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Bedford, NH 03110
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F: 603.624.9463
www.gza.com

July 29, 2019
File No. 04.0190892.00

City of Portsmouth
Planning Board
Attn: Dexter Legg, Chairman
1 Junkins Ave, 3rd Floor
Portsmouth, New Hampshire 03801

Re: Conditional Use Permit Application
City of Portsmouth Proposed Multi-Purpose Recreational Fields
680 Peverly Hill Road (Tax Map 254, Lot 8)
Portsmouth, New Hampshire

Dear Chairman Legg:

This letter transmits a Conditional Use Permit Application on behalf of the City of Portsmouth (the City), for the construction of three multi-purpose recreational fields and associated parking, as well as the construction of a new transfer station and related upgrades adjacent to the existing City of Portsmouth Public Works facility located at 680 Peverly Hill Road (i.e., the Site) (see attached **Locus Plan**). On behalf of the City, GZA GeoEnvironmental, Inc. (GZA) is requesting consideration of a Conditional Use Permit application for permanent impacts within wetlands and wetland buffers within the City of Portsmouth.

The proposed project involves the construction of three multi-purpose recreational fields and associated parking on the western portion of the Site. In addition, the City is proposing to construct a new transfer station and associated upgrades adjacent to the existing City or Portsmouth Public Works facility on the eastern portion of the Site. The Site is an old quarry and was extensively re-graded as part of gravel pit reclamation in the 1990s.

Before prioritizing this Site, the City completed an extensive recreational needs assessment (see Comprehensive Recreation Needs Study dated 5/17/10 prepared by The Architectural Team, Inc., Ballard*King & Associates Ltd., Barker Rinker Seacat Architecture, and Copley Wolff Design Group). This assessment determined a need for additional fields due to the City's growing population and the City's 2025 Master Plan goal to increase recreational opportunities to the public. Currently, the City does not have adequate field space dedicated to non-school sports, and there is a shortage of fields available for existing leagues. At least 14-16 groups compete for field time primarily from spring to late fall with activities occurring from March to mid-November. During June 2019, over 2,000 players spanning 60-64 individual teams required space on the existing limited field space. Currently, these teams

require space in Greenland, Newington, Rye, and New Castle, to supplement field space available in Portsmouth. The Recreational Needs Study recommended the construction of three multi-purpose fields to address current and future demands for recreational field space.

As part of the comprehensive recreational needs study, five potential parcels were identified as candidates for the proposed construction of multi-purpose recreational fields (see Figure 5, Alternative Site Analysis). Two parcels were reviewed at municipal hearings and were denied due to abutter input. The other two parcels are either too distant from existing sports facilities, would not support multiple recreational fields, or were not owned/available to the City. The construction of all three proposed fields in one location provides key efficiencies and improved logistics for City residents. Often, multiple members of a family are involved in sports, and the presence of multiple fields optimizes operations and limits excessive trips to attend games. The current proposed Site is the only remaining candidate available to construct three multi-purpose fields at one Site.

In addition, the City is proposing to construct a new transfer station in the eastern portion of the Site adjacent to the existing City of Portsmouth Public Works facility. The solid waste transfer/recycling facility is being developed to significantly increase efficiencies in the hauling of solid waste and recyclables from the City's solid waste management program. Currently, the City operates a curbside collection system for both household/business solid waste and recyclables and drives the materials to remote disposal or processing facilities in relatively small packers that collect the material. The facility is required to meet the current and projected demand for solid waste processing. The Site is zoned for Municipal uses, and therefore is ideal for accommodating both multi-purpose recreational fields and a new transfer station.

The team completed a field walk with the New Hampshire Department of Environmental Services (NHDES) on March 29, 2019 and a pre-application meeting with the NHDES, U.S. Army Corps of Engineers, United States Environmental Protection Agency, and New Hampshire Natural Heritage Bureau on April 30, 2019. Since the original concept was developed, the proposed wetland impacts have been reduced from approximately 83,929 square feet (sq. ft.) to 57,512 sq. ft. In addition, direct impacts have been avoided in Wetland 1, a natural wetland with the highest functions and values on Site. Direct impacts have been avoided in Wetlands 2 and 3 which are also natural wetland systems (see Existing Conditions Overview). The proposed project includes unavoidable impacts within 100-foot wetland buffer areas totaling approximately 436,119 sq. ft. However, as previously mentioned, majority of impacts to wetlands and wetland buffers are to previous man-made sedimentation ponds, ditches, treatment swales, and previously altered buffers.

GZA coordinated a review with the New Hampshire Natural Heritage Bureau (NHB). Through coordination with the NHB, it was determined that there are no anticipated impacts to exemplary natural communicates located off-Site as a result of the proposed project.

In accordance with the City of Portsmouth Zoning Ordinance, Article 10, section 10.1017.50, a Conditional Use Permit may be issued by the Planning Board for any proposed development other than installation of utilities within a right-of-way, as long as the project meets the following criteria;

A. ***The land is reasonably suited to the use, activity or alteration***. The Site is an old quarry area and is zoned as a Municipal lot. The Site can accommodate multiple fields, is located in close proximity to schools, and is owned by the City. In addition, the proposed project avoids direct impact to natural wetlands and is adjacent to an existing passive recreational area to the west.

The Site is also surrounded by parcels zoned as Industrial and Mixed Residential. In 2010 the City completed a detailed recreational needs assessment which determined a need for additional fields due to the City's growing population and the City's 2025 Master Plan to increase recreational opportunities to the public. The City study further identified five potential parcels for the proposed recreational fields, including the current Site. Two other project parcels were deemed unsuitable after public input. The others do not support multiple recreational fields, or were not owned by the City.

The proposed transfer station on the eastern side of the Site is suitable for this parcel of land as the Site is zoned as a Municipal lot which can accommodate a transfer station. In addition, the Site is adjacent to the existing public works facility. The transfer station only proposes impacts to created treatment swales and ditches, and does not propose impacts to natural wetlands or unaltered buffers.

B. ***There is no alternative location outside the wetland buffer that is feasible and reasonable for the proposed use, activity or alteration.*** There are nine wetlands located on Site. Of these nine wetlands, three are natural and six were previously excavated for quarry activities or were graded as part of final reclamation of the Site, and are not considered natural wetlands. The proposed project has been redesigned to reduce overall direct wetland impacts from 83,929 sq. ft. to 57,512 sq. ft. In addition, direct impacts to natural wetlands were avoided entirely through careful site design. The proposed transfer station on the eastern portion of the Site will impact wetland buffers of previously excavated wetlands and will not impact wetland buffers of natural wetlands.

C. ***There will be no adverse impact on the wetland functional values of the site or surrounding properties***. The natural wetlands, including Wetlands 1, 2 and 3, are located in the western portion of the Site. Wetland impacts to natural wetland have been avoided as a result of the proposed project. The three natural wetlands located on Site provide the highest wetland functions and values, including groundwater recharge/discharge, floodflow alteration, sediment and toxicant retention, nutrient removal, wildlife habitat, educational/scientific value, and specifically production export, sediment/shoreline stabilization, recreational function, visual quality and uniqueness value in Wetland 1. Since wetland impacts were avoided in the three previously listed natural wetlands, it is not anticipated that there will be adverse impacts on the wetland functions and values on natural wetlands as a result of the proposed project. The remaining wetlands, which were excavated for quarry activities or were graded as part of final reclamation of the Site, primarily offer sediment/toxicant retention function. However, a portion of Wetland 9 containing a large detention pond is not proposed to be impacted as a result of the project and will retain primary sediment/toxicant retention capability. In addition, the project includes a landscaping plan and an in-lieu fee mitigation payment for unavoidable impacts to wetlands.

D. ***Alteration of the natural vegetative state or managed woodland will occur only to the extent necessary to achieve construction goals.*** The existing Site is primarily cleared as a result of prior quarrying and grading activities. In addition, existing natural vegetation in Wetlands 1, 2 and 3 are not proposed to be impacted. As a result, disturbance to natural vegetation will only occur to the extent necessary for the proposed project within the prior quarried and disturbed portion of the Site.

E. ***The proposed alternative with the least adverse impact to areas and environments under the jurisdiction of this Section***. As previously mentioned, through careful site design and meetings with the project team, the proposed impacts have been reduced from 83,929 sq. ft. to 57,512 sq. ft. in prior excavated wetlands. Impacts to natural wetlands have been avoided and functions and values of natural wetlands will not be

adversely impacted. In addition, the proposed project offers redevelopment and repurposing of an old quarry site. As a result, this is the least impacting alternative to the Site.

F. ***Any area within the vegetated buffer strip will be returned to a natural state to the extent feasible.*** Impacts to wetland vegetative buffer strips have been minimized to the greatest extent feasible through project design and meetings with the project team. Impacts to natural wetlands have been avoided, and majority of impacts to wetland buffers and vegetated buffer strips are associated with wetlands previously excavated for quarry activities or were graded as part of final reclamation of the Site. Limited impact within the vegetated buffer strip of natural wetlands was necessary due to lot size and shape restrictions, recreational field size requirements, and proximity of proposed recreational fields to wetlands on Site. However, as previously mentioned, wetland impacts to natural wetlands were avoided entirely through site plan revisions and meetings with the project team, and impacts to vegetated buffer strips associated with natural wetlands have been minimized and avoided to the greatest extent.

As part of the proposed project, best management practices and design considerations have been implemented to minimize and protect existing natural resource features including the following;

1. Landscape Plantings

The project includes an extensive planting plan comprised of native and naturalized species including balsam fir (*Abies balsamea*), western red cedar (*Thuja plicata*), Eastern white pine (*Pinus strobus*), gray birch (*Betula populifolia*), flowering dogwood (*Cornus florida*), and American basswood (*Tilia americana*) (see **Figure 4 – Plans by CMA Engineers, Inc.**). These plantings will enhance visual aesthetics and provide wildlife habitat components. The plantings will provide nesting and feeding locations to common songbirds including song sparrow (*Melospiza melodia*), mockingbird (*Mimus polyglottos*), and black-capped chickadee (*Poecile atricapillus*) which occur on Site.

2. Modern Stormwater Treatment

The existing, excavated manmade wetlands on Site are remnants of prior quarry activities and are isolated from natural wetlands. In addition, these wetlands provide low functional benefits and minimal stormwater treatment. The project proposes the creation of modern, state-of-the-practice stormwater management facilities which will meet NHDES and Alteration of Terrain permit requirements. Proposed stormwater management features will provide high pollutant removal efficiencies for TSS, zinc, phosphorus and nitrogen. Stormwater treatment features throughout the Site will include subsurface storage facilities, subsurface gravel wetland features, and vegetative swales and forebays.

The three proposed recreational fields will provide infiltration of precipitation comparable to permeable pavement in terms of performance. A subsurface storage facility will be located under the north side of the fields which will provide treatment to stormwater from the fields, as well as groundwater recharge and peak flow attenuation.

Stormwater runoff associated with proposed parking areas and accessways for the three recreational fields will be pretreated in a vegetative swale and forebay prior to receiving primary treatment in proposed subsurface gravel wetland stormwater features.

Stormwater runoff associated with the proposed transfer station will primarily flow through underground treatment facilities for treatment prior to being recharged to groundwater or discharged. Additional runoff from pavement and gravel areas will be pre-treated by sediment forebays and treated by a vegetated infiltration basin before being discharged to surface waters.

3. Invasive Species Management

Several invasive plant species including phragmites (*Phragmites australis*), reed canary grass (*Phalaris arundinacea*), autumn olive (*Elaeagnus umbellata*), multiflora rose (*Rosa multiflora*), oriental bittersweet (*Celastrus orbiculatus*), and glossy buckthorn (*Frangula alnus*) have been observed on Site. During construction, the project will implement practices to control the spread of invasive plants within the work limits of the project. Invasive plants that are excavated for construction will be managed in accordance with "Best Management Practices for the Control of Invasive and Noxious Plant Species," dated 2018, prepared by the New Hampshire Department of Transportation. The contractor will be required to develop a site-specific Invasive Species Management Plan.

4. Mitigation

The project includes mitigation for permanent wetland impacts exceeding the 10,000 sq. ft. threshold for State and federal wetland mitigation. As required, GZA completed a pre-application meeting with the NHDES, NHFG, the Environmental Protection Agency (EPA), and the USACE on April 30, 2019 to review project details and proposed mitigation. As a result of the NHDES pre-application meeting on April 30, 2019, and preliminary coordination with the City of Portsmouth, the project includes a mitigation package including an in-lieu fee payment to the Aquatic Resource Mitigation (ARM) Fund of $205,024.44. In-lieu fee payments to the ARM fund can be applied for by towns and other local agencies to fund wetland restoration, creation, and preservation projects within the same watershed where impacts occurred.

Please feel free to contact us with any questions.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Tracy Tarr, CWS, CWB, CESSWI
Associate Principal

James Long, CWS, CSS
Consultant/Reviewer

Deborah M. Zarta Gier, CNRP
Principal

TLT/DMZ/JHL:kr
\\gzabedford\jobs\04jobs\0190800s\04.0190892.00\work\local permitting\portsmouth cup\draft portsmouth athletic fields cup application 072319 dmz.docx

Attachments: Owner Authorization

Photo Log
List of Abutters
Figure 1 – Locus Plan
Figure 2 – Wildlife Action Plan Overlay
Figure 3 – Existing Conditions Overlay
Figure 4 – Plans by CMA Engineers, Inc.
Table 1 – Wetland and Buffer Area Analysis
Table 2 - Wetland and Buffer Impact Analysis

Owner Authorization

Owner - Letter of Authorization

I, PETER H. RICE, representative of the City of Portsmouth, New Hampshire, do hereby authorize CMA Engineers, Inc. and GZA GeoEnvironmental, Inc. to prepare and submit a Conditional Use Permit Application for the construction of recreational athletic fields and a new transfer station on Tax Map 254, Lot 8 within the Wetlands Protection area. This shall include any required signatures. I understand that this does not incur any costs on my behalf.

Signature	Print Name	Date
	Peter Rice	7/23/19
Witness	Print Name	Date
	DAVID S ALLEN	7/23/19

Photo Log

PHOTO LOG
City of Portsmouth Athletic Fields Project
Portsmouth, New Hampshire

Photos Taken: October 19, 2018 and April 24, 2019

Photograph No. 1: Looking northerly into Vernal Pool A within Wetland 1. There are no proposed wetland impacts to Wetland 1.

Photograph No. 2: Looking into Wetland 1. There are no proposed wetland impacts to Wetland 1.

PHOTO LOG
City of Portsmouth Athletic Fields Project
Portsmouth, New Hampshire

Photos Taken: October 19, 2018 and April 24, 2019

Photograph No. 3: Looking westerly at intermittent channel within Wetland 1. There are no proposed wetland impacts to Wetland 1.

Photograph No. 4: Looking easterly at Vernal Pool B within Wetland 1.

PHOTO LOG
City of Portsmouth Athletic Fields Project
Portsmouth, New Hampshire

Photos Taken: October 19, 2018 and April 24, 2019

Photograph No. 5: Looking northerly at Wetland 2 adjacent to the existing access road. There are no proposed wetland impacts to Wetland 2.

Photograph No. 6: Looking northerly at Wetland 3. There are no proposed wetland impacts to Wetland 3.

PHOTO LOG
City of Portsmouth Athletic Fields Project
Portsmouth, New Hampshire

Photos Taken: October 19, 2018 and April 24, 2019

Photograph No. 7: Looking northerly at Wetland 4 primarily dominated by Phgramites (*Phragmites australis*).

Photograph No. 8: Looking northwesterly at Wetland 5 adjacent to Pike Industries to the north.

PHOTO LOG
City of Portsmouth Athletic Fields Project
Portsmouth, New Hampshire

Photos Taken: October 19, 2018 and April 24, 2019

Photograph No. 9: Looking northerly at Wetland 6 (treatment swale).

Photograph No. 10: Looking southeasterly at Wetland 7 (ditch).

PHOTO LOG
City of Portsmouth Athletic Fields Project
Portsmouth, New Hampshire

Photos Taken: October 19, 2018 and April 24, 2019

Photograph No. 11: Looking southwesterly at Wetland 8 in the foreground and Wetland 9 in the background.

Photograph No. 12: Looking easterly at Wetland 9 (stormwater treatment facility).

List of Abutters

City of Portsmouth Multi-Purpose Recreational Fields Project
City of Portsmouth Conditional Use permit
Abutters List
Portsmouth, New Hampshire

Wetland Scientist
GZA GeoEnvironmental, Inc.
Attn: Tracy Tarr, CWS, CWB, CESSWI
5 Commerce Park North, Suite 201
Bedford, NH 03110

Owner/Applicant
Tax Map 254-8
City of Portsmouth
1 Junkins Avenue
Portsmouth, NH 03801

Engineer
CMA Engineers
1 Sundial Avenue Suite 510N
Manchester, NH 03103

Engineer
Weston and Sampson
55 Walkers Brook Drive, Suite 100
Reading, MA 01867

Tax Map 252-2-10
JMK Realty LLC
PO Box 971
Portsmouth, NH 03802

Tax Map 252-2-11
HEG West Road LLC
2 International Way
Lawrence, MA 01843

Tax Map 252-2-12
One Hundred West LLC
100 West Road
Portsmouth, NH 03801

Tax Map 252-2-14
Litchfield Portsmouth LLC
C/O Eaton Partners, Inc.
175 Canal Street, Suite 401
Manchester, NH 03101

Tax Map 254-7
Pike Industries
3 Eastgate Park Road
Belmont, NH 03220

Tax Map 266-4
Foundation for Seacoast Health
100 Campus Drive, Suite 1
Portsmouth, NH 03801

Tax Map 266-1
Ricci Construction Co, Inc.
225 Banfield Road
Portsmouth, NH 03801

Tax Map 266-3
Andrew and Carol Ann Croteau
285 Banfield Road
Portsmouth, NH 03801

Tax Map 267-19
Two Hundred Seventy West Condo
Mastercard
270 West Road
Portsmouth, NH 03801

Tax Map 266-5
Hope for Tomorrow Foundation
1 Stoneridge Drive
Rye, NH 03870

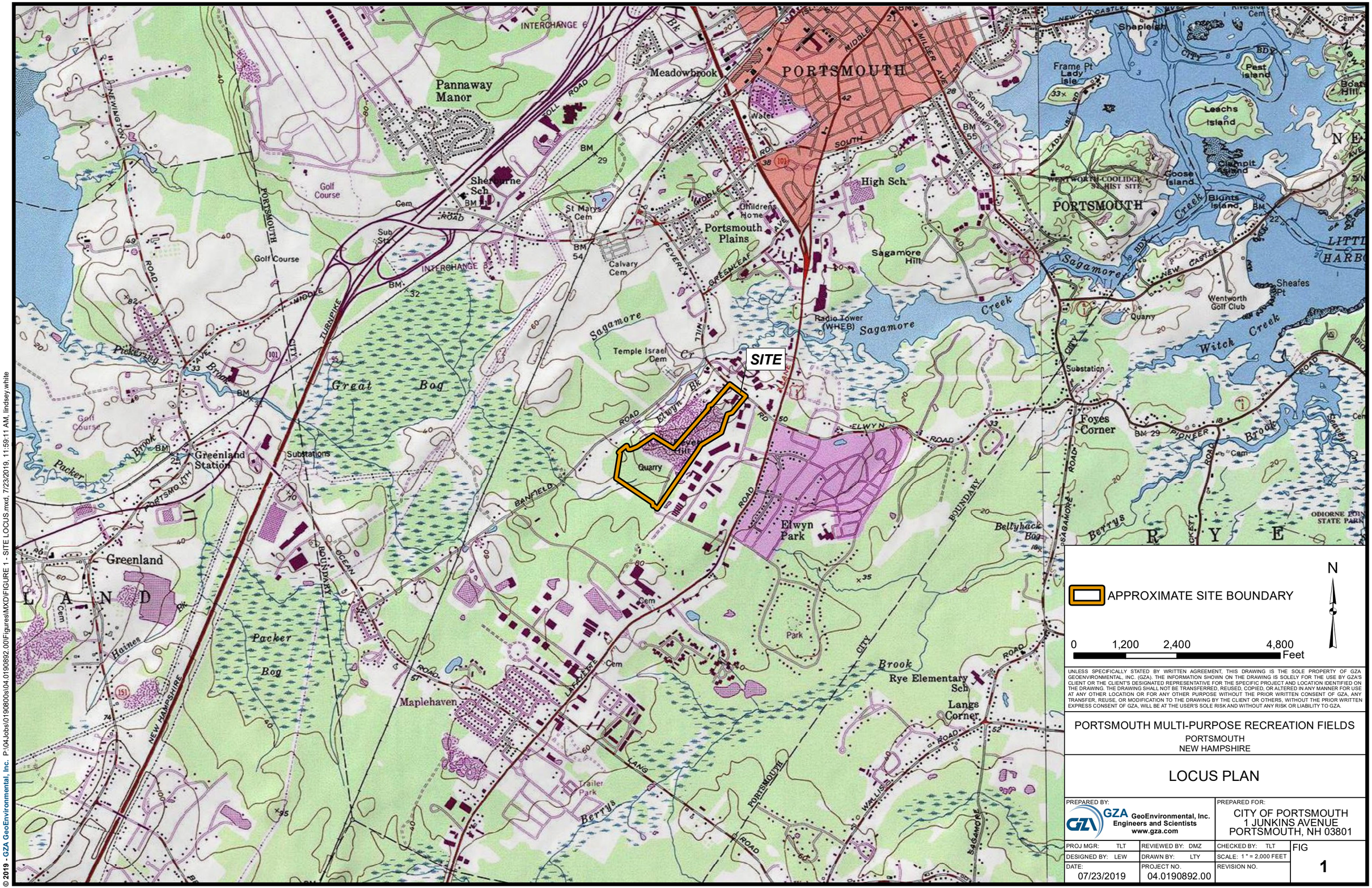
Tax Map 267-17
Graywolf Properties
1 Libbey Lane
Rye, NH 03870

Tax Map 267-23
Engel Family Trust
C/O Robert Engel, Trustee
PO Box 6070
Manchester, NH 03108

Tax Map 267-20
Harvey Propco LLC
1400 Main Street
Waltham, MA 02451

Tax Map 267-22
200 West Road LLC
210 Commerce Way
Portsmouth, NH 03801

Figure 1 – Locus Plan



N

APPROXIMATE SITE BOUNDARY

0 1,200 2,400 4,800 Feet

PORTSMOUTH MULTI-PURPOSE RECREATION FIELDS

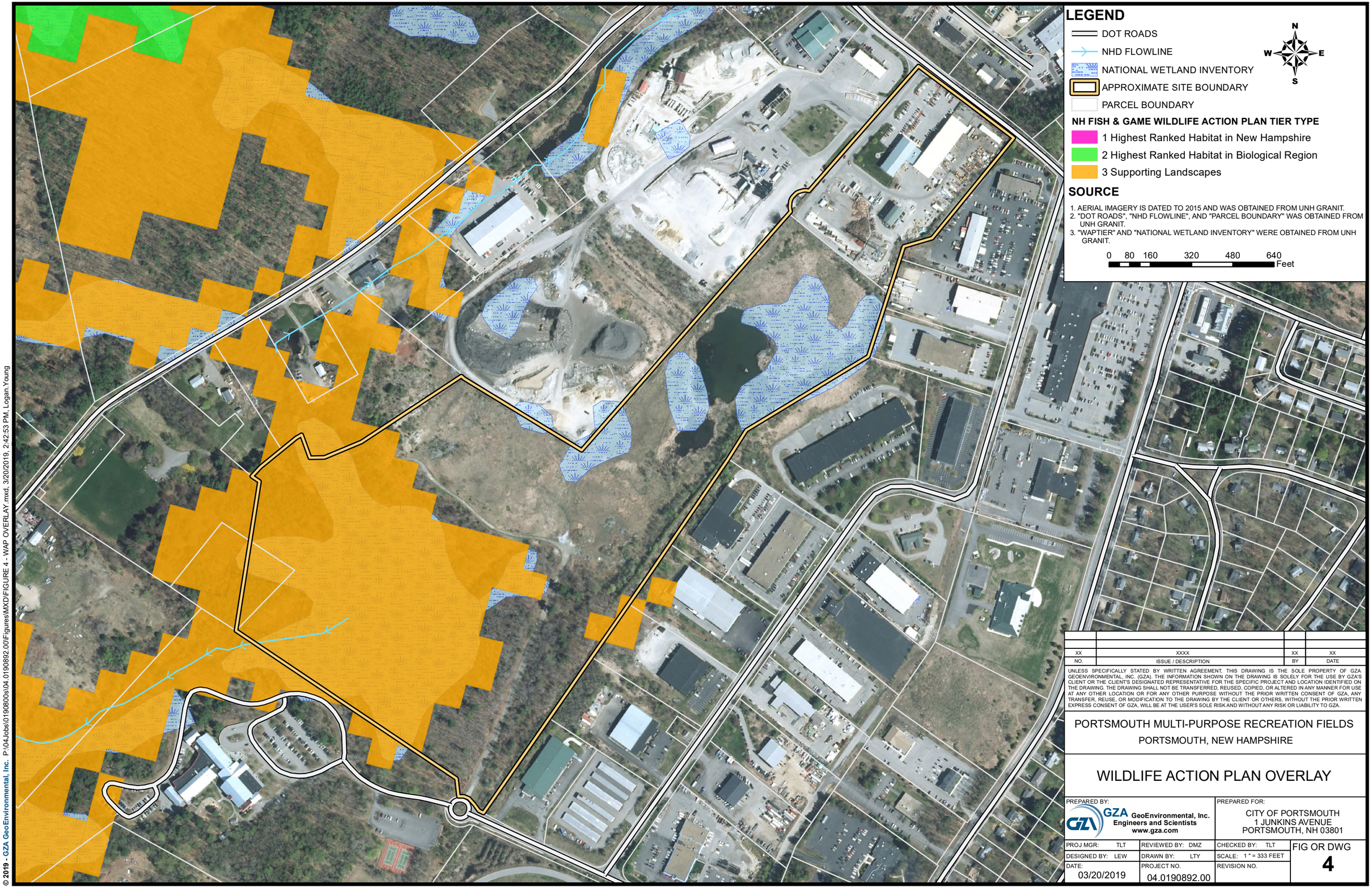
PORTSMOUTH
NEW HAMPSHIRE

LOCUS PLAN

PREPARED BY:	PREPARED FOR:
GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	CITY OF PORTSMOUTH 1 JUNKINS AVENUE PORTSMOUTH, NH 03801

PROJ MGR: TLT	REVIEWED BY: DMZ	CHECKED BY: TLT	FIG 1
DESIGNED BY: LEW	DRAWN BY: LTY	SCALE: 1 " = 2,000 FEET	
DATE: 07/23/2019	PROJECT NO. 04.0190892.00	REVISION NO.	

