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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 of 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 (*Parus 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

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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

Peter Rice

Print Name

7/25/19

Date



Witness

DAVID S. ALLEN

Print Name

7/23/19

Date

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 Phragmites (*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

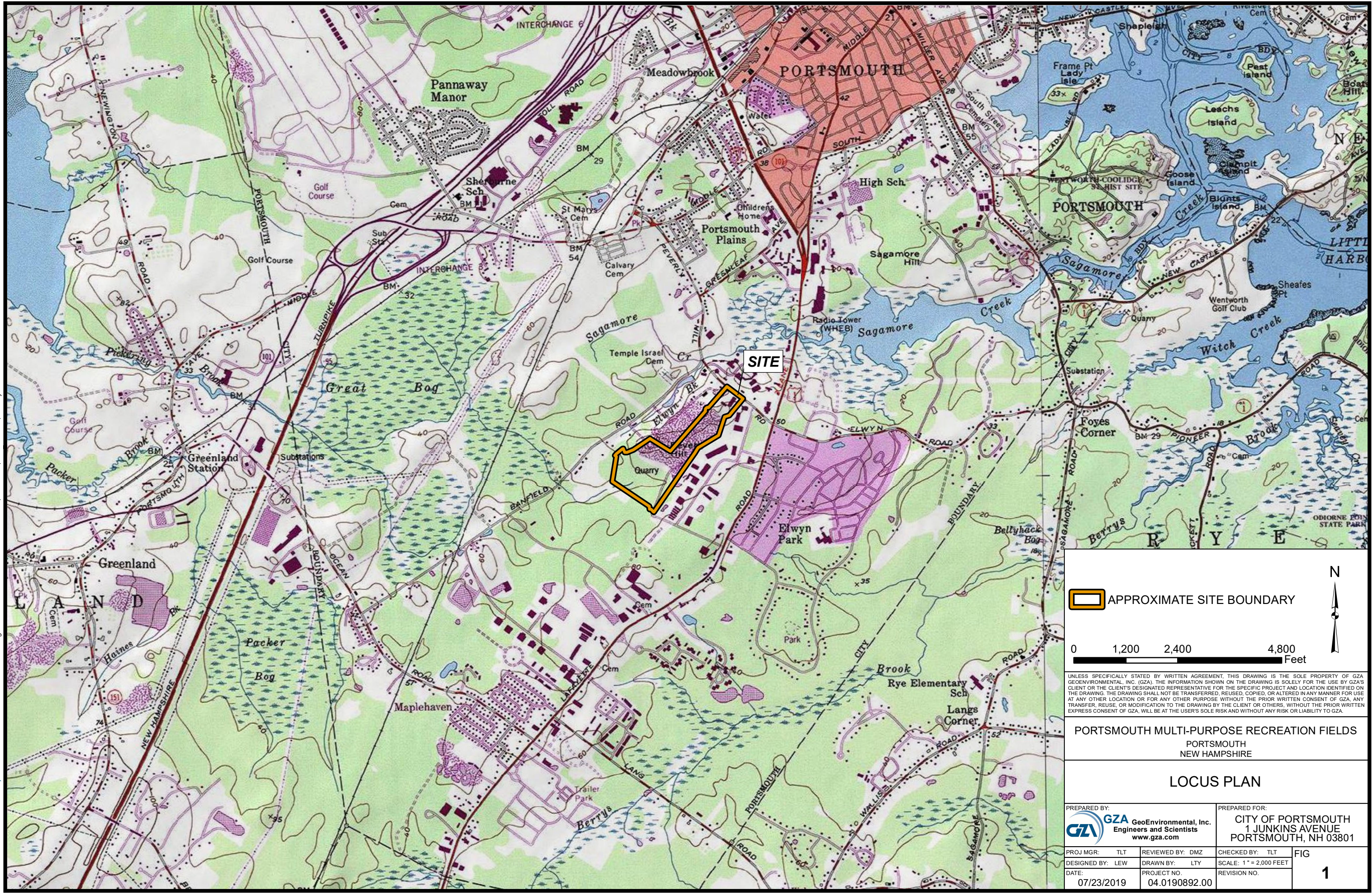
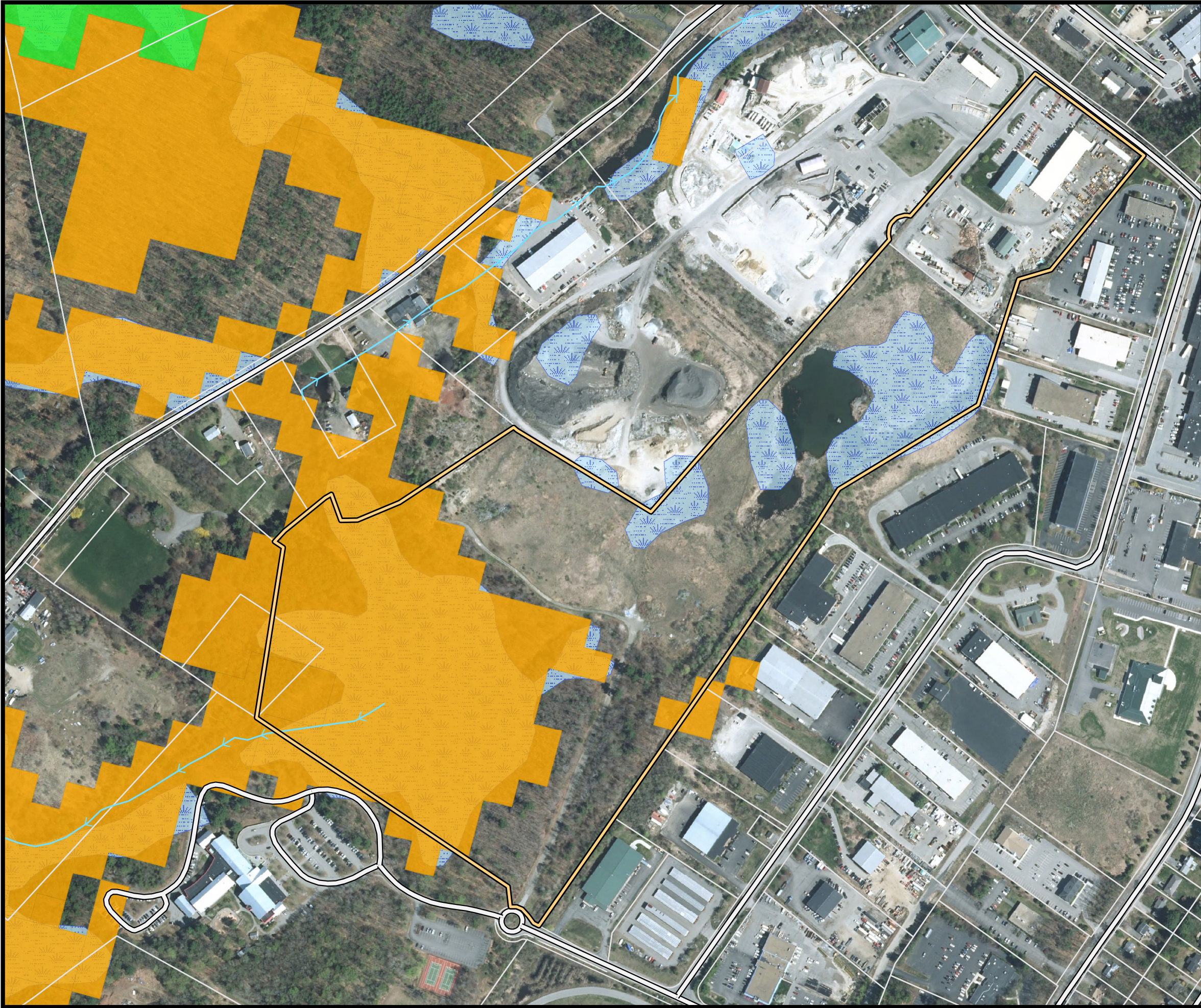


