPORARY SEDIMENT CONTROL BARRIERS AND EROSION CONTROL PRACTICES SHALL BE REMOVED. ANY DISTURBANCE CREATED DURING REMOVAL SHALL BE REPAIRED IN AN APPROPRIATE MANNER.

- ACCUMULATED SEDIMENT SHALL BE REMOVED FROM ALL ON SITE CATCH BASINS.

WINTER STABILIZATION & CONSTRUCTION PRACTICES:

MAINTENANCE REQUIREMENTS:

- MAINTENANCE MEASURES SHALL BE PERFORMED THROUGHOUT CONSTRUCTION INCLUDING OVER THE WINTER PERIOD. AFTER EACH RAINFALL, SNOWSTORM, OR PERIOD OF THAWING AND RUNOFF, THE SITE CONTRACTOR SHALL CONDUCT INSPECTION OF ALL INSTALLED EROSION CONTROL PRACTICES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUED FUNCTION.
- FOR ANY AREA STABILIZED BY TEMPORARY OR PERMANENT SEEDING PRIOR TO THE ONSET OF THE WINTER SEASON, THE CONTRACTOR SHALL CONDUCT AN INSPECTION IN THE SPRING TO ASCERTAIN THE CONDITION OF THE VEGETATION AND REPAIR ANY DAMAGED AREAS OR BARE SPOTS AND RESEED AS REQUIRED TO ACHIEVE AN ESTABLISHED VEGETATIVE COVER (AT LEAST 85% OF AREA VEGETATED WITH HEALTHY, VIGOROUS GROWTH.)

SPECIFICATIONS:

- THE FOLLOWING STABILIZATION TECHNIQUES SHALL BE EMPLOYED DURING THE PERIOD FROM OCTOBER 15 THROUGH MAY 15.

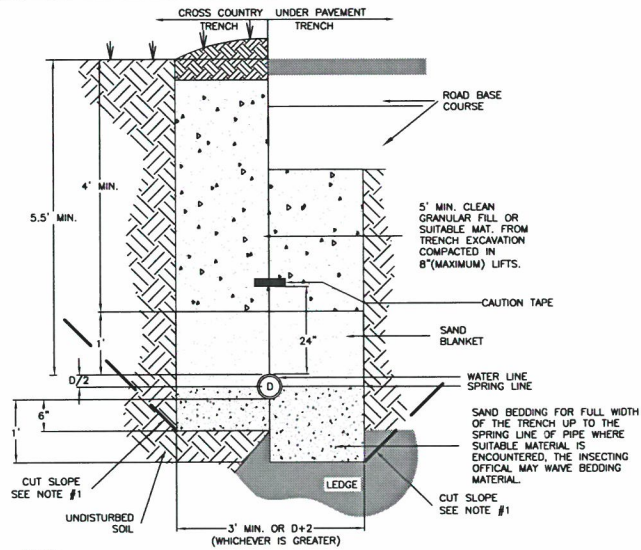
- THE AREA OF EX

LAND SURVEYORS



CIVIL ENGINEERS

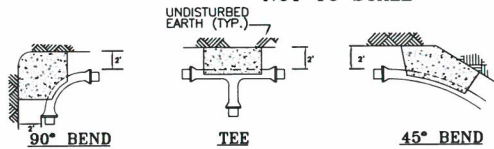
CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITHIN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.



- NOTES:
1. PIPES MAY BE INSTALLED BY EXCAVATING AN OPEN TRENCH WITH SIDE SLOPES OF 1:1 MAXIMUM TO A DEPTH OF 4'-FT. INSTALLATIONS DEEPER THAN 4'-FT REQUIRE THE USE OF A TRENCH BOX.
2. PIPE MATERIALS SHALL BE AS SPECIFIED ON THE DESIGN PLAN.
3. SAND BLANKET MAY BE OMITTED FOR REINFORCED CONCRETE PIPE.

WATER PIPE TRENCH INSTALLATION DETAIL

NOT TO SCALE



PIPE SIZE	90° BEND	TEE	PLUG	45° BEND	22 1/2" BEND
6"	5	4	3	2	2
8"	10	8	6	6	3
12"	24	18	8	12	8

NOTE: SIZE OF THRUST BLOCKS MAY BE INCREASED BY THE ENGINEER TO MEET SOIL CONDITIONS FOUND DURING CONSTRUCTION.

WATER MAIN THRUST BLOCK DETAILS

NOT TO SCALE

DUCTILE IRON MECHANICAL RETRAINED LENGTH (FEET)																								
PIPE DIAMETER (INCHES)	BENDS																				DEAD END			
	11 1/4"				22 1/2"				45°				90°											
	50 psi	100 psi	150 psi	200 psi	50 psi	100 psi	150 psi	200 psi	50 psi	100 psi	150 psi	200 psi	50 psi	100 psi	150 psi	200 psi	50 psi	100 psi	150 psi	200 psi				
2"	0	0	1	1	0	1	1	1	1	1	2	3	2	4	5	7	4	8	12	17				
6"	0	0	1	1	1	1	2	2	1	2	3	4	3	5	8	10	6	12	18	23				
8"	0	1	1	1	1	1	2	3	1	3	4	6	3	7	10	13	8	15	23	31				
10"	0	1	1	2	1	2	2	3	2	3	5	7	4	8	12	16	9	19	28	37				
12"	0	1	1	2	1	2	3	4	2	4	6	8	5	9	14	19	11	22	33	44				
TEE*																								
SAME SIZE				ONE SIZE SMALLER				ONE SIZE SMALLER				TWO SIZE SMALLER												
50 psi	100 psi	150 psi	200 psi	50 psi	100 psi	150 psi	200 psi	50 psi	100 psi	150 psi	200 psi	50 psi	100 psi	150 psi	200 psi	50 psi	100 psi	150 psi	200 psi					
2"	1	1	1	1	1	1	1	1	3	4	5	—	—	—	—									
6"	1	1	1	4	1	1	1	1	3	6	9	12	4	8	12	16								
8"	1	1	3	11	1	1	1	1	3	6	10	13	6	11	17	22								
10"	1	1	8	17	1	1	1	6	3	6	10	13	6	11	17	23								
12"	1	2	13	24	1	1	4	13	5	11	16	22	6	12	18	23								

* BASED ON A MINIMUM ATTACHED PIPE ALONG RUN (Lr) = 5 FEET

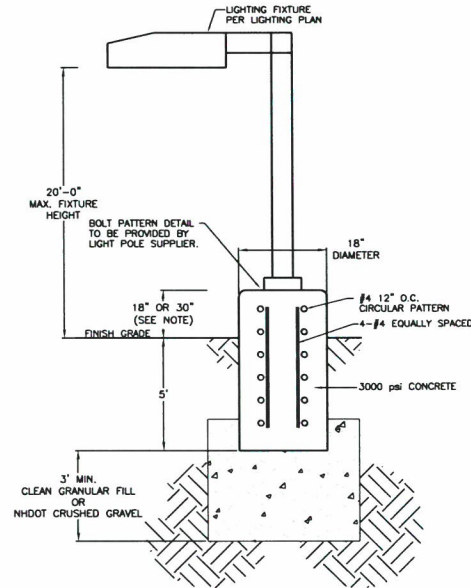
MECHANICAL RESTRAINED LENGTH SCHEDULE

NOT TO SCALE

- NOTES:
1. PIPE IS BURIED TO A DEPTH OF 6 FEET WITH A MINIMUM OF 4 INCHES OF COMPACTED GRANULAR MATERIAL UNDER THE PIPE TO THE SPRING LINE OF THE PIPE.
2. THE EXISTING SOIL IS POORLY GRADED GRAVEL AND GRAVEL SAND MIXTURE WITH LITTLE TO NO FINES.
3. ALL CALCULATIONS ARE BASED ON A FACTOR OF SAFETY OF 1.5 TO 1.
4. ALL CALCULATIONS ARE BASED ON THE "RESTRAINED LENGTH CALCULATION PROGRAM" BY EBAA IRON, INC., RELEASE 3.1.

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P.B. NO.

