CITY OF DOVER

PLANNING TECHNICAL REVIEW COMMITTEE –AGENDA

REVISED

Meeting Type: Regular Meeting
Meeting Location: Council Conference Room, City Hall, 288 Central Ave, Dover NH 03820
Meeting Date: **Thursday, March 21, 2024**
Meeting Time: **10:30 AM**

1. 10:30 AM – 11:00 AM: Site Review for Future Automation. LLC (Owners: DIBIDA), Assessor's Map D, Lot 11-8, zoned IT, located at Quality Way. (Proposal is to construct a light manufacturing facility consisting of two buildings 24,000 s.f and 10,000 s.f, each with office space, and associated infrastructure.) (SITE-2024-0002) *This item was previous heard by the Planning Board Technical Review Committee on February 15, 2024.*

PLAN SNAPSHOT REPORT SITE-2024-0002
FOR CITY OF DOVER, N.H.

Plan Type:	Site Plan - Major	**Project:**		**App Date:**	01/24/2024
Work Class:	New Construction	**District:**	None	**Exp Date:**	03/29/2024
Status:	Fees Due	**Square Feet:**	0.00	**Completed:**	NOT COMPLETED
Valuation:	$0.00	**Assigned To:**	Blonigen, Rachel	**Approval Expire Date:**	
Description:	Site Plan, including Architect & Landscaping Plans				

Parcel:	D0011-008000 Main	**Address:**	Quality Wy Dover, NH Main	**Zone:**	IT(Non-Residential - Innovative Technolo

Applicant
Alun Williams
Home: (000) 000-0000
Business: (000) 000-0000
Mobile: (000) 000-0000

Applicant
Civilworks New England
Steve Haight
181 Watson Road PO Box 1166
Dover, NH 03820
Business: (603) 749-0443
Mobile: (603) 817-6651

Plan Custom Fields

Total	0	Total2	0	Total3	0
Total4	0	Total5	0	Total6	0
Total7	0	Total8	0	Total9	0
Street Classification Type	Municipal	Net Change in # Parking Spaces (+/-)	45	Water Service	Municipal
Recording Number		Sewer Service	Municipal	Total Acres (GIS)	8.61
Deed Book	1559	Total SQFT	375052	Deed Page	394
Deed Date		Proposed Property Use	Light Manufacturing w/Office	Area of Parcel to be Developed (SQFT)	164238
Number of Parking Spaces Existing	0	Number of Parking Spaces Proposed	45	Number of Employees Total	45
Number of Employees in Max Shift	2	Distance to City Water	25	Distance to City Sewer	25
Type of Building to be Built	Steel Frame with Ribbed Metal Exterior	Estimated Construction Value	3500000.00	Refuse Removal	Private
Is there an existing Conservation Easement?	No	Existing Conservation Easement Details		TotalImpactFeeSDTOD	0.00
TotalImpactFeeTHTOD	0.00	TotalImpactFee23FTOD	0.00	TotalImpactFeeA4TOD	0.00
TotalImpactFeeMHTOD	0.00	TotalImpactFeeADUTOD	0.00	TotalImpactFeeAONRTOD	0.00
TotalImpactFeeAR55TOD	0.00	TotalImpactFeeAR62TOD	0.00	Sub Total Residential	0.00
TotalImpactFeeRIRCTOD	0.00	TotalImpactFeeOCSTOD	0.00	TotalImpactFeeITWCTOD	0.00
TotalImpactFeeNHALTOD	0.00	TotalImpactFeeOIUTOD	0.00	TotalImpactFeeAFAOTOD	0.00
Sub Total Non-Residential	0.00	Total of Impact Fees to be Assessed	0.00		

Attachment File Name	Added On	Added By	Attachment Group	Notes
Signature_Steve_Haight_1/24/2024.jpg	01/24/2024 15:36	Haight, Steve		Uploaded via CSS
2024.02.15_PlanningTechnicalReviewCommittee.Agenda.pdf	01/31/2024 16:54	Blonigen, Rachel		TRC Agenda
2024.02.15_PlanningTechnicalReviewCommittee.Quality Way_SITE-2024-0002.pdf	02/15/2024 16:27	Blonigen, Rachel		Draft TRC Minutes

PLAN SNAPSHOT REPORT (SITE-2024-0002)

Invoice No.	Fee	Fee Amount	Amount Paid
INV-00006548	Planning General Application Fee	$200.00	$0.00
	Total for Invoice INV-00006548	$200.00	$0.00
	Grand Total for Plan	**$200.00**	**$0.00**

Meeting Type	Location	Scheduled Date	Subject
Technical Review Committee Meeting v.1	City Hall, Second Floor Conference Room	02/15/2024	Technical Review Committee Meeting

Submittal Name	Status	Received Date	Due Date	Complete Date	Resubmit	Completed
Land Use Plan Technical Review v.1	Requires Re-submit	02/13/2024	03/12/2024	02/15/2024	Yes	Yes

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Business Development	Business Development	Meyers, Kathleen	Requires Re-submit	02/13/2024	03/12/2024	02/15/2024

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
City Engineer	Community Services - Engineering	Mavrogeorge, Kenneth	Requires Re-submit	02/13/2024	03/12/2024	02/15/2024

Comments: Project: Quality Way – Future Automation
TRC Meeting: Meeting #1
Reviewer: Ken Mavrogeorge
Checked by: Engineering Staff
- General Comment:
o Applicant and Contractor shall review the Dover Construction Guidelines prior to scheduling a Preconstruction meeting with City staff. The guidelines can be found on the City of Dover Website on the Engineering page. https://www.dover.nh.gov/Assets/government/city-operations/1form/community-services/engineering/engineering-documents/Construction%20Guidelines.pdf
o Confirm that the plans are tied into the City's GIS coordinate system (NAD83 NH State Plane in feet) and topography is on the NAVD88 datum.
o Change "handicap" references to "accessible" where applicable throughout documents.
o Emergency contacts shall be provided for pump system after construction is complete.
o Applicant shall provide an easement to the City along the private drives within the property to allow for access and operation of the water infrastructure (hydrants and shut offs) to maintain water quality.
- Sheet 6:
o Show the location of the building egresses
o Does retaining wall on main entrance require guardrail?
o How is the bike rack mounted? It appears to be in the grass. It appears that a bikes might be close to doors in the parking space.
- Sheet 7:
o Show labels for contours on main drive and grading outside of paved surfaces.
o Show spot grades on top and bottom of retaining wall on main entrance.
o Recommend adding a DMH at the end of PP7 where it changes direction to provide access for maintenance.
o How will the wetland be prevented from flowing directly into parking area?
- Sheet 9:
o Show both fire and domestic services.
o Add notes calling out hydrants, fittings, and water main sizes and connections.
o Identify how the proposed force mains, water, and electric conduit cross the drainage (below or above?).
o Call out how the force main will tie into the existing SMH.
- Sheet 13:
o Remove Trench Patch Detail as it conflicts with Dover standard.
o Is a 6 inch pad for the dumpster sufficient? Recommend a minimum 12" concrete pad be provided.
o Note in Utility trench references Public Service specifications. Please check that the correct document is noted (Eversource).
- Sheet 14:
o Provide bike rack pad detail.
o Depth of embedment for guardrail seems insufficient. Please confirm depth is sufficient for behind a retaining wall.
o Detail calls out Monolithic concrete curb but plans show integrated concrete curb. Recommend coordinating terms.
- Sheet 15:
o Add note to box culvert detail that a stamped design shall be provided by a professional engineer.
- Sheet 16:
o Show class of water main in water service detail.
- Sheet 17:
o Provide detail/spec on anti-seep collar
o Provide detail on how the force mains are joined. Recommend providing the ability to isolate each station.
o Please confirm that the common force main can handle both pump stations running at the same time.
- Sheet L-1:
o Snow storage areas conflict with landscaping. Recommend storing snow in areas where landscaping won't get in the way.
- Landscape O&M
o Snow Storage section prohibits dumping snow storage on stormwater basin. This appears to conflict with the site plan. Please revise snow storage to meet the recommendations of the O&M plan.

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
IS Building Official	Fire / Inspection Services	Maxfield, Jim	Requires Re-submit	02/13/2024	03/12/2024	02/14/2024

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Planning	Planning	Kaspari, Jackson	Requires Re-submit	02/13/2024	03/12/2024	02/15/2024

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Zoning Administrator	Planning	Crouser, Paul	Requires Re-submit	02/13/2024	03/12/2024	02/15/2024

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Traffic Bureau	Police	Speidel, Marn	Requires Re-submit	02/13/2024	03/12/2024	02/15/2024

Comments:
- Sheet 4, Dover Note 22: site construction hours should probably exclude Sundays due to proximity to Quail Drive residential
- Zoom out the Neighborhood Plan to provide more context
- At 10,000 SF building, is there an accessible route behind the proposed EV charging station?
- Will your workforce create more demand for EV stations?
- Do the proposed dumpster locations interfere with loading dock doors?
- Bike racks not shown or provided
- Lack of employee amenities outdoors for break time
- Campus walkability – particularly between the two buildings – seems lacking
- Would like to see a connection to existing Quality Way sidewalk

Submittal Name	Status	Received Date	Due Date	Complete Date	Resubmit	Completed
Land Use Plan Technical Review v.2	In Review	02/29/2024	03/13/2024		No	No

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Business Development	Business Development	Meyers, Kathleen	In Review	02/29/2024	03/28/2024	

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
City Engineer	Community Services - Engineering	Mavrogeorge, Kenneth	In Review	02/29/2024	03/13/2024	

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
IS Building Official	Fire / Inspection Services	Maxfield, Jim	In Review	02/29/2024	03/13/2024	

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Planning	Planning	Kaspari, Jackson	In Review	02/29/2024	03/28/2024	

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Zoning Administrator	Planning	Benton, Donna	In Review	02/29/2024	03/13/2024	

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Traffic Bureau	Police	Speidel, Marn	In Review	02/29/2024	03/13/2024	

Workflow Step / Action Name	Action Type	Start Date	End Date
Review v.1		01/25/2024 16:45	
Confirm application complete v.1	Generic Action		01/25/2024 16:46
Technical Review Committee Meeting Agenda v.1	Task	01/25/2024 16:45	02/13/2024 12:10
Land Use Plan Technical Review v.1	Receive Submittal	02/13/2024 0:00	02/15/2024 16:30
Land Use Plan Technical Review v.2	Receive Submittal	02/29/2024 0:00	
Technical Review Committee Meeting v.1	Hold Meeting	02/13/2024 12:10	02/15/2024 16:31
Planning Board v.1			
Planning Board Agenda v.1	Task		
Invoice for Notices v.1	Task		
Send Notices v.1	Task		
Planner Creates Staff Recommendations v.1	Plan Activity		
Distribute Planning Board Materials v.1	Task		
Planning Board Hearing v.1	Hold Hearing		
Planning Board Decision v.1	Plan Activity		
NOD Sent to Applicant v.1	Create Report		
Final Plan v.1			
Land Use Plan Stamped and Signed v.1	Generic Action		

Recording v.1	Task
Document Archival v.1	Generic Action
Internal Notification of Plan Completion v.1	Generic Action
Building Official Notifies Address v.1	Generic Action
Pre-Con Meeting v.1	Hold Meeting
Create/Link to Records v.1	
Create / Link to Permit - Building Major v.1	Create Sub Permit
Create / Link to Permit - Site Work, Construction v.1	Create Sub Permit

CIVILWORKS NEW ENGLAND

181 WATSON ROAD
P.O. BOX 1166
DOVER, NH 03821-1166
PHONE: 603.749.0443 FAX: 603.749.7348

February 29, 2024

City of Dover
288 Central Ave
Dover, NH 03820

Attn: Donna Benton, Director of Planning & Community Development

Subject: Site Review & Conditional Use Permit Applications
Quality Way - Tax Map D, Lot 11-8
Civilworks New England Reference No. 22075

Dear Ms. Benton:

On behalf of our client, Future Automation, Inc., we are pleased to submit the following application(s) and associated materials for the second review by the Technical Review Committee (TRC). Attached are three (3) copies of associated material items 1-17 listed below. We are not providing additional copies of the Drainage Report as this has not changed. All materials will be provided electronically (PDF) to the Planning Department:

0) Cover Letter (rev)
1) TRC Comments Response (rev)
2) Site Plan Review Application
3) Site Plan Review Checklist
4) Application Fee Schedule
5) Conditional Use Permit Application
6) Applicant's Authorizations
7) City of Dover Agreement (email)
8) Project Narrative
9) IT District Narrative
10) Conditional Use Permit Narrative
11) Stormwater Management Narrative
12) Letters to Serve (emails from City, Eversource, Until) (rev)
13) Pump Station Calculations
14) Traffic Assessment Memorandum
15) Landscape Operation & Maintenance Plan
16) Stormwater Inspection and Maintenance Plan
17) Site Plan Set, including Landscape Plan, Streetscapes & Architect Plans (rev)
18) Drainage Report w/Supporting Documents & Plans (2 copies previously submitted)

We look forward to representing these applications at the TRC meeting on March 21, 2024. Please do not hesitate to contact our office should you have any questions.

Sincerely,

Stephen J Haight, PE
CIVILWORKS NEW ENGLAND

CITY OF DOVER

TECHNICAL REVIEW COMMITTEE MINUTES – SITE-2024-0002

Application Type:	Site Review
Applicant(s):	Future Automation, LLC
Owner(s):	Dover Business Industrial and Development Authority (DBIDA)
Location:	Quality Way (Assessor's Map D, Lot 11-8)
Date:	February 15, 2024

INTENT: Proposal is to construct a light manufacturing facility consisting of two buildings, 25,000 square feet and 10,000 square feet, each with office space, parking, and associated infrastructure. (SITE-2024-0002)

UNITS PROPOSED: None

AGENDA ITEM #: 1

ACREAGE: 8.61± ac.

ZONING DISTRICT: IT

EXISTING LAND USE: Vacant

PROPOSED LAND USE: Light Manufacturing

SURROUNDING LAND USE: Light Manufacturing, Residential

ZBA ACTION: None

PERMITS REQUIRED:
- CUP for §170-27.1, Wetland Protection District
- NH DES Wetlands Permit and Alteration of Terrain

WAIVERS REQUESTED: None requested.

ATTENDANCE:
Donna Benton, Planning
Paul Crouser, Zoning
Marn Speidel, Police
Jim Maxfield, Fire/Inspection Services
Ken Mavrogeorge, Engineering
James Burdin, Business Development
Tom Clark, Planning Board

Others:
Erin Bassegio, Assistant City Planner
Abigail Gilbert, Office of Business Development Intern
Joseph Griffin, PE, Civilworks NE
David Choate, Colliers

Approval of minutes from January 25, 2024:
J. Burdin moved to approve the January 25, 2024 minutes. Seconded by K. Mavrogeorge. Vote: U/A.

PLAN REVIEW:
Planning:
- Reminder: Impact fees, Water and sewer investment fees
- Provide Letter to Serve from Eversource
- Add PE stamp to TAM
- IT Requirements:
  - A majority of the parking spaces shall be located to the side or rear of the buildings. Waiver needed.
- Revise plans:
  - Add Planning file number, SITE-2024-0002
  - Add Wetland buffer placards every 35'
  - Principal buildings in commercial or industrial uses shall be lighted on all sides for security.
  - Clarify lighting foot candles (lessen font size, clarify decimal placement). Seems pretty bright.
  - Change "handicap" to "accessible"
  - Confirm curb material
  - Discuss pedestrian connectivity, potentially between buildings, potentially adding sidewalk in-between buildings and to Quality Way.
  - Trees within landscape plan require a minimum of 3" caliper
  - Add second bike rack for 10,000 sf. building
  - Change site construction hours to preclude work on Sundays or federal holidays

Engineering:
- General Comment:
  - Applicant and Contractor shall review the Dover Construction Guidelines prior to scheduling a Preconstruction meeting with City staff. The guidelines can be found on the City of Dover Website on the Engineering page. https://www.dover.nh.gov/Assets/government/city-operations/1form/community-services/engineering/engineering-documents/Construction%20Guidelines.pdf
  - Confirm that the plans are tied into the City's GIS coordinate system (NAD83 NH State Plane in feet) and topography is on the NAVD88 datum.

DRAFT

- Change "handicap" references to "accessible" where applicable throughout documents.
- Emergency contacts shall be provided for pump system after construction is complete.
- Applicant shall provide an easement to the City along the private drives within the property to allow for access and operation of the water infrastructure (hydrants and shut offs) to maintain water quality.

- Sheet 6:
  - Show the location of the building egresses
  - Does retaining wall on main entrance require guardrail?
  - How is the bike rack mounted? It appears to be in the grass. It appears that a bikes might be close to doors in the parking space. Include bike rack at second building.
- Sheet 7:
  - Show labels for contours on main drive and grading outside of paved surfaces.
  - Show spot grades on top and bottom of retaining wall on main entrance.
  - Recommend adding a DMH at the end of PP7 where it changes direction to provide access for maintenance.
  - How will the wetland be prevented from flowing directly into parking area?
- Sheet 9:
  - Show both fire and domestic services.
  - Add notes calling out hydrants, fittings, and water main sizes and connections.
  - Identify how the proposed force mains, water, and electric conduit cross the drainage (below or above?).
  - Call out how the force main will tie into the existing SMH.
- Sheet 13:
  - Remove Trench Patch Detail as it conflicts with Dover standard.
  - Is a 6 inch pad for the dumpster sufficient? Recommend a minimum 12" concrete pad be provided.
  - Note in Utility trench references Public Service specifications. Please check that the correct document is noted (Eversource).
- Sheet 14:
  - Provide bike rack pad detail.
  - Depth of embedment for guardrail seems insufficient. Please confirm depth is sufficient for behind a retaining wall.
  - Detail calls out Monolithic concrete curb but plans show integrated concrete curb. Recommend coordinating terms.
- Sheet 15:
  - Add note to box culvert detail that a stamped design shall be provided by a professional engineer.
- Sheet 16:
  - Show class of water main in water service detail.
- Sheet 17:
  - Provide detail/spec on anti-seep collar
  - Provide detail on how the force mains are joined. Recommend providing the ability to isolate each station.
  - Please confirm that the common force main can handle both pump stations running at the same time.
- Sheet L-1:
  - Snow storage areas conflict with landscaping. Recommend storing snow in areas where landscaping won't get in the way.
- Landscape O&M
  - Snow Storage section prohibits dumping snow storage on stormwater basin. This appears to conflict with the site plan. Please revise snow storage to meet the recommendations of the O&M plan as low level plantings may be in conflict.

DRAFT

CITY OF DOVER

TECHNICAL REVIEW COMMITTEE MINUTES – SITE-2024-0002

Application Type:	Site Review
Applicant(s):	Future Automation, LLC
Owner(s):	Dover Business Industrial and Development Authority (DBIDA)
Location:	Quality Way (Assessor's Map D, Lot 11-8)
Date:	February 15, 2024

Police:

- Sheet 4, Dover Note 22: site construction hours should probably exclude Sundays due to proximity to Quail Drive residential
- Zoom out the Neighborhood Plan to provide more context
- At 10,000 SF building, is there an accessible route behind the proposed EV charging station?
- Will your workforce create more demand for EV stations?
- Do the proposed dumpster locations interfere with loading dock doors?
- Confirm bike rack location
- Lack of employee amenities outdoors for break time
- Campus walkability – particularly between the two buildings – seems lacking
- Would like to see a connection to existing Quality Way sidewalk

Fire/Inspection Services:

- Submitted plans shall be stamped by a NH professional designer
- Clarify the width of the sidewalk at the EV charging stations
- Detail sheet should include an EV charger detail
- Revise references to "handicap" to "accessible"
- Clarify if the sewer pumping stations classification (i.e. class I div I).
- Clarify a control panel location with alarm
- Classify the generator type and clarify fuel type
- Provide a general description of the building use classification(s)
- Indicate types and quantities of commodities to be stored inside.
- Plans to indicate ingress/egress locations.
- Exterior landings to be no greater than ½" elevation change (drop for LS code compliance)
- Are there any equipment pads on the exterior.
- Clarify Architectural plans and site plans near FDC to ensure there is clear unobstructed access.

Business Development:

- This application requires architectural review and endorsement by the Dover Business and Industrial Development Authority (DBIDA) prior to review by the Planning Board
- DBIDA meetings occur on the first Tuesday of the month. Please confirm with Business Development staff if you wish to be added to the agenda by the Thursday prior to the meeting
- The plans, renderings, and landscape plan seem generally attractive and suitable for the location in Enterprise Park

Planning Board:

- None.

Next Steps: Revise plans to add items mentioned in comments. Resubmit for second TRC.

Adjournment:
J. Maxfield moved to adjourn at 11:05 a.m. Seconded by: M. Speidel. Vote: U/A.

DRAFT

CIVILWORKS NEW ENGLAND

181 WATSON ROAD
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PHONE: 603.749.0443 FAX: 603.749.7348

February 29, 2024

Dover Planning Board
288 Central Avenue
Dover, NH 03820

Attn: Technical Review Committee

Ref: Future Automation, Inc.
Assessor's Map D, Lot 11-8

Re: Responses to Technical Review Committee minutes #1– SITE-2024-0002
dated February 15, 2024

Dear Planning Board:

In response to Technical Review Committee minutes referenced above we submit the following responses in bold beneath the review comments in italic.

Planning

1. *Reminder: Impact fees, water, and sewer investment fees*
   The client has been made aware of all impact fees and investment fees.
2. *Provide Letter to Serve from Eversource*
   Acknowledged, see attached will serve letter from Michael Busby, dated December 21, 2023.
3. *Add PE stamp to TAM*
   Acknowledged, stamps will be provided on final planning board submittal.
4. *IT Requirements*
   a. *A majority of the parking spaces shall be located to the side or rear of the building. Waiver needed.*
      Upon review of the site plan and the IT narrative previously submitted a waiver is not required as the proposed parking for both of the proposed buildings are to the side of each. The frontage is along Quality Way.
5. *Revise plan to:*
   a. *Add Planning file number, SITE-2024-0002*
      The plans have been updated accordingly.
   b. *Add Wetland buffer placards every 35'*
      The plans have been updated accordingly, see sheet 6.
   c. *Principal buildings in commercial or industrial uses shall be lighted on all sides for security.*
      The plans have been updated accordingly, see sheet 21.
   d. *Clarify lighting foot candles (lessen font size, clarify decimal placement). Seems pretty*

bright.
The lighting plan has been revised, see sheet 21.

e. *Change "handicap" to "accessible"*
The plans have been updated accordingly.

f. Confirm curb material
Curb material has been clarified. Curbing in front of buildings has been revised to show monolithic concrete curb.

g. Discuss pedestrian connectivity, potentially between buildings, potentially adding sidewalk in-between buildings and to Quality Way.
Based on the light manufacturing type use anticipated for these buildings it is not expected that there will be much if any pedestrian traffic between the two buildings. The driveways are of sufficient widths to accommodate any minor pedestrian traffic with out conflicting with vehicle traffic on site. Also, the site design is cognizant of impervious coverage concerns and the amount of impervious on site has been limited to what is needed. Also, there are no sidewalks along Quality Way so a sidewalk would be to no where in this case. The main access drive is 30' wide and can accommodate random foot traffic with no impacts from vehicular traffic.

h. Trees within landscape plan require a minimum of 3" caliper
As has been discussed with Staff on previous projects landscape architects have provided written opinion "that trees with a 2- 2.5" caliper generally establish themselves more quickly and begin to produce new growth sooner and with less maintenance than those of the required 3.5-4" caliper." All landscape plans have been prepared with this opinion in mind. Terrain Planning & Design LLC. is in support of this opinion.

i. Add second bike rack for 10,000 sf. building
The plans have been updated accordingly, see sheet 6.

j. Change site construction hours to preclude work on Sundays or federal holidays
The plans have been updated accordingly. Sundays have been removed from Sheet 4 Dover Note 22 construction hours note. Note has been revised to include "work precluded on Sundays and federal holidays."

Engineering

1. *General: Applicant and Contractor shall review the Dover Construction Guidelines prior to scheduling a Preconstruction meeting with City staff. The guidelines can be found on the City of Dover Website on the Engineering page. https://www.dover.nh.gov/Assets/government/city-operations/1form/community-services/engineering/engineering-documents/Construction%20Guidelines.pdf*
Acknowledged.
2. *General: Confirm that the plans are tied into the City's GIS coordinate system (NAD83 NH State Plane in feet) and topography is on the NAVD88 datum.*
Acknowledged.
3. *General: Change "handicap" references to "accessible" where applicable*
The plans have been updated accordingly.
4. *General: Emergency contacts shall be provided for pump system after construction is complete.*
Acknowledged.

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5. *General: Applicant shall provide an easement to the City along the private drives within the property to allow for access and operation of the water infrastructure (hydrants and shut offs) to maintain water quality.*
   The client has been made aware that they will need to provide an easement to the City of Dover for maintenance of water quality, a note has been added to the plans stating "an easement will be granted to the city along the water lines to allow access for operation of the water infrastructure to maintain water quality." See sheet 4 note 29.
6. *Sheet 6: Show the locations of the building egresses.*
   The four egresses on the 25,000-sf building have been labeled, and the three egresses on the 10,000 sf building have been labeled, see sheet 6.
7. *Sheet 6: Does retaining wall on main entrance require guardrail?.*
   The plans have been updated accordingly to include chain link fence integrated on the walls on the entrance drive.
8. *Sheet 6: How is the bike rack mounted? It appears to be in the grass. It appears that a bikes might be close to doors in the parking space. Include bike rack at second building.*
   The bike rack detail has been updated to show a bike rack that is free standing and not mounted to the ground. At the 25,000 sf building the bike rack location has been adjusted to not conflict with any parking space. A bike rack has been added to the 10,000-sf building, see sheet 6.
9. *Sheet 7: Show labels for contours on main drive and grading outside of paved surfaces.*
   The plans have been updated accordingly, see sheet 7.
10. *Sheet 7: Show spot grades on top and bottom of retaining wall on main entrance.*
    The plans have been updated accordingly, see sheet 7.
11. *Sheet 7: Recommend adding a DMH at the end of PP7 where it changes direction to provide access for maintenance.*
    Two (2) yard drains with solid covers have been provided at the bends of PP6 and PP7 for maintenance purposes. See sheet 18, yard drain detail.
12. *Sheet 7: How will the wetland be prevented from flowing directly into parking area?*
    It has been evaluated that the wetlands will not flow directly into the parking area because the grading provides +6' to the parking grade, this gives adequate elevation from flooding. As well the cross culvert for the entry drive has been designed to accommodate a 100-year storm without flooding.
13. *Sheet 9: Show both fire and domestic services.*
    The plans have been updated accordingly to show "typical fire and domestic water service connection detail", see sheet 9.
14. *Sheet 9: Add notes calling out hydrants, fittings, and water main sizes and connections.*
    The plans have been updated accordingly.
15. *Sheet 9: Identify how the proposed force mains, water, and electric conduit cross the drainage (below or above?).*
    Drainage lines will be above proposed force mains, water, and electrical conduit.
16. *Sheet 9: Call out how the force main will tie into the existing SMH.*
    The plans have been updated accordingly, to include Fernco couplings, see sheet 9.
17. *Sheet 13: Remove Trench Patch Detail as it conflicts with Dover Standard.*

The plans have been updated accordingly; the details have been deleted.

18. *Sheet 13: Is a 6 inch pad for the dumpster sufficient? Recommend a minimum 12" concrete pad be provided.*
    It is our professional opinion that a 6" thick concrete dumpster pad is sufficient. A layer of 4" crushed gravel and 12" gravel sections adds structural capacity of the concrete, as well 4000 psi concrete will be used, a high strength concrete.
19. *Sheet 13: Note in Utility trench references Public Service specifications. Please check that the correct document is noted (Eversource).*
    The plans have been updated accordingly. sheet 13, utility trench detail note 3 has been revised to say. "For complete specifications see 'requirements for electric service connections – information and requirements for electric supply by Eversource Energy.'"
20. *Sheet 14: Provide bike rack pad detail.*
    The plans have been updated accordingly, see sheet 14.
21. *Sheet 14: Depth of embedment for guardrail seems insufficient. Please confirm depth is sufficient for behind a retaining wall.*
    Referencing the NHDOT "Guardrail Standard – Beam Guardrail Standard Section-Wood Post & Hardware Details" the detail shows 4'-5" depth of the post in ground, the detail in the plan has been revised to show this, see sheet 14. The detail also shows the guardrail 2' minimum from slopes steeper than 4:1, this is provided.
22. *Sheet 14: Detail calls out Monolithic concrete curb but plans show integrated concrete curb. Recommend coordinating terms.*
    Plans have been updated accordingly to include MCC (monolithic concrete curb) in front of buildings.
23. *Sheet 15: Add note to box culvert detail that a stamped design shall be provided by a professional engineer.*
    The box culvert detail has been updated to include a note that states "shop drawings stamped by a professional engineer will be provided prior to construction.", see sheet 15. The shop drawings will be stamped by a professional engineer.
24. *Sheet 16: Show class of water main in water service detail.*
    The plans have been updated accordingly, see "city of dover d-4 water trench detail" sheet 16.
25. *Sheet 17: Provide detail/ spec on anti -seep collar.*
    The plans have been updated accordingly to show an Anit-Seep Collar Detail on sheet 17.
26. *Sheet 17: Provide detail on how the force mains are joined. Recommend providing the ability to isolate each station.*
    The plans have been revised to show a curb stop for each site, see sheet 9, and sheet 19 for detail.
27. *Sheet 17: Please confirm that the common force main can handle both pump stations running at the same time.*
    Please find attached "Preliminary Pressure Sewer – Pipe Sizing and Branch Analysis" provided by E-One showing that a 1.5" Dia SDR11HDPE passes the flow when all four

pumps are running.

28. *Sheet L1.0: Snow storage areas conflict with landscaping. Recommend storing snow in areas where landscaping won't get in the way.*
    The limits of snow storage have been revised to show storage only on the sediment forebay. The landscape plan has been revised to show grass along the edge of pavement near the sediment forebay instead of low-level plantings, so that a plow can push the snow over the vegetation without damage.
29. *Landscape O&M: Snow Storage section prohibits dumping snow storage on stormwater basin. This appears to conflict with the site plan. Please revise snow storage to meet the recommendations of the O&M plan as low level plantings may be in conflict.*
    The limits of snow storage have been revised to show storage only on the sediment forebay. The landscape plan has been revised to show grass along the edge of pavement near the sediment forebay instead of low-level plantings, so that a plow can push the snow over the vegetation without damage.

Police

1. *Sheet 4, Dover Note 22: site construction hours should probably exclude Sundays due to proximity to Quail Drive residential*
   Sundays have been removed from Sheet 4 Dover Note 22 construction hours note. Note has been revised to include "work precluded on Sundays and federal holidays."
2. *Zoom out the Neighborhood Plan to provide more context*
   The plans have been updated accordingly to show 1"=200' scale.
3. *At 10,000 SF building, is there an accessible route behind the proposed EV charging station?*
   Graphically on the plans the EV charging station is shown as a 2' x 2' box, this is just for visual purposes, the dimensions for the EV charging station are 16.9" deep by 13.7" wide. The width of the sidewalk behind the EV charging stations is 3.6', both being ADA compliant.
4. *Will your workforce create more demand for EV stations?*
   It is not anticipated that the workforce will create more demand for EV stations, although if there is a demand that comes about, the company can add more services after it is constructed (with appropriate approvals).
5. *Do the proposed dumpster locations interfere with loading dock doors?*
   The dumpster and ramp for the 25,000-sf building has been moved slightly to eliminate conflicts with loading dock doors. Dumpster and ramp have been confirmed on 10,000 sf building.
6. *Confirm bike rack locations*
   A bike rack will be provided on both proposed buildings.
7. *Lack of employee amenities outdoors for break time*
   The applicant/building owner will provide amenities as needed.
8. *Campus Walkability – particularly between the two buildings – seems lacking between the*

building and Quality Way
Based on the light manufacturing type use anticipated for these buildings it is not expected that there will be much if any pedestrian traffic between the two buildings. The driveways are of sufficient widths to accommodate any minor pedestrian traffic with out conflicting with vehicle traffic on site. Also, the site design is cognizant of impervious coverage concerns and the amount of impervious on site has been limited to what is needed. Also, there are no sidewalks along Quality Way so a sidewalk would be to no where in this case. The main access drive is 30' wide and can accommodate random foot traffic with no impacts from vehicular traffic.

9. *Would like to see a connection to existing Quality Way sidewalk*
There are no sidewalks along Quality Way to connect to. Staff has indicated that the City does not have any current plans to add sidewalks in Quality Way.

Fire/ Inspection Services

1. *Submitted plans shall be stamped by a NH professional designer*
Acknowledged, final plans shall have NH professional stamps.
2. *Clarify the width of the sidewalk at the EV charging stations*
Graphically on plans the EV charging station is shown as a 2' x 2' box, this is just for visual purposes, the dimensions for the EV charging station are 16.9" deep by 13.7" wide. The width of the sidewalk behind the EV charging stations is 3.6', both being ADA compliant.
3. *Detail sheet should include an EV charger detail*
The plans have been updated accordingly to include an EV charger detail, see sheet 14.
4. *Revise references to "handicap" to "accessible"*
The plans have been updated accordingly.
5. *Clarify if the sewer pumping stations classification (i.e. class I div I).*
Pump chambers are unclassified because the pump chamber will be vented in accordance with manufacturer's specifications and local plumbing code, see sheet 4 utility note 28.
6. *Clarify a control panel location with alarm*
The plans have been updated accordingly to include a note that states "coordinate control panel location with architect for location of mech room (typ)"
7. *Classify the generator type and clarify fuel type*
The generator will be sized by the project electrical engineer prior to construction. Engineered shop drawings will be provided during construction. It is anticipated that the generator will be powered by natural gas.
8. *Provide a general description of the building use classification(s)*
The building will be used for light manufacturing and office space.
9. *Indicate types and quantities of commodities to be stored inside.*

Future Automation's business is the designing and manufacturing of a large range of AV concealment and moving architectural mechanisms to enhance the smart home, commercial and marine industries. From that different commodities will consist of various electrical components and manufacturing mechanical components for automated mechanisms.

10. *Plans to indicate ingress/egress locations.*
    The four egresses on the 25,000-sf building have been labeled, and the three egresses on the 10,000 sf building have been labeled, see sheet 6.
11. *Exterior landings to be no greater than ½" elevation change (drop for LS code compliance)*
    The landings provide no greater than a 1/2" elevation change, this has been clarified with a spot shot.
12. *Are there any equipment pads on the exterior.*
    Yes, 25,000 sf building has a concrete generator and transformer pad, as well the 10,000 sf building has a concrete generator and transformer pad, see sheet
13. *Clarify Architectural plans and site plans near FDC to ensure there is clear unobstructed access.*
    The FDC connections have been confirmed that there is clear unobstructed access, the location of the FDC on the 25,000 sf building has been revised, see sheet 9.

Business Development

1. *This application requires architectural review and endorsement by the Dover Business and Industrial Development Authority (DBIDA) prior to review by the Planning Board*
   Acknowledged.
2. *DBIDA meetings occur on the first Tuesday of the month. Please confirm with Business Development staff if you wish to be added to the agenda by the Thursday prior to the meeting*
   Acknowledged.
3. *The plans, renderings, and landscape plan seem generally attractive and suitable for the location in Enterprise Park*
   Acknowledged.

CIVILWORKS NEW ENGLAND

Sincerely,



Stephen J Haight, PE

Mark Beaudry

From: Mavrogeorge, Kenneth <K.Mavrogeorge@dover.nh.gov>
Sent: Thursday, January 4, 2024 3:19 PM
To: Mark Beaudry
Cc: Steve Haight; Cheryl Andreason; Joseph Griffin; Nadeau, Mike; Fredrickson, David
Subject: RE: CNE 22075 – Future Automation, Quality Way

Mark,

At this time we have the ability to serve the site with water and sewer with the project demand in your email below.

Regards,

Ken

Ken Mavrogeorge, PE
City Engineer
City of Dover, NH
271 Mast Rd.
Dover, NH 03820-4169
e: k.mavrogeorge@dover.nh.gov
p: 603.516.6454 | c: 603.534.8865
f: 603.516.6463

Dover: First in New Hampshire, First with you!
http://www.dover.nh.gov

From: Mark Beaudry <mbeaudry@civilworksne.com>
Sent: Wednesday, January 3, 2024 10:36 AM
To: Mavrogeorge, Kenneth <K.Mavrogeorge@dover.nh.gov>
Cc: Steve Haight <shaight@civilworksne.com>; Cheryl Andreason <cheryl@surveynh.com>; Joseph Griffin <jgriffin@civilworksne.com>
Subject: FW: CNE 22075 – Future Automation, Quality Way

Security Notice: External sender. Use caution with hyperlinks or attachments.

Hello again Ken. Happy New Year. Just wanted to follow up on my email sent on Dec. 20th since we are getting ready to submit to start the TRC review process. Thx.

Mark

From: Mark Beaudry
Sent: Wednesday, December 20, 2023 12:16 PM
To: Mavrogeorge, Kenneth <K.Mavrogeorge@dover.nh.gov>
Cc: Steve Haight <shaight@civilworksne.com>; Joseph Griffin <jgriffin@civilworksne.com>
Subject: CNE 22075 – Future Automation, Quality Way

Hello Ken: Future Automation is proposing to build two buildings; one 25,000 SF and one 10,000 SF at the end of Quality Way on Tax Map D, Lot 11-8. The buildings will contain a mix of light manufacturing and office space as follows:

Building 1:

- Office = 2,000 SF x 5 GPD/100 SF = 100 GPD
- Light Manuf. (“Factory”) = 25 employees x 10 GPD/empl = 250 GPD
- Total = 350 GPD

Building 2:

- Office = 3,330 SF x 5 GPD/100 SF = 166.5 = 167 GPD
- Light Manuf. (Factory) = 20 employees x 10 GPD/empl = 200 GPD
- Total = 367 GPD

These design flow rates are based on NHDES Env-Wq 1008.03 Table 1008-1 *Unit Design Flow Figures* for “Unspecified Office Space” (5 GPD/100 SF) and “Factories (exclusive of Ind. Waste) without Cafeteria or Showers” (10 GPD/employee). This factory flow rate is the same for any “warehouse” space.

The client has specified that their manufacturing processes do not generate industrial wastewater.

Attached is our utility plan (coordination issuance) that depicts the location, site layout of the buildings and anticipated utility services.

Back in September of 2022 you provided an email to us stating that water and sewer was available for the Weave Filtration project proposed at Lot 11-7; which has not yet been constructed as you know. We request that you now advise on the availability of service to the Future Automation project.

If you have any questions or require more information, please do not hesitate to get back to us.

Thank you for your assistance on these projects.

Mark

_____

Mark Beaudry, PE
Senior Associate/Sr. Project Manager
Civilworks New England
C: (413) 325-3384
O: (603) 749-0443 x113

Please consider conserving our natural resources before printing this e-mail and/or any attachments.

This electronic message and any attachments may contain information that is confidential and/or legally privileged in accordance with NH RSA 91-A and other applicable laws or regulations. It is intended only for the use of the person and/or entity identified as recipient(s) in the message. If you are not an intended recipient of this message, please notify the sender immediately and delete the material. Do not print, deliver, distribute or copy this message, and do not disclose its contents or take any action in reliance on the information it contains unless authorized to do so. Thank you.

EVERSOURCE ENERGY

1700 Lafayette Road
Portsmouth, NH 03801

Michael J Busby
603-436-7708 x555-5678
michael.busby@eversource.com

December 21, 2023

Mark E. Beaudry, PE
Civilworks New England
181 Watson Road, P.O. Box 1166
Dover, NH 03821

Dear Mark:

I am responding to your request to confirm the availability of electric service for the building project being proposed by Future Automation on Quality Way in Dover NH at Tax Map D, Lot 11-8.

The proposed development project consists of two buildings on the lot; one 25,000 SF and one 10,000 SF that will contain a mix of general office space and light manufacturing.

The developer will be responsible for the installation of all underground facilities and infrastructure required to extend electrical service from existing manhole on Venture Drive to proposed buildings. The underground line extension will be designed by Eversource Engineering and will need to be depicted on the utility plan. The developer will work with Eversource to obtain all necessary easements and licenses for the proposed underground/overhead facilities listed above.

This letter serves as confirmation that Eversource has sufficient capacity in Enterprise Park to provide service to this proposed development, however, it will require extending underground infrastructure to proposed site location. The cost of extending service to the location and any associated infrastructure improvements necessary to provide service will be borne by the developer unless otherwise agreed upon.

The attached drawing titled **"Site Utility Coordination Plan" dated 12/11/2023 prepared by Civilworks New England titled "Future Automation**" shows the location of the underground line extension from Venture Drive to site, required conduit and manholes, and anticipated utility transformer locations to service the proposed project.

Eversource approves the locations shown; assuming the final installed locations meet all clearances, physical protection, and access requirements as outlined in Eversource's "Information & Requirements For Electric Supply" (https://www.eversource.com/content/docs/default-source/pdfs/requirements-for-electric-service-connections.pdf?sfvrsn=2).

If you require additional information or I can be of further assistance please do not hesitate to contact me at our Portsmouth Office, 603-436-7708 Ext. 555-5678

Respectfully,

Michael J. Busby, PE
NH Eastern Regional Engineering and Design Manager, Eversource

cc: (via e-mail)
Thomas Boulter, Eastern Region Operations Manager, Eversource
Nickolai Kosko, Field Supervisor, Electric Design, Eversource

Unitil
Northern Utilities, Inc.

January 19th, 2024

Mark Beaudry, PE
Senior Associate/Sr. Project Manager
Civilworks New England

Natural Gas to Future Automation, Quality Way, Dover, NH 03820 Tax Map D, Lot 11-8

Hi Mark,

Unitil/Northern Utilities Natural Gas Division has reviewed the requested site for natural gas Service:

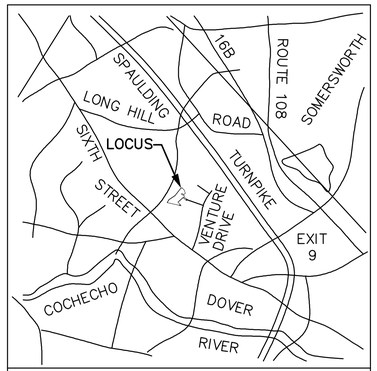
Unitil hereby confirms that natural gas is available for the proposed building at ***, Quality Way, Dover, NH 03820 Tax Map D, Lot 11-8.***

If you have any questions, please contact me at 603-534-2379.

Sincerely,

Dave MacLean
Senior Business Development Rep
Unitil

T 603.294.5261
M 603.534.2379
F 603.294.5264
Email macleand@unitil.com



LOCATION PLAN
(NO SCALE)

SITE PLAN
FOR
FUTURE AUTOMATION

TAX MAP D, LOT 11-8

QUALITY WAY

DOVER, NH

JANUARY 2024

FEBRUARY 2024

OWNER

DOVER BUSINESS AND INDUSTRIAL DEVELOPMENT AUTHORITY
f/k/a DOVER INDUSTRIAL DEVELOPMENT AUTHORITY (D.I.D.A)
288 CENTRAL AVENUE
DOVER, NEW HAMPSHIRE 03820

_____ DATE

APPLICANT

FUTURE AUTOMATION, INC.
127 VENTURE DRIVE
DOVER, NH 03820

_____ DATE

SITE CIVIL ENGINEER

CIVILWORKS NEW ENGLAND
CIVIL & WATERFRONT ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

LAND SURVEYOR

MCENEANEY SURVEY ASSOCIATES OF NEW ENGLAND
P.O. BOX 1166
DOVER, NH 03821
(603) 742-0911

ARCHITECT

JOHN M. TUTTLE, ARCHITECT
TW DESIGNS, LLC
254 DRAKE HILL ROAD
STRAFFORD, NH 03884
(603) 664-2181

WETLAND SCIENTIST

MICHEAL R. CUOMO
6 YORK POND ROAD
YORK, ME 03909
(207) 363-4532

LANDSCAPE ARCHITECT

TERRAIN PLANNING & DESIGN, LLC
311 KAST HILL ROAD
HOPKINTON, NH 03229
(603) 491-2322

WILDLIFE PROTECTION NOTES:

- ALL OBSERVATIONS OF THREATENED OR ENDANGERED SPECIES SHALL BE REPORTED IMMEDIATELY TO THE NEW HAMPSHIRE FISH AND GAME DEPARTMENT NONGAME AND ENDANGERED WILDLIFE ENVIRONMENTAL REVIEW PROGRAM BY PHONE AT 603-271-2461 AND BY EMAIL AT NHFGREVIEW@WILDLIFE.NH.GOV. EMAIL SUBJECT LINE: NHB23-3353, FUTURE AUTOMATION INC., WILDLIFE SPECIES OBSERVATION.
- PHOTOGRAPHS OF THE OBSERVED SPECIES AND NEARBY ELEMENTS OF HABITAT OR AREAS OF LAND DISTURBANCE SHALL BE PROVIDED TO NHF&G IN DIGITAL FORMAT AT THE ABOVE EMAIL ADDRESS FOR VERIFICATION AS FEASIBLE.
- IN THE EVENT A THREATENED OR ENDANGERED SPECIES IS OBSERVED ON THE PROJECT SITE DURING THE TERM OF THE PERMIT, THE SPECIES SHALL NOT BE DISTURBED, HANDLED, OR HARMED IN ANY WAY PRIOR TO CONSULTATION WITH NHF&G AND IMPLEMENTATION OF CORRECTIVE ACTIONS RECOMMENDED BY NHF&G, IF ANY, TO ASSURE THE PROJECT DOES NOT APPRECIABLY JEOPARDIZE THE CONTINUED EXISTENCE OF THREATENED AND ENDANGERED SPECIES AS DEFINED IN FIS 1002.04.
- THE NHF&G, INCLUDING ITS EMPLOYEES AND AUTHORIZED AGENTS, SHALL HAVE ACCESS TO THE PROPERTY DURING THE TERM OF THE PERMIT.