Figure 2 – Wildlife Action Plan Overlay

© 2019 - GZA GeoEnvironmental, Inc. P:\04\jobs\0190892\00\Figures\MXD\FIGURE 4 - WAP OVERLAY.mxd, 3/20/2019, 2:42:53 PM, Logan Young



LEGEND

DOT ROADS

NHD FLOWLINE

NATIONAL WETLAND INVENTORY

APPROXIMATE SITE BOUNDARY

PARCEL BOUNDARY

NH FISH & GAME WILDLIFE ACTION PLAN TIER TYPE

1 Highest Ranked Habitat in New Hampshire

2 Highest Ranked Habitat in Biological Region

3 Supporting Landscapes

SOURCE

1. AERIAL IMAGERY IS DATED TO 2015 AND WAS OBTAINED FROM UNH GRANIT.

2. "DOT ROADS", "NHD FLOWLINE", AND "PARCEL BOUNDARY" WAS OBTAINED FROM UNH GRANIT.

3. "WAPTIER" AND "NATIONAL WETLAND INVENTORY" WERE OBTAINED FROM UNH GRANIT.

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XX	XXXX	XX	XX
NO.	ISSUE / DESCRIPTION	BY	DATE
UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR THE USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.			
PORTSMOUTH MULTI-PURPOSE RECREATION FIELDS PORTSMOUTH, NEW HAMPSHIRE			
WILDLIFE ACTION PLAN OVERLAY			
PREPARED BY: <div><div><div></div><div>GZA</div></div><div>GeoEnvironmental, Inc. Engineers and Scientists www.gza.com</div></div>		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

© 2019 - GZA GeoEnvironmental, Inc. P:\04\jobs\01908005\04_0190892_00\Figures\MXD\Aerial and Wetland Plans ANNOTATED.mxd, 7/22/2019, 1:09:51 PM, lindsey.white



LEGEND

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

SOURCE

- DOT ROADS AND PARCEL BOUNDARY WERE OBTAINED FROM NH GRANIT CLEARINGHOUSE.
- WETLANDS WERE DELINEATED BY GZA GEOENVIRONMENTAL, INC. ON OCTOBER 22, 2018 IN ACCORDANCE WITH THE 1987 U.S. ARMY CORPS 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.
- GZA PERFORMED A WETLANDS FUNCTION AND VALUES ASSESSMENT IN ACCORDANCE WITH THE ACOE'S "HIGHWAY METHODOLOGY WORKBOOK SUPPLEMENT," SEPTEMBER 1999.
- AERIAL IMAGERY WAS OBTAINED FROM NH GRANIT CLEARINGHOUSE.
- INTERMITTENT FLOW WAS APPROXIMATED FROM FIELD EVALUATIONS MARCH 26, 2019.
- WETLAND POLYLINES WERE PROVIDED BY CMA ENGINEERS.