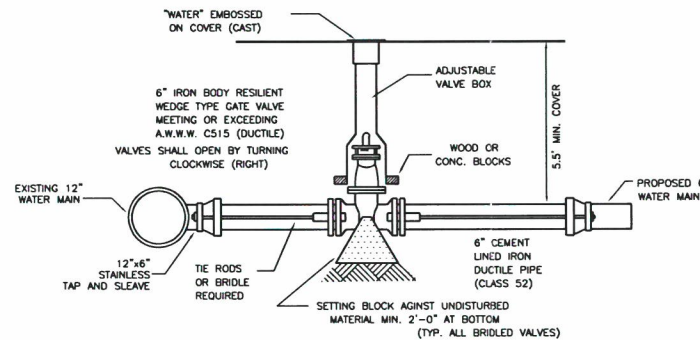
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POLE MOUNTED LIGHT DETAIL

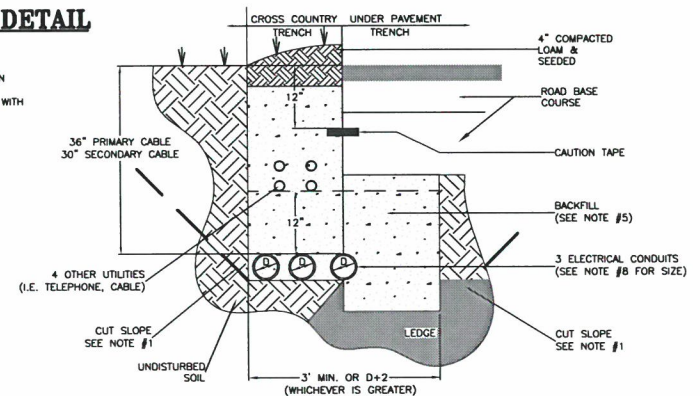
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- NOTE:
1. LIGHT POLE BASE SHALL BE 18" ABOVE FINISH GRADE FOR NON VEHICLE IMPACT AREAS AND 30" FOR VEHICLE IMPACT AREAS.
2. THE LIGHT POLE BASES CAN BE PRECAST, WITH COORDINATION WITH THE LIGHTING FIXTURE MANUFACTURE FOR BOLT PATTERN.



WATER MAIN CONNECTION

NOT TO SCALE



- NOTES:
1. ALL NON-METALLIC CONDUIT AND FITTINGS SHALL BE ELECTRICAL GRADE, SCHEDULE 40 PVC, AND SHALL CONFORM TO THE APPLICABLE SECTIONS OF NEMA TC2-1990 AND BE UL LISTED. ONLY GRAY-COLORED CONDUIT WILL BE ACCEPTED. ANY PVC CONDUIT NOT HAVING THE PROPER NEMA AND UL MARKINGS WILL NOT BE ACCEPTED. ALL STEEL CONDUITS SHALL CONFORM TO ASTM A120 AND BE RIGID GALVANIZED STEEL. STEEL FITTINGS SHALL BE SEALED WITH COMPOUND.
2. ALL 90 DEGREE SWEEPS WILL BE MADE USING RIGID GALVANIZED STEEL WITH A MINIMUM RADIUS OF 36 INCHES FOR PRIMARY CABLES AND 24 INCHES FOR SECONDARY CABLES. ALL STEEL SWEEPS WITHIN 18" OF THE SURFACE SHALL BE PROPERLY GROUNDING.
3. A 10-FOOT HORIZONTAL SECTION OF RIGID GALVANIZED STEEL CONDUIT WILL BE REQUIRED AT EACH SWEEP, UNLESS IN THE OPINION OF THE PSNH DESIGNER, THE SWEEP-PVC JOINT IS NOT SUBJECT TO FAILURE DURING CABLE PULLING.
4. THE CONDUIT SHALL CROSS PAVED AREAS AT APPROXIMATELY 90 DEGREES.
5. BACKFILL MAY BE MADE WITH EXCAVATED MATERIAL OR COMPARABLE, UNLESS MATERIAL IS DEEMED UNSUITABLE BY PSNH. BACKFILL SHALL BE FREE OF FROZEN LUMPS, ROCKS, DEBRIS, AND RUBBISH. ORGANIC MATERIAL SHALL NOT BE USED AS BACKFILL. BACKFILL SHALL BE THOROUGHLY COMPACTED IN 6-INCH LAYERS.
6. A SUITABLE PULL STRING, CAPABLE OF 200 POUNDS OF PULL, MUST BE INSTALLED IN THE CONDUIT BEFORE PSNH IS NOTIFIED TO INSTALL CABLE. THE STRING SHOULD BE BLOWN INTO THE CONDUIT AFTER THE RUN IS ASSEMBLED TO AVOID BONDING THE STRING TO THE CONDUIT.
7. ROUTING OF THE CONDUIT AND INSPECTION PRIOR TO BACKFILL WILL BE PROVIDED BY PSNH. INSTALLATION OF THE CONDUIT WILL BE DONE BY THE CONTRACTOR. THE PSNH SUPERVISOR MUST BE NOTIFIED 2 BUSINESS DAYS PRIOR TO BACKFILLING THE TRENCH. IN THE EVENT THAT A CABLE CANNOT BE SUCCESSFULLY PULLED THROUGH THE COMPLETED CONDUIT SYSTEM DUE TO A CONSTRUCTION ERROR, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND REPAIR THE INVOLVED CONDUIT. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL RESULTING EXPENSES.
8. NORMAL CONDUIT SIZES FOR EVERSOURCE ARE 3-INCH FOR SINGLE PHASE PRIMARY AND SECONDARY VOLTAGE CABLES, 4-INCH FOR THREE PHASE SECONDARY, AND 5-INCH FOR THREE PHASE PRIMARY.
9. ALL CONDUIT INSTALLATIONS MUST CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRIC SAFETY CODE, STATE AND LOCAL CODES AND ORDINANCES, AND WHERE APPLICABLE THE NATIONAL ELECTRIC CODE.
10. CONDUIT MAY BE INSTALLED BY EXCAVATING AN OPEN TRENCH WITH SIDE SLOPES OF 1:1 MAXIMUM TO A DEPTH OF 4'-FT. INSTALLATIONS DEEPER THAN 4'-FT. REQUIRE THE USE OF A TRENCH BOX.

ELECTRICAL & UNDERGROUND UTILITY TRENCH INSTALLATION DETAIL

NOT TO SCALE

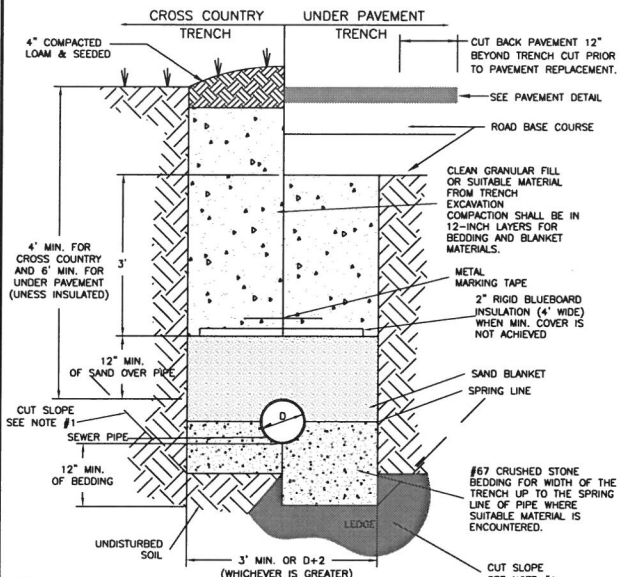
UTILITY DETAILS
TAX MAP 243, LOTS 36 & 37
109 AIRPORT DRIVE
ROCHESTER, NH
PREPARED FOR:
PELLA WINDOWS AND DOORS
OF NEW ENGLAND
SEPTEMBER 2020

C-12

NORWAY PLAINS ASSOCIATES, INC.

