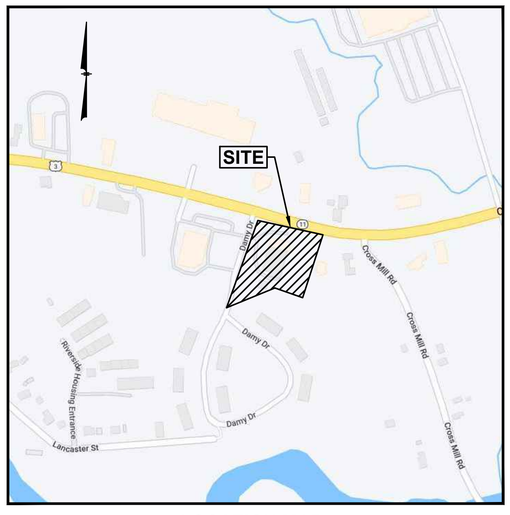
PROPOSED RETAIL MOTOR FUEL OUTLET
SITE RE-DEVELOPMENT PLANS

for

ASSESSORS MAP 148 LOT 15.2
901 CENTRAL STREET
FRANKLIN, NEW HAMPSHIRE

Prepared for:

TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842



LOCATION MAP
(NOT TO SCALE)

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4. SITE PLAN
5. GRADING & DRAINAGE PLAN
6. UTILITY PLAN
7. EROSION & SEDIMENT CONTROL PLAN
8. LANDSCAPE PLAN
9. DETAIL SHEET
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1 OF 1. SIGN & GRAPHICS PLAN
1 OF 1 LIGHTING PLAN (RL-8366-S1-R1)
2 OF 2. LIGHTING SPECIFICATIONS (RL-8366-S1-R1)
1 OF 2. BUILDING ELEVATIONS (A2.1)
2 OF 2. BUILDING ELEVATIONS (A2.1)
1 OF 1. CANOPY ELEVATIONS

GPI Engineering Design Planning Construction Management
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Salem, NH 03079

PREPARED FOR
TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842

PROPOSED RETAIL MOTOR FUEL OUTLET
MAP 148 LOT 15.2
901 CENTRAL STREET
FRANKLIN, NH 03235

STATE OF NEW HAMPSHIRE - GARRETT M. PICCIRILLO No. 15770 LICENSED - PROFESSIONAL ENGINEER

10/18/22

REVISIONS		
NO.	REVISION	DATE

OCTOBER 18, 2022

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TITLE SHEET

SCALE: NOT TO SCALE

PROJECT NO. NEX-2200013

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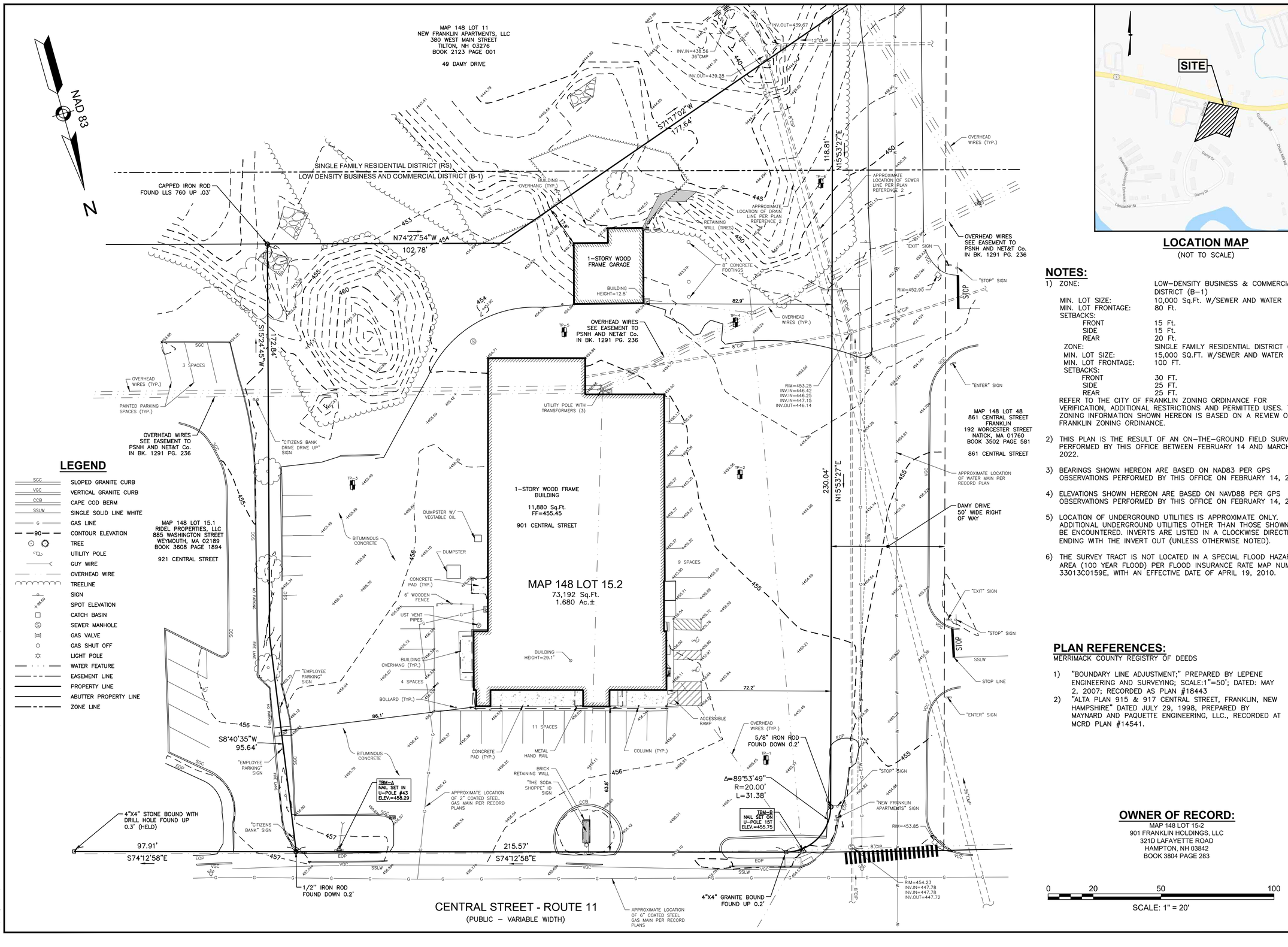
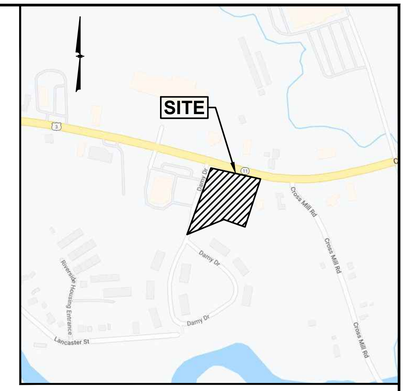


LEGEND

- SGC — SLOPED GRANITE CURB
- VGC — VERTICAL GRANITE CURB
- CCB — CAPE COD BERM
- SSLW — SINGLE SOLID LINE WHITE
- G — GAS LINE
- 90 — CONTOUR ELEVATION
- TREE
- UTILITY POLE
- GUY WIRE
- OVERHEAD WIRE
- TREELINE
- SIGN
- SPOT ELEVATION
- CATCH BASIN
- SEWER MANHOLE
- GAS VALVE
- GAS SHUT OFF
- LIGHT POLE
- WATER FEATURE
- EASEMENT LINE
- PROPERTY LINE
- ABUTTER PROPERTY LINE
- ZONE LINE



LOCATION MAP
(NOT TO SCALE)

NOTES:

1) ZONE: LOW-DENSITY BUSINESS & COMMERCIAL DISTRICT (B-1)
   MIN. LOT SIZE: 10,000 Sq.Ft. W/SEWER AND WATER
   MIN. LOT FRONTAGE: 80 Ft.
   SETBACKS:
   FRONT 15 Ft.
   SIDE 15 Ft.
   REAR 20 Ft.
   ZONE: SINGLE FAMILY RESIDENTIAL DISTRICT (RS)
   MIN. LOT SIZE: 15,000 SQ.FT. W/SEWER AND WATER
   MIN. LOT FRONTAGE: 100 FT.
   SETBACKS:
   FRONT 30 FT.
   SIDE 25 FT.
   REAR 25 FT.
   REFER TO THE CITY OF FRANKLIN ZONING ORDINANCE FOR VERIFICATION, ADDITIONAL RESTRICTIONS AND PERMITTED USES. THE ZONING INFORMATION SHOWN HEREON IS BASED ON A REVIEW OF THE FRANKLIN ZONING ORDINANCE.
2) THIS PLAN IS THE RESULT OF AN ON-THE-GROUND FIELD SURVEY PERFORMED BY THIS OFFICE BETWEEN FEBRUARY 14 AND MARCH 9, 2022.
3) BEARINGS SHOWN HEREON ARE BASED ON NAD83 PER GPS OBSERVATIONS PERFORMED BY THIS OFFICE ON FEBRUARY 14, 2022.
4) ELEVATIONS SHOWN HEREON ARE BASED ON NAVD88 PER GPS OBSERVATIONS PERFORMED BY THIS OFFICE ON FEBRUARY 14, 2022.
5) LOCATION OF UNDERGROUND UTILITIES IS APPROXIMATE ONLY. ADDITIONAL UNDERGROUND UTILITIES OTHER THAN THOSE SHOWN MAY BE ENCOUNTERED. INVERTS ARE LISTED IN A CLOCKWISE DIRECTION ENDING WITH THE INVERT OUT (UNLESS OTHERWISE NOTED).
6) THE SURVEY TRACT IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA (100 YEAR FLOOD) PER FLOOD INSURANCE RATE MAP NUMBER 33013C0159E, WITH AN EFFECTIVE DATE OF APRIL 19, 2010.

PLAN REFERENCES:
MERRIMACK COUNTY REGISTRY OF DEEDS

1) "BOUNDARY LINE ADJUSTMENT;" PREPARED BY LEPENE ENGINEERING AND SURVEYING; SCALE:1"=50'; DATED: MAY 2, 2007; RECORDED AS PLAN #18443
2) "ALTA PLAN 915 & 917 CENTRAL STREET, FRANKLIN, NEW HAMPSHIRE" DATED JULY 29, 1998, PREPARED BY MAYNARD AND PAQUETTE ENGINEERING, LLC., RECORDED AT MCRD PLAN #14541.

OWNER OF RECORD:
MAP 148 LOT 15-2
901 FRANKLIN HOLDINGS, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842
BOOK 3804 PAGE 283

0 20 50 100
SCALE: 1" = 20'

GPI
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Design
Planning
Construction Management
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PREPARED FOR
TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842

PROPOSED RETAIL MOTOR FUEL OUTLET
MAP 148 LOT 15.2
901 CENTRAL STREET
FRANKLIN, NH 03235

STATE OF NEW HAMPSHIRE No. 1019 SCOTT M. LITALIEN LICENSED LAND SURVEYOR

REVISIONS		
NO.	REVISION	DATE

OCTOBER 18, 2022

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EXISTING CONDITIONS PLAN

SCALE: 1"=20'
PROJECT NO. NEX-2200013

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SEE EROSION & SEDIMENT CONTROL PLAN FOR CONSTRUCTION SEQUENCE AND TEMPORARY EROSION CONTROL MEASURES AND LOCATION OF EROSION CONTROL DEVICES. SEE LANDSCAPE PLAN FOR LIMITS OF CLEARING.

MAP 148
LOT 15.2
73,192 Sq.Ft.
1.680 Ac.±

CONTRACTOR TO INSTALL TEMPORARY SITE CONSTRUCTION FENCING AROUND PERIMETER OF SITE PRIOR TO CONSTRUCTION & ADJUST LOCATION AS DIRECTED

CENTRAL STREET - ROUTE 11
(PUBLIC – VARIABLE WIDTH)

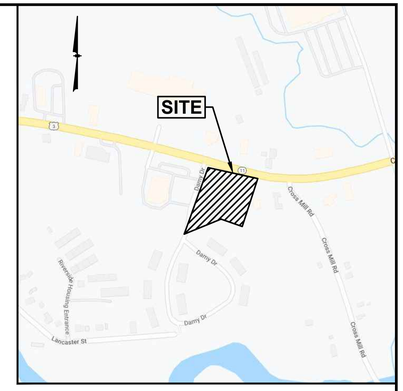
DAMY DRIVE
(PRIVATE WAY)

901 CENTRAL STREET

LEGEND

SGC	SLOPED GRANITE CURB
VGC	VERTICAL GRANITE CURB
CCB	CAPE COD BERM
SSLW	SINGLE SOLID LINE WHITE
G	GAS LINE
90	CONTOUR ELEVATION
	TREE
	UTILITY POLE
	GUY WIRE
	OVERHEAD WIRE
	TREELINE
	SIGN
	SPOT ELEVATION
	CATCH BASIN
	SEWER MANHOLE
	GAS VALVE
	GAS SHUT OFF
	LIGHT POLE
	WATER FEATURE
	EASEMENT LINE
	PROPERTY LINE
	ABUTTER PROPERTY LINE
	ZONE LINE
TBR	TO BE REMOVED
- X X X	TO BE REMOVED

DigSafe 811 MA·ME·NH·RI·VT



LOCATION MAP
NOT TO SCALE

NOTES:

1) A DEMOLITION PERMIT MUST BE OBTAINED FROM THE CITY OF FRANKLIN PRIOR TO COMMENCEMENT OF WORK. ALL EXISTING UTILITY DISCONNECTIONS MUST BE COORDINATED WITH RESPECTIVE UTILITY COMPANIES.

2) ALL DEMOLITION ACTIVITIES ARE TO BE PERFORMED IN STRICT ADHERENCE TO ALL FEDERAL, STATE AND LOCAL REGULATIONS. CONTRACTOR TO INSTALL EROSION CONTROL DEVICES IN ACCORDANCE WITH EROSION AND SEDIMENT CONTROL PLAN PRIOR TO BEGINNING DEMOLITION ACTIVITIES.

3) PROCEED WITH DEMOLITION IN A SYSTEMATIC MANNER, FROM THE TOP OF THE STRUCTURE(S) TO THE GROUND.

4) DEMOLISH CONCRETE IN ALL SECTIONS

5) BREAK UP CONCRETE SLABS–ON–GRADE, UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER.

6) CONDUCT ALL DEMOLITION OPERATIONS IN A MANNER THAT WILL PREVENT INJURY, DAMAGE TO STRUCTURES, ADJACENT BUILDINGS AND ALL PERSONS.

7) REFRAIN FROM USING EXPLOSIVES WITHOUT PRIOR WRITTEN CONSENT OF THE DEVELOPER AND APPLICABLE GOVERNMENTAL AUTHORITIES.

8) CONDUCT DEMOLITION SERVICES IN SUCH A MANNER TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS AND OTHER ADJACENT FACILITIES. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS OR OTHER OCCUPIED FACILITIES WITHOUT PRIOR WRITTEN PERMISSION OF THE DEVELOPER AND APPLICABLE GOVERNMENTAL AUTHORITIES. PROVIDE ALTERNATIVE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS IF REQUIRED BY APPLICABLE GOVERNMENTAL REGULATIONS.

9) USE WATERING, TEMPORARY ENCLOSURES AND OTHER SUITABLE METHODS, AS NECESSARY TO LIMIT THE AMOUNT OF DUST AND DIRT RISING AND SCATTERING IN THE AIR. CLEAN ADJACENT STRUCTURE AND IMPROVEMENTS OF ALL DUST AND DEBRIS CAUSED BY THE DEMOLITION OPERATIONS. RETURN ALL ADJACENT AREAS TO THE CONDITIONS EXISTING PRIOR TO THE START OF WORK.

10) ACCOMPLISH AND PERFORM THE DEMOLITION IN SUCH A MANNER AS TO PREVENT THE UNAUTHORIZED ENTRY OF PERSONS AT ANY TIME.

11) COMPLETELY FILL BELOW GRADE AREAS AND VOIDS RESULTING FROM THE DEMOLITION OF STRUCTURES AND FOUNDATIONS WITH SOIL MATERIALS CONSISTING OF STONE, GRAVEL AND SAND, FREE FROM DEBRIS, TRASH, FROZEN MATERIALS, ROOTS AND OTHER ORGANIC MATTER. STONES USED WILL NOT BE LARGER THAT 6 INCHES IN DIMENSION. MATERIAL FROM DEMOLITION MAY NOT BE USED AS FILL. PRIOR TO PLACEMENT OF FILL MATERIALS, UNDERTAKE ALL NECESSARY ACTION IN ORDER TO INSURE THAT AREAS TO BE FILLED ARE FREE OF STANDING WATER, FROZEN MATERIAL, TRASH, DEBRIS. PLACE FILL MATERIALS LAYERS NOT EXCEEDING 6 INCHES IN LOOSE DEPTH AND COMPACT EACH LAYER AT PLACEMENT TO 95% OPTIMUM DENSITY, GRADE SURFACE TO MEET ADJACENT CONTOURS AND TO PROVIDE SURFACE DRAINAGE.

12) REMOVE FROM THE DESIGNATED SITE, AT THE EARLIEST POSSIBLE TIME, ALL DEBRIS RUBBISH, SALVAGEABLE ITEMS, HAZARDOUS AND COMBUSTIBLE SERVICES. REMOVED MATERIALS MAY NOT BE STORED, SOLD OR BURNED ON SITE. REMOVAL OF HAZARDOUS AND COMBUSTIBLE MATERIALS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE PROCEDURES AS AUTHORIZED BY THE FIRE DEPARTMENT OR OTHER APPROPRIATE REGULATORY AGENCIES AND DEPARTMENTS.

13) DISCONNECT, SHUT OFF AND SEAL ALL UTILITIES SERVING THE STRUCTURE(S) TO BE DEMOLISHED BEFORE THE COMMENCEMENT OF THE DESIGNATED DEMOLITION. MARK FOR POSITION ALL UTILITY DRAINAGE AND SANITARY LINES AND PROTECT ALL ACTIVE LINES. CLEARLY IDENTIFY BEFORE THE COMMENCEMENT OF DEMOLITION SERVICES THE REQUIRED INTERRUPTION OF ACTIVE SYSTEMS THAT MAY AFFECT OTHER PARTIES, AND NOTIFY ALL APPLICABLE UTILITY COMPANIES TO INSURE THE CONTINUATION OF SERVICE.

14) PROTECT EXISTING DRAINAGE SYSTEM(S) AS NECESSARY TO PREVENT SEDIMENT FROM ENTERING DURING CONSTRUCTION. SEE DETAIL SHEETS FOR EROSION CONTROL DEVICES.

15) ALL WORK WITHIN ROADWAY RIGHT–OF–WAYS TO CONFORM TO CITY STANDARDS.

16) THE LIMITS OF WORK SHALL BE CLEARLY MARKED IN THE FIELD PRIOR TO THE START OF CONSTRUCTION OR SITE CLEARING.

17) IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO NOTIFY DIG SAFE (DIAL 811) 72 HOURS PRIOR TO ANY EXCAVATION ON THIS SITE. CONTRACTOR SHALL ALSO NOTIFY LOCAL WATER DEPARTMENT TO MARK OUT THEIR UTILITIES.

18) NOTES ON THIS PLAN THAT READ "TBR" REPRESENT FEATURES TO BE REMOVED. ANY FEATURES NOT LABELED "TBR" OR "TO BE REMOVED" SHALL BE CONSIDERED EXISTING TO REMAIN.

19) EXISTING IRRIGATION SYSTEM TO BE PROTECTED DURING DEMOLITION AND CONSTRUCTION. EXISTING IRRIGATION SYSTEM TO BE RELOCATED, EXTENDED AND CONNECTED TO ALL PROPOSED LANDSCAPED AREAS AS NECESSARY.

20) SEE LANDSCAPE PLAN FOR LIMITS OF CLEARING AND GRUBBING. AFTER CLEARING, STRIP AND STOCKPILE TOP SOIL PER LANDSCAPE PLAN, IF APPLICABLE.

0 20 50 100
SCALE: 1" = 20'

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PREPARED FOR
TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842

PROPOSED RETAIL MOTOR FUEL OUTLET

MAP 148 LOT 15.2
901 CENTRAL STREET
FRANKLIN, NH 03235

STATE OF NEW HAMPSHIRE – PROFESSIONAL ENGINEER
GARRETT M. PICCIRILLO
No. 15770
LICENSED
10/18/22

REVISIONS		
NO.	REVISION	DATE

OCTOBER 18, 2022

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CCC/GMP	FCM

DEMOLITION PLAN

SCALE: 1"=20'

PROJECT NO.
NEX-2200013

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LEGEND

VCC	PROP. VERTICAL CONCRETE CURB
VGC	PROP. VERTICAL GRANITE CURB
	PROPOSED SIGN
	PROPOSED LIGHT POLE
(1)	NUMBER OF PARKING SPACES PER ROW
T.D.	TIP DOWN CURB

SIGN KEY

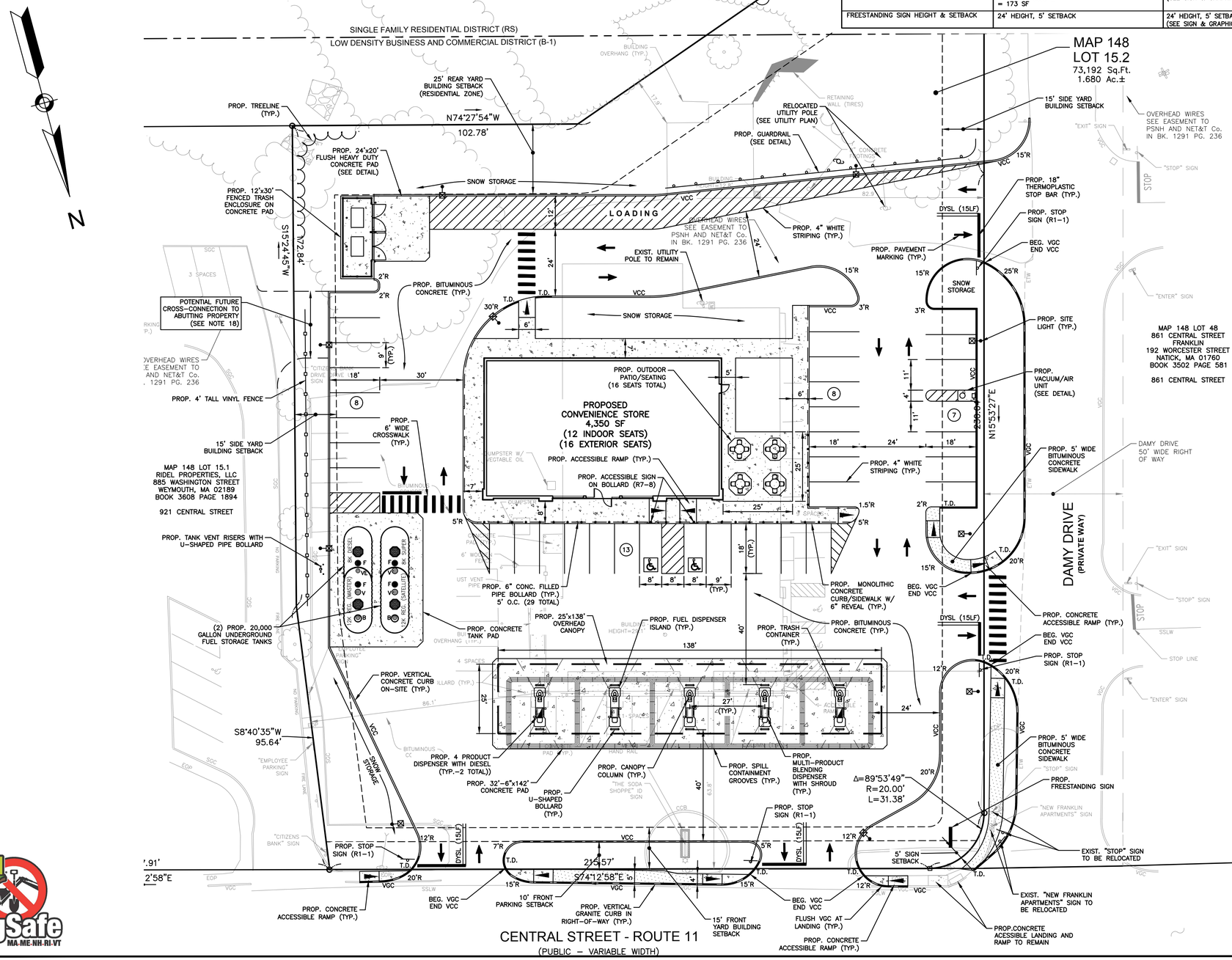
SIGN I.D. NUMBER	TEXT/COLOR	SIZE/REMARKS
R1-1	STOP R/W	30" x 30" NEW SIGN WITH POST
R7-8	RESERVED PARKING VAN ACCESSIBLE G/B/W	12" x 18" NEW SIGN WITH POST
R7-8A	VAN ACCESSIBLE G/W	6" X 12"

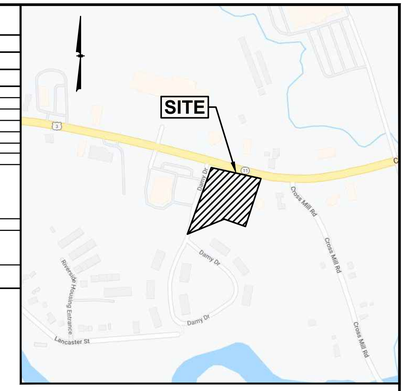
MAP 148 LOT 11
NEW FRANKLIN APARTMENTS, LLC
380 WEST MAIN STREET
TILTON, NH 03276
BOOK 2123 PAGE 001

49 DAMY DRIVE

TABLE OF ZONING REGULATIONS - FRANKLIN, NH

ZONE: B-1 & RS			
DESCRIPTION	REQUIRED		PROVIDED
	B-1	RS	
MINIMUM LOT AREA Sq. Ft.	10,000 SF	15,000 SF	73,192 SF
MINIMUM LOT FRONTAGE	80'	100'	215.57'
MINIMUM FRONT YARD BUILDING SETBACK	15'	30'	132.4'
MINIMUM SIDE YARD BUILDING SETBACK	15'	25'	67.3'
MINIMUM REAR YARD BUILDING SETBACK	20'	25'	84.2'
MINIMUM FRONT YARD PAVEMENT SETBACK	10' (PARKING)	N/A	10'
PARKING SPACE DIMENSIONS	9' x 18'	N/A	9' x 18'
MINIMUM NUMBER PARKING SPACES	RETAIL BUSINESS = 1 SPACE PER 200 SF OF GFA = 4,350 SF x 1 SP/200 SF = 22 SPACES REQUIRED		36 SPACES
MAXIMUM BUILDING HEIGHT	35'		32'-2"
MAXIMUM AGGREGATE SIGN AREA	2 SF/LINEAR FT OF BUILDING WIDTH = 2 SF x 86.5 LF = 173 SF		148.02 SF (SEE SIGN & GRAPHICS PLAN)
FREESTANDING SIGN HEIGHT & SETBACK	24' HEIGHT, 5' SETBACK		24' HEIGHT, 5' SETBACK (SEE SIGN & GRAPHICS PLAN)





LOCATION MAP
NOT TO SCALE

NOTES:

1) TAX MAP 148 LOT 15.2

2) ZONING DISTRICT:
LOW-DENSITY BUSINESS AND COMMERCIAL DISTRICT (B-1)
& SINGLE-FAMILY RESIDENTIAL DISTRICT (RS)

3) LOT AREA = 73,192 Sq.Ft.
= 1.680 Ac.±

4) EXISTING USE: RESTAURANT & STORAGE FACILITY

PROPOSED USE: RETAIL MOTOR FUEL OUTLET WITH 4,350 SF CONVENIENCE STORE AND A RETAIL FUELING AREA WITH AN OVERHEAD CANOPY & 5 FUEL DISPENSERS (10 FUELING POSITIONS).

5) A MOTOR VEHICLE ORIENTED BUSINESS REQUIRES A SPECIAL PERMIT FROM THE PLANNING BOARD IN THE B-1 DISTRICT.

6) ALL BUILDINGS AND SITE CONSTRUCTION SHALL COMPLY WITH THE RULES AND REGULATIONS OF THE AMERICANS WITH DISABILITIES ACT (ADA) AS REVISED IN 2010.

7) THE LOCATIONS OF EXISTING SUBSURFACE UTILITIES SHOWN ON THIS PLAN WERE COMPILED FROM AVAILABLE RECORD DRAWINGS AND ARE NOT WARRANTED TO BE CORRECT. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING SUBSURFACE UTILITIES PRIOR TO PERFORMING ANY WORK.

8) WRITTEN DIMENSIONS ON THIS PLAN TAKE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN THE EVENT OF A CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWINGS AND/OR SPECIFICATIONS, THE ENGINEER SHALL BE NOTIFIED BY THE CONTRACTOR.

9) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE 811 PRIOR TO ANY EXCAVATION.

10) ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE CITY OF FRANKLIN AND THE STATE OF NEW HAMPSHIRE.

11) THE SURVEY TRACT IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA (100 YEAR FLOOD) PER FLOOD INSURANCE RATE MAP NUMBER 33013C0159E, WITH AN EFFECTIVE DATE OF APRIL 19, 2010.

12) ALL CONSTRUCTION SHALL CONFORM TO THESE PLANS AND THE STANDARD CONSTRUCTION DRAWINGS AS SUPPLIED BY THE DEVELOPER.

13) A SIGN PERMIT SHALL BE OBTAINED PRIOR TO INSTALLATION.