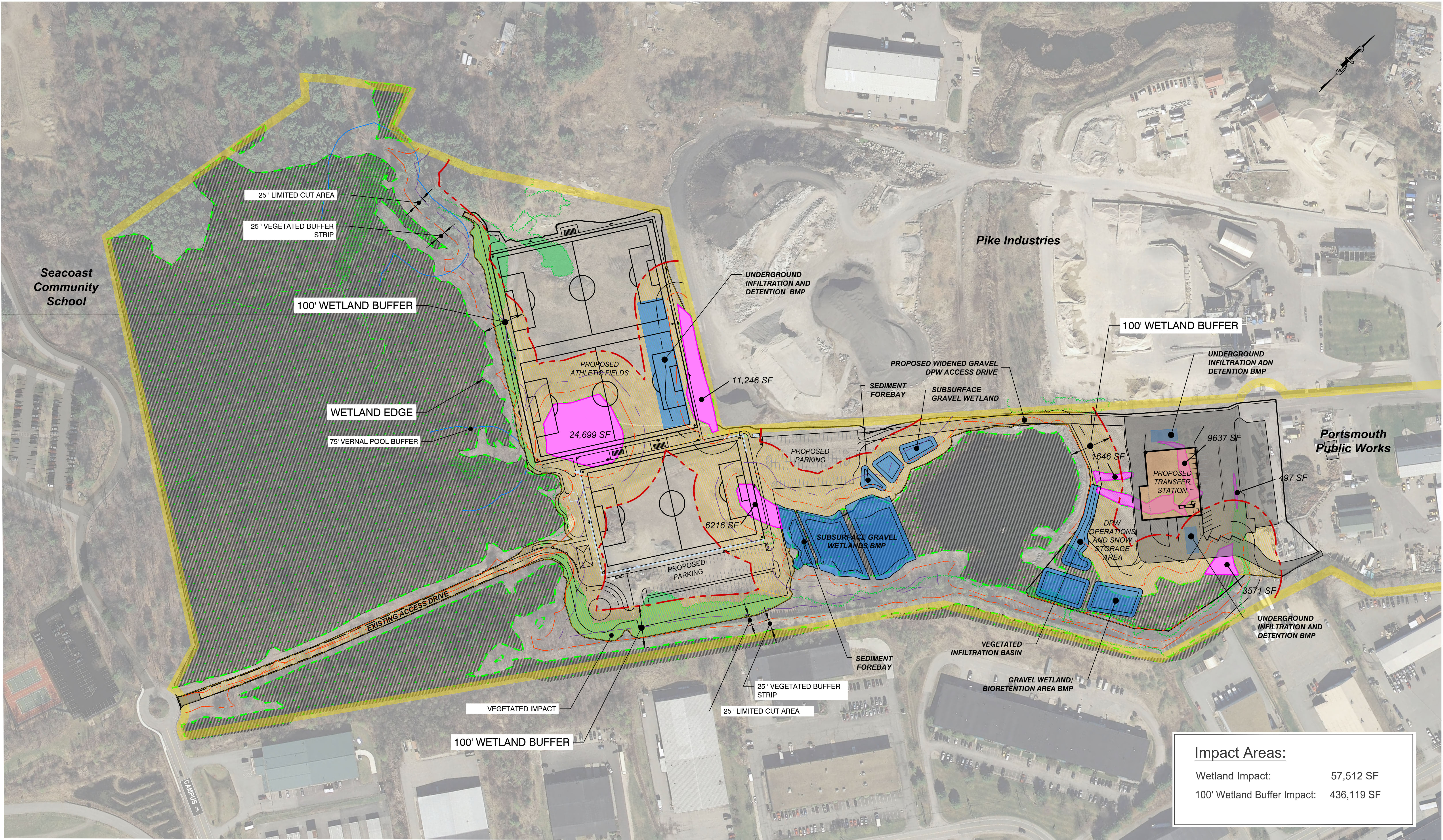
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PORTSMOUTH MULTI-PURPOSE RECREATION FIELDS
PORTSMOUTH, NEW HAMPSHIRE