SHEET INDEX	SHEET
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EXTERIOR ELEVATIONS	A3.1
AUX BUILDING STREET VIEW RENDERING	R1.1
LANDSCAPE PLANS	
LANDSCAPE PLAN	L1.0
LANDSCAPE DETAILS	L2.0

PLANNING FILE NO.: SITE-2024-0002



ABUTTERS LIST
(WITHIN 200 FT)

TAX MAP	LOT NO.	NAME & ADDRESS
D	11-1-0	DOVER BUSINESS & IND DEV AUTHORITY, F/K/A DOVER IND DEV AUTHORITY 288 CENTRAL AVE DOVER, NH 03820
D	11-9-SND	HEINE USA 10 INNOVATION WAY 288 CENTRAL AVE DOVER, NH 03820
D	11-8-SN3	DOVER BUSINESS & IND DEV AUTHORITY, F/K/A DOVER IND DEV AUTHORITY 288 CENTRAL AVE DOVER, NH 03820
D	11-8-SN2	DOVER BUSINESS & IND DEV AUTHORITY, F/K/A DOVER IND DEV AUTHORITY 288 CENTRAL AVE DOVER, NH 03820
A	47-12-0	MCCONNELL GEOFFERY R & DEBORAH TRUSTEE MCCONNELL REVOCABLE LIVING TRUST 15 REYNERS BROOK DRIVE DOVER, NH 03820
A	47-10-0	ARVENITIS KERRY A 11 REYNERS BROOK DRIVE DOVER, NH 03820
A	48-B-0	MENDENHALL JON L & MENDENHALL KAREN E 475 SIXTH STREET DOVER, NH 03820
A	49-11-0	TRICONI CHRISTOPHER E & ELIZABETH C TRUS TRICONI FAMILY LIVING TRUST 2021 28 QUAIL DRIVE DOVER, NH 03820
A	49-12-0	MOREAU SCOTT & CURTIS MARCY 32 QUAIL DRIVE DOVER, NH 03820
A	49-13-0	PORTER DOUGLAS W & PORTER YUKARI 29 QUAIL DRIVE DOVER, NH 03820
D	12-1-0	TSB PROPERTIES LLC 385 SIXTH STREET DOVER, NH 03820
D	12-2-0	TSB PROPERTIES LLC 385 SIXTH STREET DOVER, NH 03820
D	11-7-SN2	DOVER BUSINESS & IND DEV AUTHORITY, F/K/A DOVER IND DEV AUTHORITY 288 CENTRAL AVE DOVER, NH 03820
D	11-7-0	WEAVE FILTRATION QUALITY WAY DOVER, NH 03820
D	11-4-0	QUALITY WAY LLC 55 MAIN STREET, UNIT 407 NEWMARKET, NH 03857
D	11-6-0	DOVER BUSINESS & IND DEV AUTHORITY, F/K/A DOVER IND DEV AUTHORITY 288 CENTRAL AVE DOVER, NH 03820

SYMBOL LEGEND

D / 11 — TAX MAP / LOT NUMBER

NH STATE PLANE MAD 83 - GPS OBS.

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)

PLANNING FILE NO.: SITE-2024-0002

NEIGHBORHOOD PLAN

FUTURE AUTOMATION, INC.
127 VENTURE DRIVE
DOVER, NH 03820

FUTURE AUTOMATION
QUALITY WAY LOT
DOVER, NH 03820

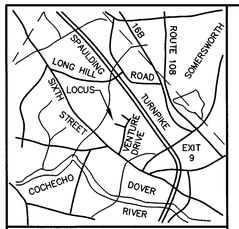
2

NO.	REVISION	APP'D	DATE
1	REV PER TRC COMMENTS #1	SJH	2-29-24

PROJECT NO: 22075
DESIGN BY: JFG
DRAWN BY: SRD
SCALE: 1"=100'
DATE: 1-18-24
FILE: SITE.DWG

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

CIVILWORKS NEW ENGLAND
CIVIL & WATERSHED ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443



LOCATION PLAN
(NO SCALE)

REFERENCE PLANS:

1.) AMENDED SUBDIVISION AND LOT LINE ADJUSTMENT PLAN PREPARED FOR GEORGE J. FOSTER & Co., INC. AND DOVER BUSINESS AND INDUSTRIAL DEVELOPMENT AUTHORITY, TAX MAP D, LOT Nos. 9A & 11–1, VENTURE DRIVE AND QUALITY WAY, DOVER, STRAFFORD COUNTY, NEW HAMPSHIRE. SCALE: 1" = 100'; DATED: FEBRUARY 14, 2006, REVISED THROUGH 5/3/06; BY THIS OFFICE. RECORDED S.C.R.D. PLANS 85–99 & 85–100.

2.) ROADWAY AS–BUILT PLAN & PROFILE PREPARED FOR DOVER INDUSTRIAL DEVELOPMENT AUTHORITY, QUALITY WAY AT VENTURE DRIVE, DOVER, STRAFFORD COUNTY, NEW HAMPSHIRE. SCALE: 1" = 40'; DATED: JANUARY 16, 2006, REVISED THROUGH 3/16/06; BY: McENEANEY SURVEY ASSOCIATES, INC. ON FILE WITH CITY OF DOVER ENGINEERING DEPARTMENT.

NOTES:

1.) OWNERS OF RECORD:

DOVER BUSINESS AND INDUSTRIAL DEVELOPMENT AUTHORITY
f/k/a DOVER INDUSTRIAL DEVELOPMENT AUTHORITY (D.I.D.A.)
288 CENTRAL AVENUE
DOVER, NEW HAMPSHIRE 03820
S.C.R.D. VOL. 1559 / 394
TITLE REF. SEE SCRD 1738 / 130, 1027 / 790, 773 / 481

2.) D / 11–8 – DENOTES TAX MAP AND PARCEL NUMBER.

3.) PLAN INTENT: TO SHOW THE SITE EXISTING CONDITIONS.

4.) PARCEL AREA = 375,192 S.F. / 8.61 Ac.

5.) ZONING DISTRICT IS INNOVATIVE TECHNOLOGY (IT)

DIMENSIONAL REQUIREMENTS:	
MINIMUM LOT SIZE	= 2 ACRES
MINIMUM LOT COVERAGE	= 33 PERCENT
MINIMUM FRONTAGE	= 200 FEET
BUILDING SETBACK REQUIREMENTS:	
FRONT SETBACK	= 50 FEET
SIDE SETBACK	= 50 FEET
REAR SETBACK	= 50 FEET
MAXIMUM BUILDING HEIGHT	= 55 FEET MAXIMUM

6.) THE SUBJECT PARCEL IS LOCATED OUTSIDE OF THE 0.2 PERCENT ANNUAL CHANCE FLOODPLAIN AS SHOWN ON FLOOD INSURANCE RATE MAP COMMUNITY NUMBER 330145; PANEL 0310; SUFFIX E; MAP NUMBER 33017C0310E; EFFECTIVE DATE SEPTEMBER 30, 2015.

7.) BASIS OF BEARING IS THE CITY OF DOVER / GEOD CORP. GRID PER REFERENCE PLAN No. 1. (G.I.S. STATIONS TR 390 AND TR 391A) VERTICAL DATUM IS CITY OF DOVER / GEOD CORP. PER CITY G.I.S. STATIONS TR 390 AND TR 391A.

8.) PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PERFORMED BY MCENEANEY SURVEY ASSOCIATES OF NEW ENGLAND WITH AN ERROR NOT GREATER THAN 1 IN 10,000

9.) WETLANDS SHOWN WERE IDENTIFIED BY DAMON E. BURT, N.H.C.W.S. #163 OF FRAGGLE ROCK ENVIRONMENTAL SERVICES ON SEPTEMBER 2, 2022 IN ACCORDANCE WITH THE 1987 CORPS. OF ENGINEERS WETLANDS DELINEATION MANUAL AND LOCATED BY McENEANEY SURVEY ASSOCIATES OF NEW ENGLAND.

10.) THE PARCEL IS SERVED BY MUNICIPAL SEWER AND WATER.

11.) TOPOGRAPHY DEPICTED IS BASED ON FIELD OBSERVATIONS BY THIS OFFICE.

12.) LOT D/11–8 WAS CREATED USING THE CITY OF DOVER TDR ORDINANCE.

LEGEND

S.F. – SQUARE FEET
Ac. – ACRE
(TYP.) – TYPICAL
± – MORE OR LESS
S.C.R.D. – STRAFFORD COUNTY REGISTRY OF DEEDS
– STONE WALL
– EDGE OF WET
f/k/a – FORMERLY KNOWN AS
D.H.(fnd) – DRILL HOLE FOUND
S.S.(fnd) – STEEL STAKE FOUND
I.R.(fnd) – IRON ROD FOUND
TBM – TEMPORARY BENCH MARK
– FIRE HYDRANT
– SEWER MANHOLE
8"S – SEWER MAIN PIPE AND SIZE
S – SEWER SERVICE
W – WATER MAIN PIPE AND SIZE
W – WATER SERVICE
– WATER GATE VALVE
G – GAS MAIN
U/G E,T,C – UNDERGROUND ELECTRIC, TELEPHONE AND CABLE BROADBAND
174 – EXISTING CONTOUR (2 FOOT INTERVAL)

No.	Bearing	Distance
L1	N30°30'05"W	55.67'
L2	N30°29'16"W	80.58'
L3	S38°23'21"E	61.89'
L4	S81°38'07"E	66.39'
L5	S77°08'15"W	52.06'
L6	S35°56'47"E	78.76'
L7	S09°40'20"W	72.30'
L8	S30°30'05"E	76.90'
L9	S30°30'05"E	59.35'

No.	Central Angle	Radius	Arc Length	Chord Length	Chord Bearing
C1	24°49'33"	253.78	109.96	109.10	N42°54'51"W
C2	22°24'32"	193.79	75.80	75.31	S41°42'21"E
C3	47°44'43"	75.00	62.50	60.71	S26°56'10"W

NO.	DATE	DESCRIPTION	BY	CHK
		REVISIONS		

22–2463	EC	22–10	53–64
PROJECT NO	TYPE	FIELDBOOK & PAGES	

"I HEREBY CERTIFY THAT THIS PLAN IS BASED ON AN ACTUAL GROUND SURVEY PERFORMED WITH A TOTAL STATION, BY ME OR THOSE UNDER MY DIRECT SUPERVISION AND THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, SAID SURVEY MEETS OR EXCEEDS THE MINIMUM PRECISION REQUIREMENTS FOR SURVEY CLASSIFICATION "U" AS SET FORTH IN TABLE 500.1 OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS."

EXISTING CONDITIONS PLAN OF LAND
PREPARED FOR
FUTURE AUTOMATION
TAX MAP D, LOT No. 11–8
QUALITY WAY
CITY of DOVER
COUNTY of STRAFFORD
STATE of NEW HAMPSHIRE

DRAWN BY: KJF	FILE: MSA\2463\D\22–2463
SCALE: 1" = 50'	DATE: NOVEMBER 2, 2022

50 25 0 25 50 100 150 200

STATE OF NEW HAMPSHIRE LICENSED LAND SURVEYOR No. 661 KEVIN M. McENEANEY SEAL SIGNATURE

McEneaney Survey Associates of NEW ENGLAND
P.O. Box 681 – 24 CHESTNUT STREET
DOVER, NH 03820 (603) 742–0911

SURVEYING – PLANNING – CONSULTING

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DOVER NOTES:

1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE PROPOSED CONSTRUCTION OF A 25,000 S.F. AND A 10,000 S.F. BUILDING WITH ASSOCIATED SITE IMPROVEMENTS.
2. OWNER(S) OF RECORD:
   DOVER BUSINESS AND INDUSTRIAL DEVELOPMENT AUTHORITY
   f/k/a DOVER INDUSTRIAL DEVELOPMENT AUTHORITY (D.I.D.A.)
   288 CENTRAL AVENUE
   DOVER, NEW HAMPSHIRE 03820
3. D/11-8 – DENOTES TAX MAP AND PARCEL NUMBER.
4. PARCEL AREA: 375,192 S.F. / 8.61 Ac.
5. TITLE REFERENCE: SEE SCRD 1559/394, 1738/130, 1027/790, 773/481
6. REFERENCE PLANS:
   A. AMENDED SUBDIVISION AND LOT LINE ADJUSTMENT PLAN PREPARED FOR GEORGE J. FOSTER & Co., INC. AND DOVER BUSINESS AND INDUSTRIAL DEVELOPMENT AUTHORITY, TAX MAP D, LOT Nos. 9A & 11–1, VENTURE DRIVE AND QUALITY WAY, CITY OF DOVER, STRAFFORD COUNTY, NEW HAMPSHIRE. SCALE: 1" = 100'; DATED: FEBRUARY 14, 2006, REVISED THROUGH 5/3/06; BY THIS OFFICE. RECORDED S.C.R.D. PLAN NOS. 85–99 & 85–100
   B. ROADWAY AS–BUILT PLAN & PROFILE PREPARED FOR DOVER INDUSTRIAL DEVELOPMENT AUTHORITY, QUALITY WAY AT VENTURE DRIVE, DOVER, STRAFFORD COUNTY, NEW HAMPSHIRE. SCALE: 1" = 40'; DATED: JANUARY 16, 2006, REVISED THROUGH 3/16/06; BY: McENEANEY SURVEY ASSOCIATES, INC. ON FILE WITH CITY OF THE DOVER ENGINEERING DEPARTMENT.
7. PROJECT DOES NOT PROPOSE ANY RIGHT–OF–WAY, CONSERVATION, SLOPE, CONSTRUCTION, POWER LINE, CROSS TRAVEL, OR OTHER EASEMENTS.
8. ZONING DISTRICT: INNOVATIVE TECHNOLOGY (IT)
   DIMENSIONAL REQUIREMENTS:

	REQUIRED	PROPOSED
MINIMUM LOT SIZE:	2 AC	8.61 AC
MAXIMUM LOT COVERAGE (BUILDING):	33%	±9.3%
MINIMUM FRONTAGE:	*200'	62.5'
MINIMUM OPEN SPACE:	33%	±72.8%
BUILDING SETBACK REQUIREMENTS:		
FRONT SETBACK:	*50'	±280'
SIDE SETBACK:	*50'	11.32'
REAR SETBACK:	50'	>145'
ABUT A STREET:	50'	N/A
MAXIMUM BUILDING HEIGHT:	55'	35'
PARKING SETBACK REQUIREMENTS:		
PARKING AREA SETBACK:	*25'	23.71'

*SENDING AREAS ALLOWED FOR REDUCED LOT FRONTAGE, FRONT SETBACK, SIDE SETBACK, AND PARKING AREA SETBACKS. RELIEF WAS GRANTED PER THE FOLLOWING: LOT D/11–8 WAS CREATED USING THE CITY OF DOVER TDR ORDINANCE THROUGH THE AMENDED SUBDIVISION AND LOT LINE ADJUSTMENT PLAN PREPARED FOR GEORGE J. FOSTER & CO., INC. AND DOVER BUSINESS AND INDUSTRIAL DEVELOPMENT AUTHORITY, TAX MAP D, LOT NOS 9A & 11–1, VENTURE DRIVE AND QUALITY WAY, DOVER, STRAFFORD COUNTY, NEW HAMPSHIRE. SCALE: 1"= 100'; DATED: FEBRUARY 14, 2006, REVISED THROUGH 5–3–06; BY MCENEANEY SURVEY ASSOCIATES, INC.; RECORDED S.C.R.D. PLANS 85–99 & 85–100.
LOT D/11–8 SENDING AREAS ARE IDENTIFIED IN THE EXISTING CONDITIONS PLAN PROVIDED BY MCENEANEY SURVEY ASSOCIATES.

9. LIST ANY VARIANCE OR SPECIAL EXCEPTIONS GRANTED BY THE ZONING BOARD OF ADJUSTMENT OR CONDITIONAL USE PERMITS GRANTED BY THE PLANNING BOARD FOR THE PROPOSED USE OR STRUCTURE, INCLUDING THE CASE NUMBER AND DATE OF DECISION AND ANY CONDITIONS. (SEE PROJECT VARIANCE/PERMIT SECTION)
10. PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PERFORMED BY MCENEANEY SURVEY ASSOCIATES, NOVEMBER 2022, WITH AN ERROR NOT GREATER THAN 1 IN 10,000.
11. THE SUBJECT PARCEL IS NOT LOCATED WITHIN THE 0.2 PERCENT ANNUAL CHANCE FLOODPLAIN AS SHOWN ON FLOOD INSURANCE RATE MAP COMMUNITY NUMBER 330145; PANEL 0310; SUFFIX E; MAP NUMBER 33017C0310E; EFFECTIVE DATE SEPTEMBER 30, 2015.
12. WETLANDS WERE DELINEATED BY DAMON E. BURT, CERTIFIED WETLANDS SCIENTIST, CERTIFICATION NUMBER 163, IN ACCORDANCE WITH CHAPTER 170–27.1 OF THE ZONING ORDINANCE, ON SEPTEMBER 2, 2022.
13. AS–BUILT PLANS OF THE SUBDIVISION SHALL BE SUBMITTED ON PAPER AND IN DIGITAL FORMAT AUTOCAD DWG, AUTOCAD DXF OR ESRI FORMAT TO THE CITY OF DOVER ENGINEER'S OFFICE UPON COMPLETION OF PROJECT IF A STREET IS PROPOSED FOR CITY ACCEPTANCE. AS–BUILT PLANS SHALL BE PREPARED AND CERTIFIED CORRECT BY A L.L.S. OR P.E. DIGITAL FILES SHALL BE GEO–REFERENCED TO NEW HAMPSHIRE STATE PLANE COORDINATES NAD83 AND SHALL BE EXPRESSED IN FEET.
14. THE INSTALLATION OF ELECTRIC POWER, CABLE TELEVISION AND TELEPHONE LINES SHALL BE UNDERGROUND THROUGHOUT THE SITE FOR WHICH DEVELOPMENT IS PROPOSED.
15. THE SUBJECT PARCEL IS SERVED BY MUNICIPAL WATER AND SEWER.
16. ALL CONSTRUCTION SHALL CONFORM WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION (NHDOT) 'STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION' AND WITH THE CITY OF DOVER COMMUNITY SERVICES REGULATIONS AND STANDARD SPECIFICATION FOR CONSTRUCTION. THE MORE STRINGENT SPECIFICATION SHALL APPLY.
17. EROSION CONTROL NOTES INCLUDE PROVISIONS FOR CONSTRUCTION SEQUENCING, TEMPORARY EROSION CONTROL MEASURES, AND PERMANENT STANDARDS SUCH AS LOAM SPREAD RATE FOR DISTURBED AREAS, RATES OF LIME, TYPE AND RATES FOR FERTILIZER, AND SEED AND MULCH MIXTURE WITH RATES OF APPLICATION.
18. THE LIMITS OF CONSTRUCTION DISTURBANCE THAT ARE LOCATED IN OR WITHIN 50 FT. OF CONSERVATION AND WETLAND DISTRICTS SHALL BE STAKED, FLAGGED AND CLEARLY IDENTIFIED PRIOR TO ANY EARTH DISTURBING ACTIVITY OCCURS.
19. ALL TREATMENT SWALES TO BE CONSTRUCTED SHALL HAVE SOD BOTTOMS.
20. A LETTER OF CREDIT FOR THE COST OF REVEGETATING ALL DISTURBED AREAS ON THE SITE SHALL BE SUBMITTED, AND THE APPROVED CONSTRUCTION SIGN INSTALLED PRIOR TO ANY EARTH DISTURBING ACTIVITY OCCURS.
21. A PRE–CONSTRUCTION CONFERENCE WITH THE DEVELOPER, THE DESIGN ENGINEER, THE EARTHWORK CONTRACTOR AND THE CITY ENGINEER SHALL OCCUR PRIOR TO ANY EARTH DISTURBING ACTIVITY.
22. SITE CONSTRUCTION HOURS SHALL BE LIMITED TO MONDAY–FRIDAY 7 AM–6 PM, SATURDAY 9 AM 4 PM. HOURS OF CONSTRUCTION MUST BE DOCUMENTED ON A SITE CONSTRUCTION SIGN ALONG WITH THE CONTACT INFORMATION FOR THE GENERAL CONTRACTOR. SAID SIGNAGE MUST BE LOCATED AND APPROVED BY THE CITY ENGINEER OR PLANNING DIRECTOR. WORK PRECLUDED ON SUNDAYS AND FEDERAL HOLIDAYS.
23. BUILDING ADDRESSES (INCLUDING APT/UNIT NUMBERS, IF APPLICABLE) SHALL BE ASSIGNED BY THE BUILDING OFFICIAL AT THE TIME OF ISSUANCE OF A BUILDING PERMIT.
24. THE PROPOSED USE FOR THE SITE IS LIGHT MANUFACTURING.
25. THE FOLLOWING FEDERAL AND STATE PERMINTS HAVE BEEN ISSUED FOR THE SUBJECT PROPERTY: (SEE PROJECT VARIANCE/PERMIT SECTION)

DOVER NOTES CONTINUED:

26. COMMERCIAL VEHICLE ROUTE DURING CONSTRUCTION SHALL CONFORM TO DOVER CITY CODE OR BE COORDINATED WITH THE COMMUNITY SERVICES DIRECTOR.
27. ANY RETAINING WALL TALLER THAN FOUR FEET (4') REQUIRES THE ISSUANCE OF A BUILDING PERMIT FROM INSPECTION SERVICES.
28. ANY FENCE TALLER THAN SEVEN FEET (7') REQUIRES THE ISSUANCE OF A BUILDING PERMIT FROM INSPECTION SERVICES.
29. APPLICANT SHALL COMPLETE LAND USE DEVELOPMENT TRACKING FORM, MOST RECENTLY REVISED VERSION, UTILIZING THE ONLINE POLLUTION TRACKING AND ACCOUNTING PILOT PROJECT (PTAPP) PORTAL.
    HTTPS://PTAPP.UNH.EDU/
30. IF APPLICABLE, THE OWNER OF RECORD SHALL RECORD AT THE REGISTRY OF DEEDS DOCUMENTATION SUFFICIENT TO PROVIDE NOTICE TO ALL PERSONS/ENTITIES THAT MAY ACQUIRE ANY PROPERTY SUBJECT TO THE REQUIREMENTS AND RESPONSIBILITIES DESCRIBED IN THE APPROVED STORMWATER MANAGEMENT PLAN. THE NOTICE SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS FOR RECORDING CONTAINED IN RSA 477 AND 478. THE NOTICE NEED NOT SET FORTH THE REQUIREMENTS AT LENGTH, SO LONG AS IT IS SUFFICIENT TO PROVIDE NOTICE TO PROSPECTIVE PURCHASERS TO THE REQUIREMENTS FOR MAINTENANCE AND REPORTING.
31. FIRE DEPARTMENT ACCESS ROAD(S) SHALL BE INSTALLED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS IN ALL WEATHER CONDITIONS AT ALL TIMES.
32. THE MAXIMUM PARKING SPACE CALCULATION IS 59, INCLUDING 3 ACCESSIBLE SPACES, AND 45, INCLUDING 4 ACCESSIBLE SPACES, ARE PROVIDED.
33. EXTERIOR LIGHTING SHALL BE CUT–OFF TYPE FIXTURES PER CHAPTER 153–14–E AND SHALL PROVIDE LIGHTING DIRECTED ON–SITE ONLY.
34. TOPOGRAPHIC SURVEY PERFORMED BY MCENEANEY SURVEY ASSOCIATE, OCTOBER 2022.
35. ELEVATIONS DEPICTED ARE BASED ON INFORMATION OBTAINED FROM THE CITY ENGINEER'S OFFICE AND WAS DERIVED FROM COORDINATES FOR CONTROL STATIONS TR390 AND TR391A. THESE COORDINATES HAVE NOT BEEN ADJUSTED TO 1983 DATUM.
36. A SECURITY SYSTEM SHALL BE INSTALLED AS REQUIRED BY CHAPTER 45, ARTICLE I, SECTION 45–2 OF THE CODE OF THE CITY OF DOVER.
37. APPROVED BACKFLOW PREVENTERS SHALL BE PROVIDED FOR BOTH FIRE AND DOMESTIC WATER LINES.
38. THE PROPOSED STRUCTURES SHALL BE SERVED BY A SPRINKLER SYSTEM AS REQUIRED BY CHAPTER 81– 30 OF THE CODE OF THE CITY OF DOVER AND THE ADOPTED STATE OF NH BUILDING AND FIRE CODES.
39. SPRINKLER CONNECTIONS MUST BE FLUSHED IN ACCORDANCE WITH NFPA 24 AND A CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING FORM MUST BE COMPLETED AND APPROVED BY INSPECTION SERVICES PRIOR TO CONNECTION OF THE BACKFLOW DEVICE.
40. FIRE DEPARTMENT CONNECTION(S) SHALL BE LOCATED ON THE STREET SIDE OF THE BUILDING PER NFPA 13. ACCESS TO THE FDC SHALL MAINTAIN A CLEAR AND UNOBSTRUCTED PATH AT ALL TIMES.
41. THE SITE LAYOUT IS DESIGNED IN COMPLIANCE WITH APPLICABLE ACCESSIBILITY REGULATIONS. THE PROPOSED STRUCTURE WILL ALSO BE DESIGNED IN ACCORDANCE WITH APPLICABLE ACCESSIBILITY REGULATIONS. (I.E. IBC, ANSI–117.1) AND NH RSA 155–A:5.
42. DESIGN ENGINEER SHALL PROVIDE SIGNED LETTER TO CITY ENGINEER CERTIFYING THAT THE STORMWATER MANAGEMENT SYSTEM HAS BEEN INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS.
43. ALL MANHOLE COVERS SHALL BE LIFTMATE R–1743–LM OR APPROVED EQUAL WITH 90 DEGREE HINGE.
44. REQUIRED BLASTING AND EXCAVATION – DOVER FIRE DEPARTMENT SHALL BE NOTIFIED PRIOR TO ANY BLASTING ACTIVITIES AND A BLASTING PERMIT FROM THE DOVER FIRE DEPARTMENT MUST BE OBTAINED.
45. THE WATER MAIN SHALL BE POLY WRAPPED IN ACCORDANCE WITH THE CITY OF DOVER STANDARDS.
46. ALL SEWER MAINS AND MANHOLES SHALL BE TESTED IN ACCORDANCE WITH NHDES ENV–WQ 700 REQUIREMENTS. COPIES OF TEST RESULTS SHALL BE PROVIDED TO THECITY OF DOVER ENGINEERING DEPARTMENT.
47. WETLAND PLACARDS SHOULD IDENTIFY THE NO CUT WETLAND BUFFER AND SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION AND AFTER.
48. ALL FITTINGS MUST BE CLASS 140 WATER FITTINGS.
49. ALL GATE VALVES MUST BE MANUFACTURED BY MUELLER OR CLOW.

DEMOLITION NOTES:

1. COORDINATE REMOVAL, RELOCATION, DISPOSAL OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE UTILITY COMPANY.
2. ANY EXISTING WORK OR PROPERTY DAMAGED OR DISRUPTED BY CONSTRUCTION/DEMOLITION ACTIVITIES SHALL BE REPLACED OR REPAIRED TO MATCH ORIGINAL EXISTING CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
3. THE CONTRACTOR SHALL NOTIFY "DIG SAFE" PRIOR TO ANY DEMOLITION/ CONSTRUCTION ACTIVITIES. (811).
4. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, UTILITIES AND PAVEMENT ON THE SITE TO THE LIMITS SHOWN UNLESS SPECIFICALLY IDENTIFIED TO REMAIN.
5. IT IS THE CONTRACTORS RESPONSIBILITY TO FAMILIARIZE HIMSELF WITH THE CONDITIONS OF ALL OF THE PERMIT APPROVALS.
6. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS NOT ALREADY OBTAINED BY THE OWNER AND ARRANGE AND PAY FOR NECESSARY INSPECTIONS AND APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION AND OFF–SITE DISPOSAL OF MATERIALS REQUIRED TO COMPLETE THE WORK, EXCEPT FOR WORK NOTED TO BE COMPLETED BY OTHERS.
8. STONES FROM REMOVED STONEWALLS SHALL REMAIN ON–SITE. STONES SHALL BE REPURPOSED ON–SITE AND SHALL NOT BE USED AS FILL.
9. THE LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATION IS NOT GUARANTEED BY THE OWNER OR THE ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK.
10. ALL MATERIALS SCHEDULED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIALS OFF–SITE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES, AND CODES.

SITE NOTES

1. REVIEW DOVER NOTES FOR ALL APPLICABLE NOTES.
2. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO APPLICABLE CITY AND STATE CODES.
3. ALL CONSTRUCTION LAYOUT SHALL BE DONE BY A LICENSED SURVEYOR UNDER CONTRACT WITH THE CONTRACTOR.
4. SEE DETAILS FOR SIGN LEGENDS.
5. ALL PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", THE "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS", AND THE AMERICAN WITH DISABILITIES ACT, LATEST EDITIONS.
6. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE CONSTRUCTION PROCEDURES AND SEQUENCE TO ENSURE THE SAFETY OF THE FACILITIES AND THEIR COMPONENTS DURING DEMOLITION AND CONSTRUCTION UNLESS OTHERWISE DIRECTED BY THE OWNERS REPRESENTATIVE. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIE–DOWNS. SUCH MATERIALS SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AT THE COMPLETION OF THE PROJECT.
7. METHODS OF DEMOLITION, CONSTRUCTION AND ERECTION ARE THE CONTRACTOR'S RESPONSIBILITY UNLESS OTHERWISE SPECIFIED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE AND MAINTAIN ENVIRONMENTAL CONTROLS AS REQUIRED BY FEDERAL, STATE AND MUNICIPAL REGULATIONS AND PERMITS. ENVIRONMENTAL CONTROLS SHALL INCLUDE BUT SHALL NOT BE LIMITED TO DUST CONTROL AND SILT BARRIERS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE TO STRUCTURES OR UTILITIES OR INJURIES TO THE PUBLIC DURING THE CONSTRUCTION PHASE CAUSED BY HIMSELF, HIS EMPLOYEES, HIS SUBCONTRACTORS OR EMPLOYEES OF SAME. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL TEMPORARY FACILITIES FOR THE PROTECTION OF THE WORK, WORKERS AND PUBLIC SAFETY.
9. THE SITE SHALL BE MAINTAINED TO PROVIDE ACCESSIBILITY IN ALL WEATHER CONDITIONS.
10. REFUSE PICKUP WILL BE BY PRIVATE CONTRACTOR AND WILL BE VIA DUMPSTER ON–SITE.
11. SNOW STORAGE WILL BE ACCORDING TO THE OPERATION AND MAINTENANCE PLAN AND WITHIN AREAS AS INDICATED. ON–SITE SNOW STORAGE SHALL OCCUR ALONG THE EDGES OF PROPOSED PAVEMENT.
12. ALL EXTERIOR DOORS ARE MANUAL AND OPENED FROM THE INTERIOR BY PANIC HARDWARE. ALL EXTERIOR DOORS SHALL COMPLY WITH ADA AND ALL LOCAL BUILDING CODE REQUIREMENTS.
13. ANY DEED RELATED ITEMS TO THE TRANSFER OF THE PROPERTY WILL BE REVIEWED BY THE CITY ATTORNEY WHILE STILL OWNED BY DIBDA.

GRADING NOTES:

1. REVIEW DOVER NOTES FOR ALL APPLICABLE NOTES.
2. CONTRACTOR SHALL RETAIN A GEOTECHNICAL ENGINEERING CONSULTANT APPROVED BY THE OWNER, TO CONDUCT COMPACTION TESTING AND FILL GRADATION MONITORING.
3. SEE EROSION CONTROL NOTES & DETAIL SHEET FOR TEMPORARY AND PERMANENT EROSION CONTROL MEASURES.
4. ALL DRAINAGE PIPES SHALL BE HDPE OR APPROVED EQUAL UNLESS OTHERWISE NOTED.
5. ALL DISTURBED AREAS NOT OTHERWISE CALLED FOR SURFACE TREATMENT SHALL RECEIVE 6" OF HIGH QUALITY LOAM AND SHALL BE SEEDED WITH GRASS.
6. ALL SITEWORK CONSTRUCTION SHALL BE ADVANCED USING "BEST MANAGEMENT PRACTICES" SANCTIONED BY THE USDA, SCS AND NHDES.
7. TEMPORARY CONSTRUCTION ENTRANCE SHALL BE INSTALLED, UTILIZED AND MAINTAINED UNTIL BASE MATERIALS ARE CONSTRUCTED.
8. CONTRACTOR SHALL PROVIDE A FINISH GRADED SURFACE FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCE AND UNDER RAISED STRUCTURES.
9. PROVIDE INLET PROTECTION BARRIERS AROUND ALL EXISTING AND PROPOSED STORM DRAINAGE INLETS WITHIN THE WORK LIMITS AND AS SHOWN ON PLAN. MAINTAIN FOR THE DURATION OF THE PROJECT UNTIL PAVEMENT HAS BEEN INSTALLED AND UPSTREAM AREAS HAVE BEEN STABILIZED.
10. INSPECT SILT BARRIERS AFTER EACH RAIN STORM OF 1/4 INCH OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE EFFICIENCY OF THE FILTER. REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 THE STRUCTURE HEIGHT.
11. A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IS REQUIRED FOR THIS PROJECT. THE SWPPP MUST INCLUDE THE APPROPRIATE BEST MANAGEMENT PRACTICES (BMP'S) TO MINIMIZE THE DISCHARGE OF POLLUTANTS FROM THE SITE. PARTIES RESPONSIBLE FOR DEVELOPING THE SWPPP SHOULD REFER TO THE EPA NPDES CONSTRUCTION GENERAL PERMITS NOTICE OF INTENT FOR A COMPLETE OUTLINE OF REQUIRED ELEMENTS. THESE PLANS AND THE STORMWATER MANAGEMENT SYSTEM INSPECTION & MAINTENANCE PLAN PREPARED FOR THIS PROJECT MAY BE UTILIZED IN FULFILLING THE REQUIREMENTS.
12. LIMIT TREE CLEARING TO ONLY THE EXTENT NECESSARY FOR CONSTRUCTION.
13. CONTRACTOR SHALL NOTIFY THE CITY OF DOVER AND THE DESIGN ENGINEER 48 HOURS PRIOR TO THE INSTALLATION OF PERMANENT STORMWATER BMP'S TO PROVIDE THE CITY AND THE ENGINEER THE OPPORTUNITY TO WITNESS THE CONSTRUCTION AND MATERIALS. THE DESIGN ENGINEER MUST CERTIFY THAT THE STORMWATER MANAGEMENT SYSTEM HAS BEEN INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS.
14. DENSITY REQUIREMENTS:

LOCATION	MINIMUM DENSITY
BELOW PAVED OR CONCRETE AREAS	95%
TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL	95%
BELOW LOAM AND SEED AREA	90%

*ALL PERCENTAGES SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH AASHTO STANDARD 180, METHOD C. FIELD DENSITY TESTS SHALL BE MADE IN ACCORDANCE WITH AASHTO STANDARD T–191, T–204, OR T–238 AND T–239.

PROJECT VARIANCE / PERMIT SUMMARY:

1. THE FOLLOWING FEDERAL AND STATE PERMITS HAVE BEEN ISSUED FOR THE SUBJECT PROPERTY:

   NHDES ALTERATION OF TERRAIN: PENDING

   NHDES WETLANDS: PENDING

2. LIST ANY VARIANCES OR SPECIAL EXCEPTIONS GRANTED BY THE ZONING BOARD OF ADJUSTMENT OR CONDITIONAL USE PERMITS GRANTED BY THE PLANNING BOARD FOR THE PROPOSED USE OR STRUCTURE, INCLUDING THE CASE NUMBER AND DATE OF DECISION AND ANY CONDITIONS.

   SITE PLAN: SITE–2024–0002 – PENDING

   CONDITIONAL USE PERMIT: P24–XX

   WAVERS REQUESTED: 153–15–C(2) – PENDING

UTILITY NOTES

1. REVIEW DOVER NOTES FOR ALL APPLICABLE NOTES.
2. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATIONS ARE NOT GUARANTEED BY THE OWNER OR ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES, AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK AT NO ADDITIONAL COST TO THE OWNER.
3. SEE EXISTING CONDITIONS PLAN FOR BENCHMARK INFORMATION.
4. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.
5. SEE GRADING, DRAINAGE & EROSION CONTROL PLAN FOR PROPOSED GRADING AND EROSION CONTROL MEASURES.
6. ALL WATER MAIN INSTALLATIONS SHALL BE CLASS 52, DOUBLE CEMENT LINED DUCTILE IRON PIPE OR TYPE "K" COPPER, OR CITY APPROVED MATERIAL.
7. ALL WATER MAIN INSTALLATIONS SHALL BE PRESSURE TESTED AND CHLORINATED AFTER CONSTRUCTION PRIOR TO ACTIVATING THE SYSTEM. CONTRACTOR SHALL COORDINATE CHLORINATION AND TESTING WITH THE CITY OF DOVER WATER DEPARTMENT.
8. ALL GRAVITY SEWER PIPE SHALL BE PVC SDR 35 UNLESS OTHERWISE NOTED AND CONFORM TO THE REQUIREMENTS OF THE CITY OF DOVER SEWER DEPARTMENT STANDARDS.
9. EXISTING UTILITIES TO BE REMOVED SHALL BE CAPPED AT THE MAIN AND MEET THE CITY OF DOVER COMMUNITY SERVICES DEPARTMENT STANDARDS FOR CAPPING OF WATER AND SEWER SERVICES.
10. ALL ELECTRICAL MATERIAL WORKMANSHIP SHALL CONFORM TO THE NATIONAL ELECTRIC CODE, LATEST EDITION, AND ALL APPLICABLE STATE AND LOCAL CODES.
11. THE EXACT LOCATION OF NEW UTILITY SERVICES AND CONNECTIONS SHALL BE COORDINATED WITH THE BUILDING DRAWINGS AND THE UTILITY COMPANIES.
12. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
13. THE CONTRACTOR SHALL OBTAIN, PAY FOR, AND COMPLY WITH ALL REQUIRED PERMITS, ARRANGE FOR ALL INSPECTIONS, AND SUBMIT COPIES OF ACCEPTANCE CERTIFICATES TO THE OWNER PRIOR TO THE COMPLETION OF THIS PROJECT.
14. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANHOLES, BOXES, FITTINGS, CONNECTORS, COVER PLATES, AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL.
15. CONTRACTOR SHALL PROVIDE EXCAVATION, BEDDING, BACKFILL AND COMPACTION FOR NATURAL GAS SERVICES. COORDINATE WITH GAS COMPANY.
16. A 10–FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN ALL WATER AND SANITARY SEWER LINES. AN 18–INCH MINIMUM OUTSIDE TO OUTSIDE VERTICAL SEPARATION SHALL BE PROVIDED AT ALL WATER/SANITARY SEWER CROSSINGS.
17. THE CONTRACTOR SHALL CONTACT "DIG–SAFE" 72 HOURS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL HAVE THE "DIG–SAFE" NUMBER ON SITE AT ALL TIMES.
18. SAWCUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN.
19. GATE VALVES, FITTINGS, ETC. SHALL MEET THE REQUIREMENTS OF THE CITY OF DOVER.
20. COORDINATE TESTING OF SEWER CONSTRUCTION WITH THE CITY OF DOVER.
21. CONTRACTOR SHALL COORDINATE ALL ELECTRIC WORK INCLUDING BUT NOT LIMITED TO: CONDUIT CONSTRUCTION, MANHOLE CONSTRUCTION, UTILITY POLE CONSTRUCTION, OVERHEAD WIRE RELOCATION, AND TRANSFORMER CONSTRUCTION WITH POWER COMPANY.
22. CONTRACTOR SHALL PHASE UTILITY CONSTRUCTION, PARTICULARLY WATER MAIN AND GAS MAIN CONSTRUCTION AS TO MAINTAIN CONTINUOUS SERVICE TO ABUTTING PROPERTIES. CONTRACTOR SHALL COORDINATE TEMPORARY SERVICES TO ABUTTERS WITH THE UTILITY COMPANY AND AFFECTED ABUTTER.
23. SITE LIGHTING SPECIFICATIONS, CONDUIT LAYOUT AND CIRCUITRY FOR PROPOSED SITE LIGHTING AND SIGN ILLUMINATION SHALL BE PREPARED BY THE PROJECT ELECTRICAL ENGINEER.
24. THE PROPOSED STRUCTURE SHALL COMPLY WITH CHAPTER 81, ARTICLE IV, SECTION 81–27 AND THE STATE BUILDING CODES OF THE CODE OF THE CITY OF DOVER.
25. FIRE SUPPRESSION PLANS SHALL BE PROVIDED TO THE FIRE/INSPECTION DEPARTMENT PRIOR TO INSTALLATION.
26. COORDINATE ALL UTILITY WORK WITH APPROPRIATE UTILITY COMPANY.
27. SEWAGE LOADING (PER NHDES ENV–WQ 1008.03)
    BUILDING 1:
    – OFFICE = 2,864 SF x 5 GPD/100 SF = 144 GPD
    – LIGHT MANUF. (FACTORY)=25 EMPLOYEES x 10 GPD/ EMPL = 250 GPD
    – TOTAL = 394 GPD
    BUILDING 2:
    – OFFICE = 3,330 SF x 5 GPD/100 SF = 166.5 = 167 GPD
    – LIGHT MANUF. (FACTORY) = 20 EMPLOYEES x 10 GPD/EMP = 200 GPD
    – TOTAL = 367 PGD
28. PUMP CHAMBERS ARE UNCLASSIFIED.

UTILITY CONTACTS

NATURAL GAS: –
CONTACT: UNITIL CORPORATION
DAVID MACLEAN
325 WEST ROAD
PORTSMOUTH, NH 03801
TEL: (603)–294–5261
EMAIL: MACLEAND@UNITIL.COM

WATER & SEWER: –
CONTACT: CITY OF DOVER COMMUNITY SERVICES DEPARTMENT
PUBLIC WORKS & UTILITIES
KEN MAVROGEORGE, PE
271 MAST ROAD
DOVER, NH 03820
TEL: (603)–516–6450
EMAIL: K.MAVROGEORGE@DOVER.NH.GOV

ELECTRIC: –
CONTACT: EVERSOURCE
TREVER EMMONS
4 OLD DOVER ROAD
ROCHESTER, NH 03867
TEL: (603)–332–7515
EMAIL: TREVER.EMMONS@EVERSOURCE.COM

PLANNING FILE NO.: SITE–2024–0002

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CIVIL & MUNICIPAL ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

NO.	REVISION	APP'D	DATE
1	REV PER TRC COMMENTS #1	SJH	2–29–24

DATE: 1–18–24
SCALE: AS SHOWN
DRAWN BY: SRD
DESIGN BY: JFG
APPROVED BY:SJH
PROJECT NO:22075
FILE: SITE.DWG

NOTE SHEET

FUTURE AUTOMATION, INC.
127 VENTURE DRIVE
DOVER, NH 03820

FUTURE AUTOMATION
QUALITY WAY LOT
DOVER, NH 03820

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DESIGN BY: JFG
APPROVED BY:SJH
PROJECT NO: 22075
FILE: SITE.DWG

LEGEND

S.F.	SQUARE FEET
Ac.	ACRE
±	MORE OR LESS
(TYP)	TYPICAL
TBR	TO BE REMOVED
R.O.W.	RIGHT OF WAY
	EXISTING UTILITY POLE
	EXISTING WATER SHUT-OFF
	EXISTING WATER VALVE
	EXISTING GAS VALVE
	EXISTING HYDRANT
	EXISTING SEWER MANHOLE
U/G T.E.	EXISTING ELECTRIC
W	EXISTING WATER LINE
S	EXISTING SEWER LINE
D	EXISTING DRAINAGE LINE
G	EXISTING GAS LINE
	EDGE OF WET
	50' WETLAND BUFFER

PARCEL AREA
375,192 S.F.
8.61 Ac.

50' WETLAND BUFFER

PROPOSED TREELINE

PROPOSED TREELINE

PROPOSED TREELINE

PROPOSED TREELINE

50' WETLAND BUFFER

REMOVE SEWER CAP FOR PROPOSED SEWER CONNECTION AT TIME OF FORCE MAIN CONSTRUCTION

TREELINE TO BE REMOVED

ELECTRIC CABINET
5C/SC9
TBM NORTHEAST
CORNER CONCRETE
ELEVATION = 170.75'

SMH
RIM = 170.48
INV. IN = 161.28
INV. OUT 161.28

SAW CUT FOR WATER SERVICE CONNECTION

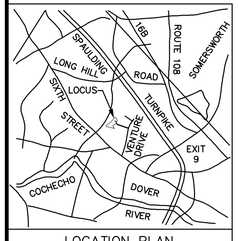
QUALITY WAY

U/G T.E.

END GAS LINE

NH STATE PLANE NAD 83 GPS OBS.