Figure 2 – Wildlife Action Plan Overlay



XX	XXXX	XX	XX
NO.	ISSUE / DESCRIPTION	BY	DATE

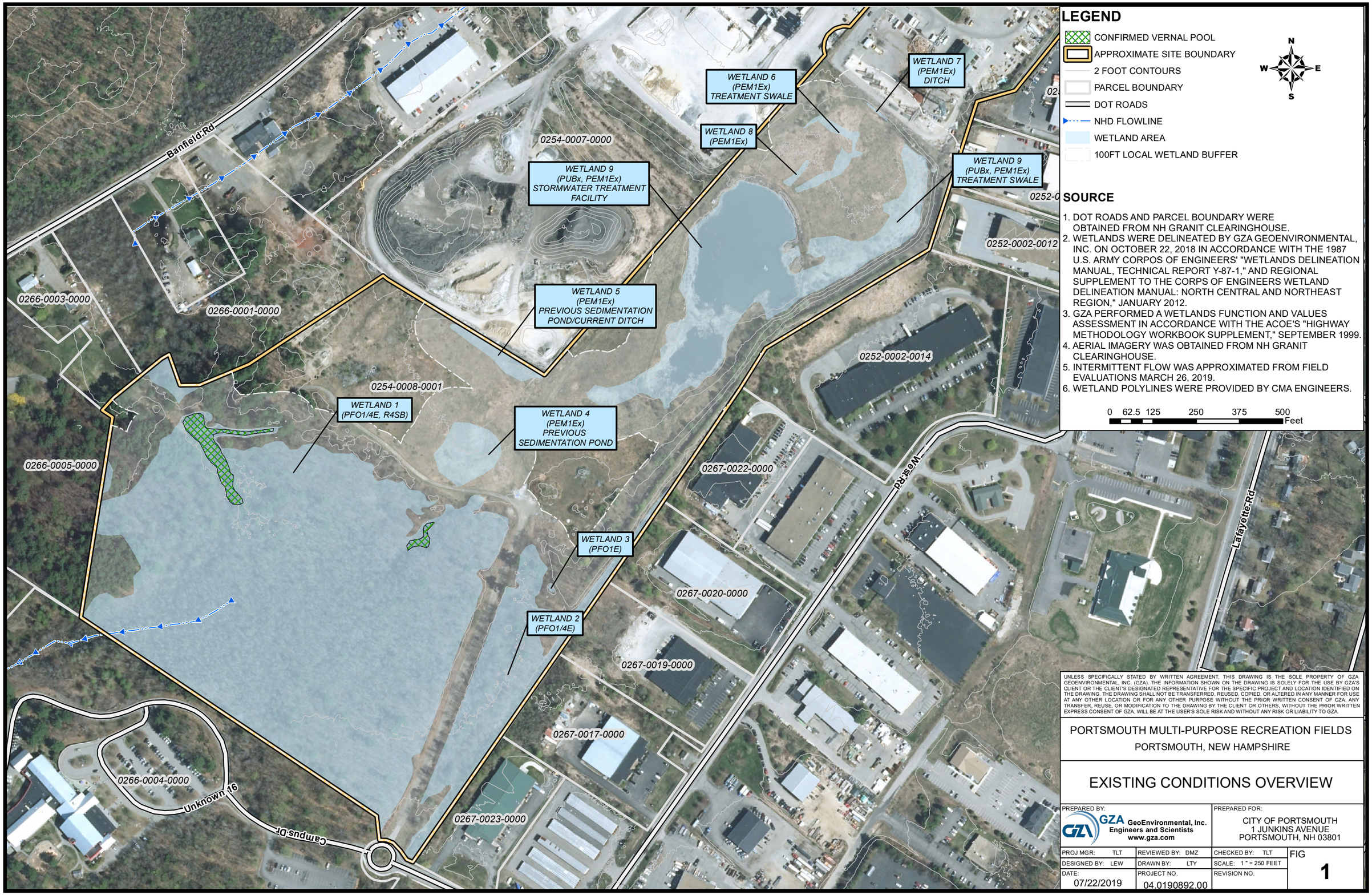
PORTSMOUTH MULTI-PURPOSE RECREATION FIELDS

PORTSMOUTH, NEW HAMPSHIRE

WILDLIFE ACTION PLAN OVERLAY

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: CITY OF PORTSMOUTH 1 JUNKINS AVENUE PORTSMOUTH, NH 03801	
PROJ MGR: TLT	REVIEWED BY: DMZ	CHECKED BY: TLT	FIG OR DWG 4
DESIGNED BY: LEW	DRAWN BY: LTY	SCALE: 1 " = 333 FEET	
DATE: 03/20/2019	PROJECT NO. 04.0190892.00	REVISION NO.	

Figure 3 – Existing Conditions Overlay



LEGEND

- CONFIRMED VERNAL POOL
- APPROXIMATE SITE BOUNDARY
- 2 FOOT CONTOURS
- PARCEL BOUNDARY
- DOT ROADS
- NHD FLOWLINE
- WETLAND AREA
- 100FT LOCAL WETLAND BUFFER

N W E S

SOURCE

1. DOT ROADS AND PARCEL BOUNDARY WERE OBTAINED FROM NH GRANIT CLEARINGHOUSE.
2. WETLANDS WERE DELINEATED BY GZA GEOENVIRONMENTAL, INC. ON OCTOBER 22, 2018 IN ACCORDANCE WITH THE 1987 U.S. ARMY CORPOS OF ENGINEERS' "WETLANDS DELINEATION MANUAL, TECHNICAL REPORT Y-87-1," AND REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTH CENTRAL AND NORTHEAST REGION," JANUARY 2012.
3. GZA PERFORMED A WETLANDS FUNCTION AND VALUES ASSESSMENT IN ACCORDANCE WITH THE ACOE'S "HIGHWAY METHODOLOGY WORKBOOK SUPPLEMENT," SEPTEMBER 1999.
4. AERIAL IMAGERY WAS OBTAINED FROM NH GRANIT CLEARINGHOUSE.
5. INTERMITTENT FLOW WAS APPROXIMATED FROM FIELD EVALUATIONS MARCH 26, 2019.
6. WETLAND POLYLINES WERE PROVIDED BY CMA ENGINEERS.

0 62.5 125 250 375 500 Feet

PORTSMOUTH MULTI-PURPOSE RECREATION FIELDS

PORTSMOUTH, NEW HAMPSHIRE

EXISTING CONDITIONS OVERVIEW

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: CITY OF PORTSMOUTH 1 JUNKINS AVENUE PORTSMOUTH, NH 03801	
PROJ MGR: TLT	REVIEWED BY: DMZ	CHECKED BY: TLT	FIG 1
DESIGNED BY: LEW	DRAWN BY: LTY	SCALE: 1 " = 250 FEET	
DATE: 07/22/2019	PROJECT NO. 04.0190892.00	REVISION NO.	

Figure 4 – Plans by CMA Engineers, Inc.

Seacoast Community School

Pike Industries

Portsmouth Public Works

25 ' LIMITED CUT AREA

25 ' VEGETATED BUFFER STRIP

100' WETLAND BUFFER

WETLAND EDGE

75' VERNAL POOL BUFFER

UNDERGROUND INFILTRATION AND DETENTION BMP

PROPOSED ATHLETIC FIELDS

11,246 SF

24,699 SF

6216 SF

PROPOSED PARKING

PROPOSED WIDENED GRAVEL DPW ACCESS DRIVE

SEDIMENT FOREBAY

SUBSURFACE GRAVEL WETLAND

SUBSURFACE GRAVEL WETLANDS BMP

100' WETLAND BUFFER

UNDERGROUND INFILTRATION ADN DETENTION BMP

1646 SF

9637 SF

497 SF

PROPOSED TRANSFER STATION

DPW OPERATIONS AND SNOW STORAGE AREA

3571 SF

UNDERGROUND INFILTRATION AND DETENTION BMP

VEGETATED INFILTRATION BASIN

GRAVEL WETLAND/ BIORETENTION AREA BMP

SEDIMENT FOREBAY

25 ' VEGETATED BUFFER STRIP

25 ' LIMITED CUT AREA

VEGETATED IMPACT

100' WETLAND BUFFER

EXISTING ACCESS DRIVE

CAMPUS DR

Impact Areas:

Wetland Impact:	57,512 SF
100' Wetland Buffer Impact:	436,119 SF

Portsmouth Multi-purpose Recreation Fields

Reduced Wetlands Impact Layout

(Post Wetland Delineation)

JULY 2019

0 100 200

- Proposed Stormwater BMP
- 100' Wetland Buffer
- 50' Limited Cut Area
- 25' Vegetated Buffer Strip
- 75' Vernal Pool Buffer
- Wetlands
- Wetland Impact
- Vegetated Impact
- 100' Wetland Buffer Impact

CMA ENGINEERS

Weston & Sampson

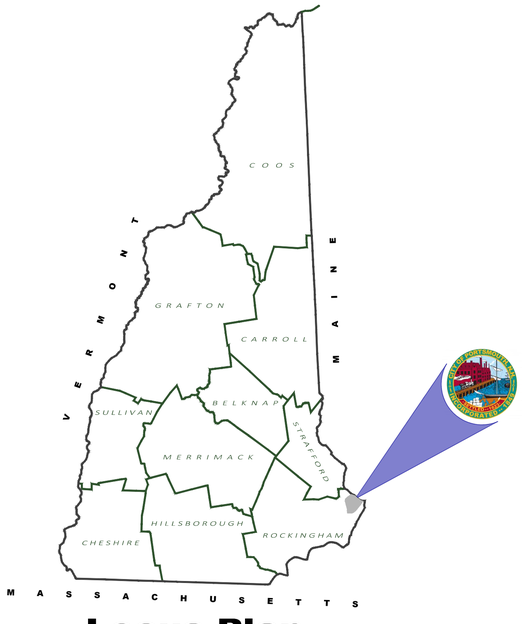
City of Portsmouth, New Hampshire

Department of Public Works

Multi-purpose Recreation Fields 680 Peverly Hill Road

Agency Review Plans - July 2019

Sheet Index *(PERMIT PLANS)*



Locus Plan

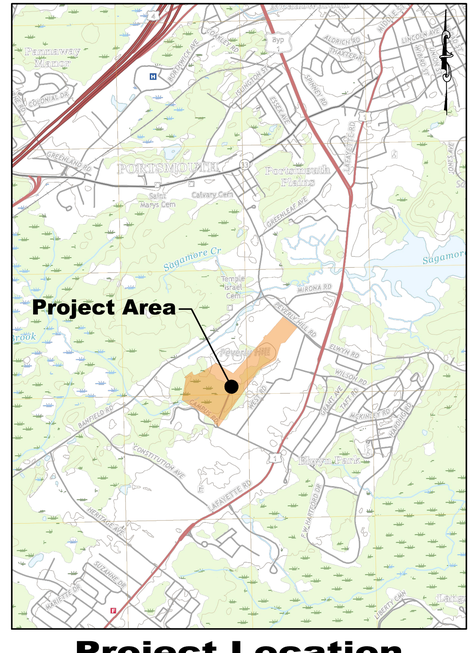
Prepared For:

City of Portsmouth
Department of Public Works
680 Peverly Hill Road
Portsmouth, New Hampshire 03801

Prepared By:

CMA ENGINEERS
CIVIL/ENVIRONMENTAL/STRUCTURAL
Portsmouth, NH 603/431-6196 • Manchester, NH 603/627-0708 • Portland, ME 207/541-4223
cmaengineers.com

Weston & Sampson℠
427 Main Street, Suite 400, Worcester,MA
(978) 977-0110 (800) 726-7766 (Sampson)
www.westonandsampson.com



Project Location

0 2000' 4000'
Scale: 1" = 2000'

M:\CADD\PROJECTS\1119 Portsmouth Athletic fields\Production\1119 COVER RF.dwg Date Plotted: Jul 23, 2019 – 2:10pm Plotted By: JKIEFFNER

General Construction Notes:

1. All work shall be in conformance with current Cith of Portsmouth and current NHDOT Standard Specifications and details.

2. The Contractor shall be solely responsible for construction means, methods, techniques, and procedures, and for safety precautions and programs in connection with all work included under this contract, including compliance with all applicable OSHA regulations. The Drawings do not include necessary components for construction safety. The Contractor shall be solely responsible for providing and maintaining all safety barriers, warning flashers, etc., as required by the conduct of the work for the protection of workers and non– workers alike. The Owner and Engineer will periodically review construction for compliance with the plans and specifications; such review does not imply approval of methods of construction.

3. The Contractor shall provide staging areas as required for staging, processing, and stock pile area as necessary. The Contractor shall prepare the area as necessary and install all erosion control devices to meet NHDES–WT standards. The Contractor shall stockpile, handle and transport materials to preserve their quality and fitness for the work. Materials shall also be stored to facilitate inspection and may be subject to inspection and retesting before incorporation in the work. Private property shall not be used for storage purposes without written permission of the property owner. If requested, copies of such written permission shall be furnished to the Owner. After completion of construction, the contractor shall return the staging area to preexisting conditions to the satisfaction of the property owner and the City.

4. Existing conditions survey and topography provided by JAMES VERRA & ASSOCIATES, INC. in January 2018. Bench marks and horizontal control points for the Contractor to lay out the work have been established and are shown on the Plans.

5. The Contractor shall perform all required layout and developing as–built documentation work with competent, qualified personnel in a manner consistent with the current survey/layout practices and acceptable to the Engineer. No separate payment for this work will be made. The Contractor shall provide the engineer with qualified persons to assist in this checking as needed and on request of the engineer. The Contractor shall perform all necessary layout work in order to construct all elements of the project as shown on the plans and specified in the contract. This work shall include, but shall not be limited to, stakeout necessary to establish lines and grades as earthwork operations progress; stakeout, layout and elevations as required for installing drain lines, sewer, water lines, and other items included in the work.

6. The Contractor is solely responsible for the accuracy of the work. The Engineer may check all or any portion of the layout, stake–out made by the Contractor. Any necessary correction to the work shall be made immediately by the contractor. Such checking by the engineer will not relieve the contractor of any responsibilities for the accuracy or completeness of the work. No claim will be considered because of alleged inaccuracies unless the contractor notifies the Engineer thereof in writing immediately upon discovery of the alleged inaccuracies and affords the Engineer opportunity to check or verify the control in question.

7. The Contractor shall be responsible for the preservation of all bench marks and control points. If any of the control points are disturbed by the Contractor during the construction, the Contractor shall replace them at no expense to the owner. Damaged or destroyed points, bench marks or stakes or any reference points damaged or made inaccessible by the progress of the construction shall be replaced or transferred by the Contractor, subject to verification by the engineer. Replacement of any layout points shall be performed by or under the direction of a NH licensed land surveyor.

8. Apparent edge of right–of–way based on the existing conditions survey. Perform all work within the existing right–of–way or acquired temporary right of entry limits.

9. The Contractor shall protect private property and shall take all necessary measures and precautions to avoid damage to existing trees, shrubs, lawns, plantings, etc. This protection will include the trimming of trees prior to construction if necessary. The Contractor shall be responsible for repairs/replacement of all damaged items.

10. The Contractor shall plan and perform test pit excavation well in advance of commencing construction and ordering materials to allow time to review actual conditions encountered. Test pits not specifically identified, shall be excavated by the Contractor at the direction of the Engineer.

11. All excavations shall be thoroughly secured on a daily basis by the Contractor at the completion of construction operations in the immediate area.

12. All drainage structures to be abandoned in place shall have the cone removed and be filled with gravel. The material shall be compacted in layers not exceeding 12 inches of compacted thickness. All connections shall be plugged with a cement concrete masonry plug at the pipe locations.

13. Plugging existing pipes with brick and mortar shall be considered subsidiary to the drainage work.

14. Pipe connections to replacement structures are subsidiary to the structure.

15. All proposed and existing drainage and sanitary sewer structure rim and pipe invert elevations are to be field verified by the contractor and accepted by the engineer.

16. The Contractor shall set all manhole frames and covers and catch basin grates and water valve covers to be flush with the base pavement grades, then raised to 1/8" to 1/4" below final pavement elevations during installation of the final wearing coarse.

17. The Contractor shall be responsible for removal and relocation of all signs that conflict with the work (incidental to construction). Any signs damaged during construction shall be replaced at no additional cost to the Owner.

18. Final location of traffic signs and supports as shown in the plans shall be field–confirmed by the Contractor and accepted by the Engineer prior to installation.

19. Remove topsoil for its total depth within the limits of the slope lines. unless otherwise directed, stockpile topsoil and use it on this project as needed.

20. All disturbed areas not designated to be paved or landscaped otherwise shall have loam borrow placed and seeded. The loam borrow shall have a minimum depth of 4" and shall be placed flush with the top of adjacent curbing, edging, pavement millings, back of sidewalk or other paved edge.

21. The contractor shall be responsible for the site restoration and clean up upon completion of the project.

Existing Utility Notes:

1. The Contractor shall verify all existing utility locations, public or private, shown or not shown, on these plans prior to construction. The engineer shall be notified in writing of any utilities found interfering with the proposed construction and appropriate remedial action shall be taken before proceeding with the work. The Contractor shall notify Dig–Safe at 1–800–225–4977 and Portsmouth DPW (to locate water, sewer & drains) at least 72 hours prior to beginning work to confirm the location of underground utilities.

2. The Contractor is responsible for the location, protection and repair (if damaged) of all existing utility mains and services. The locations of known gas, water, and sewer mains shown on these drawings are approximate. Existing gas, water, and sewer service laterals may not be shown and the Contractor should anticipate their existence. The Contractor should consider conflicts, hand excavation, and decrease in production when preparing their bid.

Permit Notes

1. The Contractor shall be responsible for obtaining all other construction permits, local and state, as well as from public utilities, including but not limited to a right–of–way trench permit from the Portsmouth DPW.

2. The Contractor shall prepare a project specific Stormwater Pollution Prevention Plan (SWPPP) and obtain an EPA Construction General Permit.

Disposal of Surplus Material

1. Unsuitable materials and boulders/rock/stones as defined by the specifications which are not acceptable as fill material shall be removed from the site. All pavement and subgrade soils removed during construction to achieve proposed grades shall become property of the Contractor. Disposal is the Contractor's responsibility.

2. Unless requested by the City, all frames, covers, grates, valves and valve boxes, and curbing to be removed during the project shall become the property of the Contractor. All pavement, concrete and subgrade soils removed during construction to achieve proposed grades shall become the property of the Contractor. All sidewalk pavement, sidewalk brick, concrete or brick structures, sewer manholes, drainage, water and sewer pipe to be removed/demolished shall become the property of the Contractor.

3. If Asbestos Cement (AC) pipe is encountered, all work shall be done in accordance with Env–A 1800 Asbestos Management and Control. If the AC pipe is broken or requires cutting or breaking, a licensed abatement contractor must complete this work and properly bag and dispose of the pipe materials. All disposal shall be done in accordance with Env–A 1800 and Env–Sw 901. The Contractor shall be responsible for removing and disposing asbestos cement pipe, including service connections, within the limits of trench excavation. The Contractor shall maintain water service to users through the use of temporary bypass piping and valves.

4. Removal of existing drainage and sanitary sewer structures and pipe shall be subsidiary to proposed work items when the existing drainage and sewer items are located within the trench limits of the proposed drainage items as specified in Section 206 of the NHDOT standard specification.

Boring Notes

1. Borings indicated on the plans were made by S.W. Cole Engineering, Inc in November 2018. Blow counts shown are the number of blows required to drive a 2" O.D. standard split spoon sampler 6" using a 140 lb weight falling 30".

2. Borings are for design purposes showing conditions at boring points only, and do not necessarily indicate material to be encountered during construction.

3. Water levels indicate thus __ were measured at the time of exploration. The water levels encountered during construction may vary considerably due to prevailing climate, rainfall, or other factors.

4. The Geotechnical investigation report is provided as an appendix to the contract documents.

Construction Traffic Management & Signing Notes

1. Two weeks prior to beginning work, the Contractor shall submit a Work Plan for the sequencing of the project and management of traffic in accordance with Section 01570. Plan shall include locations of construction signage, variable message boards, and provisions for temporary accessible pedestrian routes.

2. All traffic control devices shall conform with Sections 618 and 619 of the NHDOT Standard Specifications, the current editions of the MUTCD including all revisions, and the State of NH DOT Traffic Control Handbook.

3. The Contractor shall exercise caution and comply with all applicable traffic laws and regulations in the execution of work. The Contractor is to coordinate all work with the Cith of Portsmouth Public Works, Fire and Police Departments and Engineer at least 14 days prior to implementing any temporary road closures or temporary detours.

4. All costs for traffic control devices including placement, relocation, maintenance, and removal of signs shall be included in the Contractor's bid.

5. The Contractor is to furnish and place three portable message boards at the project site (location designated by City) at least 7 days in advance of any work for advance public notification. The message board shall remain active during the construction period.

6. All permanent construction signing and warning devices shall be supplied, erected, maintained, and removed by the Contractor. Placement of permanent construction signs shall be coordinated with the Engineer and Public Works staff. The contractor shall bear all expense of maintaining the section of road undergoing improvement including all temporary approaches or crossings and intersections with trails, roads, streets, businesses, parking lots, residences, garages, farms, and other features as may be necessary.

7. Access to existing drives shall be maintained at all times. In the event that major work must be done at drives that precludes full access, the Contractor is to coordinate the work with the Owners and the Engineer 24 hours in advance to minimize inconveniences.

8. Unless otherwise approved, the Contractor shall maintain a minimum of 14–feet of roadway access at all times to accommodate through traffic and local emergency access. Emergency vehicles shall be given priority.

9. All road openings shall be backfilled at the end of each work day to ensure safe vehicular and pedestrian travel. The Contractor shall maintain two lanes of traffic at the end of each work day. Plating trenches overnight is not allowed without prior City approval.

10. Dust control operations shall be provided throughout the duration of the project, incidental to the work.

Sanitary Sewer Notes

1. All sewer mains and fittings shall conform to ASTM D–3034 and shall be PVC SDR 35. Pipe and pipe fittings between manholes are to be of the same manufacturer. Joint compression rings shall be of an oil resistant rubber type or flexible elastomeric seals conforming to ASTM D–3212. Manufacturer's certificate of compliance shall be furnished to the City prior to installation.

2. Pipe Lengths shown on plans are horizontal lengths, measured from inside of manhole wall (2 feet from MH center for 4' diameter MH) to inside of manhole wall.

3. Sewer mains and services constructed above or without adequate separation from water mains shall be constructed of pressure class pipe (ductile iron (conforming to ANSI/AWWA C150/A21.50) or C900 PVC) for a minimum distance of 9 feet each side of the crossing. Joints shall be water pressure rated with zero leakage when tested at 25 pounds per square inch for gravity sewers and 1½ times working pressure for force mains, and joints shall not be located within 9 feet of the crossing point. Adequate separation is defined as 10 feet of horizontal separation and 18 inches vertical separation below the water main. If the minimum 18–inch vertical separation is not achievable, a waiver from NHDES is required.

4. All pipe utilizing bell and spigot joints shall be laid with the spigot end downstream. Bells will not be permitted in structures.

5. Green detectable "sewer" tape shall be installed in the sewer trench on top of the 12–inch sand blanket on all sanitary sewer mains and services.

6. Sewer service laterals are to be 6" SDR 35 pipe. Sewer Service shall be constructed at a 1% minimum slope (1/8 inch per foot) unless otherwise approved by the Engineer (10% maximum).

7. Sewer services will not be allowed to have more than two angle points, or a total angular deviation of 180 degrees, unless a variance is granted by the City.

8. Service laterals shall not connect to manholes unless specified on plans.

9. Sewer service laterals shall be designed for a minimum of 4 feet of cover at the building. Insulation will be required should the sanitary sewer lateral be less than the required 4 feet deep (6 feet in paved areas).

Water Notes

1. All materials and workmanship shall be in conformance with the Cith of Portsmouth's Construction Standards and Details and NH DES Env–DW 404. The more stringent regulation shall apply.

2. All water mains shall be Class 52 Cement Lined (CL) Ductile Iron Pipe and pipe shall meet, or exceed, current AWWA C151 specifications for ductile iron water pipe.

3. Water Mains and services shall have a minimum cover of 5'. Where top of water main is less than 5'–0" below finished grade, the Contractor shall install rigid insulation in conformance with the typical water trench detail.

4. All water mains shall be encased in polyethylene encasement (polywrap). See specification section 02611W.

5. At pipe crossings, one full length of water pipe shall be located so both joints will be as far from the sewer/drain pipe as possible. Special structural supports for the water and sewer pipes may be required.

6. All materials coming in physical contact with drinking water must be certified to meet the ANSI/NSF Standard 61 by either the Underwriters Labs (UL) or the National Sanitation Foundation (NSF).

7. Disinfection and testing of water lines shall be done in accordance with Cith of Portsmouth and current AWWA standards.

8. All existing water pipe identified to be abandoned shall be capped at all exposed ends and abandoned in place unless removal is required because of other interferences (incidental).

9. The contractor shall use restraint systems on all valves and fittings unless otherwise noted on the plans.

10. All gate valves shall have restrained mechanical joints and shall open left.

11. Existing curb box and/or other castings disturbed or relocated by construction activities shall be adjusted to match final grade, unless otherwise directed by the Engineer (subsidiary).

12. Where water main is less than 4'–0" horizontally from a structure, the contractor shall install 2 inches of rigid insulation along the side wall of the water main trench a minimum of 10'–0" horizontally beyond the centerline of the structure in both directions to protect the water main from freezing.

13. Maintain a minimum of 10 feet horizontal distance between water main and sewer piping. Notify Engineers if any discrepancy.

14. Existing fire hydrants shall be removed, decommissioned below grade, and delivered to a location specified by the City.

15. The Contractor shall install the Water Service Connections (including service saddles if required, live taps, corporations, curb stop, curb box, and PE water service pipe with tracer wire at the size specified in the service schedule) and connect the existing water service to the new curb box. The new service shall be connected to the existing service pipe past the curb stop unless the existing water service pipe is galvanized cast iron, galvanized steel or lead; in this case, the Contractor shall notify the City and Engineer.