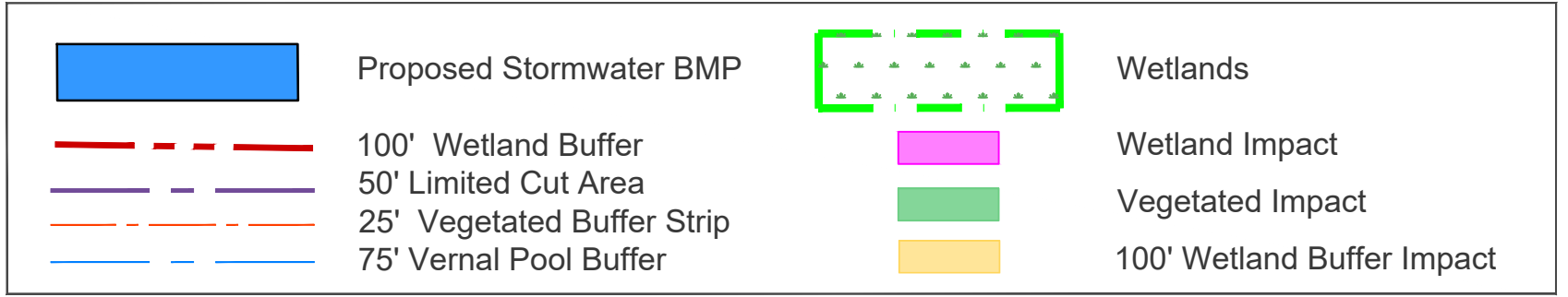
EXISTING CONDITIONS OVERVIEW

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.



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



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 material. 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 post 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.

ABBREVIATIONS:

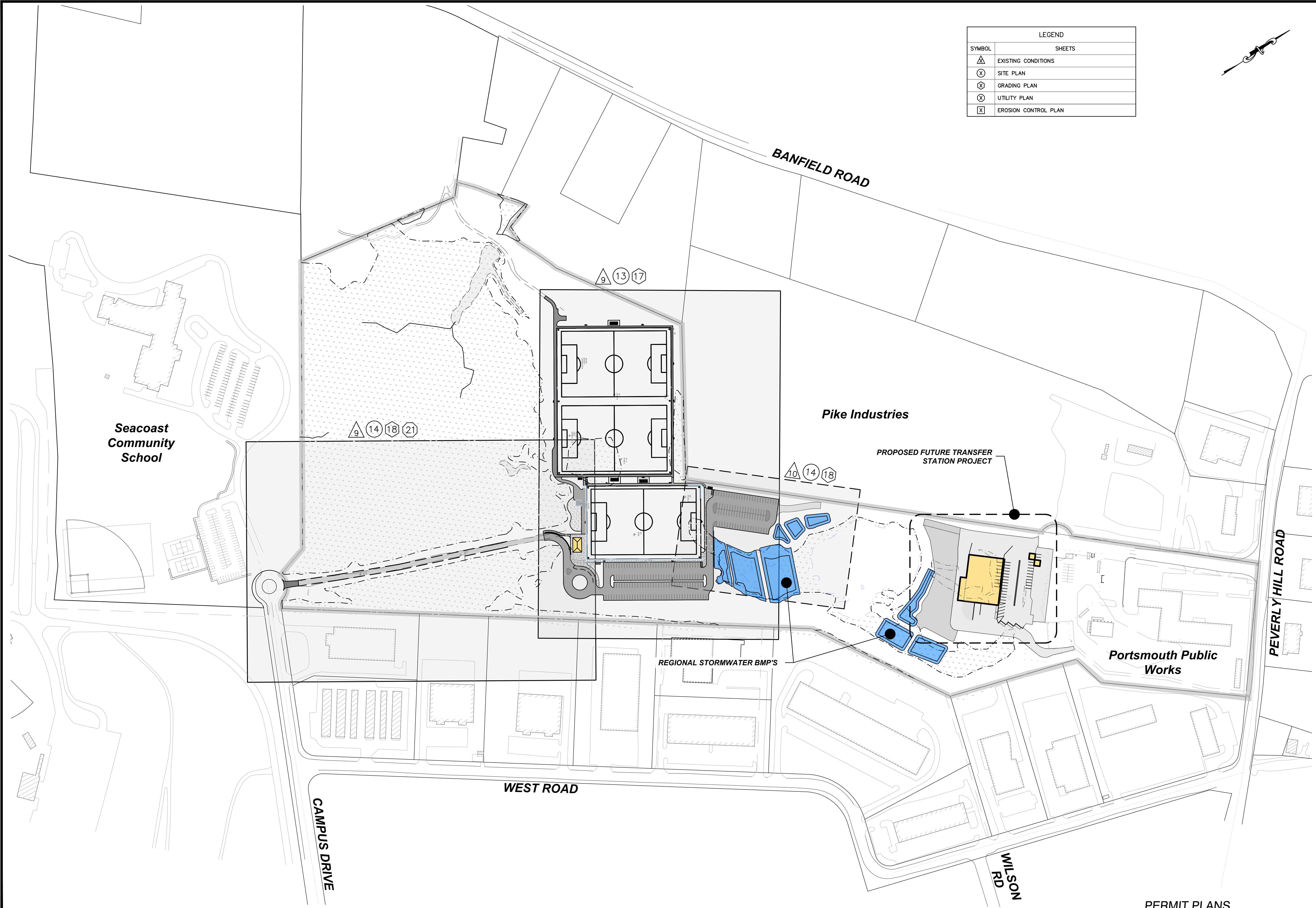
ABBREV.	MEANING	ABBREV.	MEANING
@	AT	STD	SINGLE TILE DUCT
ABD	ABANDONED	STY	STORY
ABAN	ABANDON IN PLACE	SW	SIDEWALK
ACP	ASBESTOS CEMENT PIPE	T&B.	TOP AND BOTTOM
ADD'L	ADDITIONAL	TBC	TOP BACK OF CURB
APPROX	APPROXIMATE	TCC	TRAFFIC CONTROL CABINET
ASTM	AMERICAN SOCIETY FOR TESTING	TD	TELEDUCT
BTM	AND MATERIALS	TEL	TELEPHONE CONDUIT/DUCT BANK
BH	BOTTOM	TH	TOP OF HATCH
BIT	BRADLEY HEAD	TL	TRAFFIC LIGHT CONDUIT
BLDG	BUTIMINOUS CONCRETE	TOH	TOP OF HOOD
BMP	BUILDING	TOW	TOP OF WALL
BOW	BUILDING MONITORING POINT	TRAF	TRAFFIC CONDUIT
BR	BOTTOM OF WALL	TS	TRAFFIC SIGNAL
CB	BRICK	TYP	TYPICAL
C.B.	CATCH BASIN	UMP	UTILITY MONITORING POINT
CBCI	CONCRETE BOUND	UNK	UNKNOWN
CC	CATCH BASIN WITH CURB INLET	UP	UTILITY POLE
CEM	CAST-IN-IN-PLACE CONCRETE	VC	VITRIFIED CLAY
CL	CEMENT	VERT	VERTICAL
CLF	CLEAR	VGC	VERTICAL GRANITE CURB
CL	CENTER LINE	W	WATER
CLF	CHAIN LINK FENCE	W/	WITH
CI	CAST IRON	WC	WYE CONNECTION
OICL	CAST IRON CEMENT-LINED	WIP	WROUGHT IRON PIPE
CIP	CAST IN PLACE	WM	WATER METER
C.O.	CLEAN OUT	WMH	WATER MANHOLE
CONC	CONCRETE	WFLG	WETLAND FLAG
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		
F&C	LEVEL		
FA	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		
PCI	PIPE		
PERF	PIT CAST IRON		
PM	PEFORATED		
PNS	PARKING METER		
PROP	PIPE NOT SEEN		
PSI	PROPOSED		
PVC	POUNDS PER SQUARE INCH		
R	POLYVINYL CHLORIDE		
REC	REMOVE/RELOCATE		
REINF	RECORD INFORMATION		
RES	REINFORCEMENT		
RET	REVERSE EXTENSION SEWER		
RCP	RETAIN		
RS	REINFORCED CONCRETE PIPE		
ROW	RECEIVING SHAFT		
SB	RIGHT-OF-WAY		
S.B.	STREET LIGHT BASE		
SD	STONE BOUND		
SF	STORM DRAIN		
SGC	FIRE SERVICE		
SLCC	SLOPED GRANITE CURB		
SMH	STREET LIGHT CONTROL CABINET		
SPEC	SEWER MANHOLE		
SWL	SPECIFICATION		
SQ	SINGLE WHITE LINE		
S	SQUARE		
ST	SANITARY SEWER		