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)



LOCATION PLAN
(NO SCALE)

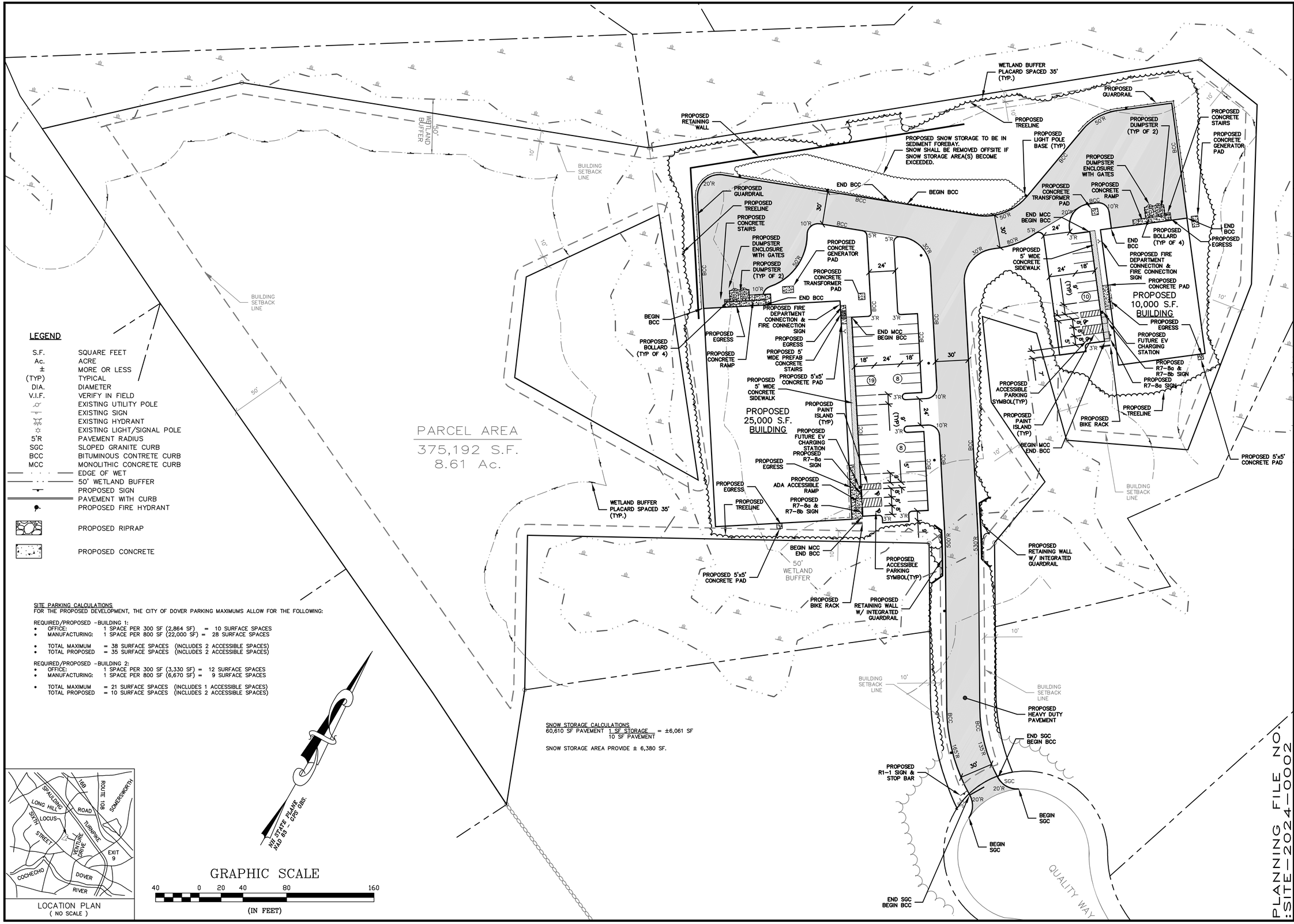
PLANNING FILE NO.
:SITE-2024-0002

DEMOLITION PLAN

FUTURE AUTOMATION, INC.
127 VENTURE DRIVE
DOVER, NH 03820

FUTURE AUTOMATION
QUALITY WAY LOT
DOVER, NH 03820

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SITE PARKING CALCULATIONS
FOR THE PROPOSED DEVELOPMENT, THE CITY OF DOVER PARKING MAXIMUMS ALLOW FOR THE FOLLOWING:

REQUIRED/PROPOSED -BUILDING 1:
- OFFICE: 1 SPACE PER 300 SF (2,864 SF) = 10 SURFACE SPACES
- MANUFACTURING: 1 SPACE PER 800 SF (22,000 SF) = 28 SURFACE SPACES
- TOTAL MAXIMUM = 38 SURFACE SPACES (INCLUDES 2 ACCESSIBLE SPACES)
- TOTAL PROPOSED = 35 SURFACE SPACES (INCLUDES 2 ACCESSIBLE SPACES)

REQUIRED/PROPOSED -BUILDING 2:
- OFFICE: 1 SPACE PER 300 SF (3,330 SF) = 12 SURFACE SPACES
- MANUFACTURING: 1 SPACE PER 800 SF (6,670 SF) = 9 SURFACE SPACES
- TOTAL MAXIMUM = 21 SURFACE SPACES (INCLUDES 1 ACCESSIBLE SPACES)
- TOTAL PROPOSED = 10 SURFACE SPACES (INCLUDES 2 ACCESSIBLE SPACES)

SNOW STORAGE CALCULATIONS
60,610 SF PAVEMENT 1 SF STORAGE = ±6,061 SF
10 SF PAVEMENT

SNOW STORAGE AREA PROVIDE ± 6,380 SF.

LOCATION PLAN
(NO SCALE)

NH STATE PLANE MAD 83 CRDS DBS.

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)

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CIVIL & WATERSHED ENGINEERING
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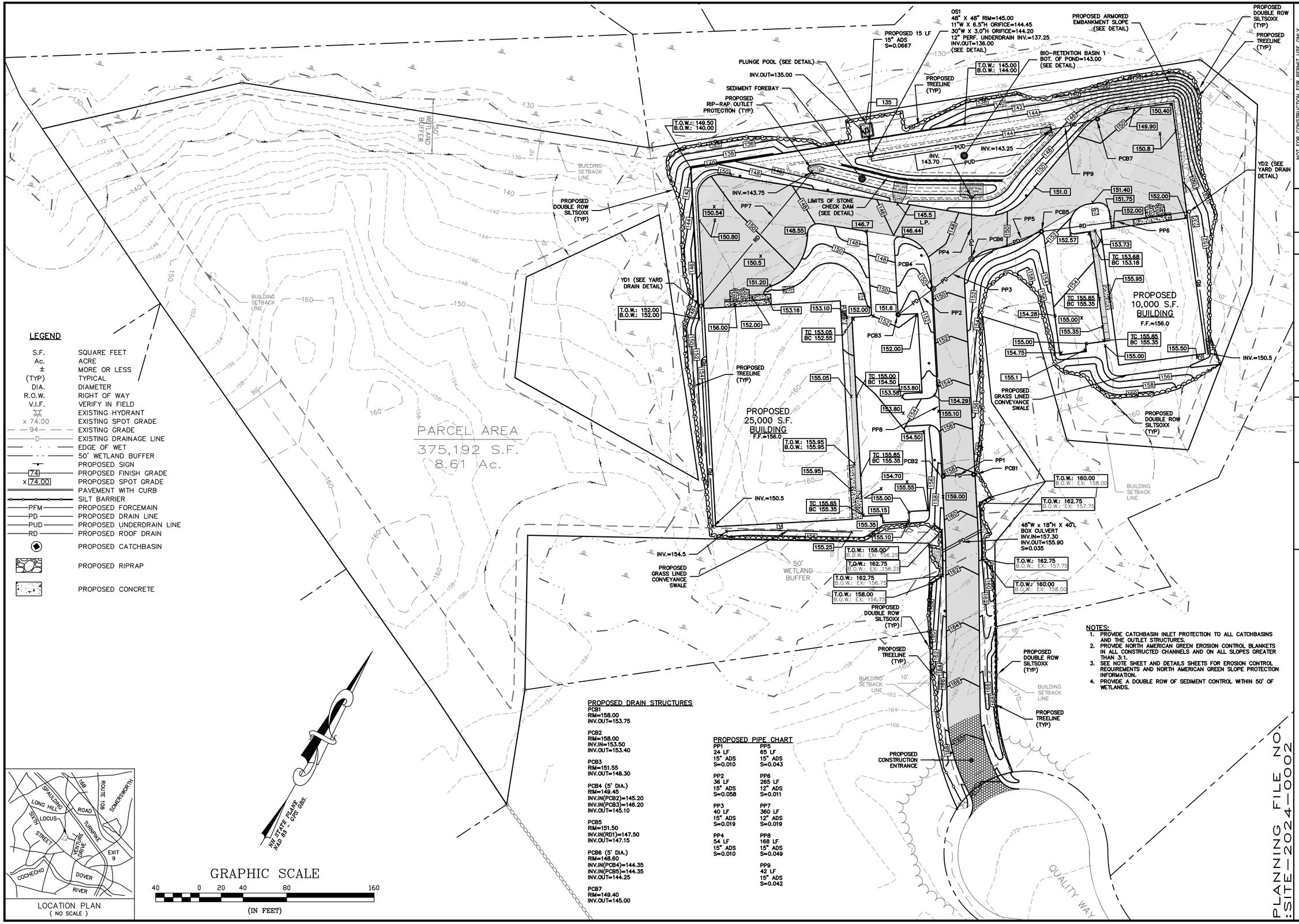
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SITE PLAN

FUTURE AUTOMATION, INC.
127 VENTURE DRIVE
DOVER, NH 03820

FUTURE AUTOMATION
QUALITY WAY LOT
DOVER, NH 03820

6



LEGEND

S.F.	SQUARE FEET
Ac.	ACRE
±	MORE OR LESS
(TYP)	TYPICAL
DIA.	DIAMETER
R.O.W.	RIGHT OF WAY
V.I.F.	VERIFY IN FIELD
	EXISTING HYDRANT
x 74.00	EXISTING SPOT GRADE
94	EXISTING GRADE
D	EXISTING DRAINAGE LINE
	EDGE OF WET
	50' WETLAND BUFFER
	PROPOSED SIGN
74	PROPOSED FINISH GRADE
x 74.00	PROPOSED SPOT GRADE
	PAVEMENT WITH CURB
	SILT BARRIER
PFM	PROPOSED FORCEMAIN
PD	PROPOSED DRAIN LINE
PUD	PROPOSED UNDERDRAIN LINE
RD	PROPOSED ROOF DRAIN
	PROPOSED CATCHBASIN
	PROPOSED RIPRAP
	PROPOSED CONCRETE

LOCATION PLAN
(NO SCALE)

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)

PROPOSED DRAIN STRUCTURES

PCB1
RIM=158.00
INV.OUT=153.75

PCB2
RIM=158.00
INV.IN=153.50
INV.OUT=153.40

PCB3
RIM=151.55
INV.OUT=148.30

PCB4 (5' DIA.)
RIM=149.45
INV.IN(PCB2)=145.20
INV.IN(PCB3)=146.20
INV.OUT=145.10

PCB5
RIM=151.50
INV.IN(RD1)=147.50
INV.OUT=147.15

PCB6 (5' DIA.)
RIM=148.60
INV.IN(PCB4)=144.35
INV.IN(PCB5)=144.35
INV.OUT=144.25

PCB7
RIM=149.40
INV.OUT=145.00

PROPOSED PIPE CHART

PP1	24 LF	15" ADS	S=0.010
PP2	36 LF	15" ADS	S=0.058
PP3	40 LF	15" ADS	S=0.019
PP4	54 LF	15" ADS	S=0.010
PP5	65 LF	15" ADS	S=0.043
PP6	265 LF	12" ADS	S=0.011
PP7	360 LF	12" ADS	S=0.019
PP8	168 LF	15" ADS	S=0.049
PP9	42 LF	15" ADS	S=0.042

NOTES:

1. PROVIDE CATCHBASIN INLET PROTECTION TO ALL CATCHBASINS AND THE OUTLET STRUCTURES.
2. PROVIDE NORTH AMERICAN GREEN EROSION CONTROL BLANKETS IN ALL CONSTRUCTED CHANNELS AND ON ALL SLOPES GREATER THAN 3:1.
3. SEE NOTE SHEET AND DETAILS SHEETS FOR EROSION CONTROL REQUIREMENTS AND NORTH AMERICAN GREEN SLOPE PROTECTION INFORMATION.
4. PROVIDE A DOUBLE ROW OF SEDIMENT CONTROL WITHIN 50' OF WETLANDS.

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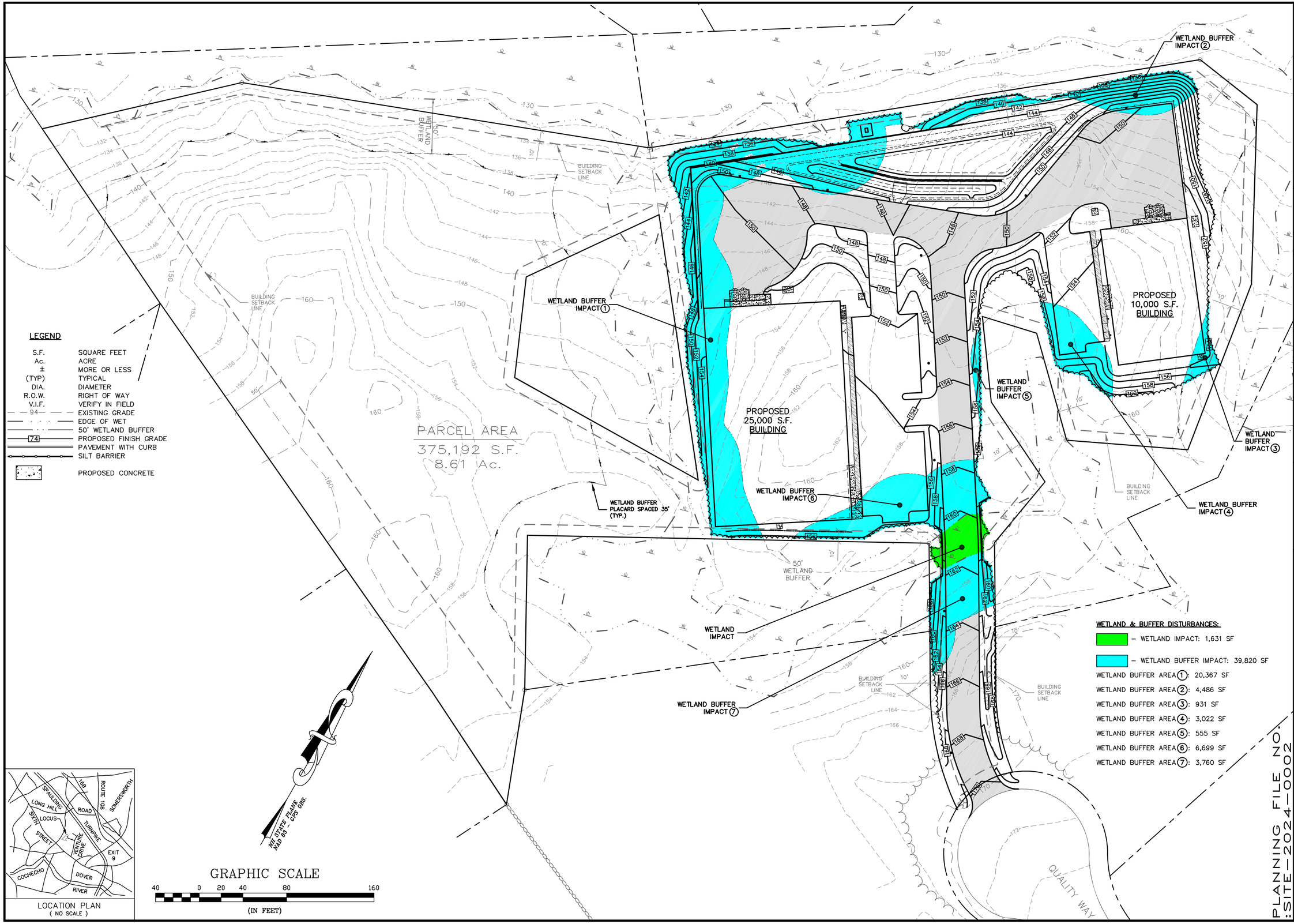
PLANNING FILE NO.
:SITE-2024-0002

GRADING, DRAINAGE & EROSION CONTROL PLAN

FUTURE AUTOMATION, INC.
127 VENTURE DRIVE
DOVER, NH 03820

FUTURE AUTOMATION
QUALITY WAY LOT
DOVER, NH 03820

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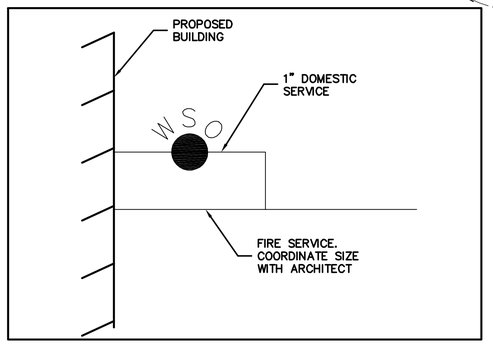
PLANNING FILE NO.
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WETLAND / WETLAND BUFFER IMPACT PLAN

FUTURE AUTOMATION, INC.
127 VENTURE DRIVE
DOVER, NH 03820

FUTURE AUTOMATION
QUALITY WAY LOT
DOVER, NH 03820

8



TYPICAL FIRE AND DOMESTIC WATER SERVICE CONNECTION DETAIL

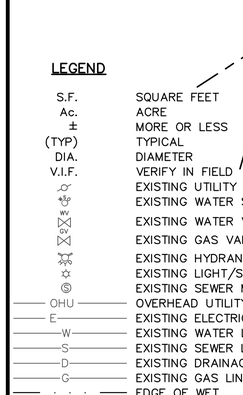
SCALE: NOT TO SCALE

PARCEL AREA
375,192 S.F.
8.61 Ac.

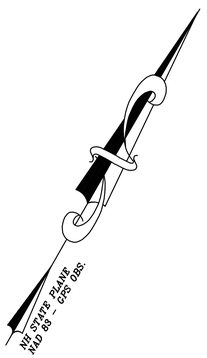
50' WETLAND BUFFER

LEGEND

S.F.	SQUARE FEET
Ac.	ACRE
±	MORE OR LESS
(TYP)	TYPICAL
DIA.	DIAMETER
V.I.F.	VERIFY IN FIELD
	EXISTING UTILITY POLE
	EXISTING WATER SHUT-OFF
	EXISTING WATER VALVE
	EXISTING GAS VALVE
	EXISTING HYDRANT
	EXISTING LIGHT/SIGNAL POLE
	EXISTING SEWER MANHOLE
OHU	OVERHEAD UTILITY
E	EXISTING ELECTRIC
W	EXISTING WATER LINE
S	EXISTING SEWER LINE
D	EXISTING DRAINAGE LINE
G	EXISTING GAS LINE
	EDGE OF WET
	50' WETLAND BUFFER
	PAVEMENT WITH CURB
	SILT BARRIER
PG	PROPOSED GAS
PW	PROPOSED WATER
PE	PROPOSED ELECTRIC
RD	PROPOSED ROOF DRAIN
PS	PROPOSED SEWER
PFM	PROPOSED FORCEMAIN
PD	PROPOSED DRAIN LINE
PUD	PROPOSED UNDERDRAIN LINE
PFES	PROPOSED FLARED END SECTION
	PROPOSED CATCHBASIN
	PROPOSED THRUST BLOCK
	PROPOSED WATER SHUTOFF
	PROPOSED FIRE HYDRANT
	PROPOSED UTILITY POLE
	PROPOSED RIPRAP
	PROPOSED CONCRETE



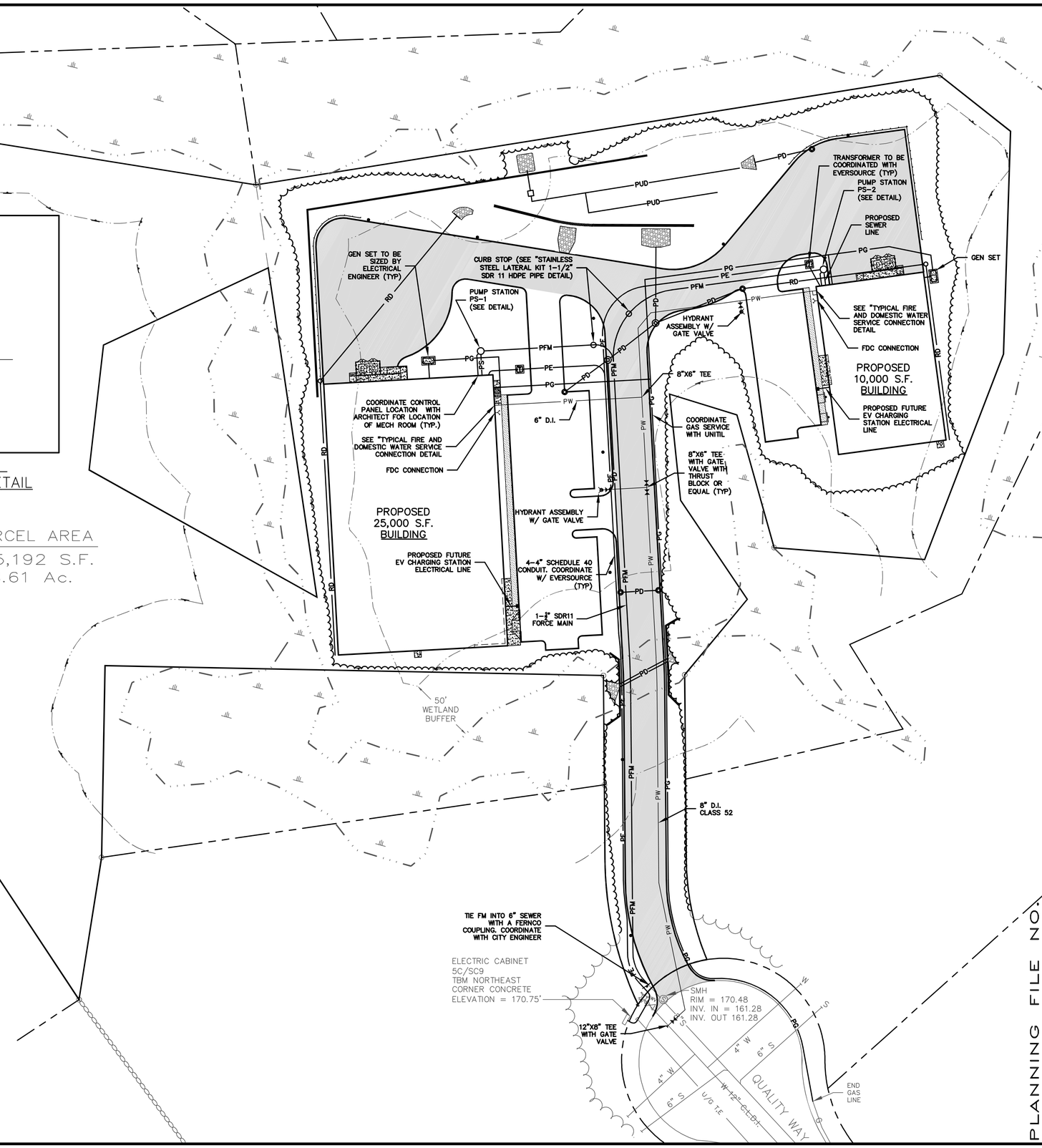
LOCATION PLAN
(NO SCALE)



GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)



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UTILITY PLAN

FUTURE AUTOMATION, INC.
127 VENTURE DRIVE
DOVER, NH 03820

FUTURE AUTOMATION
QUALITY WAY LOT
DOVER, NH 03820

9

DESCRIPTION
1. THE INTENT OF THIS PLAN IS TO SHOW SITE IMPROVEMENTS ASSOCIATED WITH THE CONSTRUCTION OF A 25,000 S.F. BUILDING AND A 10,000 S.F. BUILDING AS WELL AS DRAINAGE AND UTILITY IMPROVEMENTS, AND SITE ACCESS.

PROJECT NAME AND LOCATION
FUTURE AUTOMATION
TAX MAP D, LOT 11–8 *LATITUDE N43° 13' 26"*
QUALITY WAY *LONGITUDE W70° 54' 46"*
DOVER, NH

DISTURBED AREA
±164,238 S.F..

NOTES:
1. THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, BUT IN NO CASE SHALL EXCEED 5 ACRES AT ANY TIME BEFORE DISTURBED AREAS ARE STABILIZED.
2. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.

SEQUENCE OF MAJOR ACTIVITIES
1. CONTRACTOR SHALL PREPARE THE SWPPP. FILE FOR AND OBTAIN THE NOI A MINIMUM OF 2 WEEKS PRIOR TO COMMENCEMENT OF SITE WORK.
2. PLACE TEMPORARY EROSION AND SEDIMENT CONTROL BMP'S PRIOR TO EARTH MOVING ACTIVITIES.
3. ALL EROSION CONTROL AND PERIMETER CONTROLS SHALL BE INSTALLED PRIOR TO COMMENCING EARTH MOVING OPERATIONS.
4. SELECTIVE DEMOLITION.
5. REGRADE SITE TO SUBGRADE.
6. TEMPORARY WATER DIVERSION (SWALES, BASINS) MUST BE USED AS NECCESSARY UNTIL AREAS ARE STABILIZED.
7. SWALES AND PONDS (AS APPLICABLE) SHALL BE CONSTRUCTED EARLY ON IN THE CONSTRUCTION SEQUENCE AND BEFORE ROUGH GRADING OF THE SITE AND ALL DITCHES AND SWALES SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
8. INSTALL DRAINAGE STRUCTURES AND CONTROLS.
9. INSTALL FOUNDATION FOOTINGS AND WALLS.
10. INSTALL UTILITIES.
11. PLACE GRAVELS AND FINE GRADE.
12. STABILIZE ROADWAYS AND PARKING AREAS WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
13. ALL CUT AND FILL SLOPES SHALL BE LOAMED AND SEEDED (AS APPLICABLE) WITHIN 72 HOURS OF ACHIEVING FINISH GRADE.
14. ALL EROSION CONTROL MEASURES SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EVERY 1/2" OF RAINFALL.
15. IN ALL CASES THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION AND IN NO CASE SHALL EXCEED 5 ACRES AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
16. WHEN ALL SITE WORK IS COMPLETE AND ALL DISTURBED AREAS ARE STABILIZED REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND FILE THE EPA – N.O.T.

DEFINITIONS
AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED.
1. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED
2. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED
3. A MINIMUM OF 3" OF NON–EROSIVE MATERIAL SUCH AS STONE OR RIP–RAP HAS BEEN INSTALLED; OR
4. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED

INSTALLATION, MAINTENANCE, AND INSPECTION PROCEDURES OF EROSION AND SEDIMENT CONTROLS

A. SILT BARRIER
1. INSTALLATION
   a. USE SILT BARRIER AS PERIMETER CONTROLS, PARTICULARLY AT THE LOWER OR DOWN SLOPE EDGE OF A DISTURBED AREA.
   b. LEAVE SPACE FOR MAINTENANCE BETWEEN TOE AND SLOPE OF SILT BARRIER.
   c. TRENCH IN THE SILT BARRIER ON THE UPHILL SIDE (6 INCHES DEEP BY 6 INCHES WIDE).
   d. INSTALL STAKES ON THE DOWNHILL SIDE OF THE SILT BARRIER.
   e. CURVE THE END OF THE SILT BARRIER UP–GRADIENT TO HELP IT CONTAIN RUNOFF.
2. SEQUENCE OF INSTALLATION
   a. SEDIMENT BARRIERS SHALL BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM.
3. MAINTENANCE
   a. SILT BARRIERS SHOULD BE INSPECTED AND MAINTAINED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
   b. SILT BARRIERS HAVE A USEFUL LIFE OF ONE SEASON. ON LONGER CONSTRUCTION PROJECTS, SILT BARRIERS SHOULD BE REPLACED PERIODICALLY TO MAINTAIN EFFECTIVENESS.
   c. REMOVE SEDIMENT WHEN IT REACHES ONE–THIRD (1/3) THE HEIGHT OF THE SILT BARRIER.
   d. REPLACE THE SILT BARRIERS WHERE THEY ARE TORN, WORN, OR OTHERWISED DAMAGED AND MONITOR PERFORMANCE TO ENSURE EFFECTIVE PERFORMANCE.
   e. RETRENCH OR REPLACE ANY SILT BARRIER THAT IS NOT PROPERLY ANCHORED TO THE GROUND.
   f. 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.
   g. SILT BARRIERS SHOULD 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, SILT BARRIERS SHOULD BE REPLACED WITH A TEMPORARY CHECK DAM.

B. MULCHING
1. TIMING
   a. APPLY MULCH PRIOR TO ANY STORM EVENT. IT WILL BE NECESSARY TO CLOSELY MONITOR WEATHER PREDICTIONS TO HAVE ADEQUATE WARNING OF SIGNIFICANT STORMS.
   b. IN OTHER AREAS, THE TIME PERIOD CAN RANGE FROM 14 TO 30 DAYS OF INACTIVITY ON A AREA. THE LENGTH OF TIME VARYING WITH SITE CONDITIONS. PROFESSIONAL JUDGEMENT SHALL BE USED TO EVALUATE THE INTERACTION OF SITE CONDITIONS (SOIL ERODIBILITY, SEASON OF YEAR, EXTENT OF DISTURBANCE, PROXIMITY TO SENSITIVE RESOURCES, ETC.) AND THE POTENTIAL IMPACT OF EROSION ON ADJACENT AREAS TO CHOOSE AN APPROPRIATE TIME RESTRICTION.
   c. WITHIN 100 FEET OF RIVERS, STREAMS, WETLANDS, AND IN LAKE AND POND WATERSHEDS, THE TIME PERIOD OF WHICH MULCHING SHOULD TAKE OCCUR SHOULD BE NO GREATER THAN SEVEN (7) DAYS. THIS SEVEN DAY LIMIT SHOULD BE REDUCED FURTHER DURING WET WEATHER PERIODS.
2. APPLICATION RATE
   a. MULCH SHALL BE APPLIED AT A RATE OF BETWEEN 1.5 TO 2 TONS PER ACRE, OR 70 TO 90 POUNDS PER 1000 SQUARE FEET.
   b. GUIDELINES FOR WINTER MULCH APPLICATION. WHEN MULCH IS APPLIED TO PROVIDE PROTECTION OVER WINTER (PAST THE GROWING SEASON) IT SHALL BE AT A RATE OF 150–200 POUNDS OF HAY OR STRAW PER ACRE WITH ABOUT 4 INCHES IN DEPTH. A TACKIFIER MAY BE ADDED TO THE MULCH.
3. MAINTENANCE
   a. ALL MULCHES MUST BE INSPECTED PERIODICALLY, IN PARTICULAR AFTER RAINSTORMS. CHECK FOR SIGNS OF EROSION OR DISPLACEMENT OF THE MULCH. IF LESS THAN 90% OF THE SOIL SURFACE IS COVERED BY MULCH, ADDITIONAL MULCH SHALL BE IMMEDIATELY APPLIED.
   b. NETS MUST BE INSPECTED AFTER RAIN EVENTS FOR DISLOCATION OR FAILURE AND SHOULD BE REPAIRED AS NECCESSARY.
   c. INSPECTIONS SHOULD TAKE PLACE UNTIL THE SITE IS ESTABLISHED.
   d. EROSION CONTROL MIX MULCH USED FOR TEMPORARY STABILIZATION SHOULD BE LEFT IN PLACE. VEGETATION ADDS STABILITY AND SHOULD BE PROMOTED.

C. TEMPORARY SEEDING
1. SEEDBED PREPARATION
   a. STONES AND TRASH SHOULD BE REMOVED SO AS NOT TO INTERFERE WITH THE SEEDING AREA.
   b. WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED.
   c. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS.
      i) APPLY FERTILIZER AT A RATE OF 600 POUNDS PER ACRE OR 13.8 POUNDS PER 1,000 SQUARE FEET OF LOW PHOSPHATE FERTILIZER OR EQUIVALENT.
      ii) APPLY LIMESTONE AT A RATE OF 3 TONS PER ACRE OR 138 POUNDS PER 1,000 SQUARE FEET.
2. SEEDING
   a. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDROSEEDER (SUMMARY INCLUDING SEED AND FERTILIZER) WITH A SEEDING DEPTH FROM A QUARTER (1/4) TO A HALF (1/2) INCH.
   b. SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING.
   c. TEMPORARY SEEDING BETWEEN MAY 15TH AND AUGUST 15TH SHOULD BE COVERED WITH HAY OR STRAW MULCH, ACCORDING TO THE "TEMPORARY AND PERMANENT MULCHING" PRACTICE.
   d. VEGETATED GROWTH COVERING 85% OF THE DISTURBED AREA SHOULD BE ACHIEVED PRIOR TO OCTOBER 15TH.
3. MAINTENANCE
   a. TEMPORARY SEEDING SHALL BE INSPECTED PERIODICALLY. AT A MINIMUM, 85% OF THE SOIL SURFACE SHOULD BE COVERED BY VEGETATION. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND OTHER TEMPORARY MEASURES USED IN THE INTERIM (MULCH, FILTER FABRICS, CHECK DAMS, ETC.).

D. PERMANENT SEEDING
1. BEDDING – STONES LARGER THAN 2 INCHES, TRASH, ROOTS, AND OTHER DEBRIS INTERFERRING WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA SHOULD BE REMOVED. WHERE FEASIBLE, THE SOIL SHOULD BE TILLED TO A DEPTH OF 4" TO PREPARE A SEEDBED AND MIX FERTILIZER INTO THE SOIL.
2. FERTILIZER
   a. LIME AND FERTILIZER SHOULD BE WORKED INTO THE SOIL TO A DEPTH OF 4 INCHES USING A DISC, SPRING TOOTH HARROW, OR OTHER SUITABLE EQUIPMENT PRIOR TO OR AT THE SAME TIME OF SEEDING.
   b. FERTILIZER SHOULD BE RESTRICTED TO A LOW PHOSPHATE, SLOW RELEASE NITORGEN FERTILIZER WHEN APPLIED TO AREAS BETWEEN 25 FEET AND 250 FEET FROM A SURFACE WATER BODY. NO FERTILIZER EXCEPT LIMESTONE SHOULD BE APPLIED WITHIN 25 FEET OF THE SURFACE WATER.
   c. KINDS AND AMOUNTS OF LIME AND FERTILIZER SHOULD BE BASED ON AN EVALUATION OF SOIL TESTS. WHEN A SOIL TEST IS NOT AVAILABLE, THE FOLLOWING MINIMUM AMOUNTS SHOULD BE APPLIED:
   AGRICULTURAL LIMESTONE @ 138 LBS. PER 1,000 S.F.
   LOW PHOSPHATE (N–P205–K20) FERTILIZER @ 13.8 LBS. PER 1,000 S.F.
3. SEED MIXTURE (RECOMMENDED)
   RATE:

TYPE	LBS. PER ACRE	LBS. PER 1,000 S.F.
TALL FESCUE	20	0.45
CREEPING RED FESCUE	20	0.45
BIRDSFOOT TREFOIL	8	0.20
TOTAL	48	1.10

4. SEEDING
   a. SPRING SEEDING USUALLY GIVES THE BEST RESULTS FOR ALL SEED MIXES OR WITH LEGUMES. PERMANENT SEEDING SHOULD BE COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST.
   b. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER) WITH A SEEDING DEPTH FROM A QUARTER (1/4) TO A HALF (1/2) INCH.
   c. VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED SHOULD BE ACHIEVED PRIOR TO OCTOBER 15TH. IF THIS CONDITION IS NOT ACHIEVED, IMPLEMENT TEMPORARY STABILIZATION MEASURES FOR OVERWINTER PROTECTION.
5. HYDROSEEDING
   a. LIME AND FERTILIZER MAY BE APPLIED SIMULTANEOUSLY WITH THE SEED. THE USE OF STRAW MULCH ON CRITICAL AREAS IS PREFERRED SINCE IT GRANTS BETTER SLOPE PROTECTION BY USING ADHESIVE MATERIALS.
   b. SLOPES MUST BE NO STEEPER THAN 2 TO 1 (2 FEET HORIZONTALLY TO 1 FOOT VERTICALLY).
   c. SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING.
6. MAINTENANCE
   a. PERMANENT SEEDED AREAS SHOULD BE INSPECTED AT LEAST MONTHLY DURING THE COURSE OF CONSTRUCTION. INSPECTIONS, MAINTENANCE, AND CORRECTIVE ACTIONS SHOULD CONTINUE UNTIL THE OWNER ASSUMES PERMANENT OPERATION OF THE SITE.
   b. SEEDED AREAS SHOULD BE MOWED AS REQUIRED TO MAINTAIN A HEALTHY STAND OF VEGETATION, WITH MOWING HEIGHT AND FREQUENCY DEPENDENT ON TYPE OF GRASS COVER.
   c. BASED ON INSPECTION, AREAS SHOULD BE RESEEDED TO ACHIEVE FULL STABALIZATION OF EXPOSED SOILS.
   d. IF EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHOULD BE MADE AND AREAS RESEEDED. WITH OTHER TEMPORARY MEASURES USED TO PROVIDE EROSION PROTECTION DURING THE PERIOD OF VEGETATION ESTABLISHMENT.
   e. AT A MINIMUM, 85% OF THE SOIL SURFACE SHOULD BE COVERED BY VEGETATION.

E. STORM DRAIN INLET PROTECTION
1. SPECIFICATIONS
   a. THE MAXIMUM CONTRIBUTING DRAINAGE AREA TO THE BARRIER SHOULD BE LESS THAN ONE ACRE.
   b. ANY RESULTANT PONDING OF STORMWATER MUST NOT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT AREAS OR STRUCTURES.
2. INSTALLATION
   a. INSTALL INLET PROTECTION AS SOON AS STORM DRAIN INLETS ARE INSTALLED AND BEFORE LAND–DISTURBANCE ACTIVITIES BEGIN IN AREAS WITH EXISTING STORM DRAIN SYSTEMS.
   b. PROTECT ALL INLETS THAT COULD RECEIVE STORMWATER FROM YOUR CONSTRUCTION PROJECT.
   c. USE IN CONJUNCTION WITH OTHER EROSION PREVENTION AND SEDIMENT CONTROL BMPS.
   d. DESIGN YOUR INLET PROTECTION TO HANDLE THE VOLUME OF WATER FROM THE AREA BEING DRAINED. ENSURE THAT THE DESIGN IS SIZED APPROPRIATELY.
3. MAINTENANCE
   a. INSPECT INLETS BARRIERS FREQUENTLY, BEFORE AND AFTER EACH RAINFALL EVENT AND REPAIR WHEN NECESSARY.
   b. SEDIMENT SHOULD BE REMOVED AND THE STORM DRAIN SEDIMENT BARRIER RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE BARRIER.
   c. REMOVED SEDIMENT SHOULD BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
   d. SWEEP STREETS, SIDEWALKS, AND OTHER PAVED AREAS REGULARLY.
   e. ALL CATCH BASINS AND STORM DRAIN INLETS MUST BE CLEANED AT THE END OF CONSTRUCTION AND AFTER THE SITE HAS BEEN FULLY STABILIZED

TIMING OF CONTROLS/MEASURES
AS INDICATED IN THE SEQUENCE OF MAJOR ACTIVITIES THE SILT BARRIERS SHALL BE INSTALLED PRIOR TO COMMENCING ANY CLEARING OR GRADING OF THE SITE. STRUCTURAL CONTROLS SHALL BE INSTALLED CONCURRENTLY WITH THE APPLICABLE ACTIVITY. AREAS WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR MORE THAN TWENTY ONE (21) DAYS WILL BE STABILIZED WITH A TEMPORARY SEED AND MULCH WITHIN FOURTEEN (14) DAYS OF THE LAST DISTURBANCE. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN AREA, SILT FENCES AND ANY EARTH/DIKES WILL BE REMOVED ONCE PERMANENT MEASURES ARE ESTABLISHED. ALL AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISH GRADE.

WASTE DISPOSAL
a. WASTE MATERIALS
ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE DEPOSITED IN A DUMPSTER. NO CONSTRUCTION WASTE MATERIALS WILL BE BURIED ON SITE. ALL PERSONEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL BY THE SUPERINTENDENT.
b. HAZARDOUS WASTE
ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES BY THE SUPERINTENDENT.
c. SANITARY WASTE
ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

MAINTENACE OF STORMWATER MANAGEMENT FACILITIES
THE PROJECT PROPONENT IS RESPONSIBLE FOR THE MAINTENANCE OF ALL STORMWATER FACILITIES DURING CONSTRUCTION AND THE PROPERTY OWNER IS RESPONSIBLE AFTER CONSTRUCTION IS COMPLETE.

CATCH BASINS & STORMWATER TREATMENT STRUCTURES
1. CATCH BASINS & STORMWATER TREATMENT STRUCTURES SHOULD BE INSPECTED ON A MONTHLY BASIS AND/OR AFTER A MAJOR RAINFALL EVENT TO ASSURE THAT DEBRIS OR SEDIMENTS DO NOT REDUCE THE EFFECTIVENESS OF THE SYSTEM.

SPIL PREVENTION

A. MATERIAL MANAGEMENT PRACTICES
THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RICK OF SPILLS OR OTHER ACCIDENTAL SANITARY EXPOSURE OF MATERIALS AND SUBSTANCE DURING CONSTRUCTION TO STORMWATER RUNOFF:
GOOD HOUSEKEEPING:
THE FOLLOWING GOOD HOUSEKEEPING PRACTICES THAT WILL BE FOLLOWED ON SITE DURING
1. THE CONSTRUCTION PROJECT:
   a. AN EFFORT WILL BE MADE TO STORE ONLY SUFFICIENT AMOUNTS OF PRODUCTS TO DO THE JOB.
   b. ALL MATERIALS STORED ON SITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR PROPER (ORIGINAL IF POSSIBLE) CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE.
   c. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED.
   d. THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS.
   e. SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.
   f. WHENEVER POSSIBLE ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER.
2. HAZARDOUS PRODUCTS:
   a. THE FOLLOWING PRACTICES WILL BE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS:
   b. PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE.
   c. ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED FOR IMPORTANT PRODUCT INFORMATION.
   d. SURPLUS PRODUCT THAT MUST BE DISPOSED OF WILL BE DISCARDED ACCORDING TO THE MANUFACTURER'S RECOMMENDED METHODS OF DISPOSAL.

B. PRODUCT SPECIFICATION PRACTICES
THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ON SITE:
1. PETROLEUM PRODUCTS:
   a. ALL ON SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTATIVE MAINTENACE TO REDUCE LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT BASED SUBSTANCES USED ON SITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
2. FERTILIZERS:
   a. FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS DIRECTED BY THE SPECIFICATIONS. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORMWATER. STORAGE WILL BE IN A COVERED SHED OR ENCLOSED TRAILERS. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.
3. PAINTS:
   a. ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM BUT WILL BE DISPOSED OF PROPERLY ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.
4. CONCRETE TRUCKS:
   a. CONCRETE TRUCKS WILL DISCHARGE AND WASH OUT SURPLUS CONCRETE OR DRUM WASH WATER IN A CONTAINED AREA ON SITE.

C. SPILL CONTROL PRACTICES
IN ADDITION TO GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTION THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:
   a. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.
   b. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ON SITE. EQUIPMENT AND MATERIALS WILL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST, AND PLASTIC OR METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.
   c. ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.
   d. THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
   e. SPILLS OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OF LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE.
   f. THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM RECURRING AND HOW TO CLEANUP THE SPILL IF IT OCCURS. A DESCRIPTION OF THE SPILL, ITS CAUSE, AND THE CLEANUP MEASURES WILL BE INCLUDED.
   g. THE SITE SUPERINTENDENT RESPONSIBLE FOR DAY–TO–DAY SITE OPERATIONS WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR.

THE PROJECT PROPONENT IS REQUIRED TO MANAGE CONSTRUCTION TO MEET THE REQUIREMENTS AND INTENT OF RSA 430:53 AND AGR 3800 RELATIVE TO CONTROLLING INVASIVE SPECIES AND CONTROLLING FUGITIVE DUST IN ACCORDANCE WITH ENV–A 1002.

AGR 3800 PROHIBITED INVASIVE PLANT SPECIES RULES

THE RULE, AGR 3800, STATES: NO PERSON SHALL COLLECT, TRANSPORT, IMPORT, EXPORT, MOVE, BUY SELL, DISTRIBUTE, PROPAGATE OR TRANSPLANT ANY LIVING AND VIABLE PORTION OF ANY PLANT SPECIES, WHICH INCLUDED ALL OF THEIR CULTIVARS AND VARIETIES, LISTED IN TABLE 3800.1, NEW HAMPSHIRE PROHIBITED INVASIVE SPECIES LIST'. A COMPLETE COPY OF THE RULES CAN BE ACCESSED ON THE INTERNET AT
HTTP://AGRICULTURE.NH.GOV/TOPICS/PLANTS_INSECTS.HTM.

ENV–A 1002 FUGITIVE DUST: PRECAUTIONS TO PREVENT, ABATE, AND CONTROL FUGITIVE DUST.

a. ANY PERSON ENGAGED IN ANY ACTIVITY WITHIN THE STATE EMITS FUGITIVE DUST, OTHER THAT THOSE LISTED IN ENV–A 1002.02 (b), SHALL TAKE PRECAUTIONS THROUGHOUT THE DURATION OF THE ACTIVITY IN ORDER TO PREVENT, ABATE, AND CONTROL THE EMISSION OF FUGITIVE DUST.
b. PRECAUTIONS REQUIRED BY (a) ABOVE, SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:
   i) THE USE OF WATER OR HYDROPHILIC MATERIAL ON OPERATIONS OR SURFACES, OR BOTH;
   ii) THE APPLICATION OF ASPHALT, WATER, OR HYDROPHILIC MATERIAL, OR TARPS OR OTHER SUCH COVERS TO MATERIAL STOCKPILES;
   iii) THE USE OF HOODS, FANS, FABRIC FILTERS, OR OTHER DEVICES TO ENCLOSE AND VENT AREAS WHERE MATERIALS PRONE TO PRODUCING FUGITIVE DUST ARE HANDLED;
   iv) THE USE OF CONTAINMENT METHODS FOR SANDBLASTING OR SIMILAR OPERATIONS; AND
   v) THE USE OF VACUUMS OR OTHER SUCTION DEVICES TO COLLECT AIRBORNE PARTICULATE MATTER.

PER 153–10 F.
ALL SITE IMPROVEMENTS WHICH REQUIRE BLASTING OF LAND SHALL MEET THE FOLLOWING REQUIREMENTS PRIOR TO ANY BLASTING OCCURING.