PERMIT PLANS

no.	revision	date	by
2	CONSERVATION COMMISSION SUBMISSION	07/24/2019	JFK
1	TAC WORK SESSION SUBMISSION	07/09/2019	JFK

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STATE OF NEW HAMPSHIRE – JOSEPH H. KIEFFNER No. 9177 – LICENSED PROFESSIONAL ENGINEER

designed by: ----
drawn by: AGL
approved by: ----
scale:

date: July 2019
project no: 1119
file name: 1119 NOTES.dwg

City of Portsmouth, New Hampshire
Department of Public Works
Multi-purpose Recreation Fields
680 Peverly Hill Road
Recreation Fields
Notes

drawing no.
G-101

sheet: ---- of ----

ABBREVIATIONS:

ABBREV.	MEANING
@	AT
ABD	ABANDONED
ABAN	ABANDON IN PLACE
ACP	ASBESTOS CEMENT PIPE
ADD'L	ADDITIONAL
APPROX	APPROXIMATE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
BTM	BOTTOM
BH	BRADLEY HEAD
BIT	BITUMINOUS CONCRETE
BLDG	BUILDING
BMP	BUILDING MONITORING POINT
BOW	BOTTOM OF WALL
BR	BRICK
CB	CATCH BASIN
C.B.	CONCRETE BOUND
CBCI	CATCH BASIN WITH CURB INLET
CC	CAST-IN-PLACE CONCRETE
CEM	CEMENT
CL	CLEAR
℄	CENTER LINE
CLF	CHAIN LINK FENCE
CI	CAST IRON
CICL	CAST IRON CEMENT-LINED
CIP	CAST IN PLACE
C.O.	CLEAN OUT
CONC	CONCRETE
CONN	CONNECTION
COR	CORNER
CP	CONCRETE PIPE
CMP	CORRUGATED METAL PIPE
CSE	COBBLE STONE EDGE
D	DRAIN
DEPT	DEPARTMENT
DH	DRILL HOLE
DI	DUCTILE IRON
DIA	DIAMETER
DICL	DUCTILE IRON CEMENT-LINED
DIA	DIAMETER
DISCH	DISCHARGE
DMH	DRAIN MANHOLE
DLY	DOUBLE SOLID YELLOW LINE
DT	DRAIN TILE
DWG	DRAWING
EA	EACH
EF	EACH FACE
EM	ELECTRIC METER
E-VAULT	ELECTRIC-VAULT
EL, ELEV	ELEVATION
ELEC, E	ELECTRIC
EOP	EDGE OF PAVEMENT
EXIST	EXISTING
ESHWL	EXIST. SEASONAL HIGH WATER LEVEL
F&C	FRAME AND COVER
FA	FIRE ALARM
FD	FLOOR DRAIN
FED	FEDERAL
FH	FIRE HYDRANT
FM	FORCE MAIN
FND	FOUND
FP	FLAG POLE
FT	FOOT
GM	GAS METER
GRAN	GRANITE
HDPE	HIGH DENSITY POLYETHYLENE
HH	HAND HOLE
HORIZ	HORIZONTAL
HYD	HYDRANT
H/C	HANDICAP
INV	INVERT
IN	INCHES
IP	IRON PIPE
L	LEAVE
MBOX	MAIL BOX
MHB	MASS HIGHWAY BOUND
MHW	MEAN HIGH WATER
MIN	MINIMUM
MON	MONUMENT
NIC	NOT IN CONTRACT
NO, #	NUMBER
NTS	NOT TO SCALE
PB	PULL BOX
PC	PRECAST CONCRETE
PCCP	PRESTRESSED CONCRETE CYLINDER PIPE
PCI	PIT CAST IRON
PERF	PEFORATED
PM	PARKING METER
PNS	PIPE NOT SEEN
PROP	PROPOSED
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
R	REMOVE/RELOCATE
REC	RECORD INFORMATION
REINF	REINFORCEMENT
RES	REVERE EXTENSION SEWER
RET	RETAIN
RCP	REINFORCED CONCRETE PIPE
RS	RECEIVING SHAFT
ROW	RIGHT-OF-WAY
SB	STREET LIGHT BASE
S.B.	STONE BOUND
SD	STORM DRAIN
SF	FIRE SERVICE
SGC	SLOPED GRANITE CURB
SLCC	STREET LIGHT CONTROL CABINET
SMH	SEWER MANHOLE
SPEC	SPECIFICATION
SWL	SINGLE WHITE LINE
SQ	SQUARE
S	SANITARY SEWER
ST	STEEL

ABBREV.	MEANING
STD	SINGLE TILE DUCT
STY	STORY
SW	SIDEWALK
T&B.	TOP AND BOTTOM
TBC	TOP BACK OF CURB
TCC	TRAFFIC CONTROL CABINET
TD	TELEDUCT
TEL	TELEPHONE CONDUIT/DUCT BANK
TH	TOP OF HATCH
TL	TRAFFIC LIGHT CONDUIT
TOH	TOP OF HOOD
TOW	TOP OF WALL
TRAF	TRAFFIC CONDUIT
TS	TRAFFIC SIGNAL
TYP	TYPICAL
UMP	UTILITY MONITORING POINT
UNK	UNKNOWN
UP	UTILITY POLE
VC	VITRIFIED CLAY
VERT	VERTICAL
VGC	VERTICAL GRANITE CURB
W	WATER
W/	WITH
WC	WYE CONNECTION
WIP	WROUGHT IRON PIPE
WM	WATER METER
WMH	WATER MANHOLE
WFLG	WETLAND FLAG

GENERAL SYMBOLS:

EXISTING		PROPOSED
	UTILITY POLE & GUY WIRE	
	UTILITY POLE W/ LIGHT	
	LIGHT POLE	
	MAILBOX	
	VENT PIPE	
	SIGNS (TWO POSTS)	
	GRANITE BOUND FOUND	
	DRILL HOLE FOUND	
	IRON PIPE/ROD FOUND	
	METAL POST	
	GRANITE OR CONC. POST	
	FIRE HYDRANT	
	GAS GATE VALVE	
	WATER GATE VALVE	
	WATER CURB STOP	
	VALVE ELECTRIC BOX	
	CATCH BASIN	
	DRAIN MANHOLE	
	ELECTRIC MANHOLE	
	TELEPHONE MANHOLE	
	WATER MANHOLE	
	SEWER MANHOLE	
	MANHOLE	
	BUSH/SHRUB	
	TREE STUMP	
	CONIFEROUS TREE	
	DECIDUOUS TREE	
	ROCK	
	BORING	
	WETLAND	
	WETLAND FLAG	
	SPOT LIGHT	
	GUY WIRE	
	EDGE OF PAVEMENT	
	STOCKADE FENCE	
	EROSION CONTROL FIBER ROLL	
x335.2	SPOT ELEVATION	131.75'
	City LAYOUT LINE	
	OVERHEAD WIRES	
s	SEWER LINE	
d	DRAIN LINE	
G	GAS LINE	
w	WATER SERVICE UNDERGROUND	PWS
uge	UNDERGROUND ELECTRIC LINE	
	APPROX. ABUTTERS	
	LOT LINE	
	SHRUB LINE	
	TREE LINE	
	STONE WALL	
	GUARDRAIL	
	MAJOR CONTOUR LINE	
	MINOR CONTOUR LINE	
	EASEMENT LINE	
	WETLAND LINE	
	STATE HIGHWAY LAYOUT LINE	
w	WATER MAIN	PW
	BOLLARD	
	SLOPE LINE	
	CONSTRUCTION BASELINE	302+00
	THRUST BLOCK	

PERMIT PLANS

no.	revision	date	by
2	CONSERVATION COMMISSION SUBMISSION	07/24/2019	JFK
1	TAC WORK SESSION SUBMISSION	07/09/2019	JFK

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cmaengineers.com

JOSEPH H. KIEFFNER No. 9177 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE -

designed by: ----	drawn by: AGL	approved by: ----	scale:
date: July 2019	project no: 1119	file name: 1119 NOTES.dwg	

City of Portsmouth, New Hampshire
Department of Public Works

Multi-purpose Recreation Fields
680 Peverly Hill Road

Recreation Fields
Legends

drawing no.
G-102

sheet: ---- of ----

LEGEND	
SYMBOL	SHEETS
△ A	EXISTING CONDITIONS
X	SITE PLAN
X	GRADING PLAN
X	UTILITY PLAN
X	EROSION CONTROL PLAN

BANFIELD ROAD

Seacoast Community School

Pike Industries

△9 13 17

△9 14 18 21

△10 14 18

PROPOSED FUTURE TRANSFER STATION PROJECT

REGIONAL STORMWATER BMP'S

Portsmouth Public Works

PEVERLY HILL ROAD

WEST ROAD

CAMPUS DRIVE

WILSON RD

PERMIT PLANS

no.	revision	date	by
2	CONSERVATION COMMISSION SUBMISSION	07/24/2019	JFK
1	TAC WORK SESSION SUBMISSION	07/09/2019	JFK

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c m a e n g i n e e r s . c o m

JOSEPH H. KIEFFNER No. 13171 STATE OF NEW HAMPSHIRE PROFESSIONAL ENGINEER LICENSED

designed by: ----	drawn by: AGL	approved by: ----	scale: 1" = 150'
date: July 2019	project no: 1119	file name: 1119 Overall Plan.dwg	0 150' 300'

City of Portsmouth, New Hampshire
Department of Public Works

Multi-purpose Recreation Fields
680 Peverly Hill Road

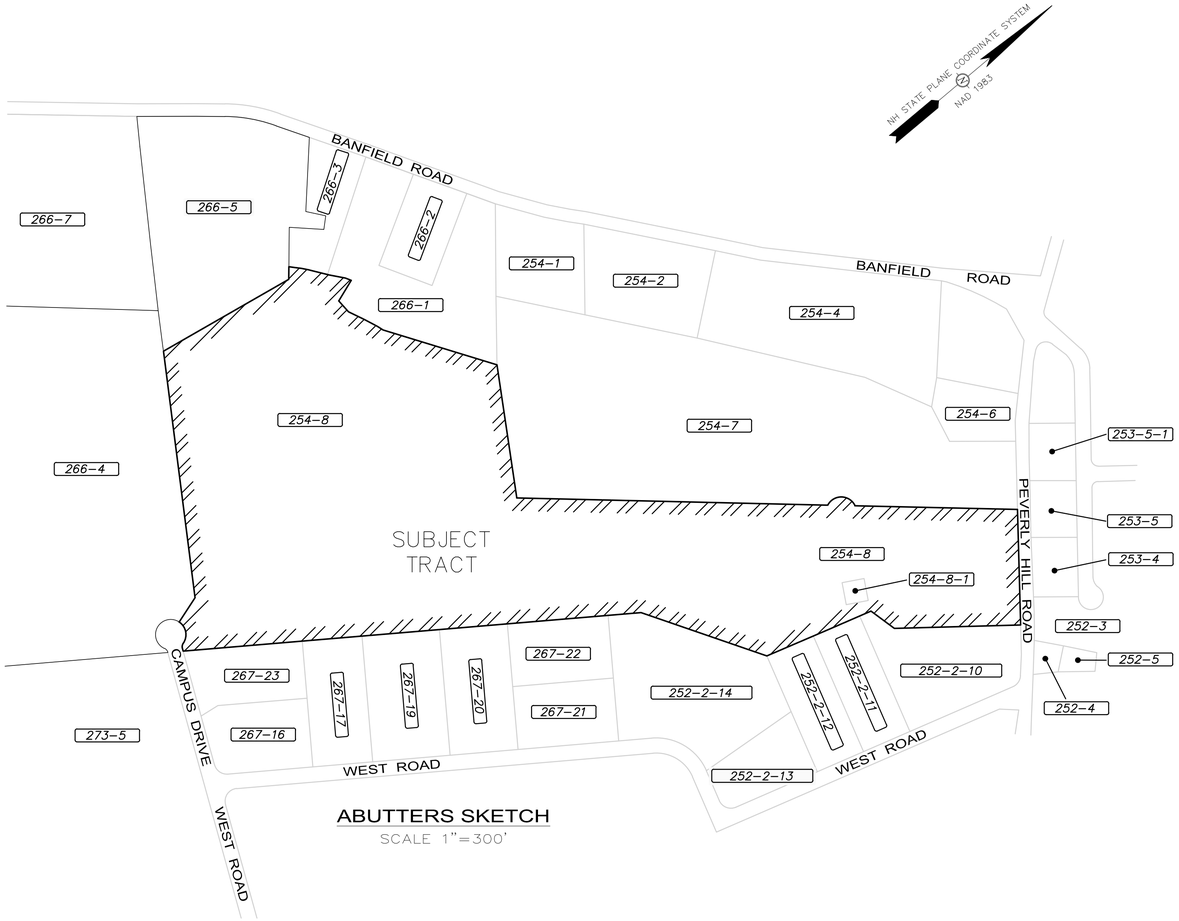
Recreation Fields
Sheet Index Plan

drawing no. G-103

sheet: ---- of ----

ABUTTERS LIST

MAP–LOT	OWNER OF RECORD	DEED REFERENCE
252–2–10	JMK REALTY LLC, PO BOX 971, PORTSMOUTH, NH 03802	3656/744
252–2–11	HEG WEST ROAD LLC, 2 INTERNATIONAL WAY, LAWRENCE, MA 01843 60 WEST RD, PORTSMOUTH, NH 03801	5835/67
252–2–12	ONE HUNDRED WEST LLC, 100 WEST RD, PORTSMOUTH, NH 03801	3589/1427
252–2–14	LITCHFIELD PORTSMOUTH LLC C/O EATON PARTNERS INC, 175 CANAL ST STE 401, MANCHESTER, NH 03101	4800/1185
252–3	LIGHTHOUSE MANUFACTURING LLC, 25 SOUTH SATELLITE RD, SOUTH WINDSOR, CT 06074	N/A
252–4 & 252–5	4 AMIGOS LLC, 321 LAFAYETTE RD, HAMPTON, NH 03842	N/A
253–4	DPH REALTY LLC, 30 MIRONA RD EXT, PORTSMOUTH, NH 03801	N/A
253–5	GERALD W. & TERESA M. REYNOLDS, 164 MASON RD, MILTON, NH 03851	N/A
253–5–1	BOURAS GROUP LLC, 10 MIRONA RD, PORTSMOUTH, NH 03801	N/A
254–7	PIKE INDUSTRIES, INC., 3 EASTGATE PARK RD, BELMONT, NH 03220	3192/1085
254–8–1	MCM ACQUISTION 2017 LLC ATTN: TAX DEPT NH22094–A, 8051 CONGRESS AVE, BOCA RATON, FL 33487–1307	N/A
266–1	RICCI CONSTRUCTION CO., INC., 225 BANFIELD RD, PORTSMOUTH, NH 03801	2527/322
266–3	ANDREW R. & CAROL ANN CROTEAU, 285 BANFIELD RD, PORTSMOUTH, NH 03801	2274/1868
266–4	FOUNDATION FOR SEACOAST HEALTH, 100 CAMPUS DR SUITE 1, PORTSMOUTH, NH 03801	3276/2980 & 3259/2178
266–5	HOPE FOR TOMORROW FOUNDATION, 1 STONERIDGE DR, RYE, NH 03870	5783/602
267–17–1	300 WEST RD LLC, 300 WEST ROAD UNIT #1, PORTSMOUTH, NH 03801	4453/1140
267–17–2	GRAYWOLF PROPERTIES LLC, 1 LIBBEY LN, RYE, NH 03870	4397/2371
267–17–3	GRAYWOLF PROPERTIES LLC, 1 LIBBEY LN, RYE, NH 03870	4439/1934
267–17–4	GRAYWOLF PROPERTIES LLC, 1 LIBBEY LN, RYE, NH 03870	4397/2371
267–19–1	BBJ PROPERTIES, INC., 38 RAINBOW LN, SANFORD, ME 04073	3396/126
267–19–2	PETER PARADIS, 481 DENNETT ST, PORTSMOUTH, NH 03801	3090/1083
267–19–3	KEVIN J. DUPLISEA, 270 WEST RD #3, PORTSMOUTH, NH 03801	5564/2186
267–19–4	WEST ROAD EQUIPMENT LLC, 270 WEST RD UNIT 4A, PORTSMOUTH, NH 03801	5059/2202
267–20	HARVEY PROPCO LLC, 1400 MAIN ST, WALTHAM, MA 02451	5660/1693
267–21	P A M REALTY TRUST C/O CP MANAGEMENT, INC., 11 COURT ST. SUITE 100, EXETER, NH 03833	4438/828
267–21	STERLING REALTY, INC., 143 PINELOCH DR, PORTLAND, ME 04103	2762/2839
267–22	MICRONICS, INC., 200 WEST RD, PORTSMOUTH, NH 03801	5423/2254
267–23	ENGEL FAMILY TRUST, ROBERT ENGEL TRUSTEE, PO BOX 6070, MANCHESTER, NH 03108	3459/1842
273–5	BELLWOOD ASSOCIATES LTD PARTNERSHIP C/O FESTIVAL FUN PARK PROPERTY TAX SERVICES PO BOX 543185, DALLAS, TX 75354	3471/2972



ABUTTERS SKETCH

SCALE 1"=300'

NOTES:

1. OWNER OF RECORD.....CITY OF PORTSMOUTH, N.H.
   ADDRESS.....1 JUNKINS AVE, PORTSMOUTH, NH 03801
   DEED REFERENCE.....3276/2986 & 5819/2310
   TAX SHEET / LOT.....254–8

   ZONED:..... MUNICIPAL — FRONT YARD SETBACK....N/A
   MINIMUM LOT AREA N/A — SIDE YARD SETBACK.....N/A
   FRONTAGE..... N/A — REAR YARD SETBACK.....N/A

2. THE RELATIVE ERROR OF CLOSURE WAS LESS THAN 1 FOOT IN 15,000 FEET.
3. THIS PLAN IS BASED ON A FIELD SURVEY, INFORMATION FROM PLANS OF RECORD AND AERIAL MAPPING BY EASTERN TOPOGRAPHICS.
   PRIMARY BM: CITY CONTROL POINT "INDU"
   HORIZONTAL DATUM: NAD 1983 (1986 CONTROL ADJUSTMENT)
   VERTICAL DATUM: NAVD 1988
4. THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASED UPON THE FIELD LOCATION OF ALL VISIBLE STRUCTURES (IE CATCH BASINS, MANHOLES, WATER GATES ETC.) AND INFORMATION COMPILED FROM PLANS PROVIDED BY UTILITY COMPANIES AND GOVERNMENTAL AGENCIES. ALL CONTRACTORS SHOULD NOTIFY, IN WRITING, SAID AGENCIES PRIOR TO ANY EXCAVATION WORK AND CALL DIG–SAFE @ 1–888–DIG–SAFE.
5. THE SUBJECT TRACTS LIE IN ZONE X (UNSHADED), AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON FLOOD INSURANCE MAP NO. 33015C0270E, EFFECTIVE DATE MAY 17, 2005, BY FEMA.
6. PARCEL 254–8 AND A PORTION OF PARCEL 266–4 ARE SUBJECT TO A RESTRICTIVE COVENANT AGREEMENT BETWEEN JOHN IAFOLLA CO., INC. & PIKE INDUSTRIES, INC., SEE RCRD BOOK 3192, PAGE 1088, BOOK 3193, PAGE 2059 AND BOOK 3198, PAGE 853.
7. WETLANDS DELINEATION 10/2018 BY GZA ENVIRONMENTAL.
8. ENGINEER OR CONTRACTOR TO VERIFY SITE BENCHMARKS BY LEVELING BETWEEN 2 BENCHMARKS PRIOR TO THE SETTING OR ESTABLISHMENT OF ANY GRADES/ELEVATIONS. DISCREPANCIES ARE TO BE REPORTED TO JAMES VERRA AND ASSOC., INC.

WETLAND DELINEATION NOTES:

1. JURISDICTIONAL WETLANDS WERE DELINEATED BY GZA GEOENVIRONMENTAL, INC. (GZA) ON OCTOBER 19 AND 22, 2018, AND APRIL 24, 2019, IN ACCORDANCE WITH THE 1987 U.S. ARMY CORPS OF ENGINEERS' (ACOE) "WETLANDS DELINEATION MANUAL," TECHNICAL REPORT Y–87–1 AND THE "REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL, NORTHCENTRAL AND NORTHEAST REGION." JANUARY 2012.
2. GZA EVALUATED WETLANDS AS POTENTIAL VERNAL POOLS ON APRIL 24, 2019 IN ACCORDANCE WITH THE NH CODE OF ADMINISTRATIVE RULES (ENV–WT 101.75, 101.86, 101.106) AND THE MANUAL "IDENTIFICATION AND DOCUMENTATION OF VERNAL POOLS IN NEW HAMPSHIRE, NEW HAMPSHIRE FISH AND GAME DEPARTMENT, NONGAME AND ENDANGERED WILDLIFE PROGRAM. 2004.
3. GZA PERFORMED A WETLANDS FUNCTIONS AND VALUES ASSESSMENT ON OCTOBER 19 AND 22, 2018, AND APRIL 24, 2019, IN ACCORDANCE WITH THE ACOE'S "HIGHWAY METHODOLOGY WORKBOOK SUPPLEMENT," SEPTEMBER 1999, AND CLASSIFIED WETLANDS IN ACCORDANCE WITH THE "CLASSIFICATION OF WETLANDS AND DEEPWATER HABITATS OF THE UNITED STATES" (FEDERAL GEOGRAPHIC DATA COMMITTEE, 2013).

WETLAND STANDARDS:

FEDERAL GEOGRAPHIC DATA COMMITTEE. 2013. CLASSIFICATION OF WETLANDS AND DEEPWATER HABITATS OF THE UNITED STATES. FGDC–STD–004–2013. SECOND EDITION. WETLANDS SUBCOMMITTEE, FEDERAL GEOGRAPHIC DATA COMMITTEE AND U.S. FISH AND WILDLIFE SERVICE, WASHINGTON, DC.

LICHVAR, R.W., D.L. BANKS, W.N. KIRCHNER, AND N.C. MELVIN. 2016. THE NATIONAL WETLAND PLANT LIST: 2016 WETLAND RATINGS. PHYTONEURON 2016–30: 1–17. PUBLISHED 28 APRIL 2016. ISSN 2153 733X

WETLAND STANDARDS (CONTINUED):

NEW ENGLAND HYDRIC SOILS TECHNICAL COMMITTEE. 2019. VERSION 4. FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, INTERSTATE WATER POLLUTION CONTROL COMMISSION, LOWELL, MASSACHUSETTS.

U.S. ARMY CORPS OF ENGINEERS, ENVIRONMENTAL LABORATORY. 1987. CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL, TECHNICAL REPORT Y–87–1, U.S. ARMY ENGINEER WATERWAYS EXPERIMENT STATION, VICKSBURG, MISSISSIPPI.

U.S. ARMY CORPS OF ENGINEERS. 2012. REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, ED. J. S. WAKELY, R. W. LICHVAR, AND C. V. NOBLE. ERDC/EL TR–12–1. VICKSBURY, MS: U.S. ARMY ENGINEER RESEARCH AND DEVELOPMENT CENTER.

U.S. DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, 2018. FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, VERSION 8.2. L.M. VASILAS, G.W. HURT, AND J.F. BERKOWITZ (EDS.). USDA, NRCS, IN COOPERATION WITH THE NATIONAL TECHNICAL COMMITTEE FOR HYDRIC SOILS.

REFERENCE PLANS:

1. AMENDED SITE PLAN, PROPERTY OF MICRONICS INC, 200 WEST ROAD, PORTSMOUTH, N.H., DATED 12/30/2014, RCRD PLAN D–38846.
2. LOT LINE REVISION PLAN, 755 BANFIELD ROAD REALTY, LLC, CONSTITUTION AVENUE, PORTSMOUTH, N.H., REVISED TO 11/28/2011, RCRD PLAN D–37091.
3. DRAINAGE EASEMENT PLAN OVER LAND OF BELLWOOD ASSOCIATES LIMITED PARTNERSHIP, CAMPUS DRIVE, PORTSMOUTH, N.H., DATED 7/30/2007, RCRD PLAN D–35073.
4. ACTIVITY AND USE RESTRICTION EASEMENT PLAN FOR PORTSMOUTH DEPARTMENT OF PUBLIC WORKS, 680 PEVERLY HILL ROAD, PORTSMOUTH, N.H., REVISED TO 9/13/2006, RCRD PLAN D–34222.
5. LATTICE TOWER EASEMENT PLAN, PEVERLY HILL ROAD, PORTSMOUTH, N.H., FOR MESSAGE CENTER MANAGEMENT, REVISED TO 4/16/2002, RCRD PLAN D–30056.
6. FOUNDATION FOR SEACOAST HEALTH, PORTSMOUTH, N.H., LOT LINE ADJUSTMENT, JOHN IAFOLLA COMPANY, INC. AND CITY OF PORTSMOUTH, REVISED TO 4/14/1998, RCRD PLAN D–26202.
7. SUBDIVISION & LOT LINE RELOCATION PLAN FOR PIKE INDUSTRIES, INC. & JOHN IAFOLLA COMPANY, INC, PEVERLY HILL ROAD/ BANFIELD ROAD, PORTSMOUTH, N.H., REVISED TO 11/21/1997, RCRD PLAN D–26136.
8. SUBDIVISION PLAN FOR JOHN IAFOLLA COMPANY, INC., PEVERLY HILL ROAD/ BANFIELD ROAD, PORTSMOUTH, N.H., REVISED TO 11/20/1996, RCRD PLAN D–25124.
9. LOT LINE ELIMINATION PLAN FOR BELLWOOD ASSOCIATES LIMITED PARTNERSHIP, LAFAYETTE ROAD/ CONSTITUTION AVENUE, PORTSMOUTH, N.H., DATED 9/3/1991, RCRD PLAN D–21288.
10. PLAN OF DRAINAGE EASEMENT FOR LAFAYETTE WEST CORP & FFP INTERIM PARTNERS, WEST ROAD, PORTSMOUTH, N.H., REVISED TO 3/28/1989, RCRD PLAN D–22902.
11. SUBDIVISION PLAN, LINCOLN AND MARY HANSCOM, PORTSMOUTH, N.H., DATED 1/1983, RCRD PLAN D–11441.
12. LOT LINE REVISION PLAN, CAMPUS DRIVE, BANFIELD & PEVERLY HILL ROADS, PORTSMOUTH, N.H., FOR CITY OF PORTSMOUTH, N.H. & FOUNDATION FOR SEACOAST HEALTH, REVISED TO 12/14/2016, RCRD PLAN D–39897.

no.	revision	date	by

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drawn by: AGL
approved by: ----
scale: 300' 0 600' Scale: 1" = 300'

date: July 2019
project no: 1119
file name: 1119 ECP.dwg

City of Portsmouth, New Hampshire
Department of Public Works
Multi-purpose Recreation Fields
680 Peverly Hill Road
Existing Conditions Plan

drawing no. V-201

sheet: ---- of ----

LINE TABLE			
LINE	BEARING		DISTANCE
L1	S 51°30'32"	E	457.64
L2	S 38°28'19"	W	500.01
L3	S 76°35'13"	W	114.96
L4	S 16°43'54"	W	48.95
L5	S 16°31'44"	W	132.02
L6	S 16°47'11"	W	268.29
L7	S 59°02'50"	W	526.73
L8	S 35°10'38"	W	1819.23
L9	N 65°24'52"	W	11.22
L10	N 16°46'42"	W	115.00
L11	N 57°17'20"	W	270.98
L12	N 57°17'20"	W	222.72
L13	N 57°17'20"	W	287.56
L14	N 57°17'20"	W	202.89
L15	N 10°10'42"	E	4.72
L16	N 10°10'42"	E	276.88
L17	N 10°10'42"	E	290.00
L18	N 49°22'45"	W	50.00
L19	N 47°59'56"	E	21.12
L20	N 46°59'02"	E	28.17
L21	N 51°03'35"	E	28.56
L22	N 54°28'19"	E	13.75
L23	N 54°07'57"	E	64.55
L24	N 53°40'13"	E	6.03
L25	N 50°59'41"	E	66.28
L26	N 61°02'31"	E	25.04
L27	S 18°34'23"	E	95.09
L28	N 88°31'38"	E	57.65
L29	N 65°49'31"	E	70.30
L30	N 67°50'02"	E	58.61
L31	N 71°47'07"	E	26.13
L32	N 57°02'00"	E	471.36
L33	S 58°29'19"	E	533.10
L34	N 41°19'31"	E	1223.68
L35	N 39°27'07"	E	7.78
L36	N 41°18'42"	E	644.30

CURVE TABLE					
CURVE	ARC L.	RADIUS	DELTA	CHORD BRG.	CHORD L.
C1	21.68	25.00	49°40'47"	N 40°34'29" W	21.00
C2	94.98	60.00	90°41'48"	N 61°04'59" W	85.37
C3	132.37	60.00	126°23'58"	N 41°18'42" E	107.11

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project no: 1119
file name: 1119 ECP.dwg
scale: 20' 0 Scale: 1" = 20' 40'