14) PROPOSED SNOW STORAGE AREAS AS SHOWN. ANY EXCESS SNOW TO BE TRUCKED OFF-SITE.

15) THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR CONDITIONS AT THE SITE. THESE PLANS, PREPARED BY GREENMAN-PEDERSEN, INC., DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR THEIR EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE SURVEYOR AND/OR ENGINEER AS INCLUDED IN THE PLAN SET DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE AND/OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND/OR LOCAL REGULATIONS.

16) ALL UNDERGROUND STORAGE TANKS, PRODUCT PIPING AND VENT LINES SHALL COMPLY WITH CURRENT STATE AND E.P.A. REGULATIONS.

17) SELF-SERVICE APPROVAL IS REQUIRED FROM THE OFFICE OF THE STATE FIRE MARSHAL. SEE APPROVED FIRE SUPPRESSION PLAN FOR LAYOUT OF SPILL CONTAINMENT GROOVES (POSITIVE LIMING BARRIER).

18) THE PROPERTY OWNER WILL WORK IN GOOD FAITH WITH THE ABUTTING PROPERTY OWNER TO INCORPORATE A POTENTIAL FUTURE VEHICULAR CROSS-CONNECTION AS SHOWN ON THIS PLAN.

OWNER OF RECORD:
MAP 148 LOT 15-2
901 FRANKLIN HOLDINGS, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842
BOOK 3804 PAGE 283

0 20 50 100
SCALE: 1" = 20'

APPROVED BY THE FRANKLIN PLANNING BOARD

CHAIRMAN/VICE CHAIRMAN _____ DATE: _____

GPI Engineering Design Planning Construction Management
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PREPARED FOR
TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842

PROPOSED RETAIL MOTOR FUEL OUTLET

MAP 148 LOT 15.2
901 CENTRAL STREET
FRANKLIN, NH 03235

STATE OF NEW HAMPSHIRE
GARRETT M. PICCIRILLO
No. 15770
LICENSED PROFESSIONAL ENGINEER
10/18/22

REVISIONS		
NO.	REVISION	DATE

OCTOBER 18, 2022

DRAWN/DESIGN BY	CHECKED BY
CCC/GMP	FCM

SITE PLAN

SCALE: 1"=20'

PROJECT NO. NEX-2200013

4 OF 14

DigSafe 811 MA-ME-NH-RI-VT

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DRAINAGE PIPE SCHEDULE

FROM: STRUCTURE NUMBER	PIPE SIZE (INCHES)	TYPE OF PIPE	APPROX. PIPE LENGTH (FEET)	SLOPE OF PIPE (FT./FT.)	TO: STRUCTURE NUMBER
CB-1	12	HDPE	104	0.005	CB-2
CB-2	12	HDPE	48	0.005	DMH-1
CB-3	12	HDPE	138	0.005	DMH-2
CB-4(FD)	15	HDPE	37	0.019	DMH-3
CB-5	12	HDPE	111	0.008	CB-6
CB-6	12	HDPE	36	0.018	CB-7(FD)
CB-7(FD)	12	HDPE	20	0.045	FES-2
DMH-1	12	HDPE	48	0.005	CB-3
DMH-2	6	HDPE	15	0.010	OWS-IN
DMH-2	12	HDPE	17	0.021	CB-4(FD)
DMH-3	15	HDPE	76	0.005	FES-1
INF-1	8	HDPE	38	0.022	CB-6
OCS-1	12	HDPE	27	0.015	FES-3
OWS-OUT	6	HDPE	26	0.010	DMH-3

DRAINAGE STRUCTURES

* CB-1
RIM=455.00
INV.OUT=452.30

CB-2
RIM=455.50
INV.IN=451.75(CB-1)
INV.OUT=451.65

CB-3
RIM=455.65
INV.IN=451.05(DMH-1)
INV.OUT=450.95

CB-4(FD)
RIM=455.00
INV.IN=450.80(DMH-2)
INV.OUT=450.70

CB-5
RIM=455.48
INV.OUT=451.60

CB-6
RIM=454.78
INV.IN=450.75(CB-5)
INV.IN=451.65(INF-1)
INV.OUT=450.65

CB-7(FD)
RIM=453.80
INV.IN=450.00(CB-6)
INV.OUT=449.90

DMH-1
RIM=456.10
INV.IN=451.40(CB-2)
INV.OUT=451.30

DMH-2
RIM=455.20
INV.IN=450.25(CB-3)
INV.OUT=451.15(BYPASS)
INV.OUT=450.15(LOW FLOW)

DMH-3
RIM=455.65
INV.IN=450.00(CB-4(FD))
INV.IN=449.50(OWS-OUT)
INV.OUT=449.40

(FD) DENOTES FIRST DEFENSE FD-4HC HYDRODYNAMIC PARTICLE SEPARATOR OR APPROVED EQUAL

* DENOTES LOW PROFILE FRAME, GRATE, AND TOP SLAB

FES-1
INV.=449.00

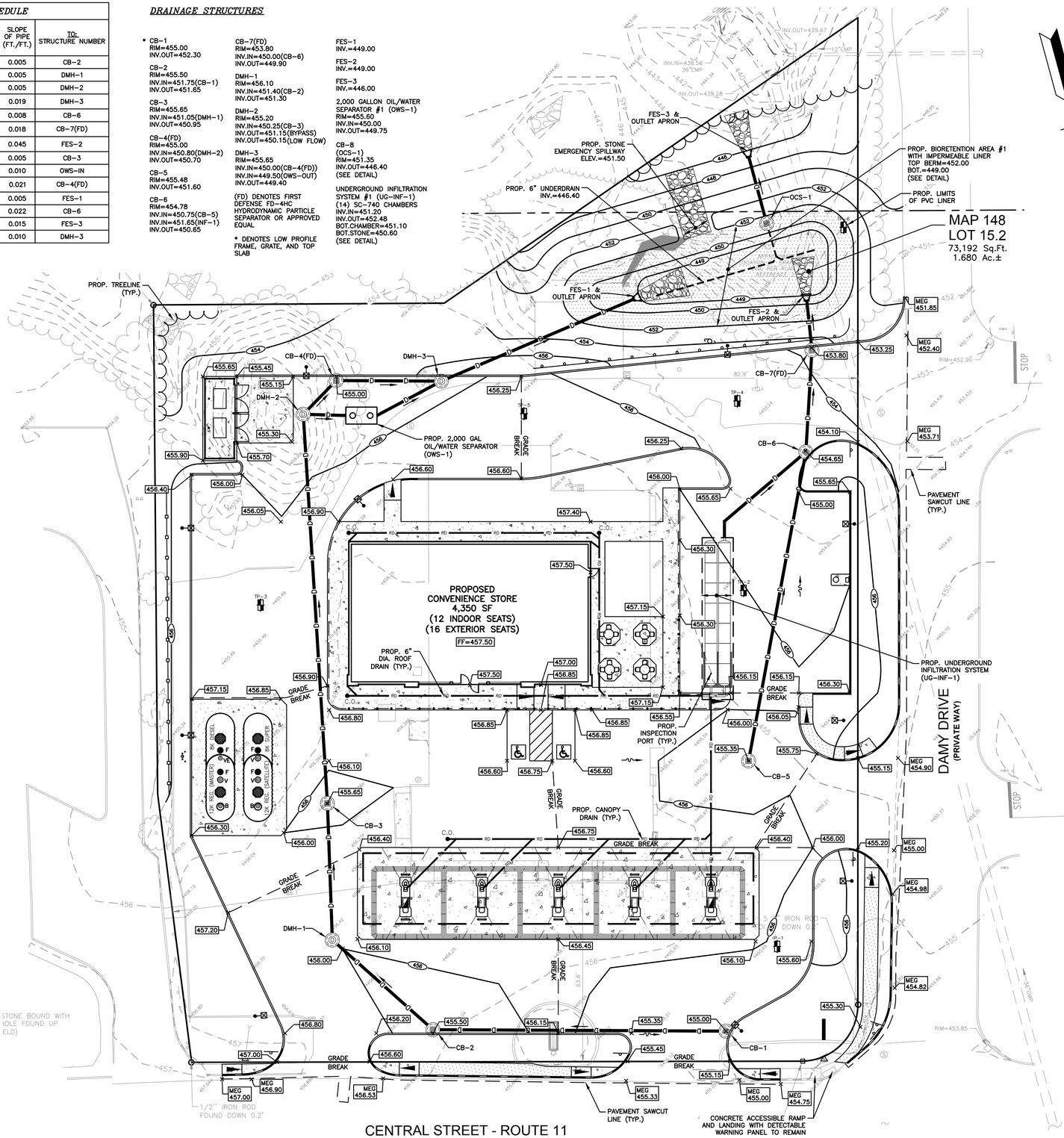
FES-2
INV.=449.00

FES-3
INV.=446.00

2,000 GALLON OIL/WATER SEPARATOR #1 (OWS-1)
RIM=455.60
INV.IN=450.00
INV.OUT=449.75

CB-8
(OCS-1)
RIM=451.35
INV.OUT=446.40
(SEE DETAIL)

UNDERGROUND INFILTRATION SYSTEM #1 (UG-INF-1)
(14) SC-740 CHAMBERS
INV.IN=451.20
INV.OUT=452.48
BOT.CHAMBER=451.10
BOT.STONE=450.60
(SEE DETAIL)



LEGEND

- SGC — SLOPED GRANITE CURB
- VGC — VERTICAL GRANITE CURB
- CCB — CAPE COD BERM
- SSLW — SINGLE SOLID LINE WHITE
- G — GAS LINE
- 90 — CONTOUR ELEVATION
- TREE
- UTILITY POLE
- GUY WIRE
- OVERHEAD WIRE
- TREELINE
- SIGN
- SPOT ELEVATION
- CATCH BASIN
- SEWER MANHOLE
- GAS VALVE
- GAS SHUT OFF
- LIGHT POLE
- WATER FEATURE
- EASEMENT LINE
- PROPERTY LINE
- ABUTTER PROPERTY LINE
- ZONE LINE
- C.O. — PROP. CLEANOUT
- CB-1 — PROP. CATCH BASIN
- DMH-1 — PROP. DRAIN MANHOLE
- MEG — MEET EXISTING GRADE
- 331.25 — PROP. SPOT ELEVATION
- 300 — PROP. CONTOUR ELEVATION
- G.B. — GRADE BREAK
- TP — TEST PIT

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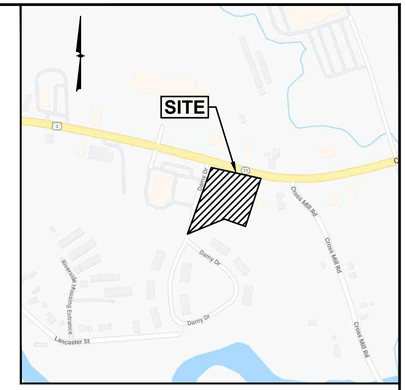
0 20 50 100
SCALE: 1" = 20'



LOCATION MAP
NOT TO SCALE

NOTES:

1) ALL SITE DRAINAGE PIPE SHALL BE CORRUGATED HIGH-DENSITY POLYETHYLENE PIPE WITH STANDARD JOINTS, DUAL-WALL, SMOOTH INTERIOR, AS MANUFACTURED BY ADS, INC., OR APPROVED EQUAL, UNLESS OTHERWISE NOTED ON PLAN.
2) ALL ROOF AND CANOPY DRAIN PIPE SHALL BE 6" PVC (SDR-35).
3) ELEVATIONS ARE BASED ON NAVD88 DATUM.
4) ALL PROPOSED ELEVATIONS AS SHOWN ARE BOTTOM OF CURB ELEVATIONS, UNLESS OTHERWISE NOTED.
5) ANY UTILITY FIELD ADJUSTMENTS SHALL BE APPROVED BY THE ENGINEER OF RECORD AND COORDINATED WITH THE APPROPRIATE LOCAL UTILITY COMPANY.
6) THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE ONLY. THE CONTRACTOR IS TO VERIFY EXACT LOCATION PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES. CONSTRUCTION SHALL COMMENCE BEGINNING AT THE LOWEST INVERT (POINT OF CONNECTION) AND PROGRESS UP GRADIENT. PROPOSED INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND INSTALLATIONS SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO COMMENCEMENT OF CONSTRUCTION.
7) ALL CONSTRUCTION SHALL CONFORM TO MUNICIPAL DPW AND ALL APPLICABLE STATE AND FEDERAL STANDARDS.
8) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIG-SAFE (DIAL 811) PRIOR TO COMMENCING ANY EXCAVATION.
9) THIS SITE WILL REQUIRE A USEPA NPDES PERMIT FOR STORMWATER DISCHARGE FOR THE SITE CONSTRUCTION SINCE THE DISTURBANCE EXCEEDS ONE ACRE (ACTUAL DISTURBANCE = 79,000 SF±). THE CONSTRUCTION SITE OPERATOR SHALL DEVELOP AND IMPLEMENT A CONSTRUCTION STORM WATER POLLUTION PREVENTION PLAN (SWPPP), WHICH SHALL REMAIN ON SITE AND MADE ACCESSIBLE TO THE PUBLIC. A COMPLETED NOTICE OF TERMINATION (NOT) SHALL BE SUBMITTED TO NPDES PERMITTING AUTHORITY WITHIN 30 DAYS AFTER EITHER OF THE FOLLOWING CONDITIONS HAVE BEEN MET: FINAL STABILIZATION HAS BEEN ACHIEVED ON ALL PORTIONS OF THE SITE FOR WHICH THE PERMITTEE IS RESPONSIBLE; OR ANOTHER OPERATOR/PERMITTEE HAS ASSUMED CONTROL OVER ALL AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED.
10) ANY UTILITIES TO BE TAKEN OUT OF SERVICE SHALL BE DISCONNECTED AS DIRECTED BY UTILITY COMPANY AND LOCAL DPW.
11) ALL TRAFFIC CONTROL AND TEMPORARY CONSTRUCTION SIGNAGE ARRANGEMENTS, ACCEPTABLE TO NHDOT AND THE CITY MUNICIPAL SERVICES – HIGHWAY DIVISION, SHALL BE EMPLOYED DURING OPERATIONS WITHIN THE PUBLIC RIGHT-OF-WAY.
12) ALL ADA ACCESSIBLE WALKWAYS CANNOT EXCEED 5% RUNNING SLOPE AND 2% CROSS SLOPE, RAMPS CANNOT EXCEED 8.33% RUNNING SLOPE AND 2% CROSS SLOPE, AND ACCESSIBLE PARKING STALLS AND ACCESS AISLES CANNOT EXCEED 2% SLOPE IN ANY DIRECTION. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES.
13) SEE UTILITY PLAN FOR DETAILED UTILITY LAYOUT.
14) CONTRACTOR IS TO FIELD ADJUST GRADES FOR THE TANK PAD TO SHED WATER
15) ALL PROPOSED CATCH BASINS SHALL HAVE 4' SUMPS AND OUTLETS EQUIPPED WITH "ELIMINATOR" OIL HOODS OR APPROVED EQUAL.
16) ALL PIPE DATA IS CALCULATED TO CENTER OF STRUCTURE, TYP.
17) CONTRACTOR TO REFER TO THE INSPECTION & MAINTENANCE (I&M) MANUAL FOR STORMWATER MANAGEMENT SYSTEMS & SITE MAINTENANCE DURING AND AFTER CONSTRUCTION.
18) CONTRACTOR TO ADJUST OIL/WATER SEPARATOR RIMS TO GRADE AS REQUIRED PER GRADING PLAN. RIM ELEVATION LISTED IS FOR THE FINISH GRADE ELEVATION AT THE CENTER OF THE TANK FOOTPRINT.
19) SEE DETAIL SHEET FOR TEST PIT LOGS.

GPI Engineering Design Planning Construction Management
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Greenman-Pedersen, Inc.
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PREPARED FOR
TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842

PROPOSED RETAIL MOTOR FUEL OUTLET
MAP 148 LOT 15.2
901 CENTRAL STREET
FRANKLIN, NH 03235

STATE OF NEW HAMPSHIRE – GARRETT M. PICCIRILLO No. 15770 LICENSED PROFESSIONAL ENGINEER
10/18/22

REVISIONS		
NO.	REVISION	DATE

OCTOBER 18, 2022

DRAWN/DESIGN BY	CHECKED BY
CCC/GMP	FCM

GRADING & DRAINAGE PLAN

SCALE: 1"=20'

PROJECT NO. NEX-2200013

5 OF 14

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SEWER PIPE SCHEDULE

FROM: STRUCTURE NUMBER	PIPE SIZE (inches)	TYPE OF PIPE	APPROX. PIPE LENGTH (feet)	SLOPE OF PIPE (ft./ft.)	TO: STRUCTURE NUMBER
BLDG.	4	PVC	10	0.020	GR. TRAP
GR. TRAP	4	PVC	9	0.072	WYE
BLDG.	6	PVC	35	0.031	WYE
WYE	6	PVC	63	0.059	SMH-1
SMH-1	6	PVC	73	0.027	EXIST. SMH

SEWER STRUCTURES

1,500 GAL. GREASE TRAP
RIM=457.3±
INV.IN=453.80
INV.OUT=453.55

SMH-1
RIM=455.90
INV.IN=449.20
INV.OUT=449.10

N

LEGEND

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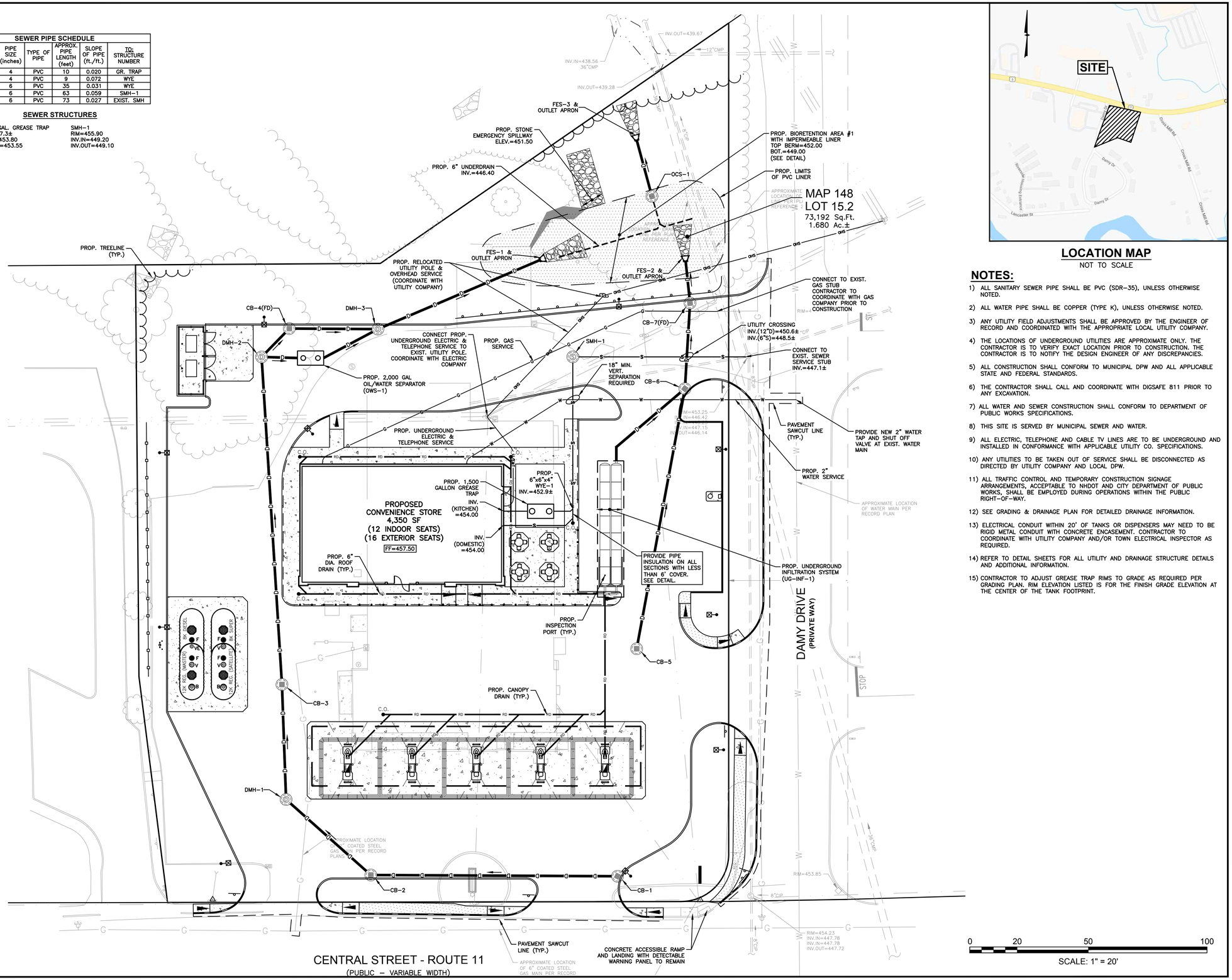
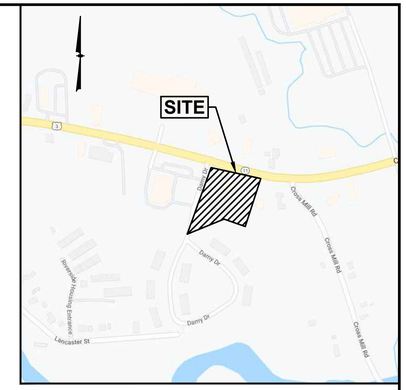
- SMH-1 — PROP. SEWER MANHOLE
- PROP. GATE VALVE



CENTRAL STREET - ROUTE 11
(PUBLIC – VARIABLE WIDTH)



LOCATION MAP
NOT TO SCALE

NOTES:

1) ALL SANITARY SEWER PIPE SHALL BE PVC (SDR-35), UNLESS OTHERWISE NOTED.
2) ALL WATER PIPE SHALL BE COPPER (TYPE K), UNLESS OTHERWISE NOTED.
3) ANY UTILITY FIELD ADJUSTMENTS SHALL BE APPROVED BY THE ENGINEER OF RECORD AND COORDINATED WITH THE APPROPRIATE LOCAL UTILITY COMPANY.
4) THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE ONLY. THE CONTRACTOR IS TO VERIFY EXACT LOCATION PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES.
5) ALL CONSTRUCTION SHALL CONFORM TO MUNICIPAL DPW AND ALL APPLICABLE STATE AND FEDERAL STANDARDS.
6) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE 811 PRIOR TO ANY EXCAVATION.
7) ALL WATER AND SEWER CONSTRUCTION SHALL CONFORM TO DEPARTMENT OF PUBLIC WORKS SPECIFICATIONS.
8) THIS SITE IS SERVED BY MUNICIPAL SEWER AND WATER.
9) ALL ELECTRIC, TELEPHONE AND CABLE TV LINES ARE TO BE UNDERGROUND AND INSTALLED IN CONFORMANCE WITH APPLICABLE UTILITY CO. SPECIFICATIONS.
10) ANY UTILITIES TO BE TAKEN OUT OF SERVICE SHALL BE DISCONNECTED AS DIRECTED BY UTILITY COMPANY AND LOCAL DPW.
11) ALL TRAFFIC CONTROL AND TEMPORARY CONSTRUCTION SIGNAGE ARRANGEMENTS, ACCEPTABLE TO NHDOT AND CITY DEPARTMENT OF PUBLIC WORKS, SHALL BE EMPLOYED DURING OPERATIONS WITHIN THE PUBLIC RIGHT-OF-WAY.
12) SEE GRADING & DRAINAGE PLAN FOR DETAILED DRAINAGE INFORMATION.
13) ELECTRICAL CONDUIT WITHIN 20' OF TANKS OR DISPENSERS MAY NEED TO BE RIGID METAL CONDUIT WITH CONCRETE ENCASEMENT. CONTRACTOR TO COORDINATE WITH UTILITY COMPANY AND/OR TOWN ELECTRICAL INSPECTOR AS REQUIRED.
14) REFER TO DETAIL SHEETS FOR ALL UTILITY AND DRAINAGE STRUCTURE DETAILS AND ADDITIONAL INFORMATION.
15) CONTRACTOR TO ADJUST GREASE TRAP RIMS TO GRADE AS REQUIRED PER GRADING PLAN. RIM ELEVATION LISTED IS FOR THE FINISH GRADE ELEVATION AT THE CENTER OF THE TANK FOOTPRINT.

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STATE OF NEW HAMPSHIRE - PROFESSIONAL ENGINEER - GARRETT M. PICCIRILLO No. 15770 LICENSED
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DRAWN/DESIGN BY	CHECKED BY
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UTILITY PLAN

SCALE: 1"=20'

PROJECT NO. NEX-2200013

6 OF 14

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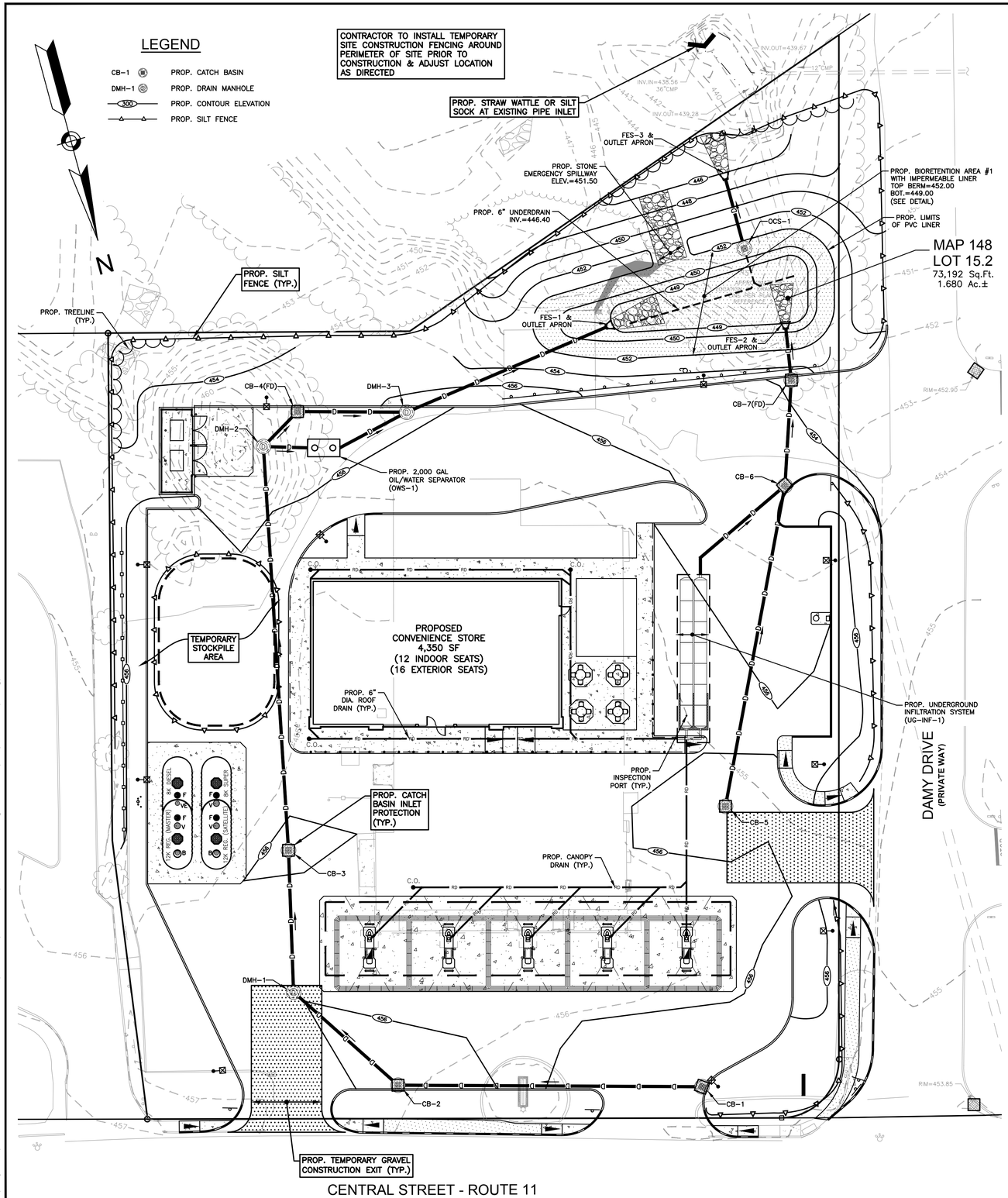
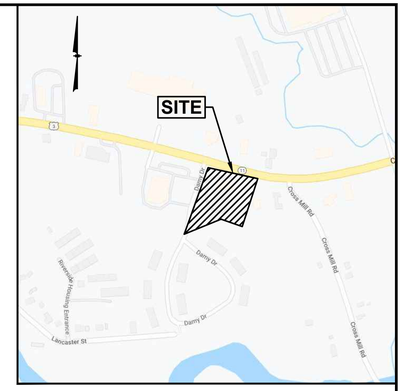


CONSTRUCTION SEQUENCE:

1) SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY ON-SITE CONSTRUCTION AS SHOWN. ADDITIONAL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED AS SOON AS PRACTICAL.
2) REMOVE AND STOCKPILE SOIL AS REQUIRED. STOCKPILE SHALL BE SURROUNDED WITH SILT FENCING TO PREVENT EROSION.
3) CONSTRUCT DRIVEWAYS AND PERFORM SITE GRADING.
4) INSTALL UNDERGROUND UTILITIES & DRAINAGE.
5) BEGIN TEMPORARY AND PERMANENT SEEDING AND MULCHING. ALL CUT AND FILL SLOPES SHALL BE SEEDED OR MULCHED IMMEDIATELY AFTER THEIR CONSTRUCTION.
6) DAILY, OR AS REQUIRED, CONSTRUCT, INSPECT, AND IF NECESSARY, RECONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, SILT FENCES, HAYBALES AND SEDIMENT TRAPS INCLUDING MULCHING AND SEEDING.
7) BEGIN EXCAVATION FOR AND CONSTRUCTION OF BUILDINGS.
8) FINISH PAVING ALL DRIVES AND PARKING AREAS. CLEAN ALL DRAINAGE STRUCTURES.
9) COMPLETE PERMANENT SEEDING AND LANDSCAPING.
10) AFTER GRASS HAS BEEN FULLY GERMINATED IN ALL SEEDED AREAS, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.

