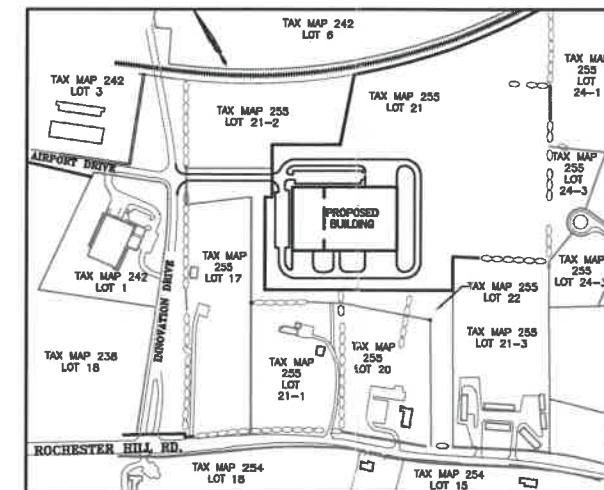
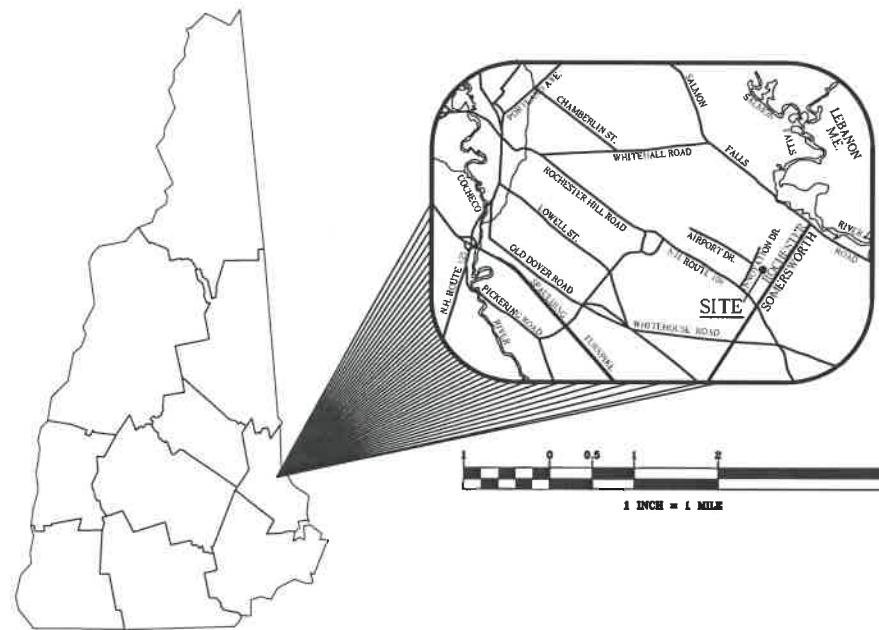




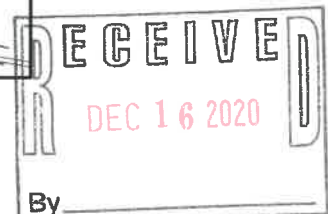
WAREHOUSE & DISTRIBUTION FACILITY

49 INNOVATION DRIVE
ROCHESTER, NEW HAMPSHIRE

PREPARED FOR
PREP PARTNERS GROUP, LLC.
DECEMBER 2020



OVERALL SITE
1" = 400'



CIVIL ENGINEERS

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

LANDSCAPING ARCHITECTS

WOODBURN & COMPANY LANDSCAPE ARCHITECTURE, LLC
103 KENT PLACE
NEWMARKET, NEW HAMPSHIRE 03857
(603) 659-5949

APPLICANT

PREP PARTNERS GROUP, LLC.
38 RAYNOR DRIVE
HINGHAM, MASSACHUSETTS 02043
(603) 986-2979

OWNER OF RECORD

TAX MAP 255, LOT 21
OWNER OF RECORD:
PREP PARTNERS GROUP, LLC
38 RAYNOR DRIVE
HINGHAM, MASSACHUSETTS 02043
SCRD BOOK 4777, PAGE 24

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

STATE AND FEDERAL PERMITS:

STATE OF NEW HAMPSHIRE PERMIT NUMBERS:
NHDES ALTERATION OF TERRAIN: PENDING
NHDES WETLANDS PERMIT: NHDES 2020-01615
NHDES DAM PERMIT: NOT REQUIRED
NHDES SUBDIVISION PERMIT: NOT REQUIRED
NHDES SUBSURFACE SYSTEMS PERMIT: NOT REQUIRED
NHDES WASTEWATER PERMIT: NHDES 02020-0808
NHDOT DRIVEWAY/ENTRANCE PERMIT: NOT REQUIRED

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES):
NPDES PERMITS ARE ONLY REQUIRED FOR PROJECTS MEETING THE DISTURBED AREA CRITERIA BELOW AND HAVING A POINT SOURCE STORMWATER DISCHARGE FROM THE SITE TO AN ADJACENT WETLAND OR WATER BODY (I.E. CULVERT, SWALE, ETC. OUTLETING TO A WETLAND, CREEK, STREAM OR RIVER).

NPDES PERMIT: REQUIRED

NPDES PERMITS CONSIST OF A NOTICE OF INTENT (NOI) FILED WITH THE ENVIRONMENTAL PROTECTION AGENCY AT LEAST 14 DAYS PRIOR TO CONSTRUCTION COMMENCING AND A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) BEING PREPARED, KEPT ON SITE AND FOLLOWED BY THE CONTRACTOR.

FOR STATUS OF THIS PERMIT, CONTACT THE PROJECT GENERAL CONTRACTOR.

FINAL APPROVAL BY
ROCHESTER PLANNING BOARD

CERTIFIED BY: *[Signature]* DATE: 12/18/20

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| C-1 | OVERALL SITE PLAN | 1" = 100' |
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| C-14 | GRAVEL WETLANDS CROSS SECTION | AS SHOWN |
| C-15 | GRAVEL WETLANDS DETAILS | AS SHOWN |
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| C-22 | SEWER FORCE MAIN PLAN & PROFILE | AS SHOWN |
| C-23 | PUMP STATION AND DRY WELL DETAILS | AS SHOWN |
| C-24 | SEWER FORCE MAIN DETAILS | AS SHOWN |
| C-25 | GRAVITY SEWER DETAILS | AS SHOWN |
| C-26 | TEST PIT LOG AND INFILTRATION TEST RESULTS | AS SHOWN |
| L-1 | LIGHTING PLAN AND DETAILS | AS SHOWN |
| L-2 | LANDSCAPING PLAN | 1" = 40' |
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FILE NO. 104
PLAN NO. C-3012
DWG. NO. 19289 SP-1
F.B. NO.



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

- EXISTING CATCH BASINS**
- CB1
RM = 292.73'
INV. IN = 298.70' (15" CPP)
INV. OUT = 295.73'
SUMP = 295.73'
- CB2
RM = 290.45'
INV. IN = 284.68' (15" CPP)
INV. OUT = 284.68' (15" CPP)
SUMP = 281.35'
- CB3
RM = 283.48'
INV. IN = 277.58' (15" CPP)
INV. OUT = 277.48' (15" CPP)
SUMP = 274.58'
- CB4
RM = 279.23'
INV. IN = 288.63' (15" CPP) FROM BRIDGE
INV. IN = 272.41' (15" CPP) FROM CB1
INV. OUT = 287.58' (15" CPP) SWALE
- CB5
RM = 280.85'
INV. IN = 274.63'
INV. OUT = 270.53' (15" CPP) SWALE
SUMP = 287.53'

TM 242-6
LOCATION: 85 INNOVATION DR.
HOUSING AUTHORITY OF ROCHESTER
% BUSINESS FINANCE AUTH. OF NH
2 PILLSBURY ST. STE 101
CONCORD, NH 03301
SCRD 4029-908

TM 239-26
NH NORTHCOAST CORP
P O BOX 429
OSSISPEE, NH 03864
SCRD 1708-532



- NOTES:**
- THE PARCELS ARE IN THE GENERAL INDUSTRIAL DISTRICT ZONE (G) AND CONSERVATION OVERLAY DISTRICT.
 - PACEL AREA = 29.85 ACRES OR 1,300,295 SQ.FT.
 - MINIMUM LOT REQUIREMENTS WITH WATER AND SEWER:
LOT AREA = 20,000 SQ.FT.
FRONTAGE = 100 FT.
 - BUILDING SETBACKS: "NO INDUSTRIAL BUILDING OR OPERATION SHALL BE SITUATED CLOSER THAN 100 FEET TO THE BOUNDARY LINE OF ANY ADJACENT RESIDENTIAL PROPERTY. THE PLANNING BOARD MAY REDUCE THIS SETBACK TO 50 FEET BY CONDITIONAL USE OR WHERE THE USE IS ACCESSORY TO A PRIMARY SECTION 275-7.2.B.
FRONT = 25 FT.
SIDE = 20 FT.
REAR = 25 FT.
 - MAXIMUM BUILDING HEIGHT = 35 FT.
 - THE LOTS ARE CURRENTLY UNDEVELOPED.
 - A PORTION OF TM 255-21 IS LOCATED WITHIN THE 100 YEAR FLOOD ZONE A AS SHOWN ON THE FLOOD INSURANCE RATE MAP DATED SEPTEMBER 30, 2015 COMMUNITY PANEL 330700218E PANEL 218 OF 405.
 - THE LOTS MAY BE SUBJECT TO AN AVIATION AND FLIGHT CLEARANCE EASEMENT AS OUTLINED IN SCRD 1187-280, AS SHOWN.
 - VERTICAL DATUM AND CONTOURS ARE DERIVED FROM LIDAR DATA ACQUIRED BY NOAA IN 2011 (NAVD83) (GEOID18).
 - HORIZONTAL DATUM IS NH STATE PLANE NAD83 (2007).
 - THIS SITE-SPECIFIC SOIL MAP WAS COMPLETED BY CYNTHIA M. BALCUS, NEW HAMPSHIRE CERTIFIED SOIL SCIENTIST #82 OF STONEY RIDGE ENVIRONMENTAL, LLC. FIELD WORK WAS COMPLETED ON MARCH 27, 2020. THE SOILS TYPE ARE AS FOLLOWS:
SYMBOL MAP UNIT
115A/VPD SCARBORO
115B/VPD SCARBORO
545A/PO WALPOLE
545C/PO WALPOLE
25A WOODBRIDGE
25B WOODBRIDGE
29C WOODBRIDGE
66D PAXTON
66E PAXTON
313B DEERFIELD
 - TEST PIT NUMBER 10 THRU 17 WERE DUG BY CHARLIE E. KARCHER, ON MAY 13, 2020. SEE SHEET C-25 FOR TEST PIT LOGS.
 - BORING WERE COMPLETED BY JOHN TURNER CONSULTING, INC. ON FEBRUARY 27, 2020. SEE SHEET C-25 FOR BORING LOGS.
 - INFILTRATION TEST WERE COMPLETED BY JOHN TURNER CONSULTING, INC. ON MAY 13 -15, 2020 AND JUNE 12, 2020 SEE SHEET C-25 FOR INFILTRATION TEST RESULTS.



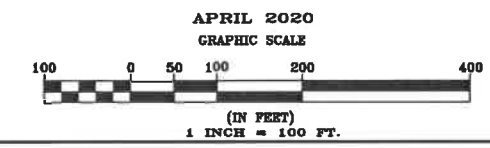
WETLAND NOTES

STATE AND FEDERAL JURISDICTIONAL WETLANDS WERE DELINEATED BY N.H. CERTIFIED WETLAND SCIENTIST, BARRY H. KEITH, IN SEPTEMBER OF 2019 AND MAPPED BY NORWAY PLAINS ASSOCIATES, INC. USING TOTAL STATION SURVEY METHODS AND IN ACCORDANCE WITH THE FOLLOWING GUIDANCE DOCUMENTS:

- N.H. CODE OF ADMINISTRATIVE RULES (ENR-WT 301.01) WITH THE TECHNIQUES OUTLINED IN THE 1987 "U.S. ARMY CORPS OF ENGINEERS WETLAND DELINEATION MANUAL, TECHNICAL REPORT Y-87-1."
- U.S. ARMY CORPS OF ENGINEERS, 2008, "REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTH CENTRAL AND NORTHEAST REGION, U.S. ARMY CORPS OF ENGINEERS RESEARCH AND DEVELOPMENT CENTER, ENVIRONMENTAL LABORATORY ERDC/EL TR-08-19."
- U.S. ARMY CORPS OF ENGINEERS, 2012, "NATIONAL LIST OF PLANT SPECIES THAT OCCUR IN WETLANDS: NORTHEAST REGION, U.S. ARMY CORPS OF ENGINEERS RESEARCH AND DEVELOPMENT CENTER, ENVIRONMENTAL LABORATORY."
- N.H. CODE OF ADMINISTRATIVE RULES (ENR-WT 301.02) WITH THE U.S. FISH AND WILDLIFE SERVICE MANUAL FWS/OBS-79/31 ENTITLED "CLASSIFICATION OF WETLANDS AND DEEP WATER HABITATS OF THE UNITED STATES, COMARIN ET AL. 1978."
- NEW ENGLAND HYDROLOGICAL SOCIETY TECHNICAL COMMITTEE, 2004, 3RD ED., "FIELD INDICATORS FOR IDENTIFYING HYDROLOGICAL SOILS IN NEW ENGLAND," NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION, LOWELL, MA.
- U.S. DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, 2010, "FIELD INDICATORS OF HYDROLOGICAL SOILS IN THE UNITED STATES, VERSION 7.0," L.M. VASILAS, G.W. HUNT, AND C.V. NOBLE (EDS.), USDA, NRCS, IN COOPERATION WITH THE NATIONAL TECHNICAL COMMITTEE FOR HYDROLOGICAL SOILS.

- WETLAND LEGEND**
- PSS/F01E - PALUSTRINE BROAD-LEAVED DECIDUOUS SCRUB-SHRUB/FORESTED, SEASONALLY FLOODED/SATURATED
- PEM1ED - PALUSTRINE PERSISTENT EMERGENT, SEASONALLY FLOODED/SATURATED, DITCHED
- R3UB1H - RIVERINE UPPER PERENNIAL, UNCONSOLIDATED BOTTOM, COBBLE-GRAVEL, PERMANENTLY FLOODED
- R3UB2H - RIVERINE UPPER PERENNIAL, UNCONSOLIDATED BOTTOM, SAND, PERMANENTLY FLOODED
- R4UB1 - RIVERINE INTERMITTENT, UNCONSOLIDATED BOTTOM, INTERMITTENTLY FLOODED
- PFO1E - PALUSTRINE BROAD-LEAVED DECIDUOUS FORESTED, SEASONALLY FLOODED/SATURATED
- PSS/EM1E - PALUSTRINE BROAD-LEAVED DECIDUOUS SCRUB-SHRUB/PERSISTENT EMERGENT, SEASONALLY FLOODED/SATURATED
- PSS1/F04E - PALUSTRINE BROAD-LEAVED DECIDUOUS SCRUB-SHRUB/NEEDLE-LEAVED EVERGREEN FORESTED, SEASONALLY FLOODED/SATURATED

EXISTING FEATURE PLAN
TAX MAP 255, LOT 21
INNOVATION DRIVE
ROCHESTER, NH
 PREPARED FOR:
PREP PARTNERS GROUP, LLC.



FILE NO. 104
 PLAN NO. C-3012-EF
 DWG. NO. 19289 SP-1
 F.B. NO.

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

NORWAY PLAINS ASSOCIATES, INC.

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

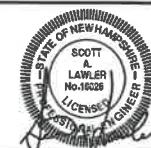
LAND SURVEYORS

CIVIL ENGINEERS

LEGEND

- PROPERTY LINE
- JURISDICTIONAL WETLANDS
- EXISTING TREE LINE
- EXISTING OVERHEAD WIRES
- NRCS SOIL BOUNDARY
- EXISTING HYDRANT
- EXISTING WATER GATE OR SHUT-OFF VALVE
- EXISTING UTILITY POLE
- EXISTING SEWER MAN HOLE
- EXISTING CATCH BASIN
- EXISTING LIGHT POLES
- PROPOSED BUILDING
- PROPOSED PAVEMENT
- PROPOSED PAVEMENT WITH CURBING
- PROPOSED TREE LINE
- PROPOSED GUARD RAIL

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



REVISIONS:
12/09/2020 - REVISE PER NOD COMMENTS.

- GENERAL SITE PLAN NOTES
- THIS PARCELS ARE LOCATED IN THE GENERAL INDUSTRIAL DISTRICT ZONE (G).
 - TOTAL PARCEL AREA: 29.85 ACRES OR 1,300,208 SQ.FT.
 - THE PURPOSE OF THIS PLAN IS TO DEVELOP A PROPOSED COMMERCIAL BUILDING.
 - ALL EXISTING UTILITIES LOCATIONS ARE APPROXIMATE AS SHOWN. THE CONTRACTOR SHALL VERIFY THEIR EXACT LOCATION PRIOR TO ANY WORK BEING PERFORMED.
 - THE EXISTING STRUCTURES ON LOT 21 SHALL BE REMOVED. THE EXISTING PAVEMENT ON LOT 21 AND LOT 21-3 SHALL BE REMOVED. THE EXISTING SEPTIC SHALL BE PUMPED AND REMOVED.
 - THESE PLANS SHOW ONLY THOSE FEATURES THAT WERE VISUALLY PER REFERENCE PLAN 1.
 - DIMENSIONAL REGULATIONS PER ZONING ORDINANCE:

GENERAL INDUSTRIAL DISTRICT ZONE (G):
MINIMUM LOT AREA WITH WATER AND SEWER = 20,000 SQ.FT.
MINIMUM LOT FRONTAGE = 100 FT.
MINIMUM YARD SETBACKS:
"NO INDUSTRIAL BUILDING OR OPERATION SHALL BE SITUATED CLOSER THAN 100 FEET TO THE BOUNDARY LINE OF ANY ADJACENT RESIDENTIAL PROPERTY." SECTION 275-7.2.B.

- FRONT = 25 FT.
SIDE = 20 FT.
REAR = 25 FT.
MAXIMUM LOT COVERAGE = 75%
MAXIMUM BUILDING HEIGHT = 35 FT.
ORIENTATION: HORIZONTAL DATUM = NAD83

- A SMALL PORTION OF PARCEL 225-21 IS LOCATED WITHIN ZONE A (100YR FLOOD) AS SHOWN ON FEDERAL EMERGENCY MANAGEMENT AGENCY MAP 330700218E SEPTEMBER 30, 2015/PANEL 21B OF 405. NO PROPOSED CONSTRUCTION WILL TAKE PLACE WITHIN THE 100YR FLOOD ZONE.
- THIS SITE-SPECIFIC SOIL MAP WAS COMPLETED BY CYNTHIA H. BALDUS, NEW HAMPSHIRE CERTIFIED SOIL SCIENTIST #62 OF STONEY RIDGE ENVIRONMENTAL LLC. FIELD WORK WAS COMPLETED ON JANUARY 31, 2020 AND FEBRUARY 5, 2020. THE SOILS TYPE ARE AS FOLLOWS:

| SOIL TYPE | MAP UNIT | SCARSD |
|-----------|------------|--------|
| 115A/VPD | SCARSD | |
| 115B/VPD | SCARSD | |
| 548A/VPD | WALPOLE | |
| 548C/VPD | WALPOLE | |
| 25A | WOODBRIDGE | |
| 25B | WOODBRIDGE | |
| 25C | WOODBRIDGE | |
| 66D | PAXTON | |
| 66E | PAXTON | |
| 113B | DESFIELD | |

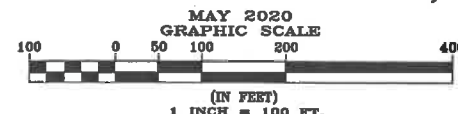
- JURISDICTIONAL WETLANDS WERE DELINEATED BY BARRY H. KEITH, C.W.S., IN SEPTEMBER 2019. FOR MORE INFORMATION ABOUT THIS SITE PLAN, CONTACT THE CITY OF ROCHESTER PLANNING DEPARTMENT, 33 WAREFIELD ST., ROCHESTER, NH 03607 (603) 335-1338.
- PARKING REQUIREMENTS (SITE PLAN REGULATIONS: ARTICLE II SECTION 10 (A)):

| | |
|---|---|
| INDUSTRIAL USE: | 1 SPACE PER 1,000 GROSS SQUARE FEET PLUS 3 SPACES PER 1,000 GROSS SQUARE FEET OF OFFICES OR RETAIL SALES: |
| 191,250 SF GFA X 1 SPACE / 1,000 SF GFA | = 191 SPACES |
| 5,050 SF OFFICE SPACE X 3 SPACES / 1,000 SF | = 15 SPACES |
| TOTAL REQUIRED SPACES | = 206 SPACES |
| TOTAL PROVIDED SPACES | = 129 SPACES |
| TOTAL FUTURE SPACE | = 36 SPACE |

ACCESSIBLE PARKING (SITE PLAN REGULATIONS: ARTICLE II SECTION 10(D)(2)): THE SPACES ARE PART OF THE TOTAL ABOVE.
ACCESSIBLE PARKING SPACES [TOTAL # OF SPACES 151 TO 200] = 6 SPACES
TOTAL PROVIDED SPACES = 6 SPACES

- THIS DEVELOPMENT MUST BE IN COMPLIANCE WITH ALL APPLICABLE LAW - INCLUDING ALL PERTINENT PROVISIONS OF THE CITY OF ROCHESTER SITE PLAN REGULATIONS - UNLESS OTHERWISE WAIVED.
- THE APPLICANT SHALL OBTAIN A STORMWATER MANAGEMENT PERMIT FROM THE PUBLIC WORKS DEPARTMENT (UNLESS DETERMINED TO BE UNNECESSARY BY THE CITY ENGINEER) AND FOLLOW THE REQUIREMENTS OF THE CITY ORDINANCE CHAPTER 218. THE PERMITTEE SHALL PREPARE A WRITTEN PLAN FOR MANAGING STORMWATER THAT ENTERS THE CONSTRUCTION SITE AND SHALL PRESENT IT TO THE INSPECTION ENGINEER AT THE PRE-CONSTRUCTION MEETING. THE PERMITTEE SHALL FOLLOW BEST MANAGEMENT PRACTICES TO PREVENT EROSION IN AREAS WHERE SOIL HAS BEEN DISTURBED.
- ACCESS INTO THE SITE FOR FIRE APPARATUS MUST BE MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION PROCESS. THIS IS THE SOLE RESPONSIBILITY OF THE APPLICANT/DEVELOPER TO MAINTAIN THIS ACCESS. PLEASE CONTACT THE FIRE DEPARTMENT AT 330-7182 WITH ANY QUESTIONS ABOUT ACCESS REQUIREMENTS.
- SNOW SHALL NOT BE PILED IN SUCH A MANNER AS TO BLOCK THE VISIBILITY OF THE VEHICLES ON INNOVATION DRIVE AND ALL EXCESS SNOW SHALL BE REMOVED FROM THE SITE.
- ALL OUTSIDE CONSTRUCTION ACTIVITY RELATED TO THE DEVELOPMENT OF THIS SITE IS RESTRICTED TO THE HOURS OF 7:00 A.M. TO 6:00 P.M. MONDAY THROUGH FRIDAY AND 8:00 A.M. TO 6:00 P.M. SATURDAY.
- ALL UTILITIES MUST BE UNDERGROUND, INCLUDING UTILITIES EXTENDED ONTO THE SITE FROM EXISTING POLES NEAR THE CITY STAFF AS APPROPRIATE TO ADDRESS THIS REQUIREMENT.
- POLES MAY BE PLACED ON/NEAR THE PROPERTY TO ALLOW FOR OVERHEAD EXTENSION OF WIRES ACROSS THE STREET. UTILITIES EXTENDING FROM ANY SUCH POLE MUST BE UNDERGROUND. THE APPLICANT MAY WORK WITH THE CITY STAFF TO ADDRESS THIS REQUIREMENT.
- THE CODE ENFORCEMENT OFFICER ADMINISTERS THE CITY OF ROCHESTER SIGN ORDINANCE. SIGNAGE SUBMITTED AS PART OF THIS SITE PLAN PACKAGE IS STILL SUBJECT TO HIS REVIEW TO ENSURE COMPLIANCE WITH THAT ORDINANCE AND OTHER APPLICABLE CODES. INDEPENDENT FROM THIS SITE PLAN REVIEW, IN ADDITION, IF ANY SIGNIFICANT CHANGE OR EXPANSION IS PROPOSED TO THE DESIGN OF THE APPROVED FREESTANDING SIGN OR TO THE OVERALL ADVERTISING SIGNAGE FOR THE SITE (NOT INCLUDING ACCESSORY SIGNAGE, SUCH AS HANDICAP PARKING SIGNS), THE PROPOSED SIGN DESIGNS MUST BE PRESENTED TO THE PLANNING BOARD FOR REVIEW PRIOR TO ISSUANCE OF THOSE SIGN PERMITS. A SIGN PERMIT MUST BE OBTAINED PRIOR TO INSTALLATION OF ANY SIGNS ON SITE.
- ALL ELEMENTS SHOWN ON THE APPROVED SITE PLAN MUST BE PROPERLY COMPLETED PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY, UNLESS APPROPRIATE SURETY IS PLACED WITH THE PLANNING DEPARTMENT.
- NOTE THAT THIS APPROVAL IS FOR THE SITE PLAN ONLY. LIFE SAFETY CODE AND BUILDING CODE REVIEW WILL BE REQUIRED AS PART OF THE PERMIT PROCESS WHEN THE CONSTRUCTION PLANS ARE SUBMITTED. VARIOUS REQUIREMENTS REGARDING THE BUILDING DESIGN POSSIBLY INCLUDING A SPRINKLER SYSTEM - MAY BE SPECIFIED AT THAT TIME.
- THE SEWER IMPACT CONTRIBUTION MUST BE PAID IN FULL TO THE CODE ENFORCEMENT DEPARTMENT, PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY. THE SEWER IMPACT IS A ONE TIME PAYMENT OF \$2.00 PER GALLON FOR AVERAGE DAILY FLOW.
- THIS PROJECT PROPOSED TO DISTURB OVER ONE ACRE OF EXISTING GROUND COVER AND MEETS OTHER SPECIFIC REQUIREMENTS RELATED TO PERMIT CRITERIA FOR EPA NPDES COMPLIANCE. THE CONTRACTOR IS RESPONSIBLE FOR DEVELOPMENT AND IMPLEMENTATION OF A STORM WATER POLLUTION PREVENTION PLAN (SWPPP), SUBMISSION OF A NOTICE OF INTENT (NOI) TO EPA, INSPECTIONS AND MAINTENANCE OF SEDIMENT CONTROL MEASURES, DOCUMENTATION OF MAINTENANCE ACTIVITIES, AND SUBMISSION OF A NOTICE OF TERMINATION (NOT) TO EPA. THE CONTRACTOR IS ALSO RESPONSIBLE TO COMPLY WITH ANY OR ALL OTHER ASPECTS OF THE CURRENT FEDERAL, STATE AND LOCAL STORM WATER OR NPDES REGULATIONS OR REQUIREMENTS.
- SNOW STORAGE CALCULATIONS:
1 SQUARE FOOT OF STORAGE AREA FOR EVERY 5 TO 10 SQUARE FEET OF AREA TO BE CLEARED
SNOW STORAGE REQUIRED = 140,727 SF/10 = 14,072 SQUARE FEET
SNOW STORAGE PROVIDED = 29,500 SQUARE FEET
- THERE SHALL BE NO SALT STORAGE ON SITE.
- ALL PARKING ON THE WEST SIDE OF THE BUILDING SHALL BE FOR EMPLOYEES AND SHALL BE DESIGNATED AS "BACK IN" ONLY WITH APPROPRIATE SIGNAGE.
- THE OWNER AND USERS OF THIS FACILITY AGREE TO WORK WITH CITY AND BUSINESSES IN THE INDUSTRIAL PARK TO OFFSET THEIR SHIFTS TO REDUCE TRAFFIC CONFLICTS.

OVERALL SITE PLAN
TAX MAP 255, LOT 21
INNOVATION DRIVE
ROCHESTER NH
PREPARED FOR:
PREP PARTNERS GROUP, LLC.



C-1

FINAL APPROVAL BY
ROCHESTER PLANNING BOARD

CERTIFIED BY: *[Signature]* DATE: *10/10/20*

SITE REVIEW APPROVAL

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

FILE NO. 104
PLAN NO. C-3012
DWG. NO. 19289 SP-1
F.B. NO.

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

NORWAY PLAINS ASSOCIATES, INC.

TAX MAP 255, LOT 21
OWNER OF RECORD:
PREP PARTNERS GROUP, LLC
38 RAYNOR DRIVE
HINGHAM, MASSACHUSETTS 02043
SCRD BOOK 4777, PAGE 24



REVISIONS:
07/15/2020 - ADD DIFFERENT PAVEMENT TYPES.
08/04/2020 - REVISE PARKING LOT, LOADING DOCKS,
DOOR LOCATIONS AND STAIRS.

LEGEND

- PROPERTY LINE
- JURISDICTIONAL WETLANDS
- EXISTING TREE LINE
- EXISTING OVERHEAD WIRES
- EXISTING HYDRANT
- EXISTING WATER GATE OR SHUT-OFF VALVE
- EXISTING UTILITY POLE
- EXISTING SEWER MAN HOLE
- EXISTING CATCH BASIN
- EXISTING LIGHT POLES
- PROPOSED BUILDING
- PROPOSED PAVEMENT
- PROPOSED PAVEMENT WITH CURSING
- PROPOSED TREE LINE
- PROPOSED CHAIN LINK FENCE
- PROPOSED GUARDRAIL
- PROPOSED BLOCK RETAINING WALL
- PROPOSED PAVEMENT (STANDARD)
- PROPOSED PAVEMENT (HEAVY DUTY)
- PROPOSED CONCRETE

- PROPOSED DETECTABLE WARNING PAVERS
- PROPOSED SIGNS
- VERTICAL GRANITE CURB 6" REVILE
- SLOPE GRANITE CURB 6" REVILE
- PAVEMENT RADIUS (20')
- PROPOSED STANDARD PARKING SPACES (9' x 18')

- PROPOSED VAN ACCESSIBLE PARKING SPACES (11' x 18' WITH 5' x 18' ACCESS ISLE)

- PROPOSED ACCESSIBLE PARKING SPACES (8' x 18' WITH 5' x 18' ACCESS ISLE)

PROPOSED SITE FEATURES:

- C1 PAINTED 12" WHITE STOP BAR
- C2 PAINTED DOUBLE YELLOW LINES
- C3 STOP SIGN (R1-1)
- C4 5' WIDE PAVED SIDEWALK OR WALKWAY
- C5 5' WIDE PAVED CROSS WALK - CONTINENTAL PATTERN
- C6 CONCRETE SIDEWALK TIP-DOWN 1:12
- C7 CONCRETE SIDEWALK TIP-DOWN 1:12 WITH DETECTABLE WARNING PAVERS
- C8 CONCRETE SIDEWALK LANDING AREA WITH DETECTABLE WARNING PAVERS
- C10 "BACK IN PARKING" SIGNS

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

FILE NO. 104
PLAN NO. C-3012
DWG. NO. 19289 SP-1
F.B. NO.

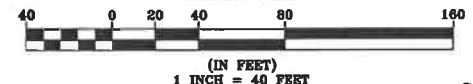
31 Mooney Street, Alton, N.H. 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

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

FINAL APPROVAL BY
ROCHESTER PLANNING BOARD

CERTIFIED BY: _____ DATE: _____



LAND SURVEYORS

CIVIL ENGINEERS

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



REVISIONS:
06/23/2020 - FROM TRC LETTER DATE 6/22/2020 DFW COMMENT: CB-10 & CB-20 GRATE TO BE CASCADE WAVE TYPE.
06/04/2020 - REVISE LOADING DOCKS AND DRAINAGE SYSTEM.
06/11/2020 - CORRECTION OF LABEL FOR DRAIN MANHOLE TO DMH1

| | | | | |
|---|---|--|---|---|
| <p>CB1-A RM = 283.50' INV. IN = 278.50' (CB2-A) INV. OUT = 278.50' (CB7-A) SUMP = 274.30' L = 5' 12"CPP</p> <p>CB2-A RM = 283.70' INV. IN = 278.40' (CB1-A) INV. IN = 279.40' (CB3-A) INV. OUT = 278.30' (CB5-A) SUMP = 276.30' L = 31' 12"CPP</p> <p>CB3-A RM = 283.65' INV. IN = 280.50' (RD) 8"CPP INV. OUT = 280.00' (CB2-A) SUMP = 277.00' L = 60.5' 12"CPP</p> <p>CB4-A RM = 283.70' INV. IN = 280.00' (CB5-A) SUMP = 277.00' L = 32.5' 12"CPP</p> <p>CB5-A RM = 283.70' INV. IN = 279.10' (CB2-A) INV. IN = 279.10' (CB4-A) INV. OUT = 278.00' (CB6-A) SUMP = 276.00' L = 33.5' 15"CPP</p> | <p>CB6-A RM = 283.50' INV. IN = 278.80' (CB5-A) INV. OUT = 277.30' (CB7-A) SUMP = 274.30' L = 25.5' 18"CPP</p> <p>CB7-A RM = 283.50' INV. IN = 277.10' (CB6-A) INV. OUT = 277.00' (CB8-A) SUMP = 274.00' L = 43' 18"CPP</p> <p>CB8-A RM = 283.40' INV. IN = 278.70' (CB7-A) INV. IN = 278.60' (CB9-A) SUMP = 273.60' L = 67.5' 18"CPP</p> <p>CB9-A 5-FT 8 RM = 283.00' INV. IN = 276.10' (CB8-A) INV. OUT = 278.00' (CB10-A) SUMP = 273.00' L = 23.5' 18"CPP</p> <p>CB10-A RM = 283.00' INV. IN = 275.80' (CB9-A) INV. IN = 276.30' (CB11-A) INV. OUT = 276.00' (CB15-A) SUMP = 272.30' L = 300' 24"CPP</p> | <p>CB11-A RM = 283.35' INV. IN = 278.80' (CB10-A) INV. OUT = 277.80' (CB12-A) SUMP = 274.00' ELIMINATOR L = 25' 15"CPP</p> <p>CB12-A RM = 281.45' INV. IN = 277.40' (CB13-A) SUMP = 273.40' ELIMINATOR L = 24' 12"CPP</p> <p>CB13-A RM = 281.45' INV. IN = 273.80' (CB10-A) INV. IN = 276.70' (CB12-A) INV. OUT = 273.70' (CB15-A) SUMP = 270.70' L = 30' 24"CPP</p> <p>CB14-A RM = 282.87' INV. IN = 278.00' (RD) 8"CPP INV. IN = 278.50' (CB3-B) INV. OUT = 277.00' (CB15-A) SUMP = 273.00' ELIMINATOR L = 11' 15"CPP</p> <p>CB15-A 5-FT 8 RM = 280.65' INV. IN = 273.40' (CB13) INV. IN = 276.50' (CB14) INV. OUT = 272.90' (CB16) SUMP = 269.90' L = 218' 30"CPP</p> | <p>CB16-A 5-FT 8 RM = 278.80' INV. IN = 271.90' (CB15-A) INV. IN = 267.50' (DMH2-A) INV. OUT = 267.00' (CB17-A) SUMP = 264.00' L = 23.5' 36"CPP</p> <p>CB17-A 6-FT 8 RM = 278.80' INV. IN = 266.00' (CB16-A) INV. IN = 265.00' (FES) SUMP = 262.00' L = 55' 36"CPP</p> <p>CB18-A RM = 283.65' INV. IN = 278.50' (CB1-B) INV. IN = 278.00' (RD) 8"CPP INV. OUT = 278.00' (CB3-B) SUMP = 275.00' (ELIMINATOR) L = 82' 15"CPP</p> <p>CB19-A RM = 280.65' INV. IN = 278.30' (CB2-B) INV. IN = 275.80' (CB9-B) INV. OUT = 271.70' (DMH1) SUMP = 267.70' L = 71.0' 30"CPP</p> <p>CB20-A RM = 280.25' INV. IN = 276.50' (RD) 8"CPP INV. IN = 275.50' (CB3-B) INV. OUT = 275.00' (CB8-B) SUMP = 272.00' L = 33' 24"CPP</p> <p>CB21-A 6-FT 8 RM = 280.65' INV. IN = 274.80' (CB4-B) INV. IN = 276.70' (6" CPP) INV. OUT = 274.70' (CB6-B) SUMP = 271.70' L = 247' 24"CPP</p> | <p>CB22-B RM = 280.93' INV. IN = 273.30' (CB5-B) INV. OUT = 273.20' (CB7-B) SUMP = 271.20' L = 53' 24"CPP</p> <p>CB23-B RM = 280.93' INV. IN = 273.30' (CB5-B) INV. OUT = 273.20' (CB7-B) SUMP = 271.20' L = 53' 24"CPP</p> <p>CB24-B 5-FT 8 RM = 279.75' INV. IN = 278.75' (CB8-B) INV. OUT = 275.70' (CB8-B) SUMP = 271.70' L = 23.5' 12"CPP</p> <p>DMH1 5-FT 8 RM = 280.25' INV. IN = 270.20' (CB8-B) INV. OUT = 270.10' (DMH2) L = 316' 30"CPP</p> <p>DMH2 5-FT 8 RM = 280.50' INV. IN = 268.50' (DMH1) INV. OUT = 268.00' (CB16-A) L = 70.5' 30"CPP</p> <p>CB25-C STA. 0+46 R18.80' RM = 281.10' (CASCADE GRATE) INV. OUT = 277.20' SUMP = 273.20' L = 36' 15"CPP</p> <p>CB26-C STA. 0+46 R14.32' RM = 281.45' (CASCADE GRATE) INV. IN = 277.00' INV. OUT = 276.75' SUMP = 272.75' (ELIMINATOR) L = 80' 15"CPP</p> |
|---|---|--|---|---|

- LEGEND**
- PROPERTY LINE
 - JURISDICTIONAL WETLANDS
 - EXISTING TREE LINE
 - EXISTING DRAIN LINE
 - EXISTING CONTOUR LINE
 - EXISTING TEST PIT
 - EXISTING SPOT GRADE
 - PROPOSED SPOT GRADE
 - PROPOSED TREE LINE
 - PROPOSED DRAIN LINE
 - PROPOSED UNDERDRAIN LINE
 - PROPOSED CONTOUR LINE
 - PROPOSED CATCH BASIN
 - PROPOSED DRAIN MANHOLE
 - PROPOSED AREA DRAIN
 - PROPOSED FLARED END SECTION (FES)
 - CORRUGATED POLYETHYLENE PIPE
 - CATCH BASIN
 - AREA DRAIN
 - TOP OF WALL
 - TOP OF CURB
 - BASE OF CURB
 - SPOT GRADE CURVING
 - PROPOSED OUTLET PROTECTION

35-17
JN: 290
R HILL RD.
VELOPMENT
ORITY
ATIONAL DR.
1, NH 03801
905-581

- DRAINAGE NOTES:**
- DRAINAGE STRUCTURES SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS SHEET.
 - ALL CORRUGATED PLASTIC PIPE (CPP) USED SHALL BE DUAL WALLED HIGH DENSITY POLYETHYLENE.
 - ALL MATERIALS SHALL BE AS SPECIFIED. ANY CHANGES SHALL BE APPROVED BY THE DESIGN ENGINEER.
 - ALL EROSION CONTROL BLANKETS SHALL BE ALL NATURAL AND NOT CONTAIN PHOTOBIODEGRADABLE NETTING. THE CONTRACTOR SHALL USE EROSION CONTROL, BERM, WHITE FILTREX DEGRADABLE WOVEN SILT SOCK OR OTHER WOVEN ORGANIC MATERIALS. EROSION CONTROL MATTING SHALL BE NORTH AMERICAN GREEN SC15050N.
 - ALL ROOF RUNOFF MUST BE DIRECTED TO THE STORMWATER MANAGEMENT SYSTEM.
 - RUNOFF MUST BE DIRECTED TO TEMPORARY PRACTICES UNTIL STORMWATER BMPs ARE STABILIZED.