1. THE APPLICANT SHALL PREPARE A PRE–BLAST SURVEY OF ALL STRUCTURES WITHIN FIVE HUNDRED (500) FEET OF THE EXTERNAL BOUNDARIES OF THE PROPOSED LOT TO BE DEVELOPED. THIS SURVEY, ALONG WITH A MONITORING PLAN, SHALL BE ON FILE WITH THE DOVER FIRE AND RESCUE. UPON RECOMMENDATIONS OF THE CHIEF, THE PLANNING BOARD MAY REQUIRE A PRE–BLAST SURVEY OF ALL STRUCTURES WITHIN ONE THOUSAND (1000) FEET.
2. THE APPLICANT SHALL HOLD A NEIGHBORHOOD MEETING TO REVIEW THE BLASTING PLAN AND PRE–BLAST SURVEY, WITH REPRESENTATIVES OF THE FIRE AND RESCUE AND THE BLASTING COMPANY IN ATTENDANCE, PRIOR TO ANY ON–SITE BLASTING. ABUTTERS WITHIN ONE THOUSAND (1000) FEET OF THE EXTERNAL BOUNDARY OF THE PROJECT PARCEL SHALL BE NOTIFIED BY THE CERTIFIED MAIL (PAID FOR BY THE APPLICANT) OF THE MEETING NO LESS THAN TEN (10) DAYS PRIOR TO THE MEETING AND NO MORE THAN FIFTEEN (15) DAYS PRIOR TO THE MEETING. THE NOTICE SHALL STATE THE TIME AND DATE OF THE BLASTING AND CONTAIN A MAP SHOWING THE BLASTING AREA, THE 1,000–FOOT–RADIUS AREA, AND THE 500–FOOT–RADIUS AREA.
3. PERMIT HOLDERS SHALL BE IN COMPLIANCE WITH NFPA 495, EXPLOSIVE MATERIALS CODE, IN ADDITION TO ALL OTHER ORDINANCES AND CODES SET FORTH IN THE CITY OF DOVER CODE, § 153–14A, STORMWATER MANAGEMENT, EROSION CONTROL AND FLOOD HAZARDS, OF THIS CHAPTER AND THE CITY OF DOVER FIRE PREVENTION CODE, WHICH SPECIFICALLY PROHIBITS THE OVERNIGHT STORAGE OF EXPLOSIVES OR BLASTING AGENTS. FURTHER, ALL STORAGE MAGAZINES SHALL BE LOCKED IN THE OPEN POSITION AT THE END OF THE DAYS OPERATION FOR EASY INSPECTION BY CITY OFFICIALS.
4. BLASTING PERMITS MAY BE OBTAINED BY CALLING THE DOVER FIRE AND RESCUE DURING NORMAL BUSINESS HOURS. THE PERMITS ARE ONLY ACTIVE FOR THE DATES AND TIME SPECIFIED ON THE PERMIT.
5. PERMIT HOLDERS SHALL HOLD INSURANCE AGAINST CLAIMS FOR DAMAGES FOR PERSONAL INJURY AND PROPERTY WHICH MAY ARISE FROM THE PERFORMANCE OF THE WORK.
6. HOURS OF OPERATION FOR THE BLASTING SHALL BE NO EARLIER THAN 8:00AM AND NO LATER THAN 6:00PM, MONDAY THROUGH FRIDAY, EXCLUDING FEDERAL HOLIDAYS.

WINTER CONSTRUCTION NOTES
1. ALL PROPOSED POST–DEVELOPMENT VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE PLACEMENT OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT.
2. ALL DITCHES & SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH SHALL BE STABILIZED WITH STONE OR EROSION CONTROL BLANKETS.
3. AFTER OCTOBER 15TH, INCOMPLETE ROAD AND PARKING SURFACES SHALL BE PROTECTED WITH A MINIMUM OF 3–INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3, OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT.

ENV–WQ 1510: BEST MANAGEMENT PRACTICES FOR BLASTING
1) ALL ACTIVITIES ASSOCIATED WITH BLASTING NEED TO BE OPTIMIZED TO PREVENT THE RELEASE OF CHEMICALS ASSOCIATED WITH BLASTING ACTIVITIES TO THE ENVIRONMENT.
2) IF MORE THAN 5,000 CY OF ROCK REMOVAL IS REQUIRED DRINKING WATER WELLS MUST BE IDENTIFIED AND LOCATED WITHIN 2000 FEET OF THE PROPOSED BLASTING ACTIVITIES. DEVELOP A GROUNDWATER QUALITY SAMPLING PROGRAM TO MONITOR FOR NITRATE AND NITRITE EITHER IN THE DRINKING WATER SUPPLY WELLS OR IN OTHER WELLS THAT ARE REPRESENTATIVE OF THE DRINKING WATER SUPPLY WELLS IN THE AREA. THE PLAN MUST INCLUDE PRE AND POST BLAST WATER QUALITY MONITORING AND BE APPROVED BY NHDES PRIOR TO INITIATING BLASTING. THE GROUNDWATER SAMPLING PROGRAM MUST BE IMPLEMENTED ONCE APPROVED BY NHDES.
3) THE FOLLOWING BEST MANAGEMENT PROCEDURES FOR BLASTING SHALL BE COMPLIED WITH:
   (1) LOADING PRACTICES. THE FOLLOWING BLASTHOLE LOADING PRACTICES TO MINIMIZE ENVIRONMENTAL EFFECTS SHALL BE FOLLOWED:
      (A) DRILLING LOGS SHALL BE MAINTAINED BY THE DRILLER AND COMMUNICATED DIRECTLY TO THE BLASTER. THE L

SEEKING REPORTS OF RARE TURTLES

The NH Fish & Game Department is collecting observations of four turtle species:



Blanding's turtle (state endangered)

- Large, dark/black domed shell with lighter speckles
- Distinct yellow throat/chin
- Aquatic but often moves on land



Wood turtle (special concern)

- Sculpted, pyramidal brownish shell
- Orange around neck and limbs
- River/stream turtle spending many months on land



Eastern box turtle (state endangered)

- Small terrestrial turtle with highly domed shell
- Irregular yellow or orange markings over brown/black base

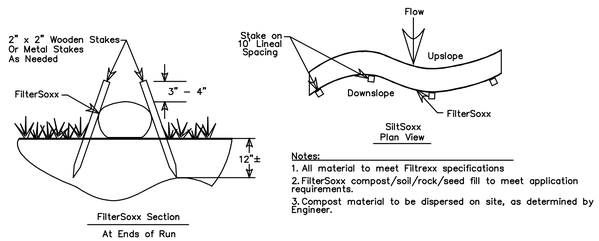


Spotted turtle (state threatened)

- Small, mostly aquatic with black or dark brown with yellow spots.
- Fairly flat shell compared to Blanding's turtle

Report sightings to RAARP@wildlife.nh.gov or 603-271-2461 *Please report promptly, noting specific location and date – Photographs strongly encouraged*

NOTES:
1. ALL OUTSIDE CONSTRUCTION PERSONNEL SHALL RECEIVE TRAINING IN THE IDENTIFICATION OF RARE TURTLE SPECIES AND MADE AWARE OF THEIR PROTECTED STATUS.
2. THE USE OF WELDED PLASTIC OR 'BIODEGRADABLE PLASTIC' NETTING OR THREAD IN EROSION CONTROL MATTING IS PROHIBITED
3. THE USE OF EROSION CONTROL BERM, WHITE FILTREXX DEGRADABLE WOVEN SILT SOCK, OR 'WILDLIFE FRIENDLY' WOVEN ORGANIC MATERIAL (E.G. COCO OR JUTE MATTING SUCH AS NORTH AMERICAN GREEN SC150BN OR EQUIVALENT) ARE ACCEPTABLE FOR USE
4. IF WOOD, SPOTTED, OR BLANDING'S TURTLES ARE FOUND LAYING EGGS IN THE WORK AREA, PLEASE CONTACT MELISSA DOPERALSKI AT 271-1738 or JOSH MEGYESY AT 271-1125 FOR FURTHER INSTRUCTIONS.



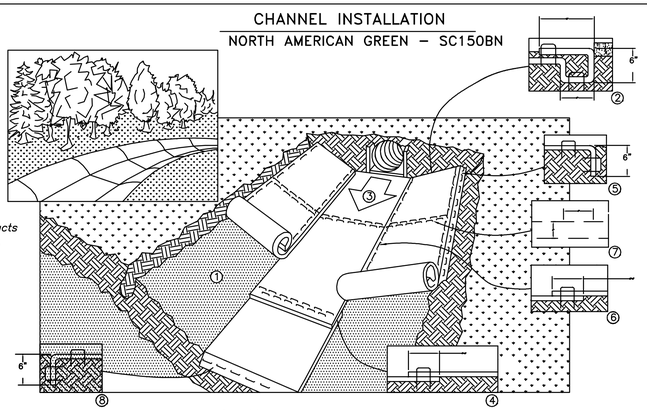
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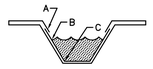
CHANNEL INSTALLATION

NORTH AMERICAN GREEN – SC150BN

NORTH AMERICAN GREEN
EROSION CONTROL *Products Guaranteed* SOLUTIONS



1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), 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.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE RECP's IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" ACROSS THE WIDTH OF THE RECP's.
3. ROLL CENTER RECP's IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'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 SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. PLACE CONSECUTIVE RECP's END OVER END (SHINGLE STYLE) WITH A 4" – 6" OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER TO SECURE RECP's.
5. FULL LENGTH EDGE OF RECP's AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT RECP's MUST BE OVERLAPPED APPROXIMATELY 2" – 5" (DEPENDING ON RECP's TYPE) AND STAPLED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE RECP's MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. NOTE: * IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP's.



CRITICAL POINTS
A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

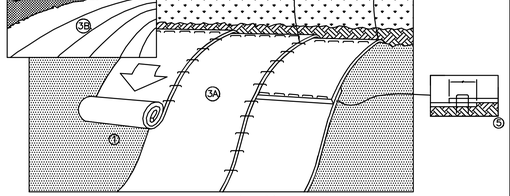
NOTE:
* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP's.

SLOPE INSTALLATION

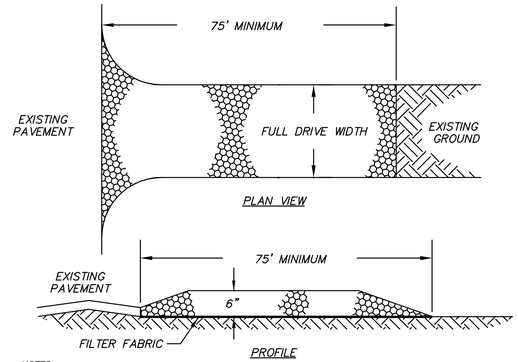
NORTH AMERICAN GREEN – SC150BN

NORTH AMERICAN GREEN
EROSION CONTROL *Products Guaranteed* SOLUTIONS



1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), 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.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'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 RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP's.
3. ROLL THE RECP's (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'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 SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2" – 5" (5 CM – 12.5 CM) OVERLAP DEPENDING ON RECP's TYPE.
5. CONSECUTIVE RECP's SPLICED 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 RECP's 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 RECP's.

NOTE: THE USE OF WELDED PLASTIC OR BIODEGRADABLE PLASTIC NETTING OR THREAD IN EROSION CONTROL MATTING IS PROHIBITED. THE USE OF WILDLIFE FRIENDLY ORGANIC MATERIALS IS RECOMMENDED.



NOTES:

1. *SEE EROSION CONTROL NOTES BELOW FOR MATERIAL, INSTALLATION AND MAINTENANCE REQUIREMENTS.*
2. *TO BE INSTALLED AT EACH POINT OF EGRESS FROM THE WORK AREA.*

STABILIZED CONSTRUCTION ENTRANCE

1. SPECIFICATIONS
   A. AGGREGATE SIZE: USE THREE (3) INCHES STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
   B. AGGREGATE THICKNESS: NOT LESS THAN SIX (6) INCHES.
   C. WIDTH TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH OF POINTS WHERE INGRESS OR EGRESS OCCURS.
   D. LENGTH: AS REQUIRED, BUT NOT LESS THAN SEVENTY-FIVE (75) FEET. PIPING OF SURFACE WATER UNDER ENTRANCE SHALL BE PROVIDED AS REQUIRED.
   E. GEOTEXTILE: TO BE PLACED OVER THE ENTIRE AREA TO BE COVERED WITH AGGREGATE.
   F. CRITERIA FOR GEOTEXTILE: THE FABRICS SHALL BE TREVIA SPUNBOND 1135, MIRAFI 600X OR EQUAL.
2. MAINTENANCE
   THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE 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.

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

CIVILWORKS NEW ENGLAND
CIVIL & WATERSHED ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

NO.	REVISION	DATE	APP'D
1	REV PER TRC COMMENTS #1	2-29-24	SJH

DATE: 1-18-24
SCALE: AS SHOWN
DRAWN BY: SRD
DESIGN BY: JFG
APPROVED BY:SJH
PROJECT NO: 22075
FILE: SITE.DWG

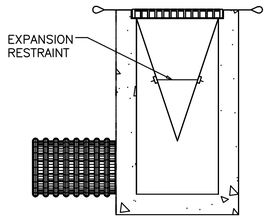
PLANNING FILE NO.: SITE-2024-0002

DETAIL SHEET

FUTURE AUTOMATION, INC.
127 VENTURE DRIVE
DOVER, NH 03820

FUTURE AUTOMATION
QUALITY WAY LOT
DOVER, NH 03820

11



INSTALLATION DETAIL

SILTSACK®
SPECIFICATIONS

NOTE: THE SILTSACK WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS. AS SUPPLIED BY AH HARRIS OF PORTSMOUTH OR APPROVED EQUAL

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-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80 %
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC -1

HI-FLOW SILTSACK®
(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

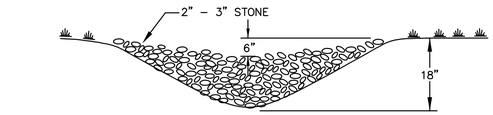
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC -1

OIL-ABSORBANT SILTSACK®
(FOR AREAS WHERE THERE IS A CONCERN FOR OIL RUN-OFF OR SPILLS)

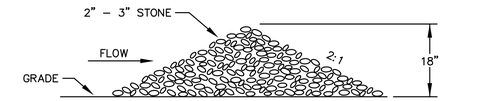
DEPENDING ON YOUR PARTICULAR APPLICATION, THE SILTSACK® CAN BE MADE FROM EITHER ONE OF THE ABOVE FABRICS WITH AN OIL-ABSORBANT PILLOW INSERT OR, MADE COMPLETELY FROM AN OIL-ABSORBANT SILTSACK®, WITH A WOVEN PILLOW INSERT.

DETAIL OF INLET SEDIMENT CONTROL DEVICE
NOT TO SCALE

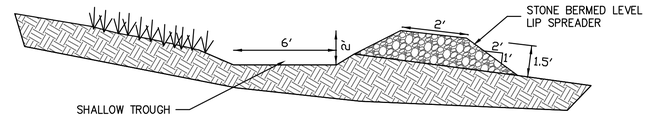
BERM STONE SIZE		
SIEVE DESIGNATION (METRIC)	SIEVE DESIGNATION (US CUSTOMARY)	PERCENT BY WEIGHT PASSING SQUARE MESH SIEVES
300 mm	12 in	100
150 mm	6 in	84-100
75 mm	3 in	68-83
25.4 mm	1 in	42-55
4.75 mm	No. 4	8-12



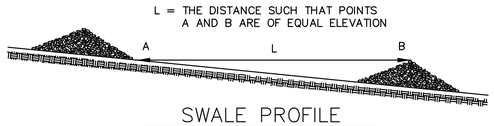
SWALE SECTION



SWALE PROFILE

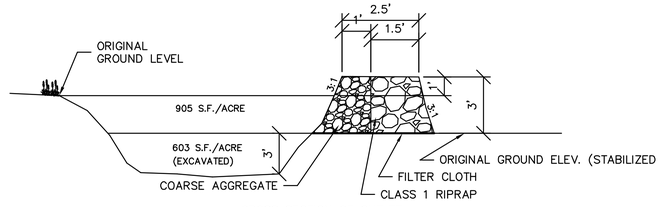


STONE BERMED LEVEL LIP SPREADER DETAIL
NOT TO SCALE

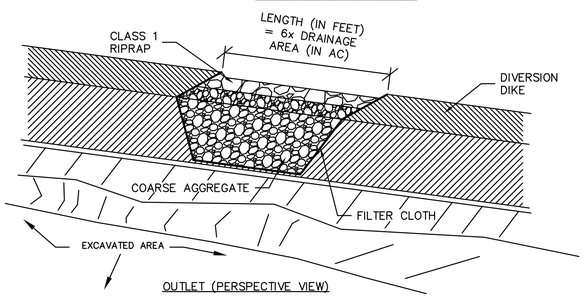


SWALE PROFILE

STONE GRADE STABILIZATION STRUCTURE DETAIL (CHECK DAMS)
NOT TO SCALE



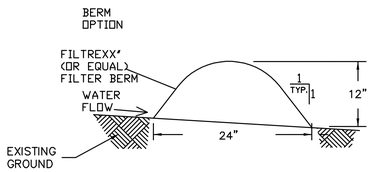
CROSS SECTION OF OUTLET



OUTLET (PERSPECTIVE VIEW)

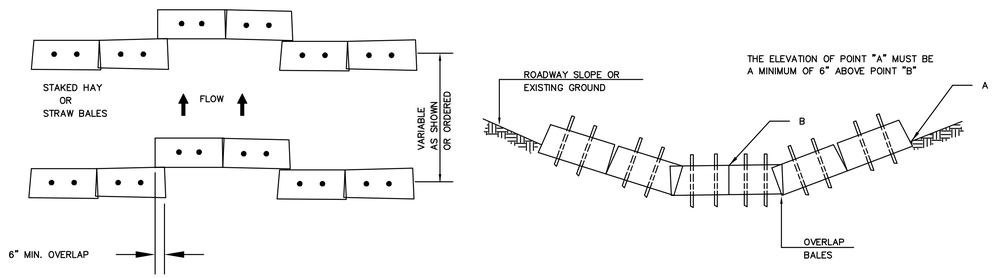
NOTES:
1. COARSE AGGREGATE SHALL MEET NHDOT 304.5 SPECIFICATIONS AND SHALL NOT CONTAIN MORE THAN 5% FINES PASSING THE #200 SIEVE.
2. FILTER CLOTH SHALL BE MIRAFI 700X OR APPROVED EQUAL.
3. CLASS I RIPRAP SHALL MEET NHDOT 583 SS SPECIFICATIONS.
4. THE MAXIMUM CONTRIBUTING AREA TO THE TRAP SHALL BE LESS THAN 5 AC.
5. THE TRAP SHALL BE CLEANED WHEN 50% OF THE ORIGINAL VOLUME IS FILLED.
6. MATERIALS REMOVED FROM THE TRAP SHALL BE PROPERLY DISPOSED OF AND STABILIZED.

TEMPORARY SEDIMENT TRAP
NOT TO SCALE



MULCH BERM DETAIL
NOT TO SCALE

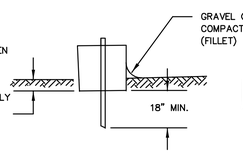
NOTES:
1. CONTRACTOR SHALL DISCUSS THE APPLICATION OF THIS PRODUCT WITH MANUFACTURE TO ENSURE PROPER PRODUCT SPECIFICATIONS.
2. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS OR EQUAL.
3. THE CONTRACTOR SHALL MAINTAIN THE COMPOST FILTER BERM IN A FUNCTIONAL CONDITION AT ALL TIMES AND IT SHALL BE ROUTINELY INSPECTED.
4. WHERE THE BERM REQUIRES REPAIR, IT WILL BE ROUTINELY REPAIRED.
5. THE CONTRACTOR SHALL REMOVE SEDIMENTS COLLECTED AT THE BASE OF THE BERM WHEN THEY REACH 1/3 OF THE EXPOSED HEIGHT OF THE BERM, OR AS DIRECTED BY THE ENGINEER.
6. THE COMPOST FILTER BERM WILL BE DISPERSED ON SITE WHEN NO LONGER REQUIRED, AS DETERMINED BY THE ENGINEER.



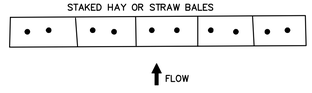
HAYBALE GRADE STABILIZATION STRUCTURE

CONSTRUCTION SPECIFICATIONS

1. BALES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4".
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY 2" x 2" STAKES OR RE-BARS DRIVEN THROUGH THE BALES. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARD PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER.
4. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
6. REMOVE AND PROPERLY DISPOSE OF ALL SEDIMENT PRIOR TO REMOVING HAYBALES.



EMBEDDING DETAIL



HAYBALE BARRIER AT TOE OF SLOPE

HAYBALE NOTES AND DETAILS
NOT TO SCALE

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

CIVILWORKS NEW ENGLAND
CIVIL & WATERSHED ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

NO.	REVISION	DATE	APP'D
1	REV PER TRC COMMENTS #1	2-29-24	SJH

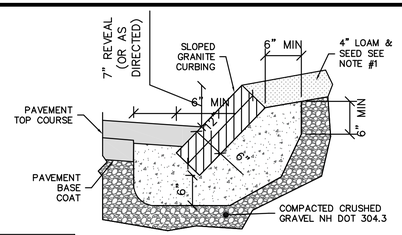
DATE: 1-18-24
SCALE: AS SHOWN
DRAWN BY: SRD
DESIGN BY: JFG
APPROVED BY:SJH
PROJECT NO:22075
FILE: SITE.DWG

PLANNING FILE NO.: SITE-2024-0002

DETAIL SHEET

FUTURE AUTOMATION, INC.
127 VENTURE DRIVE
DOVER, NH 03820

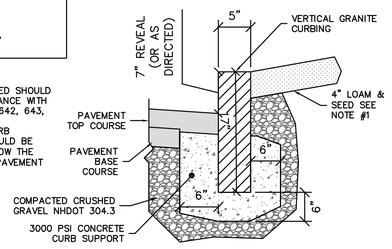
FUTURE AUTOMATION
QUALITY WAY LOT
DOVER, NH 03820



SLOPED GRANITE CURB

RADIUS	MAX LENGTH
< 21'	USE CURVED CURB
12'	3'
22' – 28'	4'
29' – 35'	5'
36' – 42'	6'
43' – 49'	7'
50' – 56'	8'
57' – 60'	9'
OVER 60'	10'

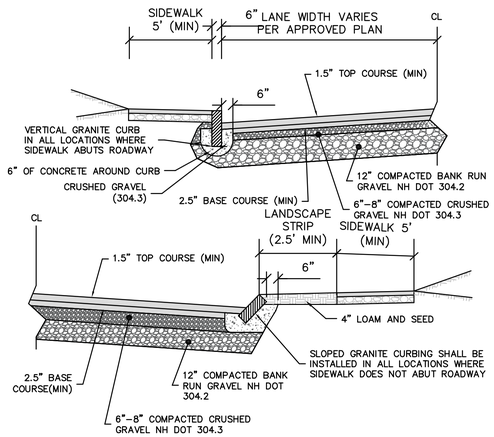
NOTES:
1. LOAM AND SEED SHOULD BE IN COMPLIANCE WITH NH DOT 641, 642, 643, 644 AND 645.
2. CONCRETE CURB SUPPORT SHOULD BE SET 1/2" BELOW THE TOP OF THE PAVEMENT BASE COURSE.



VERTICAL GRANITE CURB

CITY OF DOVER D–8 GRANITE CURB DETAIL

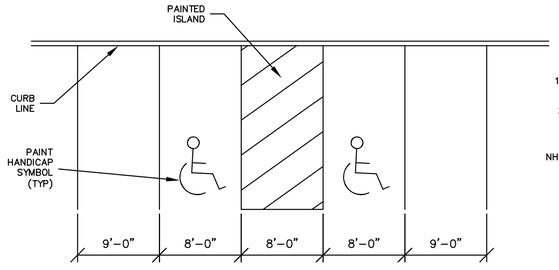
NOT TO SCALE



NOTES:
1. THIS DETAIL IS FOR GENERAL REVIEW PURPOSES ONLY, FINAL DESIGN SHALL BE BASED ON SPECIFIC SITE CONDITIONS AND APPROVED PLANS.
2. SIDEWALK LOCATION AND MATERIAL SHALL BE AS APPROVED BY THE CITY OF DOVER.

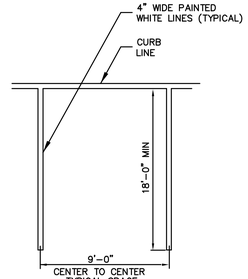
CITY OF DOVER D–5 ROADWAY CROSS SECTION DETAIL

NOT TO SCALE



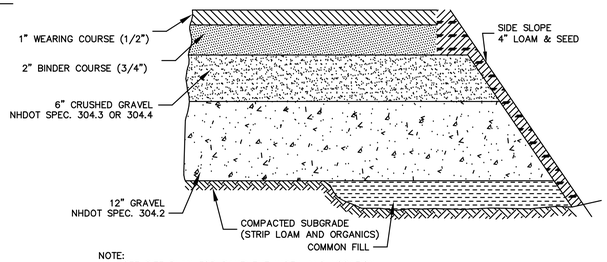
ACCESSIBLE PARKING LAYOUT

NOT TO SCALE



STANDARD PARKING STALL

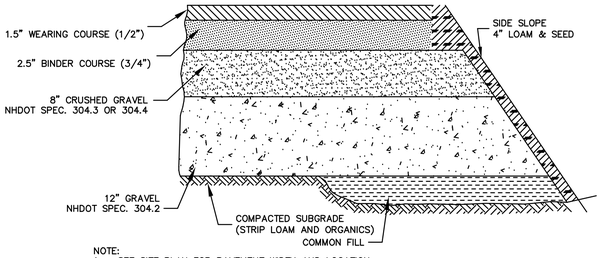
NOT TO SCALE



NOTE:
1. SEE SITE PLAN FOR PAVEMENT WIDTH AND LOCATION.
2. SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS–SLOPE.
3. GEOTEXTILE FABRIC MAYBE REQUIRED UNDER THE ROADWAY AND /OR THE PARKING AREAS AS REQUIRED BY THE ENGINEER BASED UPON SITE CONDITIONS.

TYPICAL PAVEMENT SECTION

NOT TO SCALE

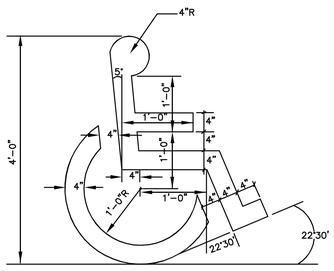


NOTE:
1. SEE SITE PLAN FOR PAVEMENT WIDTH AND LOCATION.
2. SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS–SLOPE.
3. GEOTEXTILE FABRIC MAYBE REQUIRED UNDER THE ROADWAY AND /OR THE PARKING AREAS AS REQUIRED BY THE ENGINEER BASED UPON SITE CONDITIONS.

HEAVY DUTY TYPICAL PAVEMENT SECTION

NOT TO SCALE

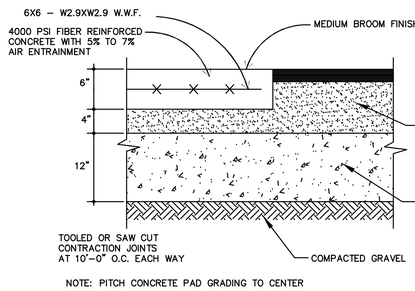
NOTE: SYMBOL TO BE PAINTED IN ALL HANDICAPPED SPACES



PAINTED

ACCESSIBLE PARKING SYMBOL

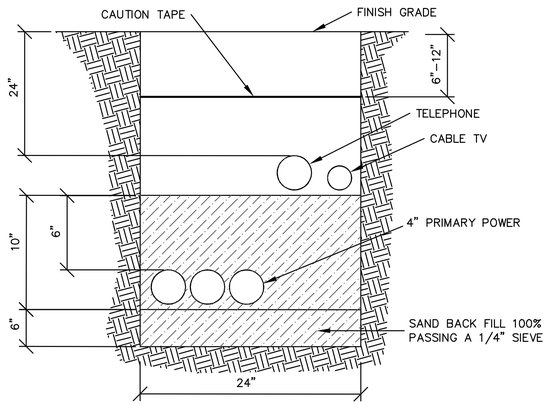
NOT TO SCALE



NOTE: PITCH CONCRETE PAD GRADING TO CENTER

DUMPSTER PAD DETAIL

NOT TO SCALE



1. TELEPHONE CONDUIT SHALL BE 3" SCHEDULE 40 PVC, WITH STEEL SWEEPS AT RISER POLE, 90° BENDS AND AT BUILDING.
2. LEAVE PULL ROPE IN ALL CONDUITS FOR CABLE INSTALLATION.
3. FOR COMPLETE SPECIFICATIONS SEE "REQUIREMENTS FOR ELECTRIC SERVICE CONNECTIONS – INFORMATIONS AND REQUIREMENTS FOR ELECTRIC SUPPLY BY EVERSOURCE ENERGY".
4. CONTRACTOR SHOULD VERIFY THE NUMBER & SIZE OF CONDUIT WITH THE APPROPRIATE UTILITIES PROVIDERS.

UTILITY TRENCH

NOT TO SCALE

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

CIVILWORKS NEW ENGLAND
CIVIL & WATERSHED ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

NO.	REVISION	APP'D	DATE
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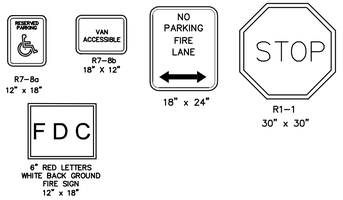
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DETAIL SHEET

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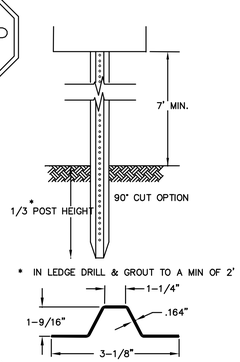


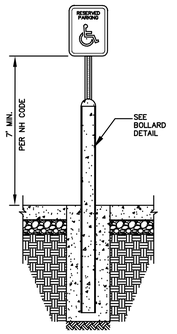
NOTE:
1. ALL SIGNS TO BE INSTALLED AS INDICATED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.

LENGTH: AS REQUIRED
WEIGHT PER LINEAR FOOT: 2.50 LBS (MIN.)
HOLES: 3/8" DIAMETER, 1" C-C FULL LENGTH
STEEL: SHALL CONFORM TO ASTM A-499 (GRADE 60) OR ASTM A-576 (GRADE 1070 - 1080)
FINISH: SHALL BE PAINTED WITH TWO COATS OF AN APPROVED MEDIUM GREEN

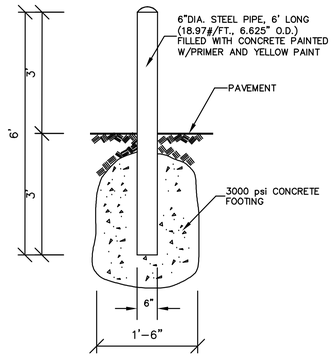
BAKED ON OR AIR DRIED, PAINT OF WEATHER RESISTANT QUALITY. ALL FABRICATION SHALL BE COMPLETE BEFORE PAINTING.

SIGN LEGEND & SIGN POST
NOT TO SCALE

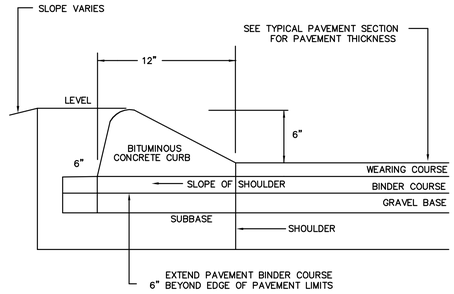




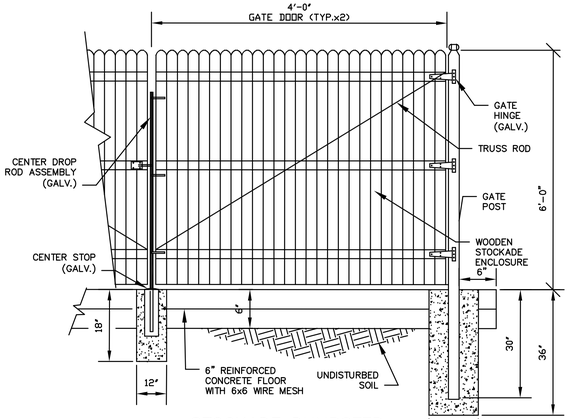
SIGN IN BOLLARD
NOT TO SCALE



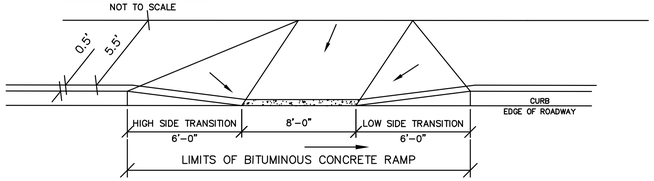
BOLLARD DETAIL
NOT TO SCALE



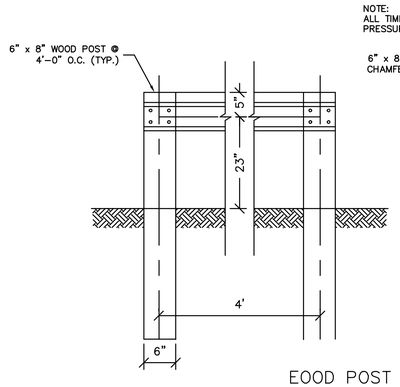
BITUMINOUS SLOPED CURB
NOT TO SCALE

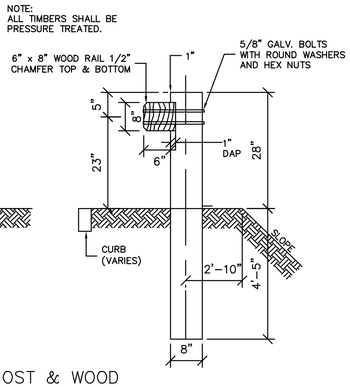


STOCKADE DUMPSTER ENCLOSURE DETAIL
NOT TO SCALE

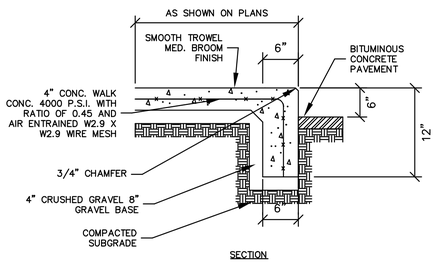


SIDEWALK APRON
NOT TO SCALE

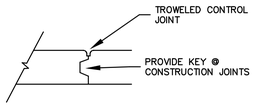




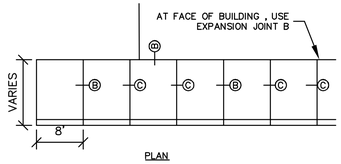
EOOD POST & WOOD BEAM GUARDRAIL DETAIL
NOT TO SCALE



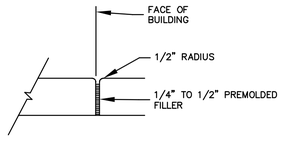
SECTION



CONSTRUCTION CONTROL JOINT C



PLAN



EXPANSION JOINT B

CONCRETE WALKWAY WITH MONOLITHIC CONCRETE CURB
NOT TO SCALE

chargepoint+

CT4000 Family

ChargePoint® Level 2 Commercial Charging Stations

The CT4000 family is the latest generation of ChargePoint commercial charging stations. Refined yet rugged, these stations set the industry standard for functionality and aesthetics.

The CT4000 full motion color LCD display instructs drivers and supports dynamic updates of custom branded videos and advertisements.

Intelligent power management options double the number of parking spaces served by allowing two charging ports to share a single circuit. Sites with single port EV stations can upgrade to dual port stations without requiring additional electrical services.

The CT4000 is the first ENERGY STAR® certified EV charger because it charges efficiently and conserves power when not charging. As an ENERGY STAR certified EV charger, the CT4000 uses significantly less energy than a standard EV charger when in standby mode to help you save money on your utility bill.

All CT4000 models offer one or two standard SAE J1772™ Level 2 charging ports with locking holsters, each port supplying up to 7.2kW. With this standard connector, ChargePoint level 2 stations can charge any EV.

Stations are available in bollard and wall mount configurations for easy installation anywhere. All stations are fully software upgradeable remotely over the air.

Stations come in both 6' and 8' tall models with 18" and 23' cords, respectively. With multiple options for size and cord reach, your station can service up to four parking spaces, reach all car models regardless of parking style or car sizes and increase the usability of your EV spots.

Driver Friendly User Interface

- Instructional video shows how to use the station
- Multi-language: English, French, Spanish
- Touch button interface; works in rain, ice and with gloves
- Backed by ChargePoint's world class 24/7 driver phone support

Easily Communicate with Your Drivers

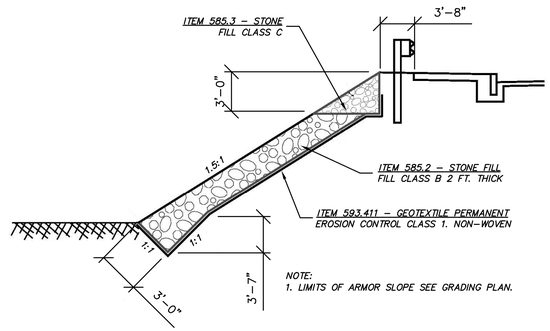
Whether you're a retail establishment wanting to advertise your latest product, a workplace looking to communicate with employees or a municipality wanting to welcome visitors, ChargePoint's prominent LCD screen makes it easy to reach EV drivers:

- Daylight readable, with auto brightness control
- 640 X 480 resolution active matrix
- Full motion 30fps video support
- Upload up to 60 seconds of high quality video on a color LCD screen to individual stations as often as desired
- Brand your charging stations to communicate with drivers
- Instructional video in English, Spanish or French

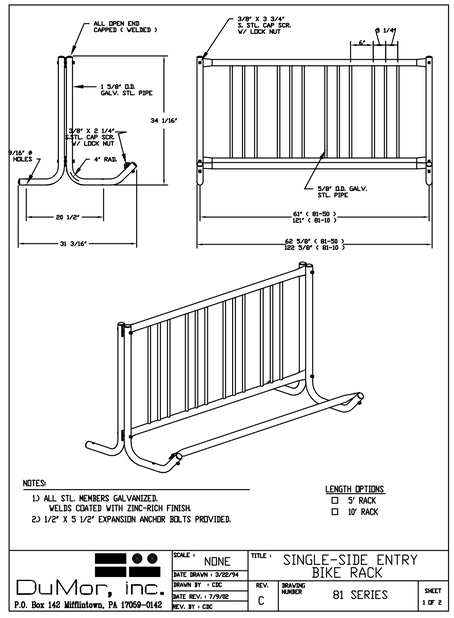


The First ENERGY STAR® Certified EV Charger

EV CHARGING STATION DETAIL
NOT TO SCALE



ARMORED EMBANKMENT SLOPE
NOT TO SCALE



DuMor, inc.
P.O. Box 142 Mifflintown, PA 17059-0142

SCALE :	NONE
DATE DRAWN :	3/22/94
DRAWN BY :	CDC
DATE REV. :	7/5/02
REV. BY :	CDC

TITLE : SINGLE-SIDE ENTRY BIKE RACK
REV. C
DRAWING NUMBER 81 SERIES
SHEET 1 OF 2

BIKE RACK DETAIL
NOT TO SCALE

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

GNE CIVILWORKS NEW ENGLAND
CIVIL & WATERSHED ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

NO.	REVISION	DATE	APP'D
1	REV PER TRC COMMENTS #1	2-29-24	SJH

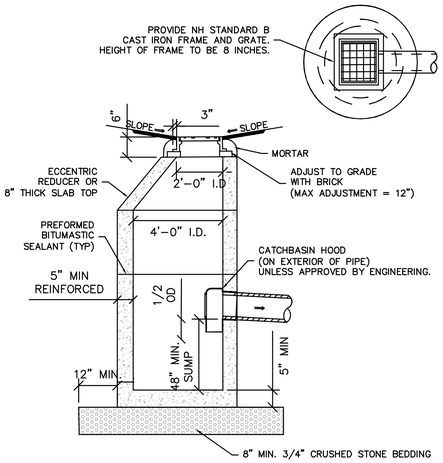
DATE: 1-18-24
SCALE: AS SHOWN
DRAWN BY: SRD
DESIGN BY: JFG
APPROVED BY:SJH
PROJECT NO: 22075
FILE: SITE.DWG

PLANNING FILE NO.: SITE-2024-0002

DETAIL SHEET

FUTURE AUTOMATION, INC.
127 VENTURE DRIVE
DOVER, NH 03820

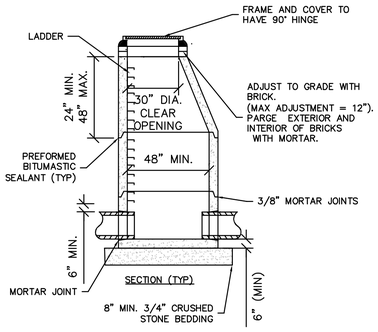
FUTURE AUTOMATION
QUALITY WAY LOT
DOVER, NH 03820



NOTES:
1. ENTIRE STRUCTURE SHALL BE H-20 LOAD RATED. PROVIDE MANUFACTURER REINFORCEMENT DETAILS TO THE CITY ENGINEER UPON REQUEST.

CITY OF DOVER D-19
CATCHBASIN DETAIL

NOT TO SCALE



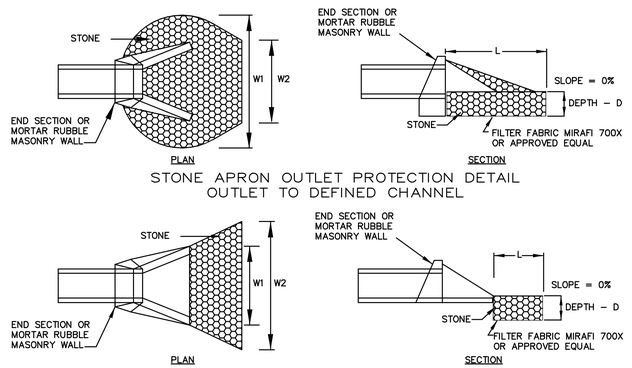
NOTES:
1. CORINGS TO BE SEPARATED BY 6" (MINIMUM) OF MONOLITHIC SECTION

CITY OF DOVER D-20
DRAIN MANHOLE DETAIL

NOT TO SCALE

SPECIFICATIONS

1. ALL CONSTRUCTION SHALL CONFORM WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION (NHDOT), "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", HEREINAFTER REFERRED TO AS THE "STANDARD SPECIFICATIONS".
2. STORM DRAINS SHALL BE ADS N12 OR APPROVED EQUAL, AND SHALL BE JOINTED WITH NEOPRENE "O" RINGS.
3. CATCH BASINS AND MANHOLES SHALL BE PRE-CAST REINFORCED CONCRETE DESIGNED BY AN ENGINEER REGISTERED IN NEW HAMPSHIRE, AND ABLE TO WITHSTAND LOADINGS OF 8 TONS (H20 LOADING).
4. MANHOLES SHALL HAVE CAST IRON FRAMES AND COVERS WITH 30" INSIDE DIAMETER OPENINGS. A 3-INCH (MINIMUM) LETTER "D" FOR DRAIN SHALL BE PLAINLY CAST INTO THE CENTER OF EACH COVER.
5. CATCH BASINS AND MANHOLES SHALL BE ADJUSTED TO GRADE WITH COURSES OF BRICK. MAXIMUM ADJUSTMENT TO GRADE SHALL BE 12 INCHES. FRAMES SHALL BE SET ON A FULL BED OF MORTAR, TRUE TO GRADE AND CONCENTRIC WITH THE MASONRY. ALL VOIDS BETWEEN THE TOP OF THE STRUCTURE AND THE BOTTOM FLANGE OF THE FRAME SHALL BE COMPLETELY FILLED TO MAKE A WATERTIGHT FIT. A RING OF MORTAR AT LEAST ONE INCH THICK AND PITCHED TO SHED WATER AWAY FROM THE FRAME, SHALL BE PLACED OVER AND AROUND THE OUTSIDE OF THE BOTTOM FLANGE. THE MORTAR SHALL EXTEND TO THE OUTER EDGE OF THE MASONRY ALL AROUND ITS CIRCUMFERENCE AND SHALL BE FINISHED SMOOTH. NO VISIBLE LEAKAGE WILL BE PERMITTED.
6. INVERT CHANNELS OF SEWER MANHOLES SHALL BE FORMED SMOOTHLY TO THE LARGEST PIPE RADIUS. CHANGES IN GRADE SHALL BE FORMED SMOOTHLY AND EVENLY. THE FLOOR OF THE STRUCTURE OUTSIDE THE CHANNELS SHALL BE SLOPED TOWARDS THE CHANNELS AT APPROXIMATELY 1/2 INCH PER FOOT. THE FLOOR AT THE CHANNEL SHALL MATCH THE CROWN OF THE LARGEST PIPE.
7. TRENCH CONSTRUCTION WILL CONFORM WITH SECTION 603.3.1 OF THE STANDARD SPECIFICATIONS (1974).
8. WOOD SHEETING OR A SUITABLE TRENCH BOX SHALL BE USED TO SUPPORT THE TRENCH AS NECESSARY. IF WOOD SHEETING IS USED, IT SHALL BE DRIVEN AT A DISTANCE OF 1 FOOT FROM THE OUTSIDE DIAMETER OF THE PIPE TO A DEPTH 6 INCHES BELOW THE INVERT OF THE PIPE. WOOD SHEETING SHALL BE CUT OFF AND LEFT IN PLACE TO AN ELEVATION NOT LESS THAN 1 FOOT ABOVE THE TOP OF THE PIPE, BUT NOT GREATER THAN 3 FEET BELOW THE FINISHED GRADE.
9. BEDDING SHALL CONFORM WITH SECTION 603.3.2 OF THE STANDARD SPECIFICATIONS (1974).
10. BACKFILL MATERIAL WILL CONFORM WITH SECTION 603.3.5 OF THE STANDARD SPECIFICATIONS (1974) AND, IN ADDITION, SHALL EXCLUDE DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOP SOIL, ALL WET OR SOFT MUCK, PEAT OR CLAY, ALL EXCAVATED LEDGE MATERIAL, FROZEN MATERIAL, ALL ROCKS OVER 6 INCHES IN LARGEST DIMENSION, OR ANY MATERIAL WHICH, AS DETERMINED BY THE ENGINEER, WILL NOT PROVIDE SUFFICIENT SUPPORT OR MAINTAIN THE COMPLETED CONSTRUCTION IN A STABLE CONDITION. BACKFILL SHALL NOT BE PLACED ON FROZEN OR PREVIOUSLY FROZEN MATERIAL.
11. ALL BACKFILL AND BEDDING COMPACTION SHALL MEET THE REQUIREMENTS OF AASHO T 99 METHOD C. DENSITY SHALL BE 95 PERCENT. COMPACTION SHALL BE 6 INCH LIFTS FOR BEDDING AND BACKFILL TO A PLANE 1 FOOT ABOVE THE PIPE AND IN 12 INCH LIFTS THEREAFTER BY AN APPROVED MECHANICAL COMPACTOR.
12. SHOULD FROZEN MATERIAL BE ENCOUNTERED, IT SHALL NOT BE PLACED IN THE BACKFILL NOR SHALL BACKFILL BE PLACED UPON FROZEN MATERIAL PREVIOUSLY FROZEN MATERIAL SHALL BE REMOVED AS REQUIRED BEFORE NEW BACKFILL IS PLACED.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO FRAMES AND GRATES DURING AND FROM THE TIME OF REMOVAL FROM THE EXISTING STRUCTURE TO AND DURING THE TIME OF RESETTING, AND SHALL REPLACE IN KIND ANY DAMAGED FRAMES OR GRATES AT NO ADDITIONAL COMPENSATION.
14. ALL TRENCHES WILL BE COVERED AND DEBRIS, INCLUDING ANY REJECTED MATERIALS, SHALL BE REMOVED DAILY. STRICT SAFETY PRECAUTIONS SHALL BE MAINTAINED AT ALL TIMES.
15. LOCATION OF UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE.
    A) THE CONTRACTOR SHALL, 48 HOURS PRIOR TO CONSTRUCTION, NOTIFY THE UTILITY COMPANIES AND HAVE ALL UTILITIES IN THE VICINITY OF THE CONSTRUCTION MARKED IN THE FIELD.
    B) AFTER THE UTILITIES HAVE BEEN LOCATED AND PRIOR TO CONSTRUCTION, THE CONTRACTOR WITH THE ENGINEER, SHALL LAYOUT THE PROPOSED DRAINAGE SYSTEM IN THE FIELD AND RECTIFY ANY UTILITY CONFLICTS WHICH MAY BE FOUND.
    C) ANY CONFLICTS WITH UTILITIES FOUND DURING CONSTRUCTION BY THE CONTRACTOR SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER AND THE UTILITY COMPANY AND PROPERLY RECTIFIED.
    D) THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF REPAIR FOR ANY UTILITIES DAMAGED DURING CONSTRUCTION. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANY TO REPAIR ANY DAMAGES, HOWEVER, THE CONTRACTOR MAY MAKE APPROPRIATE REPAIRS WITH THE UTILITY COMPANY'S PERMISSION.
16. COMPLETE SHOP DRAWINGS FOR PIPE, MANHOLES, CATCH BASINS, FRAMES, GRATES AND COVERS SHALL BE SUBMITTED IN TRIPLICATE FOR APPROVAL BY THE ENGINEER PRIOR TO THE START OF CONSTRUCTION. EACH SHOP DRAWING SHALL BE CHECKED AND INITIALIZED BY THE CONTRACTOR TO INDICATE APPROVAL BEFORE IT IS SUBMITTED TO THE ENGINEER.
17. SHOP DRAWINGS FOR FLAT CONCRETE COVERS SHALL BE STAMPED PRIOR TO SUBMISSION FOR APPROVAL BY A NEW HAMPSHIRE REGISTERED PROFESSIONAL ENGINEER.
18. BRICK MASONRY FOR SETTING FRAMES AND BRICK AND MORTAR PLUGS SHALL CONFORM TO THE STANDARD SPECIFICATION SECTION 604.2.4.