WINTER STABILIZATION NOTES:

MAINTENANCE REQUIREMENTS:
MAINTENANCE MEASURES SHOULD CONTINUE AS NEEDED THROUGHOUT CONSTRUCTION, INCLUDING THE OVER-WINTER PERIOD. AFTER EACH RAINFALL, SNOWSTORM, OR PERIOD OF THAWING AND RUNOFF, THE SITE CONTRACTOR SHOULD CONDUCT AN INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUING FUNCTION. FOR ANY AREA STABILIZED BY TEMPORARY OR PERMANENT SEEDING PRIOR TO THE ONSET OF THE WINTER SEASON, THE CONTRACTOR SHOULD CONDUCT AN INSPECTION IN THE SPRING TO ASCERTAIN THE CONDITION OF VEGETATION COVER, AND REPAIR ANY DAMAGE AREAS OR BARE SPOTS AND RESEED AS REQUIRED TO ACHIEVE AN ESTABLISHED VEGETATIVE COVER (AT LEAST 85% OF AREA VEGETATED WITH HEALTHY, VIGOROUS GROWTH).
SPECIFICATIONS:
TO ADEQUATELY PROTECT WATER QUALITY DURING COLD WEATHER AND DURING SPRING RUNOFF, THE FOLLOWING STABILIZATION TECHNIQUES SHOULD BE EMPLOYED DURING THE PERIOD FROM OCTOBER 15TH THROUGH MAY 15TH.
1) THE AREA OF EXPOSED, UNSTABILIZED SOIL SHOULD BE LIMITED TO ONE ACRE AND SHOULD BE PROTECTED AGAINST EROSION BY THE METHODS DESCRIBED IN THIS SECTION PRIOR TO ANY THAW OR SPRING MELT EVENT. SUBJECT TO APPLICABLE REGULATIONS, THE ALLOWABLE AREA OF EXPOSED SOIL MAY BE INCREASED IF ACTIVITIES ARE CONDUCTED ACCORDING TO A WINTER CONSTRUCTION PLAN, DEVELOPED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF NEW HAMPSHIRE OR A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL AS CERTIFIED BY THE CSPESC COUNCIL OF ENVIROCERT INTERNATIONAL, INC.
2) STABILIZATION AS FOLLOWS SHOULD BE COMPLETED WITHIN A DAY OF ESTABLISHING THE GRADE THAT IS FINAL OR THAT OTHERWISE WILL EXIST FOR MORE THAN 5 DAYS:
   A. ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF LESS THAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHOULD BE SEEDED AND COVERED WITH 3 TO 4 TONS OF HAY OR STRAW MULCH PER ACRE SECURED WITH ANCHORED NETTING, OR 2 INCHES OF EROSION CONTROL MIX (SEE DESCRIPTION OF EROSION CONTROL MIX BERMS FOR MATERIAL SPECIFICATION).
   B. ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF GREATER OOTHAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHOULD BE SEEDED AND COVERED WITH A PROPERLY INSTALLED AND ANCHORED EROSION CONTROL BLANKET OR WITH A MINIMUM 4 INCH THICKNESS OF EROSION CONTROL MIX, UNLESS OTHERWISE SPECIFIED BY THE MANUFACTURER. NOTE THAT COMPOST BLANKETS SHOULD NOT EXCEED 2 INCHES IN THICKNESS OR THEY MAY OVERHEAT.
3) ALL STONE-COVERED SLOPES MUST BE CONSTRUCTED AND STABILIZED BY OCTOBER 15.
4) INSTALLATION OF ANCHORED HAY MULCH OR EROSION CONTROL MIX SHOULD NOT OCCUR OVER SNOW OF GREATER THAN ONE INCH IN DEPTH.
5) ALL MULCH APPLIED DURING WINTER SHOULD BE ANCHORED (E.G., BY NETTING, TRACKING, WOOD CELLULOSE FIBER).
6) STOCKPILES OF SOIL MATERIALS SHOULD BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A FOUR-INCH LAYER OF EROSION CONTROL MIX. MULCHING SHOULD BE DONE WITHIN 24 HOURS OF STOCKING, AND RE-ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL. NO SOIL STOCKPILE SHOULD BE PLACED (EVEN COVERED WITH MULCH) WITHIN 100 FEET FROM ANY WETLAND OR OTHER WATER RESOURCE AREA.
7) FROZEN MATERIALS, (E.G., FROST LAYER THAT IS REMOVED DURING WINTER CONSTRUCTION), SHOULD BE STOCKPILED SEPARATELY AND IN A LOCATION THAT IS AWAY FROM ANY AREA NEEDING TO BE PROTECTED. STOCKPILES OF FROZEN MATERIAL CAN MELT IN THE SPRING AND BECOME UNWORKABLE AND DIFFICULT TO TRANSPORT DUE TO THE HIGH MOISTURE CONTENT IN THE SOIL.
8) INSTALLATION OF EROSION CONTROL BLANKETS SHOULD NOT OCCUR OVER SNOW OF GREATER THAN ONE INCH IN DEPTH OR ON FROZEN GROUND.
9) ALL GRASS-LINED DITCHES AND CHANNELS SHOULD BE CONSTRUCTED AND STABILIZED BY SEPTEMBER 1. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHOULD BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS, AS DETERMINED BY A QUALIFIED PROFESSIONAL ENGINEER OR A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL AS CERTIFIED BY THE CSPESC COUNCIL OF ENVIROCERT INTERNATIONAL, INC. IF A STONE LINING IS NECESSARY, THE CONTRACTOR MAY NEED TO RE-GRADE THE DITCH AS REQUIRED TO PROVIDE ADEQUATE CROSS-SECTION AFTER ALLOWING FOR PLACEMENT OF THE STONE.
10) ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY OCTOBER 15.
11) AFTER OCTOBER 15, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3.
12) SEDIMENT BARRIERS THAT ARE INSTALLED DURING FROZEN CONDITIONS SHOULD CONSIST OF EROSION CONTROL MIX BERMS, OR CONTINUOUS CONTAINED BERMS. SILT FENCES AND HAY BALES SHOULD NOT BE INSTALLED WHEN FROZEN CONDITIONS PREVENT PROPER EMBEDMENT OF THESE BARRIERS.



LOCATION MAP
NOT TO SCALE

EROSION CONTROL NOTES:

1) THE EROSION CONTROL PROCEDURES SHALL CONFORM TO THE NH STORMWATER MANUAL, VOLUME 3, EROSION & SEDIMENT CONTROLS DURING CONSTRUCTION, DECEMBER 2008, OR LATEST EDITION.
2) DURING CONSTRUCTION AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED: THE SMALLEST PRACTICAL AREA OF LAND SHOULD BE EXPOSED AT ANY ONE TIME DURING DEVELOPMENT. WHEN LAND IS EXPOSED DURING DEVELOPMENT, THE EXPOSURE SHOULD BE KEPT TO THE SHORTEST PRACTICAL PERIOD OF TIME AS APPROVED BY THE ENGINEER. LAND SHOULD NOT BE LEFT EXPOSED DURING THE WINTER MONTHS.
3) LIMIT OF MAXIMUM AREA OF EXPOSED SOIL AT ANY ONE TIME TO LESS THAN 5 ACRES. THE EXPOSED AREA THAT IS BEING ACTIVELY WORKED DURING WINTER IS TO BE LESS THAN 3 ACRES DURING THE WINTER SEASON.
4) ALL PERMANENT STORM WATER STRUCTURES SHALL BE STABILIZED PRIOR TO DIRECTING FLOW INTO THEM. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURED:
   A) BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED.
   B) A MINIMUM OF 85 PERCENT VEGETATED GROWTH HAS BEEN ESTABLISHED.
   C) A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP-RAP HAS BEEN INSTALLED.
   D) OR, EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
5) SILT FENCE SHALL BE INSTALLED AND MAINTAINED DURING AND AFTER DEVELOPMENT TO REMOVE SEDIMENT FROM RUNOFF WATER AND FROM LAND UNDERGOING DEVELOPMENT. WHERE POSSIBLE, NATURAL DRAINAGE WAYS SHOULD BE UTILIZED AND LEFT OPEN TO REMOVE EXCESS SURFACE WATER. SILT FENCE TO BE MAINTAINED AND CLEANED UNTIL ALL SLOPES HAVE A HEALTHY STAND OF GRASS.
6) ALL DISTURBED AREAS AND SIDE SLOPES WHICH ARE FINISHED GRADED, WITH NO FURTHER CONSTRUCTION TO TAKE PLACE, SHALL BE LOAMED AND SEEDED WITHIN 72 HOURS AFTER FINAL GRADING. A MINIMUM OF 4" OF LOAM SHALL BE INSTALLED WITH NOT LESS THAN ONE POUND OF SEED PER 50 SQUARE YARDS OF AREA. THE SEED MIX SHALL BE AS DESIGNATED BELOW.
7) ANY DISTURBED AREAS WHICH ARE TO BE LEFT TEMPORARILY, AND WHICH WILL BE REGRADED LATER DURING CONSTRUCTION SHALL BE MACHINE HAY MULCHED AND SEEDED WITH RYE GRASS TO PREVENT EROSION. THE MAXIMUM LENGTH OF TIME FOR THE EXPOSURE OF DISTURBED SOILS SHALL BE 45 DAYS. HAY OR STRAW MULCH SHALL BE APPLIED TO ALL FRESHLY SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE. BALES SHALL BE UNSPOILED, AIR DRIED, AND FREE FROM WEED, SEEDS AND ANY COARSE MATERIAL.
8) DURING GRADING OPERATIONS INSTALL HAY BALE BARRIERS ALONG TOE OF SLOPE OF FILL AREAS WHERE SHOWN. BARRIERS ARE TO BE MAINTAINED UNTIL DISTURBED AREAS ARE PAVED OR GRASSED.
9) THE FILL MATERIAL SHALL BE OF APPROVED SOIL TYPE FREE FROM STUMPS, ROOTS, WOOD, ETC. TO BE PLACED IN 12" LIFTS OR AS SPECIFIED. BULLDOZERS, TRUCKS, TRACTORS, OR ROLLERS MAY BE USED FOR COMPACTION BY ROUTING THE EQUIPMENT TO ALL AREAS OR EACH LAYER.
10) AVOID THE USE OF FUTURE OPEN SPACES (LOAM & SEED) WHEREVER POSSIBLE DURING CONSTRUCTION. CONSTRUCTION TRAFFIC SHALL USE THE ROADBEDS OF FUTURE ROADS.

TEMPORARY EROSION CONTROL MEASURES:

1) THE SMALLEST PRACTICAL AREA OF LAND SHALL BE EXPOSED AT ANY ONE TIME.
2) SEDIMENT CONTROL FENCE SHALL BE INSTALLED AS REQUIRED. FENCE IS TO BE MAINTAINED AND CLEANED UNTIL ALL SLOPES HAVE A HEALTHY STAND OF GRASS.
3) BALED HAY AND MULCH SHALL BE MOWINGS OF ACCEPTABLE HERBACEOUS GROWTH, FREE FROM NOXIOUS WEEDS OR WOODY STEMS, AND SHALL BE DRY. NO SALT HAY SHALL BE USED.
4) FILL MATERIAL SHALL BE FREE FROM STUMPS, WOOD, ROOTS, ETC.
5) STOCKPILED MATERIALS SHALL BE PLACED ONLY IN AREAS SHOWN ON THE PLANS. STOCKPILES SHALL BE PROTECTED BY SILT FENCING AND SEEDED TO PREVENT EROSION. THESE MEASURES SHALL REMAIN UNTIL ALL MATERIAL HAS BEEN PLACED OR DISPOSED OFF SITE.
6) ALL DISTURBED AREAS SHALL BE LOAMED AND SEEDED. A MINIMUM OF 4 INCHES OF LOAM SHALL BE INSTALLED WITH NOT LESS THAN ONE POUND OF SEED PER 50 SQUARE YARDS OF AREA.
7) SEED MIX SHALL BE EQUAL PARTS OF RED FESCUE (CREEPING), KENTUCKY BLUE GRASS, REDTOP, PERENNIAL RYEGRASS.
8) AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED, THE TEMPORARY EROSION CONTROL MEASURES ARE TO BE REMOVED.
9) PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES.
10) ALL CATCH BASIN INLETS WILL BE PROTECTED WITH INLET PROTECTION.
11) ALL STORM DRAINAGE OUTLETS WILL BE STABILIZED AND CLEANED AS REQUIRED, BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL.
12) ALL DEWATERING OPERATIONS MUST DISCHARGE DIRECTLY INTO A SEDIMENT FILTER AREA.
13) TO PREVENT TRACKING OF SEDIMENT ONTO THE EXISTING ROADS, ALL CONSTRUCTION TRAFFIC CAN ONLY EXIT THE SITE OVER THE CONSTRUCTION ENTRANCES SHOWN ON THIS PLAN.

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PREPARED FOR
TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842

PROPOSED RETAIL MOTOR FUEL OUTLET
MAP 148 LOT 15.2
901 CENTRAL STREET
FRANKLIN, NH 03235

STATE OF NEW HAMPSHIRE - GARRETT M. PICCIRILLO No. 15770 LICENSED PROFESSIONAL ENGINEER
10/18/22

REVISIONS		
NO.	REVISION	DATE

OCTOBER 18, 2022

DRAWN/DESIGN BY	CHECKED BY
CCC/GMP	FCM

EROSION & SEDIMENT CONTROL PLAN

SCALE: 1"=30'

PROJECT NO. NEX-2200013

7 OF 14

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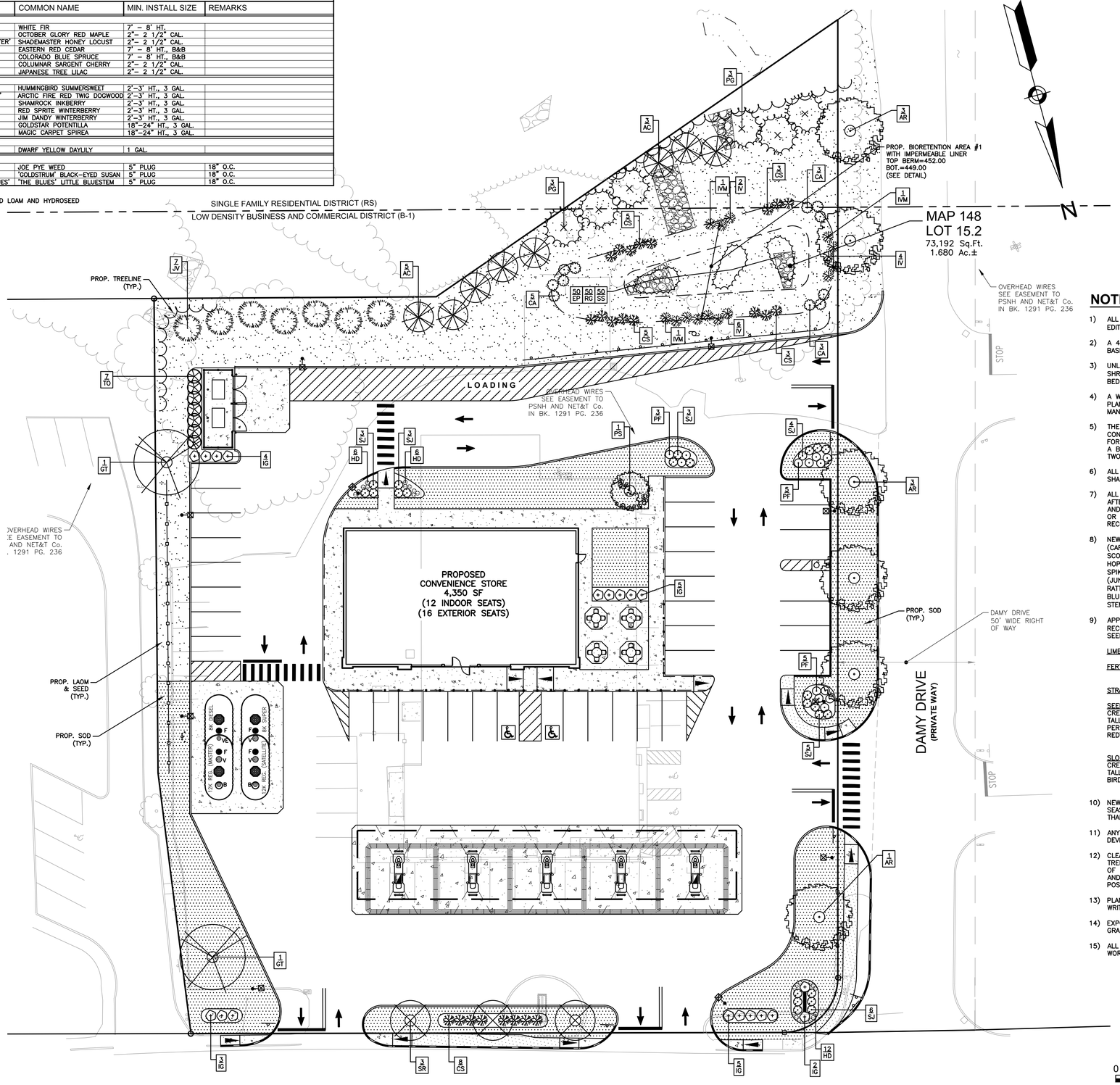
PLANTING SCHEDULE

PLANT	QNTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALL SIZE	REMARKS
TREES					
AC	8	ABIES CONCOLOR	WHITE FIR	7' – 8' HT.	
AR	6	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2"– 2 1/2" CAL.	
GT	2	GLEDITSIA TRIACANTHOS 'SHADEMASTER'	SHADEMASTER HONEY LOCUST	2"– 2 1/2" CAL.	
JV	7	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	7' – 8' HT., B&B	
PG	6	PICEA PUNGENS GLAUCA	COLORADO BLUE SPRUCE	7' – 8' HT., B&B	
PS	1	PRUNUS SARGENTII 'COLUMNARIS'	COLUMNAR SARGENT CHERRY	2"– 2 1/2" CAL.	
SR	3	SYRINGA RETICULATA	JAPANESE TREE LILAC	2"– 2 1/2" CAL.	
SHRUBS					
CA	11	CLETHRA ALNIFOLIA 'HUMMINGBIRD'	HUMMINGBIRD SUMMERSWEET	2'–3' HT., 3 GAL.	
CS	24	CORNUS STOLONIFERA 'ARCTIC FIRE'	ARCTIC FIRE RED TWIG DOGWOOD	2'–3' HT., 3 GAL.	
IG	19	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY	2'–3' HT., 3 GAL.	
IV	12	ILEX VERTICILLATA 'RED SPRITE'	RED SPRITE WINTERBERRY	2'–3' HT., 3 GAL.	
IVM	3	ILEX VERTICILLATA 'JIM DANDY'	JIM DANDY WINTERBERRY	2'–3' HT., 3 GAL.	
PF	13	POTENTILLA FRUTICOSA 'GOLDSTAR'	GOLDSTAR POTENTILLA	18"–24" HT., 3 GAL.	
SJ	24	SPIREA JAPONICA 'MAGIC CARPET'	MAGIC CARPET SPIREA	18"–24" HT., 3 GAL.	
PERENNIALS					
HD	12	HEMEROCALLIS 'STELLA DE ORO'	DWARF YELLOW DAYLILY	1 GAL.	
PLUGS					
EP	50	EUPATORIUM PURPUREUM	JOE PYE WEED	5" PLUG	18" O.C.
RG	50	RUDBECKIA FULGIDA 'GOLDSTRUM'	'GOLDSTRUM' BLACK-EYED SUSAN	5" PLUG	18" O.C.
SS	50	SCHIZACHYRIUM SCOPARIUM 'THE BLUES'	'THE BLUES' LITTLE BLUESTEM	5" PLUG	18" O.C.

1 XX — PLANT QUANTITY / PLANT DESIGNATION

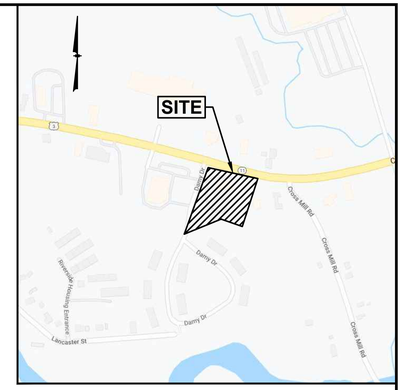
PROPOSED LOAM AND HYDROSEED

PROPOSED SOD



LEGEND

- SGC — SLOPED GRANITE CURB
- VGC — VERTICAL GRANITE CURB
- CCB — CAPE COD BERM
- SSLW — SINGLE SOLID LINE WHITE
- G — GAS LINE
- 90 — CONTOUR ELEVATION
- TREE
- UTILITY POLE
- GUY WIRE
- OVERHEAD WIRE
- TREELINE
- SIGN
- SPOT ELEVATION
- CATCH BASIN
- SEWER MANHOLE
- GAS VALVE
- GAS SHUT OFF
- LIGHT POLE
- WATER FEATURE
- EASEMENT LINE
- PROPERTY LINE
- ABUTTER PROPERTY LINE
- ZONE LINE



LOCATION MAP
NOT TO SCALE

NOTES:

1) ALL PLANT STOCK SHALL CONFORM TO ANSI Z260.1 – NURSERY STOCK, LATEST EDITION (AMERICAN ASSOCIATION OF NURSERYMEN, INC.).
2) A 4' DIA. MULCH RING WITH 3" AGED PINE BARK MULCH SHALL BE INSTALLED AT BASE OF ALL TREES IN LAWN AREAS.
3) UNLESS NOTED OTHERWISE, 3" AGED PINE BARK MULCH SHALL BE APPLIED TO SHRUB BEDS AND 1" AGED PINE BARK MULCH SHALL BE APPLIED TO PERENNIAL BEDS.
4) A WEED BARRIER (TY–PAR FABRIC OR APPROVED EQUAL) SHALL BE APPLIED TO ALL PLANTING BEDS UNLESS NOTED OTHERWISE. INSTALL WEED BARRIER AS PER MANUFACTURERS RECOMMENDATIONS.
5) THE CONTRACTOR SHALL PROVIDE TESTING OF SOILS IN PLANTING LOCATIONS. THE CONTRACTOR SHALL PROVIDE TEST RESULTS AND RECOMMENDATIONS AS NECESSARY FOR SOIL AMENDMENT TO THE ENGINEER FOR THEIR APPROVAL. BACKFILL SHALL BE A BLEND OF ONE–PART LOAM BORROW, ONE PART ORGANIC MATERIAL AND TWO–PARTS EXISTING SUBSOIL.
6) ALL LANDSCAPED AREAS NOT PLANTED WITH TREES, SHRUBS OR GROUNDCOVER SHALL BE RESTORED WITH SEED AS INDICATED ON PLANS.
7) ALL SEED, SHRUB AND TREE AREAS SHALL RECEIVE 6" PH CORRECTED TOPSOIL. AFTER TOPSOIL IS SPREAD EVENLY OVER ENTIRE AREA, ALL CLODS, LUMPS, STONES AND OTHER DELETERIOUS MATERIAL SHALL BE RAKED UP AND REMOVED. ALL LOAM OR TOPSOIL IMPORTED OR RE–UTILIZED FROM ON SITE SHALL BE AMENDED AS RECOMMENDED BY TESTING LABORATORY TO MEET MINIMUM REQUIREMENTS.
8) NEW ENGLAND WETMIX SEED SHALL CONTAIN THE FOLLOWING SPECIES: FOX SEDGE (CAREX VULPINOIDEA), LURID SEDGE (CAREX LURIDA), BLUNT BROOM SEDGE (CAREX SCOPARIA), BLUE VERVAIN (VERBENA HASTATA), FOWL BLUEGRASS (POA PALUSTRIS), HOP SEDGE (CAREX LUPULINA), GREEN BULRUSH (SCIRPUS ATROVIRENS), CREEPING SPIKE RUSH (ELEOCHARIS PALUSTRIS), FRINGED SEDGE (CAREX CRINITA), SOFT RUSH (JUNCUS EFFUSUS), SPOTTED JOE PYE WEED (EUPATORIUM MACULATUM), RATTLESNAKE GRASS (GLYCERIA CANADENSIS), SWAMP ASTER (ASTER PUNICEUS), BLUEFLAG (IRIS VERSICOLOR), SWAMP MILKWEED (ASCLEPIAS INCARNATA), SQUARE STEMMED MONKEY FLOWER (MIMULUS RINGENS)
9) APPLICATION OF GRASS SEED, FERTILIZERS (UNLESS NOTED OTHERWISE BY TESTING RECOMMENDATIONS) AND STRAW MULCH SHALL BE ACCOMPLISHED BY BROADCAST SEEDING OR HYDROSEEDING AT THE RATES OUTLINED BELOW:

LIMESTONE: 100 LBS./1,000 SQUARE FEET.

FERTILIZER: 500 LBS/ACRE OF 10–20–20 OR 1000 LBS/ACRE OF 5–10–10.

STRAW MULCH: APPROXIMATELY 3 TONS/ACRE

SEED MIX (SLOPES LESS THAN 4:1)	LBS/ACRE
CREEPING RED FESCUE	20
TALL FESCUE	15
PERENNIAL RYEGRASS	5
REDTOP	2
	42

SLOPE MIX (SLOPES GREATER THAN 4:1)	LBS/ACRE
CREEPING RED FESCUE	20
TALL FESCUE	20
BIRDSFOOT TREEFOIL	8
	48

10) NEWLY GRADED AREAS REQUIRING SLOPE PROTECTION OUTSIDE OF NORMAL SEEDING SEASON SHALL RECEIVE STRAW MULCH AT THE APPROXIMATE RATE OF NO MORE THAN 3 TONS PER ACRE.
11) ANY CHANGES IN PLANT LOCATIONS OR TYPES SHALL BE APPROVED BY THE DEVELOPER, LANDOWNER AND CITY PRIOR TO INSTALLATION.
12) CLEAR AND GRUB (TO LIMITS REQUIRED ON GRADING PLAN) TO REMOVE VEGETATION, TREES, ROCKS, DEBRIS, ROOTS, ETC. STUMPS SHALL BE REMOVED AND DISPOSED OF OFF SITE IN ACCORDANCE WITH STATE REGULATIONS. AFTER CLEARING, STRIP AND STOCKPILE ALL ON–SITE TOPSOIL FOR REUSE TO THE MAXIMUM EXTENT POSSIBLE.
13) PLANTINGS SHALL BE GUARANTEED BY THE CONTRACTOR FOR ONE YEAR AFTER WRITTEN ACCEPTANCE BY THE DEVELOPER.
14) EXPOSED SOILS SHALL BE SEEDED OR STRAW MULCHED WITHIN 72 HOURS OF FINAL GRADING.
15) ALL WORK SHALL BE COORDINATED WITH APPLICABLE EPA NPDES/SWPPP PERMIT WORK AS REQUIRED.

0 20 50 100
SCALE: 1" = 20'

811 DigSafe MA-ME-NH-RI-VT

GPI Engineering Design Planning Construction Management
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Salem, NH 03079

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MAP 148 LOT 15.2
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STATE OF NEW HAMPSHIRE – GARRETT M. PICCIRILLO No. 15770 LICENSED PROFESSIONAL ENGINEER –
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LANDSCAPE PLAN

SCALE: 1"=20'

PROJECT NO. NEX-2200013

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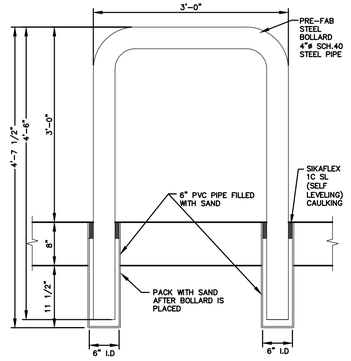
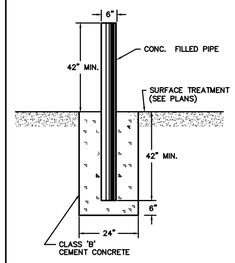


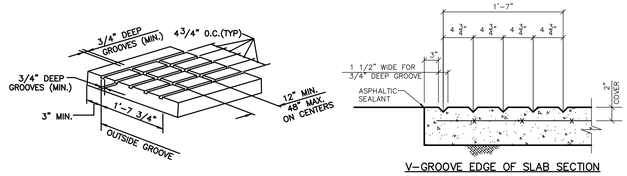
TYPICAL U-SHAPED BOLLARD

NOT TO SCALE



PIPE BOLLARD

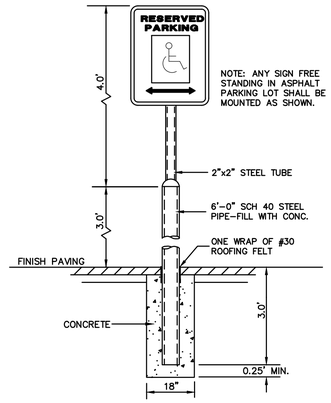
NOT TO SCALE



V-GROOVE EDGE OF SLAB SECTION

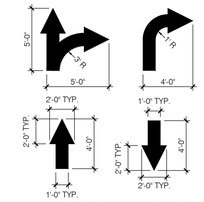
SPILL CONTAINMENT GROOVES

NOT TO SCALE



ACCESSIBLE SIGN ON BOLLARD

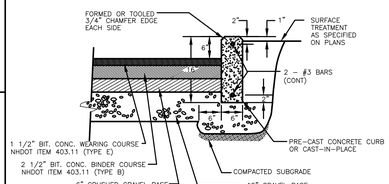
NOT TO SCALE



ALL PAVEMENT MARKINGS TO BE WHITE PAVEMENT PAINT, UNLESS STATED OTHERWISE.