2 Continental Blvd., Rochester, N.H. 603-335-3948

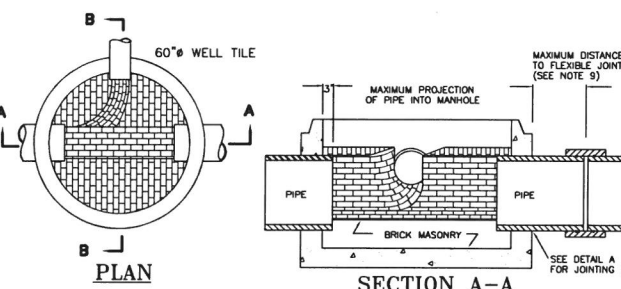
LAND SURVEYORS



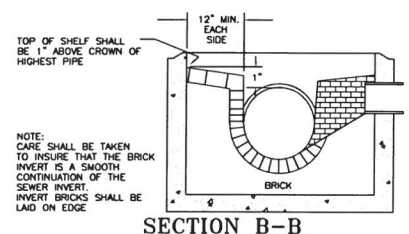
- NOTES:
- PIPES MAY BE INSTALLED BY EXCAVATING AN OPEN TRENCH WITH SIDE SLOPES OF 1:1 MAXIMUM TO A DEPTH OF 4-FT. INSTALLATIONS DEEPER THAN 4-FT REQUIRE THE USE OF A TRENCH BOX.
 - PIPE MATERIALS SHALL BE AS SPECIFIED ON THE DESIGN PLAN.
 - SAND BLANKET MAY BE OMITTED FOR REINFORCED CONCRETE PIPE.
 - WHERE SHEETING IS PLACED ALONGSIDE THE PIPE AND EXTENDS BELOW MID-DIAMETER, THE SHEETING SHALL BE CUT OFF AND LEFT IN PLACE TO AN ELEVATION NOT LESS THAN ONE FOOT ABOVE THE TOP OF THE PIPE AND AT LEAST 3 FEET BELOW FINISHED GRADE.
 - THE PIPE SAND BLANKET MATERIAL SHALL BE GRADED SAND FREE FROM ORGANIC MATERIALS, GRADED SUCH THAT 100 PERCENT PASSES A 1/4-INCH SIEVE AND A MAXIMUM OF 15 PERCENT PASSES A #200 SIEVE.
 - TRENCH BACKFILL MATERIAL IN ROADWAY LOCATIONS SHALL BE NATURAL MATERIALS EXCAVATED FROM THE TRENCH DURING CONSTRUCTION, EXCLUDING:
 - DEBRIS;
 - PIECES OF PAVEMENT;
 - ORGANIC MATTER;
 - TOP SOIL;
 - WET OR SOFT MUCK;
 - PEAT OR CLAY;
 - EXCAVATED LEDGE MATERIAL;
 - ROCKS OVER 6 INCHES IN THE LARGEST DIMENSION; AND
 - ANY MATERIAL NOT APPROVED BY THE ENGINEER.

SEWER PIPE TRENCH INSTALLATION DETAIL NOT TO SCALE

CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITHIN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.



SECTION A-A
NOTE: INVERT AND SHELVE TO BE PLACED AFTER LEAKAGE TEST



SECTION B-B
NOTE: CARE SHALL BE TAKEN TO INSURE THAT THE BRICK INVERT IS A SMOOTH CONTINUATION OF THE SEWER INVERT. INVERT BRICKS SHALL BE LAID ON EDGE

FILE NO. 104
PLAN NO. C-3085
DWC. NO. 20108 SP-1
F.B. NO.