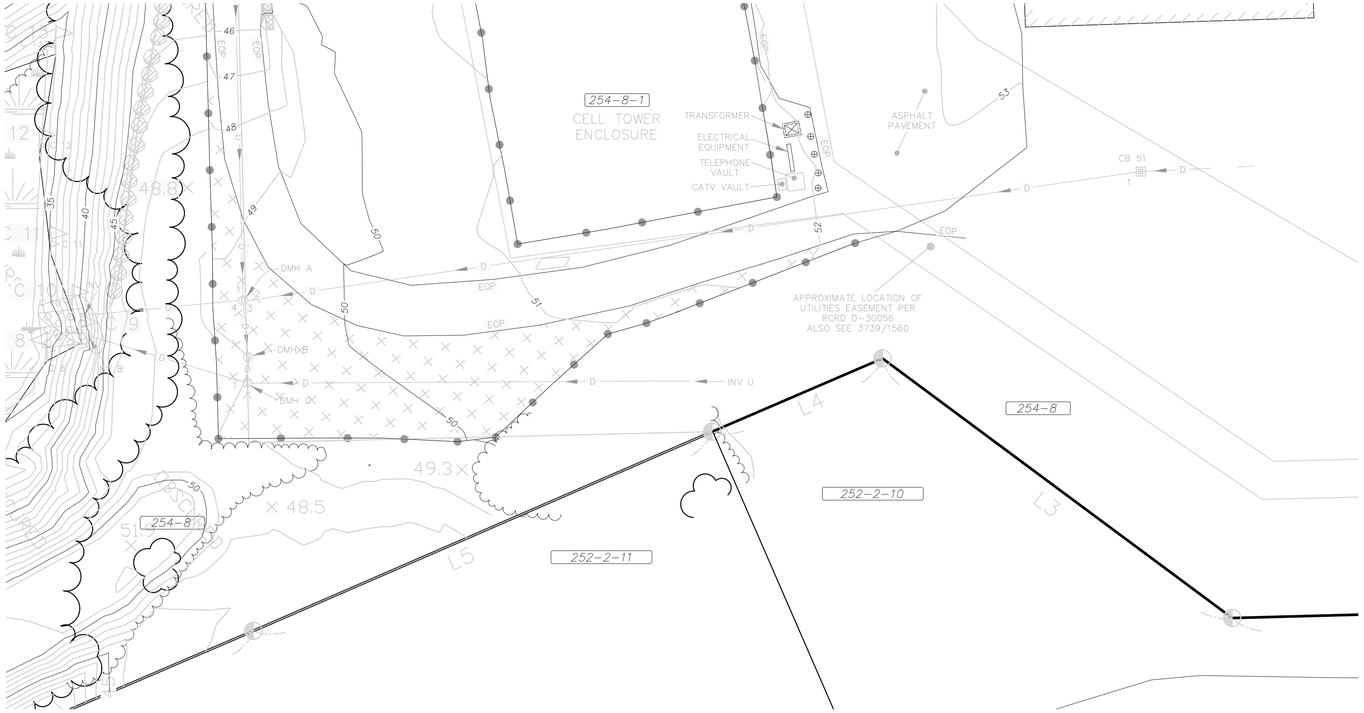
City of Portsmouth, New Hampshire
Department of Public Works

Multi-purpose Recreation Fields
680 Peverly Hill Road

Existing Conditions Plan

drawing no. V-202

sheet: ---- of ----



DRAIN & SEWER TABLE

CB 44
RIM EL= 45.55
(1) INV IN 15"HDPE= 42.40
(2) INV OUT 15"HDPE= 42.30

CB 52
RIM EL= 46.87
(1) INV IN 12"HDPE= 43.10
(2) INV IN 12"HDPE= 43.37
(3) INV OUT 15"HDPE= 43.67

CB 53
RIM EL= 46.69
(1) INV OUT 12"HDPE= 43.35

CB 54
RIM EL= 44.37
(1) INV IN 15"HDPE= 41.26
(2) INV IN 12"HDPE= 41.19
(3) INV OUT 18"HDPE= 41.10

CB 55
RIM EL= 49.67
(1) INV OUT 12"HDPE= 43.00

CB 56
RIM EL= 47.97
(1) INV OUT 12"HDPE= 44.05

CB A
RIM EL= 27.63
(1) INV IN 24"HDPE= 23.81
(2) INV OUT 24"HDPE= 23.73

CB B
RIM EL= 27.41
(1) INV IN 24"HDPE= 23.43
(2) INV OUT 24"HDPE= 23.41

CB C
RIM EL= 27.22
(1) INV IN 24"HDPE= 23.24
(2) INV OUT 24"HDPE= 23.26

SMH 5557
RIM EL= 52.36
(1) INV IN 4"PVC FM= 48.1±
(2) INV OUT 8"PVC= 47.7±

DMH A
RIM EL= 49.52
(1) INV IN 18"HDPE= 40.39
(2) INV IN 15"HDPE= 39.73
(3) INV OUT 18"HDPE= 40.08
BRICK WEIR FLOW LINE
FOR (4) = 41.23
(4) INV OUT 18"HDPE= 40.24

DMH B & DMH C ARE VORTECHNICS
DRAINAGE TREATMENT STRUCTURES

DMH B
RIM EL= 48.99

DMH C
RIM EL= 49.03
TRAPEZOIDAL WEIR EL= 41.73
(1) INV OUT 18"HDPE= 39.88

DROP INLET 1
CONCRETE COVER EL= 51.58
2 SIDE INLETS 0.85 W X 0.70 H
INLET EL= 50.71
(1) INV OUT 18"HDPE= 46.26

INV A
INV OUT 18"HDPE= 40.0±

INV B
INV OUT 18"HDPE= 39.65

INV C1
INV OUT 24"RCP= 33.54

INV C2
INV OUT 24"RCP= 33.56

INV D
54"W X 42"H ARCHED CMP
INV IN= 22.31

INV E
54"W X 42"H ARCHED CMP
INV OUT= 21.90

INV F
INV OUT 24"HDPE= 23.06

INV G
INV IN 24"HDPE= 23.89

INV H (PERFORATED PIPE)
INV OUT 6"HDPE= 24.52

INV I (PERFORATED PIPE)
INV IN 6"HDPE= 30.63

INV J1
INV IN 15"HDPE= 31.83

INV J2
INV IN 15"HDPE= 31.78

INV K1
INV OUT 15"HDPE= 30.66

INV K2
INV OUT 15"HDPE= 30.90

INV L
INV OUT 18"HDPE= 45.80

INV M (UNDERDRAIN)
INV OUT 4"PVC= 46.63

INV N1
INV IN 18"HDPE= 45.26

INV N2
INV IN 18"HDPE= 45.23

INV N3
INV IN 18"HDPE= 45.23

INV O (UNDERDRAIN)
INV OUT 4"PVC= 46.05

INV P (UNDERDRAIN)
INV OUT 4"PVC= 46.15

INV Q1
INV OUT 18"HDPE= 44.90

INV Q2
INV OUT 18"HDPE= 44.92

INV Q3
INV OUT 18"HDPE= 44.84

INV R1
INV OUT 36"CMP= 27.33

INV R2
INV OUT 36"CMP= 27.32

INV S1
INV IN 36"CMP= 30.68

INV S2
INV IN 36"CMP= 30.64

INV T1
INV IN 24"RCP= 35.22

INV T2
INV IN 24"RCP= 35.47

INV U
INV IN 12"HDPE= 41.23

TBM TABLE

TBM 1
WESTERLY CORNER OF CONCRETE
TRANSFORMER PAD
EL= 49.68

TBM 2
BOLT W/ "X" CUT
HYDRANT TOP FLANGE
EL= 48.63

TBM 3
BOLT W/ "X" CUT
HYDRANT TOP FLANGE
EL= 53.92

TBM 4
SURVEY SPIKE SET
IN BASE 30" PINE
EL= 42.40
(0.5' ABOVE GROUND)

TBM 5
MARKED BOLT
HYDRANT LOWER FLANGE
EL= 52.07

TBM 6
CHISELLED SQUARE FOUND
IN LEDGE OUTCROP
EL= 40.09
(AT GROUND EL.)

TBM 7
SPIKE FOUND
IN BASE 30" PINE
EL= 37.19
(0.5' ABOVE GROUND)

20 0 20 40 60 80 FEET
10 0 10 20 METERS

LEGEND:

- STONE WALL
- IRON ROD
- IRON PIPE
- BOUND as DESCRIBED
- WOOD HUB
- DRILL HOLE
- CHAIN LINK FENCE
- WOOD FENCE
- GUARD RAIL
- WOOD FENCE POST
- BARBED WIRE FENCE
- 110-5 ..... TAX SHEET – LOT NUMBER
- RCRD ..... ROCKINGHAM COUNTY REGISTRY OF DEEDS
- EOP ..... EDGE OF PAVEMENT
- SGC ..... SLOPED FACED GRANITE CURB
- VGC ..... VERTICAL FACED GRANITE CURB
- RWBL ..... MODULAR BLOCK RETAINING WALL
- RWC ..... CONCRETE RETAINING WALL
- RWM ..... MORTARED RETAINING WALL
- RWS ..... STONE RETAINING WALL
- BOLLARD
- SIGN
- DOUBLE POST SIGN
- SIGNAL JUNCTION BOX
- LIGHT POLE
- ELECTRICAL CONDUIT
- PAD MOUNTED TRANSFORMER
- ELECTRICAL PANEL
- ELECTRICAL BOX
- E ..... ELECTRIC METER
- TELEPHONE MANHOLE
- GAS VALVE
- WATER GATE VALVE
- HYDRANT
- CATCH BASIN
- CATCH BASIN
- DRAIN MANHOLE
- SEWER MANHOLE
- TREE LINE
- BRUSH LINE
- CONIFEROUS TREE
- DECIDUOUS TREE
- W ..... WATER LINE
- S ..... SEWER LINE
- D ..... DRAIN LINE
- G ..... GAS LINE
- FM ..... FORCE MAIN
- UGC ..... UNDERGROUND COMMUNICATIONS
- UGE ..... UNDERGROUND ELECTRIC
- BORING
- TEST PIT
- CEMENT CONCRETE
- CRUSHED STONE
- RIP RAP
- RETAINING WALL
- LA ..... LANDSCAPED AREA
- ×12.5 ..... SPOT GRADE

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project no: 1119
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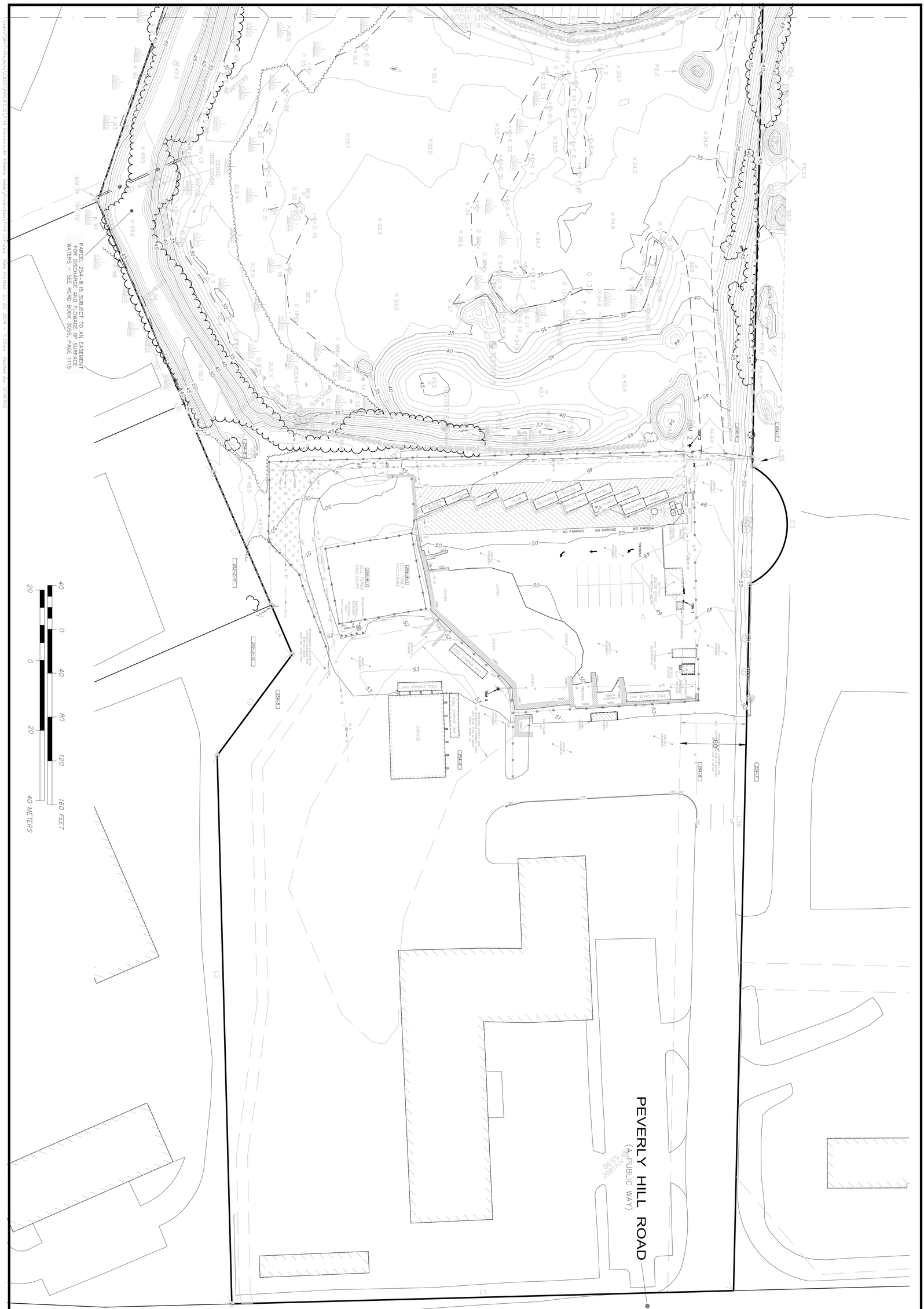
scale: 20' 0 Scale: 1" = 20' 40'

City of Portsmouth, New Hampshire
Department of Public Works
Multi-purpose Recreation Fields
680 Peverly Hill Road
Existing Conditions Plan

drawing no. V-203
sheet: ---- of ----



sheet: — of —	drawing no: V-204	City of Portsmouth, New Hampshire Department of Public Works	date: July 2019
			designed by: ----
			project no: 1119
			drawn by: AGL
		Multi-purpose Recreation Fields 680 Peverly Hill Road	file name: 1119 ECP.dwg
			approved by: ----
		Existing Conditions Plan	scale: 0 40' 80' Scale: 1" = 40'

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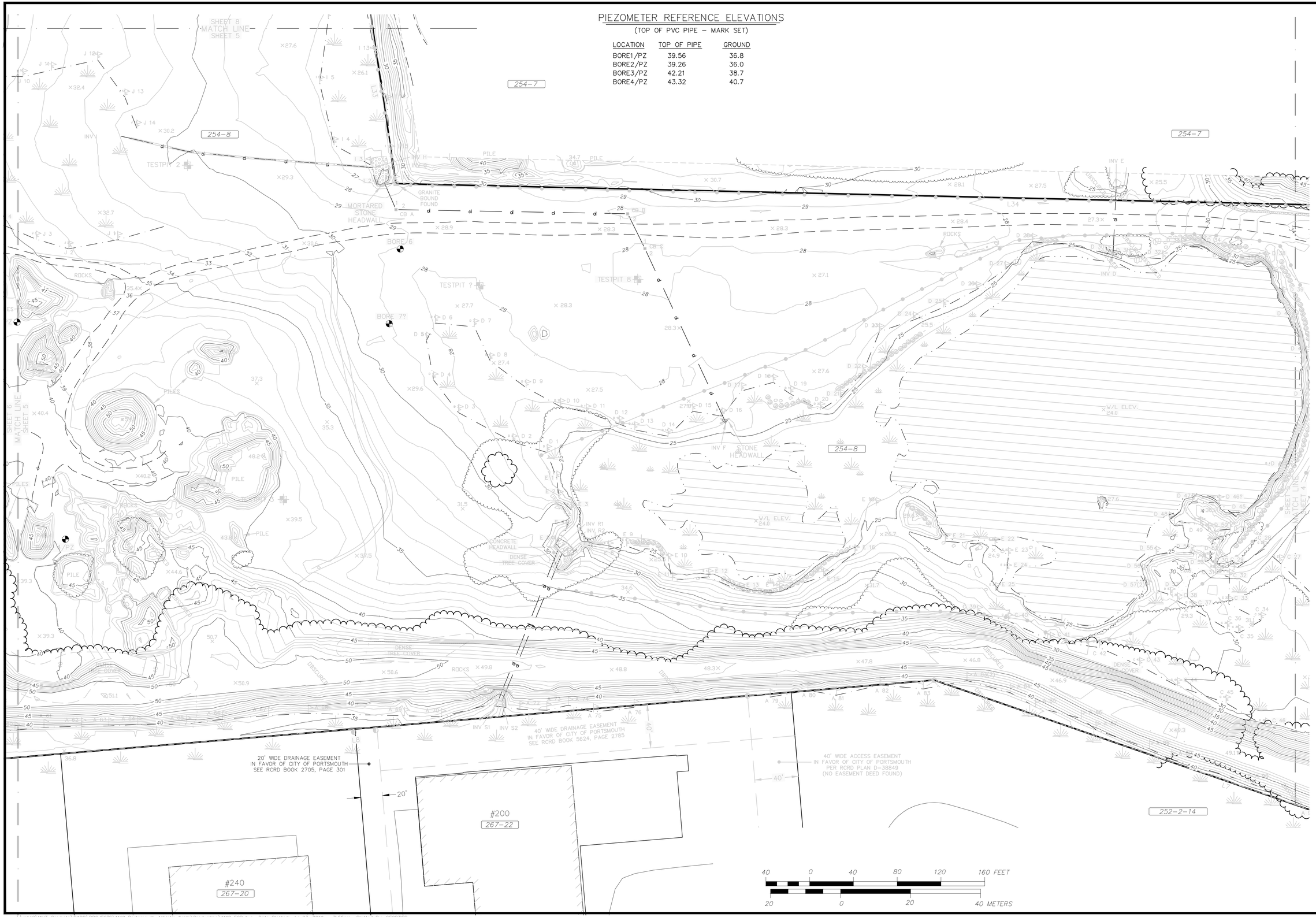
PIEZOMETER REFERENCE ELEVATIONS

(TOP OF PVC PIPE – MARK SET)

LOCATION	TOP OF PIPE	GROUND
BORE1/PZ	39.56	36.8
BORE2/PZ	39.26	36.0
BORE3/PZ	42.21	38.7
BORE4/PZ	43.32	40.7



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date: July 2019
project no: 1119
file name: 1119 ECP.dwg
scale: 1" = 40'

City of Portsmouth, New Hampshire
Department of Public Works
Multi-purpose Recreation Fields
680 Peverly Hill Road
Existing Conditions Plan

drawing no. V-205
sheet: ---- of ----

266-4

SHEET 7
MATCH LINE
SHEET 6

254-8

266-4

254-8

266-4

254-8

267-19

267-17

273-5

267-23

CAMPUS DRIVE
(A PUBLIC WAY-60' WIDE)

DRAINAGE EASEMENT IN FAVOR OF FOUNDATION FOR SEACOAST HEALTH SEE RCRD BOOK 4553, PAGE 1886

BORE 2/PZ

BORE 3/PZ

BORE 8

BORE 9

TBM 4

TBM 5

SMH 1

DROP INLET 1

STONE HEADWALL

FITNESS STATION 8

FITNESS STATION 9

DENSE TREE COVER

GRAVEL ACCESS

PILES

OBSCURED

UGC

UGE

INV L

INV Q1
INV Q2
INV Q3

INV M
INV N1
INV N2
INV N3
INV O

#50

40 0 40 80 120 160 FEET

20 0 20 40 METERS

\\mht2\MHT-Projects\CADD\PROJECTS\1119 Portsmouth Athletic fields\Production\1119 ECP.dwg Date Plotted: Jul 23, 2019 - 7:55am Plotted By: SFORTIER

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City of Portsmouth, New Hampshire
Department of Public Works

Multi-purpose Recreation Fields
680 Peverly Hill Road

Existing Conditions Plan

designed by: ----
drawn by: AGL
approved by: ----
scale: 40' 0 80' Scale: 1" = 40'

date: July 2019
project no: 1119
file name: 1119 ECP.dwg

drawing no.
V-206

sheet: ---- of ----

266-5
266-3
266-2
266-1
266-7
254-8
266-4

10' WIDE PEDESTRIAN & BICYCLE EASEMENT
AS SHOWN ON RCRD PLAN D-40861

BARBED WIRE
IN STUMP FOUND

IRON ROD
FOUND

HUB
FOUND

571.60
276.88
4.72
202.89

DETAIL
N.T.S.

HV1899
43.33

WOOD
BRIDGE

INV K1
INV K2
INV J1
INV J2

TBM 7
TBM 6
BORE 1 PZ

FITNESS
STATION 6
FITNESS
STATION 7

DENSE
TREE COVER
DISTURBED
FILL

SHEET 7
MATCH LINE
SHEET 8
SHEET 7
MATCH LINE
SHEET 6

40 0 40 80 120 160 FEET
20 0 20 40 METERS

\\mht2\MHT-Projects\CADD\PROJECTS\1119 Portsmouth Athletic fields\Production\1119 ECP.dwg Date Plotted: Jul 23, 2019 – 7:55am Plotted By: SFORTIER

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drawn by: AGL
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date: July 2019
project no: 1119
file name: 1119 ECP.dwg
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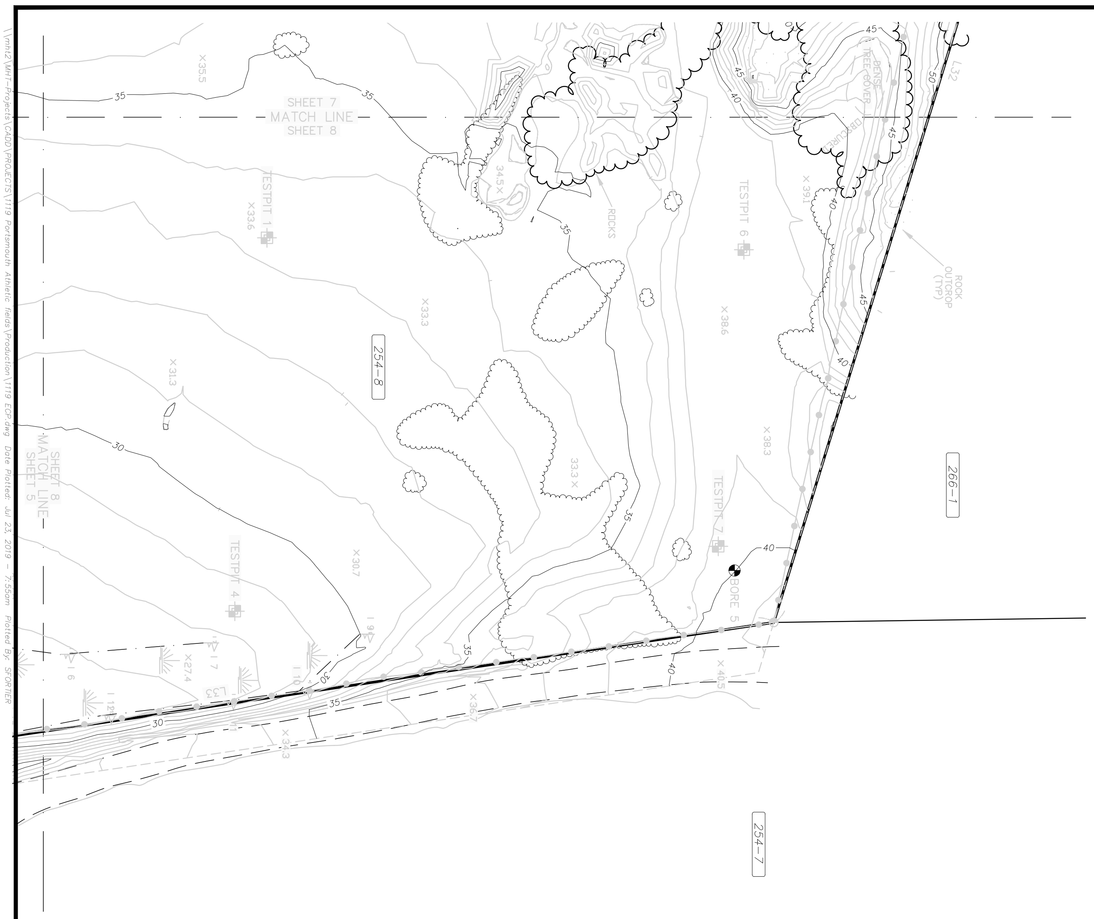
City of Portsmouth, New Hampshire
Department of Public Works

Multi-purpose Recreation Fields
680 Peverly Hill Road

Existing Conditions Plan

drawing no.
V-207

sheet: ---- of ----



PIEZOMETER REFERENCE ELEVATIONS

(TOP OF PVC PIPE – MARK SET)

LOCATION	TOP OF PIPE	GROUND
BORE1/PZ	39.56	36.8
BORE2/PZ	39.26	36.0
BORE3/PZ	42.21	38.7
BORE4/PZ	43.32	40.7

40 20 0 0 40 20 40 80 120 160 FEET
40 METERS

\\mh2\MH Projects\CAD\PROJECTS\1119 Portsmouth Athletic fields\Production\1119 ECP.dwg Date Plotted: Jul 23, 2019 – 7:55am Plotted By: SFORTIER

sheet: — of —	City of Portsmouth, New Hampshire Department of Public Works	date: July 2019	designed by: ----
drawing no. V-208	Multi-purpose Recreation Fields 680 Peverly Hill Road	project no: 1119	drawn by: AGL
	Existing Conditions Plan	file name: 1119 ECP.dwg	approved by: ----
		scale: 0 40' 80' Scale: 1" = 40'	

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SEE SHEETS L1.01 & L1.02 FOR SITE PLAN INFORMATION FOR RECREATIONAL FIELDS AMENITIES

SNOW STORAGE AREA

MATCH LINE
MATCH TO C-302

STORMWATER BMP

Pike Industries

GRANITE BOUND FOUND

POROUS PAVEMENT WALK

PARKING LOT LIGHTING, TYP.

500'

6'

9' TYP.

19' TYP.

24'

PROPERTY LINE

8'

GRAVEL PARKING

9'

33'

6'

10'

30'

10'

8'

29'-7"

BLEACHERS, TYP.