STONE APRON OUTLET PROTECTION DETAIL
OUTLET TO DEFINED CHANNEL

STONE APRON OUTLET PROTECTION DETAIL
OUTLET TO FLAT AREA, NON DEFINED CHANNEL

MAINTENANCE

THE OUTLET PROTECTION SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR STORM. IF THE RIPRAP HAS BEEN DISPLACED, UNDERMINED OR DAMAGED, IT SHOULD BE REPAIRED IMMEDIATELY. THE CHANNEL IMMEDIATELY BELOW THE OUTLET SHOULD BE CHECKED TO SEE THAT EROSION IS NOT OCCURRING. THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS, AND SEDIMENT THAT COULD CHANGE FLOW PATTERNS AND/OR TAILWATER DEPTHS ON THE PIPES. REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO THE OUTLET PROTECTION APRON.

STONE GRADATION

% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE
100	1.5 TO 2.0 D50
85	1.3 TO 1.8 D50
50	1.0 TO 1.5 D50
15	0.3 TO 0.5 D50

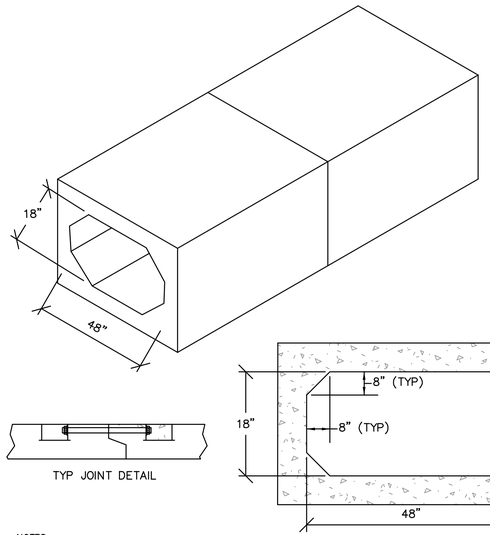
CONSTRUCTION SPECIFICATIONS

1. THE SUBGRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIPRAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
2. THE ROCK OR GRAVEL USED FOR FILTER OR RIPRAP SHALL CONFORM TO THE SPECIFIED GRADATION.
3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIPRAP. 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 JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
4. 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.

OUTLET FROM	W1(ft)	W2(ft)	L(ft)	D (ft)	D50(IN)	CHANNEL TYPE
PCB6	11	3	17	1	6	DEFINED
PCB7	11	3	12	1	6	DEFINED
RD2	9	3	13	1	6	DEFINED
BOX CULVERT (IN)	6	10	5	1	6	UNDEFINED
BOX CULVERT (OUT)	6	18	10	1	6	UNDEFINED

RIP RAP OUTLET PROTECTION

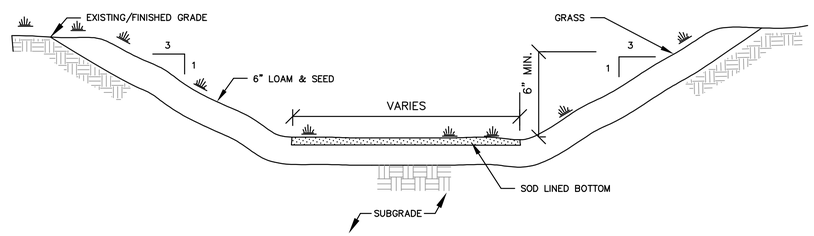
NOT TO SCALE



NOTES:
1. CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS
2. DESIGN PER ASTM C1433 BOX CULVERT
3. ALL REINFORCEMENT PER ASTM A615
4. DESIGNED DOE AASHTO HS-20 LOADING
5. SHEA CONCRETE OR APPROVED EQUAL.
6. SHOP DRAWINGS STAMPED BY A PROFESSIONAL ENGINEER WILL BE PROVIDED TO THE CITY DURING CONSTRUCTION.

BOX CULVERT

NOT TO SCALE



MAINTENANCE

TIMELY MAINTENANCE IS IMPORTANT TO KEEP THE VEGETATION IN THE SWALE IN GOOD CONDITION. MOWING SHOULD BE DONE FREQUENTLY ENOUGH TO KEEP THE VEGETATION IN VIGOROUS CONDITION AND TO CONTROL ENCROACHMENT OF WEEDS AND WOODY VEGETATION, HOWEVER IT SHOULD NOT BE MOWED TOO CLOSELY, MAINTAIN A MINIMUM 4" STAND OF VEGETATION. FERTILIZE ON AN "AS NEEDED" BASIS TO KEEP THE GRASS HEALTHY. OVER FERTILIZATION CAN RESULT IN THE SWALE BECOMING A SOURCE OF POLLUTION.

THE SWALE SHOULD BE INSPECTED PERIODICALLY AND AFTER EVERY MAJOR STORM TO DETERMINE THE CONDITION OF THE SWALE. RILLS AND DAMAGED AREAS SHOULD BE PROMPTLY REPAIRED AND REVEGETATED AS NECESSARY TO PREVENT FURTHER DETERIORATION.

GRASS LINED CONVEYANCE SWALE DETAIL

NOT TO SCALE

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

GNE
CIVILWORKS NEW ENGLAND
CIVIL & WATERSHED ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

NO.	REVISION	APP'D	DATE
1	REV PER TRC COMMENTS #1	SJH	2-29-24

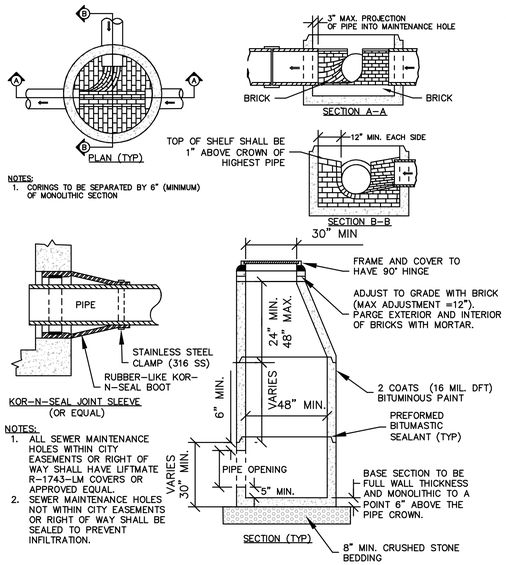
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DRAWN BY: SRD
DESIGN BY: JFG
APPROVED BY:SJH
PROJECT NO: 22075
FILE: SITE.DWG

PLANNING FILE NO.: SITE-2024-0002

DETAIL SHEET

FUTURE AUTOMATION, INC.
127 VENTURE DRIVE
DOVER, NH 03820

FUTURE AUTOMATION
QUALITY WAY LOT
DOVER, NH 03820



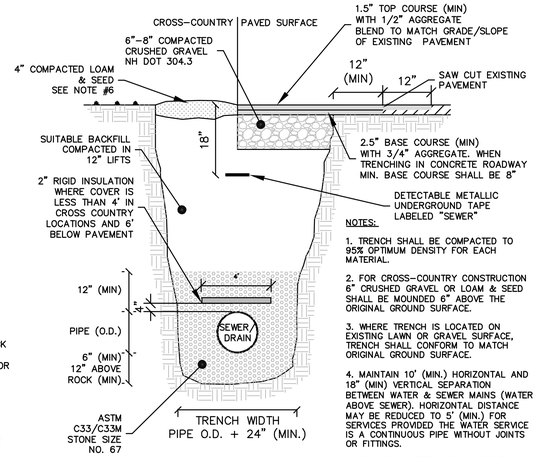
NOTES:
1. CORINGS TO BE SEPARATED BY 6" (MINIMUM) OF MONOLITHIC SECTION

KOR-N-SEAL JOINT SLEEVE (OR EQUAL)

NOTES:
1. ALL SEWER MAINTENANCE HOLES WITHIN CITY EASEMENTS OR RIGHT OF WAY SHALL HAVE LIFTMATE R-1743-LM COVERS OR APPROVED EQUAL.
2. SEWER MAINTENANCE HOLES NOT WITHIN CITY EASEMENTS OR RIGHT OF WAY SHALL BE SEALED TO PREVENT INFILTRATION.

CITY OF DOVER D-16
SEWER MANHOLE DETAIL

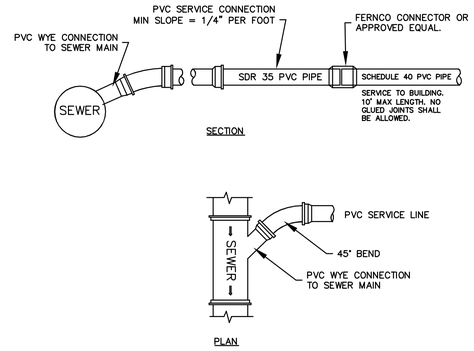
NOT TO SCALE



NOTES:
1. TRENCH SHALL BE COMPACTED TO 95% OPTIMUM DENSITY FOR EACH MATERIAL.
2. FOR CROSS-COUNTRY CONSTRUCTION 6" CRUSHED GRAVEL OR LOAM & SEED SHALL BE MOUNDED 6" ABOVE THE ORIGINAL GROUND SURFACE.
3. WHERE TRENCH IS LOCATED ON EXISTING LAWN OR GRAVEL SURFACE, TRENCH SHALL CONFORM TO MATCH ORIGINAL GROUND SURFACE.
4. MAINTAIN 10' (MIN.) HORIZONTAL AND 18" (MIN) VERTICAL SEPARATION BETWEEN WATER & SEWER MAINS (WATER ABOVE SEWER). HORIZONTAL DISTANCE MAY BE REDUCED TO 5' (MIN.) FOR SERVICES PROVIDED THE WATER SERVICE IS A CONTINUOUS PIPE WITHOUT JOINTS OR FITTINGS.
5. BACKFILL MATERIAL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE; DEBRIS, PAVEMENT, ORGANIC MATTER, TOP SOIL, MUCK, PEAT AND ROCKS OVER 6" IN LARGEST DIMENSION
6. LOAM AND SEED SHOULD BE IN COMPLIANCE WITH NH DOT 641, 642, 643, 644 AND 645.

CITY OF DOVER D-3
SEWER TRENCH DETAIL

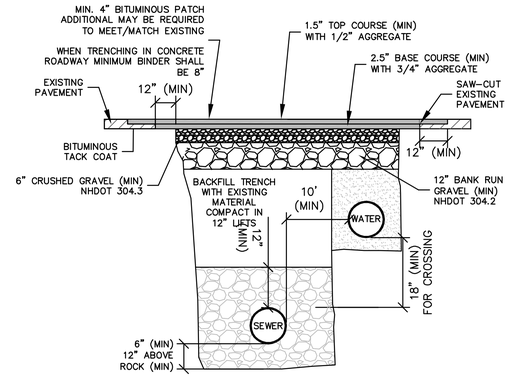
NOT TO SCALE



NOTES:
1. TRENCHING AND BEDDING REQUIREMENTS PER CITY SEWER TRENCH DETAIL (D-3).
2. SERVICE LATERAL DIAMETER VARIES PER APPLICATION. REVIEW SIZE WITH CITY ENGINEER PRIOR TO INSTALLATION.
3. SDR 35 SHALL NOT EXTEND INTO THE BUILDING

CITY OF DOVER D-17
SEWER SERVICE DETAIL

NOT TO SCALE



NOTES:
1. TRENCH SHALL BE COMPACTED TO 95% OPTIMUM DENSITY.
2. ALL WORK SHALL COMPLY WITH THE CITY OF DOVER CONSTRUCTION GUIDELINES AND PROCEDURES
3. MAINTAIN 10' (MIN.) HORIZONTAL AND 18" (MIN) VERTICAL SEPARATION BETWEEN WATER & SEWER MAINS (WATER ABOVE SEWER). HORIZONTAL DISTANCE MAY BE REDUCED TO 5' (MIN.) FOR SERVICES PROVIDED THE WATER SERVICE IS A CONTINUOUS PIPE WITHOUT JOINTS OR FITTINGS.

CITY OF DOVER
TYPICAL TRENCH DETAIL

NOT TO SCALE

TRELLEBORG PIPE SEALS

TRELLEBORG

Kor-N-Seal® I Stainless Steel Wedge Connector (WS Series)

Installation Instructions

CONNECTOR INSTALLATION

1. Check to be sure the Stainless Steel Waveband® is properly located in Connector groove.
2. Inspect the inside surface of the cored/formed hole. If there is porosity or wire-to-concrete separation, use patching or hydraulic cement to smooth the surface.
3. Insert Connector Assembly into hole with Wedge Expander at top of hole.
4. Position Connector so it is square to manhole both vertically and horizontally.
5. Tighten Wedge Expander using 1/2" socket wrench to 12 foot pounds.
6. Retorquing prior to shipment is recommended but not required.

Note if Vacuum Testing

Testing should be done prior to backfilling so that leaks can be easily located and repaired.

All lift holes need to be plugged with a nonshrinking mortar.

Plug all pipes entering the manhole, taking care to securely brace the pipes and plugs.

Patented Waveband technology "captures" the rubber between itself and the concrete, creating a more effective seal.



*Covered under US Patent No.: 5,738,359

PIPE INSTALLATION

1. Be sure sealing area of pipe is smooth and free of defects. Repair if needed.
2. Center pipe in Connector opening. (Pipe must not rest on Connector Korband)
3. Position the Pipe Clamp in the Connector's Pipe Clamp groove with the screw at the top.
4. Tighten the Pipe Clamp screw to 60 inch pounds with a T-handle Torque Wrench, P/N 80090

Note:

On minimum pipe O.D. installations, tension the rubber under the pipe clamp by lifting the rubber toward pipe clamp screw housing by hand. This will help prevent the rubber from wrinkling or folding over during tightening of hose clamp. Application of a very small amount pipe lube on the pipe clamp track will allow the pipe clamp to slide on the rubber and improve the performance of the hose clamp. Make sure to torque all screw locations on the pipe clamps.

Caution:

Do not use an impact wrench for installation.

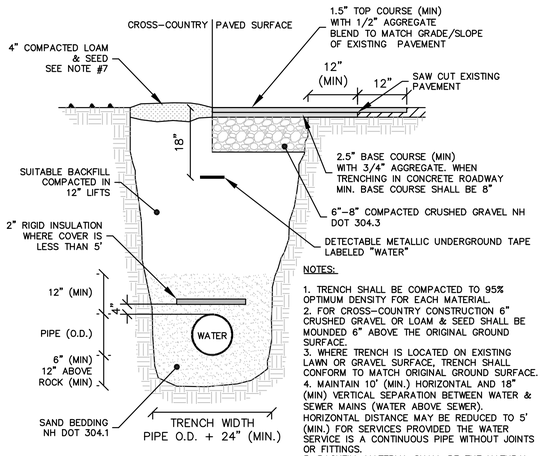
All pipe stubs must be restrained.

Adapters are required when using Corrugated Pipe. Refer to the Corrugated Pipe Adapter Data Sheet for more information.

Check calibration of torque limiters monthly

Torque limiters are available for connectors that can be used with cordless drills and hand or air ratchets.

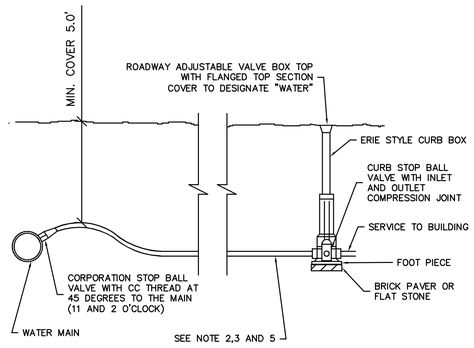
Call 800-626-2180 for information.



NOTES:
1. TRENCH SHALL BE COMPACTED TO 95% OPTIMUM DENSITY FOR EACH MATERIAL.
2. FOR CROSS-COUNTRY CONSTRUCTION 6" CRUSHED GRAVEL OR LOAM & SEED SHALL BE MOUNDED 6" ABOVE THE ORIGINAL GROUND SURFACE.
3. WHERE TRENCH IS LOCATED ON EXISTING LAWN OR GRAVEL SURFACE, TRENCH SHALL CONFORM TO MATCH ORIGINAL GROUND SURFACE.
4. MAINTAIN 10' (MIN.) HORIZONTAL AND 18" (MIN) VERTICAL SEPARATION BETWEEN WATER & SEWER MAINS (WATER ABOVE SEWER). HORIZONTAL DISTANCE MAY BE REDUCED TO 5' (MIN.) FOR SERVICES PROVIDED THE WATER SERVICE IS A CONTINUOUS PIPE WITHOUT JOINTS OR FITTINGS.
5. BACKFILL MATERIAL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE; DEBRIS, PAVEMENT, ORGANIC MATTER, TOP SOIL, MUCK, PEAT, AND ROCKS OVER 6" IN LARGEST DIMENSION
6. PROVIDE MINIMUM 5' OF COVER. ENGINEERING APPROVAL REQUIRED FOR LESS THAN 5' OF COVER.
7. LOAM AND SEED SHOULD BE IN COMPLIANCE WITH NH DOT 641, 642, 643, 644 AND 645.

CITY OF DOVER D-4
WATER TRENCH DETAIL

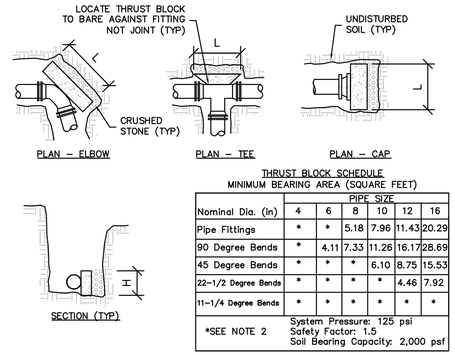
NOT TO SCALE



NOTES:
1. ALL WATER LINES 4" OR GREATER SHALL BE DUCTILE IRON WITH AN 8 MIL POLYETHYLENE WRAP, INCLUDING TEE AND OTHER CONNECTIONS.
2. WATER SERVICE LINES SHALL BE COPPER TUBING (TYPE K) BETWEEN MAIN AND CURB STOP.
3. SERVICE BETWEEN CURB STOP AND BUILDING MAY BE (BLUE OR BLACK) CTS SDR 9 PLASTIC POLYETHYLENE RATED FOR 250 psi.
4. CAM-LOCK REQUIRED FOR CTS OR IPS, MJ ADAPTER REQUIRED FOR HDPE
5. 3/4"- COPPER, CTS
   1"- COPPER, CTS
   2"- CTS, HDPE, IPS

CITY OF DOVER D-13
WATER SERVICE CONNECTION DETAIL

NOT TO SCALE



THRUST BLOCK SCHEDULE
MINIMUM BEARING AREA (SQUARE FEET)

	PIPE SIZE					
Nominal Dia. (in)	4	6	8	10	12	16
Pipe Fittings	*	*	5.18	7.96	11.43	20.29
90 Degree Bends	*	4.11	7.33	11.26	16.17	28.69
45 Degree Bends	*	*	*	6.10	8.75	15.53
22-1/2 Degree Bends	*	*	*	*	4.46	7.92
11-1/4 Degree Bends	*	*	*	*	*	*
*SEE NOTE 2	System Pressure: 125 psi Safety Factor: 1.5 Soil Bearing Capacity: 2,000 psf					

NOTES:
1. ALL THRUST BLOCKS SHALL BE PRE-CAST CONCRETE UNLESS APPROVED BY THE CITY ENGINEER.
2. 2'X2'X2' MINIMUM THRUST BLOCK REQUIRED, ANY BEARING AREA OVER 4SF REQUIRES THRUST BLOCKS, RESTRAINED JOINTS AND CALCULATIONS ASSOCIATED WITH THE JOINT.
3. THE MINIMUM BEARING AREAS SHOWN IN THE THRUST BLOCK SCHEDULE ARE BASED ON A SYSTEM PRESSURE OF 125 PSI. IF THE SYSTEM PRESSURE IS ABOVE 125 PSI, INCREASE THE NOTED AREAS PROPORTIONALLY TO THE ACTUAL SYSTEM PRESSURE.
4. FOR MINIMUM BEARING AREAS OVER 4 SF, THE LENGTH (L) OF THE BLOCK IS APPROXIMATELY TWICE AS LONG AS THE HEIGHT (H).
5. PLACE CRUSHED STONE BEHIND THRUST BLOCK AGAINST UNDISTURBED SOIL.
6. PLACE THRUST BLOCK ALONG MAXIMUM LENGTH OF THE FITTING TO MAXIMIZE BEARING AREA.
7. CONCRETE COMPRESSIVE STRENGTH: 2,000 PSI MINIMUM.
8. USE OF THRUST BLOCKS DOES NOT ELIMINATE THE REQUIREMENT OF OTHER RESTRAINTS OR VICE VERSA.

CITY OF DOVER D-15
THRUST BLOCK DETAIL

NOT TO SCALE

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

GNE CIVILWORKS NEW ENGLAND
CIVIL & WATERSHED ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

NO.	REVISION	APP'D	DATE
1	REV PER TRC COMMENTS #1	SJH	2-29-24

DATE: 1-18-24
SCALE: AS SHOWN
DRAWN BY: SRD
DESIGN BY: JFG
APPROVED BY:SJH
PROJECT NO: 22075
FILE: SITE.DWG

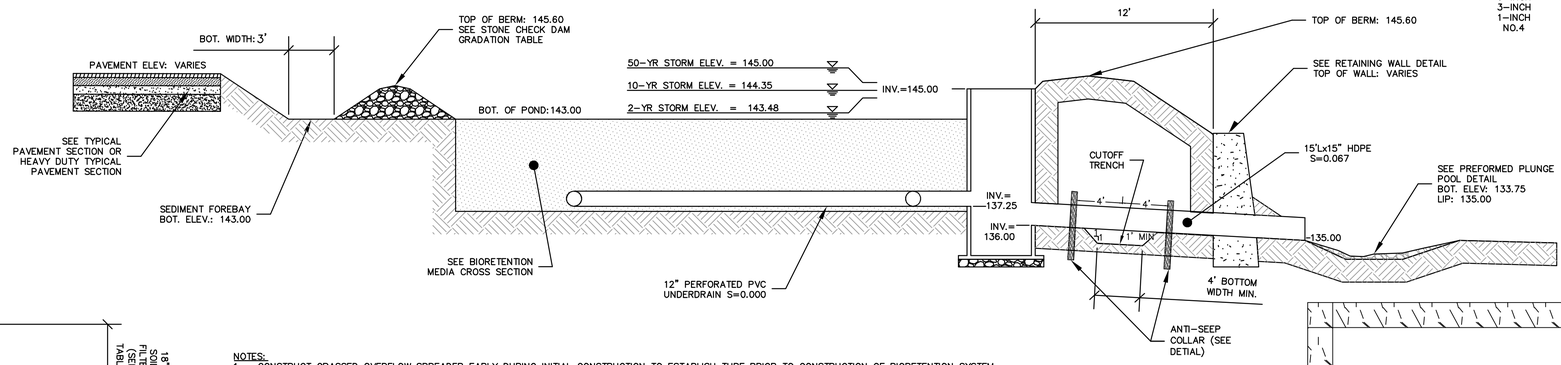
PLANNING FILE NO.: SITE-2024-0002

DETAIL SHEET

FUTURE AUTOMATION, INC.
127 VENTURE DRIVE
DOVER, NH 03820

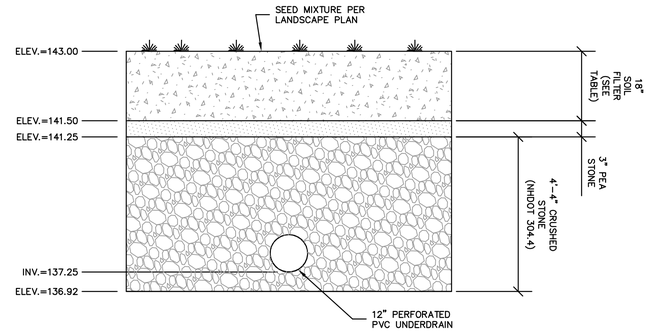
FUTURE AUTOMATION
QUALITY WAY LOT
DOVER, NH 03820

BIORETENTION FILTER MEDIA SPECIFICATIONS			
COMPONENT MATERIAL	PERCENT OF MIXTURE BY VOLUME	GRADATION OF MATERIAL	
		SIEVE NO.	PERCENT BY WEIGHT PASSING STANDARD SIEVE
FILTER MEDIA OPTION A			
ASTM C-33 CONCRETE SAND	50 TO 55		
LOAMY SAND TOPSOIL, WITH FINES AS INDICATED	20 TO 30	200	15 TO 25
MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH, WITH FINES AS INDICATED	20 TO 30	200	< 5
FILTER MEDIA OPTION B			
MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH, WITH FINES AS INDICATED	20 TO 30	200	< 5
LOAMY COARSE SAND	70 TO 80	10	85 TO 100
		20	70 TO 100
		60	15 TO 40
		200	8 TO 15



STONE CHECK DAM GRADATION

SIEVE DESIGNATION	PERCENT BY WEIGHT PASSING SQUARE MESH SIEVE
12-INCH	100%
6-INCH	84%-100%
3-INCH	68%-83%
1-INCH	42%-55%
NO.4	8%-12%



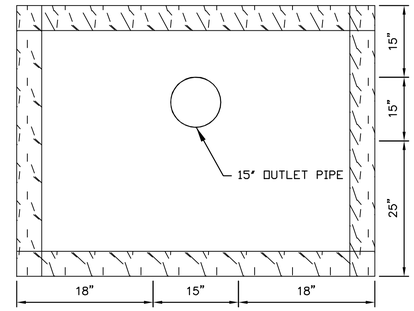
BIORETENTION MEDIA CROSS SECTION

NOT TO SCALE

NOTES:
1. CONSTRUCT GRASSED OVERFLOW SPREADER EARLY DURING INITIAL CONSTRUCTION TO ESTABLISH TURF PRIOR TO CONSTRUCTION OF BIORETENTION SYSTEM.
2. DO NOT BEGIN CONSTRUCTION OF THE BIORETENTION AREA UNTIL LAWN AREA ON THE ENTIRE SITE AREA ESTABLISHED WITH AT LEAST 80 PERCENT TURF. FILTER ALL DRAIN INLETS IN THE SEDIMENT FOREBAYS TO PREVENT SILTATION INTO THE BIORETENTION AREA.
3. DO NOT DRIVE CONSTRUCTION EQUIPMENT THE FILTER MATERIAL. INSTALL FILTER MATERIAL BY MEANS OF AN EXCAVATOR LOCATED ADJACENT TO THE FILTER AREA.
4. MATERIALS: CRUSHED STONE LAYER SHALL MEET NHDOT 304.4. STONE SHALL CONTAIN NO MORE THAN 5% FINES PASSING THE #200 SIEVE. TOPSOIL SHALL CONTAIN 15 TO 25% FINES PASSING THE #200 SIEVE.
5. REFER TO LANDSCAPING DRAWINGS FOR GRASS SEED MIXES. FERTILIZATION OF THE FILTER AREA SHALL BE AVOIDED UNLESS ABSOLUTELY NECESSARY TO ESTABLISH VEGETATION.
6. INITIAL ESTABLISHMENT: DURING THE FIRST 2-3 MONTHS OF ESTABLISHMENT WATER THE GARDEN ON A WEEKLY BASIS (TO SUPPLEMENT RAINFALL FOR TOTAL OF 1 INCH PER WEEK).
7. ANNUAL MAINTENANCE: IN THE SPRING OF EACH YEAR, ANY DEAD VEGETATION SHALL BE REMOVED TO ALLOW FOR NEW GROWTH, AND ANY ACCUMULATED SEDIMENT (NORMALLY AT THE ENTRANCE TO THE GARDEN) SHALL ALSO BE REMOVED. TURF AT FILTER SHALL BE MOWED NO MORE THAN 3 TIMES PER GROWING SEASON. IF WATER PONDS ON THE SURFACE FOR MORE THAN 24 HOURS DURING THE FIRST YEAR OR 72 HOURS THEREAFTER, THE FILTER SURFACE SHALL BE AERATED WITH DEEP TINES OR THE SURFACE REPLACED.

BIORETENTION BASIN 1

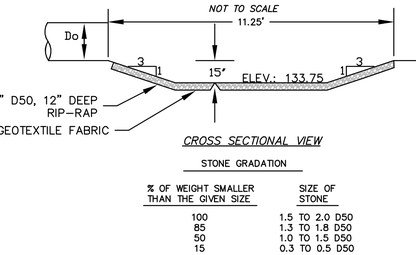
NOT TO SCALE



NOTES:
1. ANTI-SEEP COLLARS SHALL BE WATERPROOF AND HAVE A WATERPROOF CONNECTION TO THE PIPE.
2. ANTI-SEEP COLLARS TO BE AGRI DRAIN OR APPROVED EQUAL.

ANTI-SEEP COLLAR DETAIL

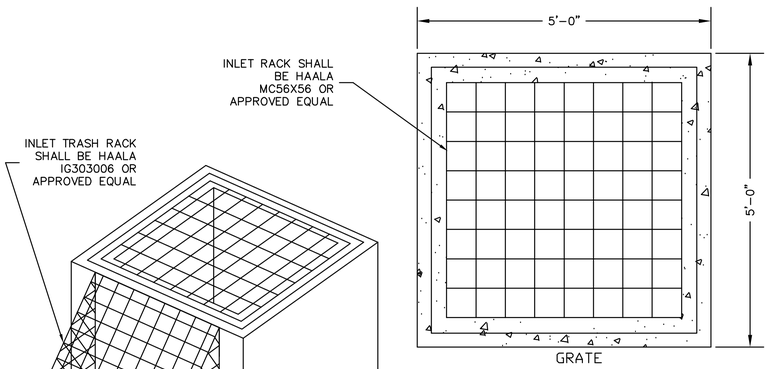
NOT TO SCALE



CROSS SECTIONAL VIEW

STONE GRADATION

% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE
100	1.5 TO 2.0 D50
85	1.3 TO 1.8 D50
50	1.0 TO 1.5 D50
15	0.3 TO 0.5 D50

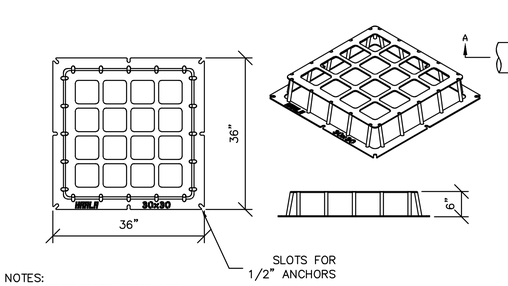


GRATE

NOTE:
1. OUTLET STRUCTURES SHALL BE PRE CAST WITH A MINIMUM CONCRETE STRENGTH OF 4,000 PSI @ 28 DAYS.
2. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR EACH STRUCTURE FOR REVIEW BY THE TOWN.
3. INLET GRATES AND TRASH RACKS SHALL BE HAALA PRODUCTS OR APPROVED EQUAL.

TYPICAL INLET TRASH RACKS

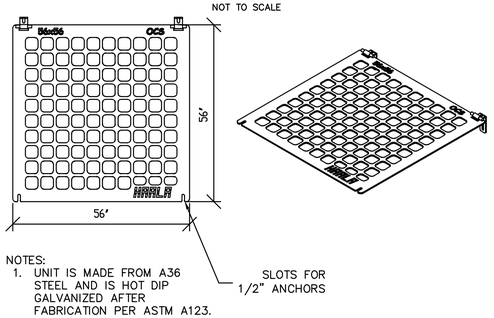
NOT TO SCALE



NOTES:
1. UNIT IS MADE FROM A36 STEEL AND IS HOT DIP GALVANIZED AFTER FABRICATION PER ASTM A123.

HAALA IG303006

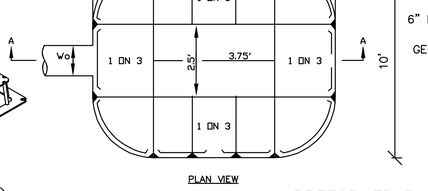
NOT TO SCALE



NOTES:
1. UNIT IS MADE FROM A36 STEEL AND IS HOT DIP GALVANIZED AFTER FABRICATION PER ASTM A123.

HAALA MC56X56

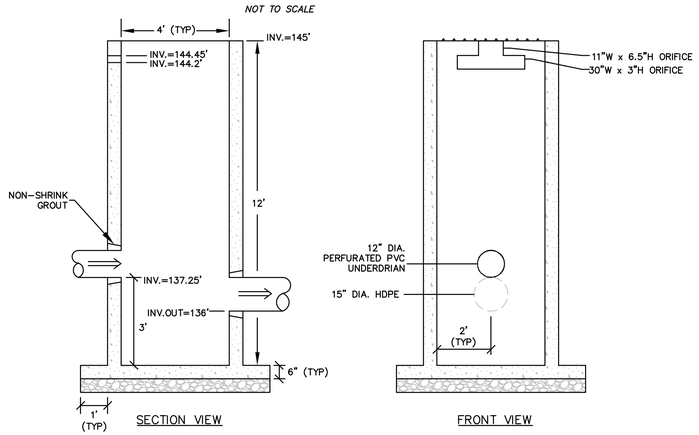
NOT TO SCALE



PLAN VIEW

PREFORMED PLUNGE POOL DETAIL

NOT TO SCALE



SECTION VIEW

FRONT VIEW

NOTE:
1) ALL OUTLET STRUCTURES SHALL BE PRE CAST WITH A MINIMUM CONCRETE STRENGTH OF 4,000 PSI @ 28 DAYS.
2) THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR EACH STRUCTURE FOR REVIEW BY THE TOWN.
3) SUMPS SHALL NOT BE GREATER THAN 8 INCHES.

OUTLET STRUCTURE 1 (OS1) DETAIL

NOT TO SCALE

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

CNE CIVILWORKS NEW ENGLAND
CIVIL & WATERSHED ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

NO.	REVISION	APP'D	DATE
1	REV PER TRC COMMENTS #1	SJH	2-29-24

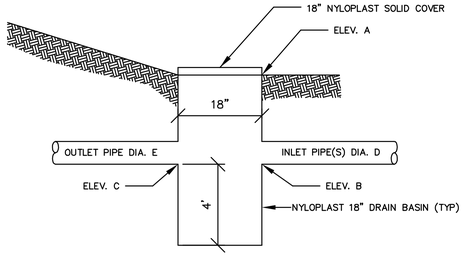
DATE: 1-18-24
SCALE: AS SHOWN
DRAWN BY: SRD
DESIGN BY: JFG
APPROVED BY:SJH
PROJECT NO: 22075
FILE: SITE.DWG

PLANNING FILE NO.: SITE-2024-0002

DETAIL SHEET

FUTURE AUTOMATION, INC.
127 VENTURE DRIVE
DOVER, NH 03820

FUTURE AUTOMATION
QUALITY WAY LOT
DOVER, NH 03820

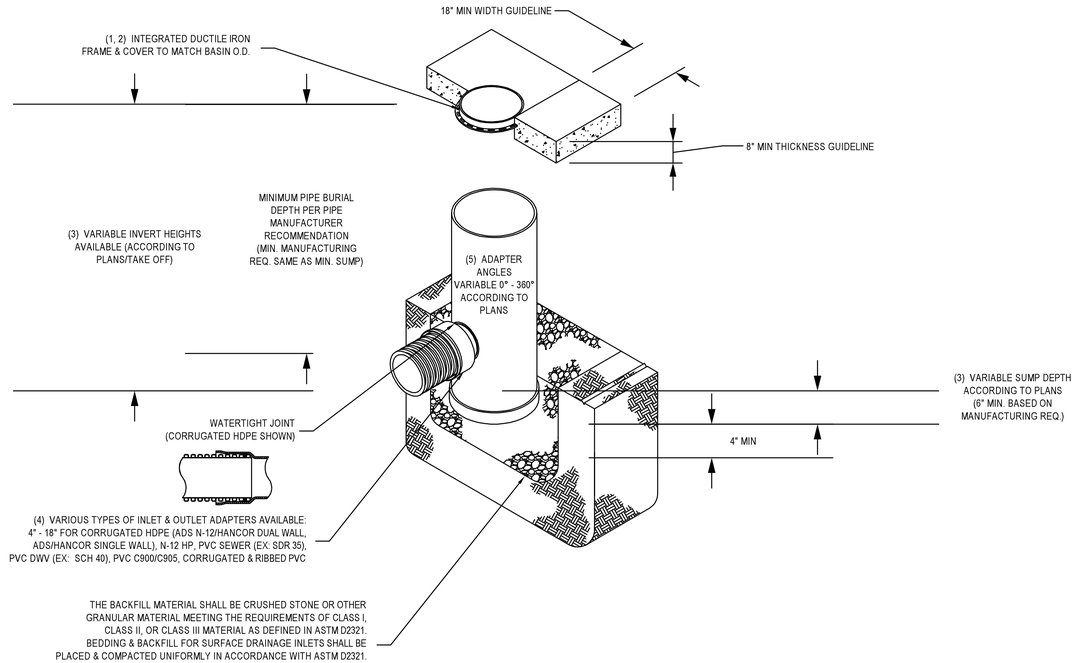


OS	ELEV. A (FT)	ELEV. B (FT)	ELEV. C (FT)	DIA. D (IN)	DIA. E (IN)
YD1	152.25	148.50	148.50	12"	12"
YD2	152.50	148.50	148.50	12"	12"

NOTE:
1) THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR EACH STRUCTURE FOR REVIEW BY THE CITY.
2) SEE NYLOPLAST 18" DRAIN BASIN DETAIL.

YARD DRAIN DETAIL
NOT TO SCALE

NYLOPLAST 18" DRAIN BASIN: 2818AG



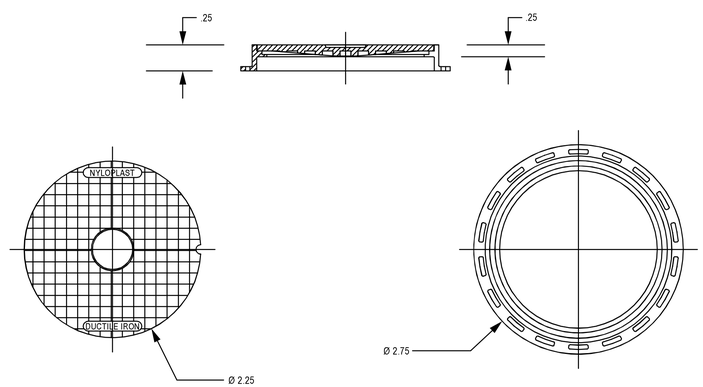
1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER.
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.