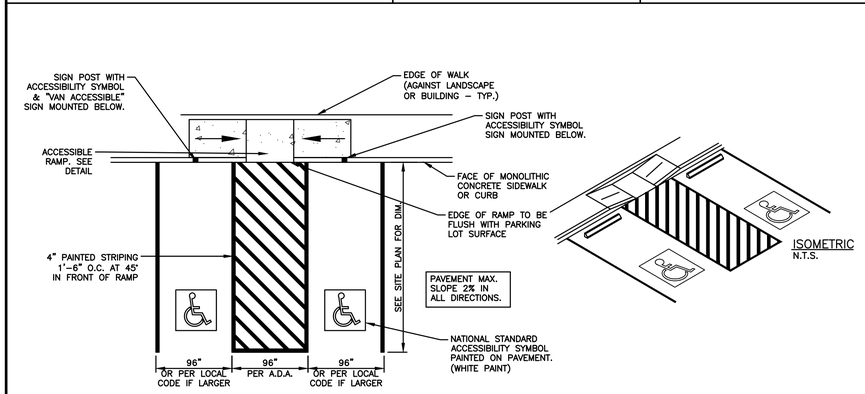
ON-SITE PAVEMENT MARKING

NOT TO SCALE



PAVEMENT AND CONCRETE CURB SECTION ON-SITE

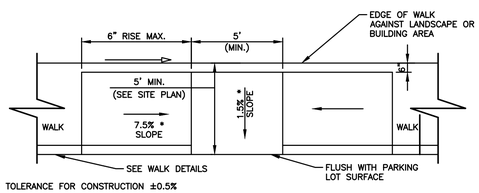
NOT TO SCALE



ISOMETRIC N.T.S.

ACCESSIBLE PARKING STALLS

NOT TO SCALE



ACCESSIBLE PARKING RAMP

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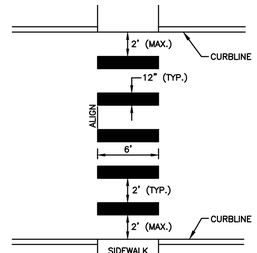
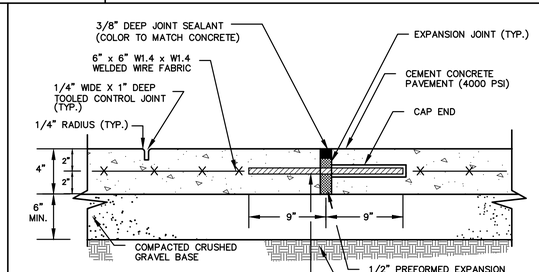


NOTES:

1. TWELVE INCH (12") LINES SHALL BE APPLIED IN ONE APPLICATION, NO COMBINATION OF LINES (TWO – 6 INCH LINES) WILL BE ACCEPTED.
2. LONGITUDINAL CROSSWALK LINES TO BE PARALLEL TO CURBLINE.
3. ALL LONGITUDINAL CROSSWALK LINES TO BE THE SAME LENGTH AND PROPERLY ALIGNED.

CROSSWALK

NOT TO SCALE

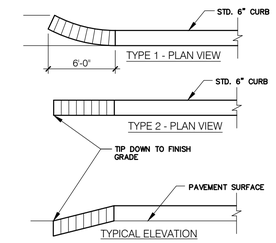


NOTES:

1. MAINTAIN 2" CLEARANCE (TYP) BETWEEN ALL CONCRETE EDGES AND WIRE FABRIC OR DOWEL.
2. CONTROL JOINTS TO BE LOCATED 5 FT. ON CENTER.
3. EXPANSION JOINTS TO BE LOCATED 25 FT. ON CENTER.

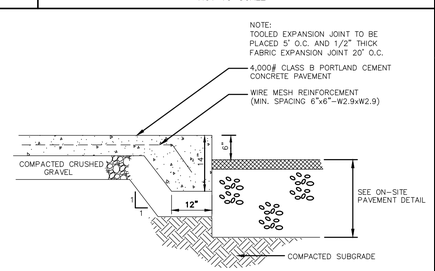
CEMENT CONCRETE SIDEWALK SECTION AND JOINT

NOT TO SCALE



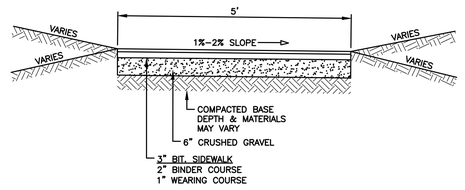
TYPICAL TIP DOWN CURB

NOT TO SCALE



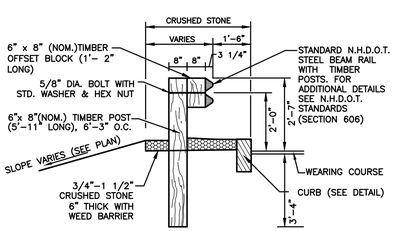
MONOLITHIC CURB/SIDEWALK

NOT TO SCALE



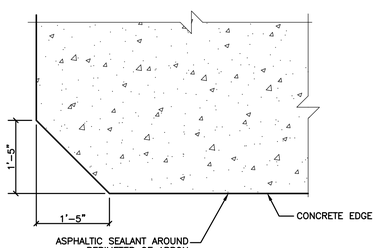
BITUMINOUS CONCRETE SIDEWALK

NOT TO SCALE



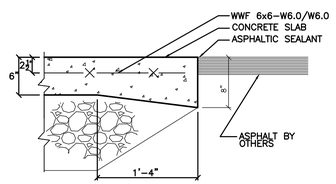
GUARD RAIL

NOT TO SCALE



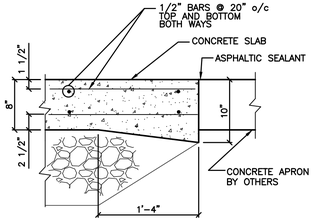
DISPENSER APRON CHAMFER

NOT TO SCALE



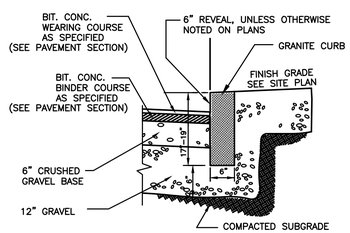
DISPENSER APRON EDGE

NOT TO SCALE



TANK APRON EDGE

NOT TO SCALE



VERTICAL GRANITE CURB

NOT TO SCALE

NOTE: SAWCUT 1' OFF FACE OF CURB WHERE INSTALLED IN EXISTING PAVEMENT. PATCH PAVEMENT TO MATCH EXISTING THICKNESS.

GPI Engineering Design Planning Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road, Suite One
Salem, NH 03079

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PROPOSED RETAIL MOTOR FUEL OUTLET

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STATE OF NEW HAMPSHIRE – GARRETT M. PICCIRILLO No. 15770 LICENSED PROFESSIONAL ENGINEER

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DETAIL SHEET

SCALE: AS SHOWN

PROJECT NO. NEX-2200013

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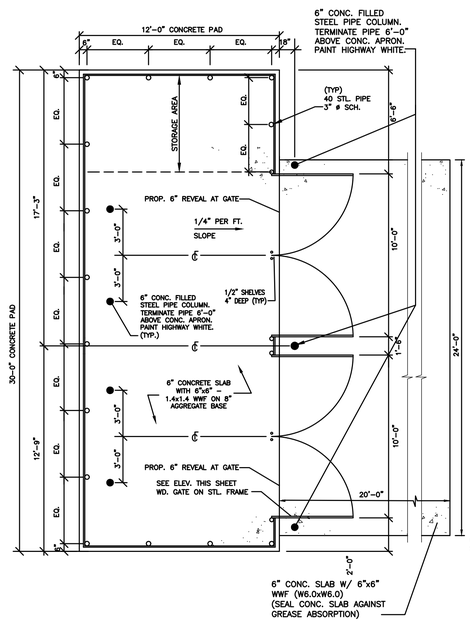
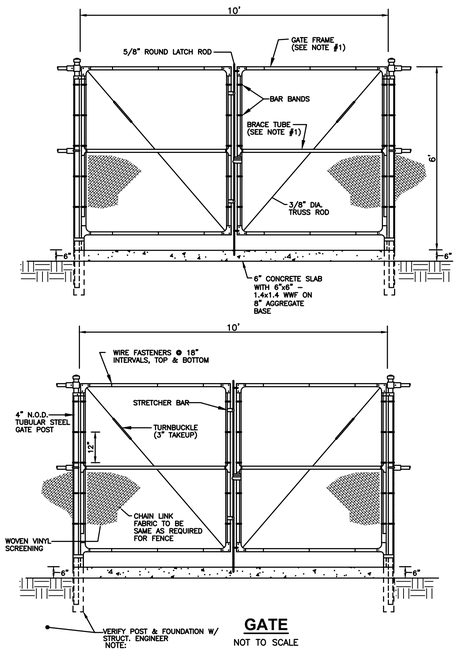


PLAN VIEW

NOTE: SEE SITE PLAN FOR ACTUAL TRASH ENCLOSURE CONFIGURATION.

CHAIN LINK TRASH ENCLOSURE

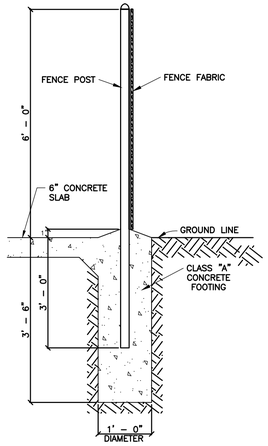
NOT TO SCALE



GATE

NOT TO SCALE

1) NOMINAL OUTSIDE DIAMETER (N.O.D.) OF GATE FRAME AND BRACE TUBE TO BE 1.66" UP TO 6" IN WIDTH, AND 1.90" IF OVER 6" IN WIDTH.

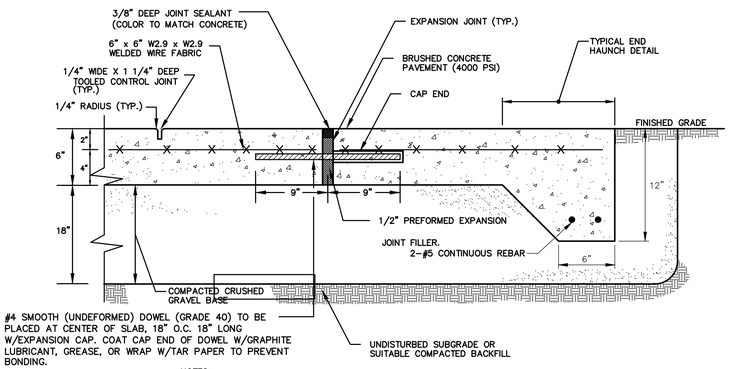


TRASH ENCLOSURE FENCE

NOT TO SCALE

FENCE NOTES:

1) FENCE FABRIC SHALL BE STANDARD 2" CHAIN LINK GALVANIZED MESH WITH PRIVACY SLATS (FOREST GREEN).
2) ALL POSTS SHALL BE GALVANIZED SCHEDULE 40 STEEL PIPE.
3) ALL LINE POSTS TO BE 2.375" O.D. PIPE. MAXIMUM SPACING TO BE 10' ON CENTER.
4) ALL END AND CORNER POSTS TO BE 2.875" O.D. PIPE.
5) ALL TOP AND MIDDLE RAILS TO BE 1.66" O.D. PIPE.
6) ALL FITTINGS AND ACCESSORIES SHALL BE GALVANIZED.



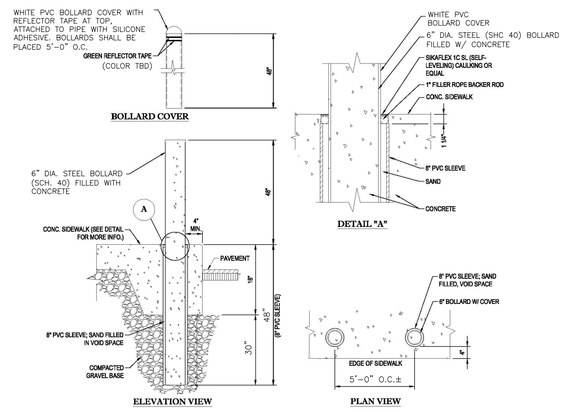
#4 SMOOTH (UNDEFORMED) DOWEL (GRADE 40) TO BE PLACED AT CENTER OF SLAB, 18" O.C. 18" LONG W/EXPANSION CAP. COAT CAP END OF DOWEL W/GRAPHITE LUBRICANT, GREASE, OR WRAP W/TAR PAPER TO PREVENT BONDING.

NOTES:

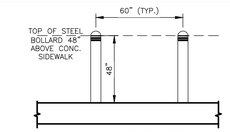
1. MAINTAIN 2" CLEARANCE (TYP) BETWEEN ALL CONCRETE EDGES AND WIRE FABRIC, DOWEL, OR REBAR.
2. CONTROL JOINTS TO BE LOCATED 5 FT. ON CENTER OR AS SHOWN ON ARCHITECTURAL PLANS.
3. EXPANSION JOINTS TO BE LOCATED 25 FT. ON CENTER.
4. WELDED WIRE FABRIC SHALL BE LAPSED A MINIMUM OF 2 WIRE SPACES.

6" HEAVY DUTY CONCRETE PAD

NOT TO SCALE



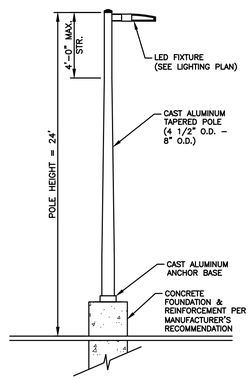
BOLLARD SET IN CONCRETE WALK



BOLLARD ELEVATION

BOLLARD AT STOREFRONT

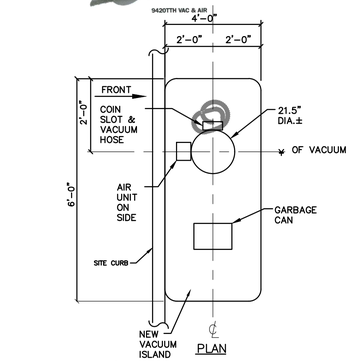
NOT TO SCALE

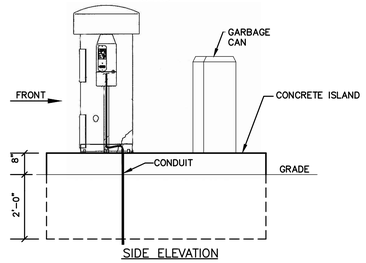


LIGHT FIXTURE

NOT TO SCALE

9420TH VAC & AIR

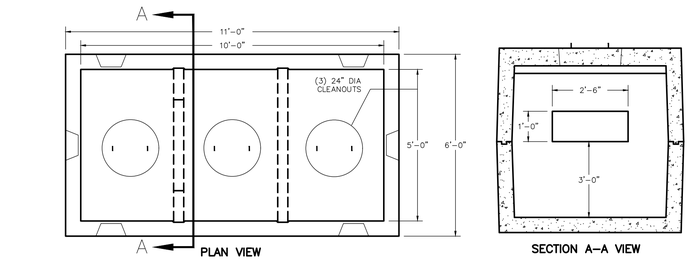




SIDE ELEVATION

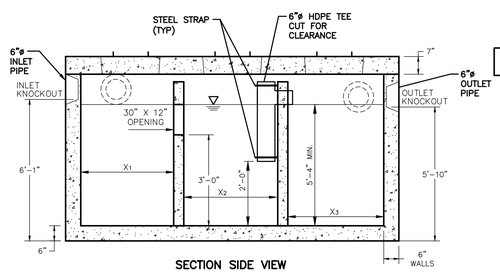
VACUUM/AIR ISLAND

NOT TO SCALE



PLAN VIEW

SECTION A-A VIEW



SECTION SIDE VIEW

BAFFLE WALL DETAIL

ITEM: TK-2000C2C
WEIGHT: 27,340LBS

NOTES:

1. CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS.
2. DESIGNED FOR H-20 LOADING.
3. TONGUE & GROOVE JOINT SEALED WITH BUTYL RESIN.
4. FIRST & SECOND CHAMBER SIZING BASED ON NHDES CRITERIA OF 400 CF/ACRE OF IMPERVIOUS AREA:
   O/W SEP #1: 17,553 SF IMP. AREA = 0.40 Ac.
   400 CF/Ac. x 0.40 Ac.= 160 CF
   $X_1 + X_2 = 160$ CF/(5'-4"x 5') = 6'-0" (MIN.)
   $X_1 \& X_2$ = 3'-0" (PER CHAMBER)
   X_3 = 3'-0"
5. CONTRACTOR TO SUBMIT SHOP DRAWING FOR APPROVAL.

2,000 GAL. OIL/WATER SEPARATOR (OWS-1)

NOT TO SCALE

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PREPARED FOR
TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842

PROPOSED RETAIL MOTOR FUEL OUTLET

MAP 148 LOT 15.2
901 CENTRAL STREET
FRANKLIN, NH 03235

STATE OF NEW HAMPSHIRE
GARRETT M. PICCIRILLO
No. 15770
LICENSED PROFESSIONAL ENGINEER

10/18/22

REVISIONS		
NO.	REVISION	DATE

OCTOBER 18, 2022

DRAWN/DESIGN BY	CHECKED BY
CCC/GMP	FCM

DETAIL SHEET

SCALE: AS SHOWN

PROJECT NO. NEX-2200013

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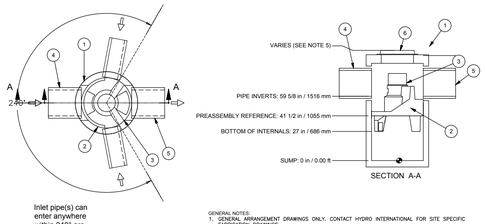


Inlet pipe(s) can enter anywhere within 240° arc.

Parts List		
ITEM	SIZE (in)	DESCRIPTION
1	48	I.D. PRECAST MANHOLE
2		LEDGER SUPPORT
3		SEPARATION MODULE
4	12	INLET PIPE (BY OTHERS)
5	15	OUTLET PIPE (BY OTHERS)
6	30	FRAME AND COVER (OR GRATE) (ROUND)

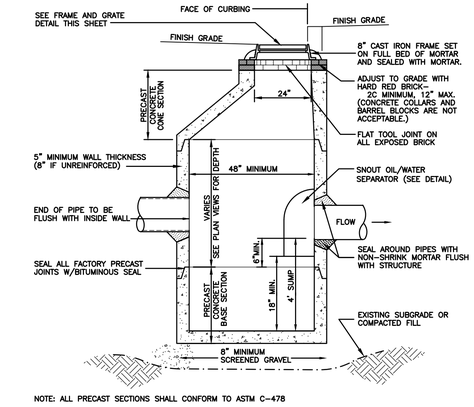
GENERAL NOTES:
1. GENERAL ARRANGEMENT DRAWINGS ONLY. CONTACT HYDRO INTERNATIONAL FOR SITE SPECIFIC FABRICATION DRAWINGS.
2. THE DIAMETER OF THE INLET & OUTLET PIPES MAY BE NO MORE THAN 24".
3. MULTIPLE INLET PIPES POSSIBLE (REFER TO PROJECT PLANS).
4. INLET/OUTLET PIPE ANGLE CAN VARY TO ALIGN WITH DRAINAGE NETWORK (REFER TO PROJECT PLANS).
5. PEAK FLOW RATE AND MINIMUM HEIGHT LIMITED BY AVAILABLE COVER AND PIPE DIAMETER.
6. LARGER SEDIMENT STORAGE CAPACITY MAY BE PROVIDED WITH A DEEPER SUMP DEPTH.

PRODUCT SPECIFICATIONS:
A. THE TREATMENT SYSTEM SHALL USE AN INDUCED VORTEX TO SEPARATE POLLUTANTS FROM STORMWATER RUNOFF.
B. THE TREATMENT SYSTEM SHALL FIT WITHIN THE LIMITS OF EXCAVATION (AREA AND DEPTH) AS SHOWN IN THE PROJECT PLANS AND WILL NOT EXCEED THE DIMENSIONS FOR THE DESIGN FLOW RATES (Q) CITED HEREIN.
C. THE TREATMENT SYSTEM SHALL BE SIZED TO REMOVE 80% OF THE AVERAGE ANNUAL LOAD OF TSS (TOTAL SUSPENDED PARTICLE SIZE (TPS) OF 109 MICRONS AND/OR 80% OF TSS BASED ON THE TPS OF 230 MICRONS AT 0.17 CFS AND 1.2 CFS, RESPECTIVELY.
D. THE TREATMENT SYSTEM SHALL CONVEY THE PEAK ON-LINE FLOW RATES OF UP TO 18 CFS WITHOUT CAUSING UPSTREAM SURCHARGE CONDITIONS. FULL-SCALE INDEPENDENT LABORATORY SCOUR TESTING SHALL DEMONSTRATE EFFLUENT CONTROL OF LESS THAN OR EQUAL TO 5 MG/L FOR ALL FLOWS UP TO 200% OF WTRV=108.
E. THE TREATMENT SYSTEM SHALL BE CAPABLE OF CAPTURING AND RETAINING FINE SILT AND SAND SIZE PARTICLES. ANALYSIS OF CAPTURED SEDIMENT FROM FULL-SCALE FIELD INSTALLATIONS SHALL DEMONSTRATE PARTICLE SIZES PREDOMINATELY IN THE 20-MICRON RANGE.

"FIRST DEFENSE" UNIT DETAIL - FD-4HC

(OR APPROVED EQUAL)
NOT TO SCALE

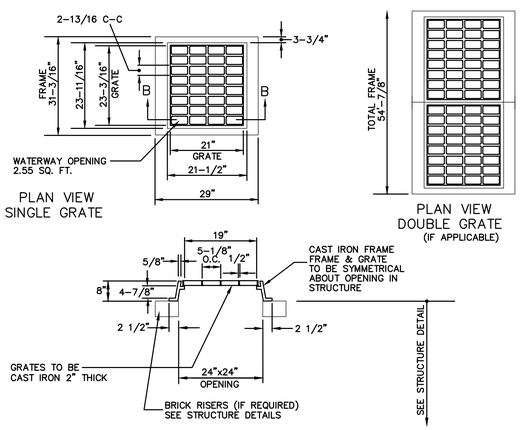
NOTE: CONTRACTOR SHOULD CONFIRM SYSTEM PARTS AND OBTAIN SHOP DRAWINGS FROM MANUFACTURER PRIOR TO CONSTRUCTION.



NOTE: ALL PRECAST SECTIONS SHALL CONFORM TO ASTM C-478

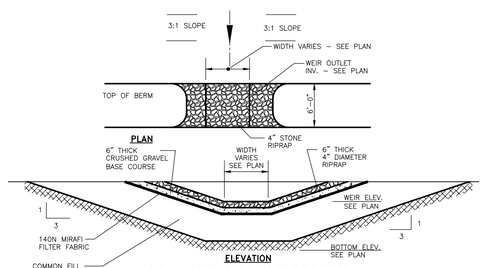
DEEP SUMP CATCH BASIN ECCENTRIC CONE

(FOR USE IN CURBED AREAS)
NOT TO SCALE



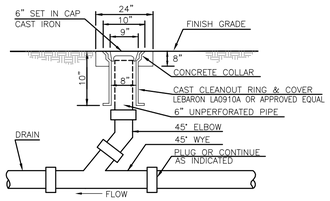
FRAME AND GRATE - TYPE B

NOT TO SCALE



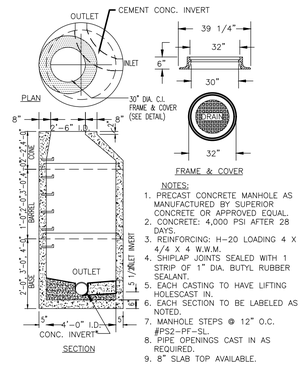
EMERGENCY OVERFLOW SPILLWAY CROSS SECTION

NOT TO SCALE



TYPICAL DRAIN CLEANOUT

NOT TO SCALE



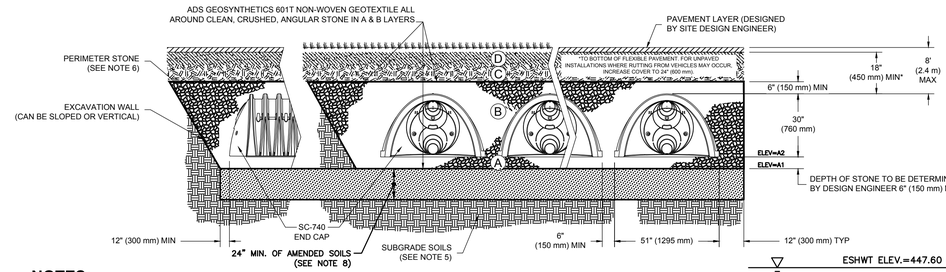
NOTES:
1. PRECAST CONCRETE MANHOLE AS MANUFACTURED BY SUPERIOR CONCRETE OR APPROVED EQUAL.
2. CONCRETE: 4,000 PSI AFTER 28 DAYS.
3. REINFORCING: H-20 LOADING 4 X 4/4 X 4 W.W.M.
4. SHIPLAP JOINTS SEALED WITH 1 STRIP OF 1" DIA. BUTYL RUBBER SEALANT.
5. EACH CASTING TO HAVE LIFTING HOLESCAST IN.
6. EACH SECTION TO BE LABELED AS NOTED.
7. MANHOLE STEPS @ 12" O.C. #PS2-PF-SL.
8. PIPE OPENINGS CAST IN AS REQUIRED.
9. 8" SLAB TOP AVAILABLE.

PRECAST CONCRETE DRAIN MANHOLE

MAXIMUM PIPE DIAMETER 30"
NOT TO SCALE

UNDERGROUND INFILTRATION SYSTEM NOTES:

1) EXISTING TOPSOIL, BRUSH, TREES, BOULDERS, FILL, DEBRIS AND OTHER UNSUITABLES TO BE REMOVED FOR 5' ALL AROUND UNDERGROUND INFILTRATION SYSTEM DOWN TO NATIVE MATERIAL. BACKFILL WITH STONE BEDDING MATERIAL.
2) DO NOT TRAFFIC EXPOSED SOIL SURFACES WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION SYSTEM.
3) DO NOT PLACE INFILTRATION SYSTEMS INTO SERVICE UNTIL THE CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
4) CONTRACTOR SHOULD CONFIRM SYSTEM PARTS AND OBTAIN SHOP DRAWINGS FROM MANUFACTURER. SUBSTITUTIONS AND SHOP DRAWINGS SHOULD BE APPROVED BY THE ENGINEER.
5) PARTS SPECIFICATIONS SHOWN ARE AS PROVIDED BY ADS INC., OR APPROVED EQUAL. ANY CHANGES TO THESE SPECIFICATIONS SHOULD BE APPROVED BY DESIGN ENGINEER FOR PERFORMANCE.



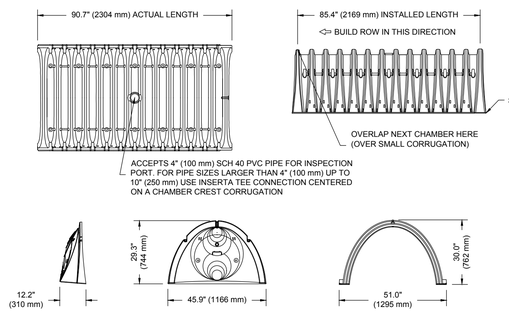
NOTES:

1. SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".^J
2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".^J
3. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.^J
4. THE "SITE DESIGN ENGINEER" REFERS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN AND LAYOUT OF THE STORMTECH CHAMBERS FOR THIS PROJECT.^J
5. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.^J
6. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
7. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
8. CONTRACTOR SHALL ENGAGE A QUALIFIED PROFESSIONAL TO DETERMINE SPECIFICATION OF AMENDED SOILS. INFILTRATION TESTING SHALL BE PERFORMED PURSUANT TO ENV-WQ 1504.14 TO ENSURE THAT A TARGET RATE OF 8 TO 10 IN/HR IS ACHIEVED. THE TESTING SHALL BE PERFORMED BY A CERTIFIED SOIL SCIENTIST, PROFESSIONAL GEOLOGIST, OR QUALIFIED ENGINEER (P.E.) TO BE DETERMINED BY THE CONTRACTOR. RESULTS OF THE INFILTRATION TESTING SHALL BE SUBMITTED TO THE ENGINEER WITHIN 7 DAYS OF TESTING.