PHASE I RECREATION FIELDS

390'

PAVED ACCESS DRIVE

PAVED HC PARKING

TRANSFORMER

GRAVEL ACCESS DRIVE

PROPERTY LINE

10'

WETLAND EDGE

MATCH LINE
MATCH TO C-302

POROUS PAVEMENT WALK

PERMIT PLANS

no.	revision	date	by
2	CONSERVATION COMMISSION SUBMISSION	07/24/2019	JFK
1	TAC WORK SESSION SUBMISSION	07/09/2019	JFK

CMA ENGINEERS
Civil/Environmental Engineers
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JOSEPH H. KIEFFNER No. 9317 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE

designed by:	----
drawn by:	AGL
approved by:	----
date:	July 2019
project no:	1119
file name:	1119 Site Plan-Phase1.dwg
scale:	40' 0 80' Scale: 1" = 40'

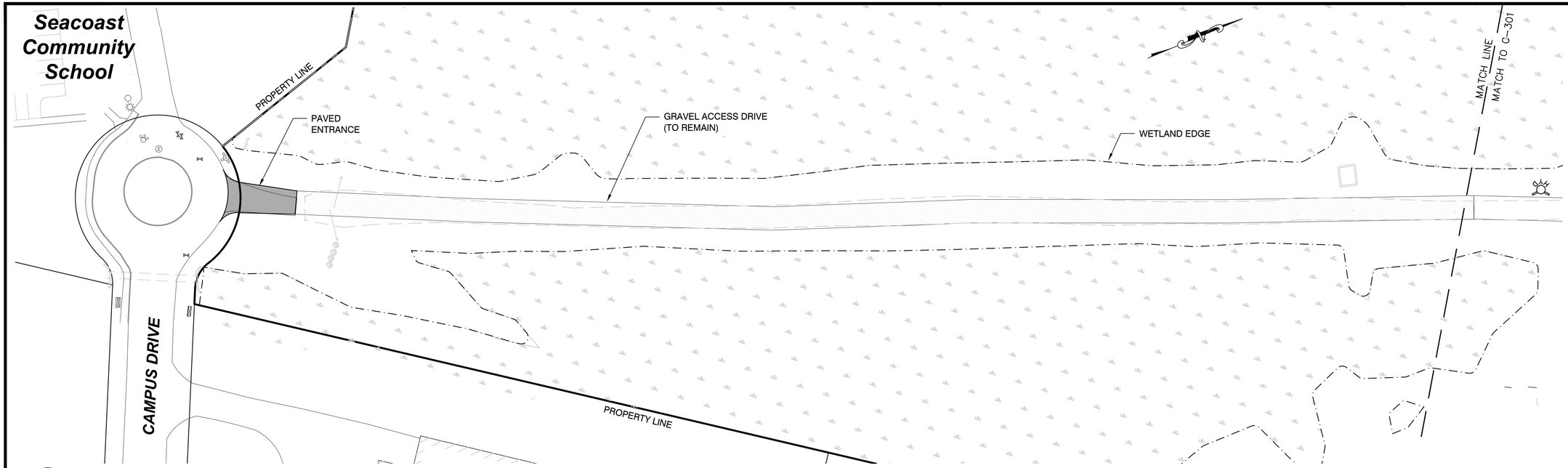
City of Portsmouth, New Hampshire
Department of Public Works

Multi-purpose Recreation Fields
680 Peverly Hill Road

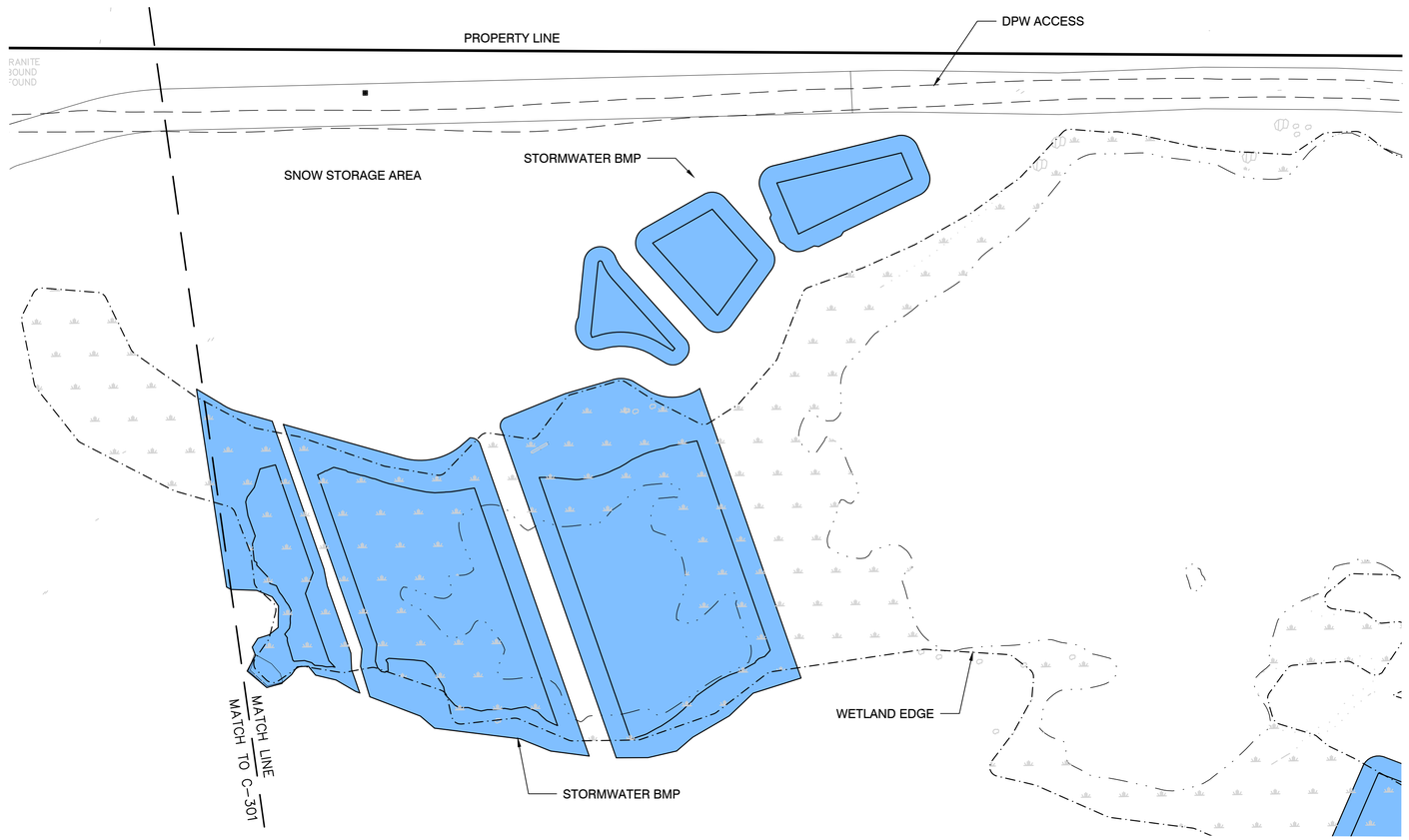
Recreation Fields
Site Plan Phase 1

drawing no.
C-301

sheet: ---- of ----



1 ACCESS ROAD PLAN
SCALE: 1"=40'



2 PARTIAL PLAN
SCALE: 1"=40'

PERMIT PLANS

no.	revision	date	by
2	CONSERVATION COMMISSION SUBMISSION	07/24/2019	JFK
1	TAC WORK SESSION SUBMISSION	07/09/2019	JFK

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STATE OF NEW HAMPSHIRE
JOSEPH H. KIEFFNER
No. 9179
LICENSED PROFESSIONAL ENGINEER

designed by: ----	drawn by: AGL	approved by: ----	scale: 0 40' 80' Scale: 1" = 40'
date: July 2019	project no: 1119	file name: 1119 Site Plan-Phase I.dwg	

City of Portsmouth, New Hampshire
Department of Public Works

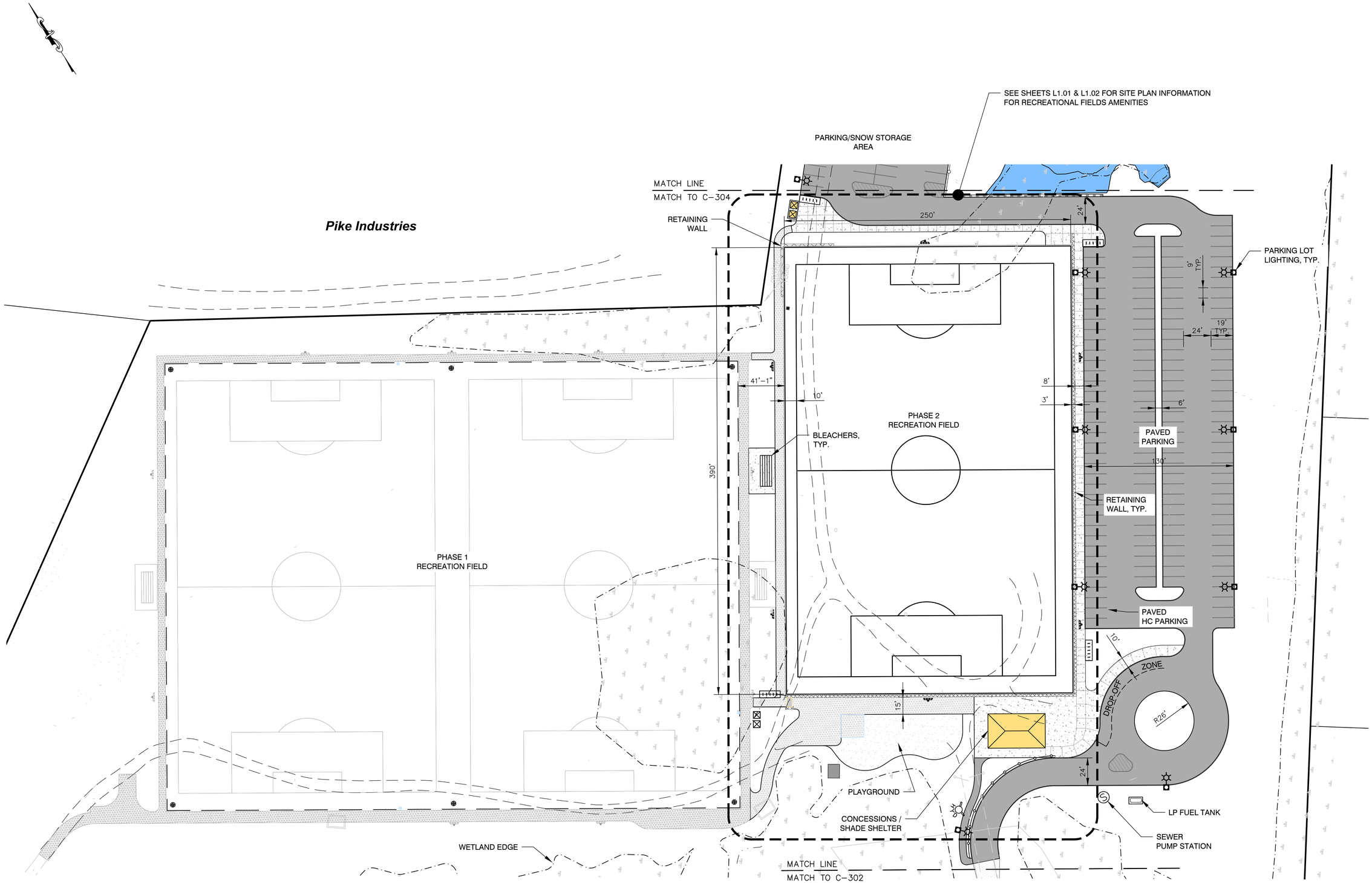
Multi-purpose Recreation Fields
680 Peverly Hill Road

Recreation Fields
Site Plan Phase 1

drawing no. C-302

sheet: ---- of ----

\\vnht2\MHT-Projects\CADD\PROJECTS\1119 Portsmouth Athletic fields\Production\1119 Site Plan-Phase1.dwg Date Plotted: Jul 23, 2019 - 7:56am Plotted By: SFORTIER



PERMIT PLANS

no.	revision	date	by
2	CONSERVATION COMMISSION SUBMISSION	07/24/2019	JFK
1	TAC WORK SESSION SUBMISSION	07/09/2019	JFK

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STATE OF NEW HAMPSHIRE
JOSEPH H. KIEFFNER
No. 15179
LICENSED PROFESSIONAL ENGINEER

designed by: ----	drawn by: AGL	approved by: ----	scale: 0 40' 80' Scale: 1" = 40'
date: July 2019	project no: 1119	file name: 1119 Site Plan-Phase2.dwg	

City of Portsmouth, New Hampshire
Department of Public Works

Multi-purpose Recreation Fields
680 Peverly Hill Road

Recreation Field
Site Plan Phase 2

drawing no.
C-303

sheet: ---- of ----

2 PARTIAL PLAN
SCALE: 1"=40'

PERMIT PLANS

no.	revision	date	by
2	CONSERVATION COMMISSION SUBMISSION	07/24/2019	JFK
1	TAC WORK SESSION SUBMISSION	07/09/2019	JFK

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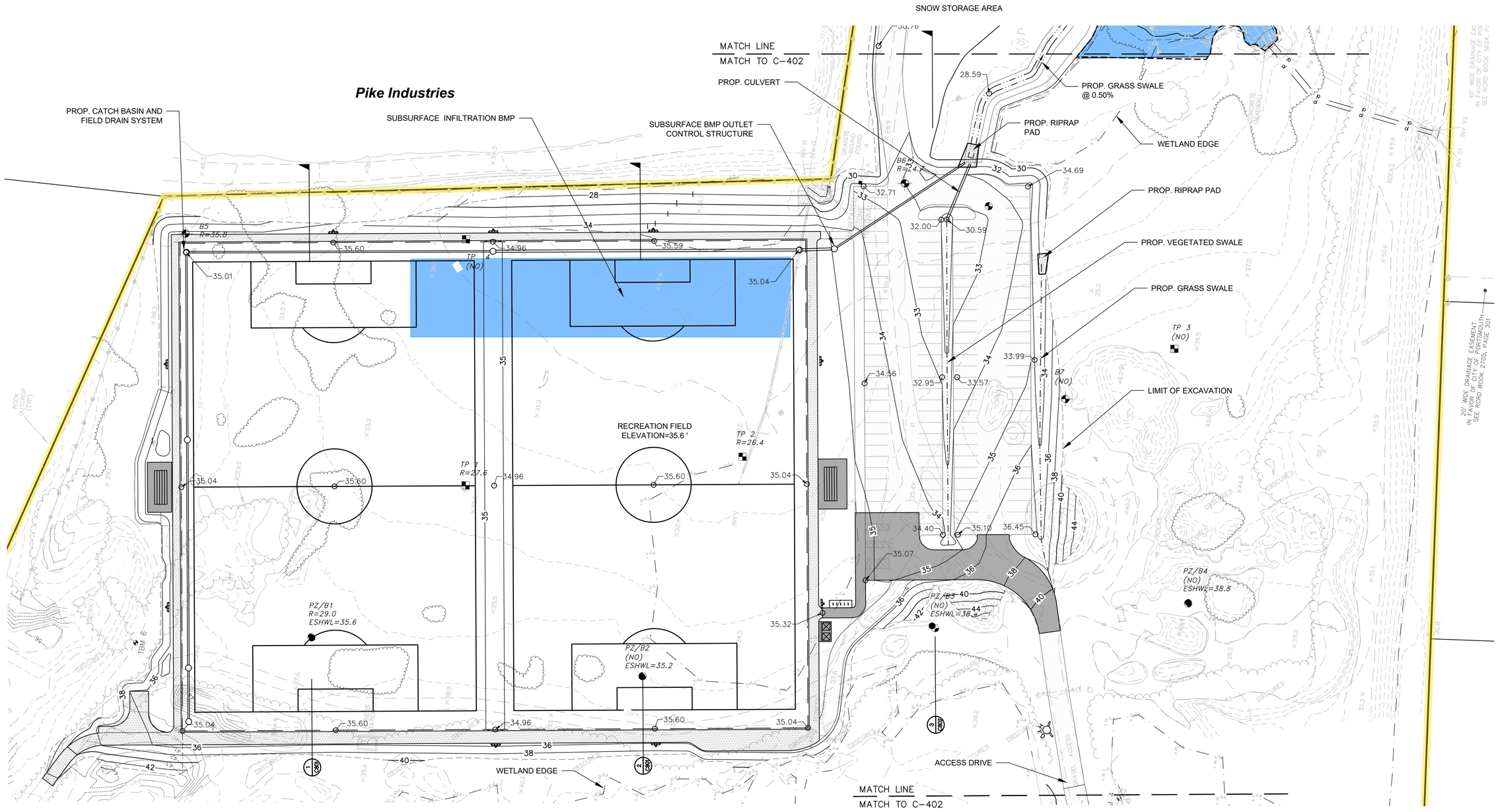
STATE OF NEW HAMPSHIRE
JOSEPH H. KIEFFNER
No. 13171
LICENSED PROFESSIONAL ENGINEER

designed by: ----
drawn by: AGL
approved by: ----
scale: 1" = 40'
date: July 2019
project no: 1119
file name: 1119 Site Plan-Phase2.dwg

City of Portsmouth, New Hampshire
Department of Public Works
Multi-purpose Recreation Fields
680 Peverly Hill Road
Recreation Field
Site Plan Phase 2

drawing no. C-304
sheet: ---- of ----

\\mht2\MHT-Projects\CADD\PROJECTS\1119 Portsmouth Athletic fields\Production\1119 Site Plan-Phase2.dwg Date Plotted: Jul 23, 2019 - 7:56am Plotted By: SFORTIER



no.	revision	date	by
2	CONSERVATION COMMISSION SUBMISSION	07/24/2019	JFK
1	TAC WORK SESSION SUBMISSION	07/09/2019	JFK

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STATE OF NEW HAMPSHIRE
JOSEPH H. KIEFFNER
No. 15179
PROFESSIONAL ENGINEER
LICENSED

designed by: ----
drawn by: AGL
approved by: ----
date: July 2019
project no: 1119
file name: 1119 Grading Plan-Phase1.dwg
scale: 1" = 40'
0 40' 80'

City of Portsmouth, New Hampshire
Department of Public Works
Multi-purpose Recreation Fields
680 Peverly Hill Road
Recreation Fields
Grading & Drainage Plan Phase 1

drawing no.
C-401

sheet: ---- of ----

Seacoast Community School

CAMPUS DRIVE

CAMPUS DRIVE
(A PUBLIC WAY-60' WIDE)

FINE GRADE GRAVEL ACCESS DRIVE (±17' WIDE AVERAGE))

WETLAND EDGE

MATCH LINE
MATCH TO C-401

GRAVEL ACCESS

FITNESS STATION 9

TBM 4

TBM 5

B8 (NO)

B9 (ORGANICS)

STONE HEADWALL

1 ACCESS ROAD PLAN
SCALE: 1"=40'

PROP. SITE GRAVEL WETLANDS

PROP. ROCK CHECK DAM

PROP. SEDIMENT FOREBAY

PROP. VEGETATED SWALE

PROP. RIPRAP PAD

PROP. ARMORED PAD

WETLAND EDGE

PROP. RIPRAP PAD

PROP. OUTLET CONTROL STRUCTURE

PROP. ARMORED HIGH FLOW BYPASS

PROP. GRAVEL WETLANDS

PROP. ARMORED HIGH FLOW BYPASS

MATCH LINE
MATCH TO C-401

MATCH LINE
MATCH TO C-403

STONE HEADWALL

CONCRETE HEADWALL

W/L ELEV.

2 PARTIAL PLAN
SCALE: 1"=40'

PERMIT PLANS

no.	revision	date	by
2	CONSERVATION COMMISSION SUBMISSION	07/24/2019	JFK
1	TAC WORK SESSION SUBMISSION	07/09/2019	JFK

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JOSEPH H. KIEFFNER No. 517 – STATE OF NEW HAMPSHIRE – LICENSED PROFESSIONAL ENGINEER

designed by: ----
drawn by: AGL
approved by: ----
scale: 1" = 40'
date: July 2019
project no: 1119
file name: 1119 Grading Plan-Phase1.dwg

City of Portsmouth, New Hampshire
Department of Public Works

Multi-purpose Recreation Fields
680 Peverly Hill Road

Access Road & Partial Plan
Grading & Drainage Plan Phase 1

drawing no. C-402
sheet: ---- of ----

\\mht2\MHT-Projects\CADD\PROJECTS\1119 Portsmouth Athletic Fields\Production\1119 Grading Plan-Phase1.dwg Date Plotted: Jul 23, 2019 – 7:57am Plotted By: SFORTIER

GRADING NOTE:
EXISTING GRADE CONTOURS ARE REPRESENTATIVE OF PHASE ONE POST CONSTRUCTION.

Pike Industries

MATCH LINE
MATCH TO C-404

PROP. RET. WALL
(0.5'-7' HT.)

6" VGC

PCB-2

PCB-1

PROP. OUTLET CONTROL STRUCTURE

PDMH-1

PROP. 2:1
CUT SLOPE

B5
R=35.8

B6
R=24.7

TP 4
(NO)

TP 3
(NO)

B7
(NO)

TP 2
R=26.4

TP 1
R=27.6

PROP. WALL
HT. VARIES

PROP.
3' WALL

PZ/B1
R=29.0
ESHWL=35.6

PZ/B2
(NO)
ESHWL=35.2

PZ/B3
(NO)
ESHWL=38.4

PZ/B4
(NO)
ESHWL=39.8

PROP. TREE
FILTERS (3)

PROP. CATCH
BASIN

WETLAND EDGE

???

PERMIT PLANS

M:\CADD\PROJECTS\1119 Portsmouth Athletic fields\Production\1119 Grading Plan-Phase2.dwg Date Plotted: Jul 23, 2019 – 10:42am Plotted By: JKIEFFNER

no.	revision	date	by
2	CONSERVATION COMMISSION SUBMISSION	07/24/2019	JFK
1	TAC WORK SESSION SUBMISSION	07/09/2019	JFK

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STATE OF NEW HAMPSHIRE
JOSEPH H. KIEFFNER
No. 17117
LICENSED PROFESSIONAL ENGINEER

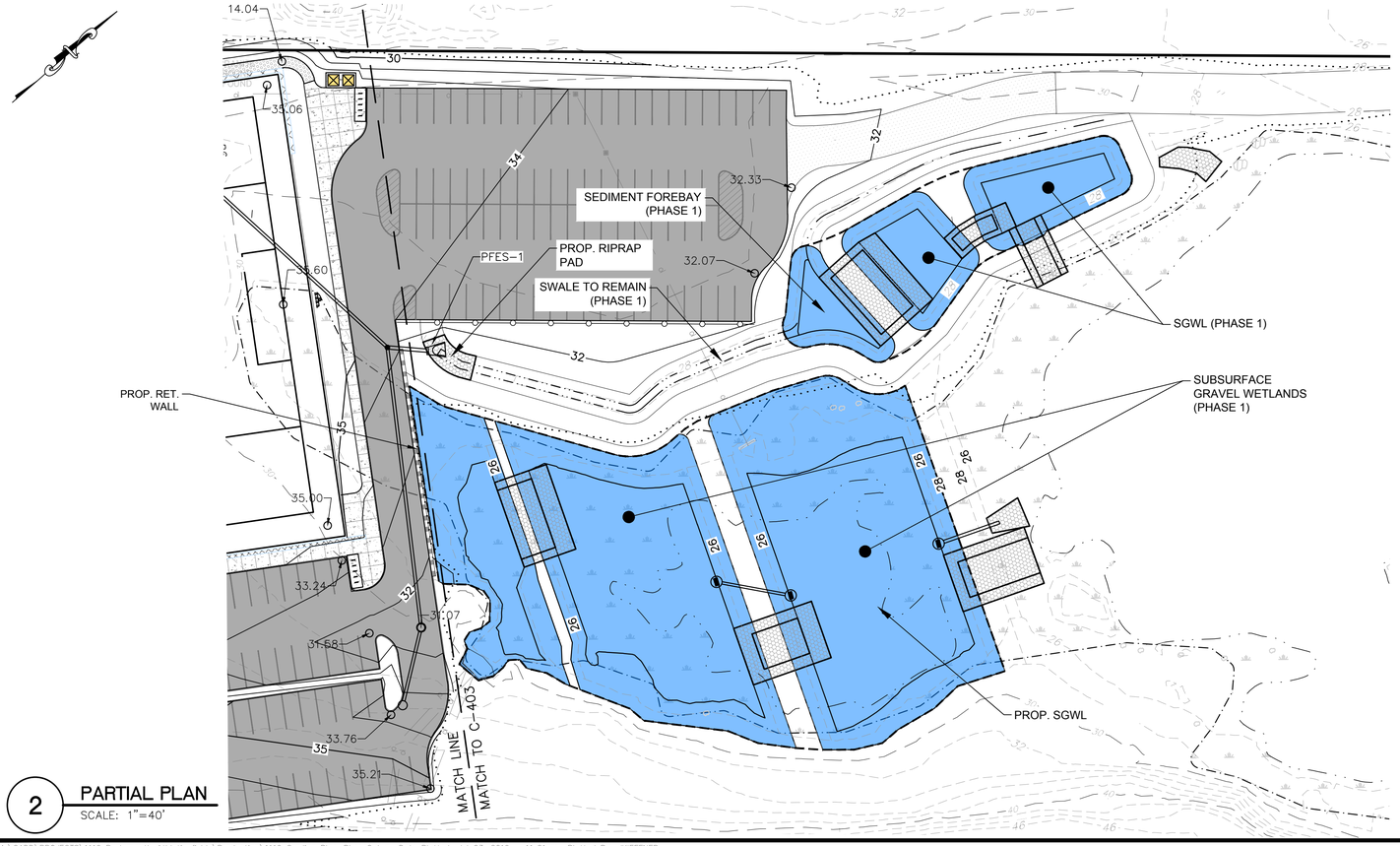
designed by: ----	drawn by: AGL	approved by: ----	scale: 40' 0 Scale: 1" = 40' 80'
date: July 2019	project no: 1119	file name: 1119 Grading Plan-Phase2.dwg	

City of Portsmouth, New Hampshire
Department of Public Works
Multi-purpose Recreation Fields
680 Peverly Hill Road
Recreation Fields
Grading & Drainage Plan Phase 2

drawing no.
C-403

sheet: ---- of ----

GRADING NOTE:
EXISTING GRADE CONTOURS ARE REPRESENTATIVE OF PHASE ONE POST CONSTRUCTION.