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	
	SPOT ELEVATION	
	CITY LAYOUT LINE	
	OVERHEAD WIRES	
	SEWER LINE	
	DRAIN LINE	
	GAS LINE	
	WATER SERVICE UNDERGROUND	
	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	
	WATER MAIN	
	BOLLARD	
	SLOPE LINE	
	CONSTRUCTION BASELINE	
	THRUST BLOCK	

PERMIT PLANS

[illegible]



LEGEND	
SYMBOL	SHEETS
	EXISTING CONDITIONS
	SITE PLAN
	GRADING PLAN
	UTILITY PLAN
	EROSION CONTROL PLAN

City of Portsmouth, New Hampshire Department of Public Works		designed by: _____	date: July 2019
Multi-purpose Recreation Fields 680 Peverly Hill Road		drawn by: AGI	project no: 1119
Recreation Fields Sheet Index Plan		approved by: _____	file name: 1119 Overall Plan.dwg
drawing no: G-103		scale: 0 150' 300' Scale: 1" = 150'	
sheet: _____ of _____		no. _____	
PERMIT PLANS		revision _____	
by _____		date _____	
JFK		07/09/2019	
JFK		07/24/2019	
TAC WORK SESSION SUBMISSION		CONSERVATION COMMISSION SUBMISSION	
1		2	
no.		no.	
c m a e n g i n e e r s . c o m		Portland, ME 207/541-4223 Manchester, NH 603/627-0708 Portsmouth, NH 603/431-6196	
CMA ENGINEERS		Civil/Environmental/Structural	
Professional Engineer		JOSEPH H. KIEFFNER No. 2517 LICENSED ENGINEER	
STATE OF NEW HAMPSHIRE		Professional Engineer	