STORMTECH TABLE		
SYSTEM #	ELEV. A1	ELEV. A2
U/G INF-1	450.60	451.10

UNDERGROUND INFILTRATION SYSTEM STORMTECH SC-740 CHAMBER TYPICAL CROSS SECTION

NOT TO SCALE

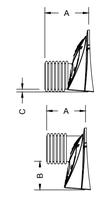


STORMTECH SC-740 CHAMBER

NOT TO SCALE

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

PART #	STUB	A	B	C
SC740EPE06T / SC740EPE06TPC	6" (150 mm)	10.9" (277 mm)	18.5" (470 mm)	---
SC740EPE06B / SC740EPE06BPC			---	0.5" (13 mm)
SC740EPE08T /SC740EPE08TPC	8" (200 mm)	12.2" (310 mm)	16.5" (419 mm)	---
SC740EPE08B / SC740EPE08BPC			---	0.6" (15 mm)
SC740EPE10T / SC740EPE10TPC	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)	---
SC740EPE10B / SC740EPE10BPC			---	0.7" (18 mm)
SC740EPE12T / SC740EPE12TPC	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)	---
SC740EPE12B / SC740EPE12BPC			---	1.2" (30 mm)
SC740EPE15T / SC740EPE15TPC	15" (375 mm)	18.4" (467 mm)	9.0" (229 mm)	---
SC740EPE15B / SC740EPE15BPC			---	1.3" (33 mm)
SC740EPE18T / SC740EPE18TPC	18" (450 mm)	19.7" (500 mm)	5.0" (127 mm)	---
SC740EPE18B / SC740EPE18BPC			---	1.6" (41 mm)
SC740EPE24B*	24" (600 mm)	18.5" (470 mm)	---	0.1" (3 mm)



ALL STUBS, EXCEPT FOR THE SC740EPE24B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

* FOR THE SC740EPE24B THE 24" (600 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL

STORMTECH SC-740 CHAMBER END CAP

NOT TO SCALE

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PROPOSED RETAIL MOTOR FUEL OUTLET

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FRANKLIN, NH 03235

GARRETT M. PICCIRILLO No. 15770 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE

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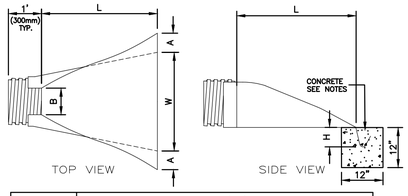


	DIMENSIONS, INCHES (mm)					
PIPE DIAMETER	PART NO.	A, ±1 (25)	B MAX	H, ±1 (25)	L, ±1/2 (13)	W, ±2 (50)
12", 15" (300,375)	1210 NP	6.5 (165)	10 (254)	6.5 (165)	25 (635)	29 (736)
18" (450)	1810 NP	7.5 (190)	15 (380)	6.5 (168)	32 (812)	35 (890)
24" (600)	2410 NP	7.5 (190)	18 (450)	6.5 (165)	36 (900)	45 (1140)
30" (750)	3010 NP	10.5 (266)	NA	7.0 (178)	53 (1346)	68 (1725)
36" (900)	3610 NP	10.5 (266)	NA	7.0 (178)	53 (1346)	68 (1725)

CONSTRUCTION SPECIFICATIONS:

PREPARE BEDDING:

BACKFILL MATERIAL AROUND THE END SECTION MAY BE THE SAME AS THE MATERIAL AROUND THE PIPE. PLACE A FEW INCHES OF BACKFILL MATERIAL IN THE TRENCH OR DITCH WHERE THE END SECTION WILL BE PLACED. COMPACT AND CONTOUR THIS BEDDING MATERIAL TO GENERALLY MATCH THE END SECTION. EXCAVATE AN AREA IN THE BEDDING WHERE TOE TROUGH WILL SEAT SO THAT THE END SECTION WILL BE LEVEL WITH THE BOTTOM OF THE TRENCH OR DITCH IN THE FINISHED INSTALLATION.

PLACE END SECTION OF PIPE:

OPEN THE END SECTION COLLAR AND SEAT IT OVER THE TWO PIPE CONNECTIONS. ONCE THE END SECTION IS POSITIONED, CHECK TO MAKE SURE THAT THE INVERT OF THE END SECTION MATCHES THE INVERT OF THE PIPE AND THAT THE END SECTION IS LEVEL WITH THE TRENCH OR DITCH BOTTOM.

SECURE THE END SECTION:

SLIP THE STAINLESS STEEL ROD THROUGH THE PRE-DRILLED HOLES AT THE TOP OF THE COLLAR. THE ROD SHOULD BE BETWEEN THE CROWNS OF THE TWO PIPE CONNECTIONS. PLACE A WASHER ON EITHER END OF THE ROD. PLACE A NUT ON EITHER END OF THE ROD AND TIGHTEN WITH A WRENCH.

SECURE THE TOE TROUGH:

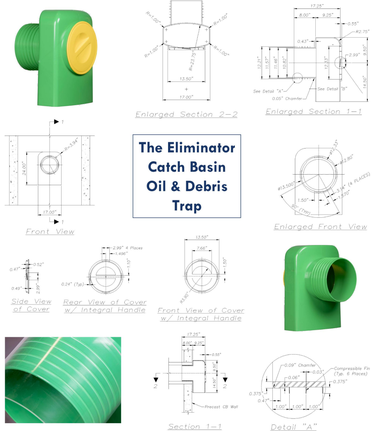
TO PREVENT WASHOUTS FROM HIGH VELOCITY FLOW, IT IS RECOMMENDED THAT THE TROUGH BE SECURED WITH CONCRETE. POUR CONCRETE IN THE TROUGH UP TO THE LEVEL OF THE TRENCH OR DITCH BOTTOM AND ALONG THE ENTIRE LENGTH OF THE TROUGH.

FINISH BACKFILL:

SHOVEL BACKFILL AROUND THE END SECTION IN 6 TO 9 INCH LAYERS EQUALLY ON BOTH SIDES, KNIFING IT TO ELIMINATE VOIDS. TAMP WITH A SMALL-FACED COMPACTOR OR OTHER EQUIPMENT SUITABLE FOR SMALL AREAS. CONTINUE PLACING, KNIFING, AND COMPACTING BACKFILL LAYERS TO THE TOP OF THE END SECTION TO SEAT IT WELL INTO THE BACKFILL.

FLARED END SECTION
HIGH DENSITY POLYETHYLENE (HDPE)

NOT TO SCALE



Ground Water Rescue, Inc.
24 Ryden St., Quincy, MA 02169
Tel: 617-773-1128 Fax: 617-773-0510
www.kleanstream.com

MADE IN USA

TEST PIT DATA

Test Pit No.	**1**	SCS Soil:		Champlain-Urban Land Complex
ESHWT:	No visible indicators	Standing Water:		None
Refusal:	>84"	Roots:		None
Depth	Horizon	Soil Texture	Color	Consistence	Mottles; Quantity/Contrast
0-84"	Fill	Variable Soils	Variable		

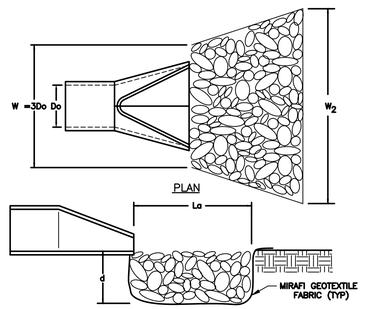
Test Pit No.	**2**	SCS Soil:		Champlain-Urban Land Complex
ESHWT:	No visible indicators	Standing Water:		None
Refusal:	>90"	Roots:		None
Depth	Horizon	Soil Texture	Color	Consistence	Mottles; Quantity/Contrast
0-72"	Fill	Variable Soils	Variable		
72-90"	C	Coarse Sand	10yr 4/6	FR	

Test Pit No.	**3**	SCS Soil:		Champlain-Urban Land Complex
ESHWT:	60"	Standing Water:		None
Refusal:	>96"	Roots:		None
Depth	Horizon	Soil Texture	Color	Consistence	Mottles; Quantity/Contrast
0-48"	Fill	Variable Soils	Variable		
48-56"	A	Loamy Sand	10yr 3/2	FR	
56-60"	B	Loamy Sand	10yr 5/6	FR	
60-96"	C	Fine Sand	2.5y 6/8	FR	@60" Distinct

Test Pit No.	**4**	SCS Soil:		Champlain-Urban Land Complex
ESHWT:	No visible indicators	Standing Water:		None
Refusal:	>84"	Roots:		None
Depth	Horizon	Soil Texture	Color	Consistence	Mottles; Quantity/Contrast
0-84"	Urban Fill	Variable Soils	Variable		Glass, scrap metals, etc

Test Pit No.	**5**	SCS Soil:		Champlain-Urban Land Complex
ESHWT:	66"	Standing Water:		None
Refusal:	>80"	Roots:		None
Depth	Horizon	Soil Texture	Color	Consistence	Mottles; Quantity/Contrast
0-40"	Fill	Variable Soils	Variable		
40-44"	A	Loamy Sand	10yr 3/2	FR	
44-56"	B	Loamy Sand	10yr 5/6	FR	
56-80"	C	Sand	2.5y 5/6	FR	

Test Pit No.	**6**	SCS Soil:		Champlain-Urban Land Complex
ESHWT:	30"	Standing Water:		40"
Refusal:	78"	Roots:		8"
Depth	Horizon	Soil Texture	Color	Consistence	Mottles; Quantity/Contrast
0-10"	A	Loamy Sand	10yr 3/2	FR	
10-20"	B	Sand	10yr 5/6	FR	
20-78"	C	Sand	2.5y 5/6	FR	@30" Distinct



OUTLET	Do	La	W_1	W_2	d_{50}	d
FES-1	15"	17'	3.75'	10.5'	3"	8"
FES-2	12"	13'	3'	8'	3"	8"
FES-3	12"	14'	3'	8.5'	3"	8"

ROCK RIP-RAP GRADATION

% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE IN INCHES
100	4.5 TO 6.0
85	3.9 TO 5.4
50	3.0 TO 4.5
15	0.9 TO 1.5

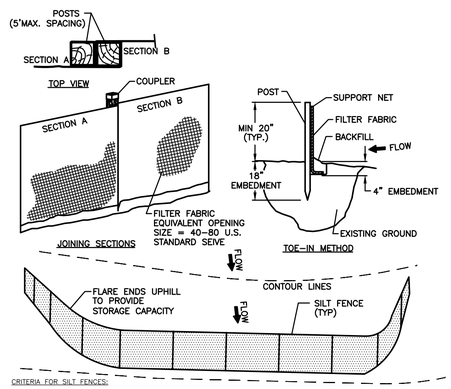
FORMULAS USED (REFERENCE NHDES STORMWATER MANUAL, VOL. 2, PAGE 174)

CONSTRUCTION NOTES:

1. THE SUBGRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIP-RAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
2. THE ROCK OR GRAVEL USED FOR FILTER OR RIP-RAP SHALL CONFORM TO THE SPECIFIED GRADATION.
3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIP-RAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
4. STONE FOR THE RIP-RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.
5. THE MEDIAN STONE DIAMEMETER FOR THE RIP-RAP APRON IS d50. FIFTY PERCENT BY WEIGHT OF THE RIP-RAP MIXTURE SHALL BE SMALLER THAN THE MEDIAN STONE SIZE. THE LARGEST STONE SIZE IN THE MIXTURE SHALL BE 1.5 d50.

STONE OUTLET APRON

NOT TO SCALE



CRITERIA FOR SILT FENCES:

1) SILT FENCE FILTER CLOTH: THE FABRIC FOR THE SILT FENCE SHALL MEET THE FOLLOWING SPECIFICATIONS:

FABRIC PROPERTIES:	MINIMUM ACCEPTABLE VALUES	TEST METHOD
GRAB TENSILE STRENGTH (lbs)	90	ASTM D1682
ELONGATION AT FAILURE (%)	50	ASTM D1682
MULLEN BURST STRENGTH (PSI)	190	ASTM D3786
PUNCTURE STRENGTH (lbs)	40	ASTM D751
EQUIVELANT OPENING SIZE	40–80	US STD SIEVE

2) FENCE POSTS (FOR FABRICATED UNITS) – THE POSTS SHALL BE A MINIMUM OF 36 INCHES LONG. WOOD POSTS WILL BE OF SOUND QUALITY HARDWOOD WITH A MINIMUM CROSS SECTIONAL AREA OF 3.0 SQUARE INCHES. STEEL POSTS WILL BE STANDARD T OR U SECTIONS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT. MAXIMUM SPACING SHALL BE 6 LINEAR FEET.

3) WIRE FENCE (FOR FABRICATED UNITS) – WIRE FENCING SHALL BE A MINIMUM 14.5 GUAGE WITH A MAXIMUM 6 INCH MESH OPENING.

4) PREFABRICATED UNITS – PREFABRICATED UNITS MAY BE USED IN LIEU OF THE ABOVE METHOD PROVIDING: (1) THE FILTER CLOTH AND FENCE POSTS MEET THE ABOVE CRITERIA; AND (2) THE UNIT IS INTALLED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

MAINTENANCE:

1) SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.

2) IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.

3) SEDIMENT DEPOSITS SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMTELY ONE-HALF THE HEIGHT OF THE BARRIER.

4) SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

CONSTRUCTION SPECIFICATIONS:

1) THE GEOTEXTILE FABRIC SHALL MEET THE DESIGN CRITERIA FOR SILT FENCES.

2) THE FABRIC SHALL BE EMBEDDED A MINIMUM OF 8 INCHES INTO THE GROUND (4" DEEP & 4" WIDE) AND THE SOIL COMPACTED OVER THE EMBEDDED FABRIC.

3) WOVEN WIRE FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES.

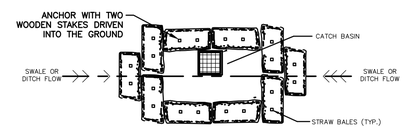
4) FILTER CLOTH SHALL BE FASTENED SECURELY TO THE WOVEN WIRE FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP, MID-SECTION AND BOTTOM.

5) WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EAC OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES (24" IS PREFERRED), FOLDED, AND STAPLED.

6) POSTS TO BE SPACED AT A MAXIMUM OF 6' ON CENTER.

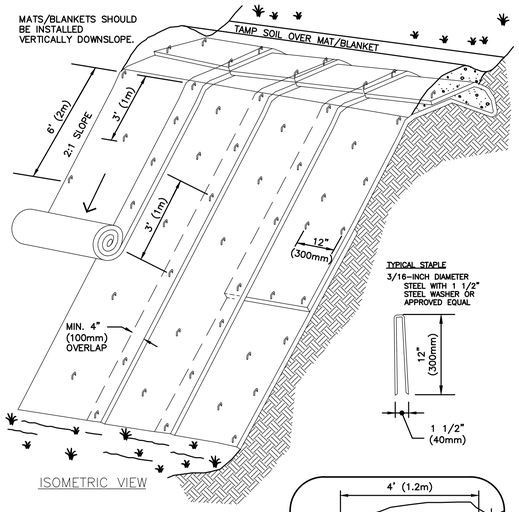
SEDIMENT CONTROL FENCE

NOT TO SCALE



LOW POINT SEDIMENTATION CONTROL BARRIER

NOT TO SCALE



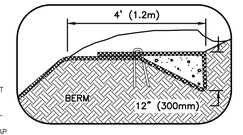
TYPICAL SLOPE SOIL STABILIZATION

NOTES:

1. BEGIN AT THE TOP OF BLANKET INSTALLATION AREA BY ANCHORING BLANKET IN A 6" DEEP TRENCH. BACKFILL AND COMPACT TRENCH AFTER STAPLING.
2. ROLL THE BLANKET DOWN THE SWALE IN THE DIRECTION OF THE WATER FLOW. LAY BLANKETS LOOSELY & MAINTAIN DIRECT CONTACT WITH SOIL – DO NOT STRETCH.
3. THE EDGES OF BLANKETS MUST BE STAPLED WITH APPROX. 4 INCH OVERLAP WHERE 2 OR MORE STRIP WIDTHS ARE REQUIRED.
4. WHEN BLANKETS MUST BE SPLICED DOWN THE SWALE, PLACE BLANKET END OVER END WITH 6 INCH (MIN.) OVERLAP AND ANCHOR DOWN SLOPE BLANKET IN A 6 INCH DEEP TRENCH.
5. BLANKETS SHALL BE STAPLED ENOUGH TO ANCHOR BLANKET WHILE MAINTAINING CONTACT WITH SOIL. STAPLES SHALL BE PLACED DOWN THE CENTER & STAGGERED WITH THE STAPLES PLACED ALONG EDGES. PATTERN & AMOUNT OF STAPLES VARIES BY MANUFACTURER, SO FOLLOW MANUFACTURERS RECOMMENDATIONS.
6. BLANKET SHALL BE NORTH AMERICAN GREEN SC-150 OR APPROVED EQUAL.

MAINTENANCE & MATS

1. BLANKETS SHALL BE INSPECTED WEEKLY DURING CONSTRUCTION & AFTER A RAINFALL IN EXCESS OF 1/2" IN A 24-HOUR PERIOD.
2. FAILURES SHALL BE REPAIRED IMMEDIATELY. IF ANY OF THE FOLLOWING OCCUR; SLOPE WASHOUT, MAT DISPLACEMENT, DAMAGE TO MAT, THE AFFECTED AREA SHALL BE REPAIRED & RESEEDED & MAT SHALL BE REPLACED OR RE-INSTALLED.



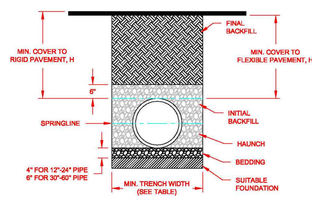
TYPICAL INSTALLATION OF EROSION CONTROL BLANKETS FOR SLOPES

NOT TO SCALE

NOTE: DO NOT USE PRODUCTS THAT CONTAIN WELDED PLASTIC OR THAT ARE "PHOTODEGRADABLE". USE PRODUCTS WITH BIODEGRADABLE NETTING AND NATURAL FIBER MATERIAL (I.E. STRAW OR COCONUT FIBER).

BLANKET SLOPE PROTECTION FOR EROSION CONTROL

NOT TO SCALE



NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER, AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-900mm).
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
4"	21"
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
54"	88"
60"	96"

MINIMUM RECOMMENDED COVER BASED ON VECHICLE LOADING CONDITIONS

	SURFACE LIVE LOADING CONDITION	
PIPE DIAM.	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48"	12"	48"
54" - 60"	24"	60"

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

MINIMUM RECOMMENDED COVER BASED ON RAILWAY LOADING CONDITIONS

PIPE DIAM.	COOPER E-80**
UP TO 24"	24"
30"-36"	36"
42"-60"	48"

** COVER IS MEASURED FROM TOP OF PIPE TO BOTTOM OF RAILWAY TIE.
*** E-80 COVER REQUIREMENTS, ARE ONLY APPLICABLE TO ASTM F 2306 PIPE.

REV	DESCRIPTION	BY	MM/DD/YY	CHK'D
3	ADDED E-80 INFORMATION	TJR	09/20/07	

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ADVANCED DRAINAGE SYSTEMS, INC. ("ADS") HAS PREPARED THIS DETAIL BASED ON INFORMATION PROVIDED TO ADS. THIS DRAWING IS INTENDED TO DEPICT THE COMPONENTS AS REQUESTED. ADS HAS NOT PERFORMED ANY ENGINEERING OR DESIGN SERVICES FOR THIS PROJECT, NOR HAS ADS INDEPENDENTLY VERIFIED THE INFORMATION SUPPLIED. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION. IT IS THE DESIGN ENGINEERS RESPONSIBILITY TO ENSURE THE DETAILS PROVIDED HEREIN MEETS OR EXCEEDS THE MINIMUM LOCAL, STATE, OR NATIONAL, INSTALLATION REQUIREMENTS AND TO ENSURE THAT THE DETAILS PROVIDED HEREIN ARE ACCEPTABLE FOR THIS PROJECT.

TYPICAL TRENCH DETAIL

DRAWING NUMBER: STD-101

4640 TRUEMAN BLVD. HILLIARD, OHIO 43026

ADVANCED DRAINAGE SYSTEMS, INC.

DRWN: CKD
DATE: 12/13/06
SCALE: NTS
SHEET: 1 OF 1

HDPE PIPE TRENCH

NOT TO SCALE

GPI
Engineering
Design
Planning
Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road, Suite One
Salem, NH 03079

PREPARED FOR
TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842

PROPOSED RETAIL MOTOR FUEL OUTLET

MAP 148 LOT 15.2
901 CENTRAL STREET
FRANKLIN, NH 03235

STATE OF NEW HAMPSHIRE
GARRETT M. PICCIRILLO
No. 15770
LICENSED PROFESSIONAL ENGINEER

10/18/22

REVISIONS		
NO.	REVISION	DATE

OCTOBER 18, 2022

DRAWN/DESIGN BY	CHECKED BY
CCC/GMP	FCM

DETAIL SHEET

SCALE: AS SHOWN

PROJECT NO. NEX-2200013

12 OF 14

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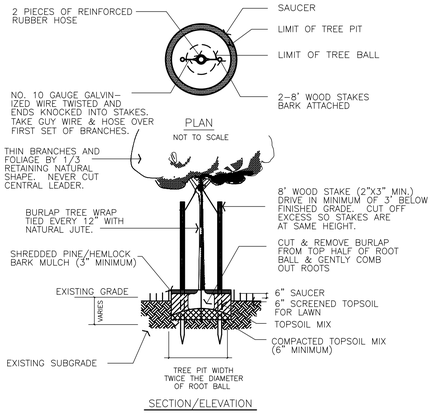
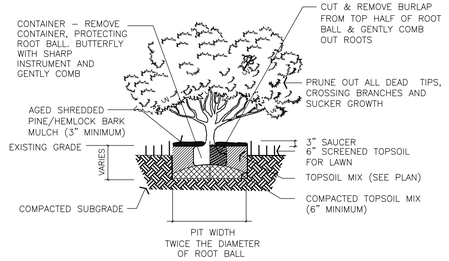


TYPICAL TREE PLANTING
NOT TO SCALE



TYPICAL SHRUB PLANTING
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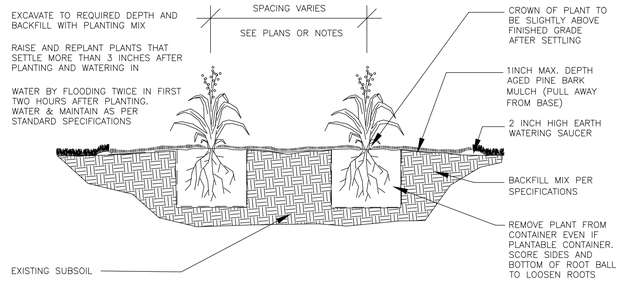
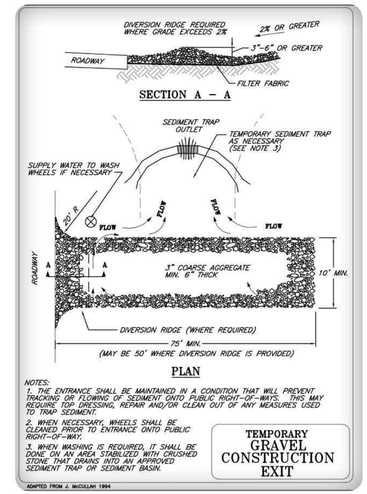
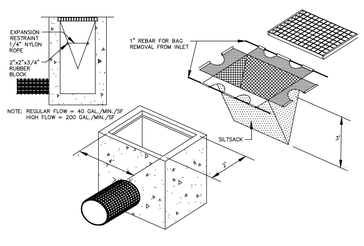


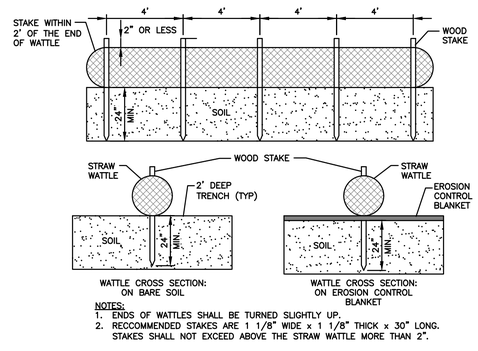
TYPICAL PERENNIAL PLANTING
NOT TO SCALE



GRAVEL CONSTRUCTION EXIT
NOT TO SCALE

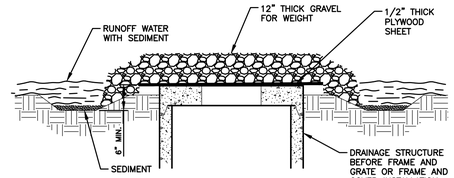


SILT SACK DETAIL-ON OR OFF SITE
NOT TO SCALE



NOTES:
1. ENDS OF WATTLES SHALL BE TURNED SLIGHTLY UP.
2. RECCOMMENDED STAKES ARE 1 1/8" WIDE x 1 1/8" THICK x 30" LONG. STAKES SHALL NOT EXCEED ABOVE THE STRAW WATTLE MORE THAN 2".

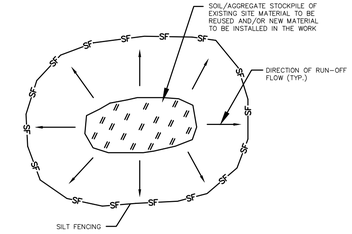
STRAW WATTLE
NOT TO SCALE



MAINTENANCE

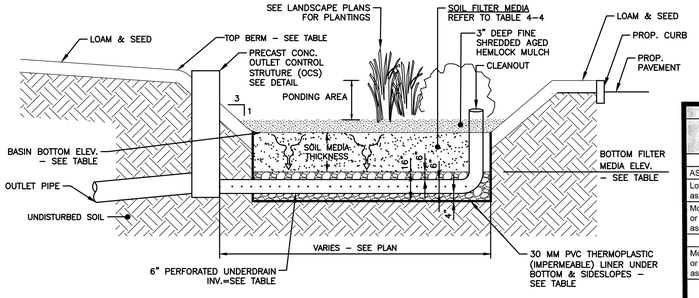
1. ALL STRUCTURES SHOULD BE INSPECTED AFTER EVERY RAIN STORM AND REPAIRS MADE AS NECESSARY.
2. SEDIMENT SHOULD BE REMOVED FROM THE TRAPPING DEVICES AFTER THE SEDIMENT HAS REACHED A MAXIMUM OF ONE HALF OF THE DEPTH OF THE TRAP. THE SEDIMENT SHOULD BE DISPOSED OF IN A SUITABLE AREA AND PROTECTED FROM EROSION BY EITHER STRUCTURAL OR VEGETATIVE MEANS.
3. THE TEMPORARY TRAPS SHOULD BE REMOVED AND THE AREA REPAIRED AS SOON AS THE CONTRIBUTING DRAINAGE AREA TO THE INLET HAS BEEN COMPLETELY STABILIZED.
4. ALL STRUCTURES WITH INLET PROTECTION MUST BE CLEANED AT THE END OF CONSTRUCTION AND WHEN THE SITE IS FULLY STABILIZED.

INLET PROTECTION
NOT TO SCALE



NOTES:
1. ALL EXISTING EXCAVATED MATERIAL THAT IS NOT TO BE REUSED IN THE WORK IS TO BE IMMEDIATELY REMOVED FROM THE SITE AND PROPERLY DISPOSED OF.
2. SOIL/AGGREGATE STOCKPILE SITES TO BE WHERE SHOWN ON THE DRAWINGS.
3. RESTORE STOCKPILE SITES TO PRE-EXISTING PROJECT CONDITION AND RESEED AS REQUIRED.
4. STOCKPILE HEIGHTS MUST NOT EXCEED 35'. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.

MATERIALS STOCKPILE
NOT TO SCALE



NOTES:
FOR ADDITIONAL INFORMATION REFER TO THE NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 2, POST-CONSTRUCTION BEST MANAGEMENT PRACTICES, DECEMBER 2008.

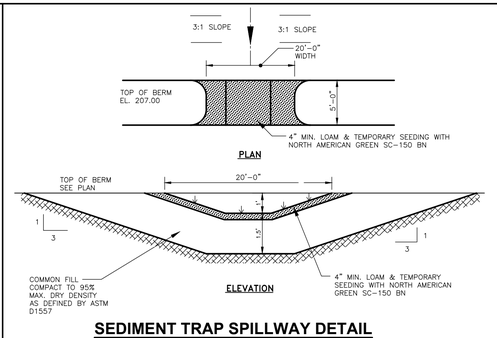
BIORETENTION AREA	TOP BERM ELEVATION	BASIN BOTTOM ELEVATION	SOIL MEDIA THICKNESS	BOTTOM FILTER MEDIA ELEV.	INV. UNDERDRAIN	BOTTOM STONE INV.	IMPERMEABLE LINER
#1	452.00	449.00	18"	447.50	446.40	446.07	YES

NOTES:
1. DO NOT PLACE THE BIORETENTION SYSTEM INTO SERVICE UNTIL THE BMP HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
2. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUNOFF, WATER FROM EXCAVATIONS) TO THE BIORETENTION AREA DURING ANY STAGE OF CONSTRUCTION.
3. DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE SYSTEM.

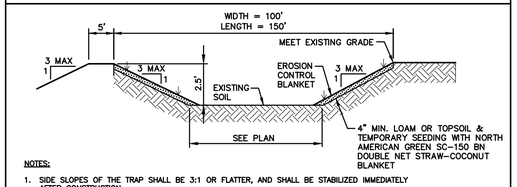
BIORETENTION AREA
NOT TO SCALE

Table 4-4. Bioretention Filter Media

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

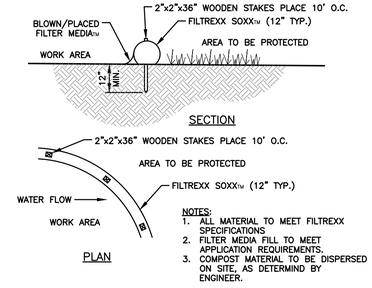


SEDIMENT TRAP SPILLWAY DETAIL
NOT TO SCALE



NOTES:
1. SIDE SLOPES OF THE TRAP SHALL BE 3:1 OR FLATTER, AND SHALL BE STABILIZED IMMEDIATELY AFTER CONSTRUCTION.
2. THE SPILLWAY ON THE TRAP SHOULD BE A MINIMUM OF 1 FOOT BELOW THE CREST OF THE TRAP AND SHALL DISCHARGE TO A STABILIZED AREA.
3. THE TRAP SHALL BE CLEANED WHEN 50% OF THE ORIGINAL VOLUME IS FILLED. MATERIALS REMOVED FROM THE TRAP SHALL BE PROPERLY DISPOSED OF AND STABILIZED.