31 Mooney Street, Alton, N.H. 603-875-3948

- NOTES:
- IT IS INTENTION OF THE CITY OF ROCHESTER PUBLIC WORKS DEPARTMENT THAT THE MANHOLE, INCLUDING ALL COMPONENT PARTS, HAVE ADEQUATE SPACE, STRENGTH AND LEAK PROOF QUALITIES CONSIDERED NECESSARY BY THE PUBLIC WORKS DEPARTMENT FOR THE INTENDED SERVICE. SPACE REQUIREMENTS AND CONFIGURATIONS, SHALL BE AS SHOWN ON THE DRAWING. MANHOLES MAY BE AN ASSEMBLY OF PRECAST SECTIONS, WITH OR WITHOUT STEEL REINFORCEMENT, WITH ADEQUATE JOINTING, OR CONCRETE CAST MONOLITHICALLY IN PLACE WITH OR WITHOUT REINFORCEMENT. IN ANY APPROVED MANHOLE, THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND LOADS OF 8 TONS (H=20 LOADING) WITHOUT FAILURE AND PREVENT LEAKAGE IN EXCESS OF ONE GALLON PER DAY PER VERTICAL FOOT OF MANHOLE, CONTINUOUSLY FOR THE LIFE OF THE STRUCTURE. A PERIOD GENERALLY IN EXCESS OF 25 YEARS IS TO BE UNDERSTOOD IN BOTH CASES.
 - BARRELS AND CONE SECTIONS SHALL BE PRECAST REINFORCED CONCRETE, OR POURED IN PLACE REINFORCED CONCRETE. PRECAST CONCRETE BARREL SECTIONS, CONES AND BASES SHALL CONFORM TO ASTM C478. ALL PRECAST SECTIONS AND BASES SHALL HAVE THE DATE OF MANUFACTURE AND THE NAME OR TRADEMARK OF THE MANUFACTURER IMPRESSED OR INDULIBLY MARKED ON THE INSIDE WALL.
 - VACUUM LEAKAGE TESTING (ASTM C1244) SHALL BE PERFORMED FOR ALL MANHOLES, LOW-PRESSURE AIR TESTING (ASTM F1417) AND DEFLECTION TESTING USING A "GO/NO GO" MANHOLE, FOR ALL SANITARY SEWERS, IN ACCORDANCE WITH THE MINNESOTA SEWER REGULATIONS AND THE CITY OF ROCHESTER DEPARTMENT OF PUBLIC WORKS REQUIREMENTS.
 - INVERTS AND SHELVES: MANHOLES SHALL HAVE A BRICK PAVED SHELVE 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 HIGHEST PIPE CROWN AND SLOPE TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. UNDERLAYMENT OF INVERT AND SHELVE SHALL CONSIST OF BRICK MASONRY, BRICK MASONRY CONFORM WITH ASTM C32. INVERTS AND SHELVES SHALL NOT BE INSTALLED UNTIL AFTER SUCCESSFUL TESTING IS COMPLETED.
 - FRAMES AND COVERS: MANHOLE FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30-INCH CLEAR OPENING. A 3-INCH (MINIMUM HEIGHT) LETTER "SEWER" FOR SEWERS OR "DRAIN" FOR DRAINS SHALL BE PLAINLY CAST INTO THE CENTER OF EACH COVER.
 - SEWER MANHOLE FRAME AND COVER: PAMREX 32" D.I. MANHOLE FRAME AND COVER SEWER - E.J.PRESCOTT PRODUCT# 62113-32-S, IMMEDIATELY FOLLOWING COMPLETION OF THE LEAKAGE TEST, THE FRAME AND COVER SHALL BE PLACED ON THE TOP OF THE MANHOLE OR SOME OTHER MEANS MUST BE PROVIDED TO PREVENT ACCIDENTAL ENTRY BY UNAUTHORIZED PERSONS, CHILDREN, OR ANIMALS, UNTIL THE CONTRACTOR IS READY TO MAKE FINAL ADJUSTMENT TO GRADE.
 - BEDDING: MIN. 6" OF 3/4" CRUSHED STONE (12" IN LEDGE) FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33:
 - 100% PASSING #67 INCH SCREEN
 - 90-100% PASSING 3/4 INCH SCREEN
 - 20-55% PASSING 3/8 INCH SCREEN
 - 0-10% PASSING #4 SIEVE
 - 0-5% PASSING #8 SIEVE
 - WHERE ORDERED BY THE ENGINEER TO STABILIZE THE BASE, CRUSHED STONE MIN. 3/4" SHALL BE USED.
 - CONCRETE FOR DROP SUPPORT SHALL CONFORM TO THE REQUIREMENT FOR CLASS A (3000#) CONCRETE OF THE NEW HAMPSHIRE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS STANDARD SPECIFICATIONS AS FOLLOWS:
 - CEMENT: 6.0 BAGS PER CUBIC YARD
 - WATER: 5.75 GALLONS PER BAG CEMENT
 - MINIMUM SIZE OF AGGREGATE: 1 INCH
 - FLEXIBLE JOINT: A FLEXIBLE JOINT SHALL BE PROVIDED WITHIN THE FOLLOWING DISTANCES:
 - RCP & CI PIPE - ALL SIZES - 48"
 - AC & VC PIPE - UP THROUGH 12" DIA. - 18" SEE NOTE 9.A
 - AC & VC PIPE - LARGER THAN 12" DIA. - 36"
 - DI PIPE - NONE REQUIRED
 - PVC (ASTM 3034) - UP THROUGH 15" DIA. - NONE REQUIRED
 - PVC (ASTM F 679) - LARGER THAN 15" DIA. - 48" TO 60"
 - PVC (ASTM F 789) - ALL SIZES - 48" TO 60"
 - UNDER SEVERE CONDITIONS WHEN DIFFERENTIAL SETTING CANNOT BE CONTROLLED WITHIN NORMAL LIMITS, JOINTS IN THE STUB LENGTH MAY BE NECESSARY. OTHER PLASTIC PIPE SHALL BE REVIEWED ON A CASE BY CASE BASIS.
 - SHALLOW MANHOLE: IN LIEU OF A CONE SECTION, WHEN MANHOLE DEPTH IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER MAY BE USED HAVING AN ECCENTRIC ENTRANCE OPENING AND CAPABLE OF SUPPORTING H=20 LOADS.
 - MANHOLE STEPS SHALL NOT BE PROVIDED WITHIN THE MANHOLES AS DIRECTED BY THE CITY OF ROCHESTER.
 - MINIMUM SIZE PIPE FOR HOUSE SERVICE SHALL BE 4 INCHES.
 - PIPE AND JOINT MATERIALS: P.V.C. (POLY VINYL CHLORIDE) PIPE: ALL P.V.C. PIPE AND FITTINGS SHALL CONFORM TO THE MOST RECENT REQUIREMENTS OF ASTM SPECIFICATIONS FOR TYPE PSM POLY VINYL CHLORIDE (P.V.C.) SEWER PIPE AND FITTINGS, DESIGNATION D-3034 AND ASTM SPECIFICATIONS FOR SEWER PIPE, JOINTS USING ELASTOMERIC SEALS, DESIGNATION D-3212. MANUFACTURER'S CERTIFICATE OF COMPLIANCE SHALL BE FURNISHED TO THE ENGINEER, PRIOR TO INSTALLATION. METHODS OF SHIPPING AND STORAGE ON SITE SHALL BE SUCH AS TO AVOID INJURY TO THE PIPE. DAMAGED PIPE SHALL BE REJECTED AND REMOVED FROM THE JOB. MINIMUM "PIPE STIFFNESS" (F/Y) AT 7 1/2" DEFLECTION SHALL BE 45 PSI FOR SIZE WHEN TESTED IN ACCORDANCE WITH ASTM METHODS OF TEST D-2412, "EXTERNAL LOADING PROPERTIES OF PLASTIC PIPE BY PARALLEL - PLATE LOADING". ALL P.V.C. PIPE SHALL BE TYPE SDR-35 (A MEASURE OF THICKNESS AND RIGIDITY) AND SHALL HAVE ELASTOMERIC GASKET JOINTS. SOLVENT CEMENT JOINTS SHALL NOT BE ALLOWED. P.V.C. USED FOR FORCE MAINS SHALL CONFORM TO ASTM D-2241 AND D-1784 (CLASS 1254-B). A SAFETY FACTOR OF 2.5 SHALL BE USED FOR PRESSURE RATING DETERMINATION WITH A STANDARD DIMENSION RATIO (SDR) NO HIGHER THAN 26.
 - DAMAGED PIPE SHALL BE REJECTED AND REMOVED FROM THE JOB SITE.
 - JOINTS SHALL BE DEPENDENT UPON A NEOPRENE OR ELASTOMERIC GASKET FOR WATER TIGHTNESS. ALL JOINTS SHALL BE PROPERLY MATCHED WITH THE PIPE MATERIAL USED. WHERE DIFFERING MATERIALS ARE TO BE CONNECTED, AS AT THE STREET SEWER WYE OR AT THE FOUNDATION WALL, APPROPRIATE MANUFACTURED ADAPTERS SHALL BE USED.
 - TEES OR WYES: WHERE A TEE OR WYE IS NOT AVAILABLE IN THE EXISTING STREET SEWER, AN APPROPRIATE SADDLE TAPPED INTO A SMOOTHLY DRILLED OR SAWN OPENING IN THE SEWER, THE PRACTICE OF BREAKING AN OPENING WITH A SLEDGE HAMMER, STUFFING CLOTH OR OTHER SUCH MATERIAL AROUND THE JOINT, OR APPLYING MORTAR TO HOLD THE CONNECTION, AND ANY OTHER SIMILAR CRUDE PRACTICES OR WEP OR HASTY IMPROVISATIONS WILL NOT BE PERMITTED. THE CONNECTION SHALL BE CONCRETE ENCASED AS SHOWN IN THE DETAIL UP TO AND INCLUDING 15" DIAMETER. DOES (NOT APPLY TO INSTALLATIONS WHERE TEES & WYES ARE USED).
 - PIPE INSTALLATION: THE PIPE SHALL BE HANDLED, PLACED, AND JOINTED IN ACCORDANCE WITH INSTALLATION GUIDES OF THE APPROPRIATE MANUFACTURER. IT SHALL BE CAREFULLY BEDDED ON A 4 INCH LAYER OF CRUSHED STONE AS SPECIFIED IN NOTE 10. BEDDING AND RE-FILL FOR A DEPTH OF 12 INCHES ABOVE THE TOP OF THE PIPE SHALL BE CAREFULLY AND THOROUGHLY TAMPED BY HAND OR WITH THE APPROPRIATE MECHANICAL DEVICES. THE PIPE SHALL BE LAID AT A CONTINUOUS AND CONSTANT GRADE FROM THE STREET SEWER CONNECTION TO THE HOUSE FOUNDATION AT A GRADE OF NOT LESS THAN 1/8 INCH PER FOOT. PIPE JOINTS MUST BE MADE UNDER DRY CONDITIONS. IF WATER IS PRESENT, ALL NECESSARY STEPS SHALL BE TAKEN TO Dewater THE TRENCH.
 - TESTING: THE COMPLETED HOUSE SEWER SHALL BE SUBJECTED TO A LEAKAGE TEST IN ANY OF THE FOLLOWING MANNERS (PRIOR TO BACKFILLING)
 - AN OBSERVATION TEE SHALL BE INSTALLED AS SHOWN AND, WHEN READY FOR TESTING, AN INFLATABLE BLADDER OR PLUG SHALL BE INSERTED JUST UPSTREAM FROM THE OPENING IN THE TEE AFTER INFLATION, WATER SHALL BE INTRODUCED INTO THE SYSTEM ABOVE THE PLUG TO A HEIGHT OF 5 FEET ABOVE THE LEVEL OF THE PLUG.
 - THE PIPE SHALL BE LIBERALLY HOSED WITH WATER TO SIMULATE, AS NEARLY AS POSSIBLE, WET TRENCH CONDITIONS OR, IF THE TRENCH IS WET, THE GROUND WATER SHALL BE PERMITTED TO RISE IN THE TRENCH OVER THE PIPE. INSPECTIONS FOR LEAKS SHALL BE MADE THROUGH THE CLEANOUT WITH A FLASHLIGHT.
 - DRY FLUORESCENCE DYE OR SPRAY INTO THE SPRING OVER THE PIPE. IF THE TRENCH IS DRY, THE PIPE SHALL BE LIBERALLY HOSED WITH WATER, OR IF THE TRENCH IS WET, GROUND WATER SHALL BE PERMITTED TO RISE IN THE TRENCH OVER THE PIPE. OBSERVATION FOR LEAKS SHALL BE MADE IN THE FIRST DOWNSTREAM MANHOLE. LEAKAGE OBSERVED IN ANY OF THE ABOVE ALTERNATE TESTS SHALL BE CAUSE FOR RE-ACCEPTANCE AND THE PIPE SHALL BE DUG-UP IF NECESSARY AND RE-LAID SO AS TO ASSURE WATER-TIGHTNESS.
 - ILLEGAL CONNECTION: NOTHING BUT SANITARY WASTE FLOW FROM THE HOUSE TOILETS, SINKS, LAUNDRY ETC. SHALL BE PERMITTED. ROOF DRAINS, FOOTING DRAINS OR ANY OTHER SIMILAR CONNECTION CARRYING RAIN WATER, DRAINAGE, OR GROUND WATER, SHALL NOT BE PERMITTED.
 - HOUSE AND WATER SERVICE SHOULD NOT BE LAID IN THE SAME TRENCH AS SEWER SERVICE, BUT WHEN NECESSARY, SHALL BE PLACED ABOVE AND TO THE WET SIDE OF THE HOUSE SEWER AS SHOWN.
 - LOCATION: THE LOCATION OF THE TEE OR WYE SHALL BE RECORDED AND FILED IN THE MUNICIPAL RECORDS. IN ADDITION, A FERRUS METAL ROD OR PIPE SHALL BE PLACED OVER THE TEE OR WYE AS DESCRIBED IN THE TYPICAL "CHIMNEY" DETAIL. TO AID IN LOCATING THE BURIED PIPE WITH A DIP NEEDLE OR PENFINDER.
 - CONCRETE: CONCRETE SHALL CONFORM TO THE REQUIREMENTS FOR CLASS A (3000 PSI) CONCRETE OF THE NEW HAMPSHIRE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS STANDARD SPECIFICATIONS AS FOLLOWS:
 - CEMENT: 6.0 BAGS/C.Y.
 - WATER: 5.75 GALLONS/BAG OF CEMENT
 - AGGREGATE: 1 1/2" MAX.
 - CHIMNEYS: IF VERTICAL DROP INTO SEWER IS GREATER THAN 4', A CHIMNEY SHALL BE CONSTRUCTED FOR THE HOUSE CONNECTION. 25- ALL DRAINAGE AND SEWER STRUCTURES INCLUDING FRAMES AND GRATES SHALL BE H=20 LOADING. 26- ALL SEWER CONSTRUCTION SHALL BE CONSTRUCTED TO MINES AND THE CITY OF ROCHESTER STANDARDS & SPECIFICATIONS.
 - HORIZONTAL JOINTS: BETWEEN SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE OF A TYPE APPROVED BY THE COMMISSION, WHICH TYPE SHALL, IN GENERAL, DEPEND FOR WATER TIGHTNESS UPON AN ELASTOMERIC OR MASTIC-LIKE GASKET.
 - PIPE TO MANHOLE JOINTS: SHALL BE ONLY AS APPROVED BY THE COMMISSION AND IN GENERAL, WILL DEPEND FOR WATER TIGHTNESS UPON EITHER AN APPROVED NON-SHRINKING MORTAR OR ELASTOMERIC SEALANT.
 - FOR BITUMASTIC JOINTS: THE AMOUNT OF SEALANT SHALL BE SUFFICIENT TO FILL AT LEAST 75% OF THE JOINT CAVITY APPROVED BITUMASTIC SEALANTS: RAM-NEK KENT SEAL NO.2 E2
 - THE CONTRACTOR SHALL NOTIFY DIG-SAFE 1-888-344-7233 PRIOR TO CONSTRUCTION.