FILE NO. 104
PLAN NO. C-3012
DWG. NO. 19289 SP-1
F.B. NO.

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

NORWAY PLAINS ASSOCIATES, INC.

GRADING & DRAINAGE PLAN
TAX MAP 255, LOT 21
INNOVATION DRIVE
ROCHESTER NH
PREPARED FOR:
PREP PARTNERS GROUP, LLC

MAY 2020
GRAPHIC SCALE
(IN FEET)
1 INCH = 60 FEET

C-3

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

LAND SURVEYORS

CIVIL ENGINEERS

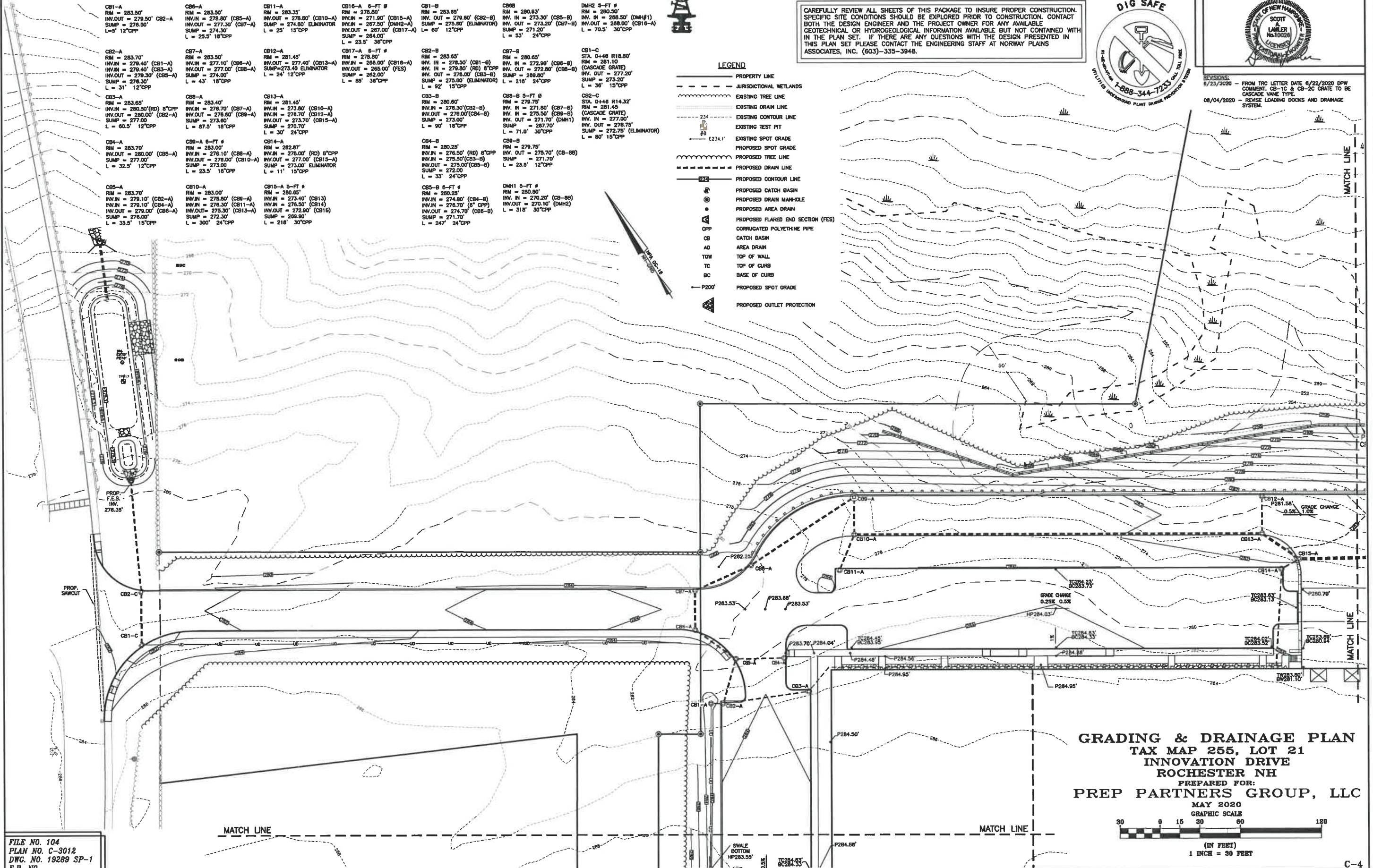
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REVISIONS:
6/23/2020 - FROM TRC LETTER DATE 6/22/2020 DFW
COMMENT: CB-1C & CB-2C GRATE TO BE
CASCADE WAVE TYPE.
08/04/2020 - REVISE LOADING DOCKS AND DRAINAGE
SYSTEM.

LEGEND

- PROPERTY LINE
- JURISDICTIONAL WETLANDS
- EXISTING TREE LINE
- EXISTING DRAIN LINE
- EXISTING CONTOUR LINE
- EXISTING TEST PIT
- EXISTING SPOT GRADE
- PROPOSED SPOT GRADE
- PROPOSED TREE LINE
- PROPOSED DRAIN LINE
- PROPOSED CONTOUR LINE
- PROPOSED CATCH BASIN
- PROPOSED DRAIN MANHOLE
- PROPOSED AREA DRAIN
- PROPOSED FLARED END SECTION (FES)
- CORRUGATED POLYETHYLENE PIPE
- CB CATCH BASIN
- AD AREA DRAIN
- TOW TOP OF WALL
- TC TOP OF CURB
- BC BASE OF CURB
- P200' PROPOSED SPOT GRADE
- PROPOSED OUTLET PROTECTION

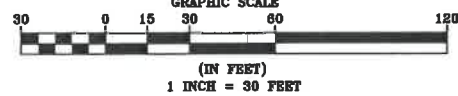


FILE NO. 104
PLAN NO. C-3012
DWG. NO. 19289 SP-1
F.B. NO.

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

NORWAY PLAINS ASSOCIATES, INC.

GRADING & DRAINAGE PLAN
TAX MAP 255, LOT 21
INNOVATION DRIVE
ROCHESTER NH
PREPARED FOR:
PREP PARTNERS GROUP, LLC
MAY 2020
GRAPHIC SCALE



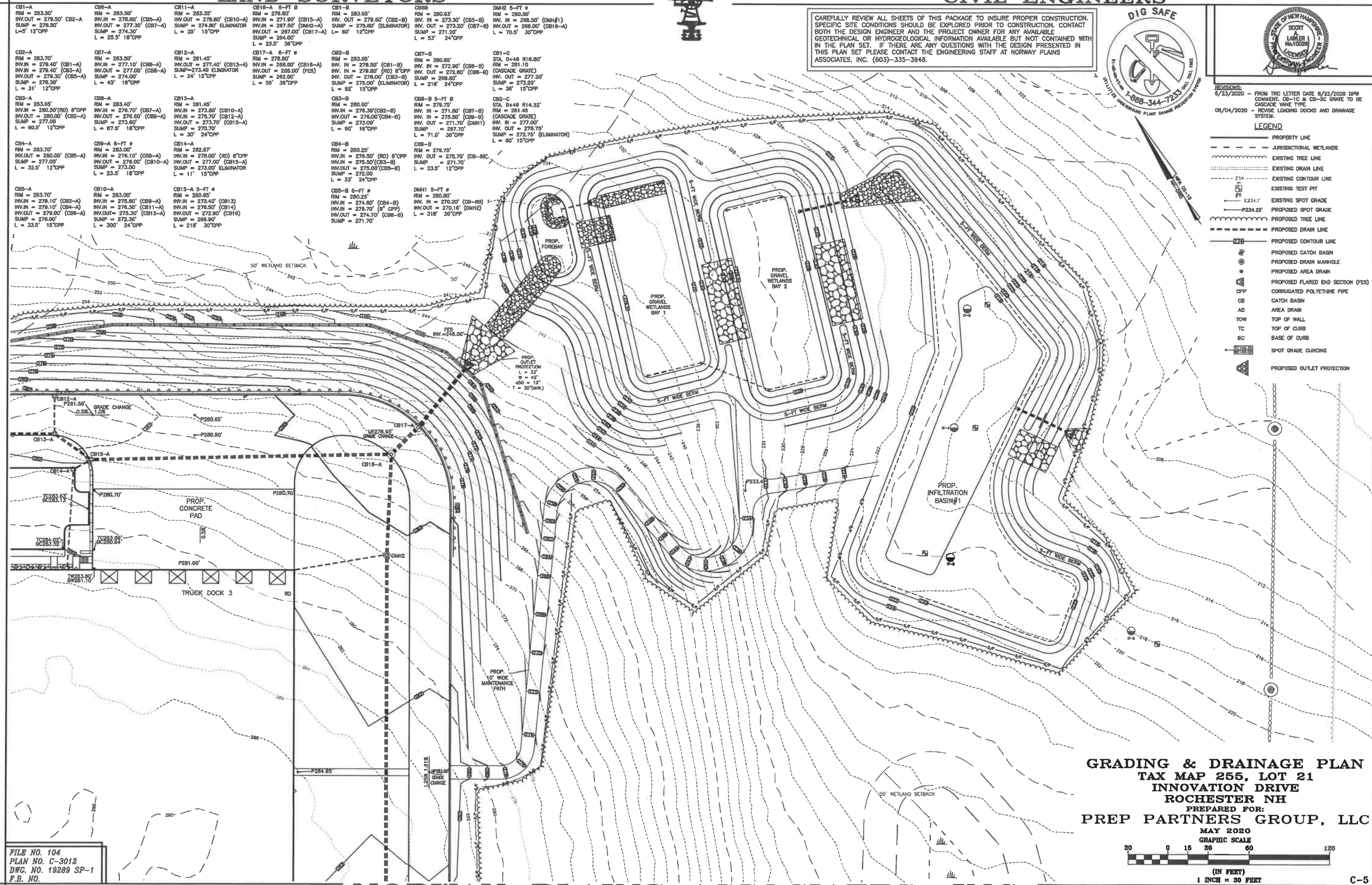
2 Continental Blvd., Rochester, N.H. 603-335-3948

C-4



REVISIONS:
6/23/2020 - FROM TRC LETTER DATE 6/22/2020 DPW COMMENT. CB-1C & CB-2C GRATE TO BE CASCADE VANE TYPE.
08/04/2020 - REVISE LOADING DOCKS AND DRAINAGE SYSTEM.

| | |
|--|-----------------------------------|
| | PROPERTY LINE |
| | JURSDICTIONAL WETLANDS |
| | EXISTING TREE LINE |
| | EXISTING DRAIN LINE |
| | EXISTING CONTOUR LINE |
| | EXISTING SPOT PIT |
| | EXISTING SPOT GRADE |
| | PROPOSED SPOT GRADE |
| | PROPOSED TREE LINE |
| | PROPOSED DRAIN LINE |
| | PROPOSED CONTOUR LINE |
| | PROPOSED CATCH BASIN |
| | PROPOSED DRAIN MANHOLE |
| | PROPOSED AREA DRAIN |
| | PROPOSED FLARED END SECTION (FES) |
| | CORRUGATED POLYETHYLENE PIPE |
| | CATCH BASIN |
| | AREA DRAIN |
| | TOP OF WALL |
| | TOP OF CURB |
| | BASE OF CURB |
| | SPOT GRADE CURVING |
| | PROPOSED OUTLET PROTECTION |



FILE NO. 104
PLAN NO. C-3012
DWG. NO. 19289 SP-1
F.B. NO.

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

NORWAY PLAINS ASSOCIATES, INC.

GRADING & DRAINAGE PLAN
TAX MAP 255, LOT 21
INNOVATION DRIVE
ROCHESTER NH
PREPARED FOR:
PREP PARTNERS GROUP, LLC

MAY 2020
GRAPHIC SCALE

(IN FEET)
1 INCH = 30 FEET

C-5

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

LAND SURVEYORS

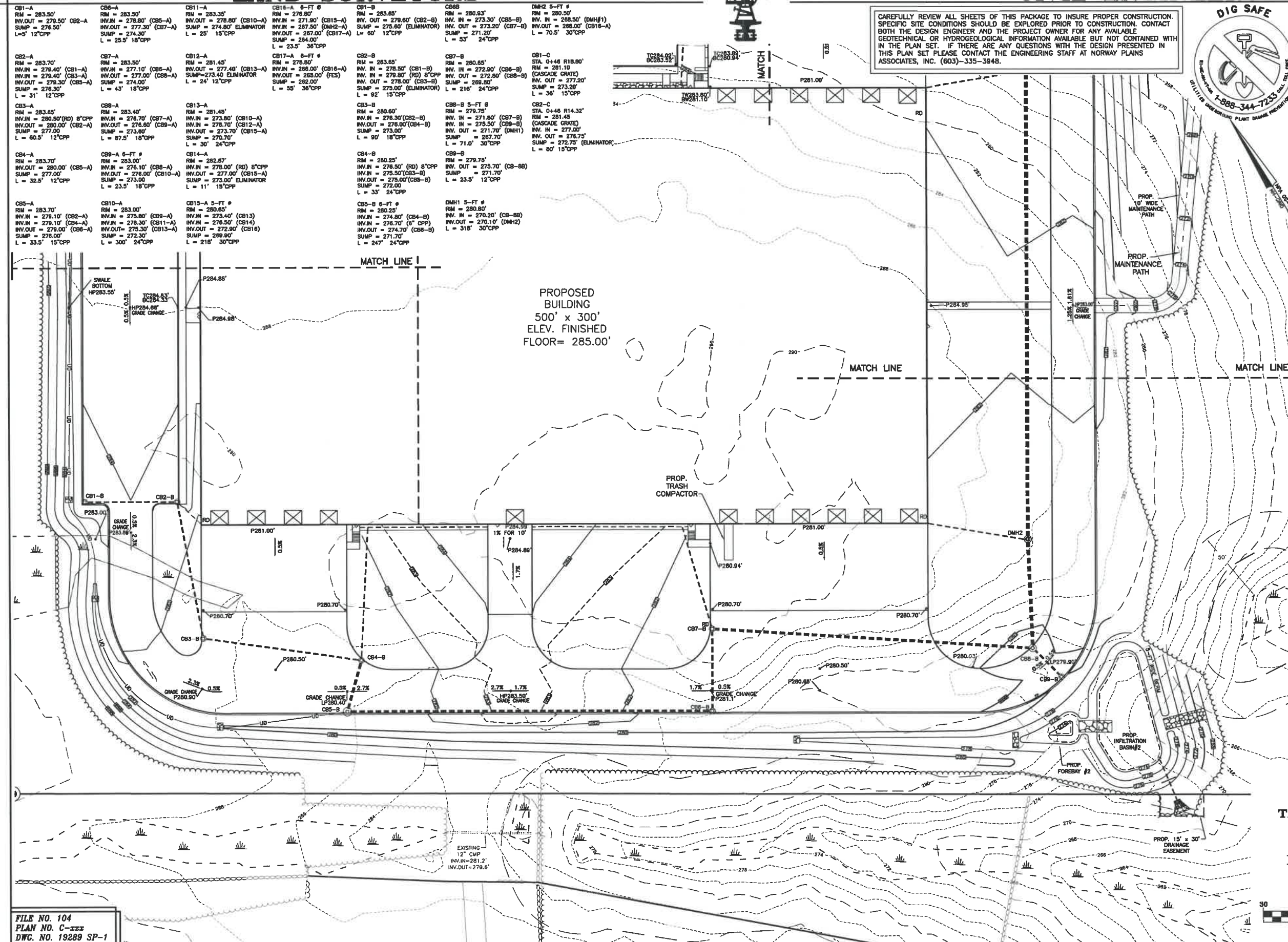
CIVIL ENGINEERS

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REVISIONS:
8/23/2020 - FROM TRC LETTER DATE 8/22/2020 DPW COMMENT: CB-1C & CB-2C GRATE TO BE CASCADE VANE TYPE.
08/04/2020 - REVERSE LOADING DOCKS AND DRAINAGE SYSTEM.

- LEGEND**
- PROPERTY LINE
 - - - JURISDICTIONAL WETLANDS
 - - - EXISTING TREE LINE
 - - - EXISTING DRAIN LINE
 - - - EXISTING CONTOUR LINE
 - - - EXISTING TEST PIT
 - - - EXISTING SPOT GRADE
 - - - PROPOSED SPOT GRADE
 - - - PROPOSED TREE LINE
 - - - PROPOSED DRAIN LINE
 - - - PROPOSED CONTOUR LINE
 - ⊙ PROPOSED CATCH BASIN
 - ⊙ PROPOSED DRAIN MANHOLE
 - ⊙ PROPOSED AREA DRAIN
 - ⊙ PROPOSED FLARED END SECTION (FES)
 - ⊙ CORRUGATED POLYETHYLENE PIPE
 - ⊙ CATCH BASIN
 - ⊙ AREA DRAIN
 - ⊙ TOP OF WALL
 - ⊙ TOP OF CURB
 - ⊙ BASE OF CURB
 - ⊙ SPOT GRADE CURVING
 - ⊙ PROPOSED OUTLET PROTECTION



FILE NO. 104
PLAN NO. C-333
DWG. NO. 19289 SP-1
F.B. NO.

GRADING & DRAINAGE PLAN
TAX MAP 255, LOT 21
INNOVATION DRIVE
ROCHESTER NH
PREPARED FOR:
PREP PARTNERS GROUP, LLC
MAY 2020
GRAPHIC SCALE
1 INCH = 30 FEET

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

NORWAY PLAINS ASSOCIATES, INC.

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

C-6

LAND SURVEYORS



CIVIL ENGINEERS

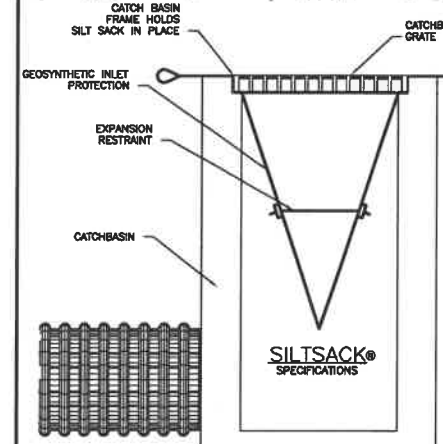
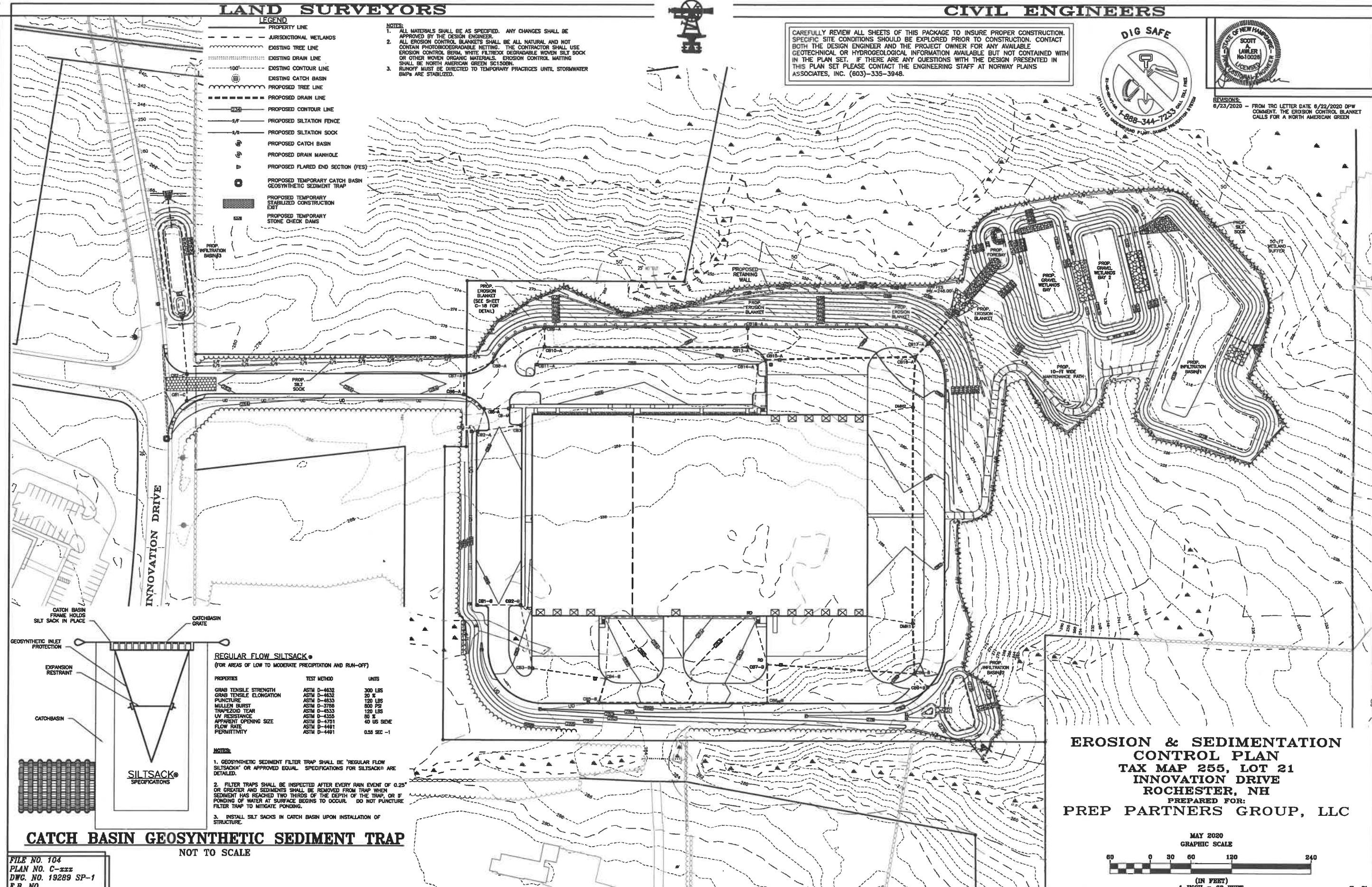
- LEGEND**
- PROPERTY LINE
 - JURISDICTIONAL WETLANDS
 - EXISTING TREE LINE
 - EXISTING DRAIN LINE
 - EXISTING CONTOUR LINE
 - EXISTING CATCH BASIN
 - PROPOSED TREE LINE
 - PROPOSED DRAIN LINE
 - PROPOSED CONTOUR LINE
 - PROPOSED SILTATION FENCE
 - PROPOSED SILTATION SOCK
 - PROPOSED CATCH BASIN
 - PROPOSED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

- NOTES:**
1. ALL MATERIALS SHALL BE AS SPECIFIED. ANY CHANGES SHALL BE APPROVED BY THE DESIGN ENGINEER.
 2. ALL EROSION CONTROL BLANKETS SHALL BE ALL NATURAL AND NOT CONTAIN PHOTOBIODEGRADABLE NETTING. THE CONTRACTOR SHALL USE EROSION CONTROL BERM, WHITE FLITREX DEGRADABLE WOVEN SILT SOCK OR OTHER WOVEN ORGANIC MATERIALS. EROSION CONTROL MATING SHALL BE NORTH AMERICAN GREEN SC1500N.
 3. RUNOFF MUST BE DIRECTED TO TEMPORARY PRACTICES UNTIL STORMWATER BMPs ARE STABILIZED.

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REVISIONS:
6/23/2020 - FROM TRC LETTER DATE 6/22/2020 DPW COMMENT. THE EROSION CONTROL BLANKET CALLS FOR A NORTH AMERICAN GREEN



REGULAR FLOW SILTSACK®
(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

| PROPERTIES | TEST METHOD | UNITS |
|--------------------------|-------------|-------------|
| GRAB TENSILE STRENGTH | ASTM D-4632 | 300 LBS |
| GRAB TENSILE ELONGATION | ASTM D-4632 | 20 % |
| PUNCTURE | ASTM D-4633 | 120 LBS |
| MULLEN BURST | ASTM D-3786 | 800 PSI |
| TRAPEZOID TEAR | ASTM D-4633 | 120 LBS |
| UV RESISTANCE | ASTM D-4355 | 50 % |
| APPROXIMATE OPENING SIZE | ASTM D-4701 | 40 US SEVE |
| FLOW RATE | ASTM D-4481 | |
| PERMITIVITY | ASTM D-4491 | 0.55 SEC -1 |

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

CATCH BASIN GEOSYNTHETIC SEDIMENT TRAP

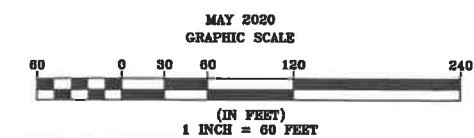
NOT TO SCALE

FILE NO. 104
PLAN NO. C-322
DWG. NO. 19289 SP-1
F.B. NO.

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

NORWAY PLAINS ASSOCIATES, INC.

**EROSION & SEDIMENTATION
CONTROL PLAN
TAX MAP 255, LOT 21
INNOVATION DRIVE
ROCHESTER, NH**
PREPARED FOR:
PREP PARTNERS GROUP, LLC



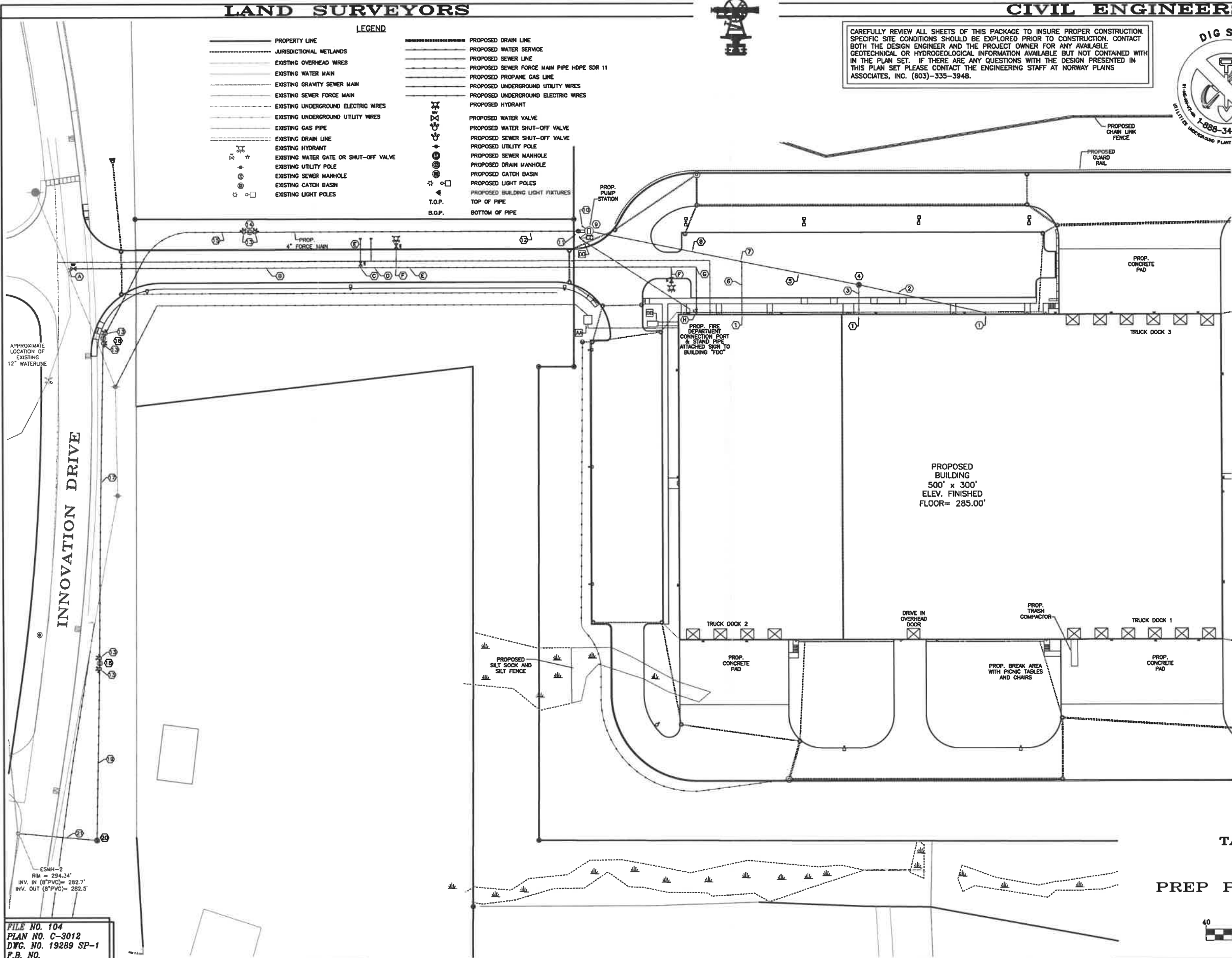
2 Continental Blvd., Rochester, N.H. 603-335-3948

| LEGEND | |
|--------|--|
| — | PROPERTY LINE |
| - - - | JURISDICTIONAL WETLANDS |
| — | EXISTING OVERHEAD WIRES |
| — | EXISTING WATER MAIN |
| — | EXISTING GRAVITY SEWER MAIN |
| — | EXISTING SEWER FORCE MAIN |
| — | EXISTING UNDERGROUND ELECTRIC WIRES |
| — | EXISTING UNDERGROUND UTILITY WIRES |
| — | EXISTING GAS PIPE |
| — | EXISTING DRAIN LINE |
| — | EXISTING HYDRANT |
| — | EXISTING WATER GATE OR SHUT-OFF VALVE |
| — | EXISTING UTILITY POLE |
| — | EXISTING SEWER MANHOLE |
| — | EXISTING CATCH BASIN |
| — | EXISTING LIGHT POLES |
| — | PROPOSED DRAIN LINE |
| — | PROPOSED WATER SERVICE |
| — | PROPOSED SEWER LINE |
| — | PROPOSED SEWER FORCE MAIN PIPE HDPE SDR 11 |
| — | PROPOSED PROPANE GAS LINE |
| — | PROPOSED UNDERGROUND UTILITY WIRES |
| — | PROPOSED UNDERGROUND ELECTRIC WIRES |
| — | PROPOSED HYDRANT |
| — | PROPOSED WATER VALVE |
| — | PROPOSED WATER SHUT-OFF VALVE |
| — | PROPOSED SEWER SHUT-OFF VALVE |
| — | PROPOSED UTILITY POLE |
| — | PROPOSED SEWER MANHOLE |
| — | PROPOSED DRAIN MANHOLE |
| — | PROPOSED CATCH BASIN |
| — | PROPOSED LIGHT POLES |
| — | PROPOSED BUILDING LIGHT FIXTURES |
| — | TOP OF PIPE |
| — | B.O.P. |

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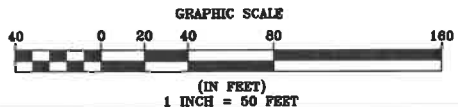
REVISIONS:
6/23/2020 - FROM TRC LETTER DATE 6/22/2020 DPW COMMENT, NOTE 4 ADDED
8/05/2020 - REVISE LOADING DOCK AND DOOR LOCATIONS. ADD ADDITIONAL SEWER SERVICES



- PROPOSED SEWER SYSTEM**
- 1. PROP. 6" SDR35 PVC CLEAN OUT INV. = 278.00'
 - 2. PROP. SDR35 PVC 6" SEWER PIPE L = 120' S=1.00%
 - 3. PROP. SDR35 PVC 6" SEWER PIPE L = 26' S=4.62%
 - 4. PROP. SMH #1 RM = 284.21' INV. IN = 277.80' INV. OUT = 277.70'
 - 5. PROP. SDR35 PVC 6" SEWER PIPE L = 109' S=1.28%
 - 6. PROP. SDR35 PVC 6" SEWER PIPE L = 46' S=2.73%
 - 7. PROP. SDR35 PVC 6" SERVICE WVE INV. = 277.68'
 - 8. PROP. SDR35 PVC 6" SEWER PIPE L = 140' S = 1.28%
 - 9. PROP. SEWER PUMP STATION COVER = 283.25' INV. IN = 274.50' INV. OUT = 272.50'
 - 10. PROP. 4" SDR35 PUMP STATION VENT
 - 11. PROP. VALVE FIT RM = 283.25' IN & OUT = 272.50' DRAIN BACK = 271.50'
 - 12. PROP. 3" SDR 11 HDPE FORCE MAIN L = 300'
 - 13. 4" PLUG VALVE MECHANICAL JOINT OPENS LEFT RESILIENT SEAT W/ VALVE BOX
 - 14. PROP. SEWER CLEAN OUT MANHOLE #2 RM = 278.70' INV. = 274.00'
 - 15. PROP. 3" SDR 11 HDPE FORCE MAIN L = 189.0'
 - 16. PROP. SEWER CLEAN OUT MANHOLE #3 RM = 290.70' INV. = 285.50'
 - 17. PROP. 3" SDR 11 HDPE FORCE MAIN L = 300.0'
 - 18. PROP. SEWER CLEAN OUT MANHOLE #4 RM = 280.70' INV. = 285.50'
 - 19. PROP. 3" SDR 11 HDPE FORCE MAIN L = 163.5'
 - 20. PROP. SEWER MANHOLE MANHOLE #5 RM = 296.50' INV. IN = 291.50' INV. OUT = 283.00' (TO EXISTING SMH-2)
 - 21. PROP. 6" SDR35 L = 68' S=0.59%
- PROPOSED ELECTRICAL SYSTEM**
- AA. PROP. CONCRETE TRANSFORMER PAD (SIZE AND EXACT LOCATION TO BE DETERMINED BY EVERSOURCE)
 - BB. NATURAL GAS 100KW BACK UP GENERATOR ON A CONCRETE PAD (SEE ELECTRICAL SITE PLANS FOR DIMENSIONS AND SPECIFICATIONS)
 - CC. PUMP CONTROL PANEL AND PEDISTAL (MIN. 5' FROM PUMP STATION)
 - DD. ELECTRICAL METER & PEDISTAL (SEE ELECTRICAL SITE PLANS FOR DIMENSIONS AND SPECIFICATIONS)
- PROPOSED WATER SYSTEM**
- A. PROP. 12" x 8" TAPPING SLEEVE WITH GATE VALVE
 - B. PROP. 8" D.I. CLASS 52 WATER MAIN
 - C. PROP. 8" x 6" TEE WITH THRUST BLOCK OR MECHANICAL JOINT RESTRAINT
 - D. PROP. 8" x 6" REDUCER WITH THRUST BLOCK OR MECHANICAL JOINT RESTRAINT
 - E. PROP. 8" D.I. CLASS 52 WATER MAIN
 - F. PROP. 8" x 6" TEE WITH THRUST BLOCK OR MECHANICAL JOINT RESTRAINT
 - G. PROP. 8" 90° BEND WITH THRUST BLOCK OR MECHANICAL JOINT RESTRAINT
 - H. PROP. 4" GATE VALVE WITH THRUST BLOCK OR MECHANICAL JOINT RESTRAINT

- NOTES:**
- CONSTRUCTION WILL CONFORM TO THE FOLLOWING UTILITIES STANDARDS AND SPECIFICATION:
A) SANITARY SEWER DISPOSAL - CITY OF ROCHESTER
B) ELECTRIC DISTRIBUTION - EVERSOURCE
C) TELEPHONE - FAIRPOINT
D) CABLE - CONSOLIDATED COMMUNICATIONS
E) WATER - CITY OF ROCHESTER
 - ALL PROPOSED ON-SITE UTILITIES SHALL BE INSTALLED UNDERGROUND.
 - APPLICANT SHALL COORDINATE WITH DPW DURING THE BUILDING PERMIT PROCESS WITH RESPECT TO WATER METER AND BACKFLOW PROTECTION DEVICES REQUIREMENTS AND SHALL PROVIDE NECESSARY PLANS, PIPING SCHEMATICS AND METER/ BACK-FLOW DEVICE(S) CUT-SHEETS TO THE DPW FOR REVIEW. ALL BACKFLOW PREVENTION DEVICES WILL REQUIRE A PASSING TEST BY A CERTIFIED BACKFLOW DEVICE TESTING FIRM PRIOR TO APPROVAL OF A CERTIFICATE OF OCCUPANCY BY THE DPW. THE BACKFLOW DEVICE TEST REPORT(S) SHALL BE SUBMITTED TO DPW FOR ITS RECORDS.
 - THE PROJECT WILL ALSO REQUIRE FROM THE CITY OF ROCHESTER THE FOLLOWING PERMITS FROM THE DEPARTMENT OF PUBLIC WORKS:
A) STORMWATER AND EROSION CONTROL PERMIT;
B) EXCAVATION PERMIT FOR WORK IN THE CITY RIGHT-OF-WAY;
C) WATER CONNECTION PERMIT;
D) SEWER CONNECTION PERMIT;
E) DRIVEWAY PERMIT.