2 PARTIAL PLAN
SCALE: 1"=40'

PERMIT PLANS

no.	revision	date	by
2	CONSERVATION COMMISSION SUBMISSION	07/24/2019	JFK
1	TAC WORK SESSION SUBMISSION	07/09/2019	JFK

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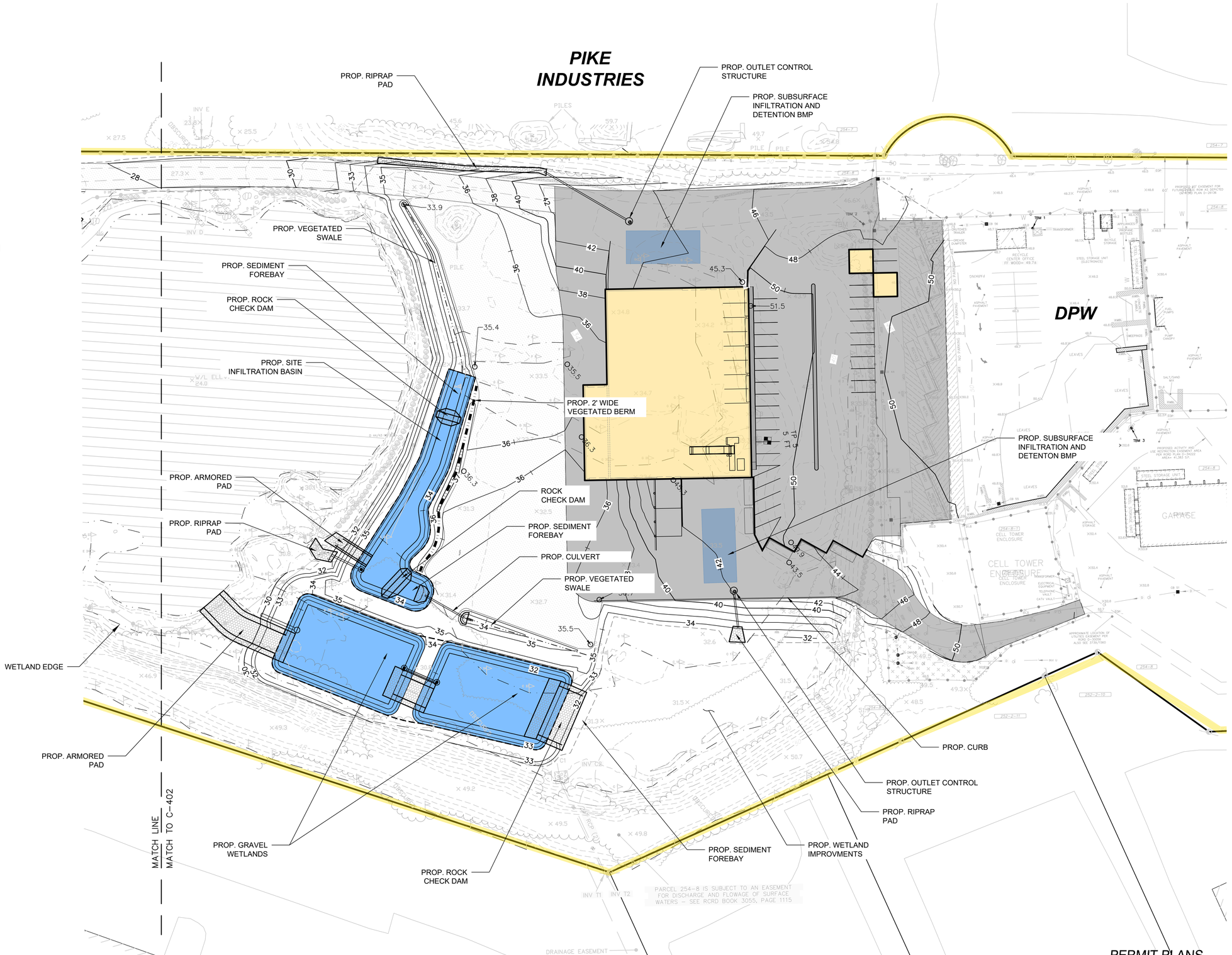
STATE OF NEW HAMPSHIRE
JOSEPH H. KIEFFNER
No. 15171
LICENSED PROFESSIONAL ENGINEER

designed by: ----
drawn by: AGL
approved by: ----
date: July 2019
project no: 1119
file name: 1119 Grading Plan-Phase2.dwg
scale: 0 40' 80' Scale: 1" = 40'

City of Portsmouth, New Hampshire
Department of Public Works
Multi-purpose Recreation Fields
680 Peverly Hill Road
Recreation Fields
Grading & Drainage Plan Phase 2

drawing no. C-404
sheet: ---- of ----

M:\CADD\PROJECTS\1119 Portsmouth Athletic fields\Production\1119 Grading Plan-Phase2.dwg Date Plotted: Jul 23, 2019 - 11:21am Plotted By: JKIEFFNER



no.	revision	date	by
2	CONSERVATION COMMISSION SUBMISSION	07/24/2019	JFK
1	TAC WORK SESSION SUBMISSION	07/09/2019	JFK

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STATE OF NEW HAMPSHIRE
JOSEPH H. KIEFFNER
No. 9779
LICENSED PROFESSIONAL ENGINEER

designed by:	drawn by:	approved by:	scale:
----	AGL	----	1" = 40'

date: July 2019
project no: 1119
file name: 1119 Grading Plan-Phase 1.dwg

0 40' 80'

City of Portsmouth, New Hampshire
Department of Public Works

Multi-purpose Recreation Fields
680 Peverly Hill Road

Transfer Station
Grading & Drainage Plan

drawing no. C-405

sheet: ---- of ----

PROPERTY LINE

CONNECT TO EXISTING SMH

2" HDPE SEWER FORCE MAIN

GRAVEL ACCESS DRIVE

WETLAND EDGE

ELECTRIC

6" CLDI WATER MAIN

CONNECTIONS TO EXISTING UTILITIES

PHASE I RECREATION FIELDS

RECREATION FIELDS WATER SUPPLY

TRANSFORMER

PROPERTY LINE

CAMPUS DRIVE

PERMIT PLANS

no.	revision	date	by
2	CONSERVATION COMMISSION SUBMISSION	07/24/2019	JFK
1	TAC WORK SESSION SUBMISSION	07/09/2019	JFK

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STATE OF NEW HAMPSHIRE
JOSEPH H. KIEFFNER
No. 17
LICENSED PROFESSIONAL ENGINEER

designed by: ----	drawn by: AGL	approved by: ----	scale: 0 40' 80' Scale: 1" = 40'
date: July 2019	project no: 1119	file name: 1119 Utility Plan-Phase1.dwg	

City of Portsmouth, New Hampshire
Department of Public Works

Multi-purpose Recreation Fields
680 Peverly Hill Road

Recreation Fields
Utility Plan Phase 1

drawing no.
C-501

sheet: ---- of ----

35.04
35.60
35.04
35.04
35.06
35.60
35.06
35.00
35.00
PROPOSED FUTURE TRANSFER STATION PROJECT
PERIMETER EROSION CONTROL (TYP.)
CONSTRUCTION ENTRANCE
TURBIDITY CURTAIN
PERIMETER EROSION CONTROL (TYP.) - TO CAMPUS DRIVE
PERMIT PLANS

no.	revision	date	by
2	CONSERVATION COMMISSION SUBMISSION	07/24/2019	JFK
1	TAC WORK SESSION SUBMISSION	07/09/2019	JFK

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STATE OF NEW HAMPSHIRE
JOSEPH H. KIEFFNER
No. 11717
LICENSED PROFESSIONAL ENGINEER

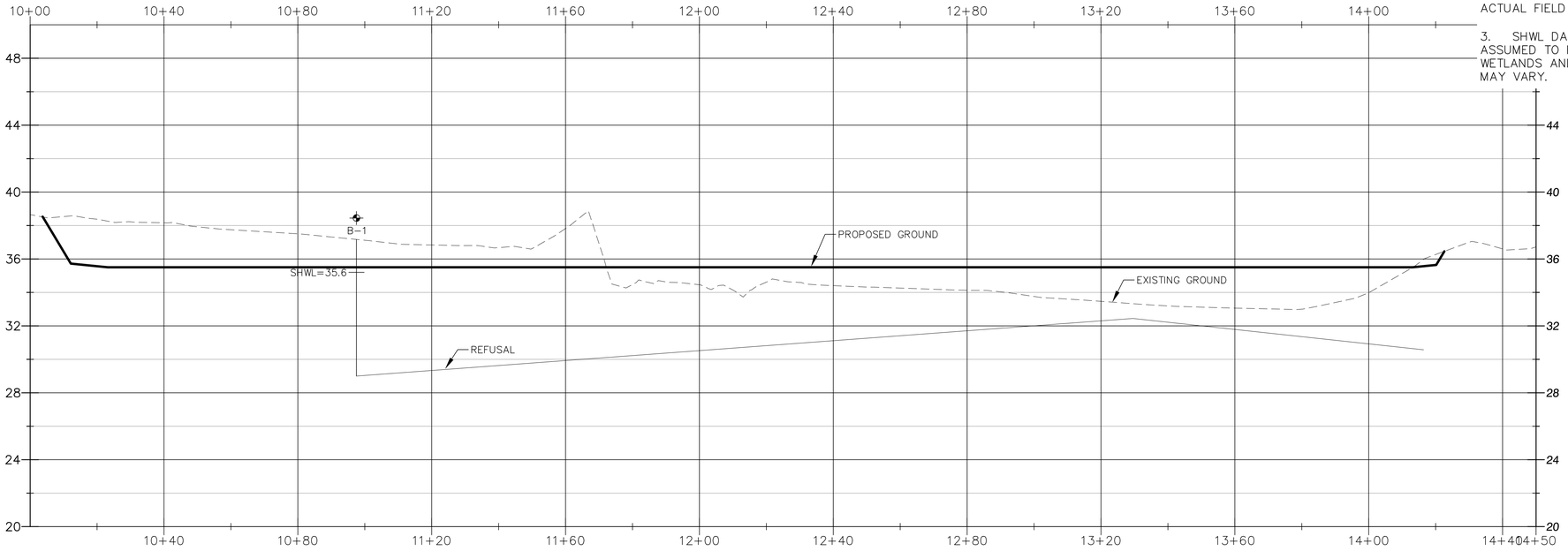
designed by: ----
drawn by: AGL
approved by: ----
date: July 2019
project no: 1119
file name: 1119 Grading Plan-Overall.dwg
scale: 1" = 80'
0 80' 160'

City of Portsmouth, New Hampshire
Department of Public Works
Multi-purpose Recreation Fields
680 Peverly Hill Road
Overall Grading & Erosion Control Plan

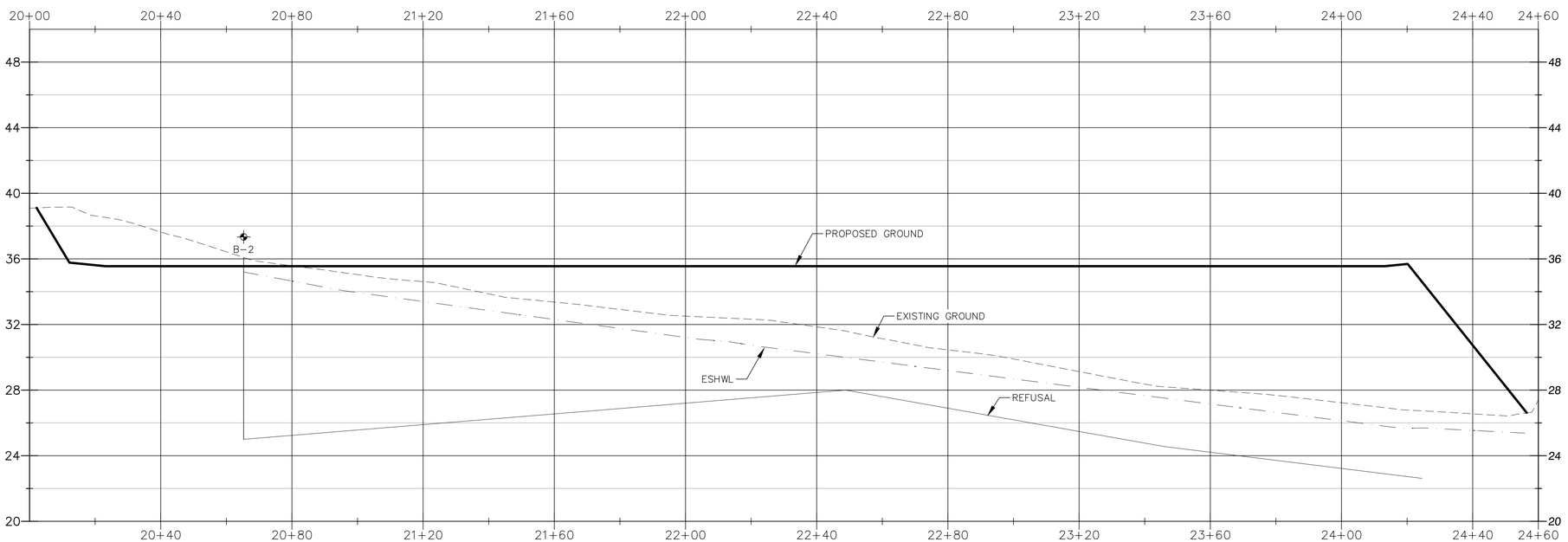
drawing no. C-601

sheet: ---- of ----

\\mht2\MHT-Projects\CADD\PROJECTS\1119 Portsmouth Athletic fields\Production\1119 Grading Plan-Overall.dwg Date Plotted: Jul 23, 2019 – 7:58am Plotted By: SFORTIER



Site Section-1 (Field 1)
1"=4' Vert & 1"=20' Horiz.



Site Section-2 (Field 2)
1"=4' Vert & 1"=20' Horiz.

NOTE:
1. REFUSALS NOT ENCOUNTERED DURING SUBSURFACE EXPLORATIONS WERE ASSUMED TO BE AT THE BOTTOM OF THE EXPLORATION.

2. LINES REPRESENTING THE WATER SURFACE AND REFUSAL PROFILES WERE INTERPOLATED BETWEEN BORINGS AND TEST PITS. ACTUAL FIELD ELEVATIONS MAY VARY.

3. SHWL DATA NOT MEASURED AT PIEZOMETERS/BORINGS WAS ASSUMED TO BE 1 FOOT BELOW EG AT THE LIMITS OF DELINEATED WETLANDS AND INTERPOLATED IN BETWEEN. ACTUAL FIELD ELEVATIONS MAY VARY.

PERMIT PLANS

no.	revision	date	by
2	CONSERVATION COMMISSION SUBMISSION	07/24/2019	JFK
1	TAC WORK SESSION SUBMISSION	07/09/2019	JFK

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cmaengineers.com

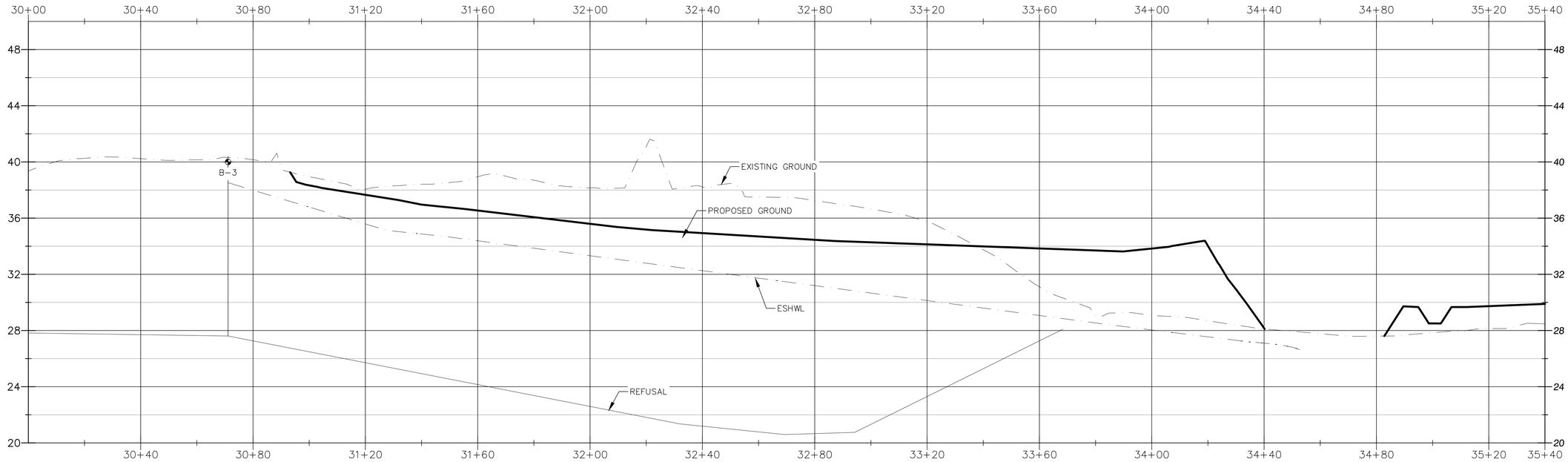
JOSEPH H. KIEFFNER No. 9170 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE

designed by: ----	drawn by: AGL	approved by: ----	scale: 1" = 20'
date: July 2019	project no: 1119	file name: 1119 Field Site Sections.dwg	0 20' 40' Scale: 1" = 20'

City of Portsmouth, New Hampshire
Department of Public Works
Multi-purpose Recreation Fields
680 Peverly Hill Road
Recreation Fields
Site Sections Phase 1

drawing no. C-801

sheet: ---- of ----



Site Section-3 (Phase 1)
1"=4' Vert & 1"=20' Horiz.

NOTE:
1. REFUSALS NOT ENCOUNTERED DURING SUBSURFACE EXPLORATIONS WERE ASSUMED TO BE AT THE BOTTOM OF THE EXPLORATION.

2. LINES REPRESENTING THE WATER SURFACE AND REFUSAL PROFILES WERE INTERPOLATED BETWEEN BORINGS AND TEST PITS. ACTUAL FIELD ELEVATIONS MAY VARY.

3. SHWL DATA NOT MEASURED AT PIEZOMETERS/BORINGS WAS ASSUMED TO BE 1 FOOT BELOW EG AT THE LIMITS OF DELINEATED WETLANDS AND INTERPOLATED IN BETWEEN. ACTUAL FIELD ELEVATIONS MAY VARY.

PERMIT PLANS

no.	revision	date	by
2	CONSERVATION COMMISSION SUBMISSION	07/24/2019	JFK
1	TAC WORK SESSION SUBMISSION	07/09/2019	JFK

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STATE OF NEW HAMPSHIRE - JOSEPH H. KIEFFNER No. 9171 - LICENSED PROFESSIONAL ENGINEER

designed by: ----
drawn by: AGL
approved by: ----
scale: 1" = 20'
date: July 2019
project no: 1119
file name: 1119 Field Site Sections.dwg

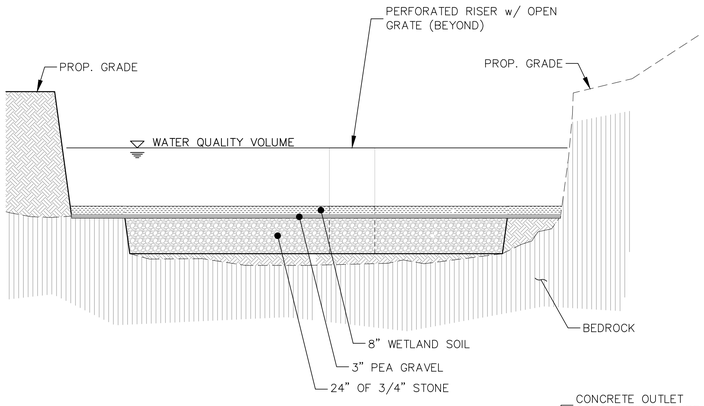
City of Portsmouth, New Hampshire
Department of Public Works

Multi-purpose Recreation Fields
680 Peverly Hill Road

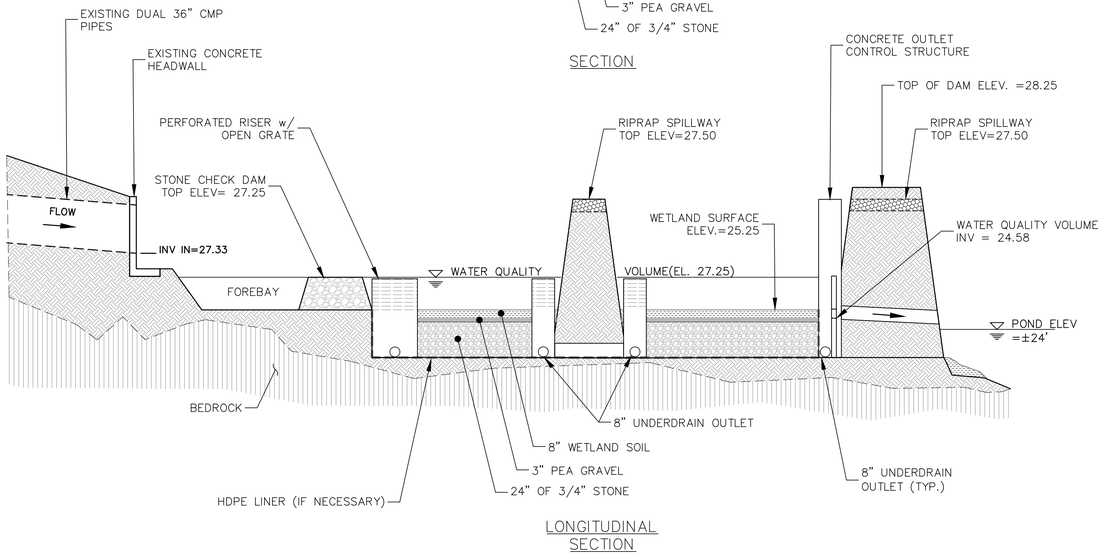
Recreation Fields
Site Sections - Phase 1

drawing no.
C-802

sheet: ---- of ----



SECTION



LONGITUDINAL SECTION

Gravel Wetlands General Sections

1
C402

Not to Scale

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no.	revision	date	by

designed by: ----
drawn by: AGL
approved by: ----
date: July 2019
project no: 1119
file name: 1119 DETAILS.dwg
scale:

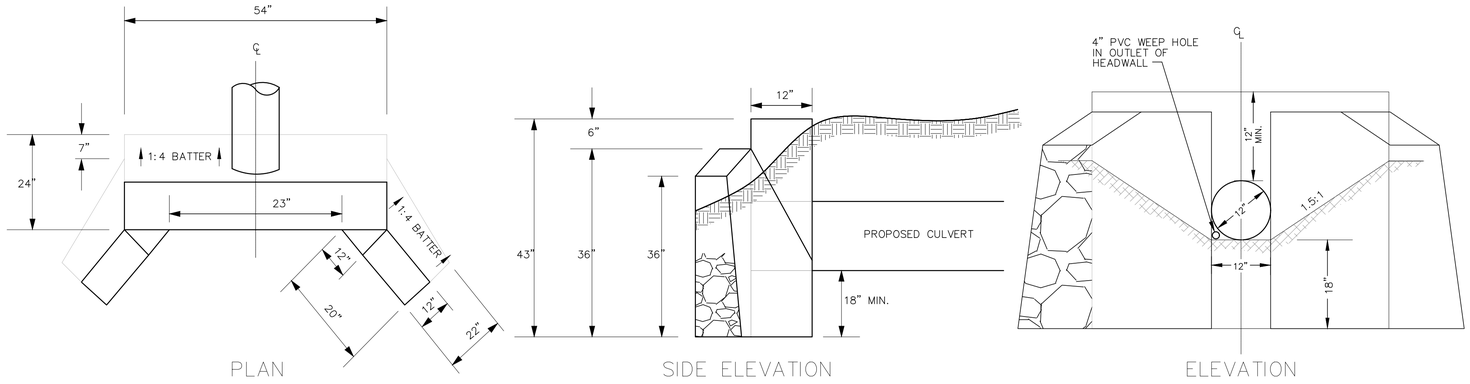
City of Portsmouth, New Hampshire
Department of Public Works

Multi-purpose Recreation Fields
680 Peverly Hill Road

Storm Water Sections & Details

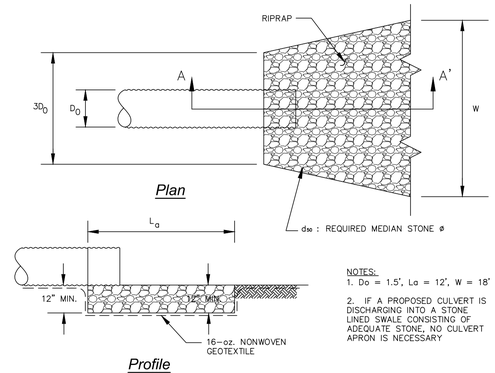
drawing no.
C-901

sheet: ---- of ----



Masonry Rubble (MRM) Headwall

Not to Scale

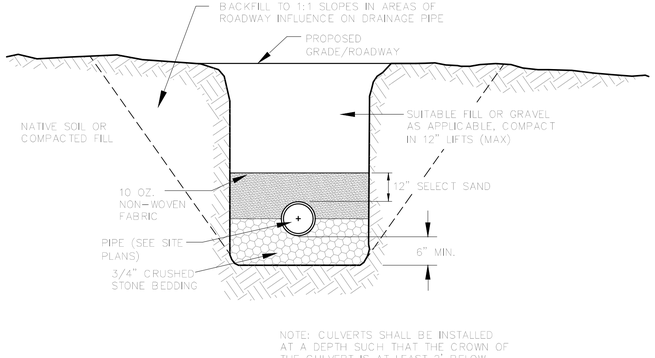


NOTES:
1. D_0 = 1.5', La = 12', W = 18'

2. IF A PROPOSED CULVERT IS DISCHARGING INTO A STONE LINED SWALE CONSISTING OF ADEQUATE STONE, NO CULVERT APRON IS NECESSARY

Stone Outlet Protection

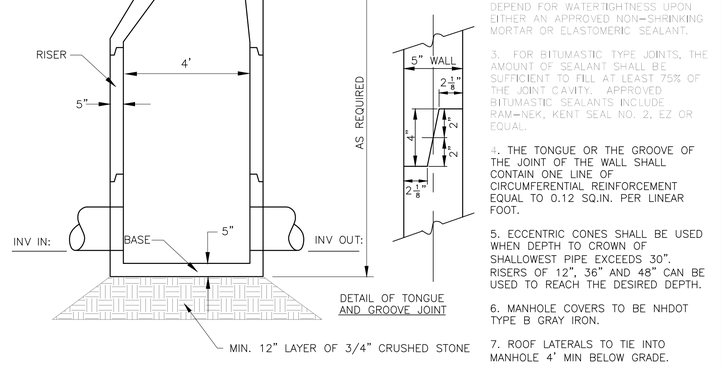
Not to Scale



NOTE: CULVERTS SHALL BE INSTALLED AT A DEPTH SUCH THAT THE CROWN OF THE CULVERT IS AT LEAST 2' BELOW GRADE

Typical Drainage Pipe

Not to Scale



NOTES:

1. HORIZONTAL JOINTS BETWEEN SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE OF A TYPE APPROVED BY THE ENGINEER, WHICH SHALL, IN GENERAL, DEPEND FOR WATERTIGHTNESS UPON AN ELASTOMERIC OR MASTIC-LIKE GASKET.

2. PIPE-TO-MANHOLE JOINTS SHALL BE ONLY AS APPROVED BY THE ENGINEER AND IN GENERAL WILL DEPEND FOR WATERTIGHTNESS UPON EITHER AN APPROVED NON-SHRINKING MORTAR OR ELASTOMERIC SEALANT.

3. FOR BITUMASTIC TYPE JOINTS, THE AMOUNT OF SEALANT SHALL BE SUFFICIENT TO FILL AT LEAST 75% OF THE JOINT CAVITY. APPROVED BITUMASTIC SEALANTS INCLUDE RAM-NEK, KENT SEAL NO. 2, EZ OR EQUAL.

4. THE TONGUE OR THE GROOVE OF THE JOINT OF THE WALL SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ.IN. PER LINEAR FOOT.

5. ECCENTRIC CONES SHALL BE USED WHEN DEPTH TO CROWN OF SHALLOWEST PIPE EXCEEDS 30". RISERS OF 12", 36" AND 48" CAN BE USED TO REACH THE DESIRED DEPTH.