THIS PRINT DISCLOSES SUBJECT MATTER IN WHICH NYLOPLAST HAS PROPRIETARY RIGHTS. THE RECEIPT OR POSSESSION OF THIS PRINT DOES NOT CONFER, TRANSFER, OR LICENSE THE USE OF THE DESIGN OR TECHNICAL INFORMATION SHOWN HEREIN REPRODUCTION OF THIS PRINT OR ANY INFORMATION CONTAINED HEREIN, OR MANUFACTURE OF ANY ARTICLE HEREFROM, FOR THE DISCLOSURE TO OTHERS IS FORBIDDEN, EXCEPT BY SPECIFIC WRITTEN PERMISSION FROM NYLOPLAST. ©2013 NYLOPLAST

DRAWN BY EBC	MATERIAL	ADS Nyloplast	3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com
DATE 03-29-06			
REVISED BY NMH	PROJECT NO./NAME	TITLE	12 IN DRAIN BASIN QUICK SPEC INSTALLATION DETAIL
DATE 03-11-16			
DWG SIZE A	SCALE NTS SHEET 1 OF 1	DWG NO. 7001-110-189	REV E

1899CGC

APPROX. WEIGHT WITH FRAME = 68.50 LBS



DIMENSIONS ARE FOR REFERENCE ONLY
ACTUAL DIMENSIONS MAY VARY
DIMENSIONS ARE IN INCHES
GRATE MEETS H-20 LOAD RATING
QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05
PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT
LOCKING DEVICE AVAILABLE UPON REQUEST SEE DRAWING NO. 7001-110-027

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DRAWN BY EBC	MATERIAL DUCTILE IRON	ADS Nyloplast	3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com
DATE 03-08-06			
REVISED BY CCA	PROJECT NO./NAME	TITLE	18 IN SOLID COVER ASSEMBLY - TYPE C
DATE 08-30-13			
DWG SIZE A	SCALE 1:10 SHEET 1 OF 1	DWG NO. 7001-110-214	REV D

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

CIVILWORKS NEW ENGLAND
CIVIL & WASTEWATER ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

NO.	REVISION	APP'D	DATE
1	REV PER TRC COMMENTS #1	SJH	2-29-24

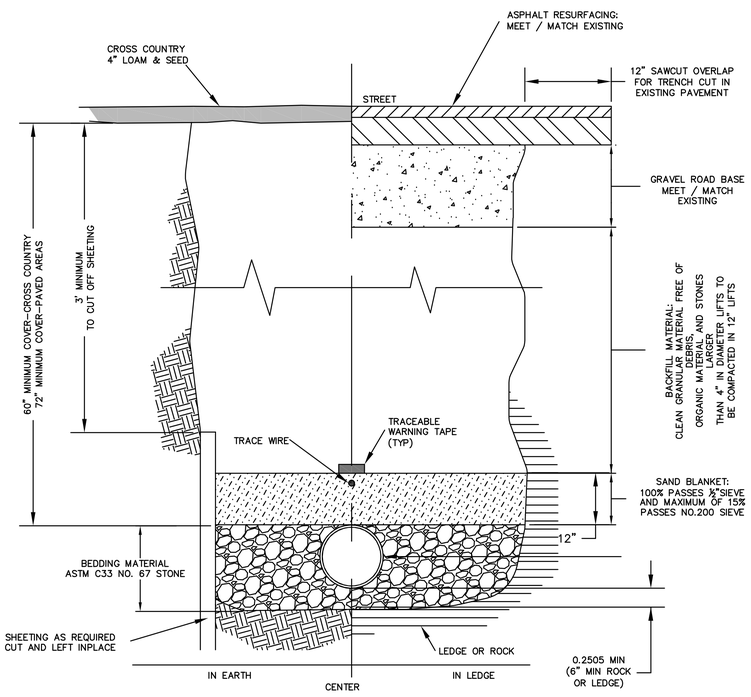
DATE: 1-18-24
SCALE: AS SHOWN
DRAWN BY: SRD
DESIGN BY: JFG
APPROVED BY:SJH
PROJECT NO: 22075
FILE: SITE.DWG

PLANNING FILE NO.: SITE-2024-0002

DETAIL SHEET

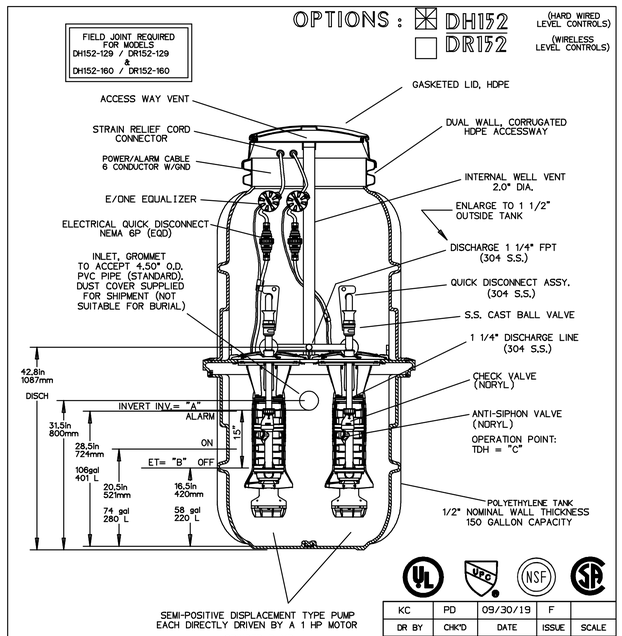
FUTURE AUTOMATION, INC.
127 VENTURE DRIVE
DOVER, NH 03820

FUTURE AUTOMATION
QUALITY WAY LOT
DOVER, NH 03820



SEWER FORCEMAIN TRENCH

NOT TO SCALE



KC	PD	09/30/19	F	
DR BY	CHK'D	DATE	ISSUE	SCALE

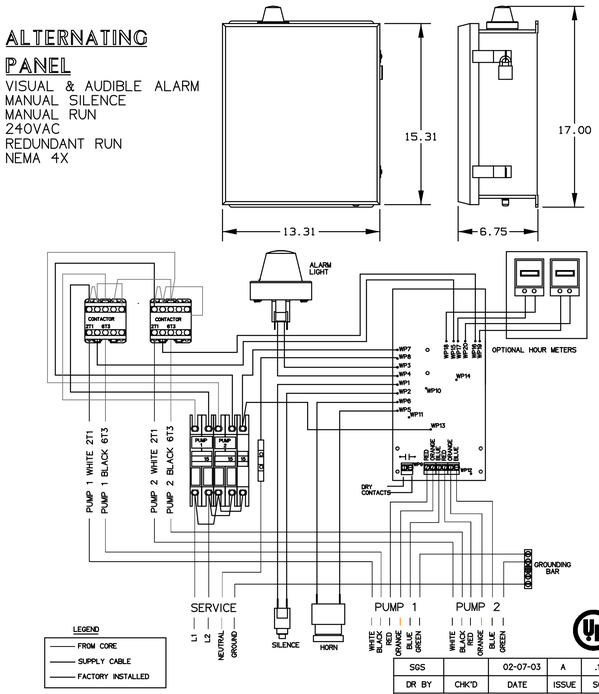
e/one SEWER SYSTEMS

MODEL DH152 / DR152
DETAIL SHEET

NA0052P02

ALTERNATING PANEL

VISUAL & AUDIBLE ALARM
MANUAL SILENCE
MANUAL RUN
240VAC
REDUNDANT RUN
NEMA 4X



SGS		02-07-03	A	.156
DR BY	CHK'D	DATE	ISSUE	SCALE

e/one SEWER SYSTEMS

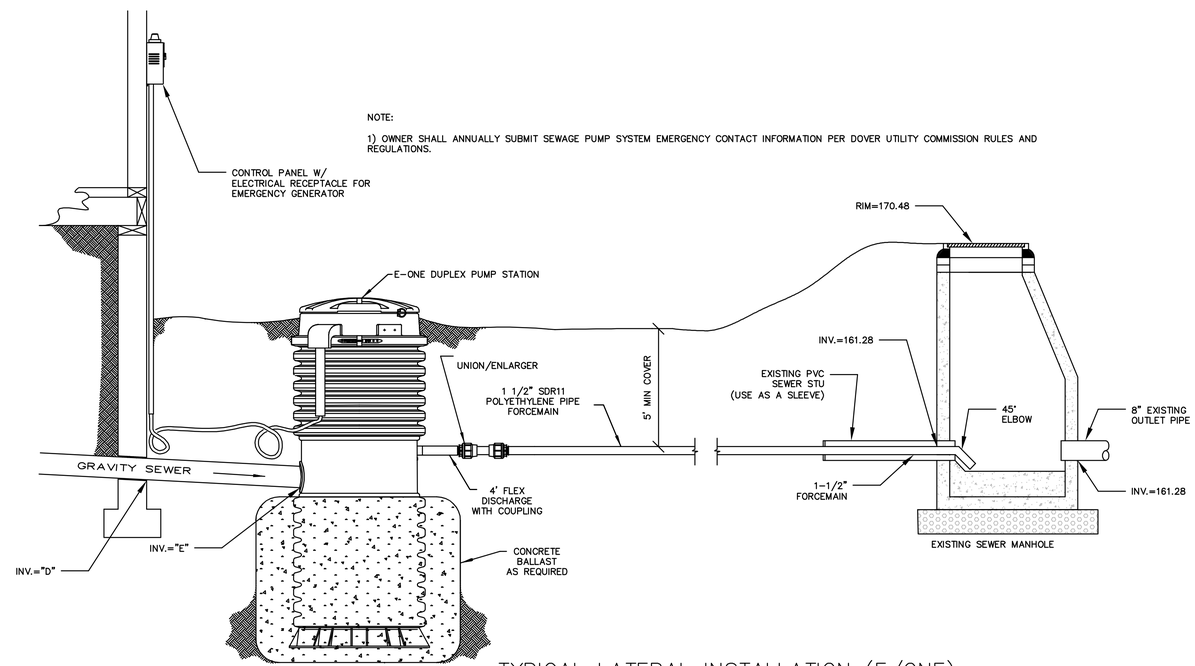
DUPLEX
SPLIT TIME ALTERNATING PANEL

LM000270

BURIED NON-METALLIC UTILITIES SHALL RECEIVE A TRACER WIRE.

1. THE TRACER WIRE SHALL BE INSTALLED ON TOP OF THE BURIED UTILITY CROWN.
2. THE TRACER WIRE SHALL BE POSITIVELY ATTACHED TO THE NON-METALLIC BURIED UTILITIES BY PLASTIC WIRE TIES OF SIMILAR TYPE OF ATTACHMENT EVERY 6 FEET FOR STRAIGHT RUN OF UTILITY AND AT ALL CHANGES OF DIRECTION. TAPE SHALL BE POLYKEN "930-35," PROTECTO-WRAP "310", OR EQUAL.
3. THE ENDS OF THE TRACER WIRE SHALL BE EXPOSED ABOVE THE FINISHED GRADE.
4. INSTALL APPROVED CAST IRON VALVE BOXES AT ALL LOCATIONS WHERE THE ENDS OF THE TRACER WIRE ARE EXPOSED ABOVE THE FINISHED GRADE. THE BOXES SHALL NOT BE MORE THAN 200 FEET APART AND SHALL CONTAIN A 24" COIL OF WIRE FROM EACH END OF THE TRACER WIRE.
5. TRACER WIRE SHALL BE CONTINUOUS BETWEEN BOXES AND SHALL BE TESTED FOR CONTINUITY IN THE PRESENCE OF THE INSPECTOR.
6. TRACER WIRE SHALL BE NO. 10 AWG, COPPER WIRE WITH TW INSULATION (BLUE IN COLOR FOR USE WITH POTABLE WATER, GREEN FOR USE WITH SEWER). CONNECTORS SHALL BE DRY-CON TYPE CONNECTORS FOR SPECIFIED WIRE GAGE AND SUITABLE FOR USE WITH BURIED TRACER WIRE.
7. TRACER WIRE SHALL BE EXPOSED ABOVE FINISHED GRADE IN THE CAST IRON BOXES AT THE TRANSITION WHERE THE NON-METALLIC BURIED UTILITY CONNECTS TO THE EXISTING METALLIC UTILITY.
8. EXTEND WIRE INTO VALVE BOXES AND TERMINATE WITH A WIRE CONNECTOR. TERMINATE WIRE FROM LINES EXTENDING FROM MAINS TO FIRE RISERS OR BUILDING SERVICES 12" (300MM) ABOVE GRADE AND CAP WITH A WIRE CONNECTOR.

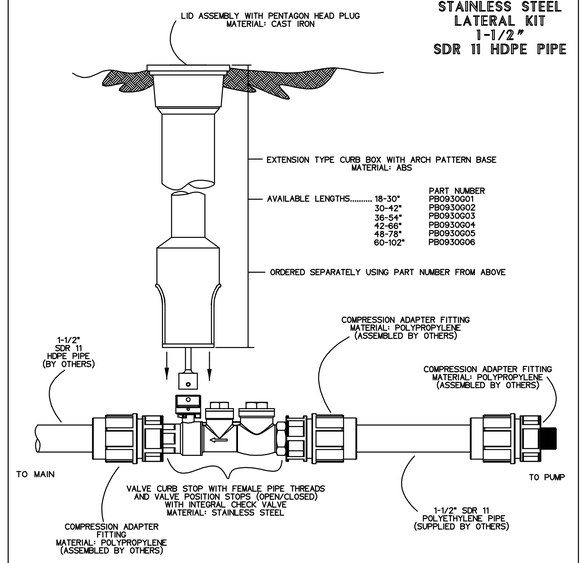
INVERT	PUMP STATION P.S.-1	PUMP STATION P.S.-2
A	148.00	147.50
B	146.90	146.40
C	22 FT @ 12.7 GPM	23.5 FT @ 12.6 GPM
D	148.50	148.0
E	148.00	147.50



TYPICAL LATERAL INSTALLATION (E/ONE)

NOT TO SCALE

STAINLESS STEEL LATERAL KIT 1-1/2" SDR 11 HDPE PIPE



KIT PARTS ARE NOT ASSEMBLED

NOTES:

1. SS CURB STOP/CHECK VALVE AND FITTINGS ARE PROVIDED SEPARATELY, TO BE ASSEMBLED BY OTHERS
2. TO ASSEMBLE, APPLY A DOUBLE LAYER OF TEFLON TAPE, AND A LAYER OF PIPE DOPE (SUPPLIED BY OTHERS) TO THE THREADS ON THE PLASTIC FITTINGS AND INSTALL PER THE MANUFACTURER'S INSTRUCTIONS
   *FOR SS FITTING INTO SS THREAD, USE EITHER PIPE DOPE OR TEFLON TAPE, NOT BOTH
3. ASSEMBLY IS TO BE PRESSURE TESTED (BY OTHERS)
4. ASSEMBLY IS TO BE USED WITH SDR11 HDPE PIPE
5. TO ORDER SS LATERAL KIT, USE PART NUMBER NC0193G02
6. CURB BOX IS TO BE ORDERED SEPARATELY, SEE ABOVE

SGS	DN	11/02/11	B	3/16
DR BY	CHK'D	DATE	ISSUE	SCALE

e/one SEWER SYSTEMS

STAINLESS STEEL LATERAL KIT
1-1/2" SDR 11 HDPE PIPE

NA0330P03

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

GNE CIVILWORKS NEW ENGLAND
CIVIL & WASTEWATER ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

NO.	REVISION	APP'D	DATE
1	REV PER TRC COMMENTS #1	SJH	2-29-24

DATE: 1-18-24
SCALE: AS SHOWN
DRAWN BY: SRD
DESIGN BY: JFG
APPROVED BY:SJH
PROJECT NO: 22075
FILE: SITE.DWG

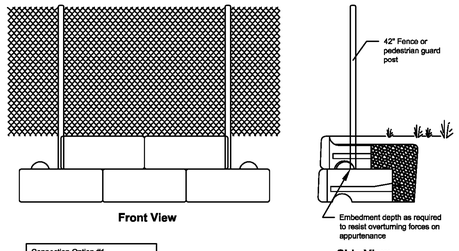
PLANNING FILE NO.: SITE-2024-0002

DETAIL SHEET

FUTURE AUTOMATION, INC.
127 VENTURE DRIVE
DOVER, NH 03820

FUTURE AUTOMATION
QUALITY WAY LOT
DOVER, NH 03820

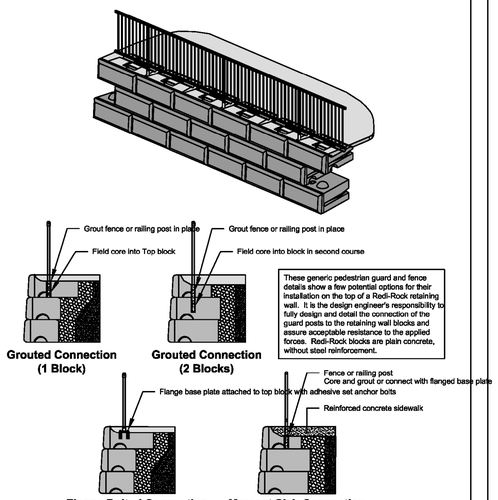
Fence or Pedestrian Guard Connection Locations



This drawing is for reference only. Determination of the suitability and/or manner of use of any details contained in this document is the sole responsibility of the design engineer of record. Final project designs, including all construction details, shall be prepared by a licensed professional engineer using the actual conditions of the proposed site.

DRAWN BY:	JRJ
APPROVED BY:	JRJ
DATE:	06-22-2015
SHEET:	1 of 1
TITLE:	Fence or Pedestrian Guard Connection Locations
FILE:	6 Fence or Pedestrian Guard Connection Locations 062215.dwg

Fence or Pedestrian Guard Connection Options

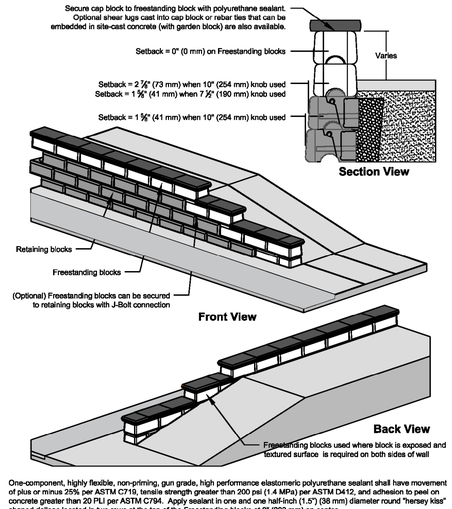


These generic pedestrian guard and fence details show a few potential options for their installation on the top of a Redi-Rock retaining wall. It is the design engineer's responsibility to fully design and detail the connection of the guard posts to the retaining wall blocks and assure acceptable resistance to the applied forces. Redi-Rock blocks are plain concrete, without steel reinforcement.

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DRAWN BY:	JRJ
APPROVED BY:	JRJ
DATE:	06-22-2015
SHEET:	1 of 1
TITLE:	Fence or Pedestrian Guard Connection Options
FILE:	5 Fence or Pedestrian Guard Connection Options 062215.dwg

Freestanding Blocks with Cap at Top of Wall



One-component, highly flexible, non-priming, gun grade, high performance elastomeric polyurethane sealant shall have movement of plus or minus 25% per ASTM C719, tensile strength greater than 200 psi (1.4 MPa) per ASTM D412, and adhesion to peel on concrete greater than 20 PLI per ASTM C794. Apply sealant in one and one half-inch (1.5") (38 mm) diameter round "hersey kiss" shaped dollops located in two rows at the top of the Freestanding blocks at 8" (203 mm) on center.

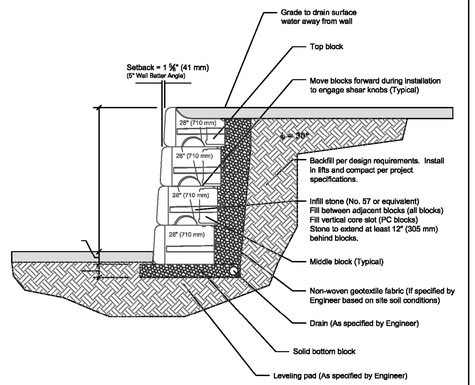
This drawing is for reference only. Determination of the suitability and/or manner of use of any details contained in this document is the sole responsibility of the design engineer of record. Final project designs, including all construction details, shall be prepared by a licensed professional engineer using the actual conditions of the proposed site.

DRAWN BY:	JRJ
APPROVED BY:	JRJ
DATE:	06-22-2015
SHEET:	1 of 1
TITLE:	Freestanding Blocks with Cap at Top of Wall
FILE:	3 Freestanding Blocks with Cap at Top of Wall 062215.dwg

ϕ = 30° | FINE TO MEDIUM SAND (SILTY SAND)

LOAD CONDITION A | NO LIVE LOAD SURCHARGE, NO BACK SLOPE, NO TOE SLOPE

4 BLOCK HIGH SECTION
(4) 28" (710 mm) Blocks



This drawing is for reference only. Determination of the suitability and/or manner of use of any details contained in this document is the sole responsibility of the design engineer of record. Final project designs, including all construction details, shall be prepared by a licensed professional engineer using the actual conditions of the proposed site. Final wall design must address both internal and external drainage and all modes of wall stability.

DRAWN BY:	C. Kruger
APPROVED BY:	J. Johnson
DATE:	June 8, 2015
SHEET:	1 of 1
TITLE:	Preliminary Wall Section Fine to Medium Sand or Silty Sand, ϕ = 30° No Live Load Surcharge, No Back Slope, No Toe Slope
FILE:	A_30_B_28_72_cad.dwg

CONTRACTOR TO COORDINATE WITH OWNER FOR FENCE STYLE

GENERAL NOTES

1. SEGMENTAL CONCRETE UNIT RETAINING WALL SHALL BE PROVIDED BY redi-rock ? OR SHEA WALL SYSTEMS OR APPROVED EQUAL.
2. RETAINING WALL DESIGN AND INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S STANDARDS.
3. STRIP VEGETATION AND ORGANIC SOIL FROM WALL AND GEOSYNTHETIC ALIGNMENT.
4. BENCH CUT ALL EXCAVATED SLOPES.
5. DO NOT OVER EXCAVATE UNLESS DIRECTED BY SITE SOIL ENGINEER TO REMOVE UNSUITABLE SOIL.
6. SITE SOILS ENGINEER SHALL VERIFY FOUNDATION SOILS AS BEING COMPETENT PER THE DESIGN STANDARDS AND PARAMETERS.
7. LEVELING PAD SHALL CONSIST OF COMPACTED COARSE SAND OR CRUSHED GRAVEL, 6" THICK MIN. AS STIPULATED BY THE MANUFACTURER.
8. CONTRACTOR MAY OPT FOR A LEAN CONCRETE PAD. CONCRETE PAD SHALL BE UNREINFORCED, 3" THICK MAXIMUM.
9. MINIMUM EMBEDMENT OF WALL BELOW FINISH GRADE SHALL BE 6" FOR WALL HEIGHTS UNDER 4 FT. AND 12" FOR WALLS OVER 4 FT. UNLESS SHOWN DIFFERENTLY.
10. FOR UNITS TO BE EMBEDDED, COMPACT FILL IN FRONT OF UNITS AT THE SAME TIME FILL BEHIND UNITS IS COMPACTED.
11. DRAINAGE AGGREGATE SHALL BE INSTALLED DIRECTLY BEHIND THE WALL WITHIN 12" OF THE TOP OF THE WALL. DRAINAGE AGGREGATE SHALL NOT EXTEND BELOW FINAL GRADE IN FRONT OF WALL.
12. COMPACTION SHALL BE TO 95% OF MAXIMUM STANDARD PROCTOR DENSITY.(ASTM D-698)
13. COMPACTION TESTS SHALL BE TAKEN AS THE WALL IS INSTALLED. THE MINIMUM NUMBER OF 3 TESTS PER WALL AND/OR AS DETERMINED BY THE SITE SOILS ENGINEER.
14. COMPACTION WITHIN 3 FT. OF WALL SHALL BE LIMITED TO HAND OPERATED EQUIPMENT.
15. IF REQUIRED SEE ELEVATION DRAWINGS FOR GEOSYNTHETIC TYPE, LENGTH AND LOCATION.
16. IF REQUIRED GEOSYNTHETIC SHALL BE PLACED WITH STRONGEST DIRECTION PERPENDICULAR TO WALL. FOLLOW GEOSYNTHETIC MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS.
17. CONTRACTOR SHALL DIRECT SURFACE RUNOFF TO AVOID DAMAGING WALL WHILE UNDER CONSTRUCTION.
18. ANY SURFACE DRAINAGE FEATURES, FINISH GRADING, PAVEMENT, OR TURF SHALL BE INSTALLED IMMEDIATELY AFTER WALL IS COMPLETED.
19. FOLLOW APPLICABLE PROVISIONS AS DICTATED BY THE MANUFACTURER.

1.4 REQUIREMENTS FOR CONTRACTOR PREPARED DESIGN AND PLANS

A. THE FINAL DESIGN TO BE SUBMITTED PRIOR TO AWARD OF CONTRACT AND SHALL INCLUDE DETAILED DESIGN COMPUTATIONS AND ALL DETAILS, DIMENSIONS, QUANTITIES AND CROSS SECTIONS NECESSARY TO CONSTRUCT THE WALL. THE DESIGN SHALL CONFORM TO ALL OF THE REQUIREMENTS OUTLINED IN SECTION 1.3 ABOVE. THE FULLY DETAILED PLANS SHALL BE ON PERMANENT, ARCHIVAL QUALITY, 24" X 36" DOUBLE MATTE MYLAR WITH PROJECT NAME, NUMBER AND DESIGN FIRM. THE PLANS TO BE SUBMITTED SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING ITEMS:

1. A PLAN AND ELEVATION SHEET OR SHEETS FOR EACH WALL, CONTAINING THE FOLLOWING:
   A. AN ELEVATION VIEW OF THE WALL WHICH SHALL INDICATE THE ELEVATION AT THE TOP OF THE WALL, AT ALL HORIZONTAL AND VERTICAL BREAK POINTS AND AT LEAST EVERY FIFTY (50) FEET ALONG THE WALL. ELEVATIONS AT THE TOP OF LEVELING PADS. THE DESIGNATION AS TO THE TYPE OF UNIT, AND THE LOCATION OF THE ORIGINAL AND FINAL GROUND LINE.
   B. A PLAN VIEW OF THE WALL WHICH SHALL INDICATE THE OFFSET FROM THE CONSTRUCTION CENTERLINE OR BASELINE TO THE FACE OF THE WALL AT ALL CHANGES IN HORIZONTAL ALIGNMENT AND THE LIMIT OF THE WIDEST UNIT.
   C. ANY GENERAL NOTES REQUIRED FOR DESIGN AND CONSTRUCTION OF THE WALL.
   D. ALL HORIZONTAL AND VERTICAL CURVE DATA AFFECTING WALL CONSTRUCTION.
2. ALL DETAILS FOR LEVELING PADS, AS WELL AS ALLOWABLE AND CALCULATED MAXIMUM BEARING PRESSURES.
3. DETAILED DESIGN COMPUTATIONS.
4. THE PLANS SHALL BE PREPARED, STAMPED AND SIGNED BY A NEW HAMPSHIRE LICENSED PROFESSIONAL ENGINEER.
5. FENCE HEIGHT TO BE 42".

RETAINING WALL SYSTEM

PART 1.0 – GENERAL

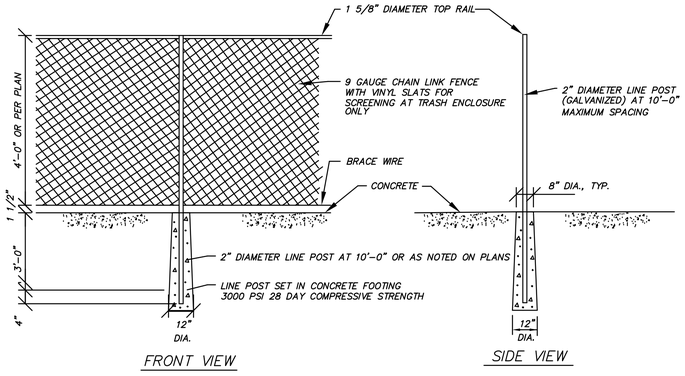
1.1 THIS WORK SHALL CONSIST OF FURNISHING ALL COMPONENTS AND ERECTING A RETAINING WALL SYSTEM IN ACCORDANCE WITH THESE SPECIFICATIONS AND IN CLOSE CONFORMITY WITH THE LINES, GRADES, DESIGN AND DIMENSIONS SHOWN ON THE PLANS OR AS ORDERED.

1.2 THIS FOLLOWING TYPE OF RETAINING WALL SYSTEMS ARE ACCEPTABLE TO BE USED ON THIS PROJECT:

REDI-ROCK	(603) 428-3218
SHEA WALL SYSTEMS	(800) 696-7432

1.3 STRUCTURAL AND GEOTECHNICAL DESIGN REQUIREMENTS

A. THE DESIGN OF THE WALL SYSTEM SHALL BE BY THE MANUFACTURER.
B. MINIMUM SAFETY FACTORS SHALL BE AS FOLLOWS:
   1. OVERTURNING: 2.0
   2. BASE SLIDING: 1.5
   3. GLOBAL STABILITY: 1.3
   4. GRID PULLOUT:
C. ALLOWABLE NET BEARING PRESSURE = 6 KIPS PER SQUARE FOOT MOIST SOIL UNIT WEIGHT = 125 POUNDS PER CUBIC FOOT FRICTION ANGLE = 32 DEGREES
D. DESIGN LOADING SHALL CONSIDER SEISMIC LOADS IN ACCORDANCE WITH THE NEW HAMPSHIRE STATE BUILDING CODE.



CHAIN LINK FENCE DETAIL

NOT TO SCALE

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

GNE CIVILWORKS NEW ENGLAND
CIVIL & WATERSHED ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

NO.	REVISION	APP'D	DATE
1	REV PER TRC COMMENTS #1	SJH	2-29-24

DATE: XXX
SCALE: XX
DRAWN BY: XX
DESIGN BY: XX
APPROVED BY:XX
PROJECT NO:XX
FILE: XXX

PLANNING FILE NO.: SITE-2024-0002

DETAIL SHEET

FUTURE AUTOMATION, INC.
127 VENTURE DRIVE
DOVER, NH 03820

FUTURE AUTOMATION
QUALITY WAY LOT
DOVER, NH 03820

20

Luminaire Schedule					
Symbol	Qty	Label	Arrangement	Description	[MANUFAC]
	1	S3	Single	MRS-LED-06L-SIL-3-UNV-DIM-30-70CRI-CXX / 4SQ B3 S11G20 S GA 4BC (20' AFG)	LSI INDUSTRIES, INC.
	2	S3-HS	Single	MRS-LED-06L-SIL-3-UNV-DIM-30-70CRI-IL-CXX / 4SQ B3 S11G20 S GA 4BC (20' AFG)	LSI INDUSTRIES, INC.
	3	S4-HS	Single	MRS-LED-06L-SIL-4-UNV-DIM-30-70CRI-IH-CXX / 4SQ B3 S11G20 S GA 4BC (20' AFG)	LSI INDUSTRIES, INC.
	3	S5-2	Back-Back	MRS-LED-06L-SIL-5W-UNV-DIM-30-70CRI-CXX / 4SQ B3 S11G20 SD180 GA 4BC (20' AFG)	LSI INDUSTRIES, INC.
	8	W	Single	EOF1MV3KBZ / WALL MTD 12' AFG	NICOR, Inc.
	2	W3	Single	XWM-3-LED-06L-30-UE-CXX / WALL MTD 18' AFG	LSI INDUSTRIES, INC.
	4	W4	Single	XWM-4-LED-06L-30-UE-CXX / WALL MTD 18' AFG	LSI INDUSTRIES, INC.

PARCEL AREA
375,192 S.F.
8.61 Ac.

PROPOSED
25,000 S.F.
BUILDING

PROPOSED
10,000 S.F.
BUILDING

50' WETLAND BUFFER

50' WETLAND BUFFER

QUALITY WAY

PARKING LOT AT 25K SF BLDG

Illuminance (Fc)
Average = 1.39
Maximum = 2.8
Minimum = 0.5
Avg/Min Ratio = 2.78
Max/Min Ratio = 5.60

TRUCK YARD-DOCK AREA 25K BLDG

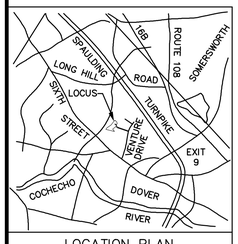
Illuminance (Fc)
Average = 0.87
Maximum = 2.4
Minimum = 0.3
Avg/Min Ratio = 2.90
Max/Min Ratio = 8.00

PARKING LOT AT 10K SF BLDG

Illuminance (Fc)
Average = 1.18
Maximum = 2.3
Minimum = 0.4
Avg/Min Ratio = 2.95
Max/Min Ratio = 5.75

TRUCK YARD-DOCK AREA 10K BLDG_1

Illuminance (Fc)
Average = 0.98
Maximum = 2.3
Minimum = 0.4
Avg/Min Ratio = 2.45
Max/Min Ratio = 5.75



LOCATION PLAN
(NO SCALE)

NH STATE PLANE
NAD 83 _ CRS DBS.

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

CIVILWORKS NEW ENGLAND
CIVIL & MUNICIPAL ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

NO.	REVISION	APP'D	DATE
1	REV PER TRC COMMENTS #1	SJH	2-29-24

DATE: 1-18-24
SCALE: 1"=40'
DRAWN BY: SRD
DESIGN BY: JFG
APPROVED BY:SJH
PROJECT NO: 22075
FILE: SITE.DWG

PLANNING FILE NO.
:SITE-2024-0002

LIGHTING PLAN

FUTURE AUTOMATION, INC.
127 VENTURE DRIVE
DOVER, NH 03820

FUTURE AUTOMATION
QUALITY WAY LOT
DOVER, NH 03820

21

Catalog # _____ Project : _____
Prepared By : _____ Date : _____

Mirada Small Area (MRS)

Outdoor LED Area Light



IP66 IK08

OVERVIEW	
Lumen Package	6,000 - 30,000
Wattage Range	39 - 209
Efficacy Range (LPW)	112 - 163
Weight lbs(kg)	20 (9.1)
Control Options	IMSBT, ALB, ALS, 7-Pin, PCI

QUICK LINKS

Ordering Guide | Performance | Photometrics | Dimensions

FEATURES & SPECIFICATIONS

Construction
- Rugged die-cast aluminum housing contains factory prewired driver and optical unit. Cast aluminum wiring access door located underneath.
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.
- Shipping weight: 27 lbs in carton.

Optical System
- State-of-the-Art one piece silicone optic sheet delivers industry leading optical control with an integrated gasket to provide IP66 rated seal.
- Proprietary silicone refractor optics provide exceptional coverage and uniformity in distribution types 2, 3, 4, 5W, FT, and LC/RC.
- Silicone optical material does not yellow or crack with age and provides a typical light transmittance of 93-95%.
- Zero uplight.
- Available in 5000K, 4000K, and 3000K color temperatures per ANSI C78.377
- Minimum CRI of 70.
- Integral louver (IL) and integral half louver (IH) options available for enhanced backlight control.

Electrical
- High-performance driver features over-voltage, under-voltage, short-circuit and over temperature protection.
- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 VAC) Input 50/60 Hz or optional High Voltage (347-480 VAC).
- L70 Calculated Life: >60k Hours
- Total harmonic distortion: <20%
- Operating temperature: -40°C to +50°C (-40°F to +122°F). 30L lumen packages rated to +40°C.
- Power factor: >.90
- Input power stays constant over life.
- Field replaceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation
- Driver is fully encased in potting material for moisture resistance and complies with FCC standards. Driver and key electronic components can easily be accessed.

Controls
- Optional integral passive infrared Bluetooth™ motion and photocell sensor. Fixtures operate independently and can be commissioned via iOS or Android configuration app.
- LSI's AirLink™ wireless control system options reduce energy and maintenance costs while optimizing light quality 24/7.

Installation
- Designed to mount to square or round poles.
- A single fastener secures the hinged door, underneath the housing and provides quick & easy access to the electrical compartment.
- Included terminal block accepts up to 12 ga. wire.
- Utilizes LSI's traditional B3 drill pattern.

Warranty
- LSI luminaires carry a 5-year limited warranty. Refer to https://www.lsicorp.com/resources/terms-conditions-warranty/ for more information.

Listings
- Listed to UL 1598 and UL 8750.
- Meets Buy American Act requirements.
- IDA compliant; with 3000K color temperature selection.
- Title 24 Compliant; see local ordinance for qualification information.
- IP66 rated Luminaire per IEC 60598-1.
- 3G rated for ANSI C136.31 high vibration applications are qualified.
- IK08 rated luminiare per IEC 66262 mechanical impact code
- DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

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Catalog # _____ Project : _____ Type : _____
Prepared By : _____ Date : _____

Mirada Medium Wall Sconce (XWM)

Outdoor Wall Sconce



IP65 IK08

OVERVIEW	
Lumen Package	3,000 - 21,000
Wattage Range	23 - 175
Efficacy Range (LPW)	125 - 158
Weight lbs(kg)	27 (12.2)
Control Options	IMSBT, ALB, ALS, PCI

QUICK LINKS

Ordering Guide | Performance | Photometrics | Dimensions

FEATURES & SPECIFICATIONS

Construction
- Rugged die-cast aluminum housing contains factory prewired driver and optical unit. Hinged die-cast aluminum wiring access door located underneath.
- Galvanized-steel universal wall mount bracket comes standard with hinging mechanism to easily access the junction box wire connections without removing the luminaire.
- Optional pole-mounting bracket (XPMA) permits mounting to standard poles.
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.
- Max shipping weight: 30lbs in carton.

Optical System
- State-of-the-Art one piece silicone optic provides industry leading optical control while also acting as an integrated gasket reducing system complexity and improving fixture reliability.
- Proprietary silicone refractor optics provide exceptional coverage and uniformity in Types 2, 3, 4, and FT distributions.
- Silicone optical material does not yellow or crack with age and provides a typical light transmittance of 93-95%.
- Zero uplight.
- Available in 5000K, 4000K and 3000K color temperatures per ANSI C78.377. Also Available in Phosphor Converted Amber with Peak intensity at 610nm.
- Minimum CRI of 70.

Electrical
- High-performance programmable driver features over-voltage, under-voltage, short-circuit and over temperature protection. Custom lumen and wattage packages available.
- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (347-480 Vac).
- L80 Calculated Life: >100k Hours
- Total harmonic distortion (THD): <20%
- 3L to 12L operating temperature: -40°C to +50°C (-40°F to +122°F).
- 15L operating temperature: -40°C to +45°C (-40°F to +113°F).
- 18L operating temperature: -40°C to +40°C (-40°F to +104°F).
- 21L operating temperature: -40°C to +35°C (-40°F to + 95°F).
- Power factor (PF): >.90
- Input power stays constant over life.
- Optional 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation
- Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed via hinged door.
- Optional integral emergency battery pack provides 90-minutes of constant power to the LED system, ensuring code compliance. A test switch/indicator button is installed on the housing for ease of maintenance. The fixture delivers 1500 lumens during emergency mode.

Controls
- Integral passive infrared Bluetooth™ motion sensor options. Fixtures operate independently and can be commissioned via an iOS or Android configuration app. Updates and modifications to the control strategy are easily implemented via an intuitive app.
- LSI's AirLink™ Blue lighting control system is a simple feature rich wireless Bluetooth mesh network. The integrated fixture sensor module provides wireless control of grouped fixtures based on motion sensors, daylight or a fully customizable schedule.

Installation
- Universal wall mounting plate easily mounts directly to 4" octagonal or square junction box.
- 2 fasteners secure the hinged door underneath the housing and provide quick & easy access to the electrical compartment for installing/servicing.
- Optional terminal block accepts up to 12 ga wire.

Warranty
- LSI luminaires carry a 5-year limited warranty. Refer to https://www.lsicorp.com/resources/terms-conditions-warranty/ for more information.
- 1 Year warranty on Battery Back-up option.

Listings
- Listed to UL 1598 and UL 8750.
- Meets Buy American Act requirements.
- IDA compliant; with 3000K or lower color temperature selection.
- Title 24 Compliant; see local ordinance for qualification information.
- Suitable for wet Locations.
- IP65 rated luminaire per IEC 60598.
- 3G rated for ANSI C136.31 high vibration applications when pole mounted (using optional XPMA bracket) or wall mounted.
- IK08 rated luminiare per IEC 66262 mechanical impact code
- DesignLights Consortium® (DLC) Premium qualified product. Not all versions of this product may be DLC Premium qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

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Catalog # _____ Project : _____
Prepared By : _____ Date : _____

Steel Poles

Square Straight



QUICK LINKS

Ordering Guide | Configurations | Dimensions | EPA

FEATURES & SPECIFICATIONS

Pole Shaft
- Straight poles are 4", 5", or 6" square.
- Pole shaft is electro-welded ASTM-A500 Grade C steel tubing with a minimum yield strength of 50,000 psi.
- On Tenon Mount steel poles, tenon is 2-3/8" O.D. high-strength pipe. Tenon is 4-3/4" in length.

Hand-Hole
- Standard hand-hole location is 12" above pole base.
- Poles 22' and above have a 3" x 6" reinforced hand-hole. Shorter poles have a 2" x 4" non-reinforced hand-hole.

Base
- Pole base is ASTM-A36 hot-rolled steel plate with a minimum yield strength of 36,000 psi.
- Two-piece square base cover is optional.

Anchor Bolts
- Poles are furnished with anchor bolts featuring zinc-plated double nuts and washers. Galvanized anchor bolts are optional.
- Anchor Bolts conform to ASTM F 1554-07a Grade 55 with a minimum yield strength of 55,000 PSI.

Ground Lug
- Ground lug is standard.

Duplex Receptacle
- Weatherproof duplex receptacle is optional.

Ground Fault Circuit Interrupter
- Self-testing Ground fault circuit interrupter is optional.

Finishes
- Every pole is provided with the DuraGrip Protection System and a 5-year limited warranty.
- When the top-of-the line DuraGrip Plus Protection System is selected, in addition to the DuraGrip Protection System, a non-porous, automotive-grade corrosion coating is applied to the lower portion of the pole interior sealing and further protecting it from corrosion. This option extends the limited warranty to 7 years.

Determining The Luminaire/Pole Combination For Your Application:
- Select luminaire from luminaire ordering information.
- Select bracket configuration if required
- Determine EPA value from luminaire/bracket EPA chart
- Select Pole Height
- Select MPH to match wind speed in the application area (See windspeed maps).
- Confirm pole EPA equal to or exceeding value of luminaire/bracket EPA
- Consult factory for special wind load requirements and banner brackets.

Pole Vibration Damper
- A pole vibration damper is recommended in open terrain areas of the country where low steady state winds are common.
- Non-tapered poles and lightly loaded poles are more susceptible to destructive vibration if a damper is not installed.

Listings
- UL Listed
- BAA/TAA Compliant

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EOF

LED Emergency Outdoor Full Cutoff

Project _____
Catalog _____
Type _____
Date _____

Product Description

The LED Emergency Outdoor Full Cutoff combines 90-minute emergency lighting with a low-profile, architectural design. The EOF is designed for outdoor use, with an optional cold-weather kit for added reliability in northern climates. The EOF comes standard with a photocell, with an optional motion sensor adding even more energy efficiency. An internal selector switch allows bypassing the photocell to control the unit from a wall switch. A non-emergency unit is available for locations not requiring battery-backup, providing a uniform look for all fixtures.

Construction
- IP65 Rated enclosure
- Durable die-cast Aluminum body
- Separable backplate for easy installation and maintenance

Optical System
- Polycarbonate lens
- Utilizes advanced LED technology with CCT of 3000K and 5000K
- CRI 70+

Electrical
- Input voltage of 120/277VAC
- Maintenance-free NiCad battery provides 90-minute emergency operation
- LED Indicator light & test button with self-testing, self-diagnostic option
- Photocell standard with wall switch control
- Motion sensor option for additional energy saving
- Operating Temperature:
  - EM: 32°F to 122°F (0°C to +50°C)
  - Non-EM and EM Cold Weather: -13°F to +122°F (-25°C to +50°C)

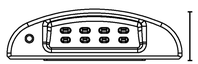
Mounting and installation
- Fixture mounts directly to J-Boxes and walls with screws
- Wiring possible through backplate or 1/2" conduit knockout
- For installations where power surge may be possible, NICOR recommends installing additional surge protection at the electrical distribution panel

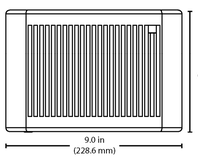
Finish
- Fine-textured, UV-stabilized powder coat bronze finish

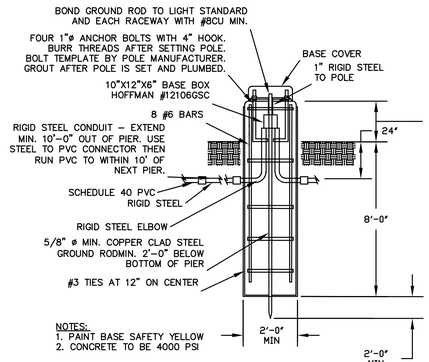
Listings
- LM-79, LM-80 testing performed in accordance with IESNA standards.
- UL & cUL 924 Listed
- Meets or exceeds requirements of NFPA 70 & NFPA 101
- Meets FCC Part 15, Subpart B, Class B standards for conducted and radiated emissions
- TM-21 Projected L70(9k) life >72,000 hours

Warranty
- 1-year limited system warranty standard
- Warranty does not cover product failure due to an overvoltage event (power surge.)

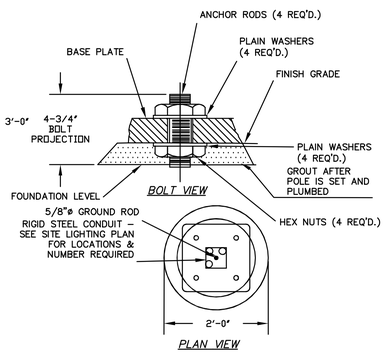








LIGHT POLE BASE
NOT TO SCALE



NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

CIVILWORKS NEW ENGLAND
CIVIL & WASTEWATER ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

NO.	REVISION	APP'D	DATE
1	REV PER TRC COMMENTS #1	SJH	2-29-24

DATE: 1-18-24
SCALE: AS SHOWN
DRAWN BY: SRD
DESIGN BY: JFG
APPROVED BY:SJH
PROJECT NO:: 22075
FILE: SITE.DWG

PLANNING FILE NO.: SITE-2024-0002

LIHGTING DETAILS

FUTURE AUTOMATION, INC.
127 VENTURE DRIVE
DOVER, NH 03820

FUTURE AUTOMATION
QUALITY WAY LOT
DOVER, NH 03820

PARCEL AREA
375,192 S.F.
8.61 Ac.

PROPOSED
25,000 S.F.
BUILDING

PROPOSED
10,000 S.F.
BUILDING

50'
WETLAND
BUFFER

50'
WETLAND
BUFFER

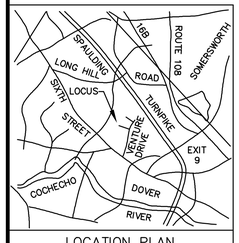
QUALITY WAY

45.50

8.50 20.00

Dover ladder feet

Width	: 8.50
Track	: 8.50
Lock to Lock Time	: 6.0
Steering Angle	: 44.0



LOCATION PLAN
(NO SCALE)

NH STATE PLANE
NAD 83 - CRS DBS.

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)

PLANNING FILE NO.: SITE-2024-0002

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

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CIVIL & SURVEYING ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

NO.	REVISION	APP'D	DATE
1	REV PER TRC COMMENTS #1	SJH	2-29-24

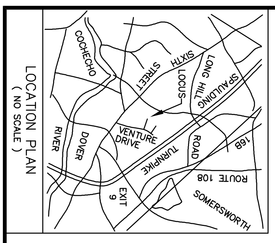
DATE: 1-18-24
SCALE: 1"=40'
DRAWN BY: SRD
DESIGN BY: JFG
APPROVED BY:SJH
PROJECT NO: 22075
FILE: SITE.DWG

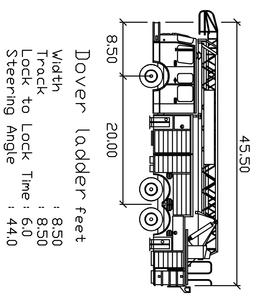
DOVER LADDER TRUCK MOVEMENT PLAN

FUTURE AUTOMATION, INC.
127 VENTURE DRIVE
DOVER, NH 03820

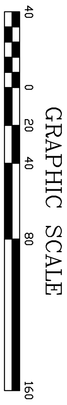
FUTURE AUTOMATION
QUALITY WAY LOT
DOVER, NH 03820

23





Dover ladder feet
Width : 8.50
Track : 8.50
Lock to Lock Time : 6.0
Steering Angle : 44.0



NH STATE PLANE
NAD 83 - GPS OBS.

PARCEL AREA
375,192 S.F.
8.61 Ac.