TEMPORARY SEDIMENT TRAP TYPICAL CROSS SECTION
NOT TO SCALE



NOTES:
1. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS
2. FILTER MEDIA FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMIND BY ENGINEER.

COMPOST FILTER SOCK INLET PROTECTION
NOT TO SCALE

GPI
Engineering
Design
Planning
Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road, Suite One
Salem, NH 03079

PREPARED FOR
TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842

PROPOSED RETAIL MOTOR FUEL OUTLET

MAP 148 LOT 15.2
901 CENTRAL STREET
FRANKLIN, NH 03235

STATE OF NEW HAMPSHIRE – PROFESSIONAL ENGINEER
GARRETT M. PICCIRILLO
No. 15770
LICENSED
10/18/22

REVISIONS		
NO.	REVISION	DATE
	OCTOBER 18, 2022	
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PROJECT NO. NEX-2200013

13 OF 14

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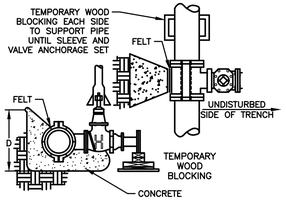
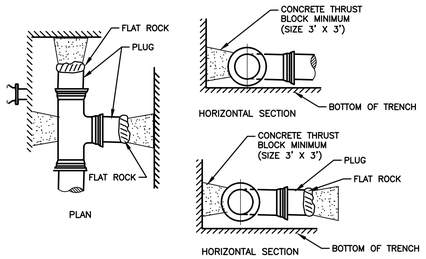
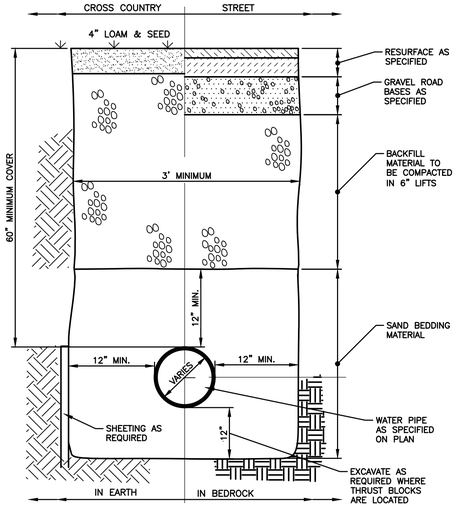


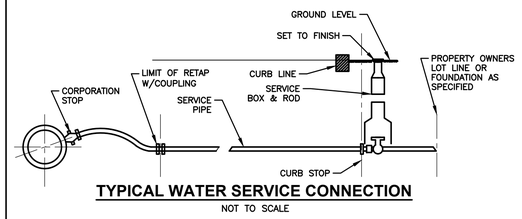
TAPPING VALVE AND SLEEVE
NOT TO SCALE



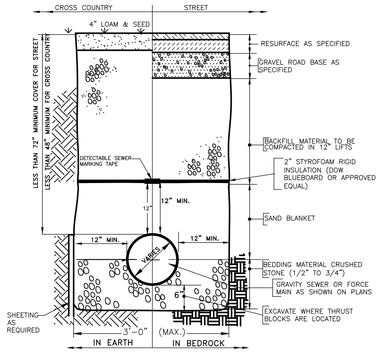
THRUST BLOCK
NOT TO SCALE



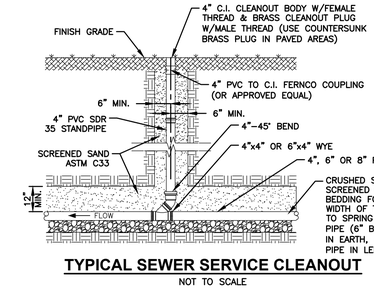
TYPICAL TRENCH SECTION FOR WATER SERVICE
NOT TO SCALE



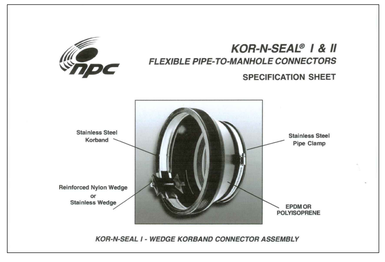
TYPICAL WATER SERVICE CONNECTION
NOT TO SCALE



TYPICAL TRENCH SECTION FOR SANITARY SEWER SERVICE WITH LESS THAN 6' OF COVER
NOT TO SCALE

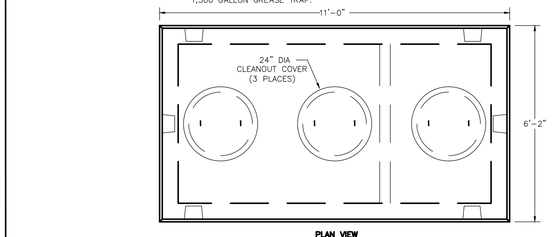


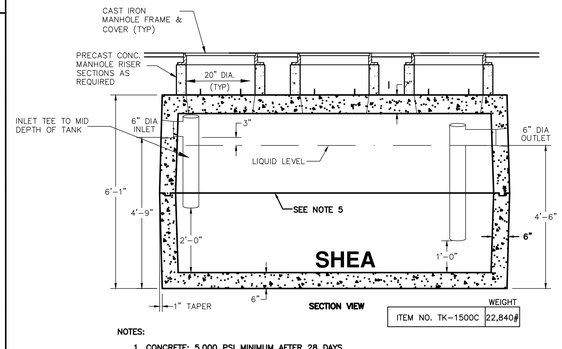
TYPICAL SEWER SERVICE CLEANOUT
NOT TO SCALE



KOR-N-SEAL
NOT TO SCALE

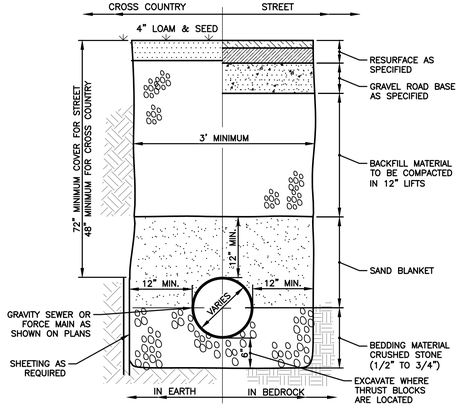
NOTE:
A) REQUIRED CAPACITY PER ME 10-144 CMR 241 (750 GAL. MIN.) # OF SEATS X (HOURS OF OPERATION/2) X 2.5 X 2 X LOADING FACTOR. THE PROPOSED RESTAURANT WITH **40** SEATS, **18** HOURS OF OPERATION AND A LOADING FACTOR OF **0.8** WILL REQUIRE A 1,440 GALLON GREASE TRAP (40 X 18/2 X 2.5 X 2 X 0.8). USE 1,500 GALLON GREASE TRAP.



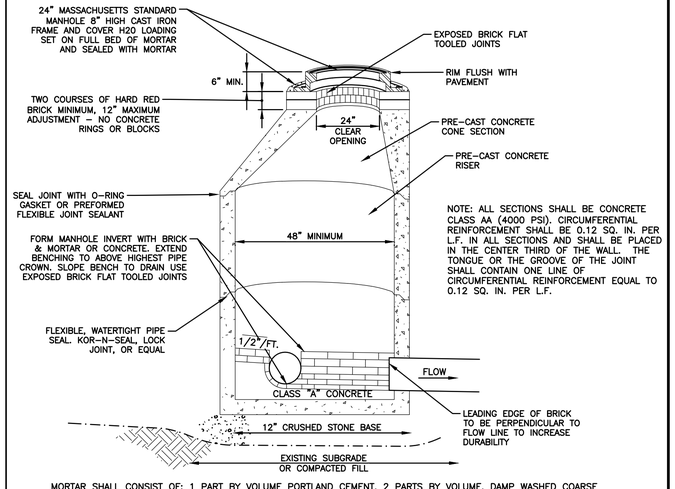


NOTES:
1. CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS.
2. DESIGN CONFORMS WITH MEDEP 10-144 CMR 241 FOR GREASE TRAPS
3. ALL REINFORCEMENT PER ASTM C1227-93.
4. DESIGNED FOR H-20 LOADING.
5. TONGUE & GROOVE JOINT SEALED WITH BUTYLE RESIN.
6. TEES AND BAFFLES SOLD SEPARATELY.

1,500 GALLON GREASE TRAP (H-20 LOADING)
NOT TO SCALE



TYPICAL TRENCH SECTION FOR SANITARY SEWER SERVICE
NOT TO SCALE



MORTAR SHALL CONSIST OF: 1 PART BY VOLUME PORTLAND CEMENT, 2 PARTS BY VOLUME, DAMP WASHED COARSE SAND AND POTABLE WATER TO PRODUCE A CONSISTENCY OF STIFF PASTE. SEAL ALL PRECAST JOINTS WITH MORTAR.

SEWER MANHOLE
NOT TO SCALE

GPI Engineering Design Planning Construction Management
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44 Stiles Road, Suite One
Salem, NH 03079

PREPARED FOR
TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842

PROPOSED RETAIL MOTOR FUEL OUTLET

MAP 148 LOT 15.2
901 CENTRAL STREET
FRANKLIN, NH 03235

STATE OF NEW HAMPSHIRE
GARRETT M. PICCIRILLO
No. 15770
LICENSED PROFESSIONAL ENGINEER
10/18/22

REVISIONS		
NO.	REVISION	DATE

OCTOBER 18, 2022

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CCC/GMP	FCM

DETAIL SHEET

SCALE: AS SHOWN

PROJECT NO. NEX-2200013

14 OF 14

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N

LEGEND

SGC	SLOPED GRANITE CURB
VGC	VERTICAL GRANITE CURB
CCB	CAPE COD BERM
SSLW	SINGLE SOLID LINE WHITE
G	GAS LINE
90	CONTOUR ELEVATION
	TREE
	UTILITY POLE
	GUY WIRE
	OVERHEAD WIRE
	TREELINE
	SIGN
	SPOT ELEVATION
	CATCH BASIN
	SEWER MANHOLE
	GAS VALVE
	GAS SHUT OFF
	LIGHT POLE
	WATER FEATURE
	EASEMENT LINE
	PROPERTY LINE
	ABUTTER PROPERTY LINE
	ZONE LINE

MAP 148
LOT 15.2
73,192 Sq.Ft.
1.680 Ac.±

PROP. TREELINE (TYP.)

BUILDING OVERHANG (TYP.)

RETAINING WALL (TIRES)

8" CONCRETE FOOTINGS

"EXIT" SIGN

"STOP" SIGN

STOP

"ENTER" SIGN

LOADING

PROPOSED
CONVENIENCE STORE
4,350 SF
(12 INDOOR SEATS)
(16 EXTERIOR SEATS)

DUMPSTER W/ VEGTABLE OIL

DUMPSTER

PAD (TYP.)

6" WHITE FENCE

UST VENT PIPES

BUILDING HEIGHT=29.1'

BUILDING OVERHANG (TYP.)

BOLLARD (TYP.)

ACCESSIBLE RAMP

HAND RAIL

PAD (TYP.)

BRICK RETAINING WALL

"THE SODA SHOPPE" ID SIGN

63.8'

"EMPLOYEE PARKING" SIGN

BITUMINOUS CONCRETE

"CITIZENS BANK" SIGN

"CITIZENS BANK DRIVE UP" SIGN

"EMPLOYEE PARKING" SIGN

RKING P.)

Irving US Trixxle Xing

DAMY DRIVE
(PRIVATE WAY)

"EXIT" SIGN

"STOP" SIGN

STOP

STOP LINE

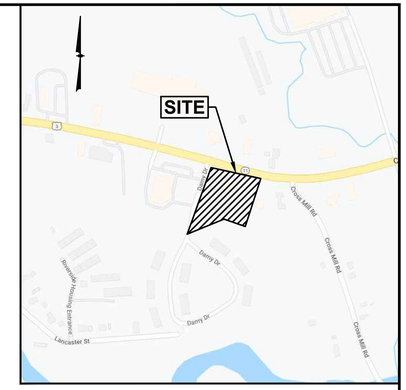
"ENTER" SIGN

"STOP" SIGN

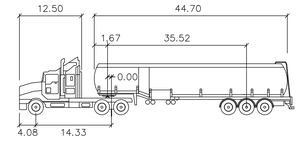
"NEW FRANKLIN APARTMENTS" SIGN

CENTRAL STREET - ROUTE 11
(PUBLIC – VARIABLE WIDTH)

0 20 50 100
SCALE: 1" = 20'



LOCATION MAP
NOT TO SCALE



Irving US Triaxle feet

Tractor Width	: 8.50	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.50	Articulating Angle	: 70.0
Trailer Track	: 8.50		

811 DigSafe MA.ME.NH.RI.VT

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PREPARED FOR
TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842

PROPOSED RETAIL MOTOR FUEL OUTLET

MAP 148 LOT 15.2
901 CENTRAL STREET
FRANKLIN, NH 03235

STATE OF NEW HAMPSHIRE – PROFESSIONAL ENGINEER
GARRETT M. PICCIRILLO
No. 15770
LICENSED

10/18/22

REVISIONS		
NO.	REVISION	DATE

OCTOBER 18, 2022

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TRUCK TURN PLAN

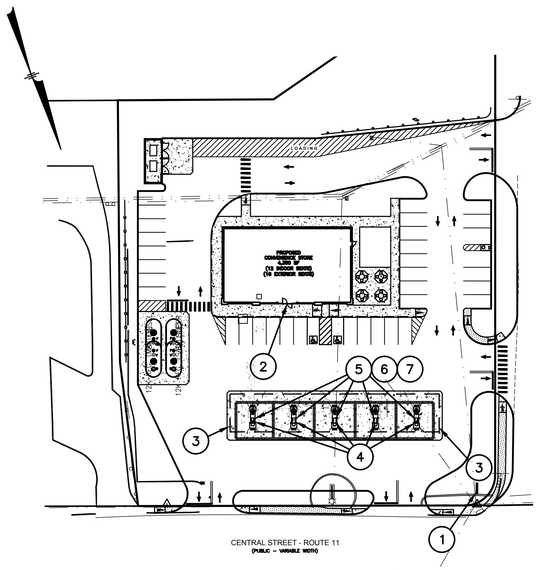
SCALE: 1"=20'

PROJECT NO. NEX-2200013

1 OF 1

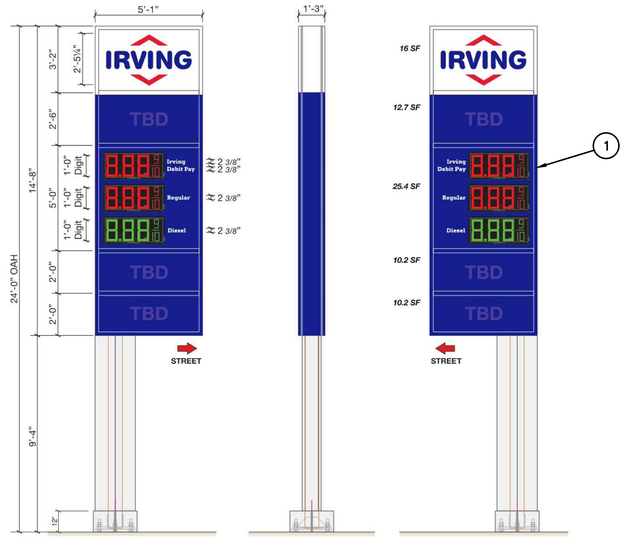
01 SITE LAYOUT

SCALE: 1" = 50'



02 PROPOSED PYLON SIGN ELEVATION

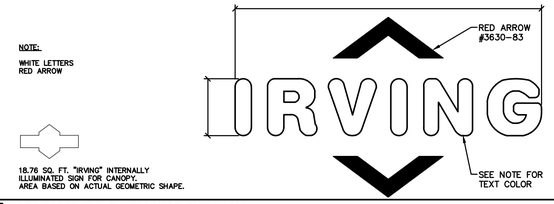
NOT TO SCALE



74.5 Total Sq.Ft.

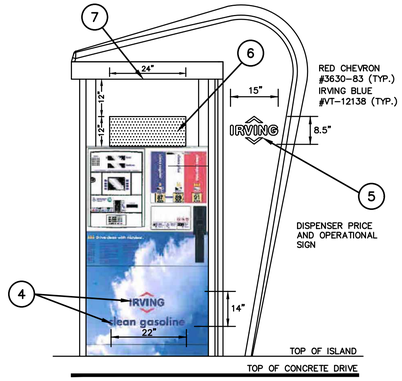
06 PROPOSED "IRVING" CANOPY LOGO

NOT TO SCALE

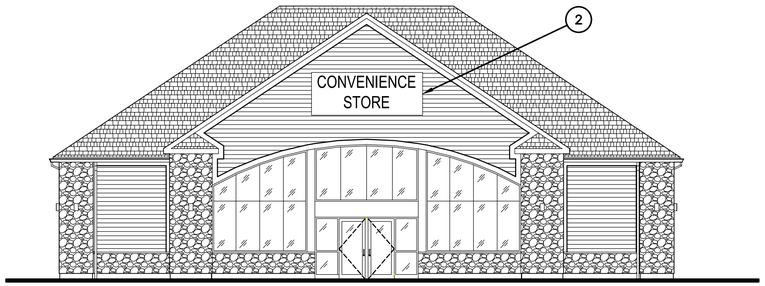


07 PROPOSED MULTI-PRODUCT DISPENSER

NOT TO SCALE



03 PROPOSED STORE ELEVATIONS



FRONT ELEVATION
N.T.S.

04 C-STORE BUILDING WALL SIGN

NOT TO SCALE

36 Sq.Ft.

08 PROPOSED SIGN SCHEDULE

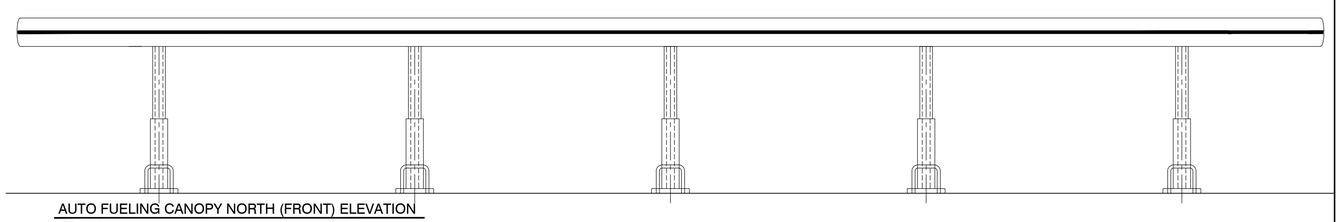
NOT TO SCALE

PROPOSED SIGN SCHEDULE

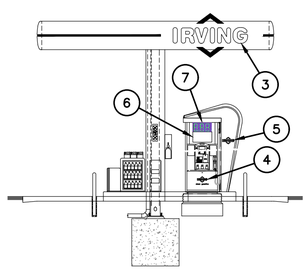
MARK	DESCRIPTION	SIZE	AREA	QTY.	TOTAL SF	ILLUM'D.
1	PYLON SIGN	SEE DETAIL 2	74.50	1	68	YES (INTERNAL)
2	C-STORE WALL SIGN	SEE LOGO DETAIL 4	36	1	36	YES (INTERNAL)
3	"IRVING" CANOPY – LOGO SIGN	SEE LOGO DETAIL 6	18.76	2	37.52	YES (INTERNAL)
4	"IRVING" DISPENSER DOOR GRAPHIC	SEE DISPENSER DETAIL 7	2.14	10	21.4	NO
5	"IRVING" DISPENSER SHROUD LOGO	SEE DISPENSER DETAIL 7	0.89	10	8.9	NO
6	"IRVING" DISPENSER ADVERTISING SIGN	SEE DISPENSER DETAIL 7	2.00	10	20	NO
7	LED DISPENSER PRICE SIGN	SEE DISPENSER DETAIL 7	2.00	10	20	NO

05 PROPOSED CANOPY ELEVATION

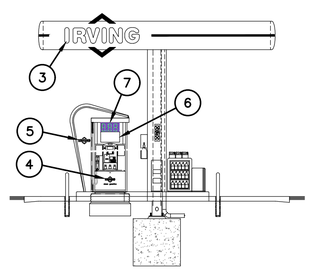
SCALE: 1/8"=1'-0"



AUTO FUELING CANOPY NORTH (FRONT) ELEVATION
1/8" = 1'-0"



AUTO FUELING CANOPY EAST ELEVATION
1/8" = 1'-0"



AUTO FUELING CANOPY WEST ELEVATION
1/8" = 1'-0"

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TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842

PROPOSED RETAIL MOTOR FUEL OUTLET

MAP 148 LOT 15.2
901 CENTRAL STREET
FRANKLIN, NH 03235

STATE OF NEW HAMPSHIRE – GARRETT M. PICCIRILLO No. 15770 LICENSED PROFESSIONAL ENGINEER

10/18/22

REVISIONS

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SIGN & GRAPHICS PLAN

SCALE: AS NOTED

PROJECT NO. NEX-2200013

1 OF 1

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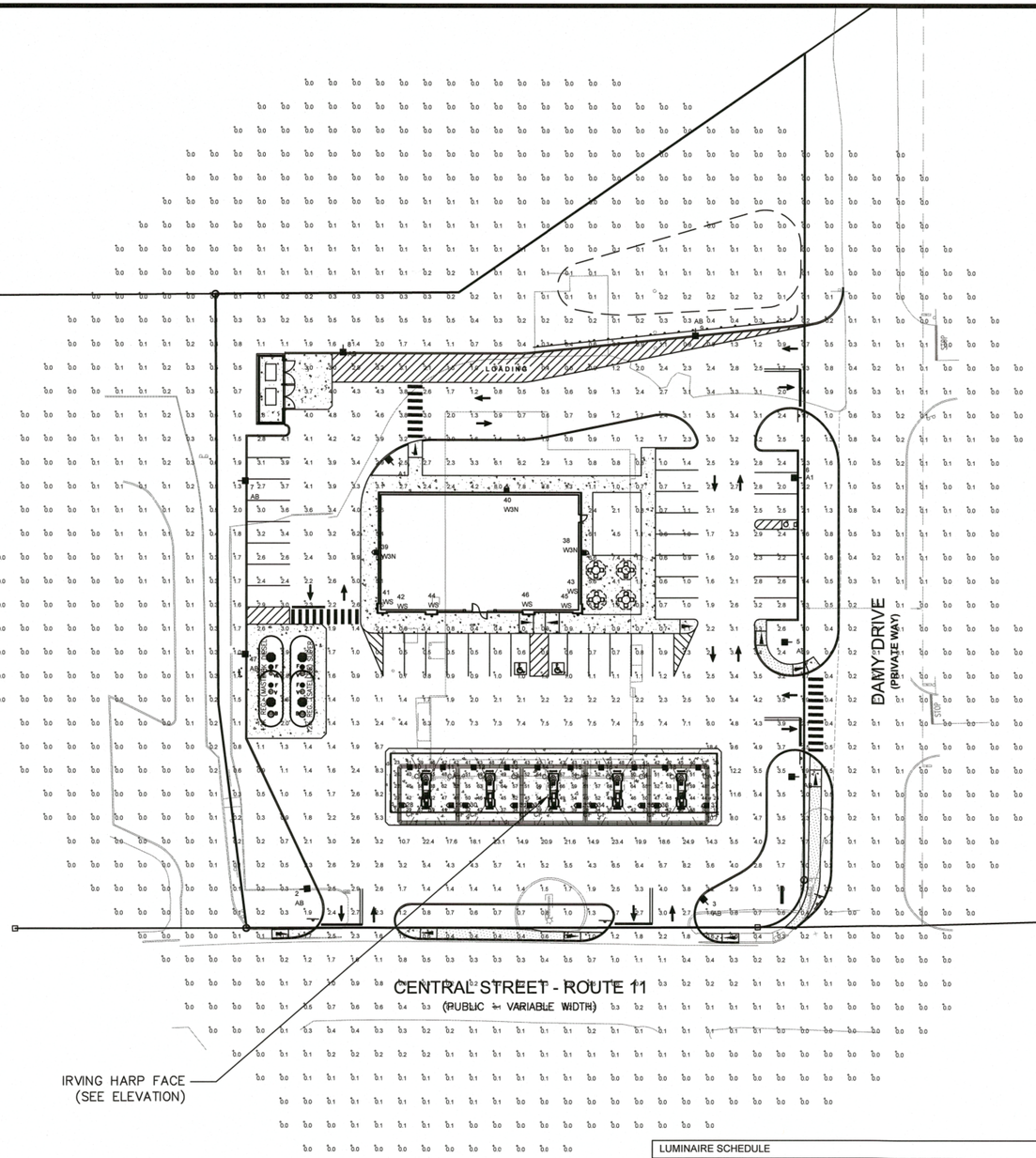
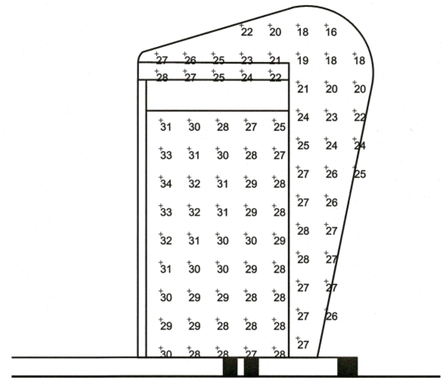


LUMINAIRE LOCATION SUMMARY		
LUM NO.	LABEL	MTG. HT.
1	A1	22.5
2	AB	22.5
3	AB	22.5
4	AB	22.5
5	AB	22.5
6	A1	22.5
7	AB	22.5
8	AB	22.5
9	AB	22.5
10	CA	14.5
11	CA	14.5
12	CA	14.5
13	CA	14.5
14	CA	14.5
15	CA	14.5
16	CA	14.5
17	CA	14.5
18	CA	14.5
19	CA	14.5
28	CF	14.5
29	CF	14.5
30	CF	14.5
31	CF	14.5
32	CF	14.5
33	CF	14.5
34	CF	14.5
35	CF	14.5
36	CF	14.5
37	CF	14.5
38	W3N	10
39	W3N	10
40	W3N	10
41	WS	10
42	WS	10
43	WS	10
44	WS	10
45	WS	10
46	WS	10
47	AB	22.5



IRVING HARP FACE ELEVATION
SCALE: 1" = 2'

THIS SITE IS LOCATED IN A REGION WHERE LIGHTING IS REGULATED BY LOCAL ORDINANCES

NOTE:
AREA LIGHTS ON NEW 20 FT. POLES MOUNTED ON 2.5 FT. CONCRETE BASES

FOOTCANDLE LEVELS CALCULATED AT GRADE (UNO) USING INITIAL LUMEN VALUES					
LABEL	AVG	MAX	MIN	AVG/MIN	MAX/MIN
DISPENSER-HARP FACE (VERTICAL)	26.83	34	16	1.68	2.13
PAVED AREA	3.42	30.7	0.4	8.55	76.75
UNDEFINED	0.24	5.5	0.0	N.A.	N.A.
UNDER CANOPY	44.53	66	14	3.18	4.71

LUMINAIRE SCHEDULE										
SYMBOL	QTY	LABEL	ARRANGEMENT	LUMENS	LLF	BUG RATING	WATTS/LUMINAIRE	TOTAL WATTS	MANUFACTURER	DESCRIPTION
	2	A1	SINGLE	10706	1.030	B3-U0-G3	132.5	265	CREE, INC.	ARE-EDG-3M-XX-06-E-UL-XX-700-57K
	8	AB	Single	8891	1.040	B1-U0-G2	134	1072	CREE, INC.	ARE-EDG-3MB-DA-06-E-UL-XX-700-57K
	10	CA	SINGLE	13251	1.030	B3-U0-G1	134	1340	CREE, INC.	CAN-304-SL-RS-06-E-UL-WH-700-57K
	10	CF	SINGLE	12862	1.030	B2-U1-G1	141	1410	RUUD LIGHTING, INC., A CREE COMPANY	CAN-304-AF-RS-06-E-UL-WH-700-57K
	3	W3N	SINGLE	5893	1.030	B2-U0-G2	68	204	CREE, INC.	SEC-EDG-3M-WM-04-E-UL-525-57K
	6	WS	SINGLE	819	1.000	B1-U3-G0	20.18	121.08		2SRBK-4-9W-LED-120V

REDLEONARD ASSOCIATES
1340 Kemper Meadow Dr, Forest Park, OH 45240
513-574-9500 | redleonard.com