OWNER OF RECORD

MAP-LOT

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	5835/67
252-2-12	ONE HUNDRED WEST LLC, 100 WEST RD, PORTSMOUTH, NH 03801	3589/1427
252-2-14	LITCHFIELD PORTSMOUTH LLC	4800/1185
252-3	C/O EATON PARTNERS INC, 175 CANAL ST STE 401, MANCHESTER, NH 03101	
252-4 & 252-5	LIGHTHOUSE MANUFACTURING LLC, 25 SOUTH SATELLITE RD, SOUTH WINDSOR, CT 06074	N/A
253-4	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
253-5-1	GERALD W. & TERESA M. REYNOLDS, 164 WASON RD, MILTON, NH 03851	N/A
254-7	BOURAS GROUP LLC, 10 MIRONA RD, PORTSMOUTH, NH 03801	N/A
254-8-1	PIKE INDUSTRIES, INC., 3 EASTGATE PARK RD, BELMONT, NH 03220	3192/1085
	MCM ACQUISITION 2017 LLC	N/A
	ATTN: TAX DEPT NH22094-A, 8051 CONGRESS AVE, BOCA RATON, FL 33487-1307	
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

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 SETBACKN/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

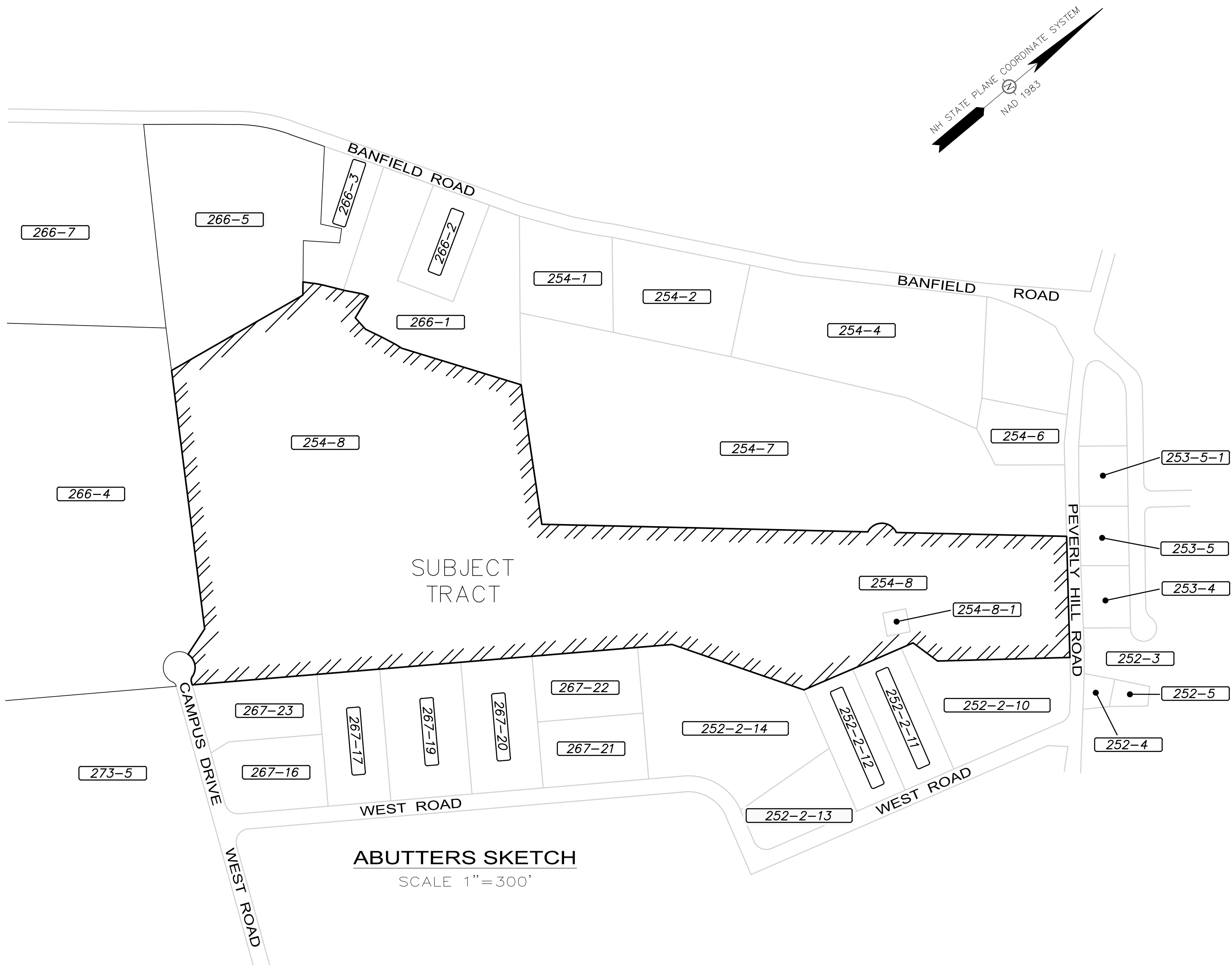
WETLAND STANDARDS (CONTINUED):

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.



ABUTTERS SKETCH

SCALE 1"=300'

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.