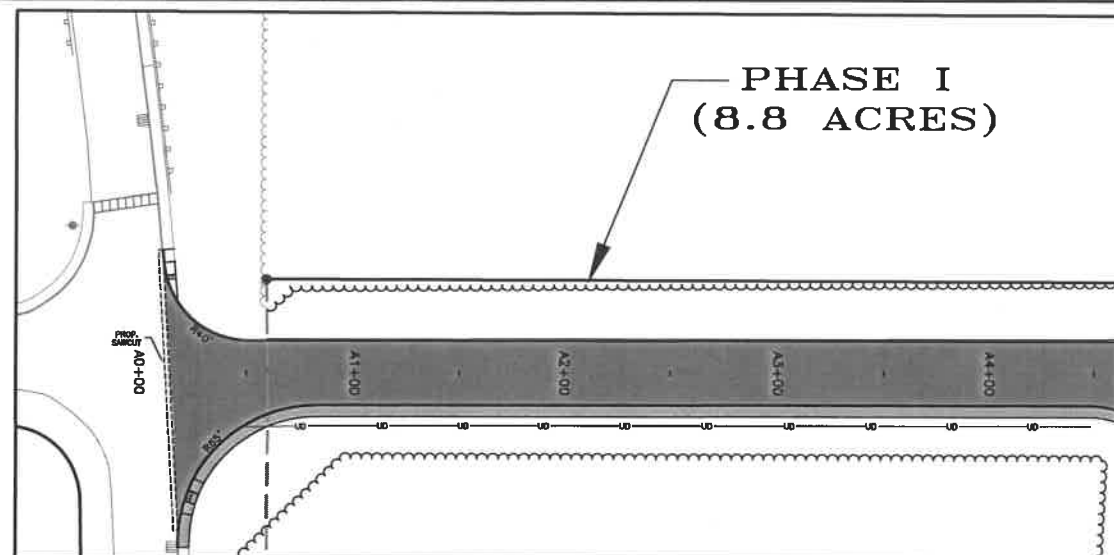
UTILITY PLAN
TAX MAP 255, LOT 21
INNOVATION DRIVE
ROCHESTER, NH
PREPARED FOR:
PREP PARTNERS GROUP, LLC.
MAY 2020



FILE NO. 104
PLAN NO. C-3012
DWG. NO. 19289 SP-1
F.B. NO.

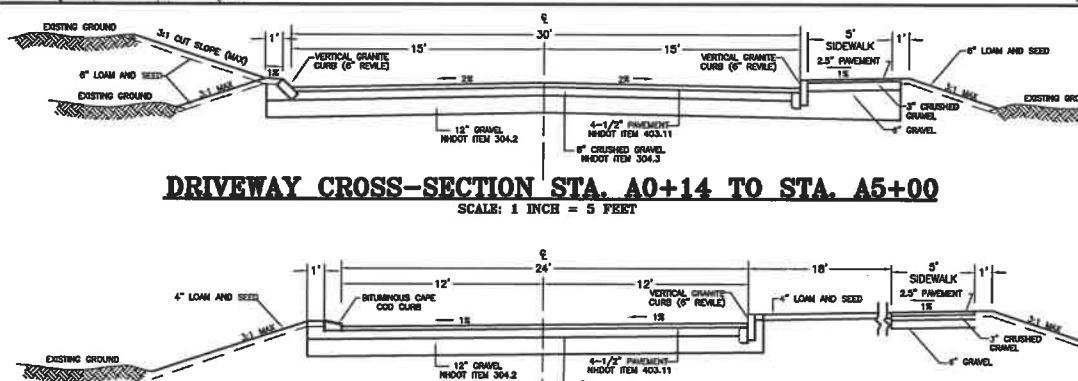


PHASE I
(8.8 ACRES)



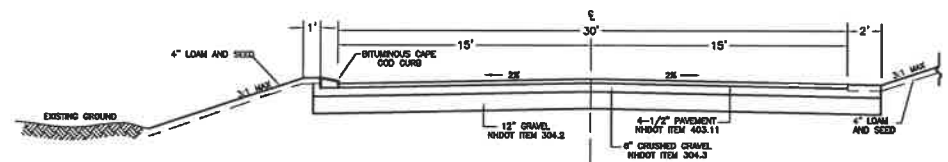
DRIVEWAY CROSS-SECTION STA. A0+14 TO STA. A5+00

SCALE: 1 INCH = 5 FEET



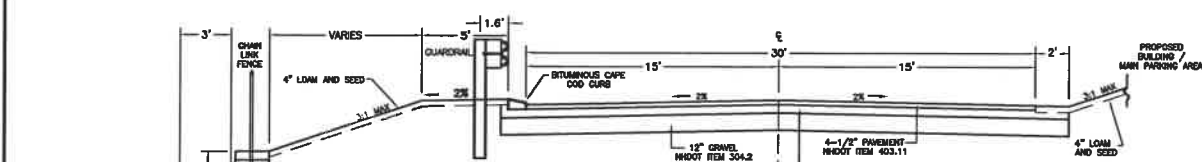
ENTRANCE IN TO MAIN PARKING AREA STA. A5+27 TO A5+65

SCALE: 1 INCH = 5 FEET



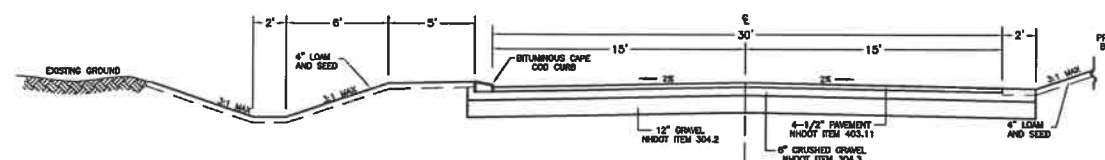
MAIN TRAVEL WAY STA. 0+00 TO STA. 1+28

SCALE: 1 INCH = 5 FEET



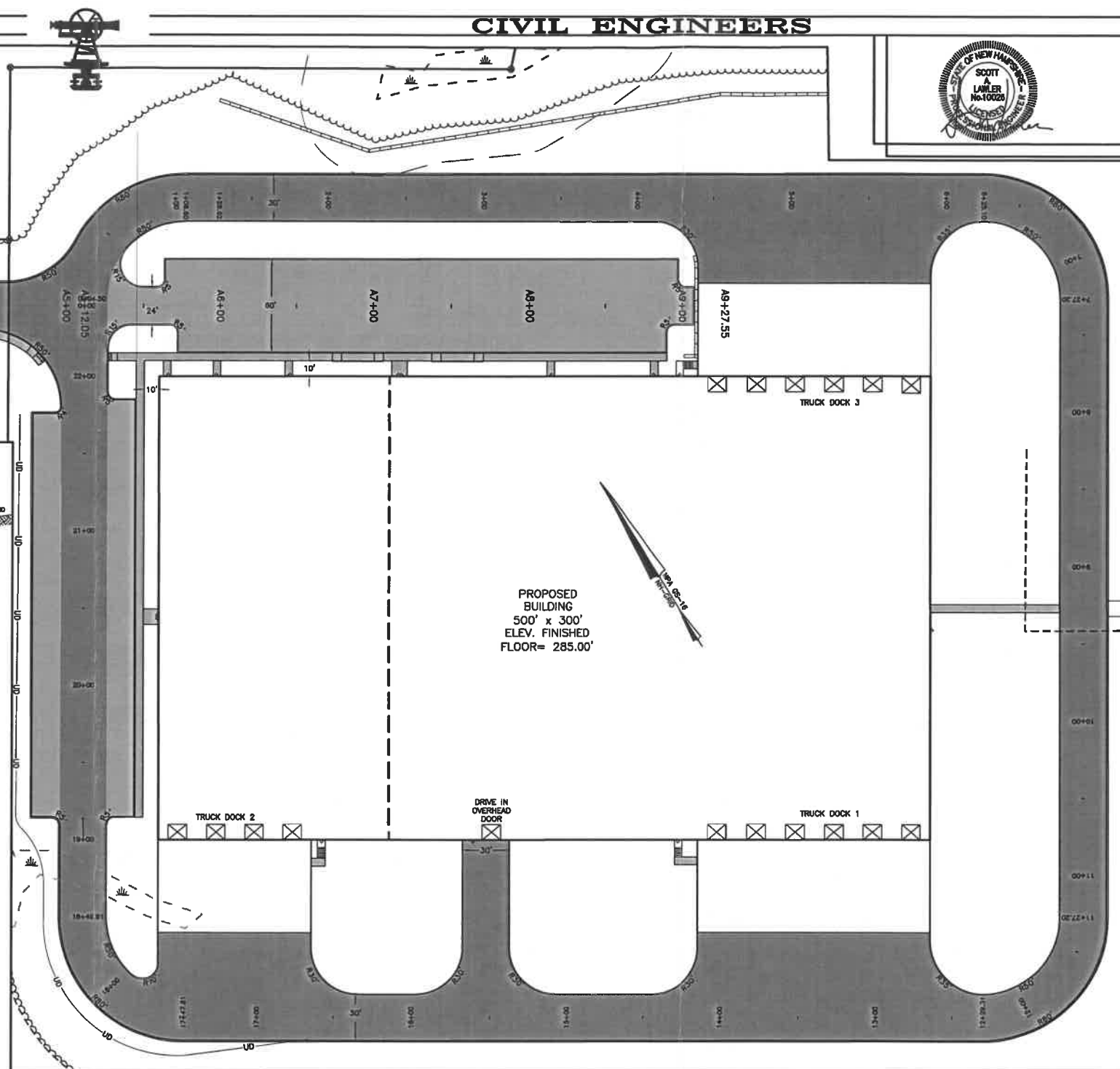
MAIN TRAVEL WAY STA. 1+28 TO 7+50

SCALE: 1 INCH = 5 FEET

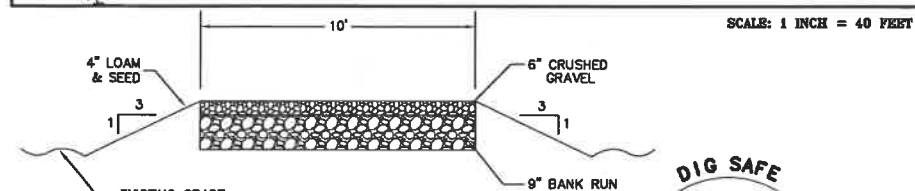


MAIN TRAVEL WAY STA. 7+50 TO STA. 19+14

SCALE: 1 INCH = 5 FEET



PROPOSED BUILDING
500' x 300'
ELEV. FINISHED FLOOR= 285.00'



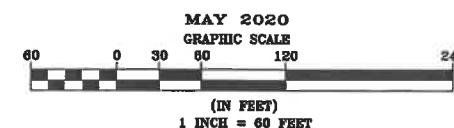
MAINTENANCE PATH CROSS-SECTION

NOT TO SCALE

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DRIVEWAY DETAIL SECTION
AND TRAVEL WAY SECTION
TAX MAP 255, LOT 21
INNOVATION DRIVE
ROCHESTER NH
PREPARED FOR:
PREP PARTNERS GROUP, LLC



FILE NO. 104
PLAN NO. C-3012
DWG. NO. 19289 SP-1
P.B. NO.

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

NORWAY PLAINS ASSOCIATES, INC.

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

LAND SURVEYORS

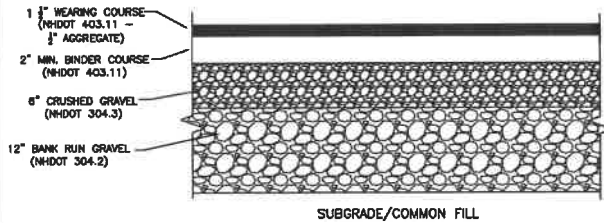


CIVIL ENGINEERS

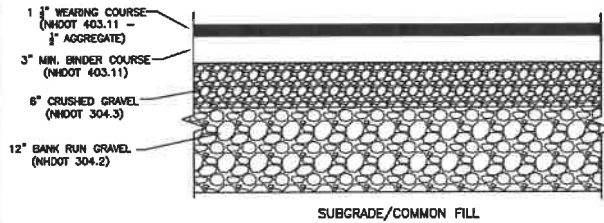
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REVISIONS:
07/15/2020 - REVISE TYPICAL PAVEMENT CROSS SECTIONS.

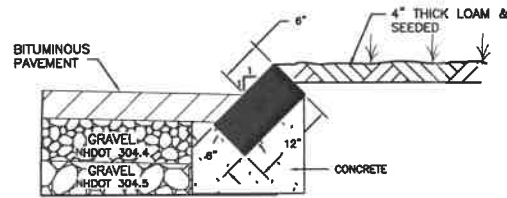


STANDARD PAVEMENT CROSS-SECTIONS
NOT TO SCALE

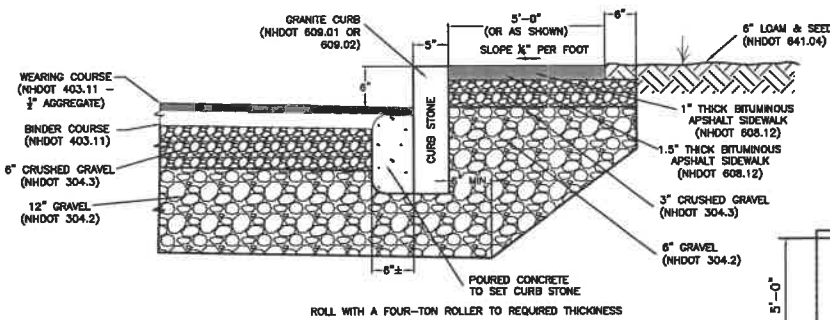


HEAVY DUTY PAVEMENT CROSS-SECTIONS
NOT TO SCALE

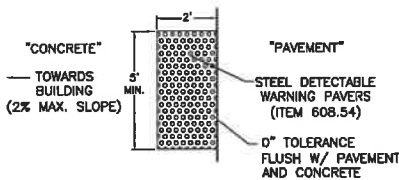
- PAVEMENT NOTES:**
1. PLACE COMMON FILL IN 12 INCH LIFTS. COMPACT COMMON FILL TO 95% MAXIMUM PROCTOR DENSITY.
 2. PLACE GRAVEL IN MAXIMUM 8 INCH LIFTS. COMPACT TO 95% MAXIMUM PROCTOR DENSITY.
 3. PLACE CRUSHED GRAVEL IN MAXIMUM 8 INCH LIFTS. COMPACT TO 95% MAXIMUM PROCTOR DENSITY.
 4. PAVEMENT MUST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



GRANITE SLOPE CURB DETAIL
NOT TO SCALE

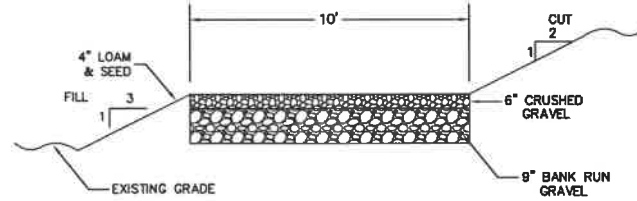


PAVED SIDEWALK WITH GRANITE CURB DETAIL
NOT TO SCALE

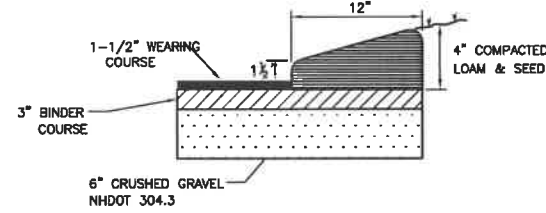


DETECTABLE WARNING PAVER DETAIL
NOT TO SCALE

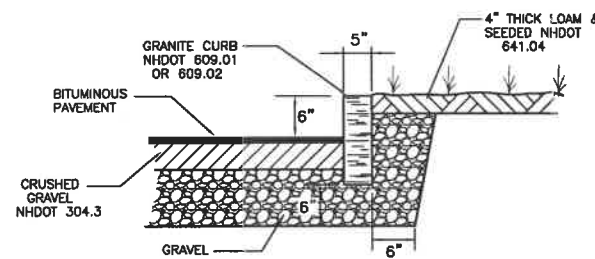
- DETECTABLE WARNING PAVER NOTES:**
1. THE MAXIMUM CROSS OF CONCRETE WALKWAY SLOPE IS 2%. THE SLOPE OF THE LANDING SHALL NOT EXCEED 2% IN ANY DIRECTION.
 2. TRANSITIONS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.
 3. DETECTABLE WARNING PAVERS (ITEM 608.54) SHALL BE USED ON CONCRETE RAMPS AS SHOWN. EACH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



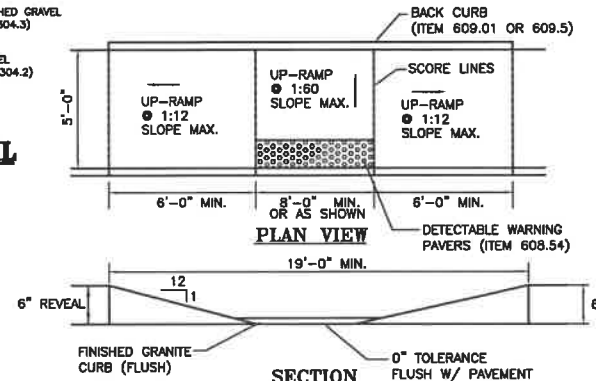
MAINTENANCE PATH CROSS-SECTION
NOT TO SCALE



BITUMINOUS CAPE COD BERM DETAIL
NOT TO SCALE

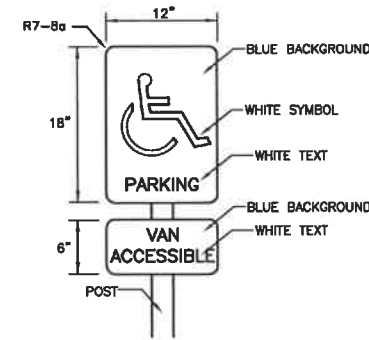


GRANITE VERTICAL CURB DETAIL
NOT TO SCALE

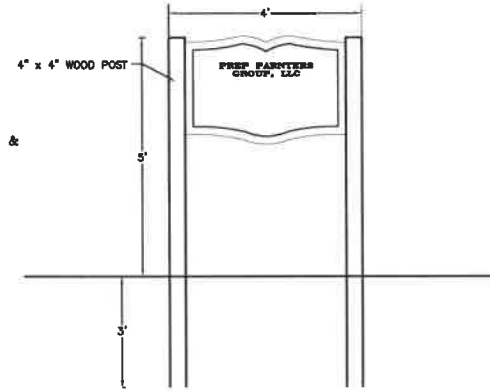


HANDICAP RAMP DETAIL "A"
NOT TO SCALE

- GENERAL SIDEWALK NOTES:**
1. THE MAXIMUM RUNNING SLOPE OF ANY SIDEWALK CURB IS 12:1. THE MAXIMUM CROSS SLOPE IS 2%. THE SLOPE OF THE LANDING SHALL NOT EXCEED 2% IN ANY DIRECTION.
 2. TRANSITIONS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.
 3. DETECTABLE WARNING PAVERS (ITEM 608.54) SHALL BE USED ON CONCRETE RAMPS AS SHOWN. EACH TACTICAL WARNING STRIP PANEL SHALL A TRUNCATED DOMED SURFACE AT LEAST 2'-0" IN WIDTH, MEASURED FROM THE BACK OF THE CURB TIP DOWN, AND 5'-0" IN LENGTH MEASURED PERPENDICULAR TO THE DIRECTION OF PEDESTRIAN TRAVEL.



SIGN DETAIL
NOT TO SCALE

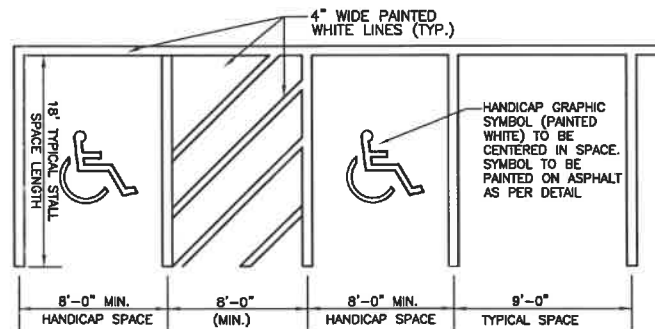
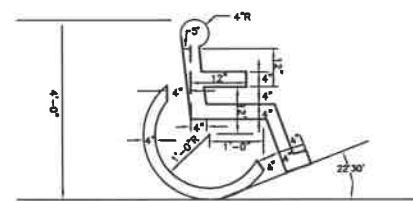


FACILITY SIGN DETAIL
NOT TO SCALE

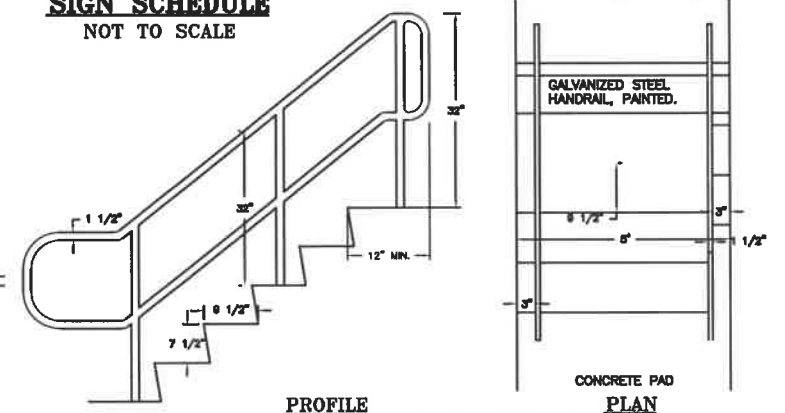
| ITEM NO. | SIGN SIZE | | TEXT | NO. SIGNS REQ'D |
|---|-----------|-------|----------------------|-----------------|
| | HEIGHT | WIDTH | | |
| R1-1 | 30" | 30" | STOP | 3 |
| R7-8 R7-8a | 18" | 12" | NO PARKING | 6 |
| R7-8P | 6" | 18" | VAN ACCESSIBLE | 2 |
| R7-1 | 18" | 12" | NO PARKING | 2 |
| NHE-9455 | 7" | 10" | FDC | 1 |
| W14-2 | 30" | 30" | NO OUTLET | 1 |
| W2-1 | 30" | 30" | + | 1 |
| W11A-2 | 30" | 30" | WALK | 2 |
| ROCHESTER STREET SIGN WITH REMOVABLE "PRIVATE" TOPPER | 4" | 8" | PRIVATE | 1 |
| | 9" | 24" | xxx DRIVE | 1 |
| CUSTOM | 18" | 12" | BACK TO PARKING ONLY | 15 |

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

SIGN SCHEDULE
NOT TO SCALE



STALL STRIPING DETAIL
NOT TO SCALE



PROFILE RAIL & STAIR DETAIL
NOT TO SCALE

PARKING AND SIDEWALK DETAILS
TAX MAP 255, LOT 21
INNOVATION DRIVE
ROCHESTER, NH
PREPARED FOR:
PREP PARTNERS GROUP, LLC.
MAY 2020

FILE NO. 104
PLAN NO. C-3012
DWG. NO. 19289
F.B. NO.

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

NORWAY PLAINS ASSOCIATES, INC.

ASSOCIATES, INC.

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

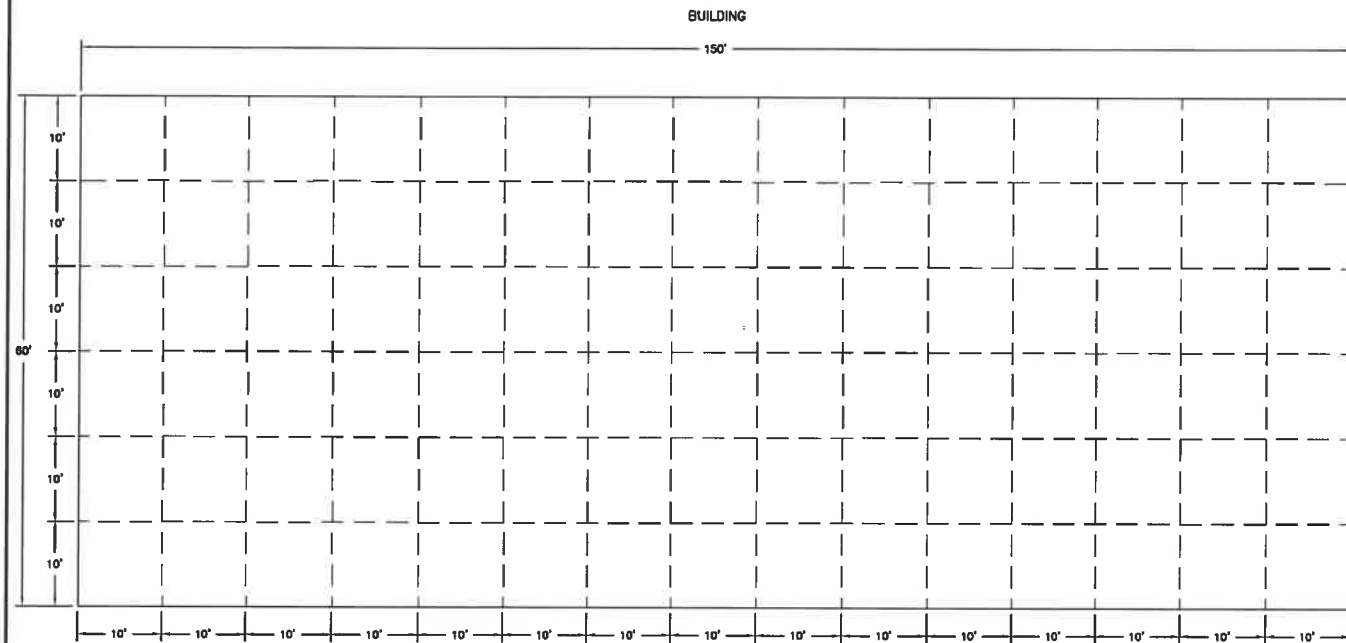
C-10

LAND SURVEYORS

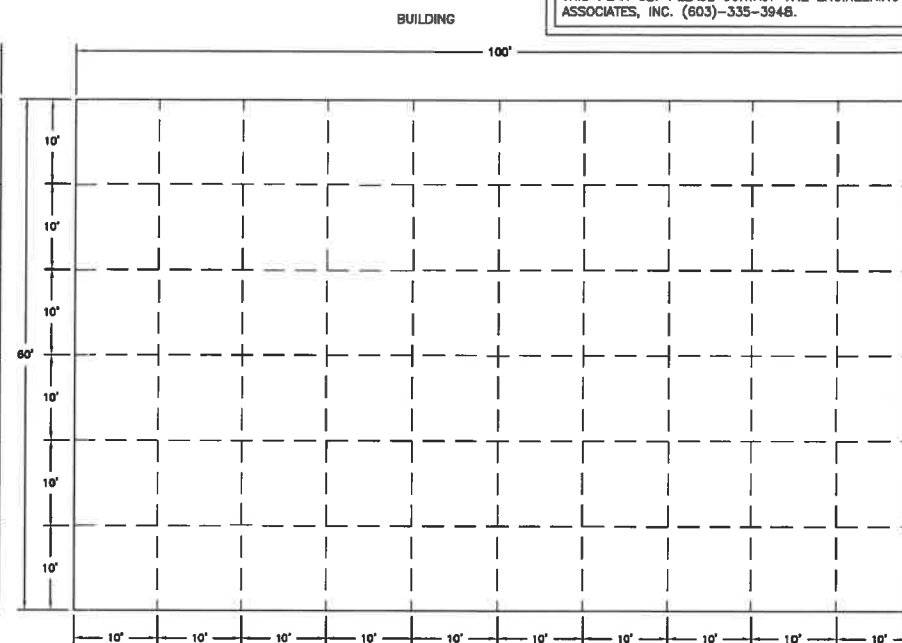


CIVIL ENGINEERS

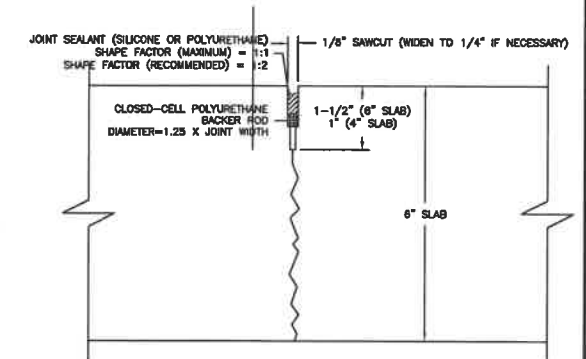
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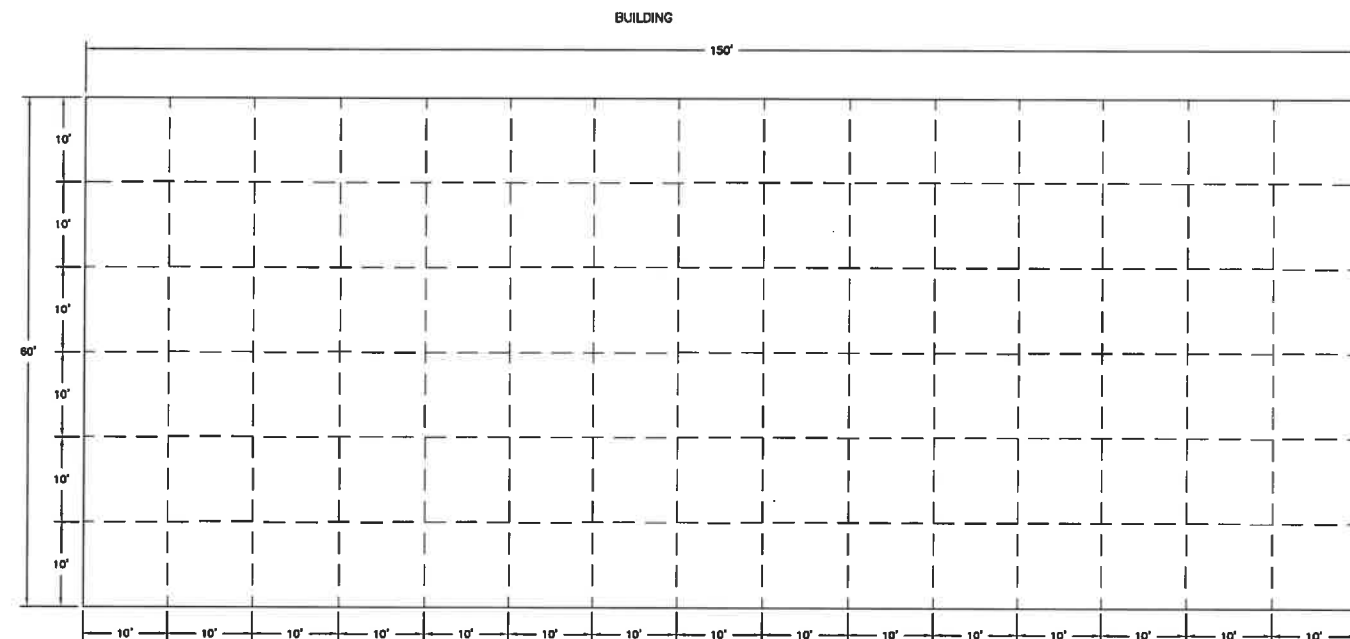
**60'X150' PAD
LOADING DOCK 1**
SCALE: 1"=10'



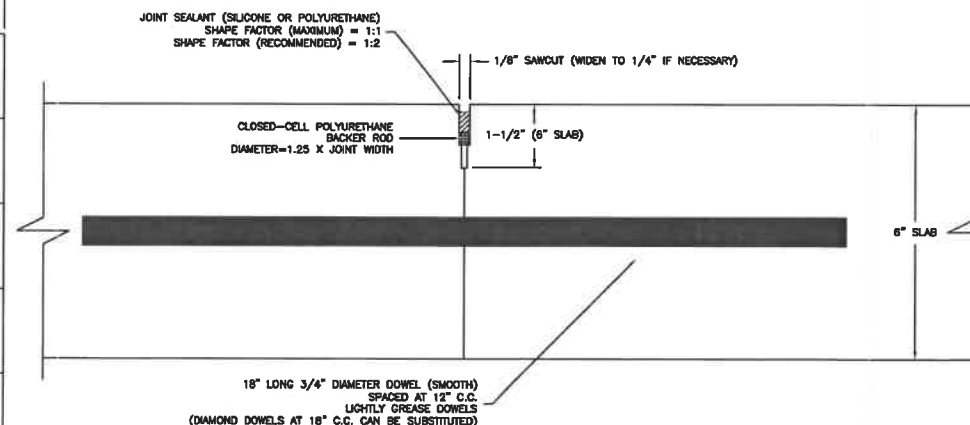
**60'X100' PAD
LOADING DOCK 2**
SCALE: 1"=10'



**(SAWCUT)
CONTRACTION JOINT DETAIL**
SCALE: 1"=2"



**60'X150' PAD
LOADING DOCK 3**
SCALE: 1"=10'



CONSTRUCTION JOINT DETAIL
SCALE: 1"=2"

JOINT NOTES:

1. JOINT SEALANT: JOINT SEALANT USED TO SEAL THE CONTRACTION JOINTS SHALL BE INTENDED FOR USE AS A CONCRETE PAVEMENT SEALER AS DESCRIBED BY THE MANUFACTURER'S SPECIFICATIONS. SEALANT SHALL BE INSTALLED WITH POLYURETHANE BACKER RODS. EITHER SILICONE OR POLYURETHANE JOINT SEALER IS ACCEPTABLE. APPROVED SEALANTS ARE AS FOLLOWS:

SILICONE:
SILKASIL 728 HS
SILKASIL 728 SL
SONOLASTIC SL 1
SONOLASTIC SL 2
POLYURETHANE:
SIFALFLEX 15 LN SL GRADE
SIFALFLEX 10 C SL
SIFALFLEX 2 C HS TO
SONOLASTIC NP 2

THE USE OF PREFORMED SEALS IS ALLOWED WITH APPROVAL OF MATERIAL BY THE DESIGN ENGINEER.