50' WETLAND BUFFER

PROPOSED 25,000 S.F. BUILDING

50' WETLAND BUFFER

PROPOSED 10,000 S.F. BUILDING

QUALITY WAY

PLANNING FILE NO.: SITE-2024-0002

DOVER LADDER TRUCK MOVEMENT PLAN

24

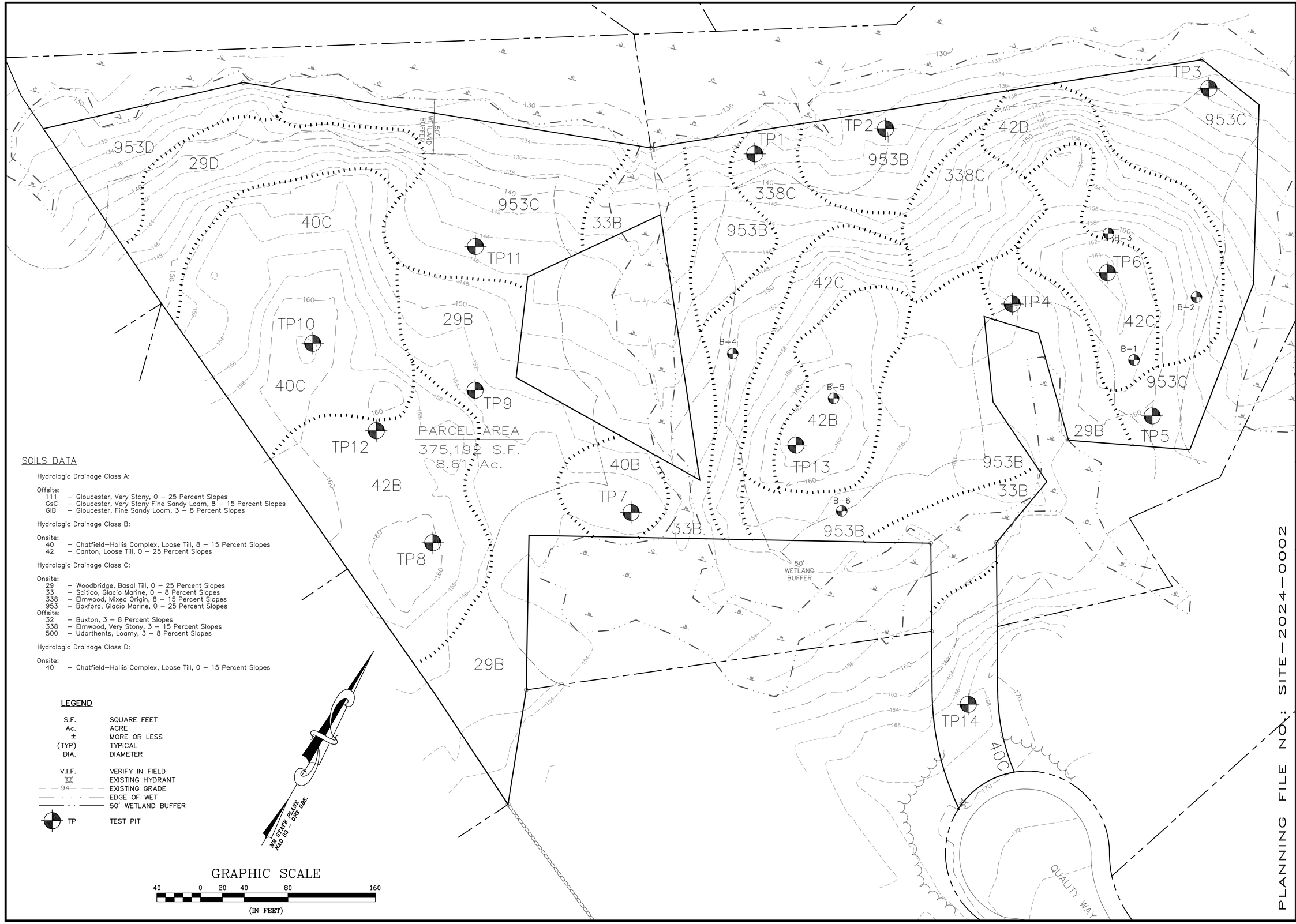
FUTURE AUTOMATION
QUALITY WAY LOT
DOVER, NH 03820

FUTURE AUTOMATION, INC.
127 VENTURE DRIVE
DOVER, NH 03820

DATE: 1-18-24				
SCALE: 1"=40'				
DRAWN BY: SRD				
DESIGN BY: JPG				
APPROVED BY:SJH				
PROJECT NO: 22075	1	REV PER TRC COMMENTS #1	SJH	2-29-24
FILE: SITE.DWG	NO.	REVISION	APP'D	DATE

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CNE
CIVILWORKS NEW ENGLAND
CIVIL & WATERFRONT ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443



SOILS DATA

Hydrologic Drainage Class A:

Offsite:
111 – Gloucester, Very Stony, 0 – 25 Percent Slopes
GsC – Gloucester, Very Stony Fine Sandy Loam, 8 – 15 Percent Slopes
GlB – Gloucester, Fine Sandy Loam, 3 – 8 Percent Slopes

Hydrologic Drainage Class B:

Onsite:
40 – Chatfield–Hollis Complex, Loose Till, 8 – 15 Percent Slopes
42 – Canton, Loose Till, 0 – 25 Percent Slopes

Hydrologic Drainage Class C:

Onsite:
29 – Woodbridge, Basal Till, 0 – 25 Percent Slopes
33 – Scitico, Glacio Marine, 0 – 8 Percent Slopes
338 – Elmwood, Mixed Origin, 8 – 15 Percent Slopes
953 – Boxford, Glacio Marine, 0 – 25 Percent Slopes
Offsite:
32 – Buxton, 3 – 8 Percent Slopes
338 – Elmwood, Very Stony, 3 – 15 Percent Slopes
500 – Udorthents, Loamy, 3 – 8 Percent Slopes

Hydrologic Drainage Class D:

Onsite:
40 – Chatfield–Hollis Complex, Loose Till, 0 – 15 Percent Slopes

LEGEND

S.F.	SQUARE FEET
Ac.	ACRE
±	MORE OR LESS
(TYP)	TYPICAL
DIA.	DIAMETER
V.I.F.	VERIFY IN FIELD
	EXISTING HYDRANT
94	EXISTING GRADE
	EDGE OF WET
	50' WETLAND BUFFER
TP	TEST PIT

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)

PLANNING FILE NO.: SITE-2024-0002

SITE SPECIFIC SOILS PLAN

FUTURE AUTOMATION, INC.
127 VENTURE DRIVE
DOVER, NH 03820

FUTURE AUTOMATION
QUALITY WAY LOT
DOVER, NH 03820

25

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CNE CIVILWORKS NEW ENGLAND
CIVIL & WATERSHED ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

NO.	REVISION	APP'D	DATE
1	REV PER TRC COMMENTS #1	SJH	2-29-24

PROJECT NO: 22075
FILE: SITE.DWG
DATE: 1-18-24
SCALE: 1"=40'
DRAWN BY: SRD
DESIGN BY: JFG
APPROVED BY:SJH

Michael Cuomo, Soil Scientist
6 York Pond Road, York, Maine 03909
207 363 4532
mcuomosoil@gmail.com

TEST PIT DATA

Client: Civilworks
Location: Quality Way, Dover, NH
Date: 1 December 2022

Test Pit Number: One

Depth	Description
1"	Leaf litter.
0-8"	Very dark grayish brown (10YR 3/2) stony fine sandy loam, granular, friable.
8-15"	Dark yellowish brown (10YR 4/6) stony fine sandy loam, blocky, friable.
15-24"	Light olive brown (2.5Y 5/3) silt loam, blocky, friable, redox.
24-36"	Olive gray (5Y 5/2) silt loam, blocky, firm, redox.
36-63"	Olive brown (2.5Y 4/4) stony fine sandy loam, blocky, firm, redox.
63"+	Bedrock.

Soil Series: Elmwood
Depth to Seasonal High Water Table: 15"
Depth to Restrictive Layer: 24"
Observed Water: 60"
Depth to Bedrock: 63"

Test Pit Number: Two

Depth	Description
2"	Leaf litter.
0-4"	Dark grayish brown (2.5Y 4/2) silt loam, granular, friable, redox.
4-10"	Light brownish gray (2.5Y 6/2) silt loam, blocky, friable, redox.
10-20"	Olive brown (2.5Y 4/4) silt loam, blocky, friable, redox.
20-30"	Gray (5Y 5/1) silt loam, blocky, firm, redox.
30-72"	Olive gray (5Y 4/2) silty clay loam, blocky, firm, redox.

Soil Series: Scitico
Depth to Seasonal High Water Table: Surface
Depth to Restrictive Layer: 20"
Observed Water: 6"
Depth to Bedrock: None

Test Pit Number: Three

Depth	Description
1"	Leaf litter.
0-8"	Dark brown (10YR 3/3) silt loam, granular, friable.
8-12"	Olive yellow (2.5Y 6/6) silt loam, blocky, friable.
12-16"	Dark grayish brown (2.5Y 4/2) silt loam, blocky, friable, redox.
16-28"	Olive brown (2.5Y 4/4) silt loam, blocky, firm, redox.
28-72"	Olive (5Y 5/3) silty clay loam, blocky, firm, redox.

Soil Series: Boxford
Depth to Seasonal High Water Table: 12"
Depth to Restrictive Layer: 16"
Observed Water: 12"
Depth to Bedrock: None

Test Pit Number: Four

Depth	Description
1"	Leaf litter.
0-6"	Dark brown (10YR 3/3) very fine sandy loam, granular, friable.
6-15"	Dark yellowish brown (10YR 4/6) very fine sandy loam, blocky, friable.
15-28"	Olive brown (2.5Y 4/4) silt loam, blocky, friable, redox.
28-80"	Light olive brown (2.5Y 5/4) stony fine sandy loam, blocky, firm, redox.
80-96"	Light yellowish brown (2.5Y 6/4) fine sand, massive, friable, redox.

Soil Series: Woodbridge variant
Depth to Seasonal High Water Table: 15"
Depth to Restrictive Layer: 28"
Observed Water: 15"
Depth to Bedrock: None

Test Pit Number: Five

Depth	Description
1"	Leaf litter.
0-8"	Very dark gray (2.5Y 3/1) silt loam, granular, friable.
8-10"	Light olive brown (2.5Y 5/3) silt loam, blocky, friable.
10-15"	Olive (5Y 5/3) silt loam, blocky, friable, redox.
15-38"	Olive (5Y 5/3) silt loam, blocky, firm, redox.
38-60"	Olive brown (2.5Y 4/3) stony fine sandy loam, blocky, firm, redox.
60-84"	Olive gray (5Y 5/2) silt loam, blocky, firm, redox.

Soil Series: Boxford variant
Depth to Seasonal High Water Table: 10"
Depth to Restrictive Layer: 15"
Observed Water: 15"
Depth to Bedrock: None

Test Pit Number: Six

Depth	Description
1"	Leaf litter.
0-6"	Very dark grayish brown (10YR 3/2) fine sandy loam, granular, friable.
6-24"	Yellowish brown (10YR 5/6) stony fine sandy loam, blocky, friable.
24-60"	Light yellowish brown (2.5Y 6/3) stony loamy sand, massive, friable.
60"+	Bedrock

Soil Series: Canton
Depth to Seasonal High Water Table: None
Depth to Restrictive Layer: None
Observed Water: None
Depth to Bedrock: 60"

Test Pit Number: Seven

Depth	Description
2"	Leaf litter.
0-6"	Very dark brown (10YR 2/2) stony fine sandy loam, granular, friable.
6-12"	Dark yellowish brown (10YR 4/6) stony fine sandy loam, blocky, friable.
12"+	Bedrock.

Soil Series: Hollis
Depth to Seasonal High Water Table: None
Depth to Restrictive Layer: None
Observed Water: None
Depth to Bedrock: 12"

Test Pit Number: Eight

Depth	Description
2"	Leaf litter.
0-6"	Dark brown (10YR 3/3) stony fine sandy loam, granular, friable.
6-12"	Dark yellowish brown (10YR 4/6) stony fine sandy loam, blocky, friable.
12-33"	Brownish yellow (10YR 6/6) stony fine sandy loam, blocky, friable.
33-60"	Light yellowish brown (2.5Y 6/3) stony loamy sand, massive, friable.

Soil Series: Canton
Depth to Seasonal High Water Table: None
Depth to Restrictive Layer: None
Observed Water: None
Depth to Bedrock: None

Test Pit Number: Nine

Depth	Description
3"	Leaf litter.
0-7"	Dark brown (10YR 3/3) stony fine sandy loam, granular, friable.
7-20"	Yellowish brown (10YR 5/6) stony fine sandy loam, blocky, friable.
20-25"	Light olive brown (2.5Y 5/4) stony fine sandy loam, blocky, friable, redox.
25-57"	Olive brown (2.5Y 4/4) stony fine sandy loam, massive, firm, redox.
57"+	Bedrock

Soil Series: Woodbridge
Depth to Seasonal High Water Table: 20"
Depth to Restrictive Layer: 25"
Observed Water: None
Depth to Bedrock: 57"

Test Pit Number: Ten

Depth	Description
2"	Leaf litter.
0-7"	Dark yellowish brown (10YR 3/6) fine sandy loam, granular, friable.
7-12"	Dark yellowish brown (10YR 4/6) fine sandy loam, blocky, friable.
12"+	Bedrock.

Soil Series: Hollis
Depth to Seasonal High Water Table: None
Depth to Restrictive Layer: None
Observed Water: None
Depth to Bedrock: 12"

Test Pit Number: Eleven

Depth	Description
1"	Leaf litter.
0-6"	Very dark grayish brown (2.5Y 3/2) silt loam, granular, friable.
6-12"	Olive brown (2.5Y 4/4) silt loam, blocky, friable.
12-22"	Light olive brown (2.5Y 5/4) silt loam, blocky, friable, redox.
22-32"	Olive gray (5Y 4/2) silt loam, blocky, firm, redox.
32-63"	Olive brown (2.5Y 4/4) stony fine sandy loam, blocky, firm, redox.

Soil Series: Boxford variant
Depth to Seasonal High Water Table: 12"
Depth to Restrictive Layer: 22"
Observed Water: 15"
Depth to Bedrock: None

Test Pit Number: Twelve

Depth	Description
3"	Leaf litter.
0-7"	Dark brown (10YR 3/3) stony fine sandy loam, granular, friable.
7-17"	Dark yellowish brown (10YR 4/6) stony fine sandy loam, blocky, friable.
17-30"	Brownish yellow (10YR 6/6) stony fine sandy loam, blocky, friable.
30-48"	Light yellowish brown (2.5Y 6/3) stony loamy sand, massive, friable.
48"+	Bedrock

Soil Series: Canton
Depth to Seasonal High Water Table: None
Depth to Restrictive Layer: None
Observed Water: None
Depth to Bedrock: 48"

Test Pit Number: Thirteen

Depth	Description
2"	Leaf litter.
0-6"	Very dark grayish brown (10YR 3/2) fine sandy loam, granular, friable.
6-16"	Dark yellowish brown (10YR 4/6) fine sandy loam, blocky, friable.
16-26"	Brownish yellow (10YR 6/6) fine sandy loam, blocky, friable.
26-64"	Light yellowish brown (2.5Y 6/3) stony loamy sand, massive, friable.

Soil Series: Canton
Depth to Seasonal High Water Table: None
Depth to Restrictive Layer: None
Observed Water: None
Depth to Bedrock: None

Test Pit Number: Fourteen

Depth	Description
3"	Leaf litter.
0-5"	Dark brown (10YR 3/3) fine sandy loam, granular, friable.
5-16"	Dark yellowish brown (10YR 4/6) fine sandy loam, blocky, friable.
16-23"	Yellowish brown (10YR 5/6) fine sandy loam, blocky, friable.
23"+	Bedrock.

Soil Series: Chatfield
Depth to Seasonal High Water Table: None
Depth to Restrictive Layer: None
Observed Water: None
Depth to Bedrock: 23"

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CIVIL & WATERSHED ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

NO.	REVISION	APP'D	DATE
1	REV PER TRC COMMENTS #1	SJH	2-29-24

DATE: 1-18-24
SCALE: AS SHOWN
DRAWN BY: SRD
DESIGN BY: JFG
APPROVED BY:SJH
PROJECT NO: 22075
FILE: SITE.DWG

PLANNING FILE NO.: SITE-2024-0002

TEST PIT LOGS

FUTURE AUTOMATION, INC.
127 VENTURE DRIVE
DOVER, NH 03820

FUTURE AUTOMATION
QUALITY WAY LOT
DOVER, NH 03820

Future Automation

Dover, NH

Planning Board
N.F.C. - 011024

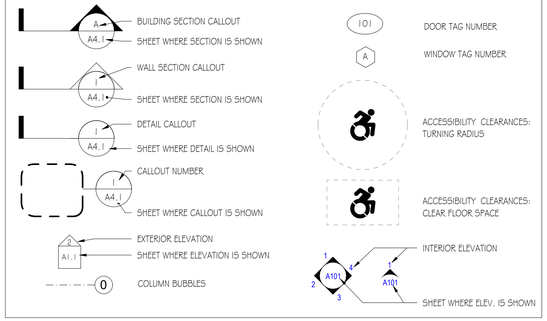
LOCUS MAP: (N.T.S.)



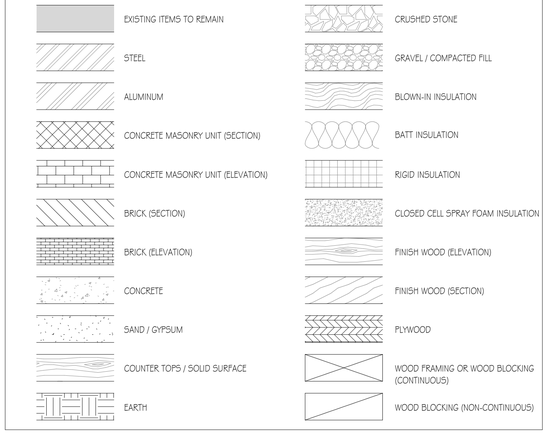
MASTER ABBREVIATION KEY:

AB	ANCHOR BOLT
AC	AIR CONDITIONER
ACI	AMERICAN CONCRETE INSTITUTE
ACOUST	ACOUSTIC
AFF	ABOVE FINISH FLOOR
ALT	ALTERNATE
ALUM	ALUMINUM
ANCH	ANCHOR
ANOD	ANODIZED
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
BD	BOARD
BIT	BITUMINOUS
BL	BUILDING LINE
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BEAM
BOC	BOTTOM OF CURB
BOF	BOTTOM OF FOOTING ELEVATION
BOT	BOTTOM
BRG	BEARING
BRK	BRICK
BSMT	BASEMENT
BTW	BETWEEN
BUR	BUILT-UP ROOF
CAB	CABINET
CB	CATCH BASIN
CER	CERAMIC
CF	CUBIC FOOT
CI	CAST IRON
CJ	CONTROL JOINT
CL	CLOSET
CLCB	CURBLESS CATCH BASIN
CLG	CEILING
CM	CONTRACT MANAGER
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT
COL	COLUMN
COMP	COMPACTED (COMPOSITION)
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CORR	CORRUGATED
CP	CONTROL PANEL
CSG	CASING
CSMT	CASEMENT
CT	CERAMIC TILE
CTR	CENTER
CY	CUBIC YARD
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DL	DEAD LOAD
DN	DOWN
DR	DOOR
DS	DOWNSPOUT
DS/C	DRIVE SIDE OF CURB
DTL	DETAIL
DWG	DRAWING
E	EAST
EJ	EXPANSION JOINT
EJC	EXPANSION JOINT COVER
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EQ	EQUAL
EQUIP	EQUIPMENT
ER	EMERGENCY ROOM
EST	ESTIMATE
EWC	ELECTRICAL WATER COOLER
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION
EXPD	EXPANDED
EXT	EXTERIOR
F/F	FACE OF FOUNDATION WALL
FA	FRESH AIR
FAP	FIRE ALARM PANEL
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FIN	FINISH
FL	FLOW LINE
FLR	FLOOR
FND	FOUNDATION
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FR	FIRE RATED
FS	FULL SIZE
FT	FOOT
FTG	FOOTING
FUR	FURRED (FURRING)
FVC	FIRE VALVE CABINET
GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GEN	GENERAL
GL	GLASS
GLZ	GLAZING
GRD	GRADE
GYP	GYPSUM
H|V	HEATING & VENTILATING
HC	HANDICAP
HDWD	HARDWOOD
HGT	HEIGHT
HM	HOLLOW METAL
HP	HIGH POINT
HVAC	HEATING, VENTILATION, AIR CONDITIONING
HWH	HOT WATER HEATER
ID	INSIDE DIAMETER
IN	INCH
INSUL	INSULATION
INT	INTERIOR
INV	INVERT
JC	JANITOR'S CLOSET
JST	JOIST
JT	JOINT
LAM	LAMINATE
LAV	LAVATORY
MAS	MASONRY
MAT	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MEM	MEMBRANE
MEP	MECHANICAL, ELECTRICAL, PLUMBING
METTP	METAL TOILET PARTITION
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MTL	METAL
MULL	MULLION
N	NORTH
NAT	NATURAL
NEC	NECESSARY
NIC	NOT IN CONTRACT
NOM	NOMINAL
NRC	NOISE REDUCTION COEFFICIENT
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF/C	OUTSIDE FACE OF CONCRETE
OH	OVERHEAD
OPG	OPENING
OPP	OPPOSITE
OR	OPERATING ROOM
PBD	PARTICLE BOARD
PCF	POUNDS PER CUBIC FOOT
PL	PROPERTY LINE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLYWD	PLYWOOD
PNL	PANEL
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PAINT
PTD	PAINTED
PTN	PARTITION
PVC	POLYVINYL CHLORIDE
QT	QUARRY TILE
R	RADIUS
R/A	RETURN AIR
RC	REINFORCED CONCRETE
RD	ROOF DRAIN
REF	REFERENCE
REFR	REFRIGERATOR
REINF	REINFORCE
REQD	REQUIRED
RGH	ROUGH
RL	RAIN LEADER
RM	ROOM
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RQMT	REQUIREMENT
S	SOUTH
S-TRAP	SEDIMENT TRAP
SC	SOLID CORE
SCED	SCHEDULE
SD	STORM DRAIN
SF	SQUARE FOOT
SH	SHOWER
SHT	SHEET
SIM	SIMILAR
SL	SLIDING
SMR	SINGLE PLY MEMBRANE ROOF
SP/PT/FIN	SPECIAL PAINT FINISH
SPEC	SPECIFICATION
SPKR	SPEAKER
SQ	SQUARE
SS	STAINLESS STEEL
STA	STATION
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRG	STRINGER
STRUCT	STRUCTURAL
SU	SITE UTILITY
SUSP	SUSPEND (SUSPENDED)
SYMM	SYMMETRICAL
SYS	SYSTEM
T	TREAD
T&G	TONGUE & GROOVED
T/FRM	TOP OF FRAME
T/SLB	TOP OF SLAB
TB	TACKBOARD
TEL	TELEPHONE
TEMP	TEMPORARY
TERR	TERRAZZO
THK	THICK
THLD	THRESHOLD
TOC	TOP OF CURB
TOF	TOP OF FOUNDATION
TOS	TOP OF SLAB
TOW	TOP OF WALL ELEVATION
TR	TO REMAIN
TYP	TYPICAL
UH	UNIT HEATER
UL	UNDERWRITER'S LABORATORIES, INC.
UOD	UNDERSIDE OF DECK
UON	UNLESS OTHERWISE NOTED
UR	URINAL
UV	UNIT VENTILATOR
VAR	VARIES OR VARIABLE
VB	VINYL BASE
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
VNR	VENEER
VOL	VOLUME
W	WEST
W/	WITH
WC	WATER CLOSET
WD	WOOD
WDW	WINDOW
WGL	WIRE GLASS
WP	WEATHERPROOF (WATERPROOFING)
WWF	WELDED WIRE FABRIC

GRAPHIC SYMBOLS LEGEND



MATERIAL LEGEND



DRAWING SHEET INDEX:

Sheet	Sheet Name	Issued	Revision	Revision Date
PCS	*PROJECT COVER SHEET*	*N.F.C.*		
A1.1	*FLOOR PLAN*	*N.F.C.*		
A3.1	*EXTERIOR ELEVATIONS*	*N.F.C.*		
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R1.1	*Main Building Street View Rendering*	*N.F.C.*		
R1.2	*Main Building Front View Rendering*	*N.F.C.*		
R1.3	*Street View Rendering*	*N.F.C.*		
R1.4	*Campus Aerial View Rendering*	*N.F.C.*		

GENERAL NOTES:

1. DO NOT SCALE DRAWING OR DIMENSIONS. FOR MISSING DIMENSIONS OR DIMENSIONS IN CONFLICT, CONTACT THE CONTRACTOR IMMEDIATELY BEFORE CONTINUING WITH WORK.
2. ANY DISCREPANCIES IN THESE PLANS WILL BE BROUGHT TO THE CONTRACTOR'S ATTENTION IN WRITING IMMEDIATELY
3. REFER TO MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DESIGN-BUILD PLANS AND SPECIFICATION FOR LOCATIONS OF ALL BLOCK OUTS, INSERTS, OPENINGS, CURBS, BASES, & PADS THAT ARE NOT DIMENSIONED OR SHOWN ON CONTRACTOR'S DWG'S. OR STRUCTURAL DWG'S.
4. STRUCTURAL STEEL, MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION PLANS AND SPECIFICATION SHALL BE PROVIDED AND ARE THE RESPONSIBILITY OF THERE RESPECTIVE SUBCONTRACTORS IF NOT CARRIED IN ARCHITECTURAL SERVICES
5. ALL CONSTRUCTION SHALL CONFORM TO AND BE IN ACCORDANCE WITH THE REGULATOR REQUIREMENTS MANDATED BY ALL FEDERAL, STATE AND LOCAL AUTHORITIES HAVING JURISDICTION IN ACCORDANCE TO THE STATE IN WHICH THE WORK IS PERFORMED (STATE BUILDING CODE, STATE LIFE SAFETY & FIRE CODE ETC.)
6. THE CONTRACTOR SHALL REVIEW ALL DOCUMENTS AND VERIFY ALL DIMENSIONS AND FIELD CONDITIONS, AND SHALL CONFIRM WORK IS BUILDABLE AS SHOWN. ANY CONFLICTS OR OMISSIONS, ETC. SHALL BE IMMEDIATELY REPORTED IN WRITING TO THE ARCHITECT FOR CLARIFICATION
7. DIMENSIONS ARE FROM EXTERIOR FACE OF FOUNDATION, VENEER, OR WALL STUD AND TO CENTER OF ALL INTERIOR STUD WALLS OR FACE OF INTERIOR MASONRY. UNLESS NOTED OTHERWISE.
8. CLEAR DIMENSIONS ARE FROM FACE TO FACE OF WALL FINISH. UNLESS NOTED OTHERWISE
9. REFER TO MECHANICAL DRAWINGS / SPEC. FOR ALL SIZES AND LOCATIONS OF MECHANICAL DUCT WORK.
10. UNLESS OBVIOUSLY SHOWN OTHERWISE, DOOR LOCATIONS NOT DESIGNATED BY WRITTEN DIMENSION SHALL BE CENTERED IN THE WALL OR SHALL BE LOCATED FOUR (4) INCHES FROM FINISH WALL TO EDGE OF DOOR JAMB. PER PLAN.
11. PROVIDE METAL CORNER BEAD AT ALL OUTSIDE CORNERS OF PLASTERED OR DRYWALL SURFACES, UNLESS NOTED OTHERWISE.
12. PENETRATIONS OF ALL FIRE RATED ASSEMBLIES SHALL BE PROTECTED BY LIKE RATED CONSTRUCTION DAMPERS, SEALANTS, COLLARS, ETC., TYPICAL.
13. CONTRACTOR SHALL FURNISH, LOCATE AND INSTALL ALL ACCESS PANELS AS REQUIRED AFTER INSTALLATION OF MECHANICAL DUCTS, PLUMBING AND ELECTRICAL WORK, FIRE RATED AS REQUIRED.
14. FURNISH AND INSTALL SOLID BLOCKING BEHIND ALL WALL HUNG MILLWORK ITEMS, RAILS, FIXTURES,GRAB BARS, ETC., WHERE INDICATED OR REQUIRED.
15. CONTRACTOR SHALL LAYOUT OR MARK, ALL EQUIPMENT, SYSTEMS AND MILLWORK ON THE FLOOR FOR ARCHITECT OR OWNER'S APPROVAL PRIOR TO BEGINNING CEILING / OVER HEAD WORK.
16. ALL SPRINKLER HEAD LOCATIONS, MAINS, BRANCHES AND RISER PIPE LOCATIONS MUST BE COORDINATED WITH THE DESIGN / BUILD CONTRACTOR PRIOR TO WORK.
17. FURNISH AND INSTALL FIRE EXTINGUISHERS IN TYPE, QUANTITY, AND LOCATION PER LOCAL FIRE DEPARTMENT. TYPICAL
18. CONTRACTOR SHALL VERIFY, COORDINATE LOCATION WITH THE ARCHITECT ANY SMOKE, CARBON MONOXIDE DETECTOR OR FIRE ALARM DEVICE AS REQUIRED BY THE LOCAL FIRE DEPARTMENT.
19. FURNISH & INSTALL FIRE DAMPERS WITH FUSIBLE LOUVER WHEREVER DUCT WORK PENETRATES ONE OR TWO HOUR CEILINGS OR WALLS. TYPICAL UNLESS NOTED OTHERWISE.
20. PROVIDE PLASTER AND GYPSUM WALL BOARD CONTROL JOINTS AT 30'-0" ON CENTER FROM FLOOR TO CEILING, OR AS NOTED ON THE CONSTRUCTION DOCUMENTS. VERIFY IN FEILD WITH ARCHITECT PRIOR TO WORK.

T | W DESIGNS
254 Drake Hill Rd. Strafford, NH
TW-Designs.com | 603.664.2181

Revision Schedule

No.	Description	Date

Project Info:
23027
Future Automation
Dover, NH
Planning Board

Architect of Record:
T | W Designs, LLC
254 Drake Hill Rd.
Strafford, NH 03884
603-664-2181

Civil Engineer:
XXX

Structural Engineer:
XXX

Electrical Engineer:
XXX

Mechanical Engineer:
XXX

Plumbing Engineer:
XXX

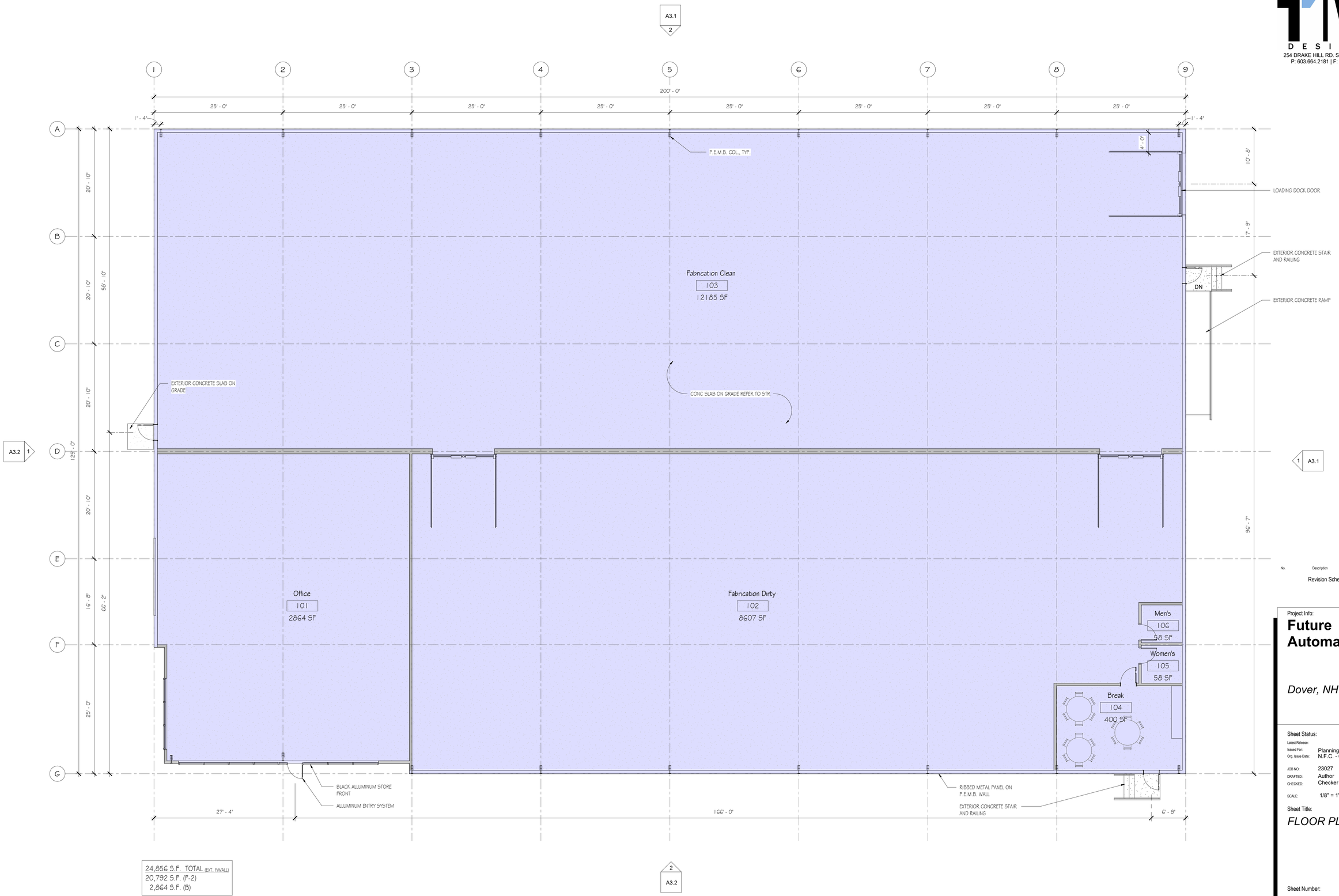
Fire Protection Eng.:
DESIGN / BUILD RESPONSIBILITY OF SPRINKLER CONTRACTOR

Contractor of Record:
XXX

23027
PROJECT COVER SHEET

SHEET NUMBER
PCS

TW DESIGNS LLC
254 DRAKE HILL RD. STRAFFORD, NH
P: 603.664.2181 | F: 603.664.9508



24,856 S.F. TOTAL (EXT. F/WALL)
20,792 S.F. (F-2)
2,864 S.F. (B)

1 FIRST FLOOR PLAN
1/8" = 1'-0"

No.	Description	Date

Revision Schedule

Project Info:

Future Automation

Dover, NH

Sheet Status:

Latest Release:
Issued For: Planning Board
Org. Issue Date: N.F.C. - 011024

JOB NO: 23027
DRAFTED: Author
CHECKED: Checker
SCALE: 1/8" = 1'-0"

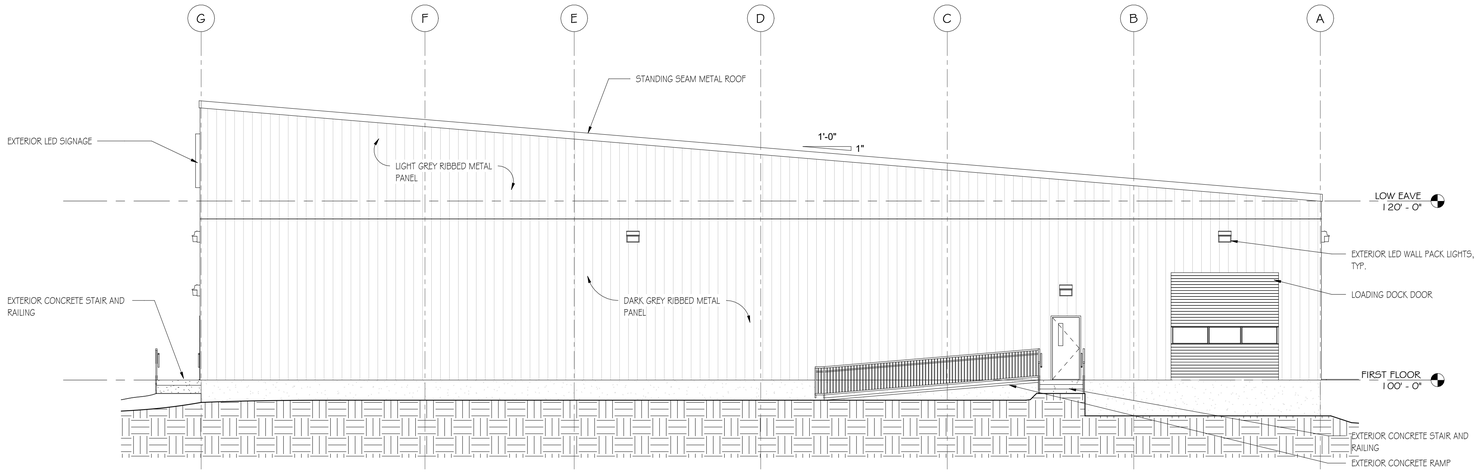
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FLOOR PLAN

Sheet Number:
A1.1

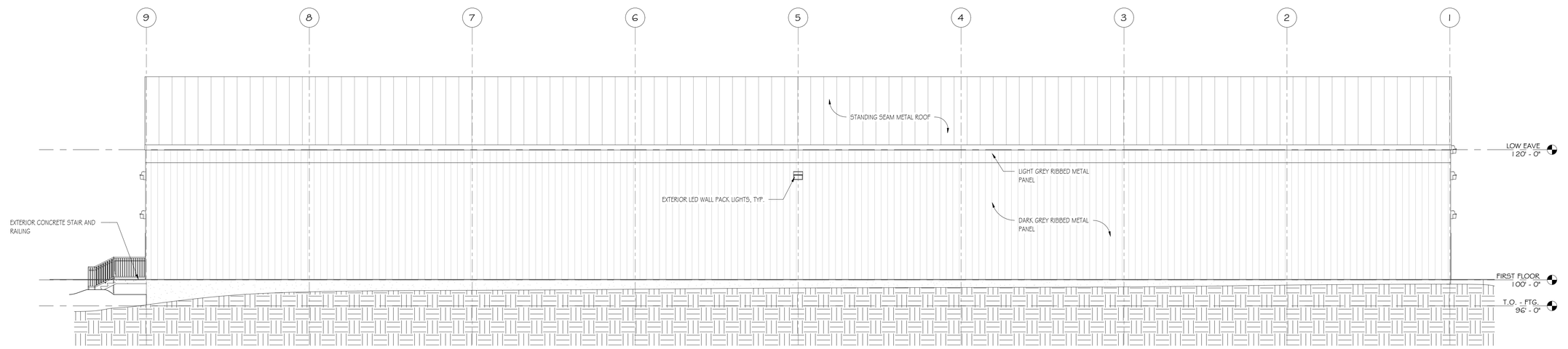
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TW DESIGNS LLC
254 DRAKE HILL RD. STRAFFORD, NH
P: 603.664.2181 | F: 603.664.9508



1 EAST EXTERIOR ELEVATION
1/8" = 1'-0"



2 NORTH EXTERIOR ELEVATION
1/8" = 1'-0"

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No.	Description	Date

Revision Schedule

Project Info:

Future Automation

Dover, NH

Sheet Status:

Latest Release:	
Issued For:	Planning Board
Org. Issue Date:	N.F.C. - 011024
JOB NO:	23027
DRAFTED:	JMT
CHECKED:	Checker
SCALE:	1/8" = 1'-0"

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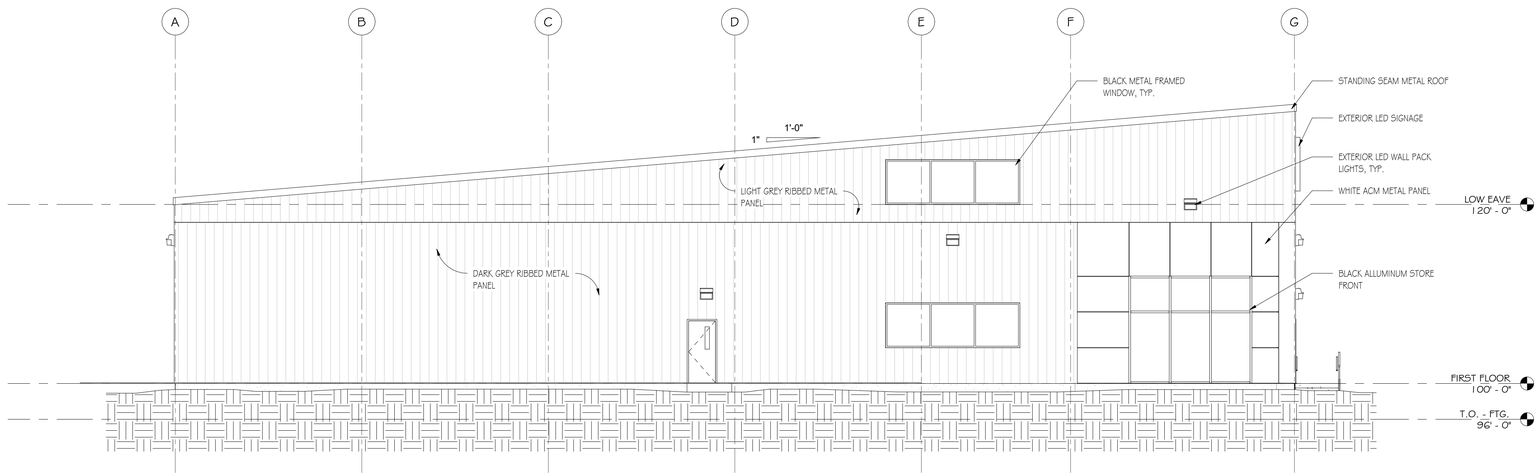
EXTERIOR ELEVATIONS

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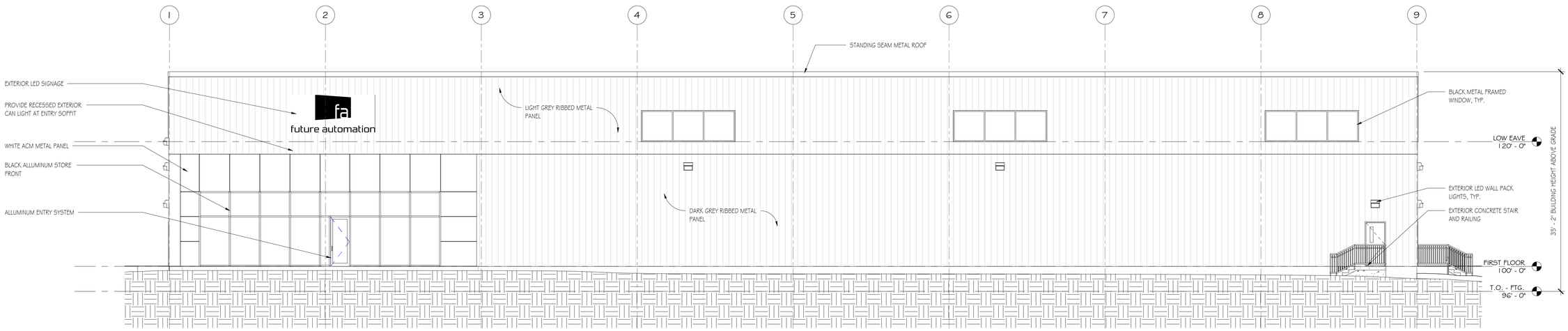
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TW DESIGNS, LLC
254 DRAKE HILL RD. STRAFFORD, NH
P: 603.664.2181 | F: 603.664.9508



1 WEST EXTERIOR ELEVATION
1/8" = 1'-0"



2 SOUTH EXTERIOR ELEVATION
1/8" = 1'-0"

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No.	Description	Date

Revision Schedule

Project Info:

Future Automation

Dover, NH

Sheet Status:

Latest Release:
Issued For: Planning Board
Org. Issue Date: N.F.C. - 011024

JOB NO: 23027
DRAFTED: Author
CHECKED: Checker

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

Sheet Title:

EXTERIOR ELEVATIONS

Sheet Number:

A3.2

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TW DESIGNS

Main Building Street View Rendering
Future Automation

R1.1

N.F.C.



TW DESIGNS

Main Building Front View Rendering
Future Automation

R1.2

N.F.C.

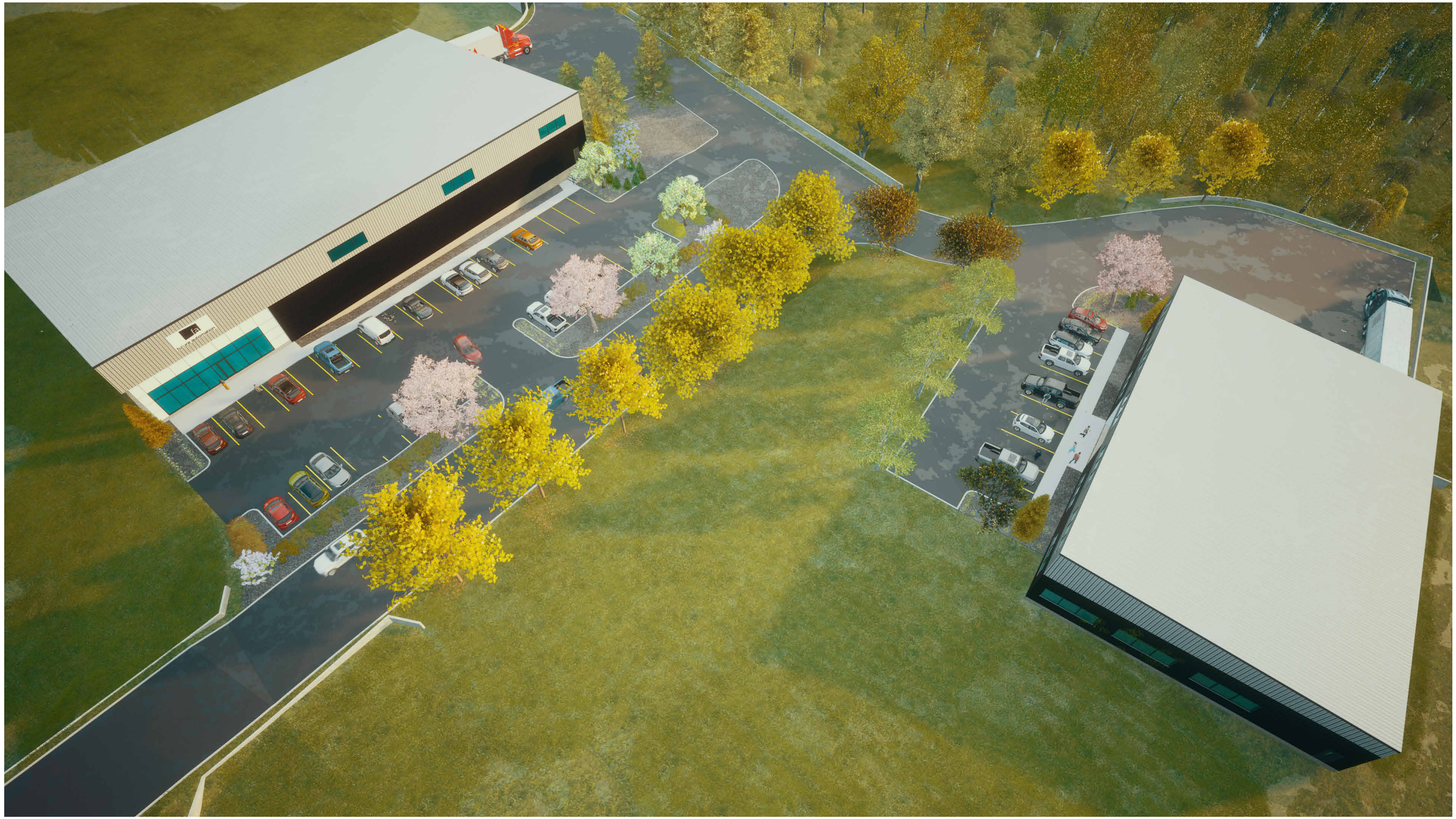


TW DESIGNS

Street View Rendering
Future Automation

R1.3

N.F.C.