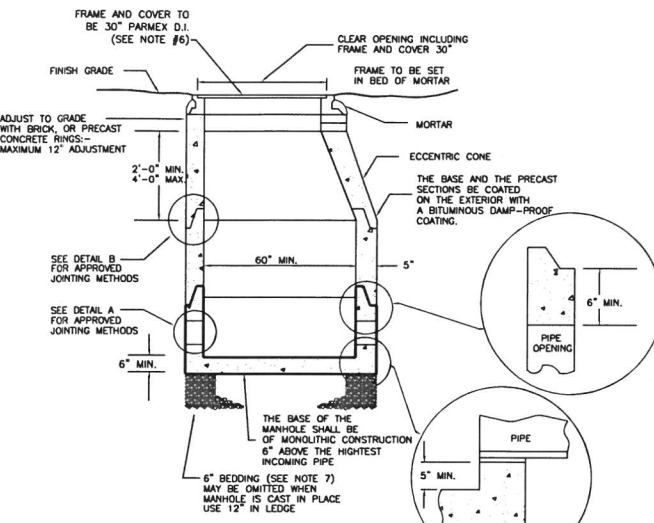
MORTAR USED IN MANHOLE CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING. MORTAR SHALL BE COMPOSED OF TYPE II PORTLAND CEMENT AND SAND WITH OR WITHOUT HYDRATED LIME ADDITION. PROPORTIONS IN MORTAR OF PARTS BY VOLUMES SHALL BE AS SHOWN BELOW:

HYDRATED LIME	SAND	TYPE II PORTLAND CEMENT
NONE	4.5 PARTS	1.5 PARTS
0.5 PARTS	4.5 PARTS	1 PART

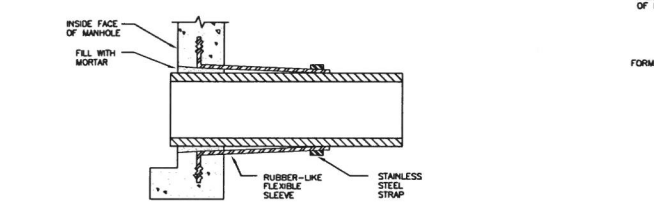
CEMENT SHALL BE TYPE II PORTLAND CEMENT THAT IS CERTIFIED BY ITS MANUFACTURER AS CONFORMING TO THE ASTM C150/C150M STANDARD IN EFFECT AT THE TIME THE CEMENT WAS MANUFACTURED. HYDRATED LIME SHALL BE TYPE S THAT IS CERTIFIED BY ITS MANUFACTURER AS CONFORMING TO THE ASTM C207 STANDARD IN EFFECT AT THE TIME THE HYDRATED LIME WAS PROCESSED. SAND SHALL CONSIST OF INERT NATURAL SAND THAT IS CERTIFIED BY ITS SUPPLIER AS CONFORMING TO THE ASTM C33 STANDARD IN EFFECT AT THE TIME THE SAND IS PROCESSED BY STANDARD SPECIFICATIONS FOR CONCRETE FINE AGGREGATES.



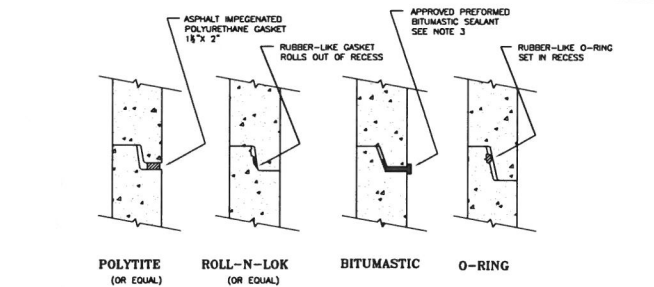
CIVIL ENGINEERS



TYPICAL SECTION NOT TO SCALE



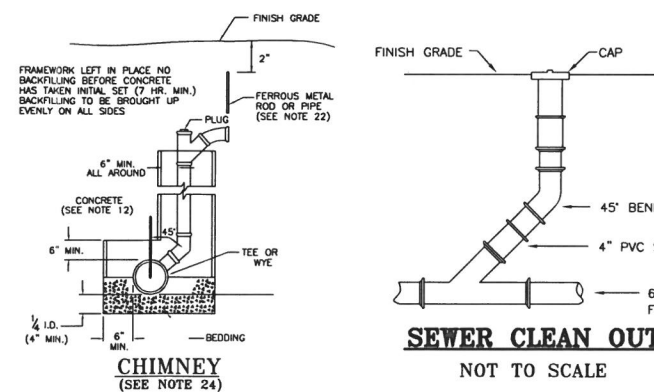
LOCK-JOINT FLEXIBLE MANHOLE SLEEVE (OR EQUAL)



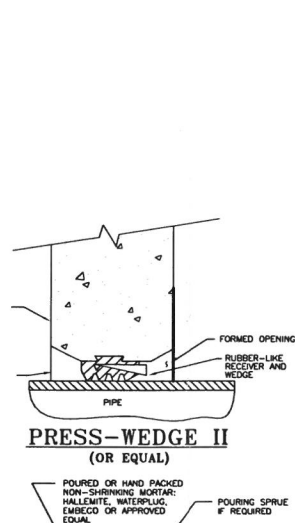
POLYTITE (OR EQUAL) ROLL-N-LOK (OR EQUAL) BITUMASTIC O-RING

NOTE: ALL GASKETS AND SEALANTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.