2. BACKER RODS: BACKER RODS SHALL BE CLOSED-CELL POLYURETHANE WITH A MINIMUM DIAMETER OF 1.25 X THE CONTRACTION JOINT WIDTH.
3. CONTRACTION JOINTS: CONTRACTION JOINTS SHALL BE SAWCUT INTO THE SLAB TO A DEPTH OF 1-1/2" MINIMUM (6" SLAB) OR 1" MINIMUM (4" SLAB), WITH A WIDTH OF 1/8". SAWCUTS TO BE WIDENED TO 1/4" IF NECESSARY TO ACCOMMODATE SEALANT AND BACKER ROD.
4. CONSTRUCTION JOINT: CONSTRUCTION JOINT TO BE CONSTRUCTED AS SHOWN ON THE TRUCK STOPPING PAD AT GUARD HOUSE DETAIL AND CONSTRUCTION JOINT DETAIL ABOVE.
5. DOWELS: DOWELS SHALL BE SMOOTH, CORROSION RESISTANT STEEL (EITHER EPOXY COATED OR STAINLESS STEEL). DOWELS SHALL BE LIGHTLY GREASED OVER THEIR ENTIRE LENGTH.

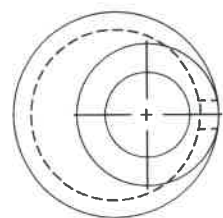
CONCRETE TRUCK PORT DETAILS
TAX MAP 255, LOT 21
INNOVATION DRIVE
ROCHESTER, NH
PREPARED FOR:
PREP PARTNERS GROUP, LLC
MAY 2020

FILE NO. 104
PLAN NO. C-3012
DWG. NO. 19289 SP-1
F.B. NO.

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

NORWAY PLAINS ASSOCIATES, INC.

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



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

Technical drawing of a 4-foot diameter manhole assembly. The drawing shows a cross-section of the structure with the following dimensions and components:

- Top Section:** A 2'-0" diameter opening with 8" wide side walls. An "ECCENTRIC CONE" is shown with dimensions 2'-2" and 4'-0".
- Barrel:** The main vertical section with a 4'-0" I.D. (Internal Diameter). The top of the barrel is 1'-0" high, and the bottom is 2'-0" high. The total height of the barrel section is 3'-0".
- Base:** A 4'-0" diameter base section with a 5" wide bottom flange.
- Outlet:** An "OUTLET INV." (Inlet Valve) is shown with a 3" SURF (Surface) and a 4' (4' with OIL & DEBRIS TRAP) section.
- Flow:** A "FLOW" arrow indicates the direction of flow into the manhole.
- Adjustment:** A note "ADJUST FRAME TO GRADE W/ BRICKS AND MORTAR" points to the top of the barrel.

Technical drawing of a square base plate. The drawing shows a square plate with a central square hole. The outer square has a side length of 12 inches, indicated by a dimension line with arrows. The inner square hole has a side length of 2 inches, also indicated by a dimension line with arrows. The plate is reinforced with 1/2 inch steel reinforcement bars, shown as dashed lines forming a grid. The reinforcement bars are spaced at 4 inches, indicated by dimension lines with arrows. The drawing is labeled "DIA. VARIES TO MATCH C.B. DIA." on the left and "1/2\"

Diagram illustrating a square opening in a precast slab. The opening is labeled "2' SQUARE OPENING". The distance from the center of the opening to the edge of the slab is labeled "4', 5', OR 6' I.D.". The height of the slab is labeled "12\".

NOTE: "THIS SIDE UP" SHALL BE INDENTED ON TOP SIDE OF PRECAST SLAB.

BASIN BARREL SECTION

NOTE:

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

[illegible]

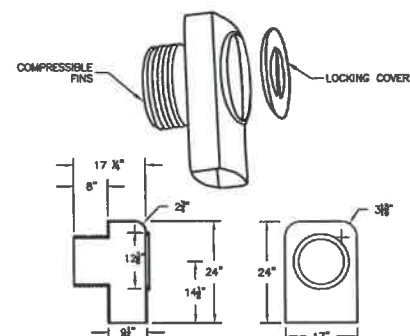

 Undrilled
 ✓ Designates Machined Surface
 Estimated Weight: 58.5 lbs.

5520M6 5521Z Assembly
CASCADE GRATE
 NOT TO SCALE

CIVIL ENGINEERS



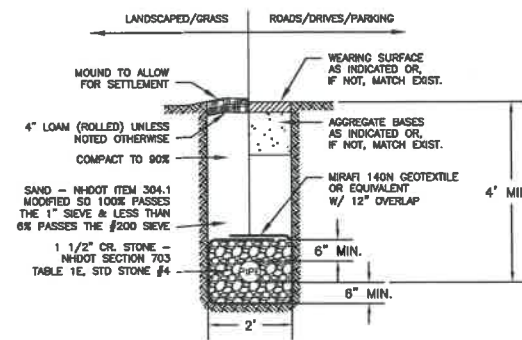
NOTES:
RUNOFF MUST BE DIRECTED TO TEMPORARY PRACTICES UNTIL STORMWATER BMPs ARE STABILIZED.



ELIMINATOR CATCH BASIN
OIL AND DEBRIS TRAP DETAIL
NOT TO SCALE

NOTES:


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



NOTES:

1. PIPE SHALL BE HDPE CORRUGATED TUBING (SEE PLAN FOR SIZE) COMPLYING WITH AASHTO M252 W/ CLASS 2 PERFORATIONS (NHDOT SECTION 605.2.4.1).
2. UNLESS NOTED OTHERWISE, ALL SOIL AND AGGREGATE MATERIALS (EXCEPT LOAM) TO BE COMPACTED TO 95% BASED ON ITS OPTIMUM DENSITY PER AASHTO T-99.

000000 00 00



A cross-sectional diagram of a toe trough. It shows a vertical wall on the left labeled "COLLAR" and a sloped surface on the right labeled "TOE TROUGH". The horizontal distance from the collar to the toe trough is labeled "C". The vertical height of the collar is labeled "H".

FLAIRED END SECTION DETAIL
NOT TO SCALE

| DIMENSIONS (INCHES) | | | | |
|---------------------|------|------|------|---|
| PIPE DIAMETERS | A | B | C | D |
| 10" / 12" | 42 | 14.5 | 33 | 6 |
| 15" | 41 | 19 | 34 | 6 |
| 18" | 46 | 22 | 43 | 6 |
| 24" | 59.5 | 28 | 48 | 6 |
| 30" | 88 | 36 | 63.5 | 6 |
| 36" | 88 | 43 | 68.5 | 6 |

INSTALLATION NOTES:

1. ANTI-SEEP COLLARS SHALL BE MADE PLASTIC IF BEING USED WITH PLASTIC PIPE. ANTI-SEEP COLLARS SHALL BE GALVANIZED SHEET METAL IF BEING USED WITH CORRUGATED METAL PIPE AND SHALL BE POURED CONCRETE IF BEING USED WITH REINFORCED CONCRETE PIPE.
2. ANTI-SEEP COLLAR SHALL BE WATERPROOF AND HAVE A WATERPROOF CONNECTION TO THE OUTLET PIPE.
3. A NUMBER OF ANTI-SEEP COLLARS SHALL BE PLACED ALONG THE PIPE IN A SPACING THAT INCREASES THE PIPE LENGTH BY 15%.

SOURCES FOR PLASTIC ANTI-SEEP COLLARS FOR USE WITH PLASTIC PIPE:
1. THE FOLLOWING ARE A FEW MANUFACTURER'S OF PLASTIC ANTI-SEEP COLLARS. COLLARS FROM THESE MANUFACTURER'S MAY BE USED WITH BOTH SMOOTH WALLED AND CORRUGATED OUTSIDE WALLED PIPE.

McRIP MANUFACTURING
16 MESERVE ROAD
DURHAM, NH 03824
PHONE: (603) 868-5176
FAX: (603) 868-2074
E-MAIL: info@mcricorp.com

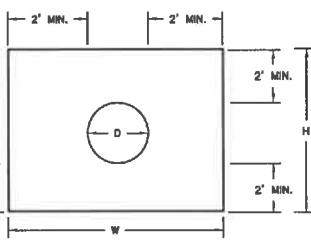
SCHIEB DRAINAGE PRODUCTS
203 SOUTH MONROE STREET
OREGON, MO 64473
PHONE: (660)-446-2343

2. IT IS ALSO SUGGESTED THAT LOCAL SUPPLIERS BE CONTACTED TO ENQUIRE ABOUT SUITABLE ANTI-SLEEP COLLAR PRODUCTS. IF A POSSIBLE ALTERNATIVE IS FOUND CONTACT THE DESIGN ENGINEER TO ENSURE ITS APPROPRIATENESS AND TO GET APPROVAL FOR ITS USE.

COLLAR DIMENSION TABLE

| D | W | H |
|----|--------|------|
| 12 | 10' | 6' |
| 18 | 10.25' | 6' |
| 24 | 12' | 7.5' |
| 30 | 12' | 7.5' |

ANTI-SEEP COLLAR DETAIL
NOT TO SCALE



NOT TO SCALE

CROSS COUNTRY UNDER PAVEMENT

The diagram illustrates a cross-section of a trench cut through pavement and soil. The layers from top to bottom are:

- PAVEMENT**: The top layer, shown with a brick pattern.
- 4" COMPACTED LOAM & SEED**: A layer immediately below the pavement.
- ROAD BASE COURSE**: A layer below the compacted loam.
- CLEAN GRANULAR FILL OR SUITABLE FILL**: A layer below the road base course.
- SAND BLANKET**: A layer below the granular fill.
- DRAIN LINE**: A pipe with diameter D located within the sand blanket.
- SPRING LINE**: The point where the drain line enters the trench.
- CRUSHED STONE BEDDING**: A layer below the sand blanket, supporting the pipe.
- LEDGE**: The bottom of the trench cut into the soil.
- UNDISTURBED SOIL**: The natural ground on either side of the trench.

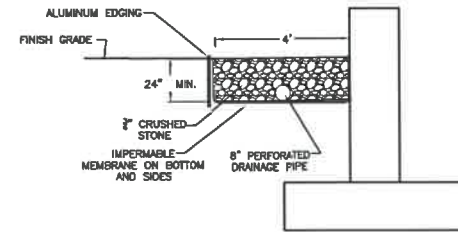
Dimensions and Slopes:

- 2' MIN.**: Vertical dimension from the top of the pavement to the top of the sand blanket.
- 3' MIN.**: Vertical dimension from the top of the sand blanket to the top of the crushed stone bedding.
- 1'**: Vertical dimension from the top of the crushed stone bedding to the top of the sand blanket.
- 6"**: Vertical dimension from the top of the sand blanket to the top of the crushed stone bedding.
- 1'**: Vertical dimension from the top of the crushed stone bedding to the top of the sand blanket.
- 3' MIN. OR D+2 (WHICHEVER IS GREATER)**: Horizontal dimension from the edge of the pavement to the edge of the trench.
- CUT SLOPE SEE NOTE #1**: The slope of the trench walls.
- D/2**: Horizontal dimension from the centerline of the pipe to the edge of the trench.
- 0.5:1**: Slope ratio of the trench walls.

NOTES:

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

**DRAINAGE PIPE
TRENCH INSTALLATION DETAIL**
NOT TO SCALE



DRIP EDGE DETAIL
NOT TO SCALE

DRAINAGE DETAILS
TAX MAP 255, LOT 21
INNOVATION DRIVE
ROCHESTER, NH

PREP PARTNERS GROUP, LLC
MAY 2020

C-12

FILE NO. 104
PLAN NO. C-3012
DWG. NO. 19289 SP-1
F.B. NO.

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

NORWAY PLAINS ASSOCIATES, INC.

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

LAND SURVEYORS

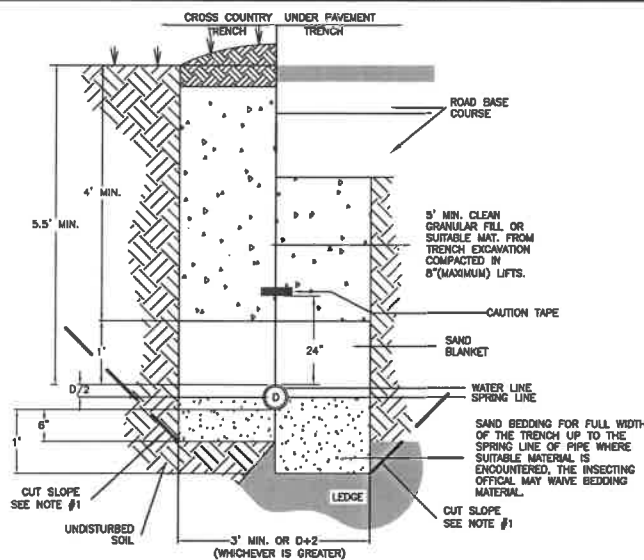


CIVIL ENGINEERS

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



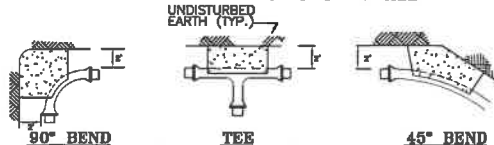
REVISIONS:
8/23/2020 - FROM TRC LETTER DATE 8/22/2020 DPW COMMENT: FIRE HYDRANT TO BE NON-DRAINING.



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

WATER PIPE TRENCH INSTALLATION DETAIL

NOT TO SCALE



| PIPE SIZE | 90° BEND | TEE | PLUG | 45° BEND | 2 1/2" x 2 1/2" W/ 2" TIE RODS |
|-----------|----------|-----|------|----------|--------------------------------|
| 6" | 5 | 4 | 3 | 2 | 2 |
| 8" | 10 | 8 | 6 | 6 | 3 |
| 12" | 24 | 18 | 8 | 12 | 8 |

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

WATER MAIN THRUST BLOCK DETAILS

NOT TO SCALE

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

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

MECHANICAL RETRAINED LENGTH SCHEDULE

NOT TO SCALE

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

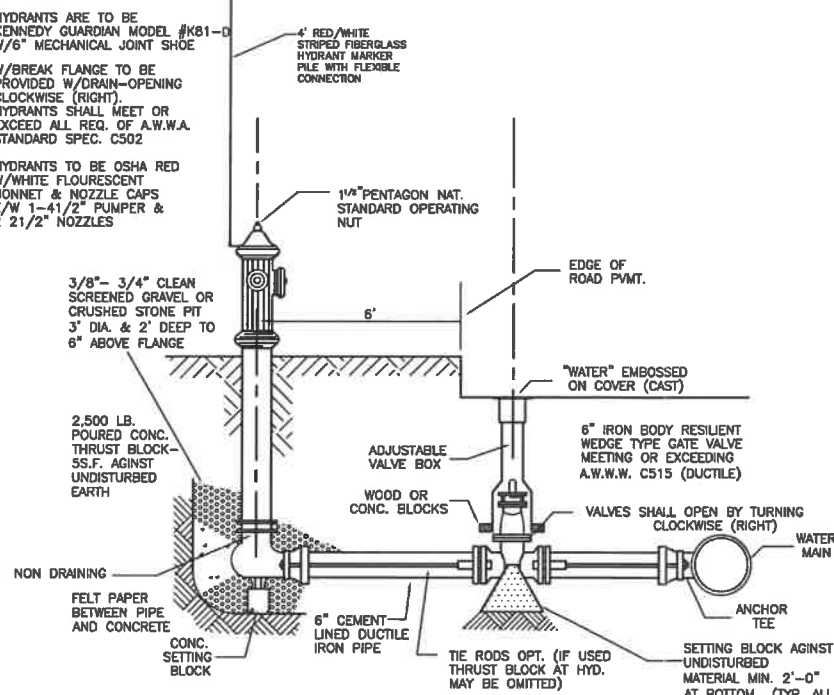
FILE NO. 104
PLAN NO. C-3012
DWG. NO. 19289 SP-1
F.B. NO.

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

HYDRANTS ARE TO BE KENNEDY GUARDIAN MODEL #K81-D W/6" MECHANICAL JOINT SHOE

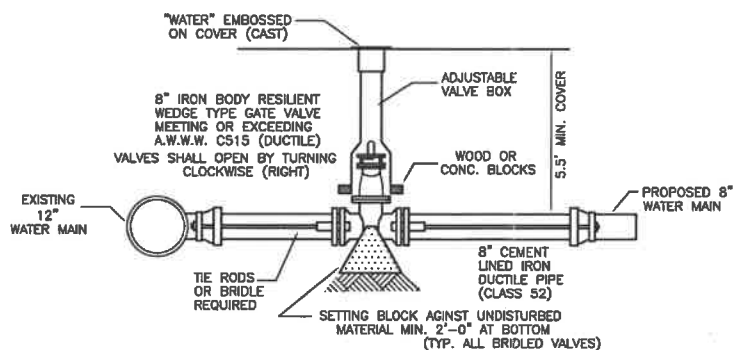
W/BREAK FLANGE TO BE PROVIDED W/DRAIN-OPENING CLOCKWISE (RIGHT). HYDRANTS SHALL MEET OR EXCEED ALL REQ. OF A.W.W.A. STANDARD SPEC. C502

HYDRANTS TO BE OSHA RED W/WHITE FLOURESCENT BONNET & NOZZLE CAPS E/W 1-4 1/2" PUMPER & 2 2 1/2" NOZZLES



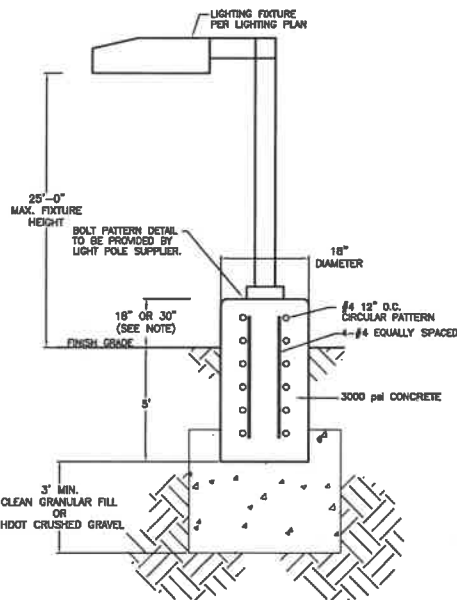
TYPICAL HYDRANT SECTION

NOT TO SCALE



WATER MAIN CONNECTION

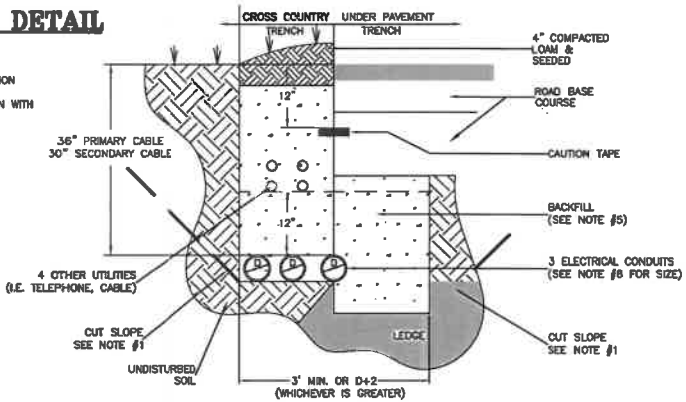
NOT TO SCALE



POLE MOUNTED LIGHT DETAIL

NOT TO SCALE

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



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

ELECTRICAL & UNDERGROUND UTILITY TRENCH INSTALLATION DETAIL

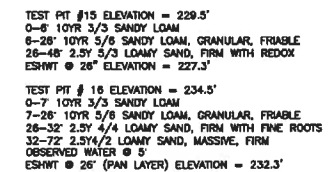
NOT TO SCALE

UTILITY DETAILS
TAX MAP 255, LOT 21
INNOVATION DRIVE
ROCHESTER, NH

PREPARED FOR:
PREP PARTNERS GROUP, LLC
MAY 2020

NORWAY PLAINS ASSOCIATES, INC.

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



- (A) PROP. 8" PERF. PVC UNDER DRAIN INV. = 223.5' (LAID LEVEL)
- (B) CLEAN OUT CAP EL. = 231.5' 8" PERF. PVC EL. 231.5' TO EL. 223.5'
- (C) CLEAN OUT CAP EL. = 231.5' 8" SOLID PVC EL. 231.5' TO EL. 223.5' 8" PERF. PVC EL. 223.5' TO EL. 225.5'
- (D) PROP. 8" SOLID PVC INV. = 223.5' (LAID LEVEL)
- (E) PROP. OUTLET FILTERED WATER 4" PVC INV. = 225.80'

FILE NO. 104
PLAN NO. C-III
DWG. NO. 19289 SP-1
F.B. NO.

CIVIL ENGINEERS



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NOTES:
RUNOFF MUST BE DIRECTED TO TEMPORARY PRACTICES UNTIL STORMWATER BMPs ARE STABILIZED.



NOT TO SCALE

PREP PARTNERS GROUP, LLC.
MAY 2020

C-14

NORWAY PLAINS ASSOCIATES, INC.

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



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



REVISIONS:
05/11/2020 - NOTE ADDED
- PIPE SIZE CALL OUT CORRECTED
- GRAVEL WETLAND CROSS SECTION
EXTENDED THE 6" LOW PERMEABILITY
SOIL UP THE WALL OF THE BASIN
- INCREASE SPILLWAY WIDTH

SEDIMENT FOREBAY GAUGE DETAIL NOT TO SCALE

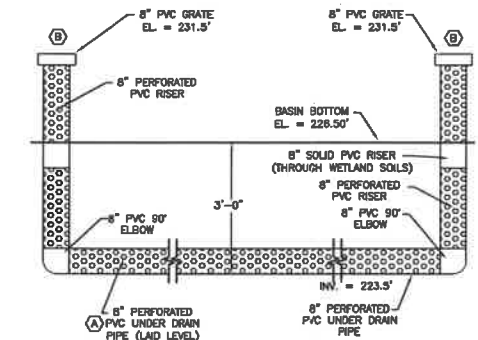
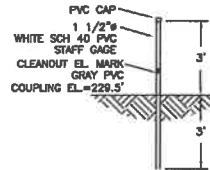
NOTES:
1. STAFF GAGE TO BE SCHEDULE 40 WHITE PVC DRIVEN OR
PLACED IN GROUND A MINIMUM 3'-FT.
2. CLEAOUT MARK ON STAFF TO BE GRAY PVC COUPLING
SET 6-INCHES FROM BOTTOM OF BASIN.

SEDIMENT FOREBAY:

- SPECIFICATIONS:**
- CONSTRUCT THE SEDIMENT FOREBAY TO THE GRADES DEPICTED ON THE PLAN AND CROSS-SECTION. OVER EXCAVATE THE 3/4"-INCH STONE MEDIA BED AS DEPICTED TO ACCOMMODATE THE 24-INCHES OF STONE AND 3-INCHES OF 3/8" PEA GRAVEL AS SHOWN IN THE CROSS-SECTION.
 - INSTALL THE WETLAND SOIL IN AN 8-INCH LAYER COMPRISED EXISTING ON-SITE WETLAND SOIL THAT HAS BEEN STOCKPILED FOR RE-USE OR MEETING THE SPECIFICATION BELOW OF: WETLAND SOILS MIX:
LOAM = 33%
PEAT MOSS = 33%
COARSE SAND (SEPTIC) = 33%
SEED THE BOTTOM OF THE GRAVEL WETLAND BASIN AS PRESCRIBED NOTES FOUND ON SHEET C-18. SEED MIXTURE = D.
 - LOAM AND SEED ONLY THE SLOPES OF THE GRAVEL WETLAND AS PRESCRIBED NOTES FOUND ON SHEET C-18. SEED MIXTURE = D.
- RECOMMENDED SEEDING RATES:**
SUPPLEMENTAL LLB/6,000 SQ. FT. OR STRAIGHT LLB/3,000 SQ.FT.
- MAINTENANCE REQUIREMENTS:**
- INSPECT PRETREATMENT MEASURES (I.E. SEDIMENT FOREBAY(S), HOODED CATCH BASINS, ETC.) BI-ANNUALLY. ONCE IN THE SPRING PRIOR TO MAY 15 AND ONCE IN THE FALL PRIOR TO OCTOBER 15.
 - INSPECT GRAVEL WETLAND SURFACE BI-ANNUALLY. ONCE IN THE SPRING PRIOR TO MAY 15 AND ONCE IN THE FALL PRIOR TO OCTOBER 15.
 - INSPECT GRAVEL WETLAND AFTER ANY RAINFALL EVENT OF 2.5-INCHES IN A 24-HOUR PERIOD OR GREATER.
 - REMOVE AND DISPOSE OF ACCUMULATED SEDIMENT BASED ON INSPECTION. REPAIR AREA OF REMOVAL AS NECESSARY.
 - PERFORM MAINTENANCE AND REHABILITATION BASED ON INSPECTIONS.
 - REMOVE DEBRIS (IF ANY) FROM INFILTRATION BASIN INLET BASED ON INSPECTION.
 - CONDUCT PERIODIC MOWING OF THE INFILTRATION BASIN SLOPES AND EMBANKMENTS (MINIMUM TWICE A YEAR) TO ELIMINATE WOODY GROWTH FROM THE EMBANKMENTS AND BOTTOM. MOWING THE INFILTRATION BASIN EMBANKMENTS WHEN MOWING THE REST OF THE SITE IS RECOMMENDED.
 - REMOVE PLANT MATERIAL THAT DIES BACK IN THE FALL FROM THE GRAVEL WETLAND SURFACE (I.E. GRASSES, REEDS, ETC.). ONLY REMOVE THE ABOVE GROUND GROWTH THAT HAS DIED BACK. LEAVE THE ROOT MASS INTACT.
 - IF THE GRAVEL WETLAND DOES NOT DRAIN WITHIN 72-HOURS FOLLOWING A RAINFALL EVENT, THEN A QUALIFIED PROFESSIONAL (I.E. PROFESSIONAL ENGINEER, CERTIFIED WETLAND OR SOILS SCIENTIST OR LANDSCAPE ARCHITECT, ETC.) SHOULD ASSESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE FUNCTION, INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE STONE BED AND PIPE MANIFOLD.

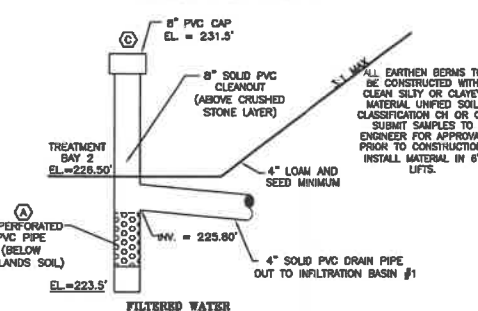
PROPOSED GRAVEL WETLAND BASIN DRAINAGE STRUCTURES

- A** PROP. 8" PERF. PVC UNDER DRAIN
INV. = 223.5'
(LAD LEVEL)
- B** CLEAN OUT
CAP EL. = 231.5'
8" SOLID PVC EL. 231.5' TO EL. 225.5'
8" PERF. PVC EL. 231.5' TO EL. 225.5'
- C** CLEAN OUT
CAP EL. = 231.5'
8" SOLID PVC EL. 231.5' TO EL. 225.5'
8" PERF. PVC EL. 231.5' TO EL. 225.5'
- D** PROP. 8" SOLID PVC
INV. = 223.5'
(LAD LEVEL)
- E** PROP. OUTLET
FILTERED WATER
4" PVC INV. = 225.80'

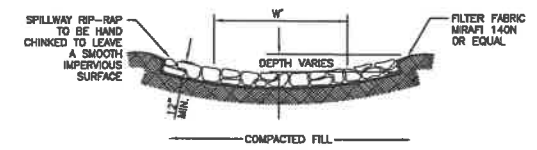


GRAVEL WETLANDS INLET STRUCTURE DETAIL SCALE: NOT TO SCALE

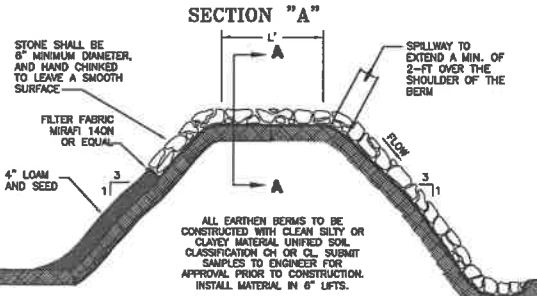
- NOTES:**
- 8" PERFORATED PIPE SHALL BE SUPPLIED WITH 4 ROWS OF 1" TO 2" DIAMETER HOLES EVERY 3 INCHES.
 - PERFORATED PIPES SHALL BE PERFORMED IN ACCORDANCE TO ASTM F-758.



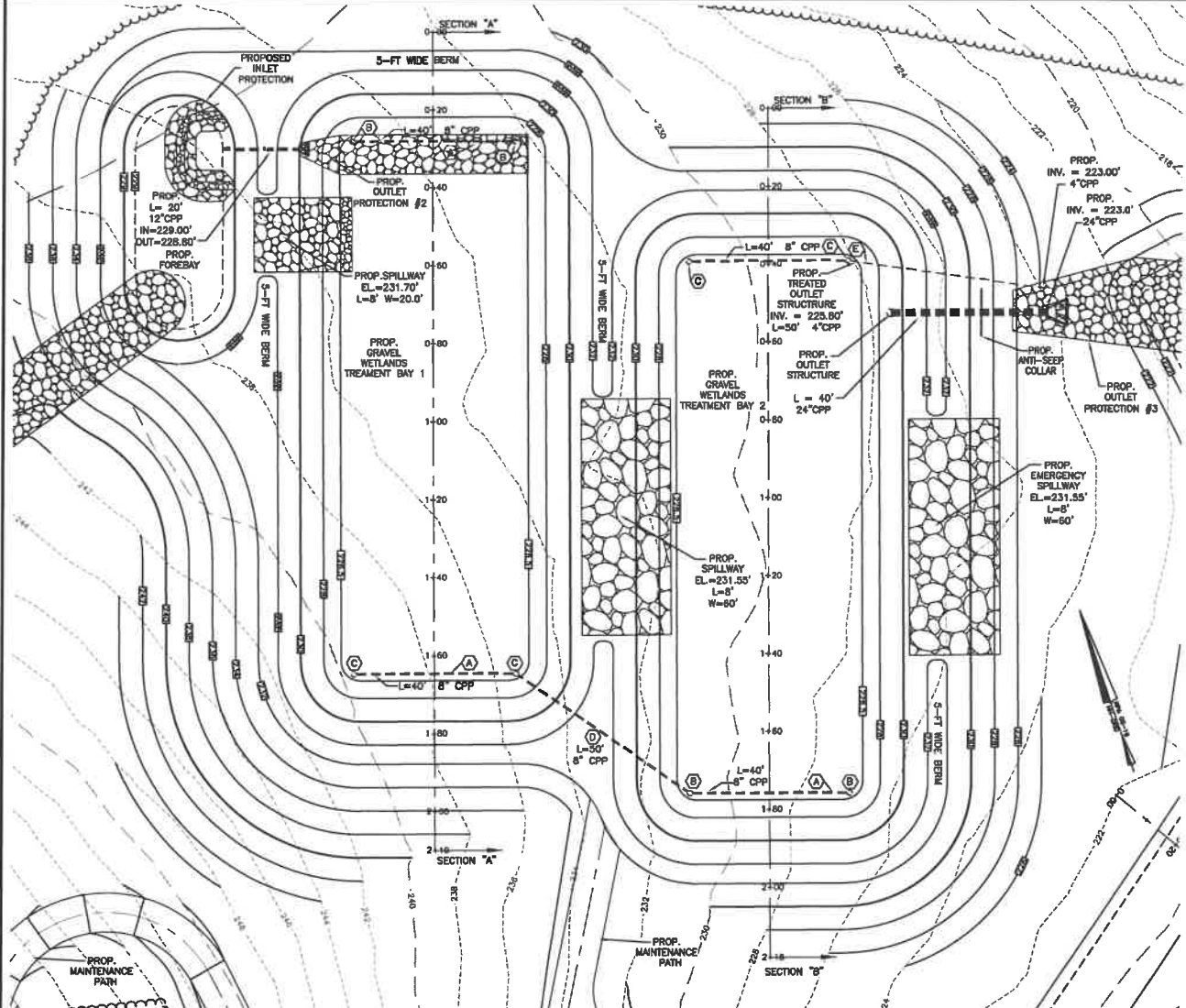
GRAVEL WETLANDS TREATED WATER OUTLET STRUCTURE DETAIL SCALE: NOT TO SCALE



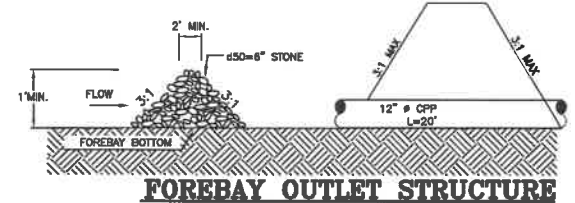
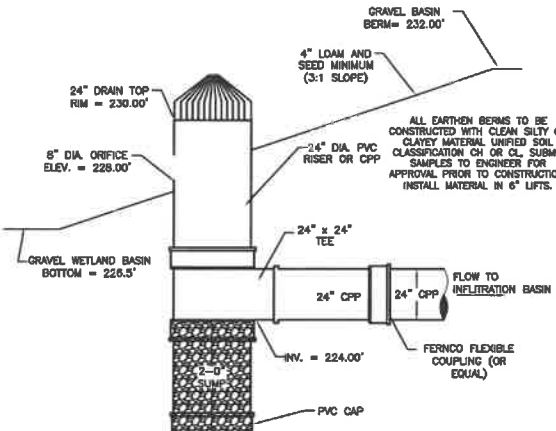
SPILLWAY DETAIL NOT TO SCALE



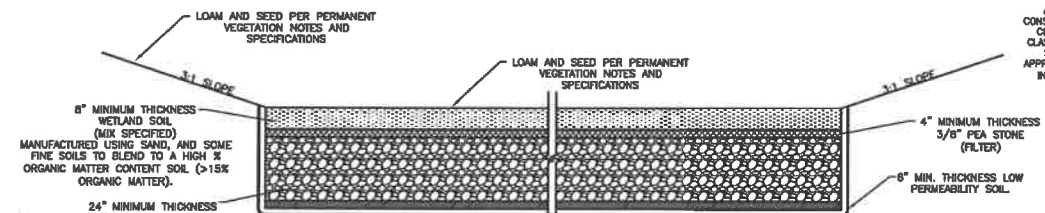
GRAVEL WETLANDS BASIN PLAN VIEW 1" = 20'



GRAVEL WETLANDS OUTLET STRUCTURE DETAIL NOT TO SCALE



FOREBAY OUTLET STRUCTURE



GRAVEL WETLAND MATERIALS CROSS-SECTION NOT TO SCALE

ALL EARTHEN BERMS TO BE CONSTRUCTED WITH CLEAN SILTY OR CLAYEY MATERIAL UNIFIED SOIL CLASSIFICATION CH OR CL. SUBMIT SAMPLES TO ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. INSTALL MATERIAL IN 6" LIFTS.

| LOW PERMEABILITY MATERIAL GRADATION: | |
|--------------------------------------|-----------------|
| SIEVE SIZE | PERCENT PASSING |
| #4 | 100 |
| #10 | 100 |
| #20 | 100 |
| #40 | 60-90 |
| #60 | 40-60 |
| #100 | 25-45 |

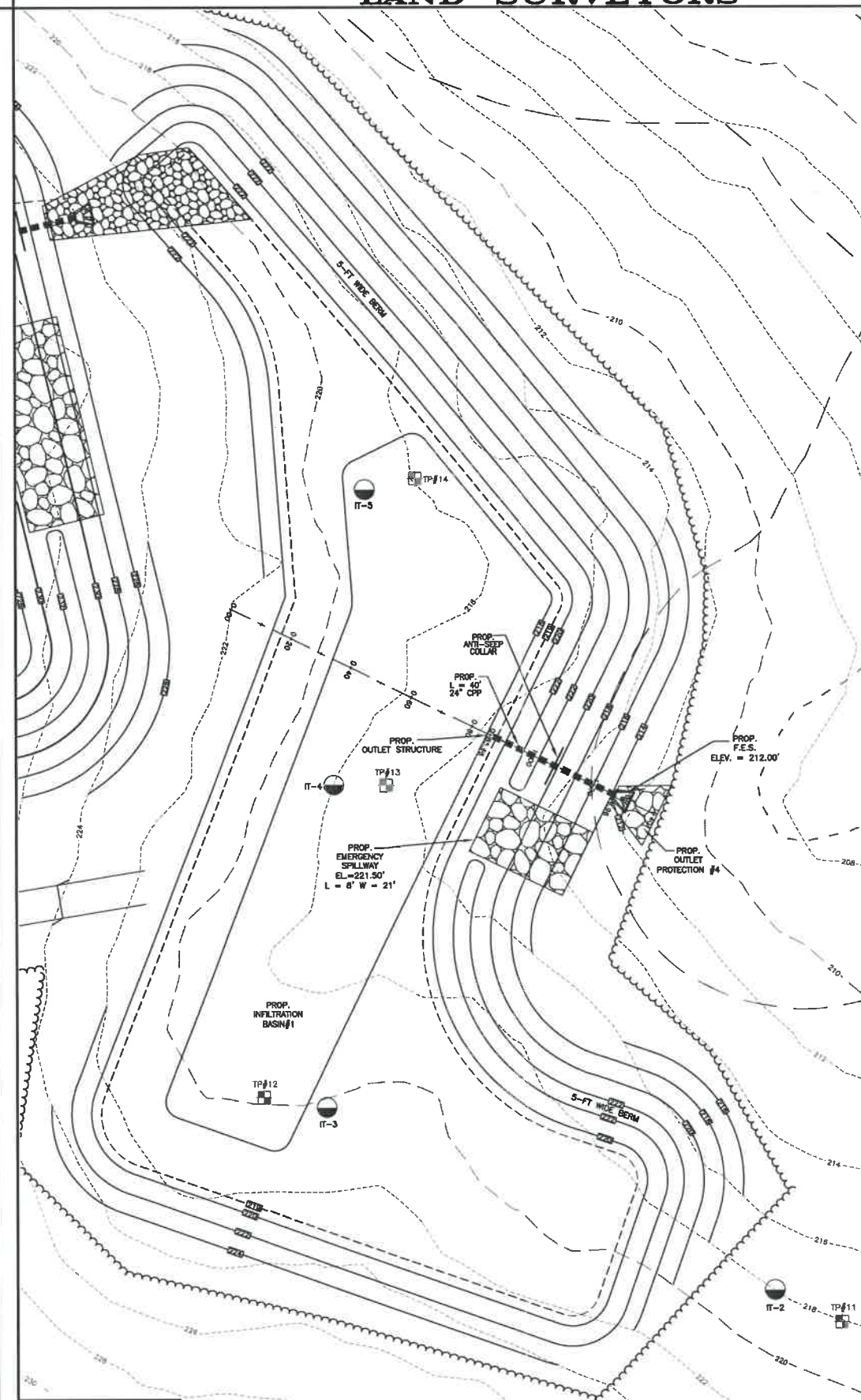
FILE NO. 104
PLAN NO. C-3012
DWG. NO. 19289 SP-1
F.B. NO.