[illegible]

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

date: July 2019	designed by: W&A
project no: 1119	drawn by: AGL
file name: 1119/ECP.dwg	approved by: W&A
scale: 300' = 1" = 300' 	

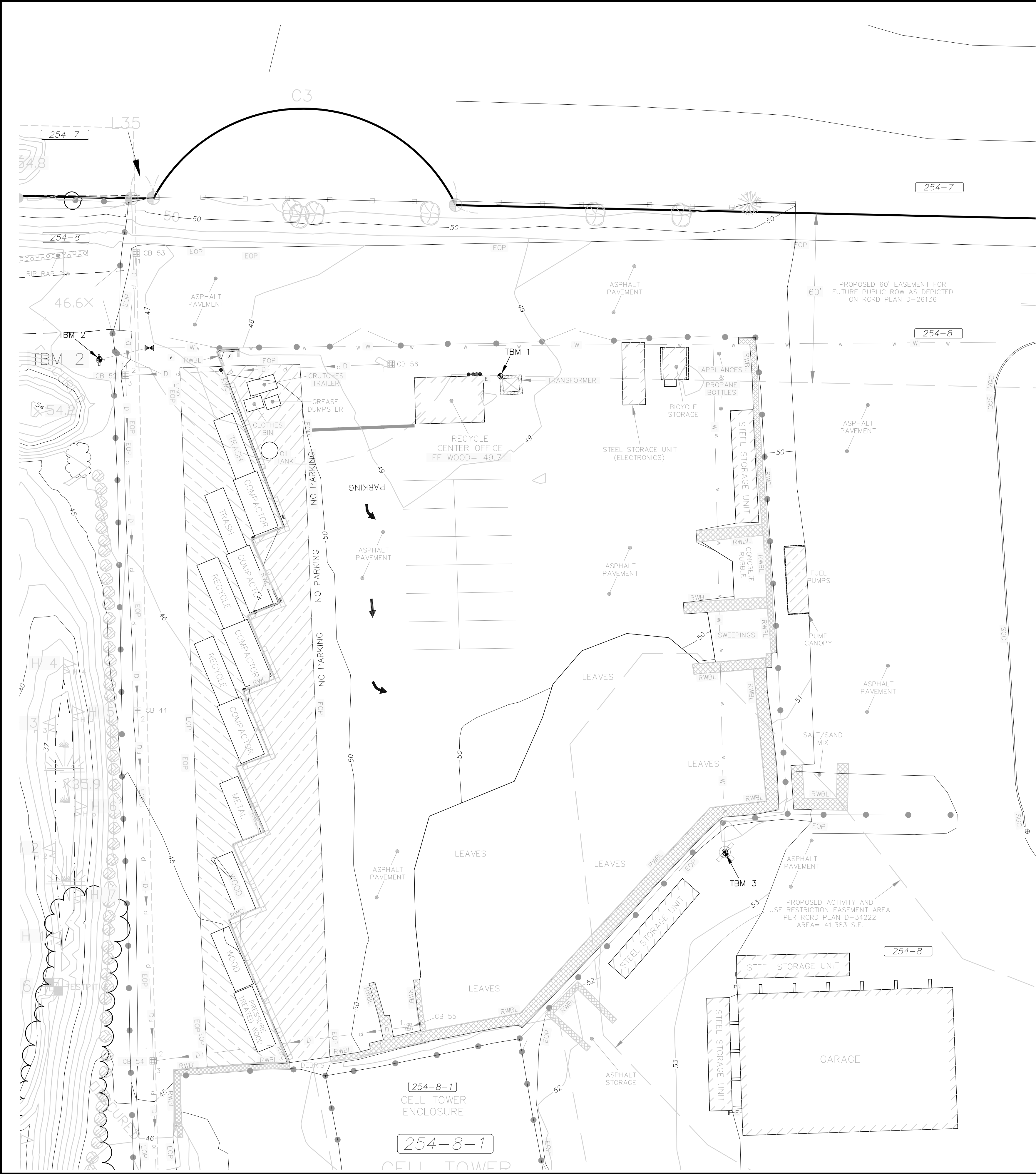
City of Portsmouth, New Hampshire
Department of Public Works