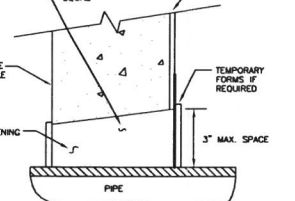
DETAIL-B



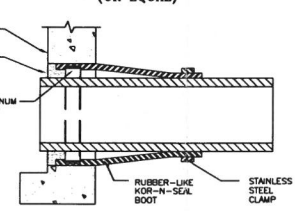
SEWER CLEAN OUT NOT TO SCALE



PRESS-WEDGE II (OR EQUAL)



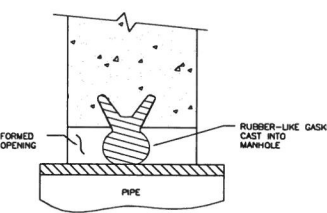
NON-SHRINKING MORTAR (OR EQUAL)



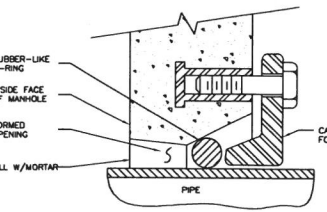
KOR-N-SEAL JOINT SLEEVE (OR EQUAL)

DETAIL-A

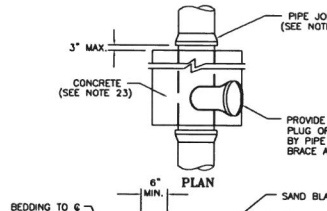
NOTE: ALL GASKETS, SEALANTS, MORTAR ETC. SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.



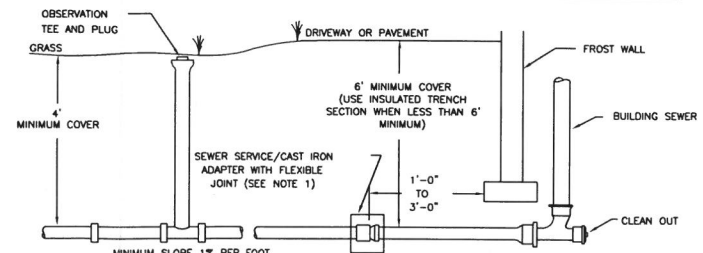
A-LOK (OR EQUAL)



RES-SEAL (OR EQUAL)



CONCRETE FULL ENCASEMENT



TYPICAL BUILDING SEWER SERVICE DETAIL NOT TO SCALE

GRAVITY SEWER DETAILS
TAX MAP 243, LOTS 36 & 37
109 AIRPORT DRIVE
ROCHESTER, NH
PREPARED FOR:
PELLA WINDOWS AND DOORS
OF NEW ENGLAND
SEPTEMBER 2020

2 Continental Blvd., Rochester, N.H. 603-335-3948

NORWAY PLAINS ASSOCIATES, INC.

LAND SURVEYORS



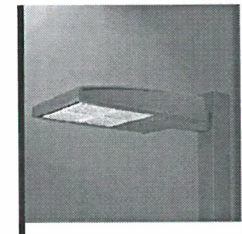
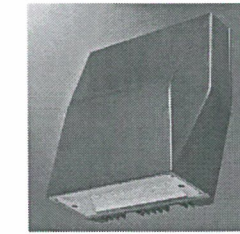
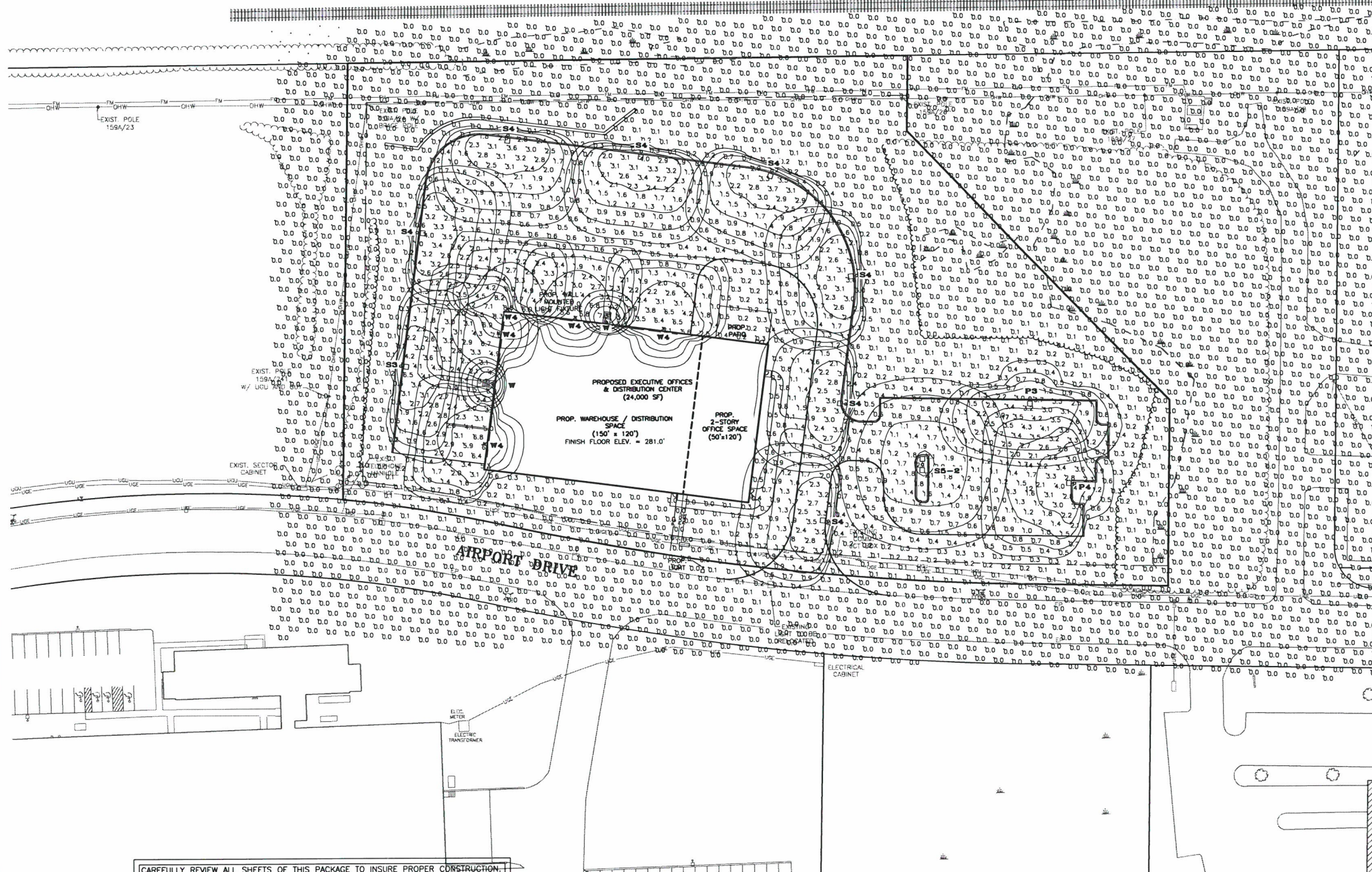
CIVIL ENGINEERS

LEGEND

- PROPERTY LINE
- JURISDICTIONAL WETLANDS
- EXISTING OVERHEAD WIRES
- EXISTING LIGHT POLES
- PROPOSED BUILDING
- PROPOSED PAVEMENT
- PROPOSED PAVEMENT WITH CURBING
- PROPOSED LIGHT POLES
- PROPOSED BUILDING LIGHT FIXTURES
- PROPOSED LIGHT FOOTCANDLE
- PROPOSED LIGHT ISOLLLUMINATION LINES

Symbol	Qty	Label	Arrangement	Description
1	1	P3	SINGLE	GLEON-AF-02-LED-E1-T3/ SSS4A20SFN1 (20' AFG)
2	1	P4	SINGLE	GLEON-AF-02-LED-E1-T4FT/ SSS4A20SFN1 (20' AFG)
3	1	S3	SINGLE	GLEON-AF-02-LED-E1-SL3-HSS/ SSS4A20SFN1 (20' AFG)
4	1	S4	SINGLE	GLEON-AF-02-LED-E1-SL4-HSS/ SSS4A20SFN1 (20' AFG)
5	1	S5-2	BACK-BACK	GLEON-AF-01-LED-E1-5WQ/ SSS4A20SFN1 (20' AFG)
6	1	W	SINGLE	AXCSIA/ MTD 10' AFG
7	1	W4	SINGLE	GWC-AF-02-LED-E1-T4FT/ WALL MTD 15' AFG