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

GRAVEL WETLAND
BASIN DETAILS
TAX MAP 255
LOT 21
INNOVATION DRIVE
ROCHESTER, NH
PREP PARTNERS GROUP, LLC
MAY 2020

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

REVISIONS:
08/11/2020 - NOTE ADDED
- LOWERED OUTLET PIPE INVERT
- EXTENDED OUTLET RIPRAP FROM GW
INTO IB#1



FILE NO. 104
PLAN NO. C-
DWG. NO. 19289/SP-1
F.B. NO.

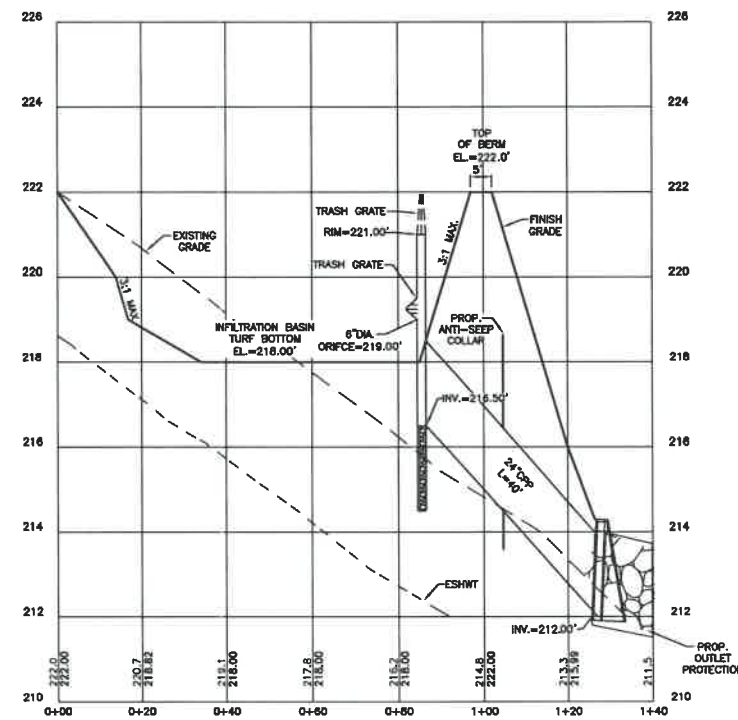


Diagram illustrating the cross-section of a spillway structure. The spillway is 21' wide at the top. The depth varies. The structure is built on compacted fill. The spillway face is lined with filter fabric, mifast 140N or equal. The spillway is to be hand chained to leave a smooth impervious surface.

STONE SHALL BE 6" MINIMUM DIAMETER, AND HAND CHINNED TO LEAVE A SMOOTH SURFACE

5' A

EL. = 221.5'

SPILLWAY TO EXTEND A MIN. OF 2-FT OVER THE SHOULDER OF THE BERM

FILTER FABRIC MIRAFI 140N OR EQUAL

4" LOAM AND SEED

3 1

3 1

FLOW

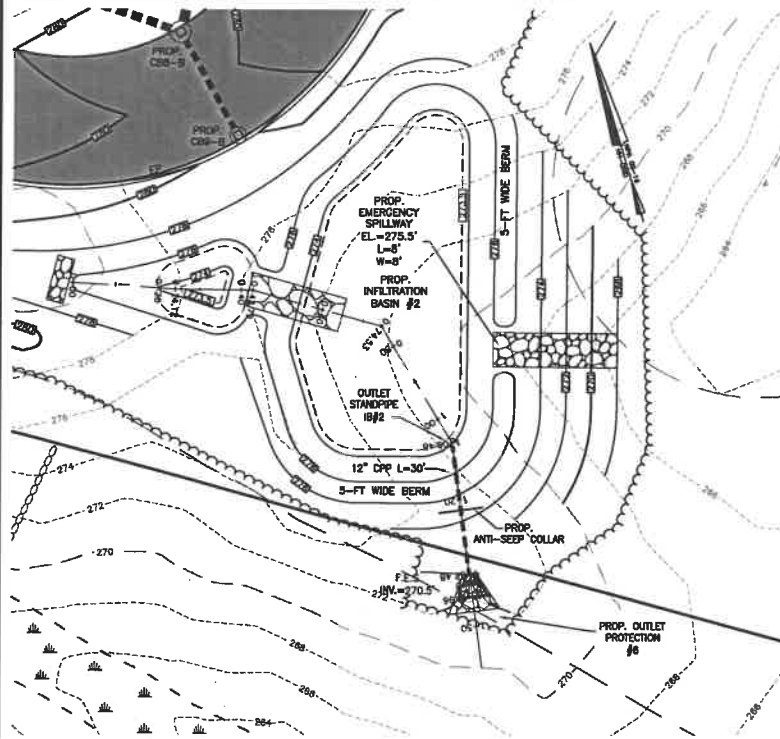
INfiltration BASIN BOTTOM = 218.0'

ALL EARTHEN BERMS TO BE CONSTRUCTED WITH CLEAN SILTY OR CLAYEY MATERIAL, UNIFIED SOIL CLASSIFICATION CH OR CL. SUBMIT SAMPLES TO ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.

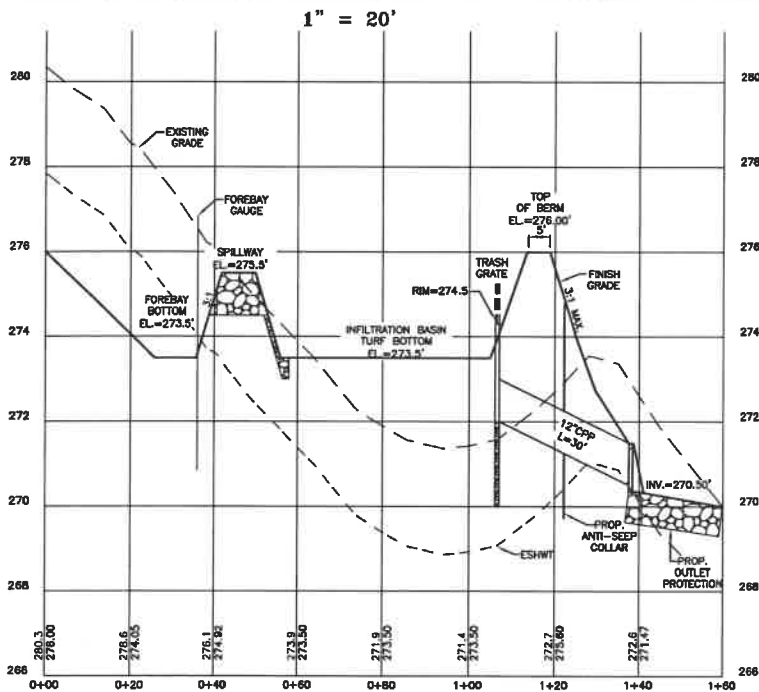
INSTALL MATERIAL

INFILTRATION BASIN #1 DETAILS
TAX MAP 255 LOT 21
INNOVATION DRIVE
ROCHESTER, NH
PREPARED FOR:
PREP PARTNERS GROUP, LLC.
MAY 2020

NOTE:
RUNOFF MUST BE DIRECTED TO TEMPORARY PRACTICES UNTIL STORMWATER BMPs ARE STABILIZED



INFILTRATION BASIN #2 PLAN VIEW



INFILTRATION BASIN #2 CROSS SECTION

1" = 20' (HORIZ.) & 1" = 2' (VERT.)

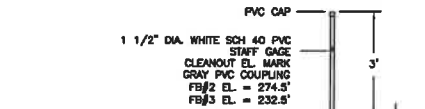
FILE NO. 104
PLAN NO. C-
DWC. NO. 19289/SP-1
F.B. NO.

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

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

- SPECIFICATIONS:**
- DO NOT DISCHARGE SEDIMENT-LOADED WATERS FROM CONSTRUCTION ACTIVITIES (RUNOFF, WATER FROM EXCAVATIONS) TO THE INFILTRATION BASIN.
 - DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF POSSIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION BASIN.
 - AFTER THE BASIN IS EXCAVATED TO THE FINAL DESIGN ELEVATION, THE FLOOR SHALL BE DEEPLY TILLED WITH A ROTARY TILLER OR DISC HARROW TO RESTORE INFILTRATION RATES, FOLLOWED BY A PASS WITH A LEVELING DRAG. VEGETATION SHALL BE ESTABLISHED IMMEDIATELY AFTER FINAL GRADING IS COMPLETED.
 - CONSTRUCT THE INFILTRATION BASIN TO THE GRADES DEPICTED ON THE PLAN AND CROSS-SECTION.
 - LOAM AND SEED ONLY THE SLOPES OF THE INFILTRATION BASIN AS PRESCRIBED IN THE "PERMANENT VEGETATION" NOTES FOUND ON SHEET C-18. SEED MIXTURE = A.
 - DO NOT PLACE INFILTRATION SYSTEMS INTO SERVICE UNTIL THE CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
- MAINTENANCE REQUIREMENTS:**
- INSPECT SEDIMENT FOREBAY 8-ANNUALLY, ONCE IN THE SPRING PRIOR TO MAY 15 AND ONCE IN THE FALL PRIOR TO OCTOBER 15.
 - CONDUCT PERIODIC MOWING OF THE SEDIMENT FOREBAY SLOPES AND EMBANKMENTS (MINIMUM TWICE A YEAR) TO ELIMINATE WOODY GROWTH FROM THE EMBANKMENTS AND BOTTOM. MOWING THE SEDIMENT FOREBAY EMBANKMENTS WHEN MOWING THE REST OF THE SITE IS RECOMMENDED.
 - REMOVE DEBRIS FROM THE OUTLET STRUCTURE OF THE SEDIMENT FOREBAY (I.E. STONE CHECK DAM) AT LEAST ONCE ANNUALLY.
 - REMOVE AND DISPOSE OF ACCUMULATED SEDIMENT BASED ON INSPECTION. WHEN SEDIMENT HAS REACHED THE RED MARK ON THE SEDIMENT STAFF GAUGE INSTALLED IN THE FOREBAY, REMOVE SEDIMENT AND DISPOSE OF IT OFF-SITE IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
- ELEVATION OF RED CLEAOUT MARK ON STAFF GAUGE FOREBAY #2 = 274.5'
ELEVATION OF RED CLEAOUT MARK ON STAFF GAUGE FOREBAY #3 = 232.5'

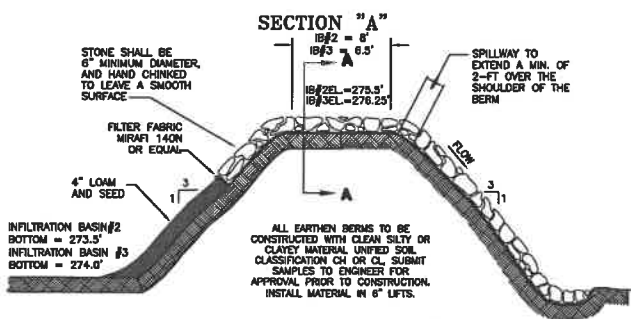
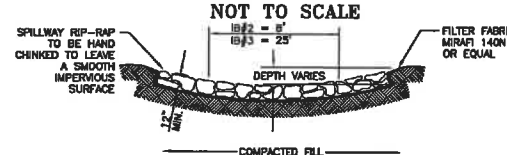
SEDIMENT FOREBAY



NOTES:

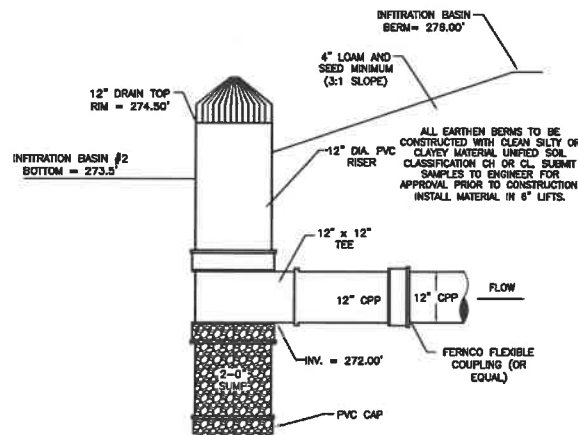
- STAFF GAUGE TO BE SCHEDULE 40 WHITE PVC BROWN OR PLACED IN GROUND A MINIMUM 3-FT. TO BE GRAY PVC COUPLING SET 6-INCHES FROM BOTTOM OF BASIN.
- CLEANOUT MARK ON STAFF TO BE GRAY PVC COUPLING SET 6-INCHES FROM BOTTOM OF BASIN.

SEDIMENT FOREBAY GAUGE DETAIL



INFILTRATION BASINS EMERGENCY SPILLWAY DETAIL

NOT TO SCALE

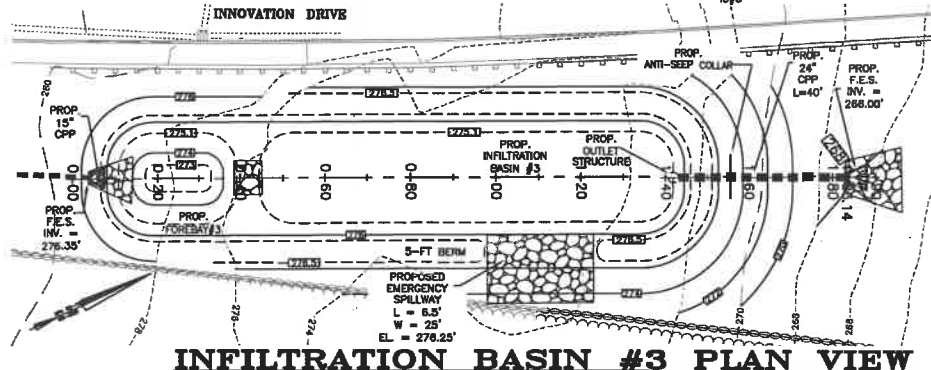


INFILTRATION BASIN #2 OUTLET STANDPIPE DETAIL

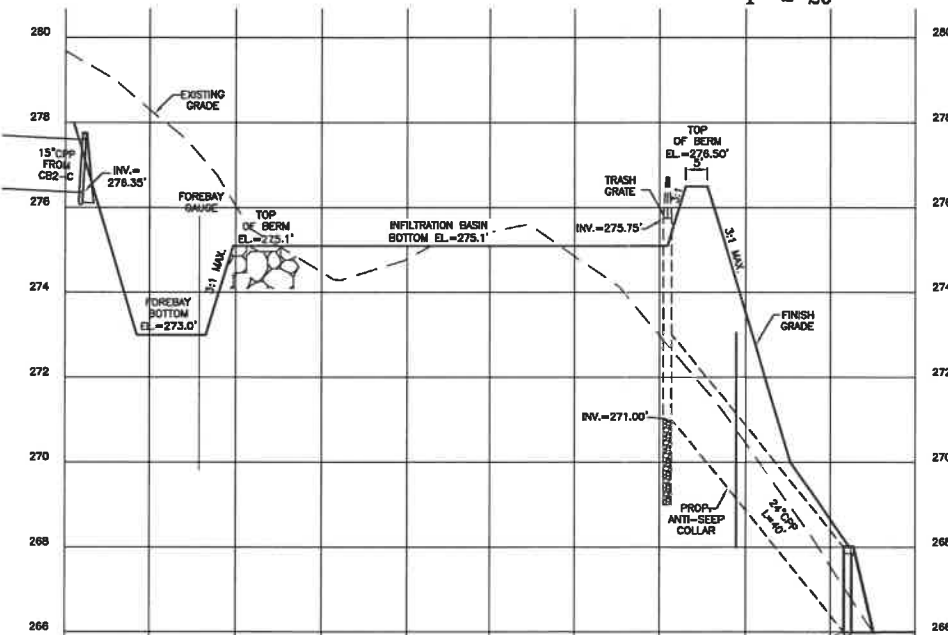
NOT TO SCALE



REVISIONS:
09/11/2020 - NOTE ADDED REMOVED NOTE REFERRING TO BIORETENTION BASIN
- LOWERED OUTLET PIPE INVERT 18#2 & 18#3

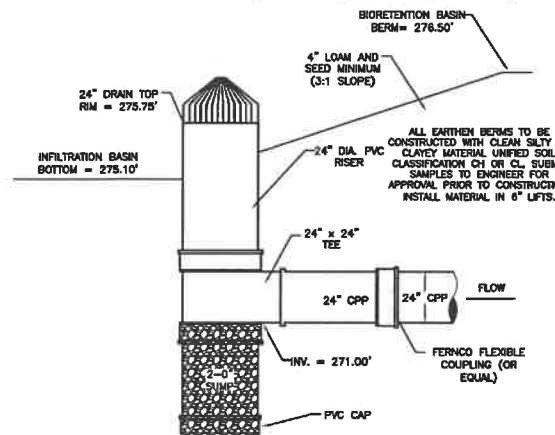


INFILTRATION BASIN #3 PLAN VIEW



INFILTRATION BASIN #3 CROSS SECTION

1" = 20' (HORIZ.) & 1" = 2' (VERT.)



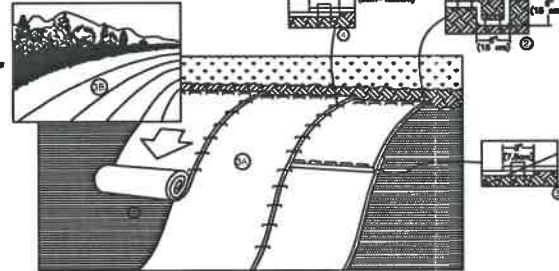
INFILTRATION BASIN #3 OUTLET STANDPIPE DETAIL

NOT TO SCALE

NOTE: RUNOFF MUST BE DIRECTED TO TEMPORARY PRACTICES UNTIL STORMWATER BMPs ARE STABILIZED.

INFILTRATION BASIN #2 &
INFILTRATION BASIN #3 DETAILS
TAX MAP 255 LOT 21
INNOVATION DRIVE
ROCHESTER, NH
PREPARED FOR:
PREP PARTNERS GROUP, LLC.
MAY 2020

NORTH AMERICAN GREEN

EROSION CONTROL PRODUCTS
Sustainable SOLUTIONS14048 HIGHWAY 41 NORTH
DUNSMUIR, N.H. 03775
603-775-9940
www.nagreen.com

SLOPE INSTALLATION

MAINTENANCE REQUIREMENTS

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

CONSTRUCTION SPECIFICATIONS

1. MANUFACTURER'S INSTALLATION INSTRUCTIONS:

- A. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
 - B. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL, AND FOLD REMAINING 12" (30 CM) PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP's.
 - C. ROLL THE RECP's (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHALL BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
 - D. THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) OVERLAP DEPENDING ON RECP's TYPE.
 - E. CONSECUTIVE RECP's SPUN DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP's WIDTH.
- NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.

2. SITE PREPARATION:

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

3. SEEDING:

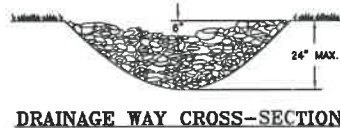
- A. SEED AREA BEFORE BLANKET INSTALLATION FOR EROSION CONTROL AND REVEGETATION. SEEDING AFTER MAT INSTALLATION IS OFTEN SPECIFIED FOR TURF REINFORCEMENT APPLICATIONS. WHEN SEEDING PRIOR TO BLANKET INSTALLATION, ALL CHECK SLOTS AND OTHER AREAS DISTURBED DURING INSTALLATION MUST BE RESEEDED.
- B. WHEN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

TEMPORARY

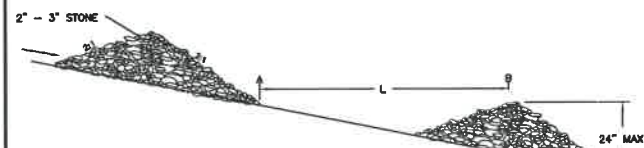
EROSION CONTROL BLANKET DETAIL

NOT TO SCALE

| SPACING BETWEEN CHECK DAMS | |
|----------------------------|-------------|
| SLOPE (FT/FT) | LENGTH (FT) |
| 0.020 | 75 |
| 0.030 | 50 |
| 0.040 | 37 |
| 0.050 | 30 |
| 0.060 | 19 |
| 0.100 | 15 |
| 0.150 | 10 |



DRAINAGE WAY CROSS-SECTION

L = THE DISTANCE SUCH THAT POINTS
A & B ARE OF EQUAL ELEVATION.

SPACING BETWEEN STONE CHECK DAMS

CONSTRUCTION SPECIFICATIONS:

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

MAINTENANCE NOTES:

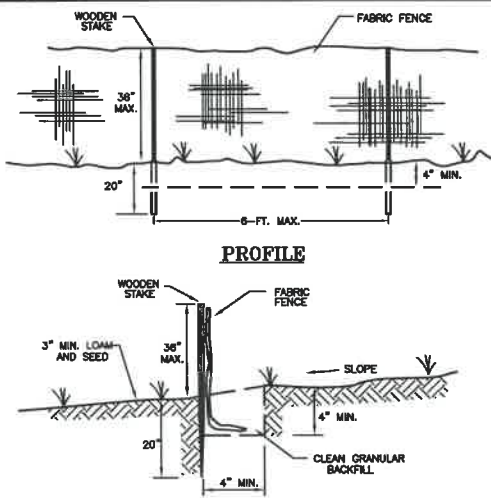
1. TEMPORARY GRADE STABILIZATION STRUCTURES SHALL BE INSPECTED AFTER EACH STORM AND DAILY DURING PROLONGED STORM EVENTS. ANY DAMAGE TO THE STRUCTURES SHALL BE REPAIRED IMMEDIATELY.
2. PARTICULAR ATTENTION SHALL BE GIVEN TO END RUN AND EROSION AT THE DOWNSTREAM TOE OF THE STRUCTURE.
3. WHEN REMOVING THE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

STONE CHECK DAM
INSTALLATION DETAIL

NOT TO SCALE

FILE NO. 104
PLAN NO. C-3012
DWG. NO. 19289 SP-1
F.B. NO.

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



CROSS-SECTION

MAINTENANCE REQUIREMENTS:

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

CONSTRUCTION SPECIFICATIONS:

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

SILTATION CONTROL FENCE DETAIL

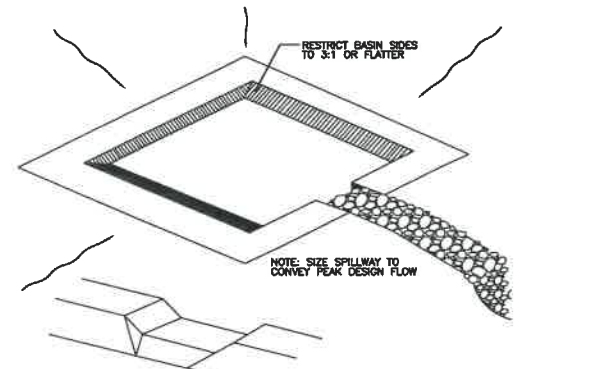
NOT TO SCALE

TEMPORARY VEGETATION
SEEDING RECOMMENDATIONS

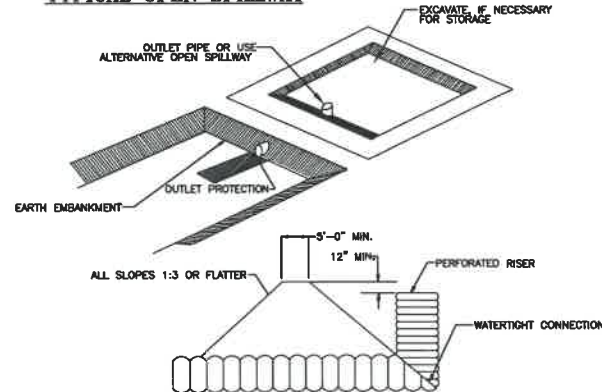
| SPECIES | PER ACRE BUSHELLS (BU) OR POUNDS (LBS.) | PER 1,000-SF | REMARKS |
|------------------------|--|-----------------|--|
| WINTER RYE | 2.5 BU OR 112 LBS. | 2.5 LBS. | BEST FOR FALL SEEDING. SEED FROM AUGUST 15 TO SEPTEMBER 15 FOR BEST COVER. SEED TO A DEPTH OF 1 INCH. |
| OATS | 2.5 BU OR 80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

SOURCES:

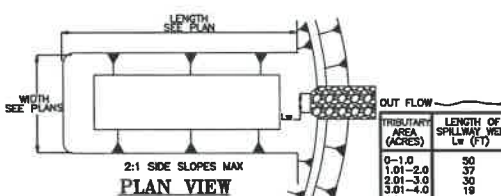
1. NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3, TABLE 4-1
2. MINNICK, E.L. AND H.T. MARSHALL, (AUGUST 1992)



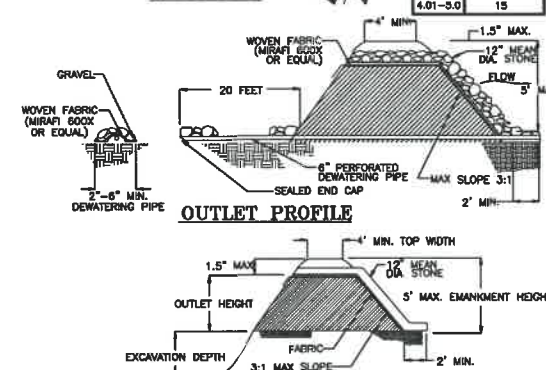
TYPICAL OPEN SPILLWAY



EMBANKMENT SECTION THRU RISER



PLAN VIEW



OUTLET PROFILE

ALTERNATE OUTLET PROFILE

SEDIMENT TRAP

NOTE:
RUNOFF MUST BE DIRECTED TO TEMPORARY PRACTICES UNTIL STORMWATER BMPs ARE STABILIZED.REVISIONS:
09/11/2020 - NOTE ADDED

TEMPORARY VEGETATION:

SPECIFICATIONS:

SITE PREPARATION:

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

SEEDING PREPARATION:

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

LIME/STONE APPLICATION RATE = 3 TONS/ACRE (138 LB./1,000-SF)

*EQUVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE

FERTILIZER APPLICATION RATE = 870 LB./ACRE (20 LB./1,000-SF)

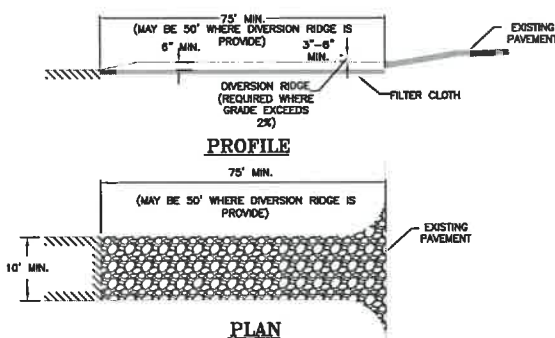
*LOW PHOSPHATE FERTILIZER (6-0-4) OR EQUIVALENT

SEEDING:

1. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL CULTPACKER TYPE SEEDER OR HYDRO SEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH. HYDROSEEDING THAT INCLUDES MULCH MAY BE LEFT ON SOIL SURFACE. SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING.
2. TEMPORARY SEED SHALL TYPICALLY OCCUR PRIOR TO SEPTEMBER 15.
3. AREAS SEED BETWEEN MAY 15 AND AUGUST 15 SHALL BE COVERED WITH HAY OR STRAW MULCH, ACCORDING TO THE "TEMPORARY AND PERMANENT MULCHING" PRACTICE DESCRIBED IN THE INHSM VOL. 3.
4. VEGETATED GROWTH COVERING AT LEAST 65% OF THE DISTURBED AREA SHALL BE ACHIEVED PRIOR TO OCTOBER 15. IF THIS CONDITION IS NOT ACHIEVED, IMPLEMENT OTHER TEMPORARY STABILIZATION MEASURES FOR OVER WINTER PROTECTION.

MAINTENANCE REQUIREMENTS:

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



PROFILE

PLAN

TEMPORARY CONSTRUCTION EXIT

NOT TO SCALE

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

CONSTRUCTION SPECIFICATIONS:

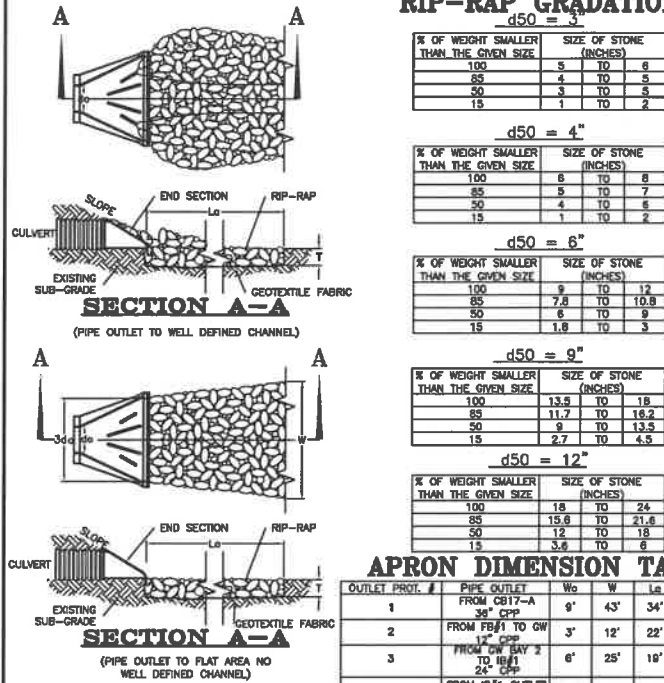
1. THE MINIMUM STONE USED SHALL BE 3-INCH CRUSHED STONE.
2. THE MINIMUM LENGTH OF THE PAD SHALL BE 75 FEET, EXCEPT THAT THE MINIMUM LENGTH MAY BE REDUCED TO 50 FEET IF A 3-INCH TO 6-INCH BERM IS INSTALLED AT THE ENTRANCE OF THE PROJECT SITE.
3. THE PAD SHALL BE THE FULL WIDTH OF CONSTRUCTION ACCESS ROAD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

TEMPORARY EROSION AND
SEDIMENTATION CONTROLTAX MAP 255, LOT NEW
INNOVATION DRIVE
ROCHESTER, NHPREPARED FOR:
PREP PARTNERS GROUP, LLC.
MAY 2020

C-18

LAND SURVEYORS

RIP-RAP GRADATION



APRON DIMENSION TABLE

| OUTLET PROT. # | PIPE OUTLET FROM CULVERT | W _o | W | L _o | T | d50 |
|----------------|--------------------------|----------------|-----|----------------|-----|-----|
| 1 | FROM FB#1 TO 36" CPP | 9' | 43' | 34' | 55" | 18" |
| 2 | FROM FB#1 TO 12" CPP | 3' | 12' | 22' | 9" | 4" |
| 3 | FROM FB#1 TO 12" CPP | 6' | 25' | 19' | 15" | 6" |
| 4 | FROM FB#1 TO 12" CPP | 6' | 20' | 14' | 9" | 3" |
| 5 | FROM FB#1 TO 12" CPP | 3' | 13' | 10' | 9" | 3" |
| 6 | FROM FB#1 TO 12" CPP | 4' | 16' | 12' | 12" | 7" |
| 7 | FROM FB#1 TO 12" CPP | 6' | 21' | 19' | 9" | 3" |

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

CONSTRUCTION SPECIFICATIONS:

1. PREPARE THE SUB-GRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIP-RAP TO THE GRADES SHOWN ON THE PLANS.
2. MINIMUM 6" SAND/GRAVEL BEDDING OR GEOTEXTILE FABRIC REQUIRED UNDER ALL ROCK RIP-RAP.
3. THE ROCK OR GRAVEL USED FOR FILTER OR RIP-RAP SHALL CONFORM TO THE SPECIFIED GRADATION.
4. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARS DURING THE PLACEMENT OF ROCK RIP-RAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO (2) PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
5. 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.
6. RIP-RAP SIZE CHOSEN FOR THE WORST CASE OF ALL OUTLETS. ALL RIP-RAP USED FOR PIPE OUTLET PROTECTION WILL HAVE THE SAME GRADATION AND THICKNESS.

MAINTENANCE NOTES:

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

PIPE OUTLET PROTECTION DETAIL

DUST CONTROL PRACTICES:

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

STOCKPILE PRACTICES:

1. LOCATE STOCKPILES A MINIMUM OF 50-FT. AWAY FROM CONCENTRATED FLOWS OF STORMWATER, DRAINAGE COURSES OR INLETS.
2. PROTECT ALL STOCKPILES FROM STORMWATER RUN-ON USING TEMPORARY PERIMETER MEASURES SUCH AS DIVERSIONS, BERMS, SANDBARS OR OTHER APPROVED PRACTICES.
3. STOCKPILES SHALL BE SURROUNDED BY SEDIMENT BARRIERS AS DESCRIBED ON THE PLANS AND IN N-HSM VOL. 3, TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILE.
4. IMPLEMENT WHEN EROSION CONTROL PRACTICES AS APPROPRIATE ON ALL STOCKPILED MATERIAL.
5. PLACE BAGGED MATERIALS ON PALLETS OR UNDERCOVER.

PROTECTION OF INACTIVE STOCKPILES:

6. INACTIVE SOIL STOCKPILES SHALL BE COVERED WITH ANCHORED TARPS OR PROTECTED WITH SOIL STABILIZATION MEASURES (TEMPORARY SEED AND MULCH OR OTHER TEMPORARY STABILIZATION PRACTICE) AND TEMPORARY PERIMETER SEDIMENT BARRIERS (I.E. SILT FENCE, ETC.) AT ALL TIMES.
7. INACTIVE STOCKPILES OF CONCRETE RUBBLE, ASPHALT CONCRETE RUBBLE, AGGREGATE MATERIALS, AND SIMILAR MATERIALS SHALL BE PROTECTED WITH TEMPORARY SEDIMENT PERIMETER BARRIERS (I.E. SILT FENCE, ETC.) AT ALL TIMES. IF THE MATERIALS ARE A SOURCE OF DUST, THEY SHALL ALSO BE COVERED.