6. MANHOLE COVERS TO BE NHDOT TYPE B GRAY IRON.

7. ROOF LATERALS TO TIE INTO MANHOLE 4' MIN BELOW GRADE.

Drain Manhole

Not to Scale

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designed by: ----
drawn by: AGL
approved by: ----
date: July 2019
project no: 1119
file name: 1119 DETAILS.dwg
scale:

City of Portsmouth, New Hampshire
Department of Public Works

Multi-purpose Recreation Fields
680 Peverly Hill Road

Drainage Details

drawing no.
C-C-902

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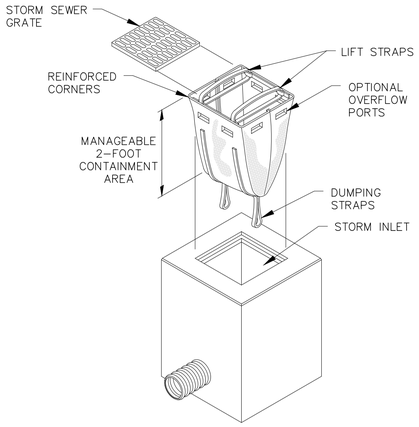

"Silt Sack" Sediment Control Device for Inlet Protection

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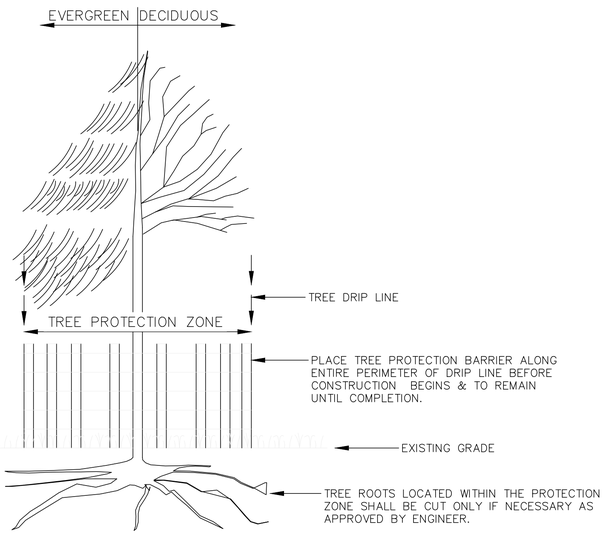

Temporary Tree Protection

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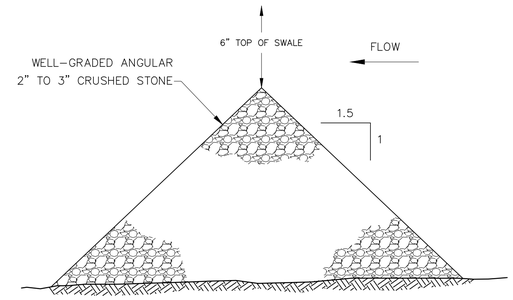


NOTES:

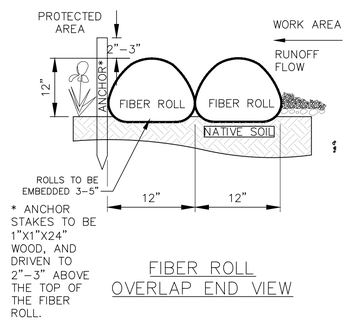
1. PLACE CRUSHED STONE TO WITHIN 6" OF TOP OF DRAINAGE WAY.
2. FOR ACTIVE DRAINAGE OUTFLOW CHECK DAMS SHALL BE PLACED IN SERIES ALONG FLOW LINE TO RETAIN SEDIMENTS.

Stone Check Dam

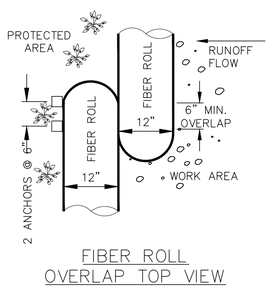
Not to Scale

Erosion Control Notes:

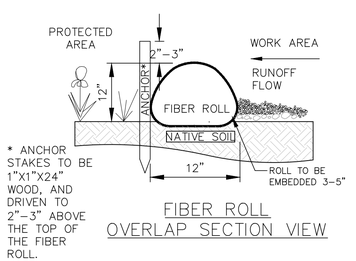
1. PERIMETER CONTROLS TO BE INSTALLED PRIOR TO EARTH MOVING OPERATIONS.
2. PRIOR TO CONSTRUCTION AND THEREAFTER EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED. PONDS AND SWALES SHALL BE INSTALLED EARLY ON IN THE CONSTRUCTION SEQUENCE (BEFORE ROUGH GRADING THE SITE).
3. THE SMALLEST PRACTICAL AREA OF LAND SHOULD BE EXPOSED AT ANY ONE TIME DURING DEVELOPMENT. WHEN LAND IS EXPOSED DURING DEVELOPMENT, THE EXPOSURE SHOULD BE KEPT TO THE SHORTEST PRACTICAL PERIOD OF TIME. LAND SHOULD NOT BE LEFT EXPOSED DURING THE WINTER MONTHS.
4. CATCH BASIN INSERTS, MIRAFI DANDY SACK OR EQUAL, SHALL BE INSTALLED AND MAINTAINED AT CATCH BASINS UNTIL PAVEMENT IS INSTALLED. SEDIMENT AND DEBRIS SHALL BE REMOVED FOLLOWING EACH STORM EVENT.
5. ALL DISTURBED AREAS AND SIDE SLOPES WHICH ARE FINISH GRADED WITH NO FURTHER CONSTRUCTION TO TAKE PLACE SHALL BE SEEDED AND MULCHED. ALL DISTURBED AREAS OUTSIDE LIMITS OF BUILDING, AND PAVEMENT SHALL BE STABILIZED WITH LOAM AND SEED. ALL SEED, LIME AND FERTILIZER PROGRAMS SHALL CONFORM TO ALL APPLICABLE SECTIONS OF THE SPECIFICATIONS.
6. ANY DISTURBED AREAS WHICH ARE TO BE LEFT TEMPORARILY, OR LONGER THAN TWO WEEKS AND WHICH WILL BE RE–GRADED LATER DURING CONSTRUCTION, SHALL BE TEMPORARILY SEEDED AND MACHINE STRAW MULCHED AT A RATE OF 1.5 TONS/ACRE.
7. AVOID USE OF UNDISTURBED AREAS WHEREVER POSSIBLE DURING CONSTRUCTION. CONSTRUCTION TRAFFIC SHALL TRAVEL THE ROADBEDS OF EXISTING AND FUTURE ROADS AND SHALL BE LIMITED TO WITHIN THE LIMITS OF CONSTRUCTION NOTED ON THE PLANS.
8. SILT FENCES SHALL BE MINIMUM OF 36 INCHES HIGH WITH THE BOTTOM OF THE CLOTH KEYED INTO THE GROUND (SEE DETAIL). POSTS SHALL BE OF WOOD OR STEEL. SILT FENCE SHALL BE INSTALLED & MAINTAINED AS NEEDED TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. ADDITIONAL SILT FENCE MAY BE ADDED AS REQUIRED BY THE ENGINEER PRIOR TO ANY ON–SITE GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL. IT SHOULD BE MAINTAINED DURING AND AFTER DEVELOPMENT TO REMOVE SEDIMENT FROM RUNOFF WATER AND FROM LAND UNDERGOING DEVELOPMENT. WHERE POSSIBLE NATURAL DRAINAGE WAYS SHOULD BE UTILIZED AND LEFT OPEN TO REMOVE CLEAN EXCESS SURFACE WATER. THE SILT FENCE IS TO BE MAINTAINED AND CLEANED UNTIL ALL SLOPES HAVE A HEALTHY STAND OF GRASS.
9. EROSION CONTROL DEVICES SHOWN REPRESENT MINIMUM MEASURES REQUIRED FOR EROSION CONTROL. THE CONTRACTOR SHALL TAKE ANY AND ALL NECESSARY MEASURES TO PREVENT TRANSPORTATION OF SEDIMENT BEYOND THE WORK AREA.
10. ALL SWALES SHALL BE STABILIZED PRIOR TO DIRECTING FLOW TO THEM.
11. AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED, THE TEMPORARY EROSION CONTROL MEASURES ARE TO BE REMOVED AND ACCUMULATED SEDIMENT DISPOSED OFF IN A LOCATION DESIGNATED BY THE OWNER.
12. WITHIN THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES COMPREHENSIVE SHORELAND PROTECTION ACT 250' BUFFER, ONLY LOW PHOSPHATE, SLOW RELEASE NITROGEN FERTILIZER OR LIMESTONE, MAY BE USED ON LAWNS OR AREAS WITH GRASS.
13. ALL ROADWAYS AND PARKING LOTS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
14. ALL CUT AND FILL SLOPES SHALL BE SEEDED/LOAMED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
15. ALL EROSION CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER EVERY 0.5" OF RAINFALL.
16. THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, BUT IN NO CASE SHALL EXCEED 5 ACRES AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED.
17. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
    - BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED
    - A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED
    - A MINIMUM OF 3" OF NO–EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED
    - EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED
18. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
19. TEMPORARY SEEDING (IF USED) SHALL BE PERENNIAL RYE GRASS, SPREAD 0.7LB/1000 SQ. FT.
20. WINTER CONSTRUCTION NOTES
    - ALL PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS;
    - ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS;
    - AFTER NOVEMBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3.



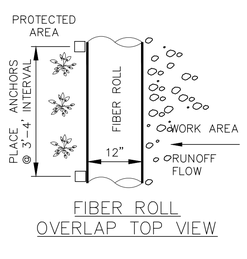
FIBER ROLL
OVERLAP END VIEW



FIBER ROLL
OVERLAP TOP VIEW



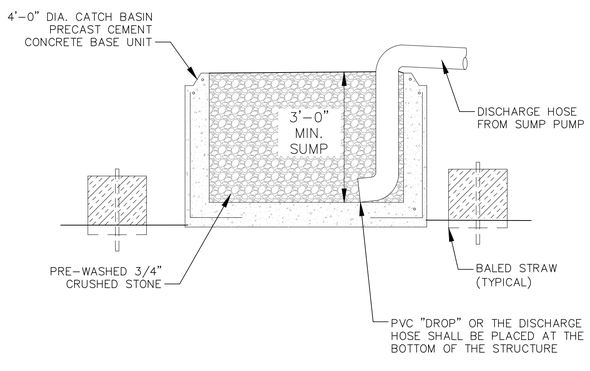
FIBER ROLL
OVERLAP SECTION VIEW



FIBER ROLL
OVERLAP TOP VIEW

Erosion Control Fiber Roll

Not to Scale



Dewatering Basin (Section)

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scale:

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Department of Public Works
Multi-purpose Recreation Fields
680 Peverly Hill Road
Erosion Control Details & Notes

drawing no. C-903

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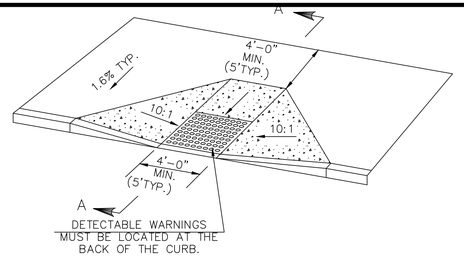
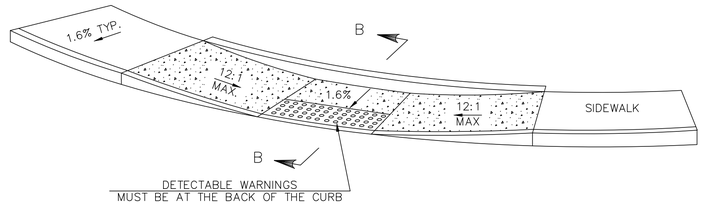
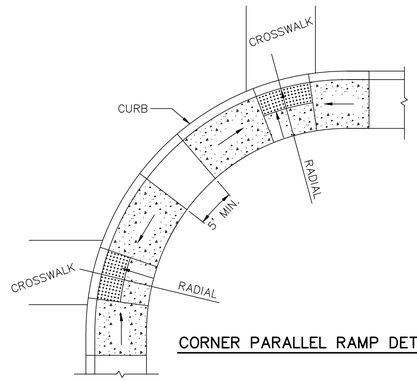


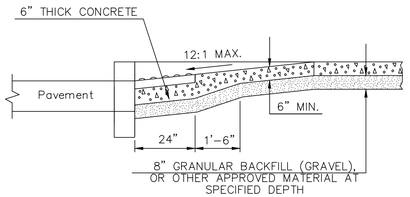
PERPENDICULAR CURB RAMP DETAIL



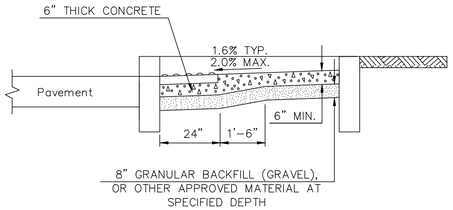
PARALLEL CURB RAMP DETAIL



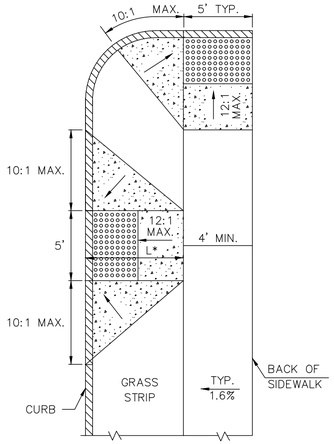
CORNER PARALLEL RAMP DETAIL



SECTION A–A



SECTION B–B



PERPENDICULAR RAMP WITH GRASS PANEL

* LENGTH OF RAMP VARIES WITH SLOPE & WIDTH OF GRASS PANEL

THE ORDER OF PREFERENCE FOR LOCATION OF CORNER RAMPS:

1. TWO SEPARATE RAMPS LOCATED ON TANGENT SIDEWALK AREA IMMEDIATELY OUTSIDE OF CORNER RADIUS.
2. TWO SEPARATE RAMPS SEPARATED BY 5' MINIMUM AS SHOWN ABOVE.
3. SINGLE RAMP SERVING TWO CROSSWALKS.

GENERAL NOTES

1. THE MAXIMUM RUNNING SLOPE OF ANY SIDEWALK CURB RAMP IS 12:1, THE MAXIMUM CROSS SLOPE IS 2%. THE SLOPE OF THE LANDING SHALL NOT EXCEED 2% IN ANY DIRECTION. RAMP RUNNING SLOPE EXCEPTION: A GREATER THAN 8.33% RAMP RUNNING GRADE IS ALLOWED WHERE THE THE ROADWAY AND THE SIDEWALK(S) ARE PARALLEL AND VERY CLOSE TOGETHER, WITH THE SAME GRADE, AND USING A GRADE OF 8.33% WOULD RESULT IN A RAMP LENGTH LONGER THAN 15'. IN THOSE CIRCUMSTANCES USE A MAXIMUM RAMP LENGTH OF 15' AND THE ALLOWABLE RUNNING SLOPE OF THE RAMP(S) IS GREATER THAN 8.33%
2. TRANSITIONS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES. ROADWAY SHOULDER SLOPES ADJOINING SIDEWALK CURB RAMPS SHALL BE A MAXIMUM OF 5% (FULL WIDTH) FOR A DISTANCE OF 2 FT. FROM THE ROADWAY CURB LINE.
3. INTERCEPT DRAINAGE ALONG THE CURB IN ADVANCE OF SIDEWALK CURB RAMPS OR LANDINGS. CATCH BASINS, MANHOLES, ETC. SHALL NOT BE LOCATED IN, OR AT THE BASE OF, SIDEWALK CURB RAMPS OR LANDINGS.
4. THE BOTTOM OF THE SIDEWALK CURB RAMP OR LANDING, EXCLUSIVE OF THE FLARED SIDES, SHALL BE WHOLLY CONTAINED WITHIN THE CROSSWALK MARKINGS.
5. THE SURFACE OF A PERPENDICULAR SIDEWALK CURB RAMP OR THE LANDING OF A PARALLEL SIDEWALK CURB RAMP SHALL CONTRAST VISUALLY WITH THE ADJOINING SIDEWALK SURFACE, EITHER ASPHALT/LIGHT–COLORED CONCRETE OR LIGHT–COLORED CONCRETE/DARK–STAINED CONCRETE. THE CONCRETE SURFACE SHALL BE SLIP RESISTANT.
6. DETECTABLE WARNING PANELS SHALL BE THE FULL WIDTH OF THE LANDING, BLENDED TRANSITION, OR CURB RAMP THEY ARE A PART OF AND SHALL BE A MINIMUM OF 2 FEET IN DEPTH. THE ROWS OF TRUNCATED DOMES SHALL BE ALIGNED PERPENDICULAR TO THE GRADE BREAK BETWEEN THE RAMP, BLENDED TRANSITION, OR LANDING AND THE STREET.

TRANSITION RAMPS:

BLENDED TRANSITIONS HAVE A RUNNING SLOPE GREATER THAN 2% BUT LESS THAN 5%. CURB RAMPS HAVE A RUNNING SLOPE OF 5% MIN. TO 8.33% MAX. SIDEWALK, BLENDED TRANSITIONS, AND CURB RAMPS HAVE A MAX. CROSS SLOPE OF 2%.

ALL GRADE BREAKS BETWEEN LANDINGS, RAMPS, AND BLENDED TRANSITIONS SHALL BE PERPENDICULAR TO THE DIRECTION OF TRAVEL.

IF IT IS NECESSARY TO USE SIDEWALK WIDTHS 5'–0" OR LESS, PROVIDE A WIDENED AREA A MINIMUM OF 5'–0" WIDE BY 5'–0" LONG SPACED AT INTERVALS OF 200' MAXIMUM TO ALLOW FOR USERS TO PASS EACH OTHER.

PROVIDE DETECTABLE WARNING SURFACES ANYTIME THAT A CURB RAMP, BLENDED TRANSITION, OR LANDING CONNECTS TO A STREET. PLACEMENT FOR DETECTABLE WARNING SURFACES ARE AS FOLLOWS:

PERPENDICULAR CURB RAMPS:

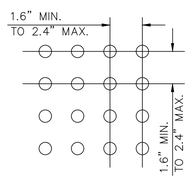
WHERE BOTH ENDS OF THE BOTTOM GRADE ARE LESS THAN 5'– 0" FROM THE BACK OF THE CURB, LOCATE THE DETECTABLE WARNING PANELS ON THE RAMP SURFACE AT THE BOTTOM OF THE RAMP. WHERE EITHER END OF THE BOTTOM GRADE IS GREATER THAN 5'–0" FROM THE BACK OF THE CURB, LOCATE THE DETECTABLE WARNINGS AT THE BOTTOM OF THE LANDING.

PARALLEL CURB RAMPS:

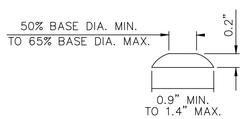
LOCATE THE DETECTABLE WARNING SURFACES AT THE BACK OF THE CURB ALONG THE EDGE OF THE LANDING.

FOR BLENDED TRANSITIONS AND LANDINGS:

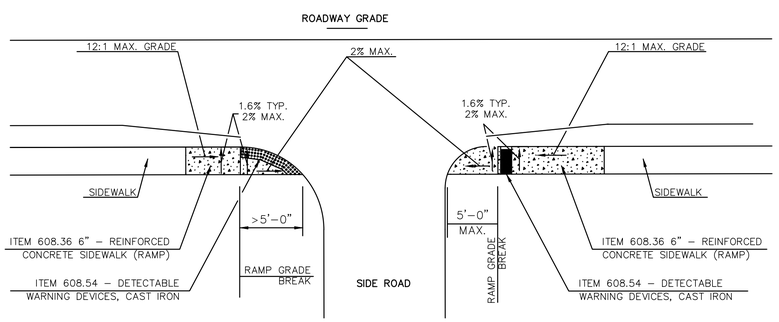
LOCATE THE DETECTABLE WARNING SURFACES AT THE BACK OF THE CURB.



DOME SPACING



DOME SECTION



PLAN VIEW

Sidewalk & Curb Ramp Details

Not to Scale

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designed by: ----
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scale:

City of Portsmouth, New Hampshire
Department of Public Works
Multi-purpose Recreation Fields
680 Peverly Hill Road
Sidewalk & Ramp Details

drawing no. C-904

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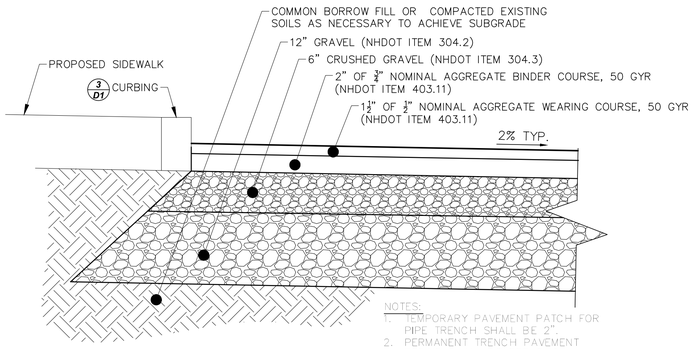
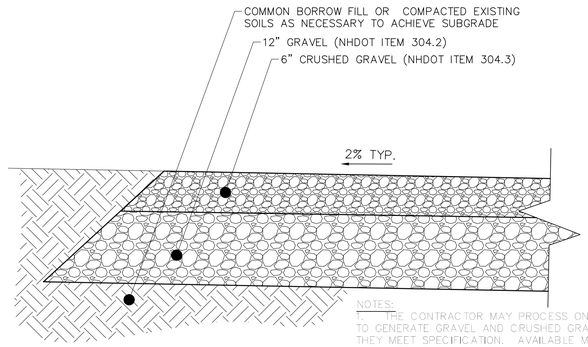


General Pavement Section

Not to Scale



General Gravel Section

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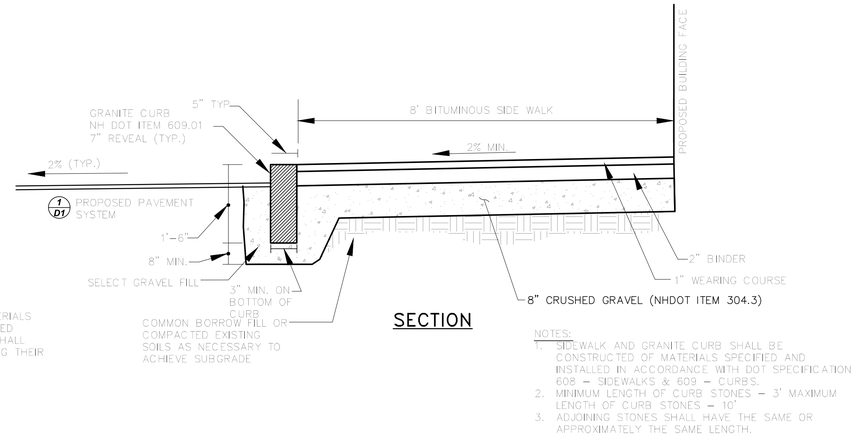

Typical Vertical Granite Curb/Bituminous Sidewalk

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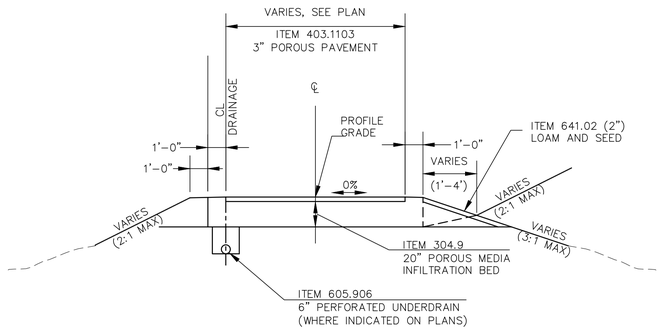

Porous Pavement Path

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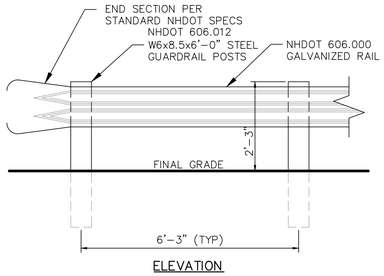

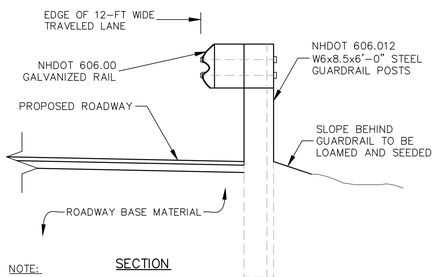

NOTE:

1. GUARDRAIL AND POSTS SHALL CONFORM WITH SECTION 606 OF THE NHDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

Typical Guardrail

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date: July 2019 | project no: 1119 | file name: 1119 DETAILS.dwg

City of Portsmouth, New Hampshire
Department of Public Works

Multi-purpose Recreation Fields
680 Peverly Hill Road

Miscellaneous Details

drawing no. C-905

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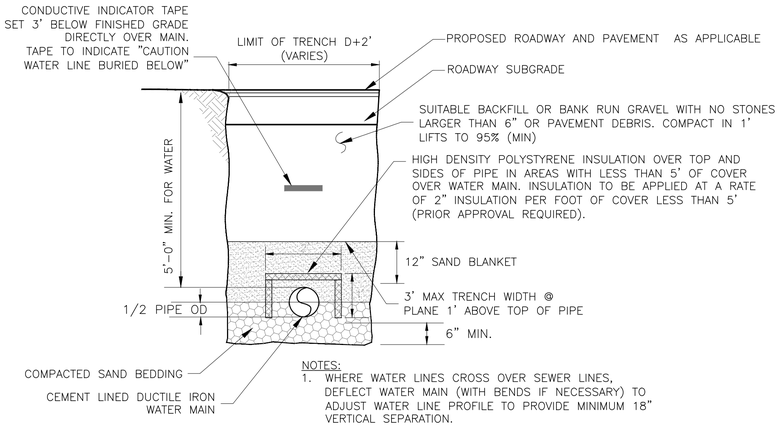
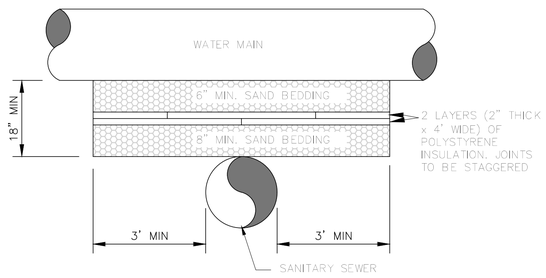


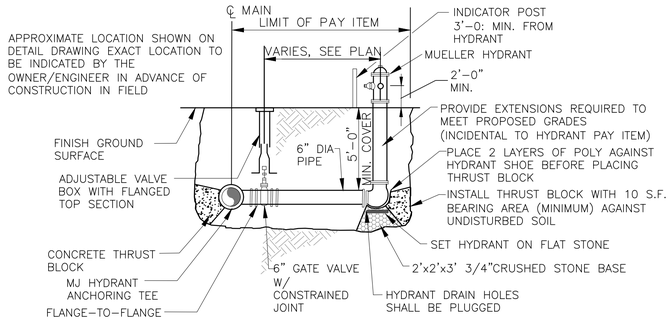
NOTES:
1. WHERE WATER LINES CROSS OVER SEWER LINES, DEFLECT WATER MAIN (WITH BENDS IF NECESSARY) TO ADJUST WATER LINE PROFILE TO PROVIDE MINIMUM 18" VERTICAL SEPARATION.

Typical Water Main Trench

Not to Scale



WATER MAIN INSTALLATION NOTES:
1. INSULATION TO BE USED WHERE VERTICAL PIPE SEPARATION IS 24" OR LESS AND HORIZONTAL SEPARATION WITH A SEWER MANHOLE OR OTHER OPEN STRUCTURE IS 6' OR LESS.
2. INSTALL VERTICAL MJ BENDS WITH RESTRAINED JOINT FITTINGS OR SWEEP PIPE WITHIN THE SPECIFICATION LIMITS IF NECESSARY TO ADJUST WATER MAIN PROFILE TO GAIN MINIMUM VERTICAL SEPARATION ABOVE SEWER.
3. 2" OF INSULATION TO BE USED AROUND WATER SERVICE CONNECTIONS WHERE PIPE CROSSINGS OCCUR.
4. WHERE WATER MAIN CROSSES SEWER AT 45° TO 90° PROVIDE MAXIMUM SPACING OF PIPE JOINTS FROM CROSSING LOCATION FOR BOTH WATER MAIN AND SEWER PIPE.