REV.	BY	DATE	DESCRIPTION
R1	JSG	10/17/22	REVISE PER UPDATED SITE PLAN WHICH INCLUDED REMOVING DIESEL CANOPY

DISCLAIMER
ANY SITE PLAN(S), FLOOR PLAN(S), RENDERING(S), LIGHTING LAYOUT(S) AND PHOTOMETRIC PLAN(S) INCLUDING BUT NOT LIMITED TO ANY PROJECT(S) CREATED/PRODUCED BY RED LEONARD ASSOCIATES INC., ARE ONLY INTENDED FOR ILLUSTRATION AND QUOTING PURPOSES ONLY. RED LEONARD ASSOCIATES HAS THE RIGHT TO USE THIRD PARTY LASERS, SCANNERS, AND CAMERAS BUT ACTUAL PROJECT CONDITIONS, DIMENSIONS, AND ACCURACY OF MEASUREMENTS MAY DIFFER FROM THESE OR ANY PARAMETERS. RED LEONARD ASSOCIATES INC. ASSUMES NO LIABILITY FOR WHAT IS CREATED/PRODUCED IN THESE RECREATIONS. THIS INCLUDES BUT IS NOT LIMITED TO THE USE OF, INSTALLATION OF AND/OR INTEGRITY OF EXISTING BUILDING(S), SURROUNDING AREA FOR PRODUCT(S) SUCH AS EXISTING POLE(S), ANCHOR BOLT(S), BASE(S), ARCHITECTURAL AND SIGNAGE STRUCTURE(S), LANDSCAPING PLAN(S), LIGHTING PLAN(S), FIXTURE SELECTION(S) AND PLACEMENT, MATERIAL(S), COLOR ACCURACY, TEXTURE(S), AND ANYTHING ATTRIBUTED TO PHOTO REALISM THAT IS CREATED. FURTHERMORE, RED LEONARD ASSOCIATES INC., DOES NOT ASSUME LIABILITY WHATSOEVER FOR ANY PURCHASES MADE BY CLIENT BEFORE, DURING, OR AT THE CONCLUSION OF THE PUBLISHED WORK. THE CUSTOMER, ITS RELATIVE AFFILIATES, AS WELL AS ANY OTHER PERSON(S) IN VIEWING OF THIS PRODUCT IS RESPONSIBLE FOR VERIFYING COMPLIANCE WITH ANY BUT NOT LIMITED TO ALL CODES, PERMITS, RESTRICTIONS, INSTRUCTIONS, PURCHASES, AND INSTALLATIONS OF OBJECTS VIEWED WITHIN THIS DOCUMENT(S) OR PROJECT(S). SYMBOLS ARE NOT DRAWN TO SCALE. SIZE IS FOR CLARITY PURPOSES ONLY. SIZES AND DIMENSIONS ARE APPROXIMATE, ACTUAL MEASUREMENTS MAY VARY. DRAWINGS ARE NOT INTENDED FOR ENGINEERING OR CONSTRUCTION USE. THIS DOCUMENT, ANY RED LEONARD DRAWING(S), OR PROJECT(S) IS NOT TO BE USED AND/OR INTENDED FOR ENGINEERING OR CONSTRUCTION PURPOSES, BUT FOR ILLUSTRATIVE PURPOSES ONLY. ANY LOCATIONS OF EMERGENCY LIGHTING SHOWN WERE PROVIDED BY OTHERS. RED LEONARD ASSOCIATES IS NOT RESPONSIBLE FOR INSUFFICIENT LIGHTING DURING AN EMERGENCY EVENT.
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SCALE: 1" = 30'
LAYOUT BY: JSG
DWG SIZE: D
DATE: 10/5/22

PROJECT NAME:
IRVING OIL
FRANKLIN, NH
DRAWING NUMBER:
RL-8366-S1-R1

AREA

QTY	LABEL	DESCRIPTION
2	A1	ARE-EDG-3M-XX-06-E-UL-XX-700-57K
8	AB	ARE-EDG-3MB-DA-06-E-UL-XX-700-57K

CANOPY

QTY	LABEL	DESCRIPTION
10	CA	CAN-304-SL-RS-06-E-UL-WH-700-57K
10	CF	CAN-304-AF-RS-06-E-UL-WH-700-57K

WALL MOUNTED

QTY	LABEL	DESCRIPTION
3	W3N	SEC-EDG-3M-WM-04-E-UL-525-57K

CYLINDER

QTY	LABEL	DESCRIPTION
6	WS	2SRBK-4-9W-LED-120V

ADDITIONAL FIXTURE INFO

THE EDGE® Series

LED Area/Flood Luminaire

Rev. Date: V11 09/07/2021

Product Description

THE EDGE® Series has a slim, low profile design. Its rugged cast aluminum housing minimizes wind load requirements and features an integral, weathertight LED driver compartment and high performance aluminum heat sinks. Various mounting choices: Adjustable Arm, Direct Arm, Direct Arm Long, or Side Arm (details on page 2). Includes a leaf/debris guard.
Applications: Parking lots, walkways, campuses, car dealerships, office complexes, and internal roadways

Performance Summary

Patented NanoOptic® Product Technology
Assembled in the U.S.A. of U.S. and imported parts
CRI: Minimum 70 CRI (4000K & 5700K); 90 CRI (5000K); 90 CRI (5000K)
CCT: Turtle Friendly Amber, 3000K (+/- 300K), 4000K (+/- 300K), 5000K (+/- 500K), 5700K (+/- 500K) standard
Limited Warranty*: 10 years on luminaire/10 years on ColorFast DeltaGuard® finish /1 year on accessories

* See ridgelinelighting.com/warranty for warranty terms

Accessories

Field-Installed

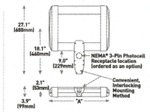
BU4 Battery Backup
Up to 1500 lm
Hand-Held Remote
RA-IGENGHEM
- For easy implementation of the programmable multi-level option, a minimum of one hand-held remote is required

RuleSight Control Module
RA-SMSL1-x
- Four pack
- Unpainted stainless steel

Shorting Cap
SA-XSLSHRT

NEMA® 3-Pin Photocell
C-ACC-A-PCELL-NEMA3-LV
- On/off functionality only
- Available with UL voltage only

DA Mount



LED Count (x10)	Dim. "A"	Weight
02	13.1" (336mm)	21 lbs. (10kg)
04	13.1" (336mm)	24 lbs. (11kg)
06	14.1" (357mm)	27 lbs. (12kg)
08	14.1" (357mm)	29 lbs. (13kg)
10	18.1" (459mm)	32 lbs. (15kg)
12	20.1" (510mm)	34 lbs. (15kg)
14	22.1" (561mm)	37 lbs. (17kg)
16	24.1" (611mm)	41 lbs. (19kg)

AA/DL/SA Mount - see page 22 for weight & dimensions

Ordering Information

Example: ARE-EDG-2M-AA-12-E-UL-SV-350

Product	Optic	Mounting*	LED Count Series (x10)	Voltage	Color Temp	Drive Current	Options
ARE-EDG-	2M Type II Medium 2MW Type II Medium w/Wide 2MF Type II Medium w/Front Throw 4M Type IV Medium 4MR Type IV Medium w/Rotated Optic 3M Type III Medium w/BLS 4MW Type IV Medium w/Wide 3MF Type III Medium w/Front Throw 3MR Type III Medium w/Rotated Optic FLD-EDGE 2S Type II Medium Flood 3S Type III Medium Flood 4S Type IV Medium Flood 5S Type V Square	SMB Type III Medium Arm SMA Type III Medium Arm A SM Type V Square Medium Arm SA Type V Short Arm SL Type V Square Long Arm AA Adjustable Arm AA Adjustable Arm A DA Direct Arm DAL Direct Long Arm SA Side Arm - Available with 20-60 LEDs NA NEMA® A 5A Side Arm - Available with 20-60 LEDs	02 04 06 08 10 12 14 16	E	UL Universal 120-277V UH Universal 347-480V	BK Black BZ Bronze SV Silver WH White	350 350mA 525 525mA 700 700mA - Available with 20-60 LEDs	DIM 0-10V Dimming - Control by others - Refer to Dimming spec sheet for details - Can't exceed specified drive current PCR Compatible only with 120V, 277V or 347V (phase to neutral) - Consult factory if fusing is required for 208V, 240V or 480V (phase to phase) - Refer to PCR_spec sheet for availability with PML options PMR Compatible only with 120V, 277V or 347V (phase to neutral) - Consult factory if fusing is required for 208V, 240V or 480V (phase to phase) - Refer to PMR_spec sheet for availability with PML options - When code dictates fusing, use slow blow fuse or type C/D breaker should be used to address inrush current HL HLS.ner Dual Circuit Input - Refer to HLS_spec sheet for details - Sensor not included PMLF Programmable Multi-Level, 15-30' Mounting Height - Refer to PML_spec sheet for details - Sensor required for downlight applications at 15' max PMLS Programmable Multi-Level, 30-40' Mounting Height - Refer to PML_spec sheet for details - Sensor required for downlight applications at 30' max PHOTO NEMA® 3-Pin Photocell - Refer to PHOTO_spec sheet for availability with HL options - 7-pin receptacle per ANSI C136.10 - Not available with SA mount - Intended for downlight applications with maximum 40' tip - Includes photocell or shorting cap - Refer to PHOTO_spec sheet for availability with HL options 30K 3000K Color Temperature - Minimum 90 CRI 40K 4000K Color Temperature - Minimum 70 CRI 50K 5000K Color Temperature - Minimum 70 CRI TSL Amber Turtle Friendly LEDs - Refer to TSL_spec sheet for details - Intended for downlight applications at 6" tip

* Reference EPA and pole configurations suitability data beginning on page 19

cULus DLC
CREE LIGHTING
US: creelighting.com (800) 236-4800
Canada: creelighting-canada.com (800) 473-1234

THE EDGE® LED Area/Flood Luminaire

Product Specifications

CONSTRUCTION & MATERIALS
- Slim, low profile, minimizing wind load requirements
- Luminaire sides are rugged die cast aluminum with integral, weathertight LED driver compartment and high performance heat sinks
- DA and DL mount utilizes convenient interlocking mounting method. Mounting is rugged die cast aluminum, mounts to 3-4" (76-102mm) round pole (by others) as standard, and secures to pole with 5/16-18 UNC bolts spaced on 2" (51mm) centers
- AA and SA mounts are rugged die cast aluminum and mount to 2" (51mm) IP, 2.375" (60mm) O.D. tenons
- Includes leaf/debris guard
- Exclusive ColorFast DeltaGuard® finish features an E-Coat epoxy primer with an ultra-durable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. Black, bronze, silver, and white are available
- **Weight:** See Dimensions and Weight Charts on pages 1 and 22

ELECTRICAL SYSTEM
- **Input Voltage:** 120-277V or 347-480V, 50/60Hz, Class 1 drivers
- **Power Factor:** > 0.9 at full load
- **Total Harmonic Distortion:** < 20% at full load
- DA and DL mounts designed with integral weathertight electrical box with terminal strips (120a-208a) for easy power hookup
- Integral 10kV surge suppression protection standard
- When code dictates fusing, a slow blow fuse or type C/D breaker should be used to address inrush current
- **Maximum 10V Source Current:** 20 LED (350mA): 10mA; 20 LED (525 & 700mA) and 40-80 LED: 0.175mA; 100-160 LED: 0.350mA

REGULATORY & VOLUNTARY QUALIFICATIONS
- cULus Listed
- Suitable for wet locations
- Enclosure rated IP66 per IEC 60529 when ordered without P or R options
- Consult factory for CE Certified products
- Certified to ANSI C136.31-2001, 3G bridge and overpass vibration standards when ordered with AA, DA and DL mounts
- ANSI C136.2 10kV surge protection, tested in accordance with IEEE/ANSI C62.41.2
- Meets FCC Part 15, Subpart B, Class A limits for conducted and radiated emissions
- Luminaire and finish endurance tested to withstand 5,000 hours of elevated ambient salt fog conditions as defined in ASTM Standard B 117
- DLC qualified with select SKUs. Refer to https://www.designlights.org/search/ for most current information
- Meets Buy American requirements within ARRA

CA RESIDENTS WARNING: Cancer and Reproductive Harm - www.p65warnings.ca.gov

Electrical Data*

LED Count (x10)	CCT	System Watts 120-480V	Total Current (A) 120V	208V	240V	277V	347V	480V
350mA								
02	3000K/5000K/TSL	29	0.21	0.13	0.11	0.10	0.08	0.07
	TSL	19	0.16	0.09	0.08	0.07	0.05	0.04
04	3000K/5000K/TSL	46	0.36	0.23	0.21	0.20	0.15	0.12
	TSL	35	0.29	0.17	0.15	0.13	0.10	0.07
06	3000K/5000K/TSL	66	0.52	0.33	0.28	0.24	0.20	0.15
	TSL	50	0.41	0.24	0.21	0.18	0.14	0.10
08	3000K/5000K/TSL	90	0.75	0.44	0.38	0.34	0.26	0.20
	TSL	69	0.57	0.35	0.29	0.25	0.20	0.14
10	3000K/5000K/TSL	110	0.92	0.53	0.47	0.41	0.32	0.24
	TSL	83	0.69	0.40	0.35	0.30	0.24	0.17
12	3000K/5000K/TSL	130	1.10	0.63	0.55	0.48	0.38	0.28
	TSL	99	0.82	0.48	0.41	0.36	0.28	0.21
14	3000K/5000K/TSL	150	1.32	0.77	0.66	0.62	0.47	0.35
	TSL	120	1.00	0.58	0.50	0.44	0.34	0.25
16	3000K/5000K/TSL	179	1.49	0.87	0.77	0.68	0.53	0.39
	TSL	136	1.13	0.65	0.57	0.49	0.39	0.28
525mA								
02	3000K/5000K/TSL	37	0.30	0.19	0.17	0.14	0.12	0.10
04	3000K/5000K/TSL	79	0.58	0.34	0.31	0.28	0.21	0.16
06	3000K/5000K/TSL	101	0.84	0.49	0.43	0.38	0.30	0.22
08	3000K/5000K/TSL	133	1.13	0.66	0.58	0.51	0.39	0.28
10	3000K/5000K/TSL	171	1.43	0.85	0.76	0.66	0.50	0.36
12	3000K/5000K/TSL	202	1.69	0.98	0.86	0.77	0.59	0.44
14	3000K/5000K/TSL	232	1.94	1.12	0.99	0.87	0.68	0.50
16	3000K/5000K/TSL	260	2.21	1.27	1.11	0.97	0.77	0.56
700mA								
02	3000K/5000K/TSL	50	0.41	0.25	0.22	0.20	0.15	0.12
04	3000K/5000K/TSL	93	0.78	0.46	0.40	0.36	0.27	0.20
06	3000K/5000K/TSL	134	1.14	0.65	0.57	0.50	0.39	0.29

* Electrical data at 25°C (77°F). Actual wattage may differ by up +/- 10% when operating between 120-277V or 347-480V +/- 10%

THE EDGE® Series Ambient Adjusted Lumen Maintenance*

Ambient	CCT	Initial LMF	25K hr Reported† LMF	50K hr Reported† LMF	75K hr Reported† Estimated‡ LMF	100K hr Estimated‡ LMF
5°C (41°F)	3000K/5000K/TSL	1.04	1.03	1.03	1.03*	1.03
	TSL	1.04	1.04	1.04	1.04*	1.04
10°C (50°F)	3000K/5000K/TSL	1.03	1.02	1.02	1.02*	1.02
	TSL	1.04	1.04	1.04	1.04*	1.04
15°C (59°F)	3000K/5000K/TSL	1.02	1.01	1.01	1.01*	1.01
	TSL	1.03	1.03	1.03	1.03*	1.03
25°C (68°F)	3000K/5000K/TSL	1.01	0.99	0.99	0.99*	0.99
	TSL	1.01	1.01	1.01	1.01*	1.01
25°C (77°F)	3000K/5000K/TSL	1.00	0.98	0.98	0.98*	0.98
	TSL	1.00	1.00	1.00	1.00*	1.00

* Lumen maintenance values at 25°C (77°F) are calculated per IES TM-21 based on LED case data and in-situ luminaire testing
† In accordance with IES TM-21. Reported values represent interpolated values based on time durations that are up to 6x the tested durations in the IES LM-80 report for the LED.
‡ Estimated values are calculated and represent time durations that exceed the 6x test duration of the LED.

CREE LIGHTING

ADDITIONAL FIXTURE INFO

304 Series™

LED Recessed Canopy Luminaire

Rev. Date: V7 04/05/2021

Product Description

Luminaire housing is constructed from rugged die cast aluminum components (RS Mount) or die cast and extruded aluminum components (RD Mount). LED driver is mounted in a sealed weathertight center chamber that allows for access from below the fixture. Luminaire mounts directly to the canopy deck and is secured in place with die cast aluminum trim frame. Luminaire housing is provided with factory applied foam gasket that provides a watertight seal between luminaire housing and canopy deck. Suitable for use in single or double wide canopies with 14" (406 mm) wide panels. Designed for canopies of 19-22 gauge (maximum 0.064" [1 mm] thickness).
Applications: Petroleum stations, convenience stores, drive-thru banks and restaurants, retail and grocery

Performance Summary

Patented NanoOptic® Product Technology
Assembled in the U.S.A. of U.S. and imported parts
CRI: Minimum 70 CRI
CCT: 4000K (+/- 300K), 5700K (+/- 500K) standard
Limited Warranty*: 10 years on luminaire/10 years on ColorFast DeltaGuard® finish

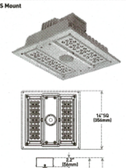
* See http://ridgelinelighting.com/warranty for warranty terms

Accessories

Field-Installed

Hand-Held Remote
RA-IGENGHEM
- For successful implementation of the programmable multi-level option, a minimum of one hand-held remote is required

RS Mount



Weight
22.0 lbs. (9.9kg)

Ordering Information

Example: CAN-304-04-RS-04-E-UL-SV-350

Product	Optic	Mounting	LED Count (x10)	Series	Voltage	Color Options	Drive Current	Options
CAN-304-	SM Type V Medium SS Type V Short SQ Type V Square Petroleum Symmetric TS Type V Square Petroleum	RS Recessed Single Stick RD Recessed Double Stick	04 06 08 10 12 14 16	E	UL Universal 120-277V UH Universal 347-480V	BK Black BZ Bronze SV Silver WH White	350 350mA 525 525mA 700 700mA	DIM 0-10V Dimming - Control by others - Refer to Dimming spec sheet for details - Can't exceed specified drive current PCR Compatible only with 120V, 277V or 347V (phase to neutral) - Consult factory if fusing is required for 208V, 240V or 480V (phase to phase) - Refer to PCR_spec sheet for availability with PML options - When code dictates fusing, use slow blow fuse or type C/D breaker should be used to address inrush current PML2 Programmable Multi-Level, 15-30' Mounting Height - Refer to PML_spec sheet for details - Sensor required for downlight applications at 15' max PMLS Programmable Multi-Level, 30-40' Mounting Height - Refer to PML_spec sheet for details - Sensor required for downlight applications at 30' max PHOTO NEMA® 3-Pin Photocell - 7-pin receptacle per ANSI C136.10 - Not available with SA mount - Intended for downlight applications with maximum 40' tip - Includes photocell or shorting cap - Refer to PHOTO_spec sheet for availability with PML options 30K 3000K Color Temperature - Minimum 90 CRI 40K 4000K Color Temperature - Minimum 70 CRI 50K 5000K Color Temperature - Minimum 70 CRI TSL Amber Turtle Friendly LEDs - Refer to TSL_spec sheet for details - Color temperature per luminaire is fixed - Available only with 700mA - Luminaire multiplier: 0.70 - Intended for downlight applications - Additional shielding (by others) may be required for Florida Fish and Wildlife Conservation Commission compliance

* All LED luminaire require marked spacing: 48" x 24" x 4" (1,219mm x 610mm x 102mm); 48" (1,219mm) center-to-center of adjacent luminaires, 24" (610mm) luminaire center to side building member, 4" (102mm) top of luminaire to overhead building member

cULus ENERGY STAR DLC
CREE LIGHTING
US: creelighting.com (800) 236-4800
Canada: creelighting-canada.com (800) 473-1234

304 Series™ LED Recessed Canopy Luminaire

Product Specifications

CONSTRUCTION & MATERIALS
- RS Mount luminaire housing is constructed from rugged die cast aluminum and incorporates integral, high performance heatsink fins specifically designed for LED canopy applications
- RD Mount luminaire housing is constructed from rugged die cast aluminum and features high performance extruded aluminum heatsinks specifically designed for LED canopy applications
- LED driver is mounted in a sealed weathertight center chamber that allows for access from below the luminaire
- Field adjustable drive current between 350mA, 525mA and 700mA on Non-IC rated luminaires
- Luminaire housing provided with factory applied foam gasket and provides for a watertight seal between luminaire housing and canopy deck
- Mounts directly to the canopy deck and is secured in place with a die cast aluminum trim frame
- RS mount includes integral junction box which allows ease of installation without need to open luminaire
- Suitable for use in single (RS Mount) or double (RD Mount) skin canopies with 14" (406mm) wide panels
- Designed for canopies of 19-22 gauge (maximum 0.064" [1mm] thickness)
- See 228 Series™ luminaires for canopies using 12" (305mm) deck sections
- Exclusive ColorFast DeltaGuard® finish features an E-Coat epoxy primer with an ultra-durable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. Black, bronze, silver, and white are available

ELECTRICAL SYSTEM
- **Input Voltage:** 120-277V or 347-480V, 50/60Hz, Class 1 drivers
- **Power Factor:** > 0.9 at full load
- **Total Harmonic Distortion:** < 20% at full load
- Integral weathertight electrical box with terminal strips (120a-208a) for easy power hookup
- Integral 10kV surge suppression protection standard
- When code dictates fusing, a slow blow fuse or type C/D breaker should be used to address inrush current
- **10V Source Current:** 0.15mA

REGULATORY & VOLUNTARY QUALIFICATIONS
- cULus Listed
- Suitable for wet locations
- Meets IP66 per IEC 60529
- ANSI C136.2 10kV surge protection, tested in accordance with IEEE/ANSI C62.41.2
- Luminaire and finish endurance tested to withstand 5,000 hours of elevated ambient salt fog conditions as defined in ASTM Standard B 117
- DLC qualified with select SKUs. Please refer to www.designlights.org for most current information
- RoHS-Compliant. Consult factory for additional details
- Meets Buy American requirements within ARRA

CA RESIDENTS WARNING: Cancer and Reproductive Harm - www.p65warnings.ca.gov

Electrical Data*

LED Count (x10)	System Watts 120-480V	Total Current (A) 120V	208V	240V	277V	347V	480V
350mA							
04	44	0.39	0.24	0.22	0.21	0.15	0.12
06	69	0.57	0.34	0.30	0.27	0.21	0.14
525mA							
04	71	0.59	0.35	0.31	0.26	0.21	0.16
06	101	0.84	0.49	0.42	0.36	0.30	0.22
700mA							
04	94	0.79	0.46	0.40	0.34	0.28	0.21
06	135	1.14	0.65	0.57	0.50	0.40	0.29

* Electrical data at 25°C (77°F). Actual wattage may differ by up +/- 10% when operating between 120-277V or 347-480V

304 Series™ Ambient Adjusted Lumen Maintenance†

Ambient	CCT	Initial LMF	25K hr Reported‡ LMF	50K hr Reported‡ LMF	75K hr Estimated‡ LMF	100K hr Estimated‡ LMF
5°C (41°F)	3000K/5000K/TSL	1.04	1.01	0.99	0.98	0.96
	TSL	1.04	1.04	1.04	1.04	1.04
10°C (50°F)	3000K/5000K/TSL	1.03	1.00	0.98	0.97	0.95
	TSL	1.04	1.04	1.04	1.04	1.04
15°C (59°F)	3000K/5000K/TSL	1.02	0.99	0.97	0.96	0.94
	TSL	1.03	1.03	1.03	1.03	1.03
25°C (68°F)	3000K/5000K/TSL	1.01	0.98	0.96	0.95	0.93
	TSL	1.01	1.01	1.01	1.01	1.01
25°C (77°F)	3000K/5000K/TSL	1.00	0.97	0.95	0.94	0.92
	TSL	1.00	1.00	1.00	1.00	1.00

* Lumen maintenance values at 25°C (77°F) are calculated per IES TM-21 based on LM-80 data and in-situ luminaire testing
† In accordance with IES TM-21. Reported values represent interpolated values based on time durations that are within 6x tested.
‡ Estimated values are calculated and represent time durations that exceed the 6x test duration of the LED.

CREE LIGHTING
US: creelighting.com (800) 236-4800
Canada: creelighting-canada.com (800) 473-1234

ADDITIONAL FIXTURE INFO

Cree Edge™ Series

LED Security Wall Pack Luminaire

Product Description

The Cree Edge™ wall mount luminaire has a slim, low profile design. The luminaire end caps are made from rugged die cast aluminum with integral, weathertight LED driver compartments and high performance aluminum heat sinks specifically designed for LED applications. Housing is rugged aluminum. Includes a lightweight mounting box for installation over standard and mud ring single gang J-Boxes. Secures to wall with four 3/16" (5mm) screws (by others). Conduit entry from top, bottom, sides and rear. Allows mounting for uplight or downlight. Designed and approved for easy through-wiring. Includes leaf/debris guard.
Applications: General area and security lighting

Performance Summary

Patented NanoOptic® Product Technology
Made in the U.S.A. of U.S. and imported parts
CRI: Minimum 70 CRI
CCT: 4000K (+/- 300K), 5700K (+/- 500K) standard
Limited Warranty*: 10 years on luminaire/10 years on ColorFast DeltaGuard® finish

* See http://ridgelinelighting.com/warranty for warranty terms

Accessories

Field-Installed

Hand-Held Remote
RA-IGENGHEM
- For successful implementation of the programmable multi-level option, a minimum of one hand-held remote is required

LED Count (x10)	Dim. "A"	Weight
02	9.9" (251mm)	20 lbs. (9.1kg)
04	11.9" (302mm)	22 lbs. (10.0kg)
06	13.9" (353mm)	25 lbs. (11.3kg)
08	15.9" (404mm)	27 lbs. (12.2kg)
10	17.9" (455mm)	31 lbs. (14.1kg)
12	19.9" (505mm)	32 lbs. (14.5kg)

Ordering Information

Example: SEC-EDG-2M-WM-36-E-UL-SV-700

Product	Optic	Mounting	LED Count Series (x10)	Voltage	Color Options	Drive Current	Options
SEC-EDG-	2M Type II Medium 2MW Type II Medium w/BLS Type II Short 3M Type III Medium 3MW Type III Medium w/BLS 4M Type IV Medium 4MW Type IV Medium w/BLS	WM Wall Mount	02 04 06 08 10 12	E	UL Universal 120-277V UH Universal 347-480V	BZ Bronze BK Black SV Silver WH White	350 350mA 525 525mA 700 700mA - Available with 20-60 LEDs	DIM 0-10V Dimming - Control by others - Refer to Dimming spec sheet for details - Can't exceed specified drive current PCR Compatible only with 120V, 277V or 347V (phase to neutral) - Refer to PCR_spec sheet for availability with HL options - Available for U.S. applications only - When code dictates fusing, see three-delay fuse HL Multi-Level - Refer to HL_spec sheet for details - Sensor required for downlight applications with 9' HB - Photocell - Refer to HL_spec sheet for availability with HL options - Available for U.S. applications only PML Programmable Multi-Level - Refer to PML_spec sheet for details - Intended for downlight applications with 9' HB 40K 4000K Color Temperature - Minimum 70 CRI 50K 5000K Color Temperature - Minimum 70 CRI

cULus DLC
CREE LIGHTING
US: lighting.cree.com T (800) 236-4800 F (262) 504-5415
Canada: www.cree.com/canada T (800) 473-1234 F (800) 890-7507

Rev. Date: V3 09/06/2017

Electrical Data*

LED Count (x10)	System Watts 120-480V	Total Current (A) 120V	208V	240V	277V	347V	480V
350mA							
02	25	0.21	0.13	0.11	0.10	0.08	0.07
04	44	0.36	0.23	0.21	0.20	0.15	0.12
06	64	0.52	0.31	0.28	0.24	0.20	0.15
08	90	0.75	0.44	0.38	0.34	0.26	0.20
10	110	0.92	0.53	0.47	0.41	0.32	0.24
12	130	1.10	0.63	0.55	0.48	0.38	0.28
525mA							
02	37	0.30	0.19	0.17	0.14	0.12	0.10
04	79	0.58	0.34	0.31	0.28	0.21	0.16
06	101	0.84	0.49	0.43	0.38	0.30	0.22
08	133	1.13	0.66	0.58	0.51	0.39	0.28
700mA							
02	50	0.41	0.25	0.22	0.20	0.15	0.12
04	93	0.78	0.46	0.40	0.36	0.27	0.20
06	134	1.14	0.65	0.57	0.50	0.39	0.29

* Electrical data at 25°C (77°F). Actual wattage may differ by up +/- 10% when operating between 120-480V +/- 10%

Recommended Cree Edge™ Series Lumen Maintenance Factors (LMF)*

Ambient	Initial LMF	25K hr Projected† LMF	50K hr Projected† LMF	75K hr Calculated† LMF	100K hr Calculated† LMF
5°C (41°F)	1.04	1.01	0.99	0.98	0.96
10°C (50°F)	1.03	1.00	0.98	0.97	0.95
15°C (59°F)	1.02	0.99	0.97	0.96	0.94
25°C (68°F)	1.01	0.98	0.96	0.95	0.93
25°C (77°F)	1.00	0.97	0.95	0.94	0.92

* Lumen maintenance values at 25°C are calculated per TM-21 based on LM-80 data and in-situ luminaire testing
† In accordance with IESNA TM-21-11. Projected Values represent interpolated values based on time durations that are within 6x tested.
‡ Per IESNA LM-80-08 total test duration (in hours) for the device under testing (DUT) i.e. the packaged LED chip)
§ In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed the 6times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing (DUT) i.e. the packaged LED chip)

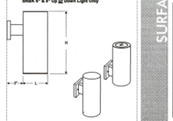
Solera

227 WILKINSON RD. BRAMPTON, ON. CANADA | WWW.SOLERACORP.COM
TOLL FREE. 1-877-765-3722 | PH. 905-457-4777 | FAX. 905-457-1115

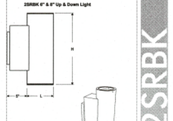
SRBK & 2SRBK surface mounted cylinders are made of heavy duty corrosion resistant low copper extruded aluminum housing with cast aluminum door frame/s and mounting bracket/arm. Lenses are sealed to exclude dust and bugs. For Outdoor rated enclosures lenses are sealed and all connections are fully gasketed for complete weather tight seal.