PROTECTION OF ACTIVE STOCKPILES:

8. ALL STOCKPILES SHALL BE SURROUNDED WITH TEMPORARY LINEAR SEDIMENT BARRIERS (I.E. SILT FENCE, ETC.) PRIOR TO THE ONSET OF PRECIPITATION. PERIMETER BARRIERS SHALL BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIAL FROM THE STOCKPILE. THE INTEGRITY OF THE BARRIER SHALL BE INSPECTED AT THE END OF EACH WORKING DAY.
9. WHEN A STORM IS PREDICTED, STOCKPILES SHALL BE PROTECTED WITH AN ANCHORED PROTECTIVE COVERING.

FILE NO. 104
PLAN NO. C-322
DWG. NO. 19289 SP-1
F.B. NO.

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

PERMANENT VEGETATION:

SPECIFICATIONS:

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

SEEDBED PREPARATION:

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

LIMESTONE APPLICATION RATE = 3 TONS/ACRE (138 LB./1,000-SF)*

*EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE

FERTILIZER APPLICATION RATE = 670 LB./ACRE (20 LB./1,000-SF)*

*LOW PHOSPHATE FERTILIZER (5-0-4) OR EQUIVALENT

SEEDING:

1. INOCULATE ALL LEGUME SEED WITH THE CORRECT TYPE OF INOCULANT.
2. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, OUTPACKER TYPE SEEDER OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH. HYDROSEEDING THAT INCLUDES MULCH MAY BE LEFT ON SOIL SURFACE.
3. WHERE FEASIBLE EXCEPT WHERE EITHER OUTPACKER TYPE SEEDER OR HYDROSEEDER IS USED, SEED SHALL BE SEEDBED FOLLOWING SEEDING OPERATIONS WITH A ROLLER, OR LIGHT DRAG.
4. SPRING SEEDING USUALLY GIVES THE BEST RESULTS FOR ALL SEED MIXES OR WITH LEGUMES. PERMANENT SEEDING SHALL BE COMPLETED 45 DAYS PRIOR TO FIRST KILLING FROST WHEN CROWN VETCH IS SEEDING IN LATE SUMMER AT LEAST 35% OF THE SEED SHALL BE HARD SEED (UNSCARIFIED). IF SEEDING CANNOT BE DONE WITHIN THE SPECIFIED SEEDING DATES, MULCH ACCORDING TO THE "TEMPORARY AND PERMANENT MULCHING" PRACTICE DESCRIBED IN THE N-HSM, VOL. 3, AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
5. AREAS SEEDING BETWEEN MAY 15 AND AUGUST 15 SHALL BE COVERED WITH HAY OR STRAW MULCH, ACCORDING TO THE "TEMPORARY AND PERMANENT MULCHING" PRACTICE DESCRIBED IN THE N-HSM, VOL. 3.
6. VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA SHALL BE ACHIEVED PRIOR TO OCTOBER 15. IF THIS CONDITION IS NOT ACHIEVED, IMPLEMENT OTHER TEMPORARY STABILIZATION MEASURES FOR OVER WINTER PROTECTION.

HYDROSEEDING:

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

MAINTENANCE REQUIREMENTS:

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

PERMANENT VEGETATION SEEDING RECOMMENDATIONS

| USE | MIXTURE | SPECIES | LBS./ACRE | LBS./1,000-SF |
|--|---------|---------------------|-----------|---------------|
| STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS | A | TALL FESCUE | 20 | 0.45 |
| | | CREeping RED FESCUE | 20 | 0.45 |
| | | TOTAL | 42 | 0.95 |
| WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER | A | TALL FESCUE | 20 | 0.45 |
| | | CREeping RED FESCUE | 20 | 0.45 |
| | | TOTAL | 42 | 0.95 |
| LIGHTLY USED PARKING LOTS, OOD AREAS, UNUSED LANDS, AND LOW INTENSITY RECREATION SITES | A | TALL FESCUE | 20 | 0.45 |
| | | CREeping RED FESCUE | 20 | 0.45 |
| | | TOTAL | 42 | 0.95 |
| WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER | D | BRODSFOOT REDD | 10 | 0.25 |
| | | GRASS | 5 | 0.10 |
| | | TOTAL | 15 | 0.35 |

SOURCES:

1. NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3, TABLES 4-2 AND 4-3
2. MINNICK, E.L. AND H.T. MARSHALL, (AUGUST 1982)



ENVIRONMENTAL MONITOR

THE PERMITTEE SHALL EMPLOY THE SERVICES OF AN ENVIRONMENTAL MONITOR (EM) FOR THE PURPOSES OF PROVIDING INDEPENDENT PROFESSIONAL ENVIRONMENTAL INSPECTION OF THE PROJECT. THE PERMITTEE SHALL RECEIVE PRIOR APPROVAL OF THE EM BY THE DEPARTMENT. THE ENVIRONMENTAL MONITOR SHALL INSPECT THE PROJECT AT A MINIMUM FREQUENCY OF ONCE PER WEEK AND FOLLOWING RAINFALL EVENTS OF 0.5-INCH OR GREATER IN A 24-HOUR PERIOD. THE INSPECTIONS SHALL BE FOR THE PURPOSES OF DETERMINING COMPLIANCE WITH THE PERMIT. THE MONITOR SHALL SUBMIT A WRITTEN REPORT, STAMPED BY A QUALIFIED ENGINEER OR CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL TO THE DEPARTMENT WITHIN 24 HOURS OF THE INSPECTIONS. THE REPORTS SHALL DESCRIBE, AT A MINIMUM, WHETHER THE PROJECT IS BEING CONSTRUCTED IN ACCORDANCE WITH THE APPROVED SEQUENCE, SHALL IDENTIFY ANY DEVIATION FROM THE CONDITIONS OF THIS PERMIT AND THE APPROVED PLANS, AND IDENTIFY ANY OTHER NOTED DEFICIENCIES. REPORTS SHOULD BE SUBMITTED TO Michael.J.Schlosser@DES.NH.GOV.

GENERAL CONSTRUCTION PHASING:

1. **STABILIZATION:**
 - a) A SITE IS DEEMED STABILIZED WHEN IT IS IN A CONDITION IN WHICH THE SOIL ON SITE WILL NOT EXPERIENCE ACCELERATED OR UNNATURAL EROSION UNDER THE CONDITIONS OF A 10-YEAR STORM EVENT, SUCH AS BUT NOT LIMITED TO:
 - 1) A MINIMUM OF 85% VEGETATIVE COVER HAS BEEN ESTABLISHED;
 - 2) A MINIMUM OF 3-INCHES OF NON-EROSIVE MATERIAL, SUCH AS STONE OR A CERTIFIED COMPOST BLANKET HAS BEEN INSTALLED; OR,
 - 3) EROSION CONTROL BLANKETS HAVE BEEN INSTALLED.
 - b) EROSION CONTROL BLANKETS HAVE BEEN INSTALLED.
2. **TEMPORARY STABILIZATION:**
 - a) ALL AREAS OF EXPOSED OR DISTURBED SOIL SHALL BE TEMPORARILY STABILIZED AS SOON AS PRACTICABLE BUT NO LATER THAN 14 DAYS FOLLOWING THE END OF THE DISTURBANCE, UNLESS A SHORTER TIME IS SPECIFIED BY LOCAL AUTHORITIES. THE CONSTRUCTION SEQUENCE APPROVED AS PART OF THE ISSUED PERMIT OR AN INDEPENDENT MONITOR.
 - b) EROSION CONTROL BLANKETS HAVE BEEN INSTALLED.
3. **PERMANENT STABILIZATION:**
 - a) ALL AREAS OF EXPOSED OR DISTURBED SOIL SHALL BE PERMANENTLY STABILIZED AS SOON AS PRACTICABLE BUT NO LATER THAN 14 DAYS FOLLOWING FINAL GRADING.
 - b) MAXIMUM ALLOWABLE DISTURBANCE:
 - c) THE DISTURBANCE AREA IS GREATER THAN 5 ACRES THE PROJECT MUST ADHERE TO THE ENVIRONMENTAL MONITORING.
 - d) DISTURBANCE, CLEAR, OR GRADE AREAS NECESSARY FOR CONSTRUCTION.
 - 1) FLAG OR OTHERWISE DELINEATE AREAS NOT TO BE DISTURBED.
 - 2) EXISTING VEHICLES AND CONSTRUCTION EQUIPMENT FROM THESE AREAS TO PREVENT EROSION.
 - e) ALL GRADED OR DISTURBED AREAS INCLUDING SLOPES SHALL BE PROTECTED DURING CLEARING AND CONSTRUCTION IN ACCORDANCE WITH THE APPROVED GRADING AND DRAINAGE PLAN DEPICTED ON SHEET C-3.
 - f) ALL EROSION AND SEDIMENT CONTROL PRACTICES AND MEASURES SHALL BE CONSTRUCTED, APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN DEPICTED ON SHEET C-3.
 - g) TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED IN THE AMOUNT NECESSARY TO COMPLETE FINISHED GRADING AND BE PROTECTED FROM EROSION.
 - h) STOCKPILES, BORROW AREAS AND SPOILS SHALL BE STABILIZED AS DESCRIBED UNDER "SOIL STOCKPILE PRACTICES".
 - i) SLOPES SHALL NOT BE CREATED SO CLOSE TO PROPERTY LINES AS TO ENDANGER ADJACENT PROPERTIES WITHOUT ADEQUATE PROTECTION AGAINST SEDIMENTATION, EROSION, SLURP, SETTLEMENT, SUBSIDENCE OR OTHER RELATED DAMAGE.
 - j) AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND/OR OTHER OBSTACLES MATERIALS.
 - k) AREAS SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3-INCHES PRIOR TO PLACEMENT OF TOPSOIL. TOPSOIL SHALL BE PLACED WITHOUT SIGNIFICANT COMPACTED TO PROVIDE A LOOSE BEDDING FOR PLACEMENT OF SEED.
 - l) ALL FILLS SHALL BE COMPACTED IN ACCORDANCE WITH PROJECT SPECIFICATIONS TO REDUCE EROSION, SLURP, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES, SITE UTILITIES, CONDUITS AND OTHER FACILITIES, SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
 - m) IN GENERAL, FILLS SHALL BE COMPACTED IN LAYERS RANGING FROM 8 TO 24 INCHES IN THICKNESS. THE CONTRACTOR SHALL REVIEW THE PROJECT GEOTECHNICAL REPORT AND/OR THE "PROJECT SPECIFIC PHASING NOTES" FOR SPECIFIC GUIDANCE.
 - n) ANY AND ALL FILL MATERIAL SHALL BE FREE OF BRUSH, RUBBISH, ROCKS (LARGER THAN 3/4" THE DEPTH OF THE LIFT BEING INSTALLED), LOGS, STUMPS, BUILDING DEBRIS, FROZEN MATERIAL AND OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY LIFTS.
 - o) FROZEN, FROZEN OR SOFT, MUDDY OR HIGHLY COMPRESSIBLE (I.E. CLAY, SILT) MATERIALS ARE SUSCEPTIBLE TO ACCELERATED SETTLEMENT AND POTENTIAL ACCELERATED EROSION. WORK IN AREAS OF THESE MATERIALS SHALL BE PERFORMED UNDER THE DIRECTION OF A PROFESSIONAL ENGINEER.
 - p) THE OUTER FACE OF THE FILL SLOPE SHALL BE ALLOWED TO STAY LOOSE, NOT ROLLED OR COMPACTED, OR BLADE SMOOTHED. A BULLDOZER MAY RUN UP AND DOWN THE FILL SLOPE SO THE DOZER TRACKS (CLAY TRACKS) CREATE GROOVES PERPENDICULAR TO THE SLOPE. IF THE SOIL IS NOT TOO MOIST, EXCESSIVE COMPACTATION WILL NOT OCCUR. SEE "SURFACE ROUGHENING" IN THE N-HSM, VOL.3.
 - q) ROUGHEN THE SURFACE OF ALL SLOPES DURING THE CONSTRUCTION OPERATION TO RETAIN WATER, INCREASE INFILTRATION AND FACILITATE VEGETATION ESTABLISHMENT.
 - r) USE SLOPE BREAKS, SUCH AS DIVERSIONS, BENCHES, OR CONTOUR FURROWS AS APPROPRIATE TO REDUCE THE LENGTH OF CUT-FILL SLOPES TO LIMIT SHEET AND RILL EROSION AND PREVENT GULLY EROSION. ALL BENCHES SHALL BE KEPT FREE OF SEDIMENT DURING ALL PHASES OF CONSTRUCTION.
 - s) SEEDS OR SPRINGS LOCATED ON OR NEAR THE PROJECT SHALL BE EVALUATED BY A PROFESSIONAL ENGINEER (PREFERABLY THE DESIGN ENGINEER) TO DETERMINE IF THE PROPOSED DESIGN SHALL BE REVISED TO PROPERLY MAINTAIN THE CONDITION.
 - t) STABILIZE ALL GRADED AREAS (AS ABOVE) WITH VEGETATION, CRUSHED STONE, COMPOST BLANKET, OR OTHER GROUND COVER AS SOON AS GRADING IS COMPLETE OR IF WORK IS INTERRUPTED FOR 21 WORKING DAYS OR MORE. USE MULCH OR OTHER APPROVED METHODS TO STABILIZE AREAS TEMPORARILY WHERE FINAL GRADING MUST BE DELAYED.
 - u) ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.
 - v) THE PROJECT SHALL BE CONSTRUCTED TO MEET ALL REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER ARS 3800 RELATIVE TO INVASIVE SPECIES.

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

CIVIL ENGINEERS

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



REVISIONS:
09/11/2020 - NOTE UNDER GENERAL CONSTRUCTION PHASING #4 HAVE BEEN REVISED.
- REVISED OUTLET PROTECTION

PROJECT SPECIFIC CONSTRUCTION PHASING:

1. REFER TO THE "GENERAL CONSTRUCTION PHASING" NOTES PRIOR TO COMMENCING CONSTRUCTION IN ACCORDANCE WITH THE FOLLOWING PHASING. THE "GENERAL CONSTRUCTION PHASING" NOTES APPLY TO THE OVERALL CONSTRUCTION AND SHALL BE ADHERED TO.
2. THE PROJECT HAS TWO (2) PHASES. SEE PHASING PLAN SHEET PH-1 FOR PHASE BOUNDARY.
3. INSTALL A TEMPORARY SEDIMENT CONTROL BARRIERS (I.E. SILT FENCE, EROSION CONTROL MIX BERM, STONE CHECK DAMS, ETC.) AROUND THE OUTER PERIMETER OF THE CONSTRUCTION SITE AS DEPICTED ON SHEET C-4 PRIOR TO EARTH MOVING OPERATIONS.
4. INSTALL ORANGE SNOW FENCE AROUND THE PERIMETER OF THE INFILTRATION BASINS AND THE FENCE SHALL REMAIN IN PLACE UNTIL CONSTRUCTION OF THE BASINS HAS STARTED.
5. CLEAR, GRUB AND STRIP THE SITE, STUMPS, BRUSH AND OTHER ORGANIC WASTE SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
6. INSTALL A TEMPORARY CONSTRUCTION EXIT AT THE LOCATION OF THE PROPOSED DRIVEWAY CONNECTION TO INNOVATION DRIVE. MAINTAIN AS DIRECTED BY THE TEMPORARY CONSTRUCTION DETAIL.
7. STOCKPILE STRIPPED TOPSOIL AND CUT MATERIAL TO BE REUSED ON SITE IN AN APPROPRIATE LOCATION IN ACCORDANCE WITH THE "SOIL STOCKPILE PRACTICES". MAINTAIN THE STOCKPILES AS DIRECTED IN THE "SOIL STOCKPILE PRACTICES".
8. PERFORM THE NECESSARY CUTS AND FILLS TO CONSTRUCT THE GRAVEL WETLAND BASIN AS DEPICTED ON SHEET C-14 AND IN ACCORDANCE WITH THE GRAVEL WETLAND BASIN DETAILS SHOWN ON SHEET C-15.
9. PERFORM THE NECESSARY CUTS AND FILLS TO CONSTRUCT THE INFILTRATION BASIN(S) AS DEPICTED ON SHEET C-16, INFILTRATION BASIN(S) AS DEPICTED ON SHEET C-17, AND IN ACCORDANCE WITH THE INFILTRATION BASIN(S) DETAILS SHOWN ON SHEET C-18.
10. CONSTRUCT THE GRAVEL WETLAND BASIN, SEDIMENT FOREBAY AND EACH LEFT TO USE MAXIMUM PROCTOR DENSITY.
11. ALL DITCHES/SWALES AND BASINS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
12. PERFORM THE NECESSARY CUTS AND FILLS TO SUBGRADE IN THE BUILDING, TRAVEL WAY AND PARKING LOT AREAS.
13. INSTALL REQUIRED FILLS IN MAXIMUM 6-INCH LIFTS AND COMPACT EACH LIFT TO USE MAXIMUM PROCTOR DENSITY.
14. AS SUBGRADE IS ACHIEVED INSTALL REMAINING SEDIMENT CONTROL BARRIERS WITHIN THE SITE (I.E. ADDITIONAL SILT FENCE, CHECK DAMS AND SEDIMENT CONTROLS AND CATCH BASINS, ETC.).
15. INSTALL ALL UTILITIES AND CLOSED DRAINAGE SYSTEM COMPONENTS (I.E. PIPE CULVERTS, CATCH BASINS AND REMAINING WATER MAIN) PER THE CORRESPONDING DETAILS AND AS SHOWN ON SHEET C-20 AND C-21, AS EACH STRUCTURE IS COMPLETED INSTALL THE CORRESPONDING SEDIMENT CONTROL MEASURE.
16. CONSTRUCT THE INFILTRATION BASINS AND OUTLET PROTECTION, LOAM SEED AND MULCH THE SIDE SLOPES OF THE BASIN AS DIRECTED IN THE INFILTRATION BASIN DETAILS AND TEMPORARY SEDIMENT CONTROL BARRIER DEPICTED ON SHEET C-22.
17. ALL CUT AND FILL SLOPES AND LAWN AREAS NOT TO BE PAVED SHALL BE LOAMED AND SEED FOR PERMANENT VEGETATION AND STABILIZATION AS DESCRIBED UNDER THE "PERMANENT VEGETATION PRACTICES" WITHIN 3 DAYS OF ACHIEVING FINAL GRADE.
18. INSTALL ALL GRAVEL BASE AND CRUSHED GRAVEL MATERIALS FOR THE PARKING AREA AS SPECIFIED IN THE CORRESPONDING DETAILS.
19. THE PARKING AREAS SHALL BE STABILIZED (CONSTRUCTED TO GRAVEL BASE COURSE) WITHIN 3 DAYS OF ACHIEVING FINISHED SUBGRADE ELEVATIONS.
20. INSTALL PAVEMENT SURFACES AS SOON AS POSSIBLE AFTER THE INSTALLATION OF THE GRAVEL BASE AND CRUSHED GRAVEL. IN ORDER TO LIMIT THE SOIL EROSION AND POLLUTION OF THE GRAVEL MATERIALS WITH ORGANIC MATERIALS, IN NO CASE SHALL AREAS TO BE PAVED BE LEFT UNPROTECTED THROUGHOUT THE WINTER MONTHS.
21. ALL DISTURBED AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE. IN NO CASE SHALL ANY DISTURBED AREA BE LEFT UN-STABILIZED FOR LONGER THAN 21 DAYS. IF NECESSARY TEMPORARY STABILIZATION MEASURES AS DISCUSSED IN THE "GENERAL CONSTRUCTION PHASING NOTES" AND N-HSM, VOL. 3 SHOULD BE EMPLOYED.
22. MAINTENANCE AND INSPECTION:
23. DURING CONSTRUCTION ALL TEMPORARY AND PERMANENT SEDIMENT, EROSION CONTROL AND STORMWATER MANAGEMENT PRACTICES SHOULD BE INSPECTED WEEKLY, AFTER EVERY 1/2 INCH OF RAINFALL, AND ANNUALLY.
24. EXCESS SEDIMENT SHOULD BE REMOVED FROM TEMPORARY SEDIMENT, EROSION CONTROL AND STORMWATER MANAGEMENT PRACTICES WHEN IT REACHES PRESCRIBED THRESHOLDS DISCUSSED IN THE DETAILS FOR EACH PRACTICE.
25. ALL DAMAGED TEMPORARY AND PERMANENT SEDIMENT, EROSION CONTROL AND STORMWATER MANAGEMENT PRACTICES SHOULD BE REPAIRED OR REPLACED IMMEDIATELY UPON NOTICE.
26. SEDIMENT SHALL BE DISPOSED OF PROPERLY EITHER ON SITE OR OFF SITE.
27. PROJECT COMPLETION AND STABILIZATION:
28. UPON PROJECT COMPLETION, ONCE THE SITE IS DEEMED STABILIZED (VEGETATION IS GERMINATED), THE TEMPORARY SEDIMENT CONTROL BARRIERS AND EROSION CONTROL PRACTICES SHALL BE REMOVED. ANY DISTURBANCE CREATED DURING REMOVAL SHALL BE REPAIRED IN AN APPROPRIATE MANNER.
29. ACCUMULATED SEDIMENT SHALL BE REMOVED FROM ALL ON SITE CATCH BASINS AND THE SEDIMENT FOREBAYS TO THE GRAVEL WETLANDS BASIN AND INFILTRATION BASIN #2 & #3.

WINTER STABILIZATION & CONSTRUCTION PRACTICES:

MAINTENANCE REQUIREMENTS:

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

SPECIFICATIONS:

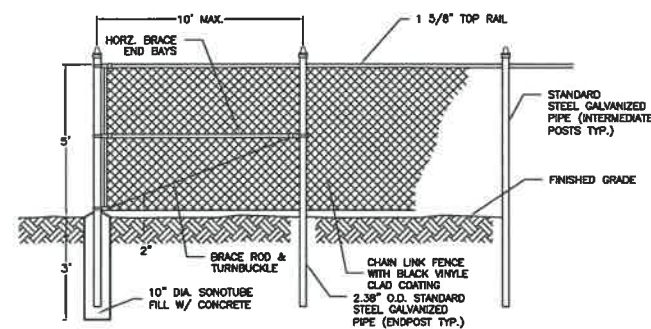
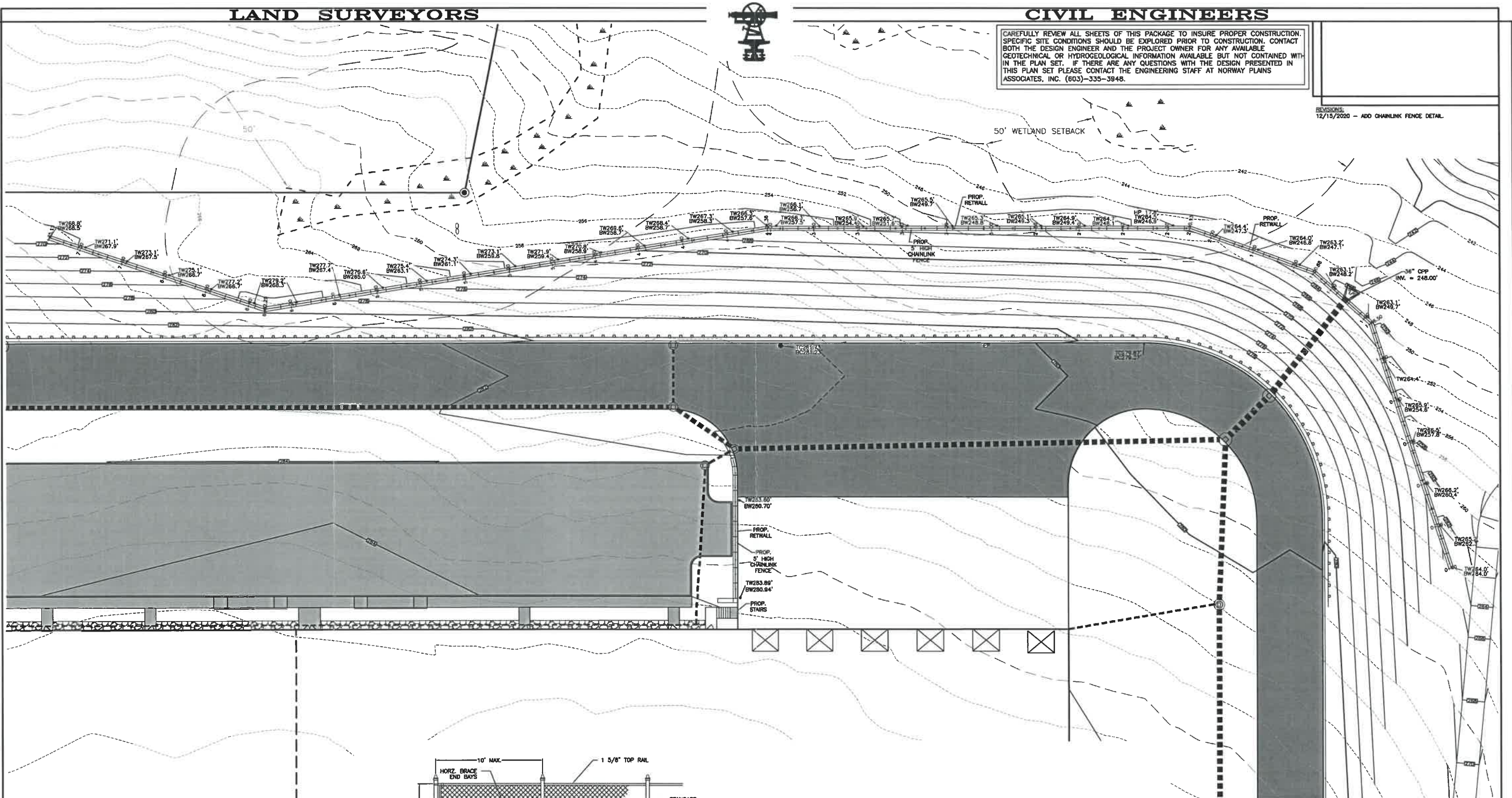
1. THE FOLLOWING STABILIZATION TECHNIQUES SHALL BE EMPLOYED DURING THE PERIOD FROM OCTOBER 15 THROUGH MAY 15:
1. THE AREA OF EXPOSED, UNSTABILIZED SOIL SHALL BE LIMITED TO 1-ACRE AND SHALL BE PROTECTED AGAINST EROSION BY THE METHODS DISCUSSED IN THE "GENERAL CONSTRUCTION PHASING" NOTES.
2. STABILIZATION AS FOLLOWS SHALL 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 85% VEGETATIVE GROWTH BY OR ARE DISTURBED AFTER OCTOBER 15, SHALL BE SEED 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 (REFER TO N-HSM, VOL. 3 FOR SPECIFICATION).
 - b) ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF GREATER THAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OR ARE DISTURBED AFTER OCTOBER 15, SHALL BE SEED AND COVERED WITH A PROPERLY INSTALLED EROSION CONTROL BLANKET OR WITH A MINIMUM OF 4 INCHES OF EROSION CONTROL MIX, UNLESS OTHERWISE SPECIFIED BY THE MANUFACTURER. NOTE THAT COMPOST BLANKETS SHALL 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 SHALL NOT OCCUR OVER SNOW OF GREATER THAN 1 INCH IN DEPTH.
5. ALL MULCH APPLIED DURING WINTER SHALL BE ANCHORED (I.E. BY NETTING, TRACING, WOOD CELLULOSE FIBER).
6. WITHIN 24 HOURS OF STOCKPILING SOIL MATERIALS SHALL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A 4 INCH LAYER OF EROSION CONTROL MIX. MULCH SHALL BE REESTABLISHED PRIOR TO ANY RAIN OR SNOWFALL. NO SOIL STOCKPILE SHALL BE PLACED (EVEN COVERED WITH MULCH) WITHIN 100-FT OF ANY WETLAND OR OTHER WATER RESOURCE AREA.
7. FROZEN MATERIAL (I.E. FROST LAYER REMOVED DURING WINTER CONSTRUCTION) SHALL BE STOCKPILED SEPARATELY AND IN A LOCATION AWAY FROM ANY AREA NEEDING PROTECTION. FROZEN MATERIAL STOCKPILES CAN MELT IN SPRING AND BECOME UNWORKABLE AND DIFFICULT TO TRANSPORT DUE TO HIGH SOIL MOISTURE CONTENT.
8. INSTALLATION OF EROSION CONTROL BLANKETS SHALL NOT OCCUR OVER SLOPE OF GREATER THAN 1 INCH IN DEPTH OR ON FROZEN GROUND.
9. ALL GRASS-LINED DITCHES AND CHANNELS SHALL BE CONSTRUCTED BY SEPTEMBER 1. ALL DITCHES AND SWALES WHICH DO NOT EXHIBIT 85% VEGETATIVE GROWTH BY OR ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS AS DETERMINED BY A PROFESSIONAL ENGINEER. IF 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 AREAS WHERE ACTIVE CONSTRUCTION HAS STOPPED FOR THE WINTER SHALL BE PROTECTED WITH A MINIMUM 3 INCH LAYER OF SAND AND GRAVEL. SAND AND GRAVEL THAT IS LESS THAN 12% OF THE SAND PORTION, OR MATERIAL PASSING THE NUMBER 4 SIEVE, BY WEIGHT, PASSES THE NUMBER 200 SIEVE.
12. SEDIMENT BARRIERS THAT ARE DISTURBED DURING FROZEN CONDITIONS SHALL CONSIST OF EROSION CONTROL MIX BERM, OR CONTINUOUS CONTAINED BERMS. SILT FENCES AND HAY BALES SHALL NOT BE INSTALLED WHEN FROZEN CONDITIONS PREVENT PROPER EMBODMENT OF THESE BARRIERS.

LAND SURVEYORS

CIVIL ENGINEERS

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REVISIONS:
12/15/2020 - ADD CHAINLINK FENCE DETAIL.



TYPICAL CHAINLINK FENCE
NOT TO SCALE

RETAINING WALL PLAN
TAX MAP 255 LOT 21
INNOVATION DRIVE
ROCHESTER, NH
PREPARED FOR:
PREP PARTNERS GROUP, LLC.

MAY 2020



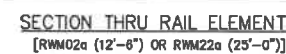
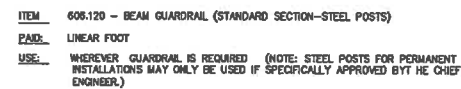
FILE NO. 104
PLAN NO. C-3012
DWG. NO. 19289/SP-1
F.B. NO.

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

NORWAY PLAINS ASSOCIATES, INC.

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

C-20



| DESIGNATOR | L | T | INTENDED USE |
|------------|--------|---------------------------|-------------------------|
| FB001 | 1 3/8" | FULL LENGTH THREAD | RAIL SPLICE BOLTS |
| FB002 | 2" | 1 3/8" MIN. THREAD LENGTH | POST BOLT (STEEL POSTS) |
| FB003 | 10" | 4" MIN. THREAD LENGTH | POST BOLT |



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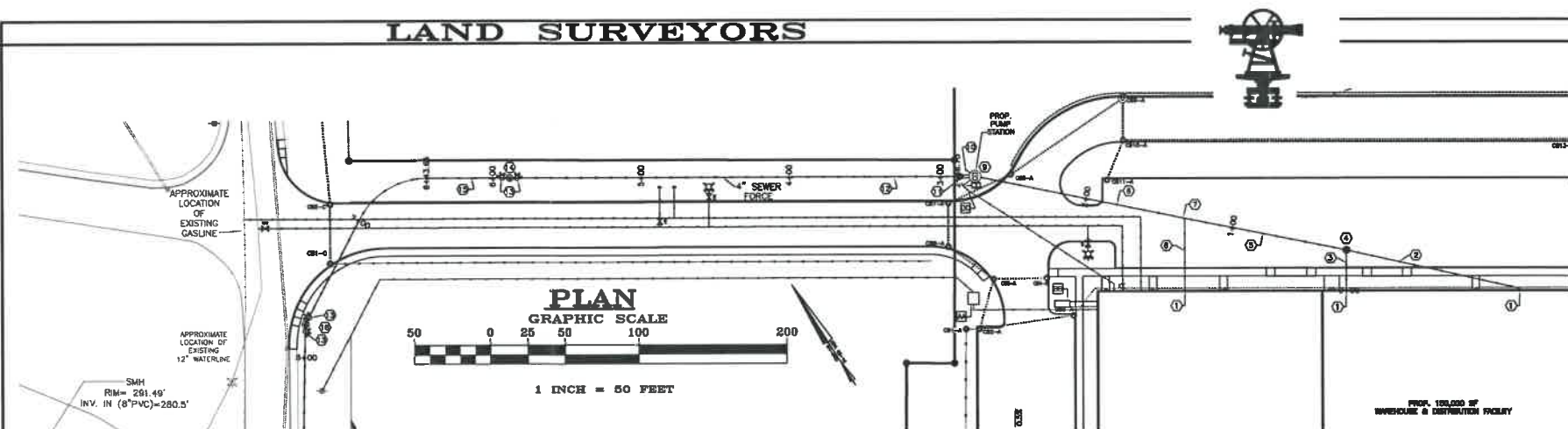
1. LENGTH OF NEED IS THE TOTAL LENGTH OF A LONGITUDINAL BARRIER NEEDED TO SHIELD AN AREA OF CONCERN. TO DETERMINE THE LENGTH OF NEED, REFER TO THE "ROADSIDE - LATEST ADOPTED VERSION, DESIGN GUIDE"
2. DESIGNATIONS PROVIDED IN BRACKETS [] REFERENCE "A GUIDE TO STANDARDIZED STANDARD ELEMENTS DETAILING LATEST ADOPTED VERSION, HIGHWAY BARRIER HARDWARE" AASHTO-AASD-ARTBA JOINT COOPERATIVE COMMITTEE.
3. THE RECTANGULAR PLATE W/ASHER (TRHD30) IS USED ONLY FOR 37'-6" OF STANDARD SECTION LENGTH OF A STANDARD UNIT TYPE. IT IS ALLOWED TO EXCEED 37'-6" OF STANDARD SECTION USING 12'-6" LENGTH RAIL ELEMENT IN CURVES OF LESS THAN 300' RAIL RADII.
4. WHEN GUARDRAIL IS INSTALLED BEHIND CURB, EITHER 6'-0" BEHIND SLOPE CURB OR ON A CURBED RAMP OR AT THE BACK OF SIDEWALK WITH BARRIER CURB, THE RAIL HEIGHT SHALL BE 48" FROM THE TOP OF THE RAIL TO THE FACE OF THE CURB OR SIDEWALK.
5. POSTS SHORTER THAN THE 7'-0" INDICATED ON THE DETAIL, BUT NOT LESS THAN 6'-0", MAY ONLY BE USED WHEN:
 - a) THE SLOPE BEHIND THE GUARDRAIL IS NO STEEPER THAN 4:1
 - b) WHERE THE DISTANCE FROM THE BACK OF THE POST TO THE BREAK OF THE SLOPE IS A MINIMUM OF 2'-0"
 - c) AND THEN ONLY AS APPROVED OR SPECIFICALLY SHOWN ON THE PLANS.
6. TO INSTALL THE 7'-0" POSTS IN ROCK FILL AREAS AND IN AREAS OF OTHER DIFFICULT SITE CONDITIONS, METHODS SUCH AS AUGURING, EXCAVATING, AND OTHER MORE UNUSUAL METHODS MAY BE REQUIRED FOR INSTALLING POSTS. THOSE CONDITIONS AND THE METHODS FOR UNUSUAL METHODS MUST BE POSTED IN THE DESIGN AREA. A WRITTEN JUSTIFICATION FOR REDUCING THE EMBEDMENT DEPTH OF THE POSTS AND WILL NOT BE CONSIDERED AS SUCH.
7. THE FHWA ADMINISTRATION HAS APPROVED THE USE OF OFFSET BLOCKS WITH DIMENSIONS THAT VARY MORE THAN WOULD BE CONSIDERED WITHIN THE NORMAL CONTEXT OF NOMINAL DIMENSIONS. IN SUCH CASES, THE PROPOSED DIMENSIONS MUST BE NO MORE THAN 10% GREATER THAN THE NOMINAL DIMENSIONS SHOWN ON THE DETAILS. THE FOLLOWING CRITERIA APPLY:
 - a) THE OFFSET BLOCKS BE SHOWN TO BE APPROVED BY THE FHWA ADMINISTRATION AS MEETING THE DESIGN REQUIREMENTS FOR THE DESIGN AREA.
 - b) THE FACE OF RAIL MUST REMAIN AT THE EDGE OF PAVEMENT OR AT THE INDICATED OFFSET, PER THE DESIGN PLANS, AND
 - c) THERE MUST NOT BE A DECREASE IN THE DISTANCE FROM THE BACK OF THE POST TO THE BREAK IN THE SLOPE AS SHOWN ON THE DESIGN PLANS. AN INCREASE IN THE DISTANCE FROM THE BACK OF THE POST TO THE BREAK IN THE SLOPE IS ACCEPTABLE.
8. ALL OTHER REQUIREMENTS OF THE PERTINENT SPECIFICATIONS AND DETAILS REMAIN IN FORCE.