Hydrant Assembly

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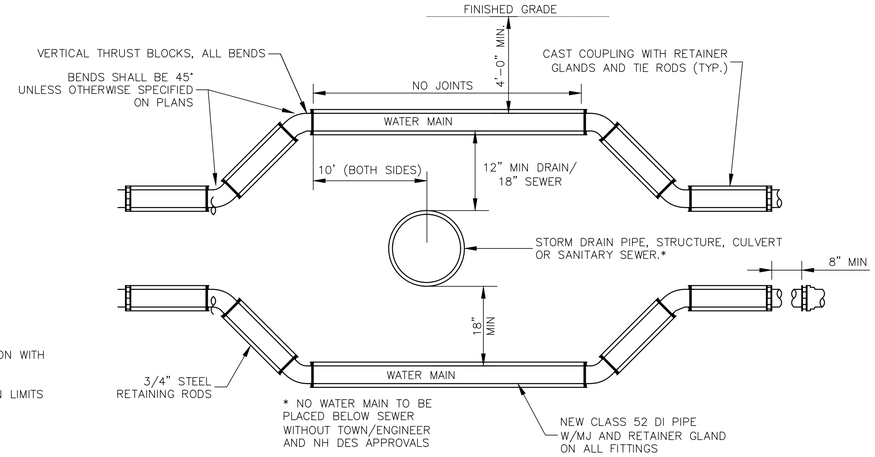
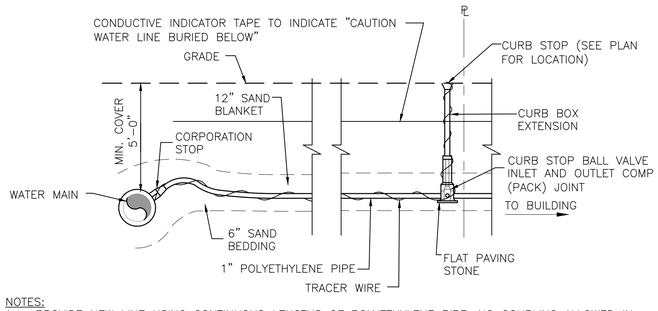


Water/Utility Crossing

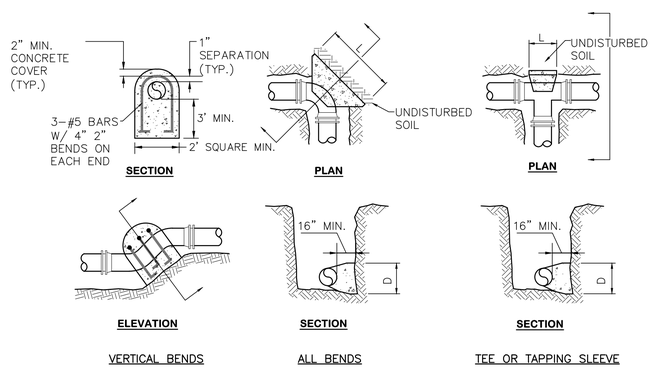
Not to Scale



NOTES:
1. PROVIDE NEW LINE USING CONTINUOUS LENGTHS OF POLYETHYLENE PIPE. NO COUPLING ALLOWED IN ROADWAY WITHOUT APPROVAL OF ENGINEER.
2. TAPS TO BE MADE AT APPROX. 10:00 AND 2:00
3. PROVIDE FOR SERVICE LINE CONTRACTION AND EXPANSION BY INSTALLING "S" IN SERVICE LINE NEAR MAIN.
4. IF SERVICE IS INSTALLED WITH LESS THAN 5'-0" COVER, INSULATE OVER LINE.
5. IF SERVICE HAS LESS THAN ADEQUATE SEPARATION (10' HORIZONTAL/18" VERTICAL-ABOVE) FROM SEWER MAINS/SERVICES, PROVIDE RIGID INSULATION ON TWO SIDES OF SERVICE PIPE.
6. TRACER WIRE (#10 INSULATED) SHALL BE PLACED ALONG THE SERVICE LINE AND SHALL BE A CONTINOUS LENGTH (WITHOUT SPLICES), EXCEPT FOR THE SPLICE AT THE STOP BOX, WHICH SHALL BE MADE WITH A COPPER CRIMP OR SPLIT BOLT CONNECTOR.
7. INSERT STAINLESS STEEL STIFFENERES REQUIRES ON ALL FLEXIBLE PLASTIC CONNECTIONS.
5. PRESSURE TEST, DISINFECT, AND FLUSH ALL WATER SERVICE CONNECTIONS.
6. CONNECT CURB STOP TO EXISTING SERVICE AT PROPERTY LINE OR AT LOCATION APPROVED BY THE ENGINEER (NO COUPLING WITHOUT APPROVAL OF ENGINEER).

Water Service Installation

Not to Scale



Thrust Blocks

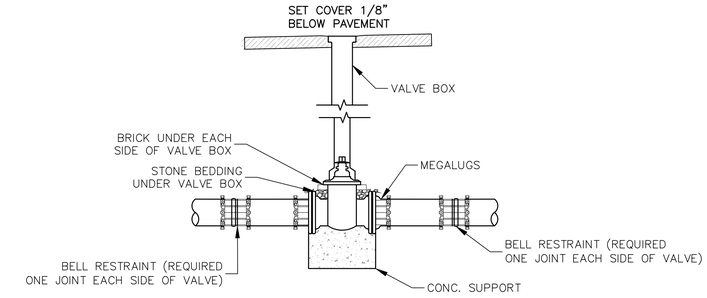
Not to Scale

NOTES:
1. Thrust blocks shall be precast concrete, except thrust blocks for vertical bends can be CIP concrete.
2. The minimum bearing areas shown above are based on a system pressure of 100 PSI. If the system pressure is above 100 psi, increase the noted areas proportional to the actual system pressure. For example, if the actual system pressure is 160 psi, multiply the above values by 160%.
3. Place thrust blocks such that the length (L) of the block is approximately twice as long as the depth (D).
4. Place thrust blocks against undisturbed soil.
5. Place thrust blocks along the full length of the fitting to maximize bearing area.
5. Place 2 layers of polyethylene or roofing paper around fittings prior to placement of the concrete to create a bond break & protect the bolts.
6. Place a solid concrete block between cap/plugs and thrust blocks.
7. Place a 12" long steel horseshoe-shaped pickup hook in all plug and cap thrust blocks. Diameter of hook shall be a minimum of 5/8".
8. Use of thrust blocks does not eliminate the requirement of retainer glands.
9. Thrust blocks are required on all fittings.
10. Coat all threaded rods, nuts, and bolts with bituminous paint.
11. Place anti-seize lubricant on all bolts.

THRUST BLOCK SCHEDULE
MINIMUM BEARING AREA (SQUARE FEET)

Nominal Dia. (in)	PIPE SIZE 4	6	8	10	12	16	20	24
Tees, Caps, Plugs, & Tapping Sleeves	1.05	2.32	4.15	6.37	9.15	16.23	25.44	36.58
90 Degree Bends	1.48	3.29	5.86	9.01	12.93	22.96	35.97	51.73
45 Degree Bends	0.80	1.78	3.17	4.88	7.00	12.42	19.47	28.00
22-1/2 Degree Bends	0.41	0.91	1.62	2.49	3.57	6.33	9.92	14.27
11-1/4 Degree Bends	0.21	0.46	0.81	1.25	1.79	3.18	4.99	7.17

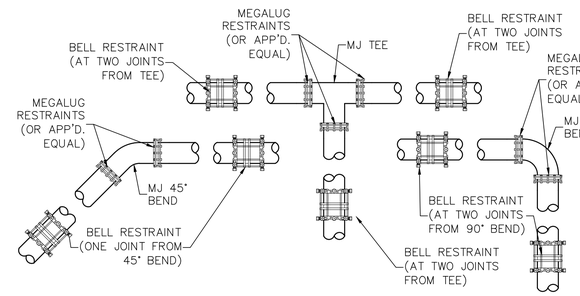
System Pressure: 100psi
Safety Factor: 1.5
Soil Bearing Capacity: 2,000psf



NOTES:
1. VALVE BOXES SHALL BE HEAVY PATTERN CAST IRON, TWO PIECE, SLIP TYPE, 5-INCH DIAMETER SHAFT WITH EXTENSION PIECES TO ALLOW SUFFICIENT COVER.
2. THE UPPER SECTION OF THE BOX SHALL BE TOP-FLANGE TYPE TO PREVENT SETTLEMENT.
3. THE LOWER SECTION SHALL BE BELLED-TYPE TO ENCLOSE THE OPERATING NUT OF THE VALVE.
4. THE COVER SHALL BE CAST IRON WITH THE WORD "WATER" PLAINLY CAST THEREON.
5. GATE VALVES SHALL OPEN LEFT.

Valve & Valve Box Detail

Not to Scale



NOTES:
1. JOINT RESTRAINT IS REQUIRED AT ALL FITTINGS PER THE ABOVE TABLE.

VALVE	RESTRAINED JOINTS
IN LINE VALVES	BELL RESTRT'S REQUIRED 1 JOINT EACH SIDE/VALVE

FITTING	RESTRAINED JOINTS
22.5° BEND	1 EACH SIDE
45° BEND	1 EACH SIDE
90° BEND	2 EACH SIDE
TEE	1 EA SIDE/RUN 2 ON BRANCH

Joint Restraint Detail

Not to Scale

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scale:
date: July 2019
project no: 1119
file name: 1119 DETAILS.dwg

City of Portsmouth, New Hampshire
Department of Public Works
Multi-purpose Recreation Fields
680 Peverly Hill Road
Water Details

drawing no. C-906
sheet: ---- of ----

PIKE INDUSTRIES

CONNECT PROPOSED PATH TO EXISTING

EMERGENCY VEHICLE TURN-AROUND

WETLAND EDGE, TYP.

20' BALL NETTING BEHIND ALL GOAL AREAS, TYP.

SPORTS LIGHTING, TYP.

PULL OFF AREA FOR PARKED AMBULANCE/ FOOD TRUCK/ PORT-A-JON

10' W. MAINTENANCE/ EMERGENCY ACCESS

20' X 20' SHADE SHELTER

PLAY GROUND AREA 4,500 SF

20' BALL NETTING BEHIND ALL GOAL AREAS, TYP.

SPORTS LIGHTING, TYP.

RE-GRADE EXISTING GRAVEL ACCESS DRIVE

CONCESSIONS/ STORAGE/ MAINTENANCE BUILDING 50' X 30'

DROP OFF/ CONCRETE GATHERING AREA

VEHICLE TURN AROUND

SOCCER FIELD 1
360' X 225'

SOCCER FIELD 2
360' X 225'

SOCCER FIELD 3
360' X 225'

BLEACHERS ON CONCRETE PAD, TYP.

4' HT. BVCL FENCING

20' BALL NETTING BEHIND ALL GOAL AREAS, TYP.

DRAINAGE STRUCTURES, TYP.

SPORTS LIGHTING, TYP.

PEDESTRIAN LOOP PATH, TYP.

WATER SPIGOT 2 PER FIELD SET IN TURF BOX, TYP.

BLEACHERS ON CONCRETE PAD, TYP.

SEGMENTAL BLOCK RETAINING WALL, TYP.

PORT-A-JON, TYP.

BIKE RACK, TYP.

PARKING LOT
83 SPACES @ 19'x9'

SNOW STORAGE AREAS

BIKERACK, TYP.

SEGMENTAL BLOCK RETAINING WALL, TYP.

PARKING LOT
145 SPACES @ 19'x9'

0 50 100 150

SCALE: 1"=50'-0"

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file name: XR-LM-OVERALL_A2.dwg
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City of Portsmouth, New Hampshire
Department of Public Works

Multi-purpose Recreation Fields
680 Peverly Hill Road

Recreation Fields
SITE PLAN

drawing no.
L1.01

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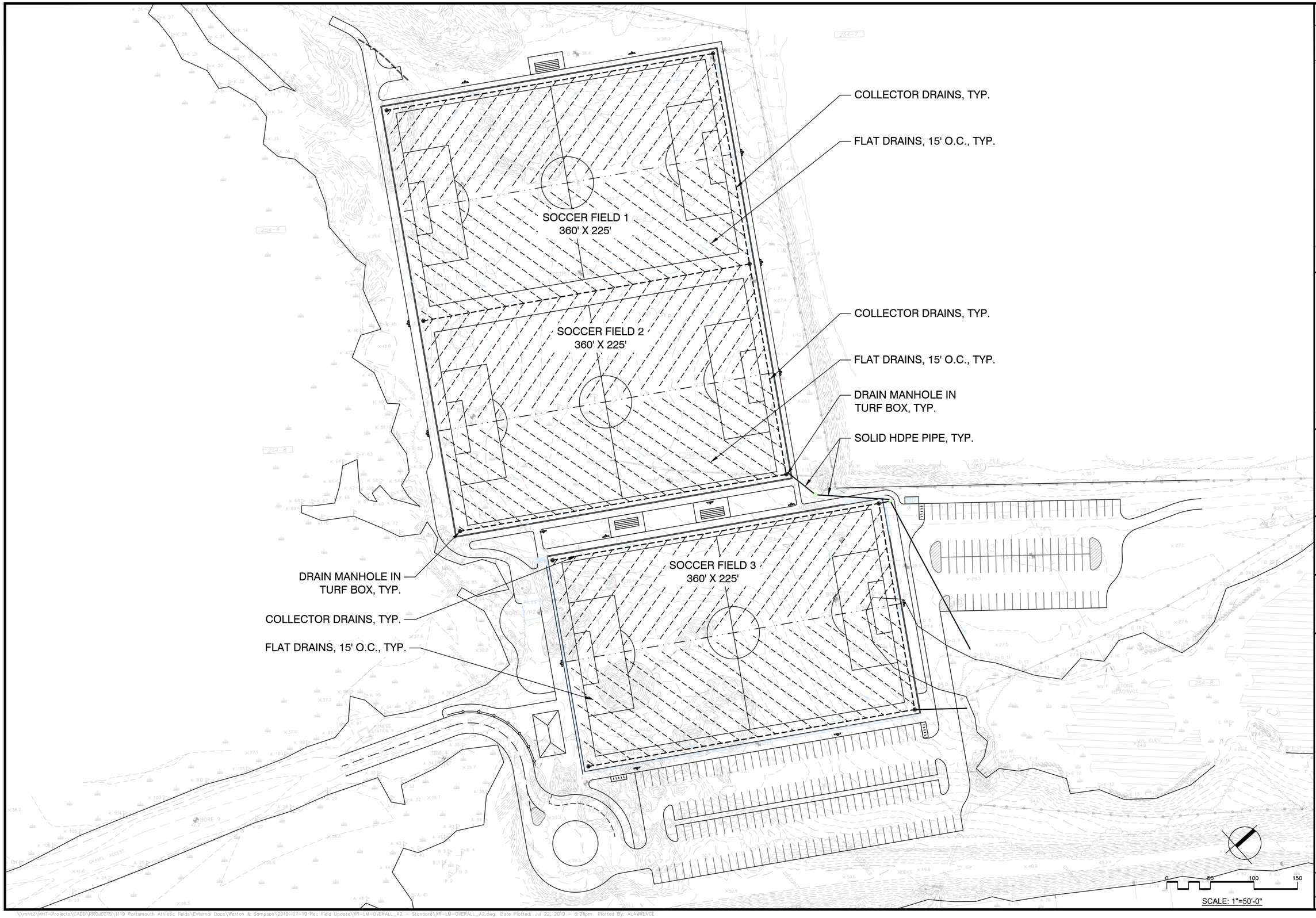

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City of Portsmouth, New Hampshire
Department of Public Works

Multi-purpose Recreation Fields
680 Peverly Hill Road

Recreation Fields
TURF DRAINAGE

drawing no.
L1.02

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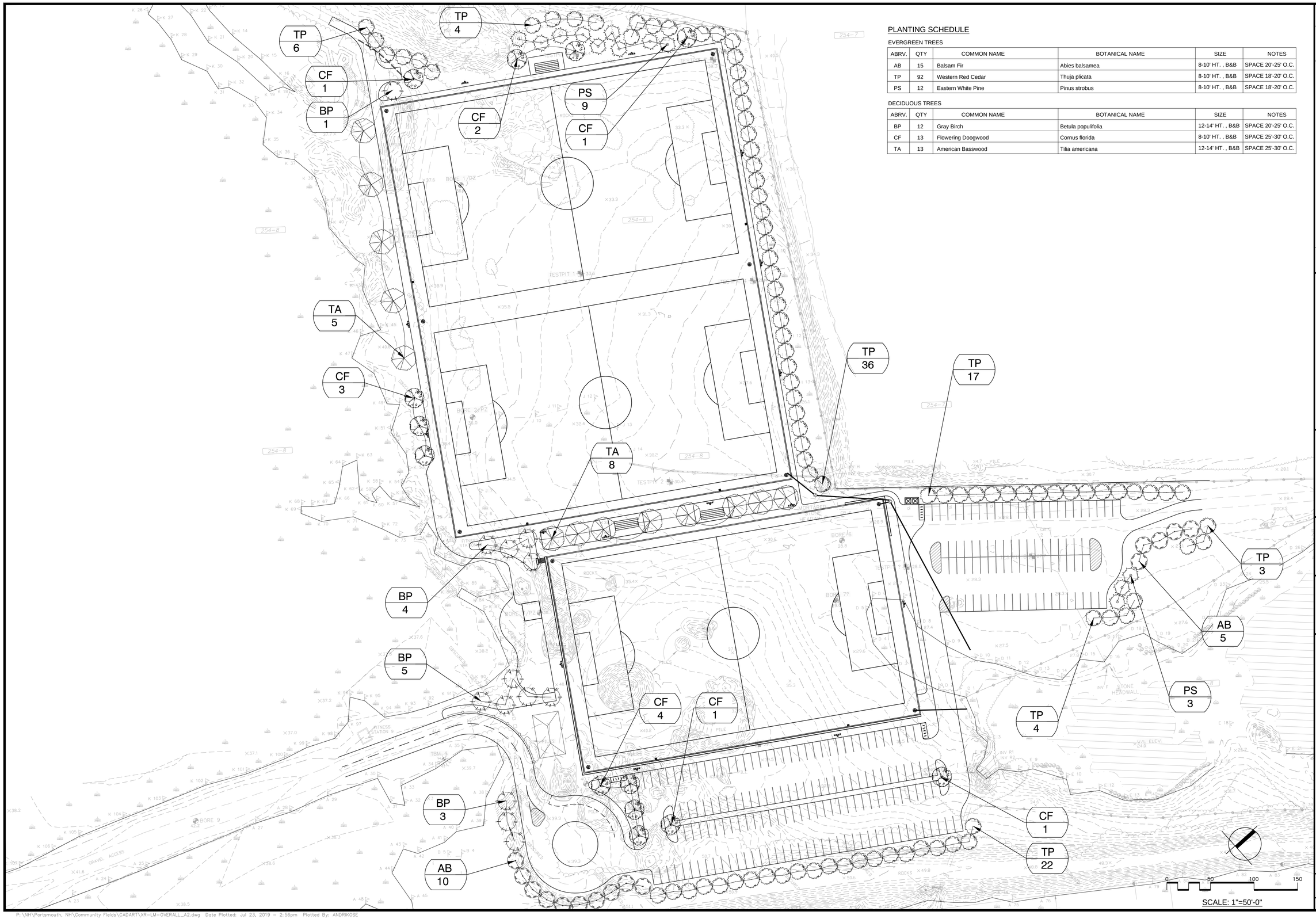

PLANTING SCHEDULE

EVERGREEN TREES

ABRV.	QTY	COMMON NAME	BOTANICAL NAME	SIZE	NOTES
AB	15	Balsam Fir	Abies balsamea	8-10' HT. , B&B	SPACE 20'-25' O.C.
TP	92	Western Red Cedar	Thuja plicata	8-10' HT. , B&B	SPACE 18'-20' O.C.
PS	12	Eastern White Pine	Pinus strobus	8-10' HT. , B&B	SPACE 18'-20' O.C.

DECIDUOUS TREES

ABRV.	QTY	COMMON NAME	BOTANICAL NAME	SIZE	NOTES
BP	12	Gray Birch	Betula populifolia	12-14' HT. , B&B	SPACE 20'-25' O.C.
CF	13	Flowering Doogwood	Cornus florida	8-10' HT. , B&B	SPACE 25'-30' O.C.
TA	13	American Basswood	Tilia americana	12-14' HT. , B&B	SPACE 25'-30' O.C.

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City of Portsmouth, New Hampshire
Department of Public Works

Multi-purpose Recreation Fields
680 Peverly Hill Road

Recreation Fields
PLANTING PLAN

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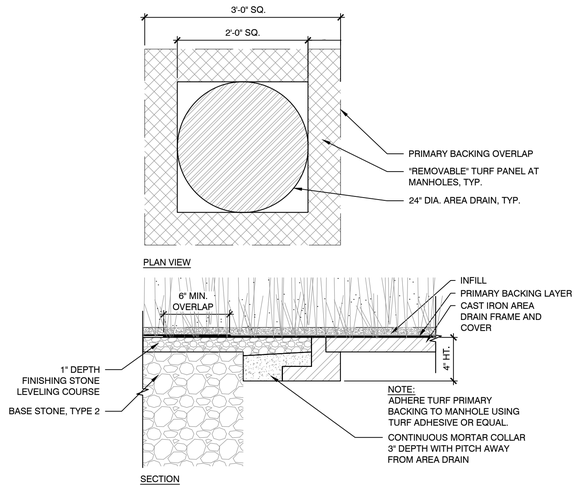
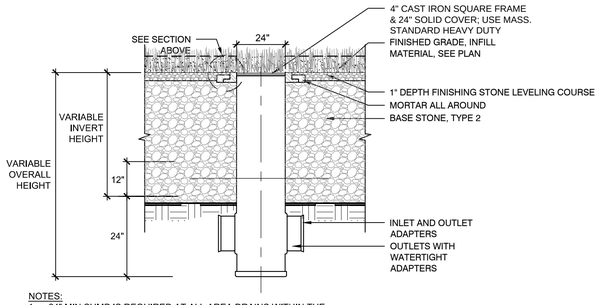
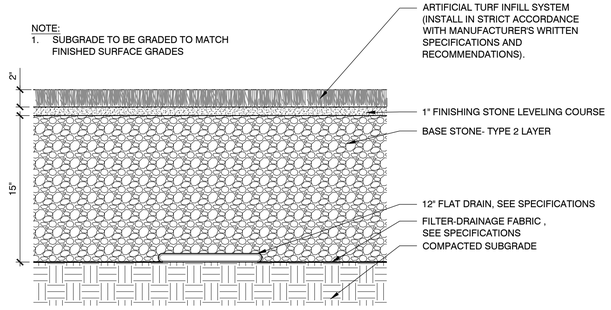


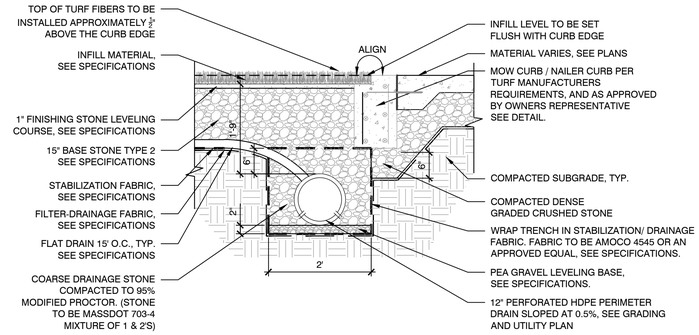


NOTES:
1. 24" MIN SUMP IS REQUIRED AT ALL AREA DRAINS WITHIN THE SYNTHETIC TURF FIELD.
2. GRATES AND/OR COVERS SHALL BE 24" ROUND AT THE LOCATIONS INDICATED ON THE GRADING PLAN.

1 PVC DRAINAGE MANHOLE IN TURF FIELD
SCALE: N.T.S.

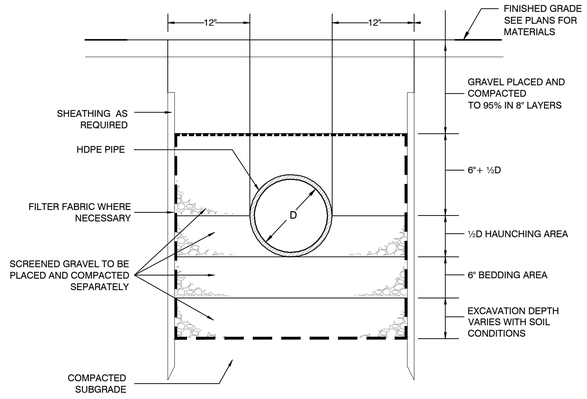


2 SYNTHETIC TURF FIELD
SCALE: NTS



NOTES:
1. FLAT DRAIN TO BE DIRECTLY CONNECTED TO PERIMETER DRAIN. PROVIDE MANUFACTURED FITTINGS TO MAKE THE CONNECTION AS REQUIRED AND APPROVED BY THE OWNERS REPRESENTATIVE.
2. CONCRETE CURB TO BE 4,500 PSI AT 28 DAYS (AIR CONTENT 6% +/- 1%) (COARSE AGGREGATE ASTM C-33 SIZE #57)

3 COLLECTOR DRAIN
SCALE: NTS



4 DRAIN PIPE TRENCH
SCALE: NTS

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City of Portsmouth, New Hampshire
Department of Public Works

Multi-purpose Recreation Fields
680 Peverly Hill Road

Recreation Fields
DETAILS

drawing no.
L1.04

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Table 1 – Wetland and Buffer Area Analysis

Table 1
Wetland and Wetland Buffer Area Analysis

Town	Wetland ID	Classification	Wetland Area (SF)	Wetland Area (Acres)	Buffer Area (SF)	Buffer Area (Acres)	Buffer Setback (ft)
Portsmouth	Wetland 1	PFO1/4E, R4SB	835,599	19.18			100
Portsmouth	Wetland 2	PFO1/4E	126,106	2.89			100
Portsmouth	Wetland 3	PFO1E	347	0.01			100
Portsmouth	Wetland 4	PEM1Ex	24,687	0.57			100
Portsmouth	Wetland 5	PEM1Ex	11,146	0.26	2,040,239	46.84	100
Portsmouth	Wetland 6	PEM1Ex	9,610	0.22			100
Portsmouth	Wetland 7	PEM1Ex	497	0.01			100
Portsmouth	Wetland 8	PEM1Ex	1,619	0.04			100
Portsmouth	Wetland 9	PUBx, PEM1Ex	200,800	4.61			100
Total			***1,210,411***	***27.79***	***2,040,239***	***46.84***	

Table 2 - Wetland and Buffer Impact Analysis

Table 2
Wetland and Buffer Impact Analysis

Town	Wetland ID	Classification	Permanent Wetland Impact (SF)	Permanent Prime Wetland Buffer Impact (SF)
Portsmouth	Wetland 1	PFO1/4E, R4SB	-	436,119
Portsmouth	Wetland 2	PFO1/4E	-	
Portsmouth	Wetland 3	PFO1E	-	
Portsmouth	Wetland 4	PEM1Ex	24,699	
Portsmouth	Wetland 5	PEM1Ex	11,246	
Portsmouth	Wetland 6	PEM1Ex	9,637	
Portsmouth	Wetland 7	PEM1Ex	497	
Portsmouth	Wetland 8	PEM1Ex	1,646	
Portsmouth	Wetland 9	PUBx, PEM1Ex	9,787	
Total			***57,512***	***436,119***