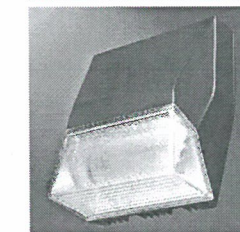
NEW HAMPSHIRE NORTHCOAST CORPORATION



**GLEON
GALLEON LED**

1-10 Light Squares
Solid State LED

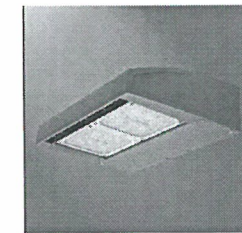
S3, S4, S5-2



**AXCS / AXCL
AXCENT**

14-123W
LED

W



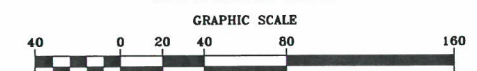
**GWC GALLEON
WALL**

1-2 Light Squares
Solid State LED

W4

LIGHTING PLAN
TAX MAP 243, LOTS 36 & 37
109 AIRPORT DRIVE
ROCHESTER, NH
PREPARED FOR:
**PELLA WINDOWS AND DOORS
OF NEW ENGLAND**

SEPTEMBER 2020



1 INCH = 40 FEET

L-1

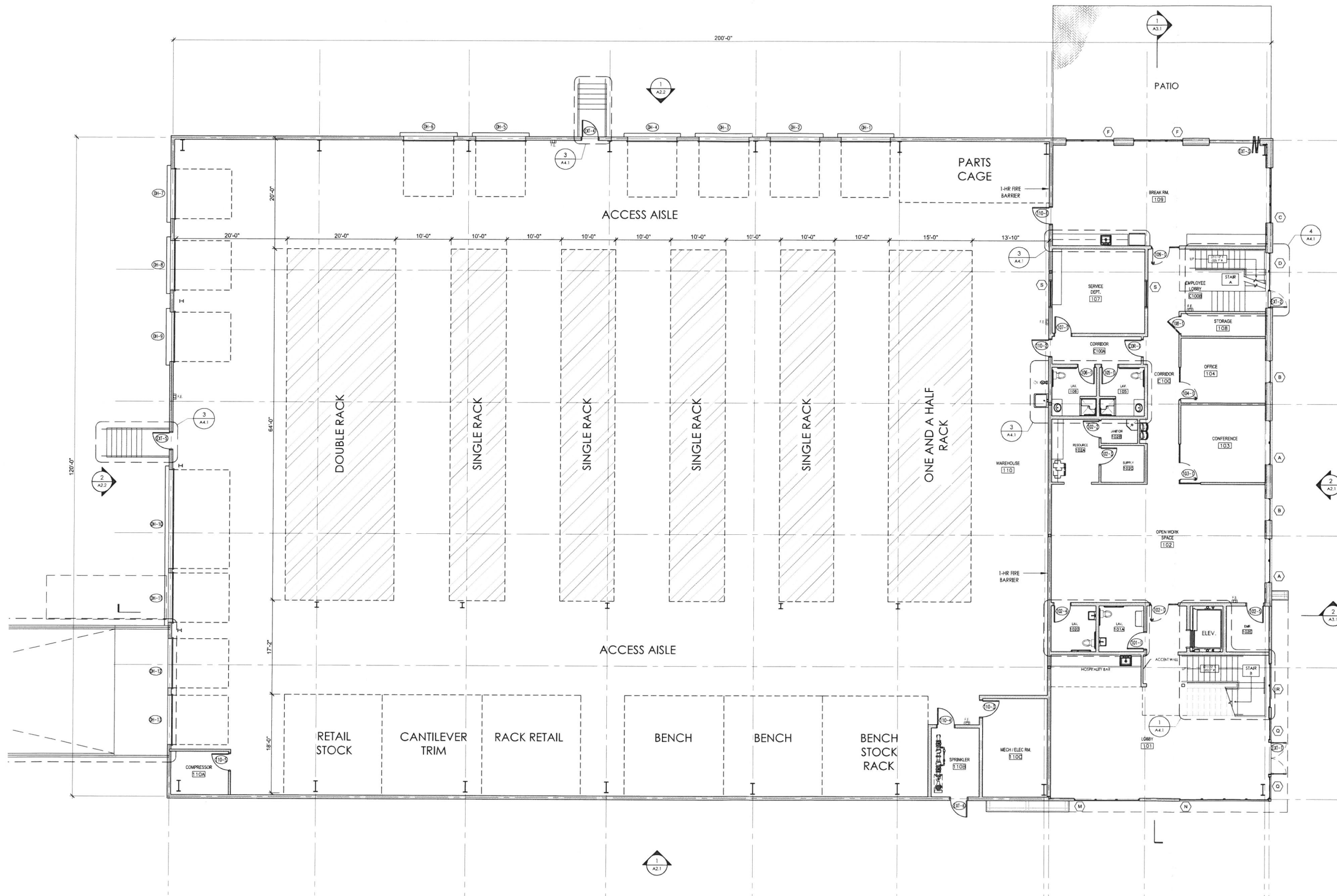
FILE NO. 154
PLAN NO. C-3085
DWG. NO. 20108/SP-1
F.B. NO.

CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITHIN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.

31 Mooney Street, Alton, N.H. 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

2 Continental Blvd., Rochester, N.H. 603-335-3948



1 OVERALL FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

OWNER:

Pella

**Pella Windows &
Doors of New England**

DESIGN BUILDER:

Careno Construction Company, LLC
Design Build / Construction Managers / General Contractors
270 West Road • Suite 4A
Portsmouth, NH 03801
p. 603.436.1806 f. 603.436.6629
c. huddy@carenoconstruction.com

ARCHITECT:

PORTONE ARCHITECTS
959 Islington Street
Portsmouth, NH 03801
603.436.8891
info@portonearchitects.com

CIVIL / STRUCTURAL ENGINEER:

NORWAY PLAINS ASSOC., INC.
31 MOONEY STREET
ALTON, N.H.
603.875.3948

STRUCTURAL ENGINEER:

REVISION HISTORY:

#	DATE	ISSUANCE

SEAL:

PRICING SET

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LOCUS MAP:

PROJECT NAME:

**Pella Windows &
Doors of New England
Executive Offices &
Distribution**

DRAWING TITLE:

**GROUND FLOOR
PLAN**

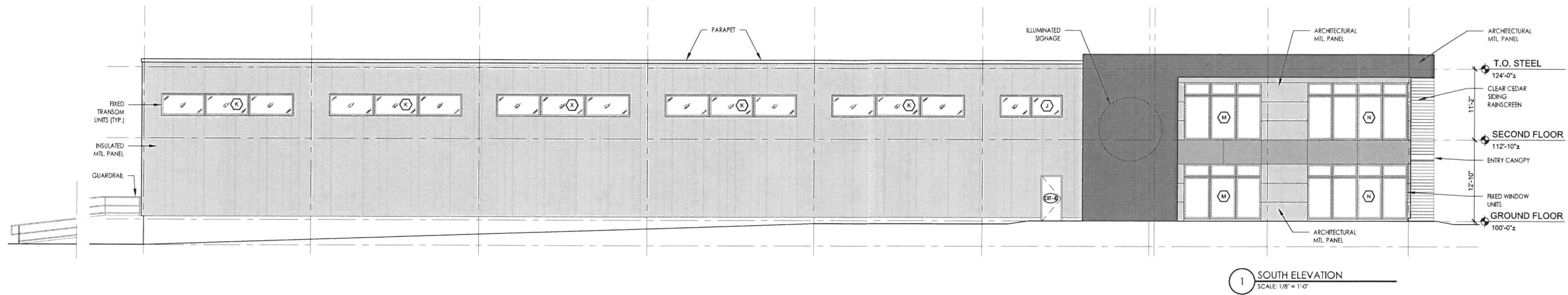
PROJECT No.: 20-050

DATE: AUGUST 21, 2020

DRAWING SCALE: AS NOTED

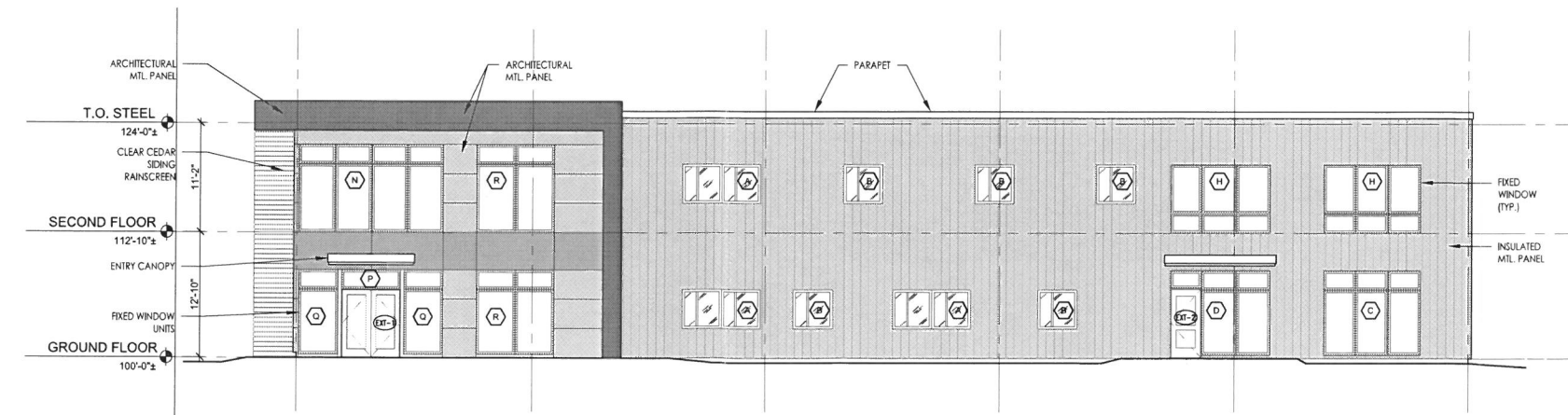
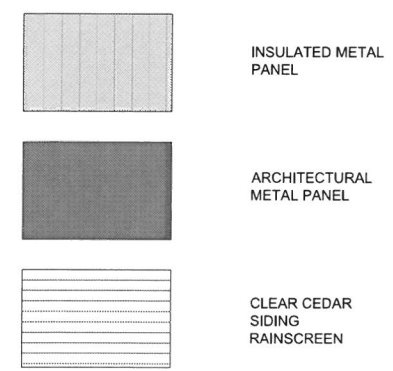
SHEET NUMBER:

A1.1



1 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"

EXTERIOR SIDING KEY:



2 EAST ELEVATION
SCALE: 1/8" = 1'-0"

OWNER:

Pella Windows & Doors of New England

DESIGN BUILDER:

Careco Construction Company, LLC
Design Build / Construction Managers / General Contractors
270 West Road - Suite 4A
Portsmouth, NH 03801
p. 603.436.1806 f. 603.436.6629
e. holly@carecoconstruction.com

ARCHITECT:

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Portsmouth, NH 03801
603.436.8891
info@portonearchitects.com

CIVIL / STRUCTURAL ENGINEER:

NORWAY PLAINS ASSOC., INC.
31 MOONEY STREET
ALTON, N.H.
603.875.3948

STRUCTURAL ENGINEER:

REVISION HISTORY:

#	DATE	ISSUANCE

SEAL:

PRICING SET

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LOCUS MAP:

PROJECT NAME:

Pella Windows & Doors of New England Executive Offices & Distribution

DRAWING TITLE:

EXTERIOR ELEVATIONS

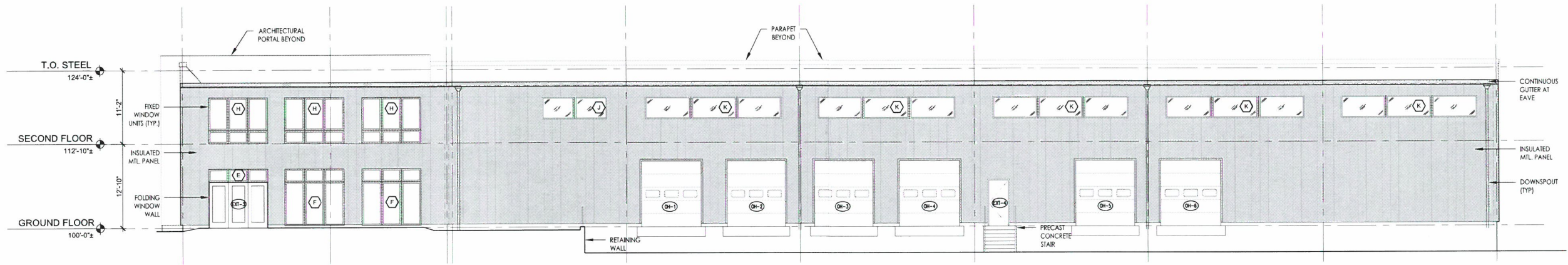
PROJECT No.: 20-050

DATE: AUGUST 21, 2020

DRAWING SCALE: AS NOTED

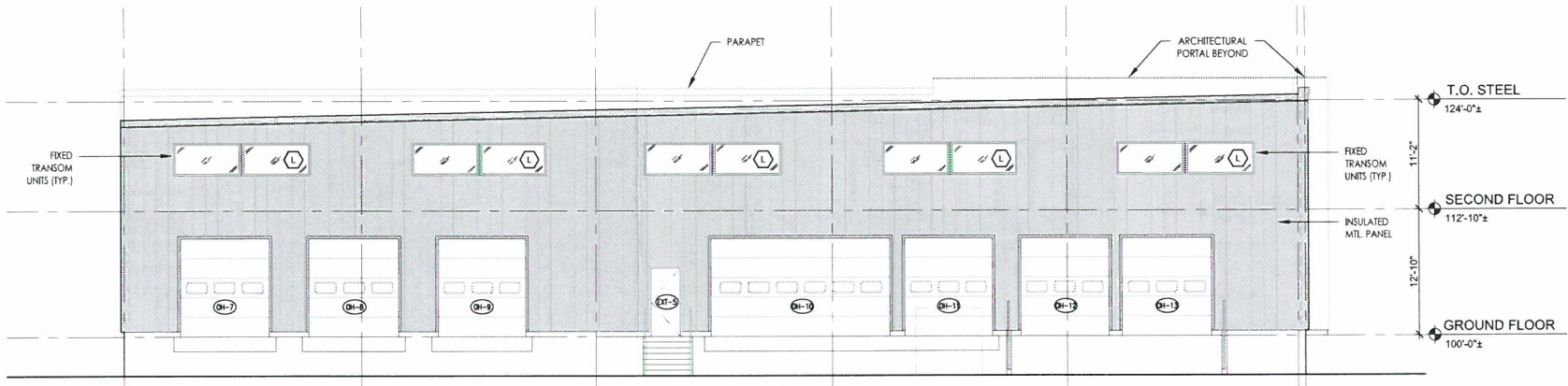
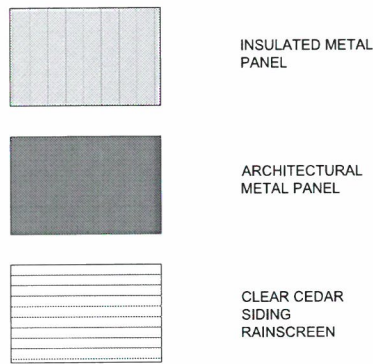
SHEET NUMBER:

A2.1



1 NORTH ELEVATION
SCALE: 1/8" = 1'-0"

EXTERIOR SIDING KEY:



2 WEST ELEVATION
SCALE: 1/8" = 1'-0"

OWNER: **Pella**
Pella Windows & Doors of New England

DESIGN BUILDER: **Careno Construction Company, LLC**
Design Build / Construction Manager / General Contractors
270 West Road - Suite 4A
Portsmouth, NH 03801
p. 603.436.1800 f. 603.436.6120
c. hcc@carenoconstruction.com

ARCHITECT: **PORTONE ARCHITECTS**
959 Islington Street
Portsmouth, NH 03801
info@portonearchitects.com

CIVIL / STRUCTURAL ENGINEER: **NORWAY PLAINS ASSOC., INC.**
31 MOONEY STREET
ALTON, N.H.
603.875.3948

STRUCTURAL ENGINEER:

REVISION HISTORY:

#	DATE	ISSUANCE

SEAL:

PRICING SET

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LOCUS MAP:

PROJECT NAME: **Pella Windows & Doors of New England Executive Offices & Distribution**

DRAWING TITLE: **EXTERIOR ELEVATIONS**

PROJECT No.: 20-050

DATE: AUGUST 21, 2020

DRAWING SCALE: AS NOTED

SHEET NUMBER:

A2.2