1. DETAILS FOR GUARDRAIL SHOWN ON THIS PAGE EXCERPTED FROM AND SPECIFIED TO MATCH NHDOT STANDARD PLANS, STANDARD NO. GR-2 AND GR-10; BEAM GUARDRAIL STANDARD SECTION - STEEL POST & HARDWARE DETAILS.

PREP PARTNERS GROUP, LLC.
MAY 2020



REVISIONS:
07/20/20 - REVISE FORCE MAIN DIAMETER AND LOCATION OF SMH #1. ADD ADDITIONAL BUILDING SERVICES.
09/02/20 - ADD PROPOSED PIPE SLOPES, REVISE INVERT AT BUILDING CLEAN-OUTS AND ADD EXISTING INVERT OUT OF EXISTING SMH #2.

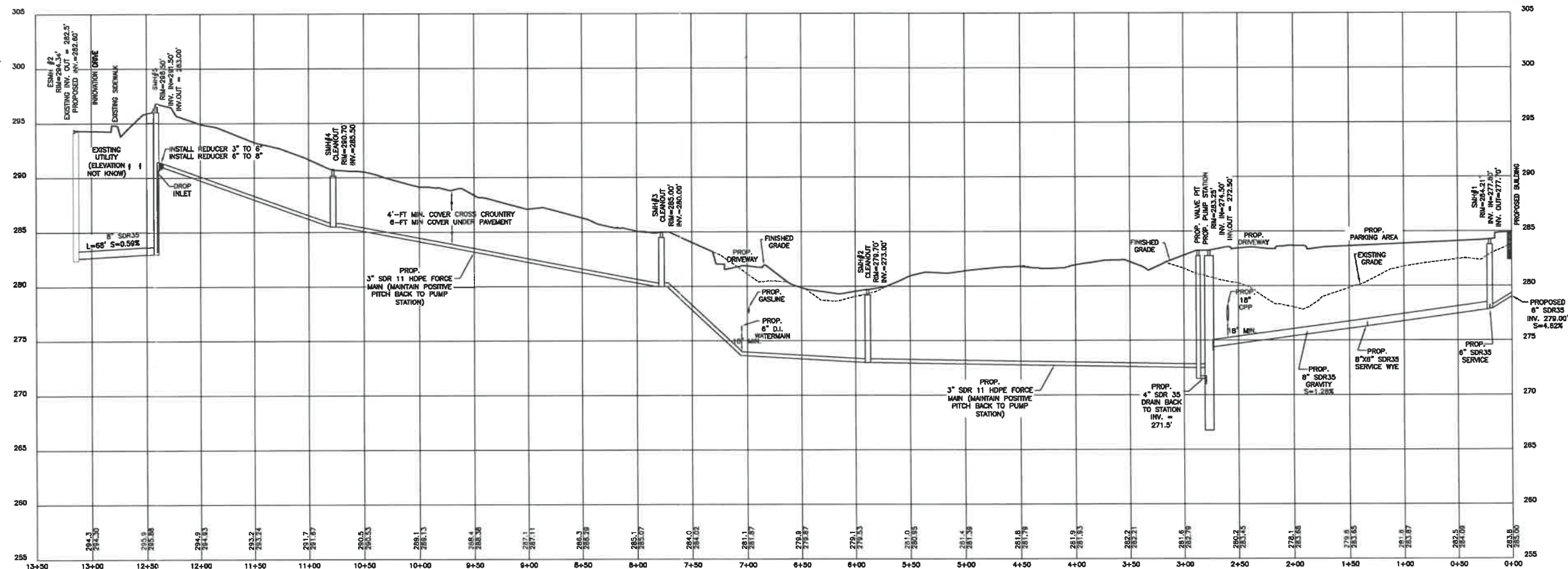


PROPOSED SEWER SYSTEM

1. PROP. 6" SDR35 PVC CLEAN OUT
INV. = 279.00'
2. PROP. SDR35 PVC 6" SEWER PIPE
L = 120' S=1.00%
3. PROP. SDR35 PVC 6" SEWER PIPE
L = 26' S=4.62%
4. PROP. SMH #1
RM = 284.21'
INV. IN = 277.80'
INV. OUT = 277.70'
5. PROP. SDR35 PVC 6" SEWER PIPE
L = 109' S=1.28%
6. PROP. SDR35 PVC 6" SEWER PIPE
L = 48' S=2.75%
7. PROP. SDR35 PVC 6" S.D. SERVICE WYE
INV. = 277.68'
8. PROP. SDR35 PVC 6" SEWER PIPE
L = 140' S = 1.28%
9. PROP. SEWER PUMP STATION
COVER = 283.25'
INV. IN = 274.50'
INV. OUT = 272.50'

10. PROP. 4" SDR35 PUMP STATION VENT
RM = 283.25'
IN & OUT = 272.50'
DRAIN BACK = 271.50'
11. PROP. VALVE PIT
RM = 283.25'
IN & OUT = 272.50'
DRAIN BACK = 271.50'
12. PROP. 3" SDR 11 HDPE FORCE MAIN
L = 300'
13. 4" PLUG VALVE MECHANICAL JOINT OPENS LEFT RESIDENT SEAT W/ VALVE BOX
14. PROP. SEWER CLEAN OUT MANHOLE #2
RM = 279.70'
INV. = 274.00'
15. PROP. 3" SDR 11 HDPE FORCE MAIN
L = 189.0'
16. PROP. SEWER CLEAN OUT MANHOLE #3
RM = 280.70'
INV. = 285.50'

17. PROP. 3" SDR 11 HDPE FORCE MAIN
L = 300.0'
18. PROP. SEWER CLEAN OUT MANHOLE #4
RM = 280.70'
INV. = 285.50'
19. PROP. 3" SDR 11 HDPE FORCE MAIN
L = 183.5'
20. PROP. SEWER MANHOLE #5
RM = 298.50'
INV. IN = 291.50'
INV. OUT = 283.00' (TO EXISTING SMH-2)
21. PROP. 8" SDR35
L = 68' S=0.59%



LEGEND

- PROPERTY LINE
- JURISDICTIONAL WETLANDS
- EXISTING TREE LINE
- EXISTING STONEWALL
- PROPOSED TREE LINE
- PROPOSED DRAIN LINE
- PROPOSED WATER SERVICE
- PROPOSED SEWER LINE
- PROPOSED SEWER FORCE MAIN PIPE HOPE SDR 11
- PROPOSED PROPANE GAS LINE
- PROPOSED UNDERGROUND UTILITY WIRES
- PROPOSED UNDERGROUND ELECTRIC WIRES
- PROPOSED HYDRANT
- PROPOSED WATER VALVE
- PROPOSED WATER SHUT-OFF VALVE
- PROPOSED SEWER SHUT-OFF VALVE
- PROPOSED UTILITY POLE
- PROPOSED SEWER MANHOLE
- PROPOSED DRAIN MANHOLE
- PROPOSED CATCH BASIN

SEWER PROFILE

SCALE 1" = 50' (HORIZ.)
1" = 5' (VERT.)

EXISTING CATCH BASINS

CB1
RM=282.73'
INV. IN = 288.70' (15" CPP)
INV. OUT = 277.48' (15" CPP)
SUMP=283.73'

EX. CB2
RM=280.45'
INV. IN = 284.66' (15" CPP)
INV. OUT=284.66' (15" CPP)
SUMP=281.35'

CB3
RM = 283.48'
INV. IN = 277.58' (15" CPP)
INV. OUT = 277.48' (15" CPP)
SUMP = 274.56'

CB4
RM = 279.23'
INV. IN = 288.03' (15" CPP) FROM BRIDGE
INV. IN = 272.41' (15" CPP) FROM CB1
INV. OUT = 267.58' (15" CPP) SWALE

CB5
RM = 280.85'
INV. IN. = 274.83'
INV. OUT = 270.55' (15" CPP) SWALE
SUMP = 287.55'

SEWER MAIN PLAN & PROFILE
TAX MAP 255, LOT 21
INNOVATION DRIVE
ROCHESTER, NH
PREP PARTNERS GROUP, LLC.
MAY 2020

C-22

FILE NO. 104
PLAN NO. C-3012
DWG. NO. 19289/SP-1
F.B. NO.

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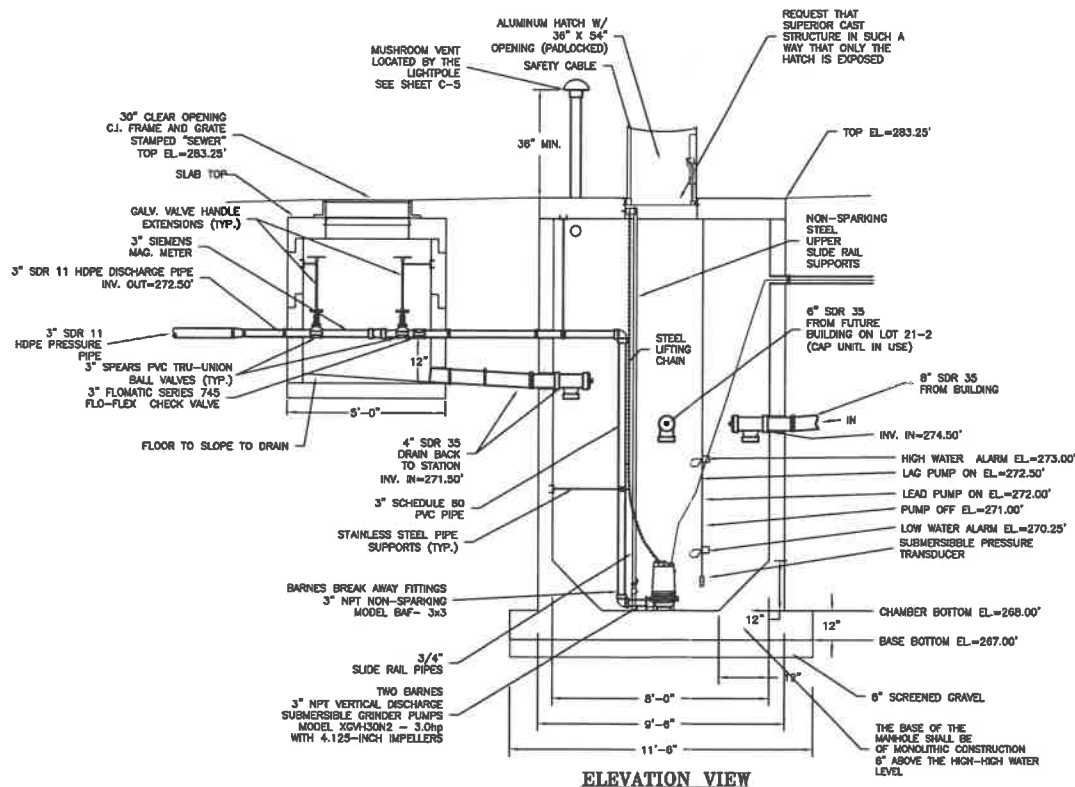
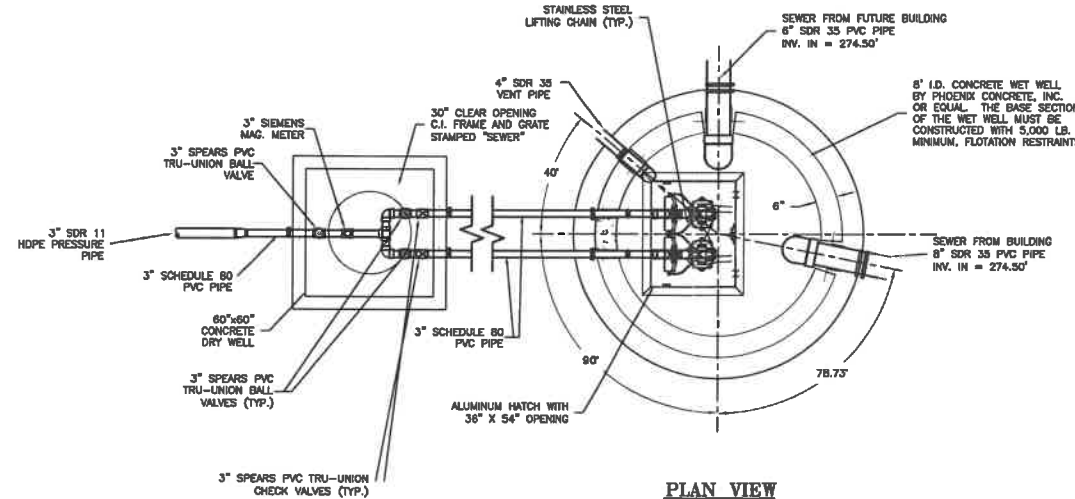
LAND SURVEYORS

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF PUMP CHAMBER, PUMP, AND CONTROL PANEL TO NORWAY PLAINS ASSOCIATES, INC. PRIOR TO ORDERING AND DELIVERY. ENGINEER APPROVAL REQUIRED PRIOR TO ORDERING.



CIVIL ENGINEERS

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



PUMP STATION NOTES

- THE 100-YEAR FLOOD ELEVATION FOR THIS PARCEL IS APPROXIMATELY ELEVATION 199.0'. ALL COMPONENTS WITHIN THE PUMP STATION AND ASSOCIATED CRITICAL ACCESSORIES (CONTROL PANEL, GENERATOR) ARE LOCATED AT LEAST 70 FEET ABOVE THE 100-YEAR FLOOD ELEVATION.
- HORIZONTAL JOINTS BETWEEN SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE OF AN OVERLAPPING TYPE, SEALED FOR WATER-TIGHTNESS USING A DOUBLE ROW OF AN ELASTOMERIC OR MASTIC-LIKE SEALANT.
- PIPE TO MANHOLE JOINTS SHALL BE AS FOLLOWS:
 - ELASTOMERIC, RUBBER SLEEVE WITH WATER-TIGHT JOINTS AT THE MANHOLE OPENING AND PIPE SURFACES;
 - CAST INTO THE WALL OR SECURED WITH STAINLESS STEEL CLAMPS;
 - ELASTOMERIC SEALING RING CAST IN THE MANHOLE OPENING WITH SEAL FORMED ON THE SURFACE OF THE PIPE BY COMPRESSION OF THE RING; AND
 - NON-SHRINK GROUTED JOINTS WHERE WATER-TIGHT BONDING TO THE MANHOLE AND PIPE CAN BE OBTAINED.
- ALL PRECAST SECTIONS AND BASES SHALL BE COATED ON THE EXTERIOR WITH A BITUMINOUS DAMP-PROOFING COATING.
- PRECAST BASES SHALL BE PLACED ON A 6-INCH LAYER OF COMPACTED BEDDING MATERIAL THAT CONFORMS TO THE ASTM C33/C33M NO. 67 STONE STANDARD IN EFFECT WHEN THE STONE IS PROCESSED BY THE MANUFACTURER, AVAILABLE AS NOTED IN APPENDIX D. THE EXCAVATION SHALL BE DEWATERED WHILE PLACING BEDDING MATERIAL AND SETTING THE BASE OR POURING CONCRETE.
- CONCRETE FOR MANHOLES AND CONCRETE GRADE RINGS SHALL CONFORM TO THE REQUIREMENTS FOR CLASS AA CONCRETE IN THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- REINFORCING FOR CONCRETE MANHOLES AND CONCRETE GRADE RINGS SHALL BE STEEL OR STRUCTURAL FIBERS THAT CONFORM TO THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- PRECAST CONCRETE BARREL SECTIONS, CONES, AND BASES SHALL BE CERTIFIED BY THEIR MANUFACTURER(S) AS CONFORMING TO THE ASTM C478 STANDARD IN EFFECT AT THE TIME THE BARREL SECTIONS, CONES, AND BASES ARE MANUFACTURED.
- WET WELLS SHALL BE TESTED PRIOR TO OPERATION USING EXFILTRATION TESTING METHOD ACI 308.1 METHOD HST-NIL IN EFFECT AT THE TIME THE WET WELL IS INSTALLED, AVAILABLE AS NOTED IN APPENDIX D. ANY VISIBLE SIGNS OF LEAKAGE SHALL BE REPAIRED AND RETESTED PRIOR TO PLACING THE WET WELL IN SERVICE.
- THE WET WELL FLOOR SHALL HAVE A MINIMUM SLOPE OF 1 TO 1 TO THE HOPPER BOTTOM.
- ALARM SIGNAL SHALL BE ACHIEVED IN ANY ONE OF THE FOLLOWING:
 - HIGH WATER FLOOD ALARM;
 - HIGH WATER TRANSDUCER ALARM;
 - PUMP 1 FAIL;
 - PUMP 2 FAIL;
 - PUMP 1 SEAL FAIL;
 - PUMP 2 SEAL FAIL;
 - PANEL TEMP ALARM;
 - LOSS OF POWER (FROM LINE OR GENERATOR);
 - HIGH WATER AND LOW WATER ALARM TRIGGERS SHALL BE SEPARATE DEVICES, INDEPENDENT OF PUMP WET WELL LEVEL CONTROL SYSTEM.
 - FOR THE POWER SOURCE FOR THE ALARM SYSTEM SHALL BE THE MAIN LINE POWER WITH A BACKUP BATTERY SYSTEM, WHICH SHALL BE CONNECTED AUTOMATICALLY SHOULD MAIN POWER FAILURE;
 - BACK-UP POWER SUPPLY FROM ON-SITE GENERATOR;
 - INSTALL A FLOW METER THAT RECORDS CONTINUOUS FLOW AND HAS THE CAPABILITY TO TOTALIZE;
 - INSTALL A WARNING SIGN ON THE ACCESS DOOR STATING THE BELOW:

PUMPS AND LEVEL CONTROLS TO BE SUPPLIED WITH A MINIMUM OF 50FT CABLES TO ALLOW FOR NO JUNCTION BOXES FOR PUMP CABLES OR FLOAT CABLES;
- SUBMERSIBLE TRANSMITTER (LEVEL RATT OR EQUAL) TO BE USED AS PRIMARY LEVEL CONTROLS WITH KWIK SWITCH 2-FLOAT BACKUP;
- PANEL TO BE NEMA 4X SS, DEAD FRONT WITH INNER DOOR;
 - CONTROLLER WILL BE PRIMEX LEVEL VIEW (OR EQUAL);
 - LEVEL VIEW CONTROLLER TO BE MODIFIED FROM STOCK PROGRAMMING TO PROVIDE INPUT AND DISPLAY FROM FLOW METER, WITH 4-20MA GPS AND PULSE FOR TOTALIZATION;
 - ONE PULSE PER 100 GALLONS PUMPED;
 - ALL OPERATOR CONTROLS/LIGHTS/SWITCHES TO BE MOUNTED ON INNER DOOR;
 - PANEL TO HAVE BATTERY BACK-UP FOR LEVEL CONTROLS AND AUXILIARY ALARMS;
 - PANEL TO HAVE 4-20MA TEMPERATURE SENSOR FEEDING TO LEVEL VIEW CONTROLLER.

REVISIONS

07/15/2020 - REVISE PUMP STATION DIAMETER IN THE PLAN VIEW AND DRY WELL DIAMETER IN THE ELEVATION VIEW.
07/29/20 - REVISE FORCE MAIN DIAMETER, PUMP STATION AND DRY WELL DETAILS AND ADD NOTES PER RECOMMENDATIONS FROM THE PUMP SUPPLIER.
09/02/20 - REVISE VALVE VAULT PLAN VIEW TO LABEL CHECK VALVES; ADD NOTE #1 TO PUMP STATION NOTES; AND REVISE NOTE 3 AND ADD NOTE 6 TO PUMP STATION INSTALLATION NOTES.

PUMP STATION DESIGN CALCULATIONS:

DAILY FLOW:

DAILY FLOW BASED ON 10 GALLONS PER DAY PER EMPLOYEE FOR WAREHOUSE USE.
(Env-Wq, 1008.03 Table 1008-1) AND ASSUMES MAXIMUM OF 325 EMPLOYEES AT TAX MAP 255, LOT 21 AND 75 EMPLOYEES AT TAX MAP 255, LOT 21-2

400 EMPLOYEES x 10 GPD/EMPLOYEE = 4,000 GPD

INFILTRATION: 300 GAL./INCH DIA./MILE/DAY
350 FEET OF 8" DIA. PVC SEWER COLLECTION
70 FEET OF 8" DIA. PVC SEWER MAIN

INFILTRATION OF GRAVITY LINES = 112 GPD

TOTAL DAILY DESIGN FLOW = 4,112 GPD

WET WELL AND PUMP OPERATION NOTES:

WET WELL INVERTS:

INV. IN = 274.50'
HIGH WATER ALARM = 273.00'
LAG PUMP ON = 272.50'
LEAD PUMP ON = 272.00'
DOSE DEPTH = 1.00 FT.
PUMP OFF = 271.00'
DEPTH OF PUMP = 3.00 FT
SUBMERSION
CHAMBER BOTTOM = 268.00'

PUMP HEAD CALCULATIONS:

STATIC HEAD:
PUMP HEAD = PROPOSED INNOVATION DRIVE (SM#4) INV. IN = 291.50'
PUMP OFF ELEV. = 221.00'
STATIC HEAD = 70.50'

HEAD CREATED BY PIPE AND FITTINGS LOSS:
HEAD FROM PIPE & FITTINGS = 19.5 FT. @ 70 GPM

TOTAL DYNAMIC HEAD:
TOTAL DYNAMIC HEAD = STATIC HEAD + HEAD FROM PIPE/FITTINGS
TOTAL DYNAMIC HEAD = 90.0 FT

PUMP INFORMATION:
PUMP = BARNES 3" SUBMERSIBLE GRINDER SEWAGE PUMPS
MODEL = XQH430X2 3.0 HP WITH 4.125" IMPELLERS
PUMP OPERATIONAL CAPACITY = 70 GPM
RUN TIME = 5.39 MIN.

PUMP STATION INSTALLATION NOTES:

- THE PUMP STATION IS BEING INSTALLED IN AN AREA WITH POTENTIAL SEASONAL HIGH WATER TABLE EFFECTS. THE CONCRETE CHAMBER SHALL HAVE AN INTEGRAL FOOTING RING THAT ADDS SOIL LOAD TO THE STRUCTURE TO FIGHT THE EFFECTS OF BUOYANCY.
- DURING INITIAL CONSTRUCTION, DEWATERING WILL BE NECESSARY IN THE HOLE FOR THE PUMP STATION. ONCE BACKFILLED, THERE SHOULD BE NO THREAT OF FLOATION.
- THE PUMP STATION WET WELL SHALL BE CONSIDERED CLASS I, GROUP D, DIVISION 2 AND THE DRY WELL SHALL BE CONSIDERED CLASS I, GROUP D, UNCLASSIFIED PURSUANT TO THE 2012 NFPA TABLE 4.2 UNLESS OTHERWISE CLASSIFIED BY AUTHORITY HAVING JURISDICTION (AHJ).
- ALL ELECTRICAL COMPONENTS SHALL MEET ALL REQUIREMENTS OF THE NATIONAL ELECTRICAL CODES.
 - SUBMERSIBLE PUMPS FOR SEWAGE PUMPING STATIONS SHALL CONFORM TO THE NEC REQUIREMENTS ADOPTED BY REFERENCE IN THE STATE BUILDING CODE PURSUANT TO RSA 155-A:1, IV, FOR INSTALLATION IN AREAS CLASSIFIED BY THE NEC AS CLASS I, DIVISION 1.
 - ELECTRICAL SYSTEMS AND COMPONENTS, INCLUDING MOTORS, LIGHTS, CABLE, CONDUITS, SWITCH BOXES, AND CONTROL CIRCUITS SHALL BE PROTECTED FROM FLOODING IN ACCORDANCE WITH ENV-WQ 705.01.
 - ELECTRICAL SYSTEMS AND COMPONENTS INCLUDING MOTORS, LIGHTS, CABLE, CONDUITS, SWITCH BOXES AND CONTROL CIRCUITS IN ENCLOSED OR PARTIALLY ENCLOSED SPACES WHERE FLAMMABLE MIXTURES OCCASIONALLY MAY BE PRESENT, INCLUDING RAW SEWAGE WET WELLS, SHALL BE CERTIFIED BY THEIR MANUFACTURER AS:
 - COMPLYING WITH THE NEC REQUIREMENTS ADOPTED BY REFERENCE IN THE STATE BUILDING CODE PURSUANT TO RSA 155-A:1, IV, FOR CLASS I, DIVISION 1 LOCATIONS; OR
 - BEING RATED FOR CLASS I DIVISION 2 REQUIREMENTS WHERE MECHANICAL VENTILATION IS PROVIDED IN ACCORDANCE WITH THE NFPA AS ADOPTED BY REFERENCE IN THE STATE FIRE CODE IN SAF-C 6000.
 - ALL ELECTRICAL EQUIPMENT AND WORK SHALL COMPLY WITH THE REQUIREMENTS OF NEC AS ADOPTED BY REFERENCE IN THE STATE BUILDING CODE PURSUANT TO RSA 155-A:1, IV, AND NFPA AS ADOPTED BY REFERENCE IN THE STATE FIRE CODE IN SAF-C 6000 IN EFFECT AT THE TIME OF INSTALLATION.
- OWNERS SHALL SUBMIT PUMP STATION OPERATIONS AND MAINTENANCE MANUAL TO NHDES WASTEWATER ENGINEERING BUREAU WITHIN 60 DAYS FOLLOWING COMPLETION OF PUMP STATION CONSTRUCTION. OEM MANUAL SHALL PROVIDE INFORMATION AND GUIDANCE FOR PUMP STATION OPERATION AND MAINTENANCE TO INCLUDE OWNERS AND OPERATOR CONTACT INFORMATION INCLUDING EMAIL ADDRESSES.

PUMP STATION DETAIL

NOT TO SCALE

PUMP STATION AND DRY WELL DETAILS

TAX MAP 255, LOT 21
INNOVATION DRIVE

ROCHESTER, NH

PREPARED FOR:

PREP PARTNERS GROUP, LLC.

MAY 2020

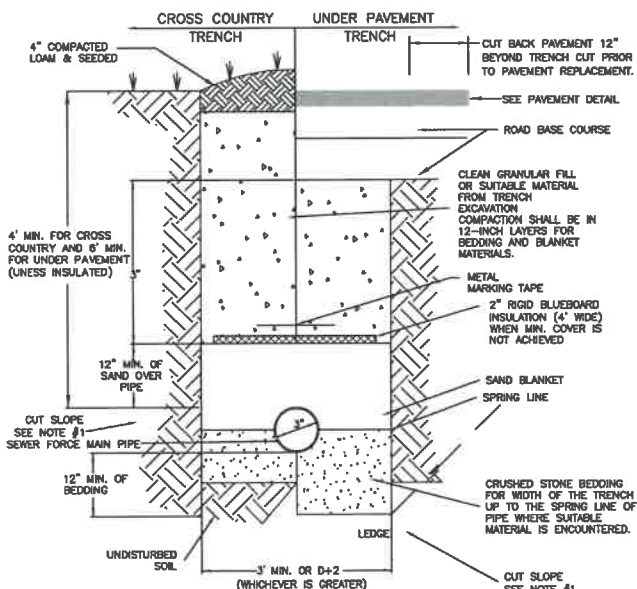
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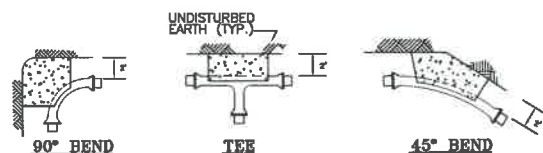
31 Mooney Street, Alton, N.H. 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

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



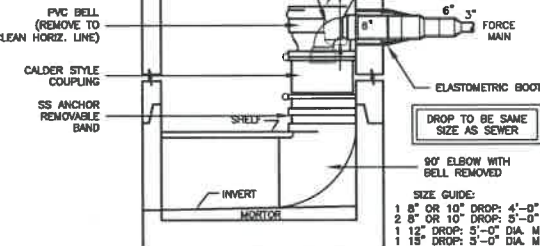
- NOTES:
1. PIPES MAY BE INSTALLED BY EXCAVATING AN OPEN TRENCH WITH SIDE SLOPES OF 1:1 MAXIMUM TO A DEPTH OF 4-FT. INSTALLATIONS DEEPER THAN 4-FT REQUIRE THE USE OF A TRENCH BOX.
 2. PIPE MATERIALS SHALL BE AS SPECIFIED ON THE DESIGN PLAN.
 3. HOPE PRESSURE MAIN PIPE SECTIONS SHALL BE JOINED BY THERMAL HEAT FUSION. CONNECTIONS OR TRANSITIONS TO NON-HOPE COMPONENTS SHALL BE MADE WITH FITTINGS APPROVED FOR HOPE CONNECTIONS. THE WELDING TECHNICIAN SHALL BE EXPERIENCED IN HOPE HEAT FUSION WELDING WITH MINIMUM OF 500 HOURS OF WELDING EXPERIENCE.
 4. SAND BLANKET MAY BE OMITTED FOR REINFORCED CONCRETE PIPE.
 5. WHERE SHEETING IS PLACED ALONGSIDE THE PIPE AND EXTENDS BELOW MID-DIAMETER, THE SHEETING SHALL BE CUT OFF AND LEFT IN PLACE TO AN ELEVATION NOT LESS THAN ONE FOOT ABOVE THE TOP OF THE PIPE AND AT LEAST 3 FEET BELOW FINISHED GRADE.
 6. THE PIPE SAND BLANKET MATERIAL SHALL BE GRADED SAND FREE FROM ORGANIC MATERIALS, GRADED SUCH THAT 100 PERCENT PASSES A 1/2-INCH SIEVE AND A MAXIMUM OF 15 PERCENT PASSES A #200 SIEVE.
 7. TRENCH BACKFILL MATERIAL IN ROADWAY LOCATIONS SHALL BE NATURAL MATERIALS EXCAVATED FROM THE TRENCH DURING CONSTRUCTION, EXCLUDING:
 - (1) DEBRIS;
 - (2) PIECES OF PAVEMENT;
 - (3) ORGANIC MATTER;
 - (4) TOP SOIL;
 - (5) WET OR SOFT MUCK;
 - (6) PEAT OR CLAY;
 - (7) EXCAVATED LEDGE MATERIAL;
 - (8) ROCKS OVER 8 INCHES IN THE LARGEST DIMENSION; AND
 - (9) ANY MATERIAL NOT APPROVED BY THE ENGINEER.



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

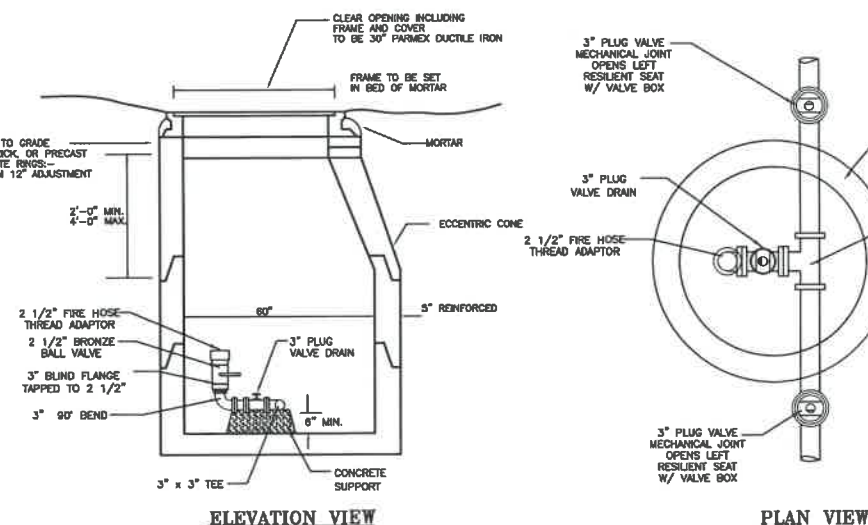
| PIPE SIZE | 90° BEND | TEE | PLUG | 45° BEND | 22 1/2° SMALLER |
|-----------|----------|-----|------|----------|-----------------|
| 3" | 3 | 4 | 3 | 2 | 2 |

NOTE: DIMENSIONS & CONSTRUCTION OF DROP MANHOLE TO BE SIMILAR TO TYPICAL MANHOLE EXCEPT AS SHOWN.