TW DESIGNS

Campus Aerial View Rendering
Future Automation

R1.4

N.F.C.

Future Automation - AUX

Dover, NH

Planning Board

N.F.C. - 011024

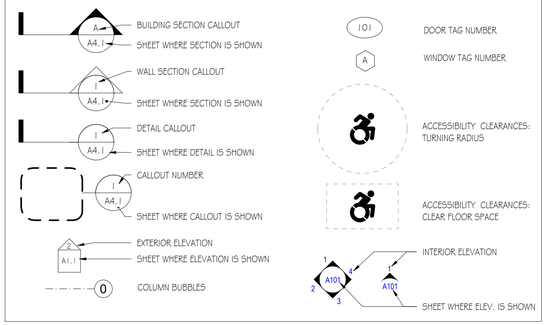
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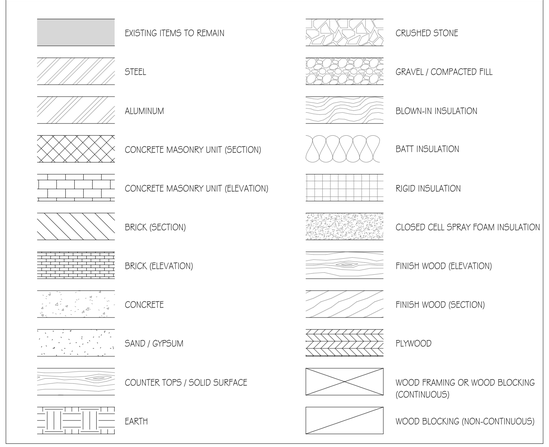
MASTER ABBREVIATION KEY:

AB	ANCHOR BOLT	E	EAST	LAM	LAMINATE	S	SOUTH
AC	AIR CONDITIONER	EJ	EXPANSION JOINT	LAV	LAVATORY	S-TRAP	SEDIMENT TRAP
ACI	AMERICAN CONCRETE INSTITUTE	EJC	EXPANSION JOINT COVER	MAS	MASONRY	SC	SOLID CORE
ACOUST	ACOUSTIC	EL	ELEVATION	MAT	MATERIAL	SCED	SCHEDULE
AFF	ABOVE FINISH FLOOR	ELEC	ELECTRICAL	MAX	MAXIMUM	SD	STORM DRAIN
ALT	ALTERNATE	ELEV	ELEVATOR	MECH	MECHANICAL	SF	SQUARE FOOT
ALUM	ALUMINUM	EQ	EQUAL	MEM	MEMBRANE	SH	SHOWER
ANCH	ANCHOR	EQUIP	EQUIPMENT	MEP	MECHANICAL, ELECTRICAL, PLUMBING	SHT	SHEET
ANOD	ANODIZED	ER	EMERGENCY ROOM	METTP	METAL TOILET PARTITION	SIM	SIMILAR
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS	EST	ESTIMATE	MFR	MANUFACTURER	SL	SLIDING
		EWC	ELECTRICAL WATER COOLER	MH	MANHOLE	SMR	SINGLE PLY MEMBRANE ROOF
BD	BOARD	EXH	EXHAUST	MIN	MINIMUM	SP/PT/FIN	SPECIAL PAINT FINISH
BIT	BITUMINOUS	EXIST	EXISTING	MISC	MISCELLANEOUS	SPEC	SPECIFICATION
BL	BUILDING LINE	EXP	EXPANSION	MO	MASONRY OPENING	SPKR	SPEAKER
BLDG	BUILDING	EXPD	EXPANDED	MTL	METAL	SQ	SQUARE
BLK	BLOCK	EXT	EXTERIOR	MULL	MULLION	SS	STAINLESS STEEL
BLKG	BLOCKING					STA	STATION
BM	BEAM	F/F	FACE OF FOUNDATION WALL	N	NORTH	STD	STANDARD
BOC	BOTTOM OF CURB	FA	FRESH AIR	NAT	NATURAL	STL	STEEL
BOF	BOTTOM OF FOOTING ELEVATION	FAP	FIRE ALARM PANEL	NEC	NECESSARY	STOR	STORAGE
		FD	FLOOR DRAIN	NIC	NOT IN CONTRACT	STRG	STRINGER
BOT	BOTTOM	FE	FIRE EXTINGUISHER	NOM	NOMINAL	STRUCT	STRUCTURAL
BRG	BEARING	FEC	FIRE EXTINGUISHER CABINET	NRC	NOISE REDUCTION COEFFICIENT	SU	SITE UTILITY
BRK	BRICK	FIN	FINISH	NTS	NOT TO SCALE	SUSP	SUSPEND (SUSPENDED)
BSMT	BASEMENT	FL	FLOW LINE			SYMM	SYMMETRICAL
BTW	BETWEEN	FLR	FLOOR	OC	ON CENTER	SYS	SYSTEM
BUR	BUILT-UP ROOF	FND	FOUNDATION	OD	OUTSIDE DIAMETER	T	TREAD
CAB	CABINET	FOF	FACE OF FINISH	OF/C	OUTSIDE FACE OF CONCRETE	T&G	TONGUE & GROOVED
CB	CATCH BASIN	FOM	FACE OF MASONRY	OH	OVERHEAD	T/FRM	TOP OF FRAME
CER	CERAMIC	FOS	FACE OF STUD	OPG	OPENING	T/SLB	TOP OF SLAB
CF	CUBIC FOOT	FR	FIRE RATED	OPP	OPPOSITE	TB	TACKBOARD
CI	CAST IRON	FS	FULL SIZE	OR	OPERATING ROOM	TEL	TELEPHONE
CJ	CONTROL JOINT	FT	FOOT			TEMP	TEMPORARY
CL	CLOSET	FTG	FOOTING	PBD	PARTICLE BOARD	TERR	TERRAZZO
CLCB	CURBLESS CATCH BASIN	FUR	FURRED (FURRING)	PCF	POUNDS PER CUBIC FOOT	THK	THICK
CLG	CEILING	FVC	FIRE VALVE CABINET			THLD	THRESHOLD
CM	CONTRACT MANAGER			PL	PROPERTY LINE	TOC	TOP OF CURB
CMU	CONCRETE MASONRY UNIT	GA	GAUGE	PLAM	PLASTIC LAMINATE	TOF	TOP OF FOUNDATION
CO	CLEAN OUT	GALV	GALVANIZED	PLAS	PLASTER	TOS	TOP OF SLAB
COL	COLUMN	GC	GENERAL CONTRACTOR	PLYWD	PLYWOOD	TOW	TOP OF WALL ELEVATION
COMP	COMPACTED (COMPOSITION)	GEN	GENERAL	PNL	PANEL	TR	TO REMAIN
CONC	CONCRETE	GL	GLASS	PSF	POUNDS PER SQUARE FOOT	TYP	TYPICAL
CONST	CONSTRUCTION	GLZ	GLAZING	PSI	POUNDS PER SQUARE INCH	UH	UNIT HEATER
CONT	CONTINUOUS	GRD	GRADE	PT	PAINT	UL	UNDERWRITERS LABORATORIES, INC.
CONTR	CONTRACTOR	GYP	GYPSUM	PTD	PAINTED	UOD	UNDERSIDE OF DECK
CORR	CORRUGATED	H&V	HEATING & VENTILATING	PTN	PARTITION	UON	UNLESS OTHERWISE NOTED
CP	CONTROL PANEL	HC	HANDICAP	PVC	POLYVINYL CHLORIDE	UR	URINAL
CSG	CASING	HDWD	HARDWOOD			UV	UNIT VENTILATOR
CSMT	CASEMENT	HGT	HEIGHT	QT	QUARRY TILE	VAR	VARIES OR VARIABLE
CT	CERAMIC TILE	HM	HOLLOW METAL	R	RADIUS	VB	VINYL BASE
CTR	CENTER	HP	HIGH POINT	R/A	RETURN AIR	VCT	VINYL COMPOSITION TILE
CY	CUBIC YARD	HVAC	HEATING, VENTILATION, AIR CONDITIONING	RC	REINFORCED CONCRETE	VERT	VERTICAL
		HWH	HOT WATER HEATER	RD	ROOF DRAIN	VEST	VESTIBULE
DF	DRINKING FOUNTAIN			REF	REFERENCE	VIF	VERIFY IN FIELD
DIA	DIAMETER	ID	INSIDE DIAMETER	REFR	REFRIGERATOR	VNR	VENEER
DIAG	DIAGONAL	IN	INCH	REINF	REINFORCE	VOL	VOLUME
DIM	DIMENSION	INSUL	INSULATION	REQD	REQUIRED	W	WEST
DL	DEAD LOAD	INT	INTERIOR	RGH	ROUGH	W/	WITH
DN	DOWN	INV	INVERT	RL	RAIN LEADER	WC	WATER CLOSET
DR	DOOR			RM	ROOM	WD	WOOD
DS	DOWNSPOUT	JC	JANITOR'S CLOSET	RO	ROUGH OPENING	WDW	WINDOW
DS/C	DRIVE SIDE OF CURB	JST	JOIST	ROW	RIGHT OF WAY	WGL	WIRE GLASS
DTL	DETAIL	JT	JOINT	RQMT	REQUIREMENT	WP	WEATHERPROOF (WATERPROOFING)
DWG	DRAWING					WWF	WELDED WIRE FABRIC

GRAPHIC SYMBOLS LEGEND



MATERIAL LEGEND



DRAWING SHEET INDEX:

Sheet	Sheet Name	Issued	Revision	Revision Date
PCS	*PROJECT COVER SHEET*	*N.F.C.*		
A1.1	*FLOOR PLAN*	*N.F.C.*		
A3.1	*EXTERIOR ELEVATIONS*	*N.F.C.*		
R1.1	*AUX Buidling Street View Rendering*	*N.F.C.*		

GENERAL NOTES:

1. DO NOT SCALE DRAWING OR DIMENSIONS. FOR MISSING DIMENSIONS OR DIMENSIONS IN CONFLICT, CONTACT THE CONTRACTOR IMMEDIATELY BEFORE CONTINUING WITH WORK.
2. ANY DISCREPANCIES IN THESE PLANS WILL BE BROUGHT TO THE CONTRACTOR'S ATTENTION IN WRITING IMMEDIATELY
3. REFER TO MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DESIGN-BUILD PLANS AND SPECIFICATION FOR LOCATIONS OF ALL BLOCK OUTS, INSERTS, OPENINGS, CURBS, BASES, & PADS THAT ARE NOT DIMENSIONED OR SHOWN ON CONTRACTOR'S DWG'S. OR STRUCTURAL DWG'S.
4. STRUCTURAL STEEL, MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION PLANS AND SPECIFICATION SHALL BE PROVIDED AND ARE THE RESPONSIBILITY OF THERE RESPECTIVE SUBCONTRACTORS IF NOT CARRIED IN ARCHITECTURAL SERVICES
5. ALL CONSTRUCTION SHALL CONFORM TO AND BE IN ACCORDANCE WITH THE REGULATOR REQUIREMENTS MANDATED BY ALL FEDERAL, STATE AND LOCAL AUTHORITIES HAVING JURISDICTION IN ACCORDANCE TO THE STATE IN WHICH THE WORK IS PERFORMED (STATE BUILDING CODE, STATE LIFE SAFETY & FIRE CODE ETC.)
6. THE CONTRACTOR SHALL REVIEW ALL DOCUMENTS AND VERIFY ALL DIMENSIONS AND FIELD CONDITIONS, AND SHALL CONFIRM WORK IS BUILDABLE AS SHOWN. ANY CONFLICTS OR OMISSIONS, ETC. SHALL BE IMMEDIATELY REPORTED IN WRITING TO THE ARCHITECT FOR CLARIFICATION
7. DIMENSIONS ARE FROM EXTERIOR FACE OF FOUNDATION, VENEER, OR WALL STUD AND TO CENTER OF ALL INTERIOR STUD WALLS OR FACE OF INTERIOR MASONRY. UNLESS NOTED OTHERWISE.
8. CLEAR DIMENSIONS ARE FROM FACE TO FACE OF WALL FINISH. UNLESS NOTED OTHERWISE
9. REFER TO MECHANICAL DRAWINGS / SPEC. FOR ALL SIZES AND LOCATIONS OF MECHANICAL DUCT WORK.
10. UNLESS OBVIOUSLY SHOWN OTHERWISE, DOOR LOCATIONS NOT DESIGNATED BY WRITTEN DIMENSION SHALL BE CENTERED IN THE WALL OR SHALL BE LOCATED FOUR (4) INCHES FROM FINISH WALL TO EDGE OF DOOR JAMB. PER PLAN.
11. PROVIDE METAL CORNER BEAD AT ALL OUTSIDE CORNERS OF PLASTERED OR DRYWALL SURFACES, UNLESS NOTED OTHERWISE.
12. PENETRATIONS OF ALL FIRE RATED ASSEMBLIES SHALL BE PROTECTED BY LIKE RATED CONSTRUCTION DAMPERS, SEALANTS, COLLARS, ETC., TYPICAL.
13. CONTRACTOR SHALL FURNISH, LOCATE AND INSTALL ALL ACCESS PANELS AS REQUIRED AFTER INSTALLATION OF MECHANICAL DUCTS, PLUMBING AND ELECTRICAL WORK, FIRE RATED AS REQUIRED.
14. FURNISH AND INSTALL SOLID BLOCKING BEHIND ALL WALL HUNG MILLWORK ITEMS, RAILS, FIXTURES,GRAB BARS, ETC. . WHERE INDICATED OR REQUIRED.
15. CONTRACTOR SHALL LAYOUT OR MARK, ALL EQUIPMENT, SYSTEMS AND MILLWORK ON THE FLOOR FOR ARCHITECT OR OWNER'S APPROVAL PRIOR TO BEGINNING CEILING / OVER HEAD WORK.
16. ALL SPRINKLER HEAD LOCATIONS, MAINS, BRANCHES AND RISER PIPE LOCATIONS MUST BE COORDINATED WITH THE DESIGN / BUILD CONTRACTOR PRIOR TO WORK.
17. FURNISH AND INSTALL FIRE EXTINGUISHERS IN TYPE, QUANTITY, AND LOCATION PER LOCAL FIRE DEPARTMENT. TYPICAL
18. CONTRACTOR SHALL VERIFY, COORDINATE LOCATION WITH THE ARCHITECT ANY SMOKE, CARBON MONOXIDE DETECTOR OR FIRE ALARM DEVICE AS REQUIRED BY THE LOCAL FIRE DEPARTMENT.
19. FURNISH & INSTALL FIRE DAMPERS WITH FUSIBLE LOUVER WHEREVER DUCT WORK PENETRATES ONE OR TWO HOUR CEILINGS OR WALLS. TYPICAL UNLESS NOTED OTHERWISE.
20. PROVIDE PLASTER AND GYPSUM WALL BOARD CONTROL JOINTS AT 30'-0" ON CENTER FROM FLOOR TO CEILING, OR AS NOTED ON THE CONSTRUCTION DOCUMENTS. VERIFY IN FEILD WITH ARCHITECT PRIOR TO WORK.

T | W DESIGNS
254 Drake Hill Rd. Strafford, NH
TW-Designs.com | 603.664.2181

Revision Schedule

No.	Description	Date

Project Info:

23027
Future Automation - AUX
Dover, NH
Planning Board

Architect of Record:

T | W Designs, LLC
254 Drake Hill Rd.
Strafford, NH 03884
603-664-2181

Civil Engineer:

XXX

Structural Engineer:

XXX

Electrical Engineer:

XXX

Mechanical Engineer:

XXX

Plumbing Engineer:

XXX

Fire Protection Eng.:

DESIGN / BUILD
RESPONSIBILITY OF
SPRINKLER CONTRACTOR

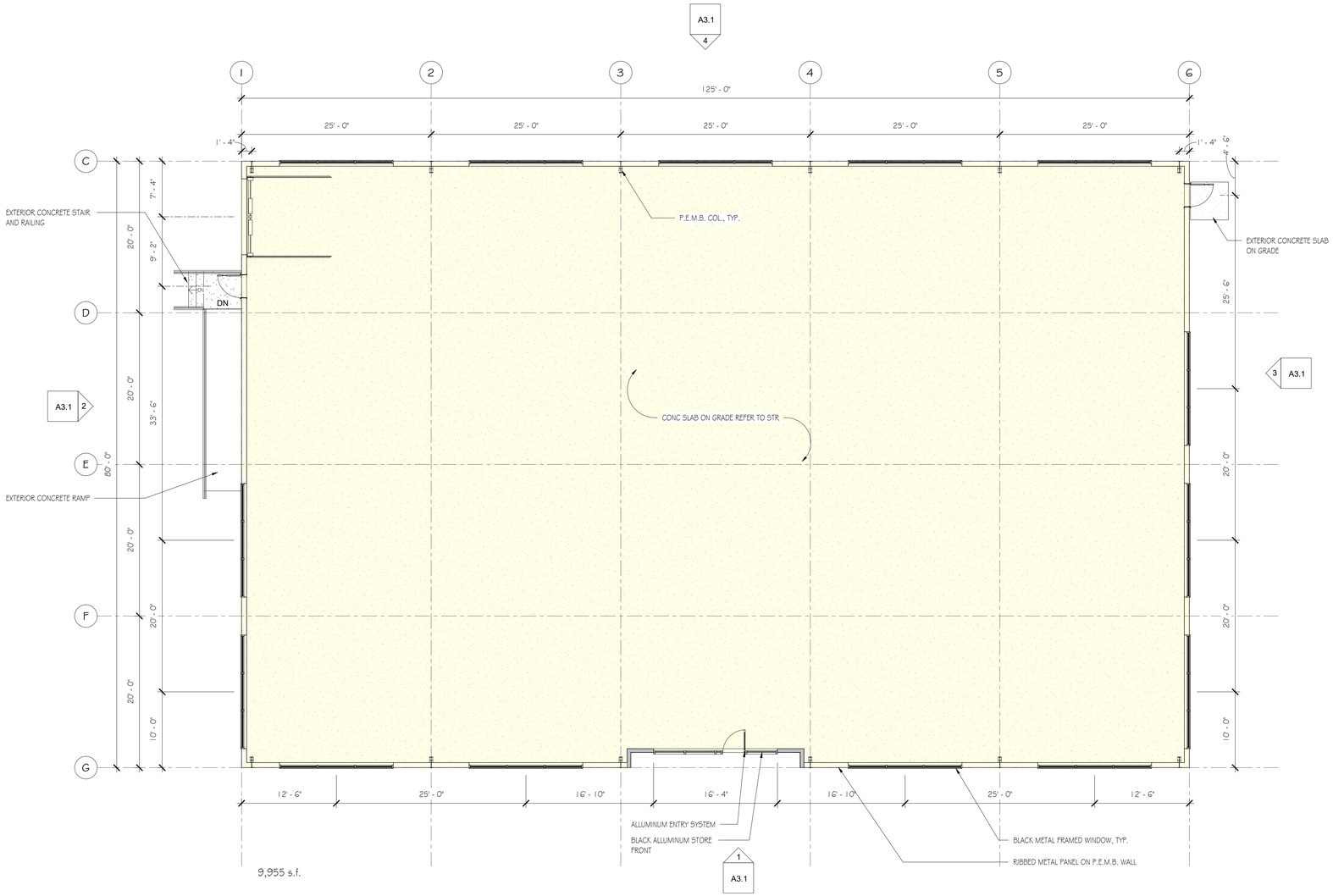
Contractor of Record:

XXX

23027
PROJECT
COVER SHEET

SHEET NUMBER
PCS

TW DESIGNS LLC
254 DRAKE HILL RD. STRAFFORD, NH
P: 603.664.2181 | F: 603.664.9508



1 FIRST FLOOR
1/8" = 1'-0"

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No.	Description	Date

Revision Schedule

Project Info:

Future Automation - AUX

Dover, NH

Sheet Status:

Latest Release:
Issued For: Planning Board
Orig. Issue Date: N.F.C. - 011024

JOB NO: 23027
DRAFTED: Author
CHECKED: Checker

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

Sheet Title:

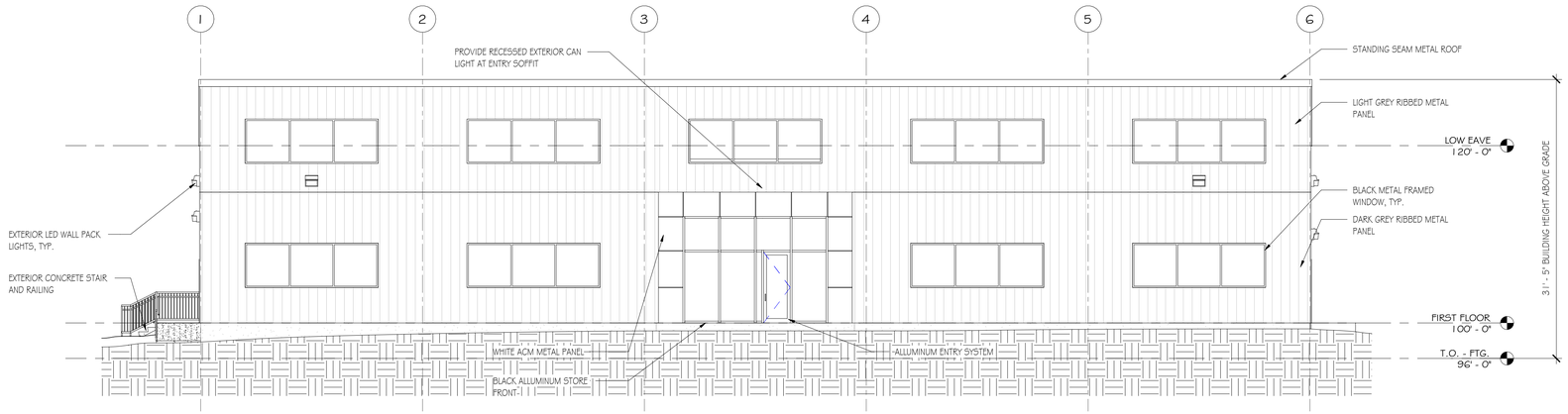
FLOOR PLAN

Sheet Number:

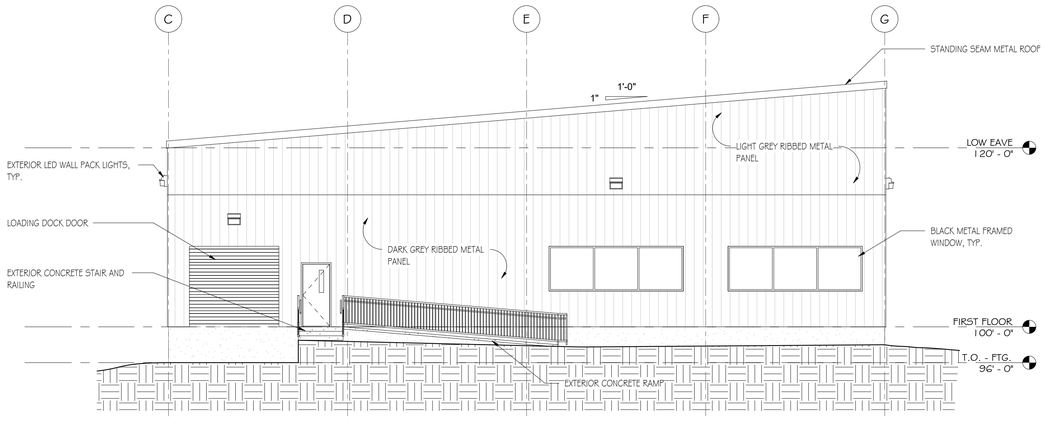
A1.1

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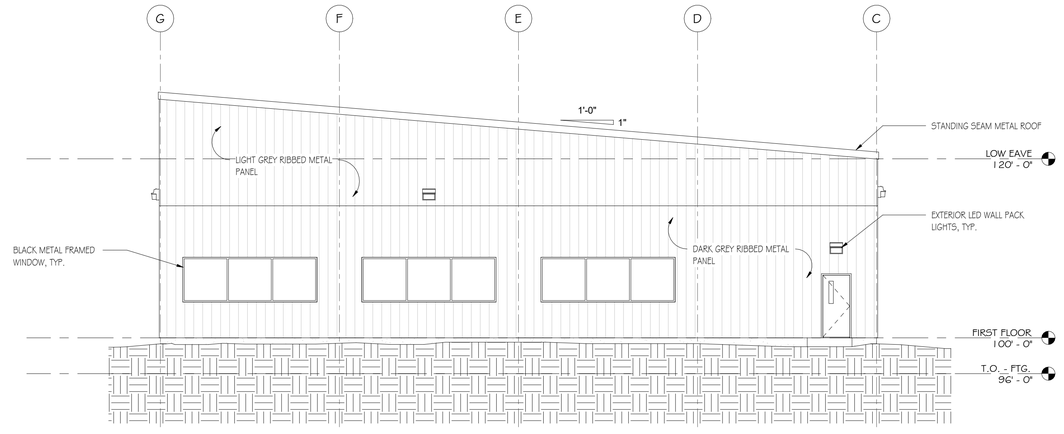
TW DESIGNS LLC
254 DRAKE HILL RD. STRAFFORD, NH
P: 603.664.2181 | F: 603.664.9508



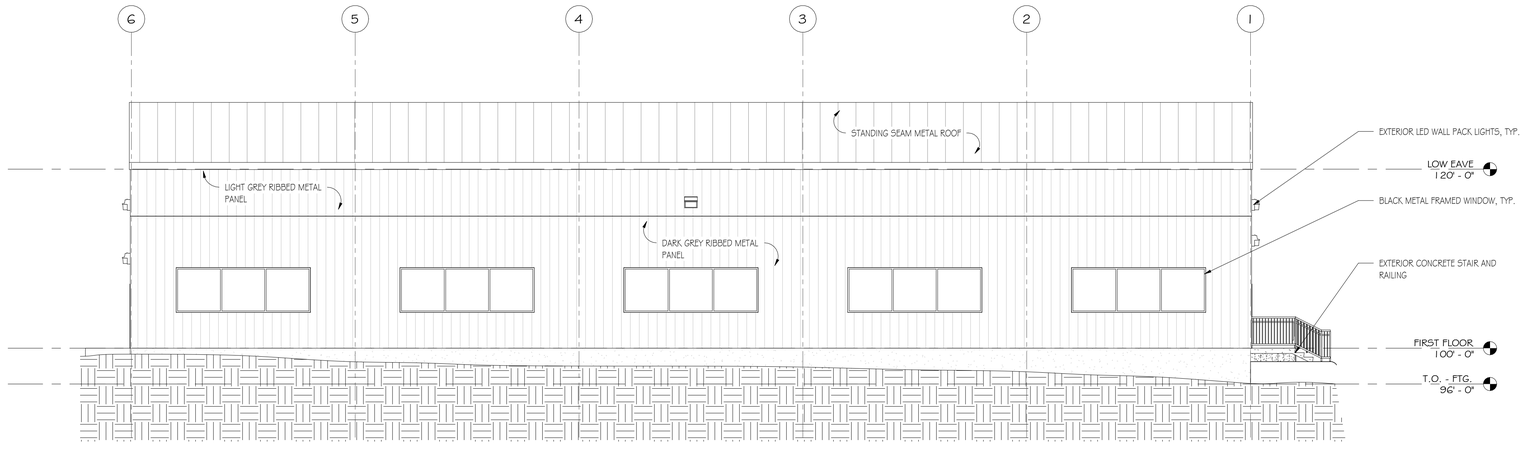
1 SOUTH EXTERIOR ELEVATION
1/8" = 1'-0"



2 WEST EXTERIOR ELEVATION
1/8" = 1'-0"



3 EAST EXTERIOR ELEVATION
1/8" = 1'-0"



4 NORTH EXTERIOR ELEVATION
1/8" = 1'-0"

No.	Description	Date

Revision Schedule

Project Info:

Future Automation - AUX

Dover, NH

Sheet Status:

Latest Release:
Issued For: Planning Board
Org. Issue Date: N.F.C. - 011024

JOB NO: 23027
DRAFTED: JMT
CHECKED: Checker
SCALE: 1/8" = 1'-0"

Sheet Title:

EXTERIOR ELEVATIONS

Sheet Number:

A3.1

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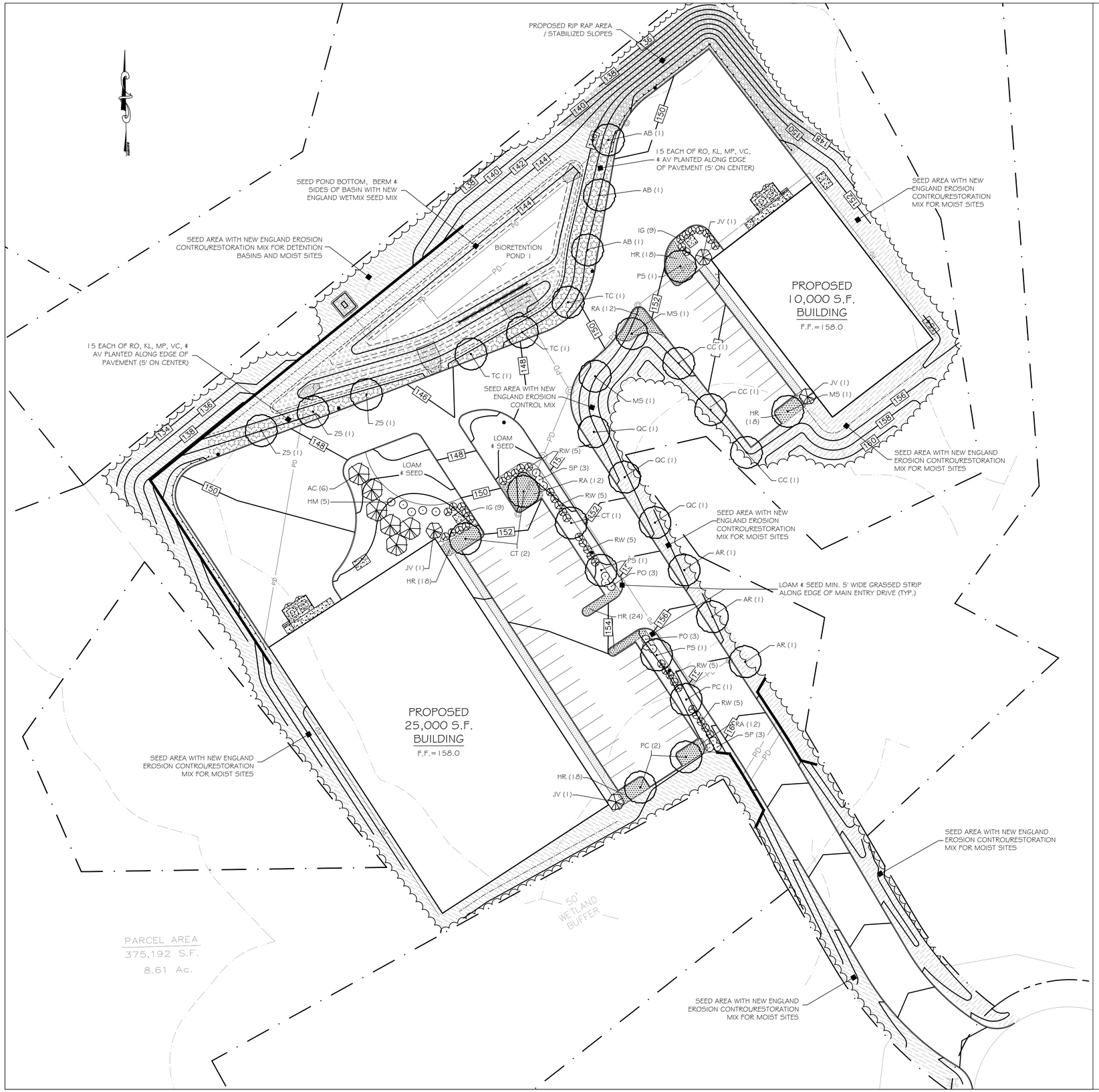


TW DESIGNS

AUX Buidling Street View Rendering
Future Automation - AUX

R1.1

N.F.C.



PLANTING SCHEDULE Botanical Name/ Common Name	Size	Label	Quantity
TREES			
Abies concolor / White Fir	6-7' B&B	AC	6
Acer rubrum 'Bowhall' / Bowhall Red Maple	2.5-3" Cal	AB	3
Acer rubrum 'October Glory' / October Glory Red Maple	2.5-3" CAL.	AR	3
Carpinus betulus 'Frans Fontaine' / Frans Fontaine European Hornbeam	2.5-3" CAL.	CC	3
Crataegus crusgalli inermis ' Crusader' / Crusader Thornless Hawthorne	2.5-3" CAL.	CT	3
Juniperus virginiana 'Hillspire' / Hillspire Eastern Red Cedar	5-6' B&B	JV	4
Malus 'Spring Snow' / Spring Snow Crabapple	2.5-3" CAL.	MS	3
Prunus serrulata 'Kwanzan' / Kwanzan Flowering Cherry	2.5-3" CAL.	PS	3
Pyrus calleryanna 'Aristocrat' / Aristocrat Flowering Pear	2.5-3" CAL.	PC	3
Quercus coccinea / Scartlet Oak	2.5-3" CAL.	QC	3
Tilia cordata 'Greenspire' / Greenspire Littleleaf Linden	2.5-3" CAL.	TC	3
Zelkova serrata 'Village Green' / Village Green Zelkova	2.5-3" Cal	ZS	3
SHRUBS			
Hydrangea macrophylla 'Endless Summer' / Endless Summer Bigleaf Hydrangea	2-2.5'	HM	5
Ilex glabra 'Compacta' / Compact Inkberry Holly	2-2.5'	IG	18
Physocarpus opulifolius 'Little Devil' / Little Devil Ninebark	2-2.5'	PO	6
Rhododendron 'Wilsoni' / Wilson Rhododendron	2-2.5'	RW	25
Syringa x hyacinthiflora 'Pocahontas' / Pocahontas Lilac	2-2.5'	SP	6
PERENNIALS			
Hemerocallis 'Happy Returns'/ Happy Returns Daylily	#1	HR	96
GROUNDCOVER			
Rhus aromatica 'Grow Low' / Grow Low Sumac	18-24"	RA	36
BIORETENTION POND #1			
Cornus sericea / Red-Osier Dogwood	#1	RO	15
Kalmia latifolia / Mountain Laurel	#1	KL	15
Myrica pensylvanica / Northern Bayberry	#1	MP	15
Vaccinium corymbosum / Highbush Blueberry	#1	VC	15
Viburnum dentatum / Arrowwood Viburnum	#1	AV	15
SEED MIX			
Grass Seed Mix			3,000 S.F.
New England Wetmix			10,000 S.F.
New England Erosion Control / Restoration Mix for Detention Basins & Moist Sites			35,000 S.F.

PLANTING NOTES

1. CONTRACTOR SHALL OBTAIN APPROVAL FROM LANDSCAPE ARCHITECT PRIOR TO PURCHASING AND/OR INSTALLING SUBSTITUTE PLANT MATERIAL PRIOR TO PURCHASE OF ANY SUBSTITUTE MATERIALS.
2. CONSTRUCTION ACCESS WILL BE AS DIRECTED BY LANDSCAPE ARCHITECT. CONTRACTOR IS RESPONSIBLE FOR RESTORATION OF ACCESS ROUTE AND ALL AREAS DISTURBED BY PLANTING OPERATIONS UPON COMPLETION OF CONSTRUCTION OPERATIONS, AT NO ADDITIONAL COST TO THE OWNER.
3. LAYOUT OF ALL PLANTING BEDS AND LOCATION OF PLANTS TO BE APPROVED BY LANDSCAPE ARCHITECT ON SITE PRIOR TO CONSTRUCTION AND INSTALLATION.
4. CONTRACTOR TO REMOVE ALL DEBRIS GENERATED BY PLANT INSTALLATION. DEBRIS TO BE DISPOSED OF IN A LEGAL MANNER.
5. ALL PLANT MATERIAL SHALL BE GUARANTEED TO BE IN GOOD, HEALTHY AND FLOURISHING CONDITION FOR TWO (2) YEARS FROM THE DATE OF FINAL INSTALLATION APPROVAL BY LANDSCAPE ARCHITECT. CONTRACTOR SHALL REPLACE, WITHOUT COST TO OWNER, AND AS SOON AS WEATHER CONDITIONS PERMIT, ALL DEAD AND NON-FLOURISHING PLANTS AS DETERMINED BY THE LANDSCAPE ARCHITECT. REPLACEMENT PLANTS SHALL BE BE GUARANTEED IDENTICALLY TO ORIGINAL PLANTS, TIME PERIOD COMMENCING FROM DATE OF REPLACEMENT PLANTING APPROVAL BY LANDSCAPE ARCHITECT.
6. ALL BEDS TO BE MULCHED WITH 4" DEPTH SHREDDED BARK MULCH UNLESS NOTED OTHERWISE.
7. CONTRACTOR TO PROVIDE NECESSARY TEMPORARY IRRIGATION IF NEEDED BASED ON TIME OF YEAR THE PROJECT IS IMPLEMENTED.
8. ALL LANDSCAPED AREAS SHALL RECEIVE REGULAR MAINTENANCE AND UPKEEP. SEVERELY INJURED, DISEASED, OR DEAD PLANT MATERIAL SHALL BE REPLACED IN KIND IN PERPETUITY (AVOID REPLACING LANDSCAPE MATERIALS IN THE PERIOD FROM NOVEMBER TO MARCH.)
9. BEST PRACTICES TO MINIMIZE ENVIRONMENTAL IMPACTS SUCH AS THE USE OF LOW PHOSPHOROUS FERTILIZER AND SLOW RELEASE NITROGEN, SHALL BE IMPLEMENTED.
10. IF OWNERSHIP OF A SITE IS CONVEYED TO A NEW PROPERTY OWNER, THE NEW OWNER SHALL BE RESPONSIBLE FOR MAINTAINING ALL LANDSCAPING IN ACCORDANCE WITH THE APPROVED FINAL LANDSCAPING PLAN.

LANDSCAPE CALCULATIONS:

INTERIOR PARKING LOT LANDSCAPING:
5% MIN. INTERIOR LANDSCAPING REQUIRED FOR LOTS WITH BETWEEN 21-125 PARKING SPACES
47 PARKING SPACES PROPOSED - 37,000 SF PARKING LOT AREA X .05 = 1,850 SF INTERIOR LANDSCAPING REQUIRED
PROVIDED: 5,800 SF INTERIOR PARKING LOT LANDSCAPING

PERIMETER LANDSCAPING:
REQUIRED: 1 DECIDUOUS SHADE TREE / 35' OF PARKING LOT PERIMETER
533 L.F.OF PARKING LOT PERIMETER / 35 = 15.2 = 15 TREES REQUIRED
PROVIDED: 30 TREES PROPOSED

terrain
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311 kast hill road
hopkinton nh 03229
603. 491. 2322
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QUALITY WAY

Site Location:
Quality Way
Dover, NH 03820

Prepared For:
Civilworks New England
181 Watson Road
PO Box 1166
Dover, NH 03821

LANDSCAPE PLAN

DATE: 11 - 30 - 23

SCALE: 1"=30'

PROJECT #: 23090

Drawn By: ID

Checked By: RM

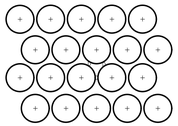
REVISIONS: DATE:
Issued for Review 11-30-23

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N

REGISTERED LANDSCAPE ARCHITECT
BRENT W. KNOWLTON
No. 981
11/30/23
STATE OF NEW HAMPSHIRE

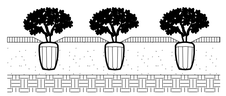


TYPICAL BED PLANT SPACING

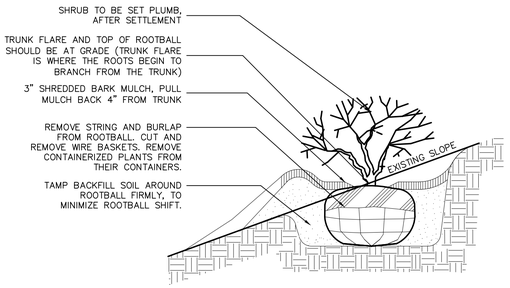
NOTE:
D = DIMENSION OF PLANT SPACING (SHRUB OR GROUNDCOVER AS INDICATED ON PLANS)

12" LOAM BACKFILL (CONTINUOUS THROUGHOUTBED AREA)

3" DEEP SHREDDED BARK MULCH

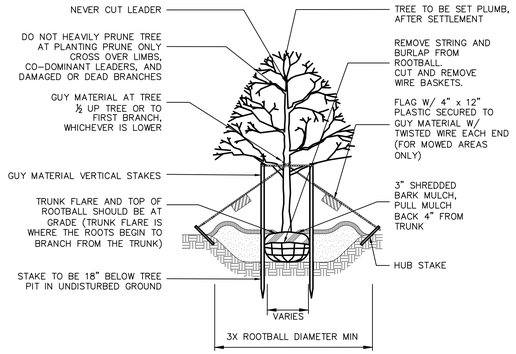


1 TYPICAL PERENNIAL PLANTING
NO SCALE



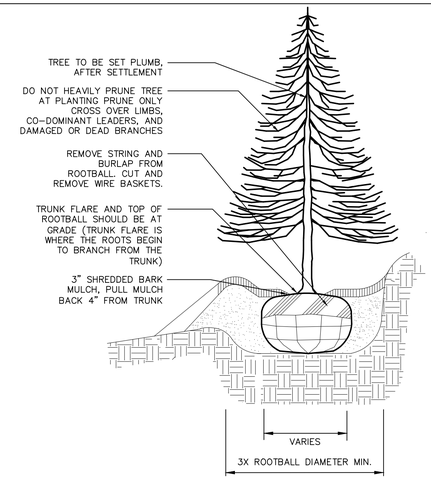
NOTE:
1. DO NOT HEAVILY PRUNE SHRUB AT PLANTING, PRUNE ONLY CROSSOVER LIMBS AND DAMAGED OR DEAD BRANCHES.
2. BACKFILL WITH LOAM, AMEND AS REQUIRED BY LANDSCAPE ARCHITECT.
3. SHRUBS & GROUNDCOVER PLANTED ADJACENT TO CITY SIDEWALKS NEED TO BE PLACED SO THE PLANTS, AT THEIR MATURE HEIGHT & WIDTH, WILL NOT ENCROACH INTO THE CITY'S SIDEWALK.

2 TYPICAL SHRUB PLANTING
NO SCALE



NOTES:
1. GUYING AND STAKING TO BE DETERMINED IN THE FIELD BY THE LANDSCAPE ARCHITECT. LOCAL FIELD CONDITIONS AS WELL AS PLANT CHARACTERISTICS WILL DETERMINE THE NECESSITY OF GUYING AND STAKING.
2. TYPICALLY ONLY TREES WITH A 3" OR GREATER CALIPER NEED TO BE STAKED. TREES WITH LESS THAN A 3" CALIPER NEED TO BE STAKED ONLY AS REQUIRED BY LANDSCAPE ARCHITECT.
3. ONLY WRAP TREE TRUNKS AS REQUIRED BY LANDSCAPE ARCHITECT.
4. TREE SHALL BE SET PLUMB, AFTER SETTLEMENT.
5. LOAM FOR BACKFILLING SHALL BE AMENDED AS REQUIRED BY LANDSCAPE ARCHITECT.
6. CITY TREES PLANTED ON PRIVATE PROPERTY, ADJACENT TO A PUBLIC RIGHT-OF-WAY, NEED TO BE PLANTED A MINIMUM OF 5 FEET FROM THE EDGE OF THE CITY SIDEWALK.

3 DECIDIOUS TREE PLANTING
NO SCALE



NOTES:
1. DO NOT STAKE EVERGREEN TREES.
2. LOAM FOR BACKFILLING SHALL BE AMENDED AS REQUIRED BY LANDSCAPE ARCHITECT.
3. TAMP BACKFILL SOIL AROUND ROOTBALL FIRMLY TO MINIMIZE ROOTBALL SHIFT.

4 EVERGREEN TREE PLANTING
NO SCALE

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QUALITY WAY

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LANDSCAPE DETAILS

DATE: 11 - 30 - 23

SCALE: AS NOTED

PROJECT #: 23090

Drawn By: ID

Checked By: RM

REVISIONS:	DATE:
Issued for Review	11-30-23

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