Available with the latest LED lighting technology.

SRBK 4" & 8" Up or Down Light Only



2SRBK 4" & 8" Up & Down Light



ELECTRICAL:
Select from 120V, 277V, 347V, 120-277V (consult Solera for additional voltages)
Magnetic Ballast is standard on most HID lamps. For electronic HID ballast specify ELB after the lamp option.
Electronic Driver is standard for LED
Electronic Ballast is standard for CFL, BIAX, FLUORESCENT & INDUCTION lamps.

SURFACE WALL MOUNT

SRBK

NAME	SIZE	LAMPING	COLOR TEMP. (LED)	VOLT	OPTICS	OPTICS DIRECTION	LENS	MOUNTING	OPTIONS	FINISH
1SRBK 2SRBK	4x5 6x5 8x5 8x8	Please see Lamping chart	ELB	120V 277V 347V 120-277V	WB NB CB	U UP D DN	L R F B	WM	IPRS ABS CMS	BL WM WH BZ SV SG CC OR

SRBC

NAME	SIZE	LAMPING	COLOR TEMP. (LED)	VOLT	OPTICS	OPTICS DIRECTION	LENS	MOUNTING	OPTIONS	FINISH
2SRBC	6x5 8x5 8x8 10x8	Please see Narrow Beam	ELB	120V 277V 347V 120-277V	NB CB	U UP D DN	L R F B	CM	IPRS ABS CMS	BL WM WH BZ SV SG CC OR

MOUNTING:
WM Wall Surface Mounted
Arm mounts to round pole (by others)
ER3 Straight arm mounts to pole/post (by others)
R__" Pole Mounted with radial arm (pole diameter must be specified)
ELA Adjustable arm with slip fitter.

OPTIONS:
IP65 IP65 Rated Enclosure
AEL Quartz Restrike (relay)
MEL Quartz Restrike (no relay)

FINISH:
Electrostatically applied, thermally cured polyester powder coated paint. *Available in Solera standard colors:*
BL Minitex Black
WH Minitex White
BZ Minitex Bronze
SG Silver Gray
CC Custom Color *Adder (Consult Solera)

OTHER FINISHING OPTIONS:
BA4 Brushed Aluminum #4
ANO Anodized Aluminum
CH Chrome

LENS/SHIELDING:
E Enclosed Clear Flat Tempered Glass Lens
O Open Bottom (no lens)
FG Enclosed Flat Frosted Glass Lens
PG Enclosed Flat Prismatic Glass Lens
MB Millgroove Baffle
HC Honeycomb Shielding

OPTICS:
High purity clear anodized reflector (std.)
WB Wide Beam Distribution
NB Narrow Beam Distribution
CB Champagne anodized aluminum reflector

OPTICS/DIRECTION:
U Up Light Only
D Down Light Only
U/D Up & Down Light

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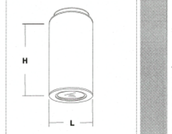
SRBC ceiling surface mounted cylinder is made of heavy duty corrosion resistant low copper extruded aluminum housing with cast aluminum door frame. Lenses are sealed to exclude dust & bugs. For Outdoor rated enclosures lenses are sealed and all connections are fully gasketed for complete weather tight seal.

Available with the latest LED lighting technology.



ELECTRICAL:
Select from 120V, 277V, 347V, 120-277V (consult Solera for additional voltages)
Magnetic Ballast is standard on most HID lamps. For electronic HID ballast specify ELB after the lamp option.
Electronic Driver is standard for LED
Electronic Ballast is standard for CFL, BIAX, FLUORESCENT & INDUCTION lamps.

LENS/SHIELDING:
E Enclosed Clear Flat Tempered Glass Lens
O Open Bottom (no lens)
FG Enclosed Flat Frosted Glass Lens
PG Enclosed Flat Prismatic Glass Lens
MB Millgroove Baffle
HC Honeycomb Shielding

OPTICS:
High purity clear anodized reflector (std.)
WB Wide Beam Distribution
NB Narrow Beam Distribution
CB Champagne anodized aluminum reflector

SURFACE CEILING MOUNT

SRBC

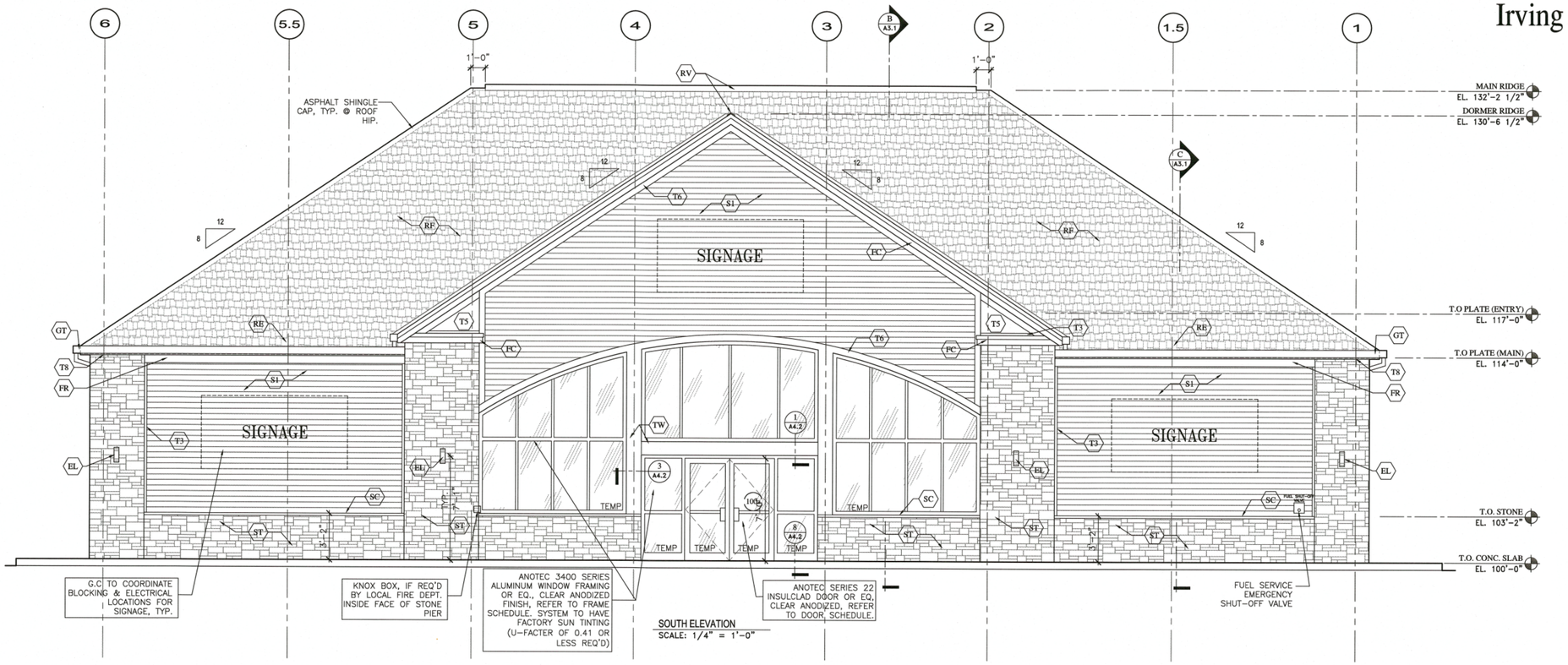
NAME	SIZE	LAMPING	COLOR TEMP. (LED)	VOLT	OPTICS	OPTICS DIRECTION	LENS	MOUNTING	OPTIONS	FINISH
2SRBC	6x5 8x5 8x8 10x8	Please see Narrow Beam	ELB	120V 277V 347V 120-277V	NB CB	U UP D DN	L R F B	CM	IPRS ABS CMS	BL WM WH BZ SV SG CC OR

MOUNTING:
CM Surface Ceiling Mounted

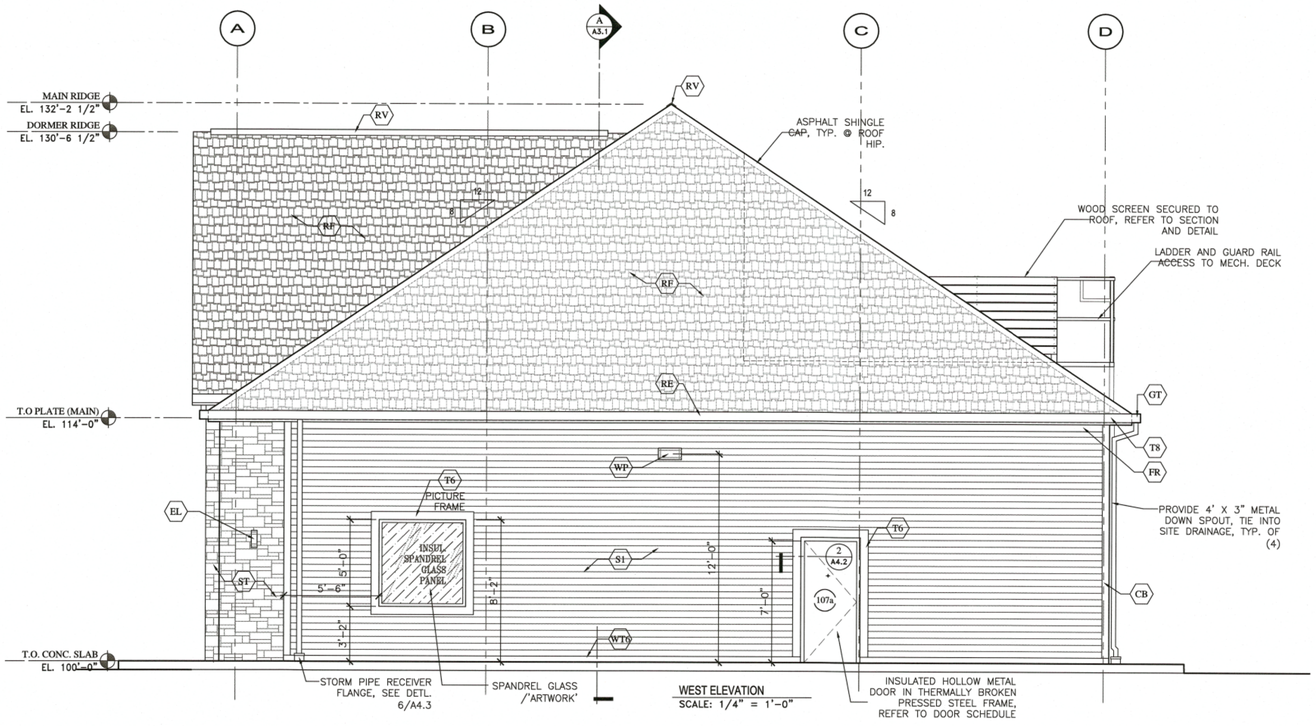
OPTIONS:
IP65 IP65 Rated Enclosure
AEL Quartz Restrike (relay)
MEL Quartz Restrike (no relay)

FINISH:
Electrostatically applied, thermally cured polyester powder coated paint. *Available in Solera standard colors:*
BL Minitex Black
WH Minitex White
BZ Minitex Bronze
SG Silver Gray
CC Custom Color *Adder (Cons

Irving - Franklin



SOUTH ELEVATION
SCALE: 1/4" = 1'-0"



WEST ELEVATION
SCALE: 1/4" = 1'-0"

MATERIAL LEGEND:

- CB — 2x4 MAIBEC CORNER BOARDS – ULTRA WHITE
- FC — 2x4 ON 2x10 FASCIA w/ METAL CAP FLASHING
- DR — PREFINISHED BROWN ALUM. DRIP EDGE, TYP.
- FN — WOOD SCREEN SECURED TO ROOF, REFER TO SECTION AND DETAILS. COLOR TO MATCH SIDING COLOR.
- FR — 2x8 MAIBEC FRIEZE BOARD COLOR: WHITE w/ CONT. PRE-FINISHED ALUM. FLASHING (BLACK)
- GT — 6" PREFINISHED METAL COMMERCIAL GUTTER AND DOWNSPOUT SYSTEM, COLOR: TO BE 'WHITE'. EXTEND BEHIND DRIP FLASHING. DOWNSPOUTS COLOR: TO MATCH SIDING COLOR AND TO BE CONNECTED TO UNDERGROUND DRAINAGE, SEE ROOF PLAN FOR GUTTER AND DOWNSPOUT LOCATIONS. 4" DRAINAGE PIPE TO EXTEND 12" ABOVE SIDEWALK. DOWNSPOUTS TO EXTEND 4" INTO PIPE. PROVIDE TOP CAP (CUT OPENING TO SUIT). WRAP DRAINAGE PIPE AND CAP WITH STAINLESS STEEL AND SECURE TO SIDEWALK AS PER DETAIL 6/A4.3
- TW — CLEAR ANODIZED FRAMING COVER TO MATCH ALUMINUM STOREFRONT WINDOW SYSTEM
- RE — METAL EDGE ICE CUTTER w/ HEAT TRACE GUTTER & EAVE SYSTEM TIED TO T-STAT
- RF — CERTAINTEED LANDMARK DESIGNER SHINGLE, COLOR: GRANITE GRAY OR APPROVED EQUAL. G.C. TO VERIFY w/ OWNER
- EL — EXTERIOR LIGHT FIXTURE, SOLERA ANODIZED ALUMINUM 4" ROUND CYLINDER COLOR: SILVER GRAY 2SRBK-4-9w-LED-120v-U/D-E-WM-IP65-COLOR-SILVER GRAY
- RV — CERTAINTEED 'ROLL SCREEN' RIDGE AIR VENT w/ SHINGLE CAP, INSECT SCREEN & 3" THROAT Min., TYP.
- S1 — 6" MAIBEC EM+ RABBETED BEVEL HORIZONTAL SIDING, TEXTURED FINISH (SEE SECTIONS AND ELEVATIONS FOR LOCATIONS). COLOR OF SIDING – TO BE STANDARD IRVING GRAY (L84769-258173-NG).
- ST — PERMACON BEOSTONE 'CLASSIC-CARBO' GRAY
- SC — 2" PERMACON BEOSTONE 'CLASSIC-CARBO' GREY WINDOW SILL CAP, INSTALL AS PER MANF'R TYP.
- T3 — 1x3 MAIBEC TRIM BOARD w/ PRE-FINISHED ALUM. FLASHING (WHITE) @ ALL HEADS & HORIZ. TRIM BOARDS – ULTRA WHITE
- T4 — 1x4 MAIBEC TRIM BOARD w/ PRE-FINISHED ALUM. FLASHING (WHITE) @ ALL HEADS & HORIZ. TRIM BOARDS – ULTRA WHITE
- T5 — AZEK 4'X8' SHEET TRADITIONAL FINISH (SMOOTH) – ULTRA WHITE
- T6 — 2x6 MAIBEC TRIM BOARD w/ PRE-FINISHED ALUM. FLASHING (WHITE) @ ALL HEADS – ULTRA WHITE
- T8 — 2x8 MAIBEC FASCIA BOARD w/ PRE-FINISHED ALUM. FLASHING (WHITE) @ ALL HEADS – ULTRA WHITE
- T10 — 1x10 MAIBEC TRIM BOARD w/ PRE-FINISHED ALUM. FLASHING (WHITE) @ ALL HEADS – ULTRA WHITE
- WT6 — 2x6 AZEK WATER TABLE BOARD w/ PRE-FINISHED ALUM. FLASHING (WHITE) @ ALL HEADS – ULTRA WHITE
- WP — EXTERIOR WALL PACK LIGHT FIXTURE

9-21-22

ALPHAarchitects
17 CHESTNUT STREET
PORTLAND, ME 04101
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FAX: 207.761.9595
design@alphaarchitects.com

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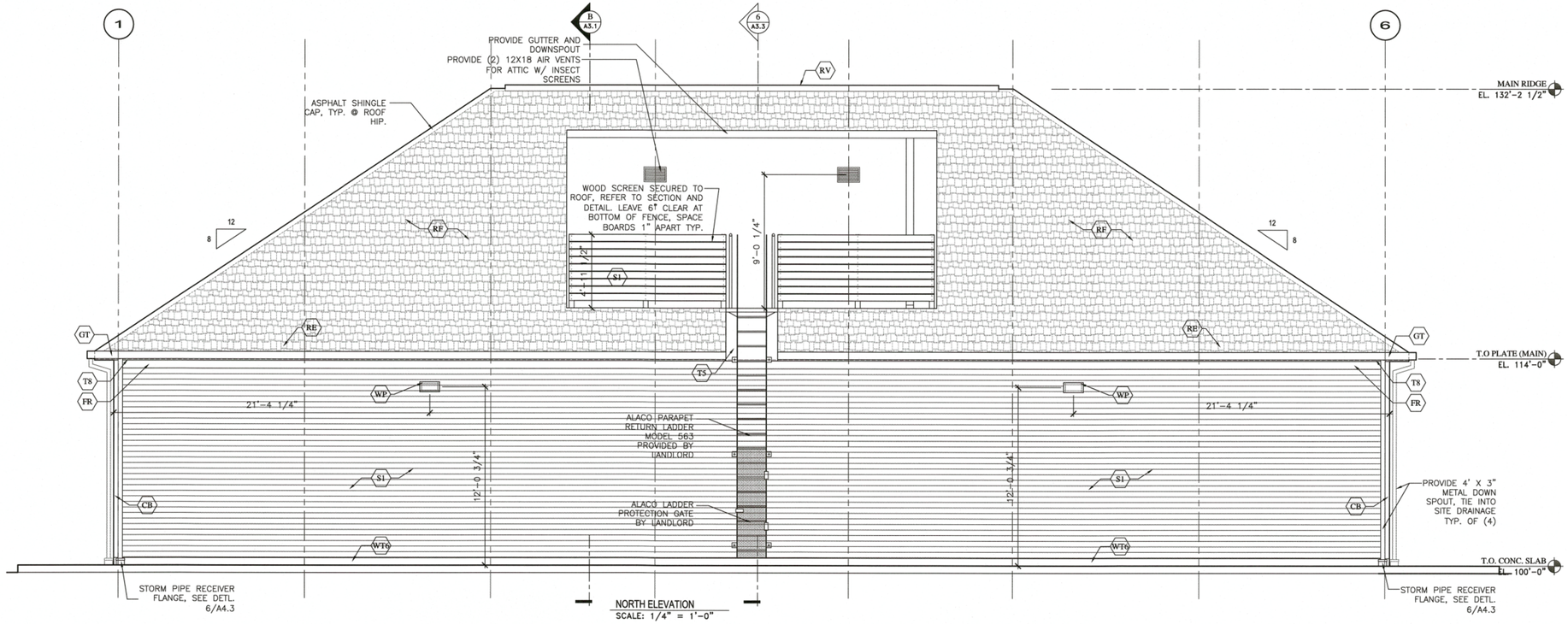
JOB: 22120

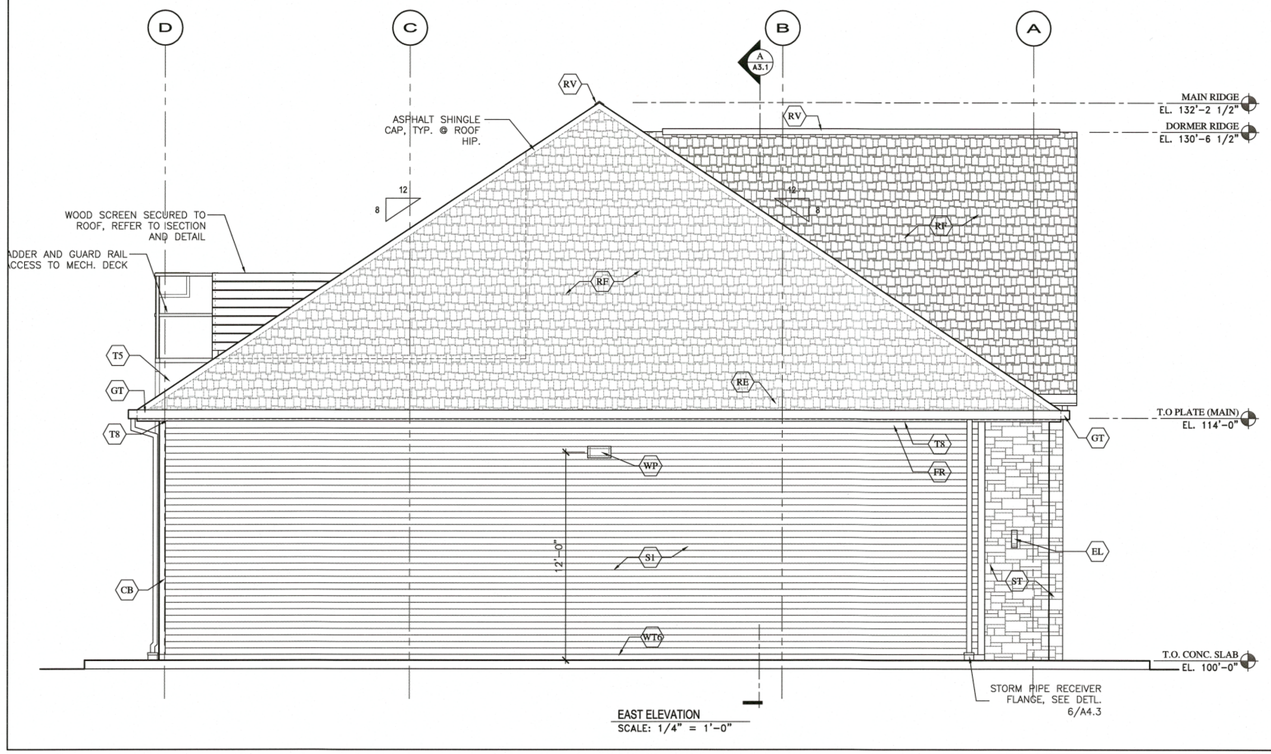
ISSUE DATE	
PLANNING	09-14-22
PERMIT	-
CD's	-
REV. 1	-
REV. 2	-
REV. 3	-

BUILDING ELEVATIONS

A2.1

Irving - Franklin





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- GT — 6" PREFINISHED METAL COMMERCIAL GUTTER AND DOWNSPOUT SYSTEM, COLOR: TO BE 'WHITE'. EXTEND BEHIND DRIP FLASHING. DOWNSPOUTS COLOR: TO MATCH SIDING COLOR AND TO BE CONNECTED TO UNDERGROUND DRAINAGE, SEE ROOF PLAN FOR GUTTER AND DOWNSPOUT LOCATIONS. 4" DRAINAGE PIPE TO EXTEND 12" ABOVE SIDEWALK. DOWNSPOUTS TO EXTEND 4" INTO PIPE. PROVIDE TOP CAP (CUT OPENING TO SUIT), WRAP DRAINAGE PIPE AND CAP WITH STAINLESS STEEL AND SECURE TO SIDEWALK AS PER DETAIL 6/A4.3
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- WP — EXTERIOR WALL PACK LIGHT FIXTURE

9-21-22

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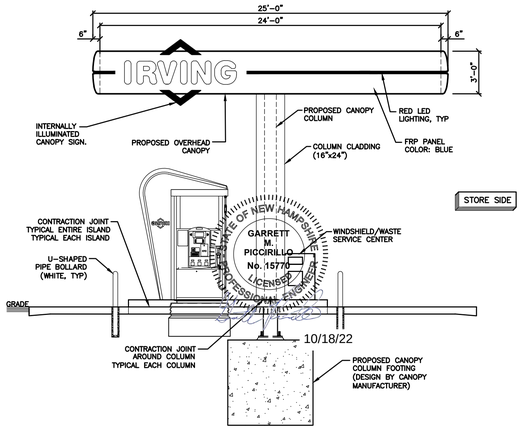
Franklin NH 03235

JOB: 22120

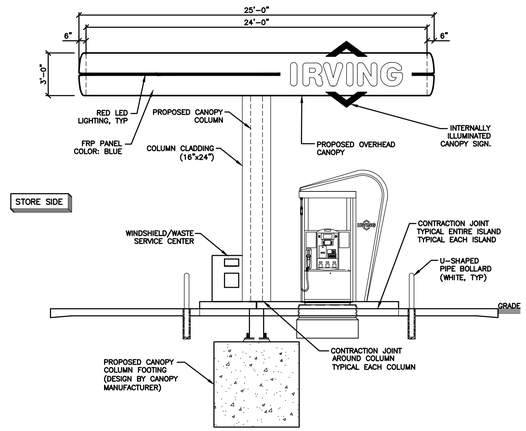
ISSUE DATE	
PLANNING	09-14-22
PERMIT	-
CD's	-
REV. 1	-
REV. 2	-
REV. 3	-

BUILDING ELEVATIONS

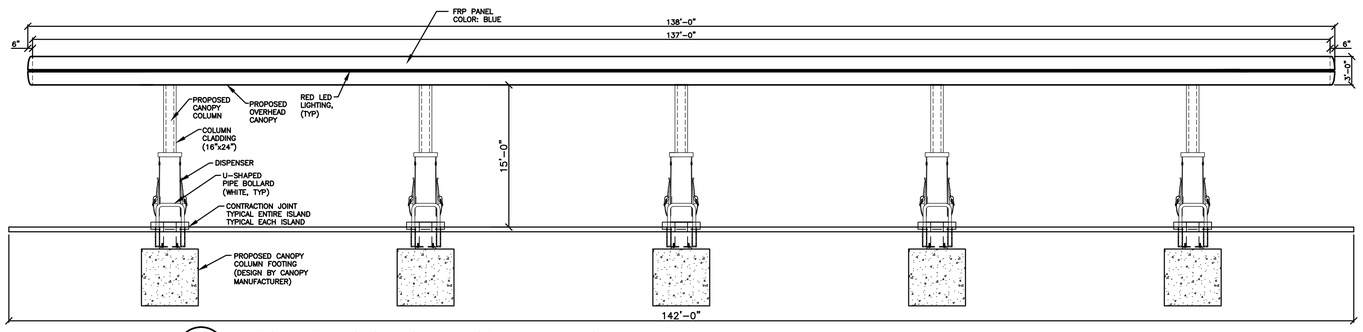
A2.2



A AUTO FUELING CANOPY WEST ELEVATION
3/16" = 1'-0"

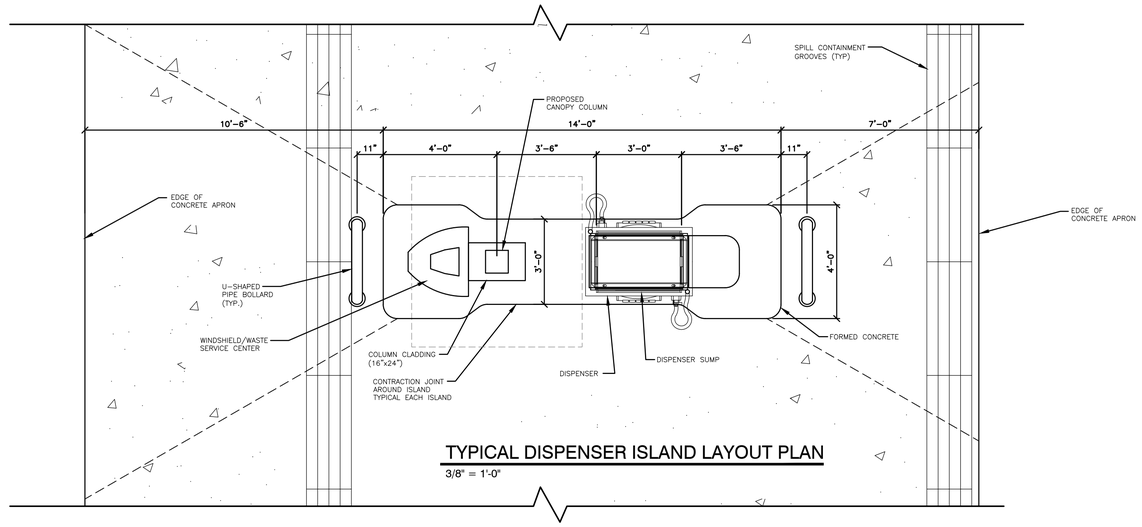


B AUTO FUELING CANOPY EAST ELEVATION
3/16" = 1'-0"



1 AUTO FUELING CANOPY FRONT ELEVATION
1/8" = 1'-0"

NOTE: NO CANOPY ILLUMINATION SHALL BE PROVIDED ON THE REAR (WEST) ELEVATION



TYPICAL DISPENSER ISLAND LAYOUT PLAN
3/8" = 1'-0"

GPI
Engineering
Design
Planning
Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road, Suite One
Salem, NH 03079

PREPARED FOR
TROPIC STAR DEVELOPMENT, LLC
321D LAFAYETTE ROAD
HAMPTON, NH 03842

PROPOSED RETAIL MOTOR FUEL OUTLET

MAP 148 LOT 15.2
901 CENTRAL STREET
FRANKLIN, NH 03235

STATE OF NEW HAMPSHIRE
GARRETT M. PICCIRILLO
No. 15770
LICENSED
PROFESSIONAL ENGINEER
10/18/22

REVISIONS		
NO.	REVISION	DATE

OCTOBER 18, 2022

DRAWN/DESIGN BY	CHECKED BY
CCC/GMP	FCM

CANOPY ELEVATIONS

SCALE: AS NOTED

PROJECT NO. NEX-2200013

1 OF 1

F:\Projects\NEX-2200013 - Franklin, NH - Tropic Star\CAD Files\2200013_CANOPY.dwg ELEVATIONS 10/18/22 4:15pm gpiccirillo