REVISION: 07/29/20 - REVISE FORCE MAIN DIAMETER

- NOTES:
1. IT IS INTENTION OF THE CITY OF ROCHESTER PUBLIC WORKS DEPARTMENT THAT THE MANHOLE, INCLUDING ALL COMPONENT PARTS, HAVE ADEQUATE SPACE, STRENGTH AND LEAK PROOF QUALITIES CONSIDERED NECESSARY BY THE PUBLIC WORKS DEPARTMENT FOR THE INTENDED SERVICE. SPACE REQUIREMENTS AND CONFIGURATIONS SHALL BE AS SHOWN ON THE DRAWING. MANHOLES MAY BE AN ASSEMBLY OF PRECAST SECTIONS, WITH OR WITHOUT STEEL REINFORCEMENT, WITH ADEQUATE JOINTING, OR CONCRETE CAST MONOLITHICALLY IN PLACE WITH OR WITHOUT REINFORCEMENT. IN ANY APPROVED MANHOLE, THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND LOADS OF 8 TONS (81-20 LBS) WITHOUT FAILURE AND PREVENT LEAKAGE IN EXCESS OF ONE GALLON PER DAY PER VERTICAL FOOT OF MANHOLE, CONTINUOUSLY FOR THE LIFE OF THE STRUCTURE. A PERIOD GENERALLY IN EXCESS OF 25 YEARS IS TO BE UNDERSTOOD IN BOTH CASES.
 2. BARRELS AND CONES OF CONCRETE OR REINFORCED CONCRETE, OR FORMED IN PLACE REINFORCED CONCRETE.
 3. PRECAST CONCRETE BARREL SECTIONS, CONES AND BASES SHALL CONFORM TO ASTM C478. ALL PRECAST SECTIONS AND BASES SHALL HAVE THE DATE OF MANUFACTURE AND THE NAME OR TRADEMARK OF THE MANUFACTURER IMPRESSED OR INDUBLY MARKED ON THE INSIDE WALL.
 4. VACUUM LEAKAGE TESTING (ASTM C1244) SHALL BE PERFORMED FOR ALL MANHOLES. LOW-PRESSURE AIR TESTING (ASTM F1417) AND DEFLECTION TESTING USING A "DO/NO DO" MANHOLE, FOR ALL SANITARY SEWERS, IN ACCORDANCE WITH THE NHDES SEWER REGULATIONS AND THE CITY OF ROCHESTER DEPARTMENT OF PUBLIC WORKS REQUIREMENTS.
 5. INVERTS AND SHELVES: MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW. AT CHANGES IN DIRECTION, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPE TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY. BRICK MASONRY CONFORM WITH ASTM C32. INVERTS AND SHELVES SHALL NOT BE INSTALLED UNTIL AFTER SUCCESSFUL TESTING IS COMPLETED.
 6. FRAMES AND COVERS: MANHOLE FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30-INCH CLEAR OPENING. A 3-INCH (MINIMUM HEIGHT) LETTER "SEWER" FOR SEWERS OR "DRAIN" FOR DRAINS SHALL BE PLAINLY CAST INTO THE CENTER OF EACH COVER. SEWER MANHOLE FRAME AND COVER: PAXHEX 32" D.I. MANHOLE FRAME AND COVER SEWER - E.J. PRESCOTT PRODUCTS® 22113-32-S. IMMEDIATELY FOLLOWING COMPLETION OF THE LEAKAGE TEST, THE FRAME AND COVER SHALL BE PLACED ON THE TOP OF THE MANHOLE OR SOME OTHER MEANS USED TO PREVENT ACCIDENTAL ENTRY BY UNAUTHORIZED PERSONS, CHILDREN, OR ANIMALS, UNTIL THE CONTRACTOR IS READY TO MAKE FINAL ADJUSTMENT TO GRADE.
 7. BEDDING: MIN. 8" OF 3/4" CRUSHED STONE (12" IN LEDGE) FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33:
 - 100% PASSING 1" SIEVE
 - 90-100% PASSING 3/4" INCH SIEVE
 - 20-55% PASSING 3/8" INCH SIEVE
 - 0-10% PASSING #4 SIEVE
 - 0-5% PASSING #8 SIEVE
 8. WHERE ORDERED BY THE ENGINEER TO STABILIZE THE BASE, CRUSHED STONE MIN. 3/4" SHALL BE USED. CONCRETE FOR DROP SUPPORT SHALL CONFORM TO THE REQUIREMENT FOR CLASS A (3000 PSI) CONCRETE OF THE NEW HAMPSHIRE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS STANDARD SPECIFICATIONS AS FOLLOWS:
 - CEMENT: 8.0 BAGS PER CUBIC YARD
 - WATER: 5.75 GALLONS PER BAG CEMENT
 - MAXIMUM SIZE OF AGGREGATE: 1 INCH.
 9. FLEXIBLE JOINT: A FLEXIBLE JOINT SHALL BE PROVIDED WITHIN THE FOLLOWING DISTANCES:
 - RCP & CI PIPE - ALL SIZES - 48"
 - AC & VC PIPE - UP THROUGH 12" DIA. - 18" SEE NOTE 9.A.
 - AC & VC PIPE - LARGER THAN 12" DIA. - 36"
 - DI PIPE - NONE REQUIRED
 - PVC (ASTM 3034) - UP THROUGH 15" DIA. - NONE REQUIRED
 - PVC (ASTM F 879) - LARGER THAN 15" DIA. - 48" TO 60"
 - PVC (ASTM F 790) - ALL SIZES - 48" TO 60"
 10. UNDER SEVERE CONDITIONS WHEN DIFFERENTIAL SETTING CANNOT BE CONTROLLED WITHIN NORMAL LIMITS, VARIATIONS IN THE STUB LENGTH MAY BE NECESSARY. OTHER PLASTIC PIPES SHALL BE REVIEWED ON A CASE BY CASE BASIS. VARIATIONS IN SHALLOW MANHOLE IN LIEU OF A CONE SECTION, WHEN MANHOLE DEPTH IS LESS THAN 8 FEET, A REINFORCED CONCRETE SLAB COVER MAY BE USED HAVING AN ECCENTRIC ENTRANCE OPENING AND CAPABLE OF SUPPORTING H-20 LOADS.
 11. MANHOLE STEPS SHALL NOT BE PROVIDED WITHIN THE MANHOLES AS DIRECTED BY THE CITY OF ROCHESTER.
 12. MINIMUM SIZE PIPE FOR HOUSE SERVICE SHALL BE 4 INCHES.
 13. PIPE AND JOINT MATERIALS P.V.C. (POLY VINYL CHLORIDE) PIPE: ALL P.V.C. PIPE AND FITTINGS SHALL CONFORM TO THE MOST RECENT REQUIREMENTS OF ASTM SPECIFICATIONS FOR TYPE P301 POLY VINYL CHLORIDE (P.V.C.) SEWER PIPE AND FITTINGS. DESIGNATION D-3034 AND ASTM SPECIFICATIONS FOR SEWER PIPE, JOINTS USING ELASTOMERIC SEALS, DESIGNATION D-3212. MANUFACTURER'S CERTIFICATE OF COMPLIANCE SHALL BE FURNISHED TO THE ENGINEER, PRIOR TO INSTALLATION. METHODS OF SHIPPING AND STORAGE ON SITE SHALL BE SUCH AS TO AVOID INJURY TO THE PIPE. DAMAGED PIPE SHALL BE REJECTED AND REMOVED FROM THE JOB. MINIMUM "PIPE STIFFNESS" (I/Y) AT 7 1/2' DEFLECTION SHALL BE 45 PSI FOR SIZE WHEN TESTED IN ACCORDANCE WITH ASTM METHODS OF TEST D-2412. "EXTERNAL LOADING" PROPERTIES OF PLASTIC PIPE BY PARALLEL - PLATE LOADING. ALL P.V.C. PIPE SHALL BE TYPE SDR-35 (A MEASURE OF THICKNESS AND RIGIDITY) AND SHALL HAVE ELASTOMERIC GASKET JOINTS. SOLVENT CEMENT JOINTS SHALL NOT BE ALLOWED. P.V.C. USED FOR FORCE MAINS SHALL CONFORM TO ASTM D-2241 AND D-1784 (CLASS 1254-B). A SAFETY FACTOR OF 2.5 SHALL BE USED FOR PRESSURE RATING DETERMINATION WITH A STANDARD DIMENSION RATIO (SDR) NO HIGHER THAN 21.
 14. DAMAGED PIPE SHALL BE REJECTED AND REMOVED FROM THE JOB SITE.
 15. JOINTS SHALL BE DEPENDENT UPON A NEOPRENE OR ELASTOMERIC GASKET FOR WATER TIGHTNESS. ALL JOINTS SHALL BE PROPERLY MATCHED WITH THE PIPE MATERIAL USED. WHERE DIFFERING MATERIALS ARE TO BE CONNECTED, AS AT THE STREET SEWER WYE OR AT THE FOUNDATION WALL, APPROPRIATE MANUFACTURED ADAPTERS SHALL BE USED.
 16. TEES OR WYES: WHERE A TEE OR WYE IS NOT AVAILABLE IN THE EXISTING STREET SEWER, AN APPROPRIATE CONNECTION SHALL BE MADE, FOLLOWING MANUFACTURER'S INSTRUCTIONS USING A BOLTED, CLAMPED, OR CROCK-CEMENTED SADDLE TAPPED INTO A SMOOTHLY DRILLED OR SAWN OPENING IN THE SEWER. THE PRACTICE OF BREAKING AN OPENING WITH A SLEDGE HAMMER, STUFFING CLOTH OR OTHER SUCH MATERIAL AROUND THE JOINT, OR APPLYING MORTAR TO HOLD THE CONNECTION, AND ANY OTHER SIMILAR CRUDE PRACTICES OR IMPROVISED OR HASTY IMPROVATIONS WILL NOT BE PERMITTED. THE CONNECTION SHALL BE CONCRETE ENCASED AS SHOWN IN THE DETAIL UP TO AND INCLUDING 15" DIAMETER. DOES (NOT APPLY TO INSTALLATIONS WHERE TEES & WYES ARE USED).
 17. PIPE INSTALLATION: THE PIPE SHALL BE HANDLED, PLACED, AND JOINTED IN ACCORDANCE WITH INSTALLATION GUIDES OF THE APPROPRIATE MANUFACTURER. IT SHALL BE CAREFULLY BEDDED ON A 4 INCH LAYER OF CRUSHED STONE AS SPECIFIED IN NOTE 10. BEDDING AND RE-FILL FOR A DEPTH OF 12 INCHES ABOVE THE TOP OF THE PIPE SHALL BE CAREFULLY AND THOROUGHLY TAMPED BY HAND OR WITH THE APPROPRIATE MECHANICAL DEVICES. THE PIPE SHALL BE LAID AT A CONTINUOUS AND CONSTANT GRADE FROM THE STREET SEWER CONNECTION TO THE HOUSE FOUNDATION AT A GRADE OF NOT LESS THAN 1/8 INCH PER FOOT. PIPE JOINTS MUST BE MADE UNDER DRY CONDITIONS. IF WATER IS PRESENT, ALL NECESSARY STEPS SHALL BE TAKEN TO DRY THE TRENCH.
 18. TESTING: THE COMPLETED HOUSE SEWER SHALL BE SUBJECTED TO A LEAKAGE TEST IN ANY OF THE FOLLOWING MANNERS (PRIOR TO BACKFILLING):
 - A. AN OBSERVATION TEE SHALL BE INSTALLED AS SHOWN AND, WHEN READY FOR TESTING, AN INFLATABLE BLADDER OR PLUG SHALL BE INSERTED JUST UPSTREAM FROM THE OPENING IN THE TEE AFTER INFLATION. WATER SHALL BE INTRODUCED INTO THE SYSTEM ABOVE THE PLUG TO A HEIGHT OF 6 FEET ABOVE THE LEVEL OF THE PLUG.
 - B. THE PIPE SHALL BE LEFT EXPOSED AND LIBERALLY HOSED WITH WATER, TO SIMULATE, AS NEARLY AS POSSIBLE, WET TRENCH CONDITIONS OR, IF THE TRENCH IS WET, THE GROUND WATER SHALL BE PERMITTED TO RISE IN THE TRENCH OVER THE PIPE INSPECTIONS FOR LEAKS SHALL BE MADE WITH A FLASHLIGHT.
 - C. DRY FLUORESCENCE DYE SHALL BE SPRINKLED INTO THE TRENCH OVER THE PIPE. IF THE TRENCH IS DRY, THE PIPE SHALL BE LIBERALLY HOSED WITH WATER, OR IF THE TRENCH IS WET, GROUND WATER SHALL BE PERMITTED TO RISE IN THE TRENCH OVER THE PIPE. OBSERVATION FOR LEAKS SHALL BE MADE IN THE FIRST DOWNSTREAM MANHOLE. LEAKAGE OBSERVED IN ANY OF THE ABOVE ALTERNATE TESTS SHALL BE CAUSE FOR NON-ACCEPTANCE AND THE PIPE SHALL BE DUG-UP IF NECESSARY AND RE-LAID SO AS TO ASSURE WATER-TIGHTNESS.
 19. ILLEGAL CONNECTION: NOTHING BUT SANITARY WASTE FLOW FROM THE HOUSE TOILETS, SINKS, LAUNDRY ETC. SHALL BE PERMITTED. ROOF LEADERS, FOOTING DRAINS OR SLUMP PUMPS OR ANY OTHER SIMILAR CONNECTION CARRYING RAIN WATER, DRAINAGE, OR GROUND WATER, SHALL NOT BE PERMITTED.
 20. HOUSE AND WATER SERVICE SHOULD NOT BE LAID IN THE SAME TRENCH AS SEWER SERVICE, BUT WHEN NECESSARY, SHALL BE PLACED ABOVE AND TO THE SIDE OF THE HOUSE SEWER AS SHOWN.
 21. BEDDING: MIN. 3/4" CRUSHED STONE (12" IN LEDGE) FREE FROM CLAY, LOAM, ORGANIC MATERIAL AND MEETING ASTM C33.8
 - 100% PASSING 1" SIEVE
 - 90-100% PASSING 3/4" INCH SIEVE
 - 20-55% PASSING 3/8" INCH SIEVE
 - 0-10% PASSING #4 SIEVE
 - 0-5% PASSING #8 SIEVE
 22. WHERE ORDERED BY THE ENGINEER TO STABILIZE THE TRENCH BASE, MIN. 3/4" CRUSHED STONE SHALL BE USED.
 23. LOCATION: THE LOCATION OF THE TEE OR WYE SHALL BE RECORDED AND PLOTTED IN THE MUNICIPAL RECORDS. IN ADDITION, A FERROUS METAL ROD OR PIPE SHALL BE PLACED OVER THE TEE OR WYE AS DESCRIBED IN THE TYPICAL "CHIMNEY". DETAIL TO BE USED IN LOCATING THE BURIED PIPE WITH A DIP NEEDLE OR PIPEFINDER.
 24. CONCRETE: CONCRETE SHALL CONFORM TO THE REQUIREMENTS FOR CLASS A (3000 PSI) CONCRETE OF THE NEW HAMPSHIRE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS STANDARD SPECIFICATIONS AS FOLLOWS:
 - CEMENT: 8.0 BAGS/C.Y.
 - WATER: 5.75 GALLONS/BAG OF CEMENT
 - AGGREGATE: 11/2" MAX.
 25. CHIMNEYS: IF VERTICAL DROP INTO SEWER IS GREATER THAN 4', A CHIMNEY SHALL BE CONSTRUCTED FOR THE HOUSE CONNECTION. 25" - ALL DRAINAGE AND SEWER STRUCTURES INCLUDING FRAMES AND GRATES SHALL BE H-20 LOADING. 25" ALL SEWER CONSTRUCTION SHALL BE CONSTRUCTED TO NHDES AND THE CITY OF ROCHESTER STANDARDS & SPECIFICATIONS.
 27. HORIZONTAL JOINTS: BETWEEN SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE OF A TYPE APPROVED BY THE COMMISSION, WHICH TYPE SHALL IN GENERAL DEPEND UPON WATER TIGHTNESS UPON AN ELASTOMERIC OR MASTIC-LIKE GASKET.
 28. PIPE TO MANHOLE JOINTS: SHALL BE ONLY AS APPROVED BY THE COMMISSION AND IN GENERAL, WILL DEPEND FOR WATER TIGHTNESS UPON EITHER AN APPROVED NON-SHRINKING MORTAR OR ELASTOMERIC SEALANT.
 29. FOR BUTYLMATIC TYPE JOINTS, THE AMOUNT OF SEALANT SHALL BE SUFFICIENT TO FILL AT LEAST 75% OF THE JOINT CAVITY APPROVED BUTYLMATIC SEALANTS: RAW-NIX KENT SEAL NO.2 EZ
 30. THE CONTRACTOR SHALL NOTIFY DWG-SAFE 1-888-344-7233 PRIOR TO CONSTRUCTION.



ELEVATION VIEW

PLAN VIEW

CLEANOUT MANHOLE DETAIL

NOT TO SCALE

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

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

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

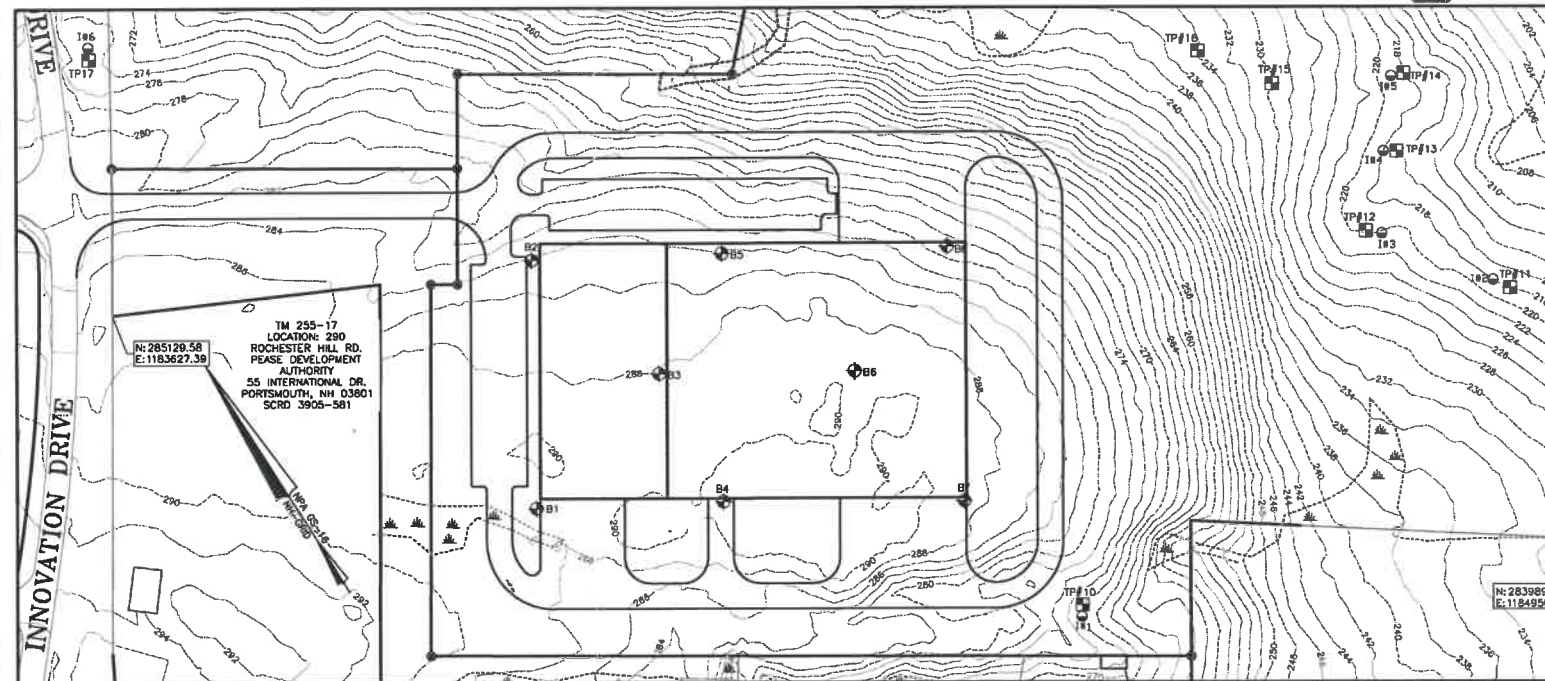
FILE NO. 104
PLAN NO. C-3012
DWG. NO. 19289/SP-1
F.B. NO.

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

NORWAY PLAINS ASSOCIATES, INC.

SEWER
FORCE MAIN DETAILS
TAX MAP 255, LOT 21
INNOVATION DRIVE
ROCHESTER, NH
PREPARED FOR:
PREP PARTNERS GROUP, LLC.
MAY 2020

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



SCALE 1" = 100'

INFILTRATION TEST

| INFILTRATION BASIN | INFILTRATION TEST | DEPTH | SOIL TYPE | MEASURED INFILTRATION RATE (IN/HR) | | | | |
|--------------------|-------------------|-------|------------|------------------------------------|---------|---------|---------|---------|
| | | | | ROUND 1 | ROUND 2 | ROUND 3 | ROUND 4 | AVERAGE |
| 2 | IT-1 | 24 | SAND | 8.44 | 9.0 | 9.19 | 9.19 | 8.95 |
| 1 | IT-2 | 30 | SAND | 6.75 | 6.9 | 7.06 | 7.38 | 7.02 |
| 1 | IT-3 | 24 | SAND | 20.50 | 19.44 | 18.00 | 16.56 | 18.56 |
| 1 | IT-4 | 30 | LOAMY SAND | 15.81 | 13.48 | 13.00 | 11.81 | 13.56 |
| 1 | IT-5 | 30 | LOAMY SAND | 6.31 | 6.81 | 7.63 | 7.50 | 7.06 |
| 3 | IT-6a | 30 | SAND | 18.5 | 15.56 | 14.69 | 14.56 | 15.83 |

TEST PIT

TEST PIT #10 ELEVATION = 272.0'
 0-14" 10YR 3/3 FINE SANDY LOAM
 14-26" 10YR 5/6 FINE SANDY LOAM, COMMON ROOTS
 26-30" 10YR 5/4 SANDY LOAM, GRANULAR, FRIABLE
 ESHWT @ 30" ELEVATION = 269.5'

TEST PIT #11 ELEVATION = 218.0'
 0-10" 10YR 3/3 FINE SANDY LOAM
 10-28" 10YR 5/6 FINE SANDY LOAM, COMMON ROOTS, GRANULAR, FRIABLE
 28-60" 2.5 Y 5/3 LOAMY SAND FIRM IN PLACE WITH REDOX CONCENTRATIONS
 ESHWT @ 28" ELEVATION = 215.7'

TEST PIT #12 ELEVATION = 219.5'
 0-10" 10YR 3/3 FINE SANDY LOAM,
 10-28" 10YR 5/6 FINE SANDY LOAM, GRANULAR, FRIABLE
 28-38" 10YR 5/3 FINE LOAMY SAND WITH REDOX CONCENTRATIONS
 38-48" 10YR 5/3 COARSE SAND VERY FIRM IN PLACE
 48-60" 10YR 5/2 FIRM LOAMY SAND WITH ROCKS AT BOTTOM OF HOLE
 ESHWT @ 38" ELEVATION = 216.3'

TEST PIT #13 ELEVATION = 216.0'
 0-12" 10YR 3/3 FINE SANDY LOAM
 12-28" 10YR 5/6 SANDY LOAM, GRANULAR, FRIABLE
 28-34" 10YR 5/4 COARSE SAND FIRM IN PLACE
 34-50" 2.5Y 5/4 LOAMY SAND VERY FINE
 ESHWT @ 34" ELEVATION = 213.2'

TEST PIT #14 ELEVATION = 217.0'
 0-8" 10YR 3/3 SANDY LOAM
 8-28" 10YR 5/6 SANDY LOAM, GRANULAR, FRIABLE
 28-48" 2.5Y 5/3 LOAMY SAND, FIRM WITH REDOX
 ESHWT @ 28" ELEVATION = 214.7'

TEST PIT #15 ELEVATION = 229.5'
 0-6" 10YR 3/3 SANDY LOAM
 6-26" 10YR 5/6 SANDY LOAM, GRANULAR, FRIABLE
 26-48" 2.5Y 5/3 LOAMY SAND, FIRM WITH REDOX
 ESHWT @ 26" ELEVATION = 227.3'

TEST PIT #16 ELEVATION = 234.5'
 0-7" 10YR 3/3 SANDY LOAM
 7-26" 10YR 5/6 SANDY LOAM, GRANULAR, FRIABLE
 26-32" 2.5Y 4/4 LOAMY SAND, FIRM WITH FINE ROOTS
 32-72" 2.5Y4/2 LOAMY SAND, MASSIVE, FIRM
 OBSERVED WATER @ 5'
 ESHWT @ 26" (PAN LAYER) ELEVATION = 232.3'

TEST PIT #17 ELEVATION = 274.5'
 0-8" 10YR 3/3 SANDY LOAM
 8-29" 10YR 5/6 SANDY LOAM, GRANULAR, FRIABLE
 29-52" 2.5Y 5/3 LOAMY SAND, FIRM WITH REDOX
 ESHWT @ 29" ELEVATION = 272.1'

NOTES:
 1. TEST PIT NUMBER 10 THRU 17 WERE DUG BY CHARLIE E. KARCHER, ON MAY 13, 2020.
 2. BORING WERE COMPLETED BY JOHN TURNER CONSULTING, INC. ON FEBRUARY 27, 2020.
 3. INFILTRATION TEST WERE COMPLETED BY JOHN TURNER CONSULTING, INC. ON MAY 13 -15, 2020 AND JUNE 12, 2020.

TEST PIT LOGS,
 INFILTRATION TEST RESULTS
 AND
 BORING LOGS
 TAX MAP 255, LOT 21
 INNOVATION DRIVE
 ROCHESTER, NH
 PREPARED FOR:
 PRE PARNETERS GROUP LLC.

MAY 2020

C-28

FILE NO. 104
 PLAN NO. C-3012
 DWG. NO. 19289/SP-1
 F.B. NO.

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

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

NORWAY PLAINS ASSOCIATES, INC.

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

LAND SURVEYORS

CIVIL ENGINEERS

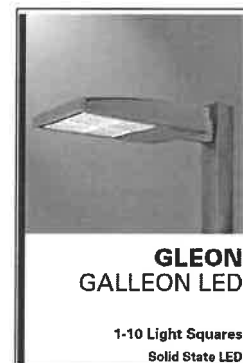
LEGEND

- PROPERTY LINE
- JURISDICTIONAL WETLANDS
- EXISTING OVERHEAD WIRES
- EXISTING LIGHT POLES
- PROPOSED BUILDING
- PROPOSED PAVEMENT
- ☆ PROPOSED PAVEMENT WITH CURBING
- PROPOSED LIGHT POLES
- PROPOSED BUILDING LIGHT FIXTURES
- 4.2 PROPOSED LIGHT FOOTCANDLE
- ☼ PROPOSED LIGHT ISOLUMINATION LINES

| Luminaire Schedule | | | | |
|--------------------|-------|-----|-------------|---|
| Symbol | Label | Qty | Arrangement | Description |
| ○ | S3-1 | 14 | SINGLE | GLEON-AF-01-LED-E1-T3/ SSS4A20SFH1 (20' AFG |
| □ | S3-2 | 4 | BACK-BACK | GLEON-AF-01-LED-E1-T3/ SSS4A20SFH2 (20' AFG |
| ◀ | W4 | 20 | SINGLE | GWC-AF-01-LED-E1-SL4/ WALL MTD 20' |



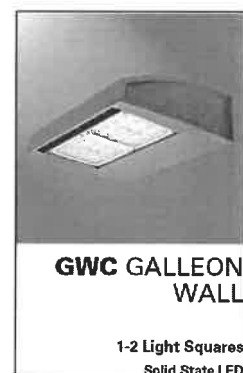
INNOVATION DRIVE



**GLEON
GALLEON LED**

1-10 Light Squares
Solid State LED

S3-1



**GWC GALLEON
WALL**

1-2 Light Squares
Solid State LED

W4

TM 255-17
LOCATION: 290

31

PROP. 150,000 SF
WAREHOUSE & DISTRIBUTION FACILITY

PROP. UNIT A
45,000 SF
(150' X 300')

PROP. UNIT B
105,000 SF
(350' X 300')

LIGHTING PLAN
TAX MAP 255, LOT 21
INNOVATION DRIVE
ROCHESTER, NH

PREPARED FOR:
PREP PARTNERS GROUP, LLC.

MAY 2020

GRAPHIC SCALE



(IN FEET)
1 INCH = 40 FT.

L-1

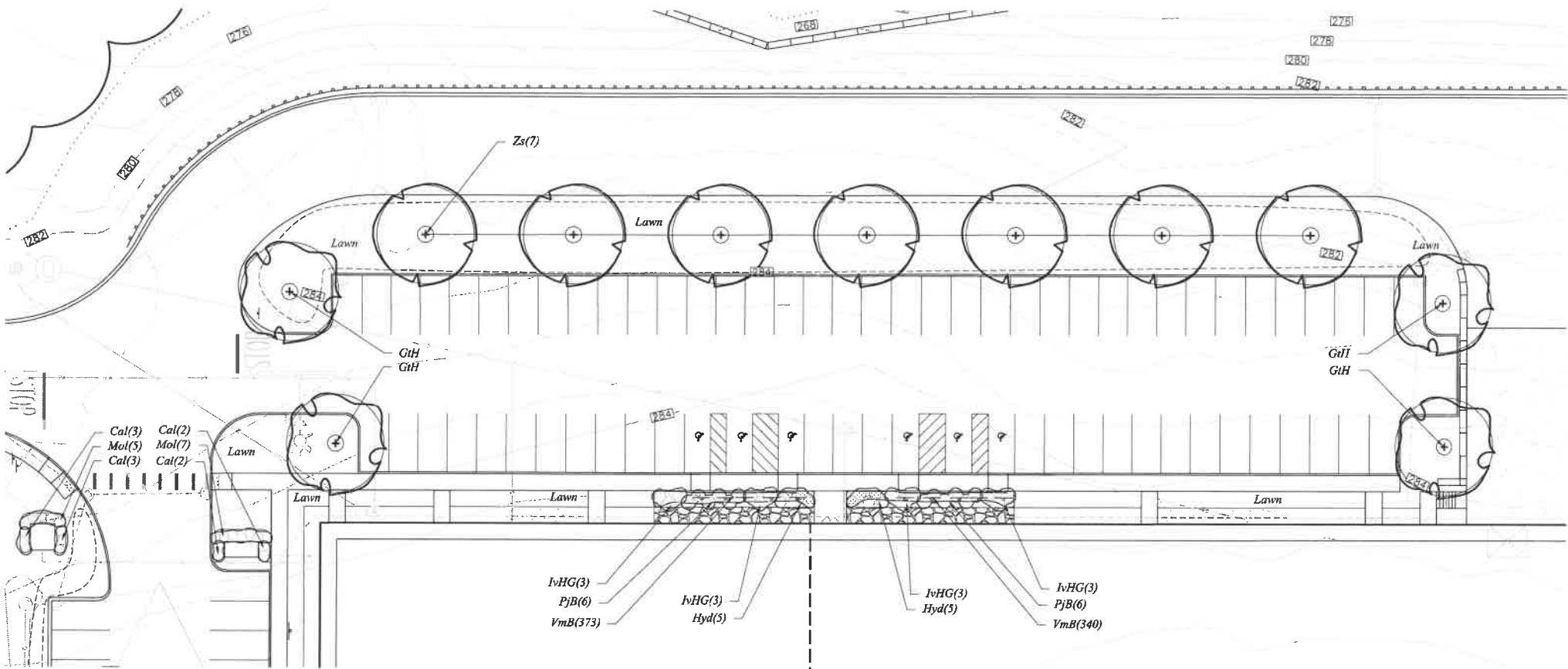
FILE NO. 154
PLAN NO. C-
DWC. NO. 19289/SP-1
F.B. NO.

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NORWAY PLAINS ASSOCIATES, INC.

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



Plant List

TREES

| Symbol | Botanical Name | Common Name | Quantity | Size | Comments |
|--------|--|-----------------------------|----------|------------|----------|
| GtH | <i>Gleditsia triacanthos</i> var. <i>inermis</i> 'Halka' | Halka Thornless Honeylocust | 4 | 2-2.5" cal | |
| Pg | <i>Picea glauca</i> | White Spruce | 5 | 7-8" BB | |
| Zs | <i>Zelkova serrata</i> 'Green Vase' | Green Vase Zelkova | 7 | 2-2.5" cal | |

SHRUBS

| Symbol | Botanical Name | Common Name | Quantity | Size | Comments |
|--------|--|------------------------------------|----------|-----------|----------|
| Hyd | <i>Hydrangea Endless Summer</i> 'Blushing Bride' | Blushing Bride Hydrangea | 10 | 5 gal | |
| PjB | <i>Pieris 'Brouwer's Beauty'</i> | Brouwer's Beauty Andromeda | 12 | 2-2.5' BB | |
| IvHG | <i>Itea virginica</i> 'Henry's Garnet' | Henry's Garnet Virginia Sweetspire | 12 | 5 gal | |

PERENNIALS, GROUNDCOVERS, VINES and ANNUALS

| Symbol | Botanical Name | Common Name | Quantity | Size | Comments |
|--------|---|------------------------|----------|----------|---------------|
| Cal | <i>Calamagrostis acutifolia</i> 'Karl Foerster' | Feather Reed Grass | 10 | 1 gal | |
| Mol | <i>Molinia caerulea</i> 'Skyracer' | Tall Purple Moor Grass | 12 | 1 gal | |
| VmB | <i>Vinca minor</i> 'Bowles' | Bowles Periwinkle | 8 | 100/flat | plant 6" o.c. |

FRONT ENTRY
LANDSCAPE PLAN
TAX MAP 255, LOT 21
INNOVATION DRIVE
ROCHESTER, NH
PREPARED FOR:
PREP PARTNERS
GROUP, LLC
AUGUST 2020

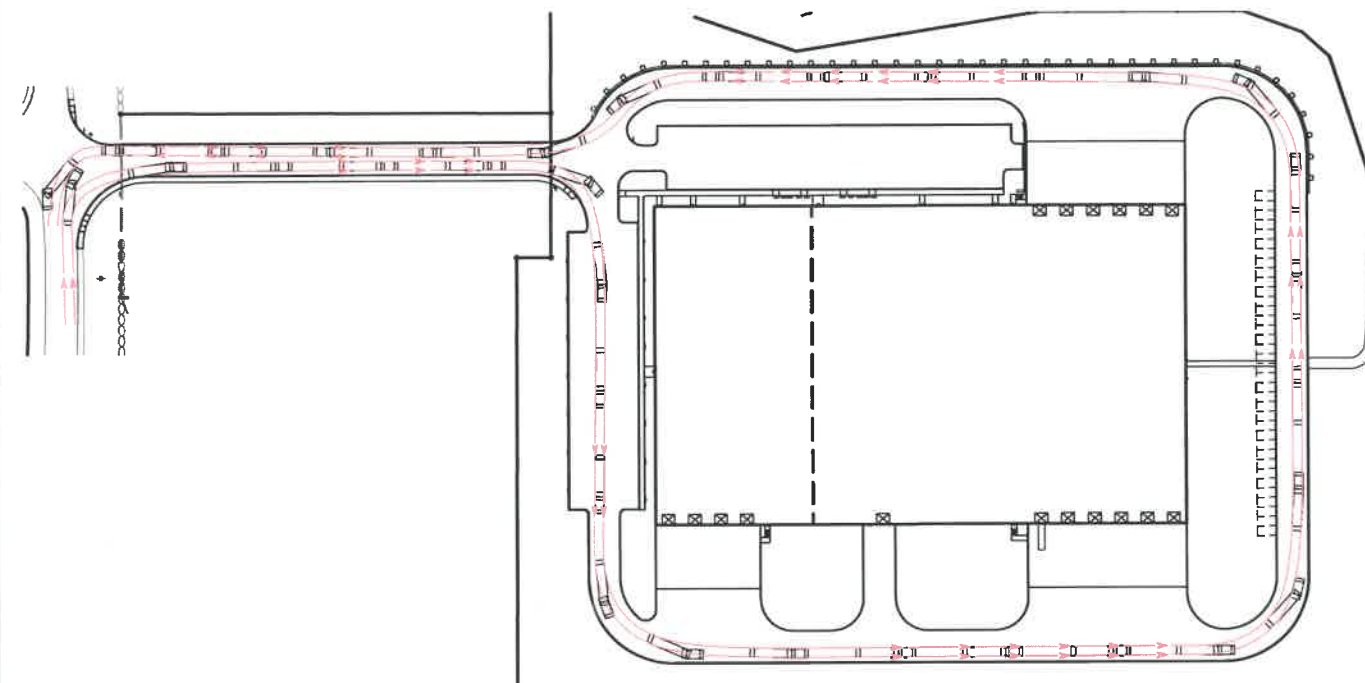
GRAPHIC SCALE

0 5 10 20 40

1 INCH = 20 FEET

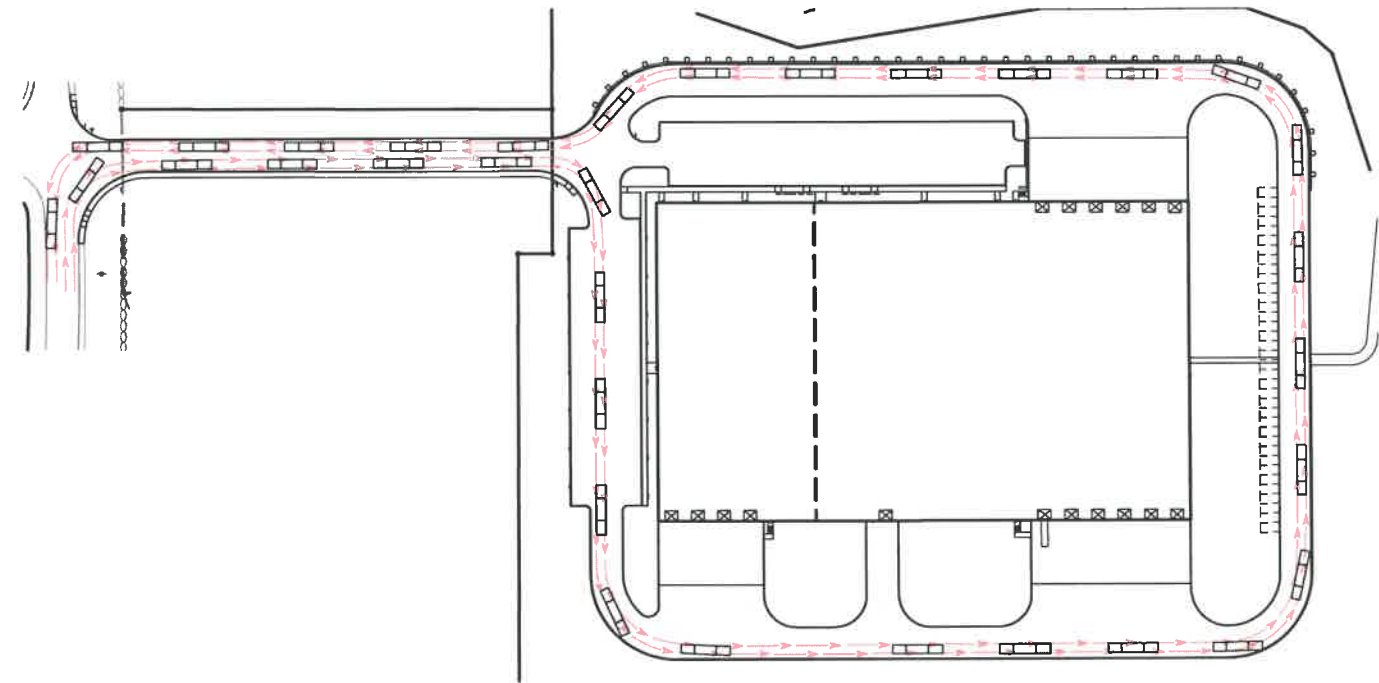
FINAL APPROVAL BY
ROCHESTER PLANNING BOARD

CERTIFIED BY: _____ DATE: _____



WB-50 TRUCK TURNING

WB-50
TRAILER TIRE PATH



ROCHESTER FIRE TRUCK

ROCHESTER FIRE TRUCK PATH
TIRE PATH

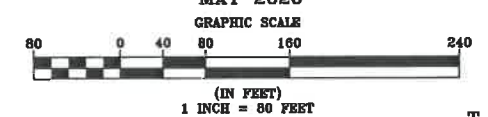
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NORWAY PLAINS ASSOCIATES, INC.

TRUCK TURNING PLAN
TAX MAP 255, LOT 21
INNOVATION DRIVE
ROCHESTER, NH
PREPARED FOR:
PREP PARTNERS
GROUP, LLC
MAY 2020



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