Multi-purpose Recreation Fields
680 Peverly Hill Road

Existing Conditions Plan

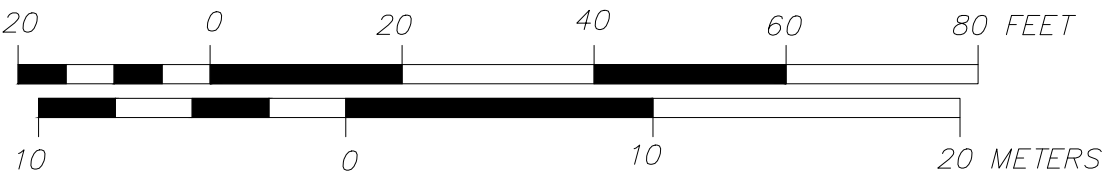
V-201

sheet: ---- of ----

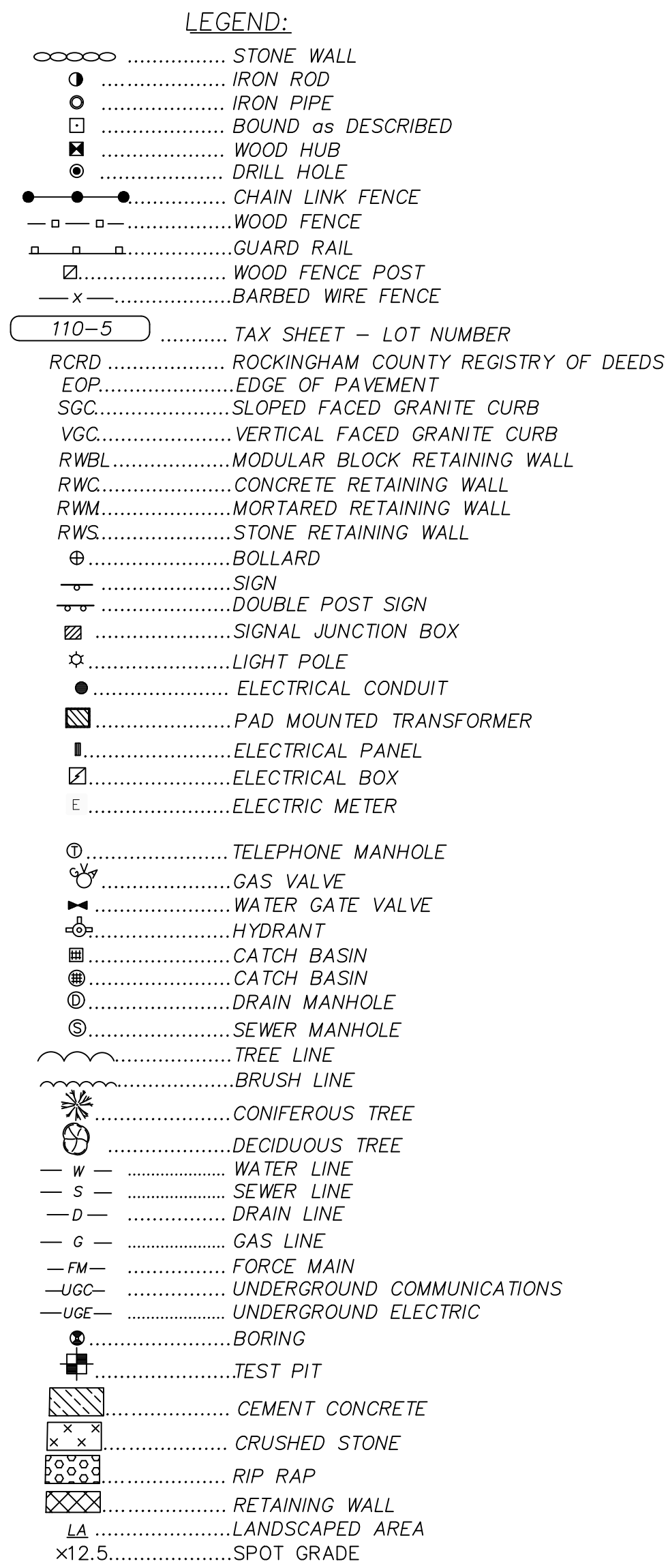


LINE TABLE		
LINE	BEARING	DISTANCE
L1	S 51°30'32" E	457.64
L2	S 38°28'19" W	500.01
L3	S 76°35'13" W	114.96
L4	S 16°43'54" W	48.95
L5	S 16°31'44" W	132.02
L6	S 16°47'11" W	268.29
L7	S 59°02'50" W	526.73
L8	S 35°10'38" W	1819.23
L9	N 65°24'52" W	11.22
L10	N 16°46'42" W	115.00
L11	N 57°17'20" W	270.98
L12	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



City of Portsmouth, New Hampshire Department of Public Works Multi-purpose Recreation Fields 680 Peverly Hill Road Existing Conditions Plan		designed by: ----	date: July 2019	drawn by: AGL	project no: 1119	approved by: -----	file name: 1119 ECP.dwg	scale: 0 20' 40' Scale: 1" = 20'	drawing no. V-202		sheet: ---- of ----	
CMA ENGINEERS Civil/Environmental/Structural		Portsmouth, NH • Manchester, NH • Portland, ME 603/431-6196 • 603/627-0708 • 207/541-4223		c m a e n g i n e e r s . c o m		no.		revision		date		by



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

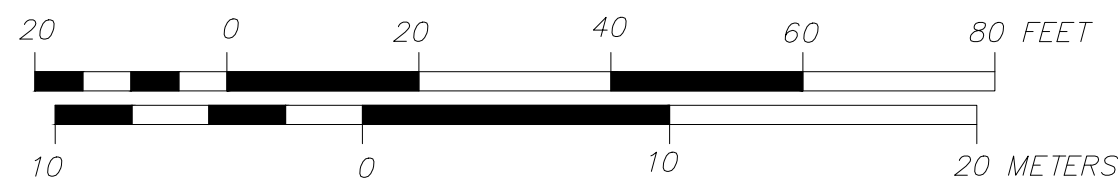
TBM 4
SURVEY SPIKE SET
IN BASE 30" PINE
EL= 42.40
(0.5' ABOVE GROUND)

TBM 5
MARKED BOLT
HYDRANT LOWER FLANGE
EL= 52.07

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

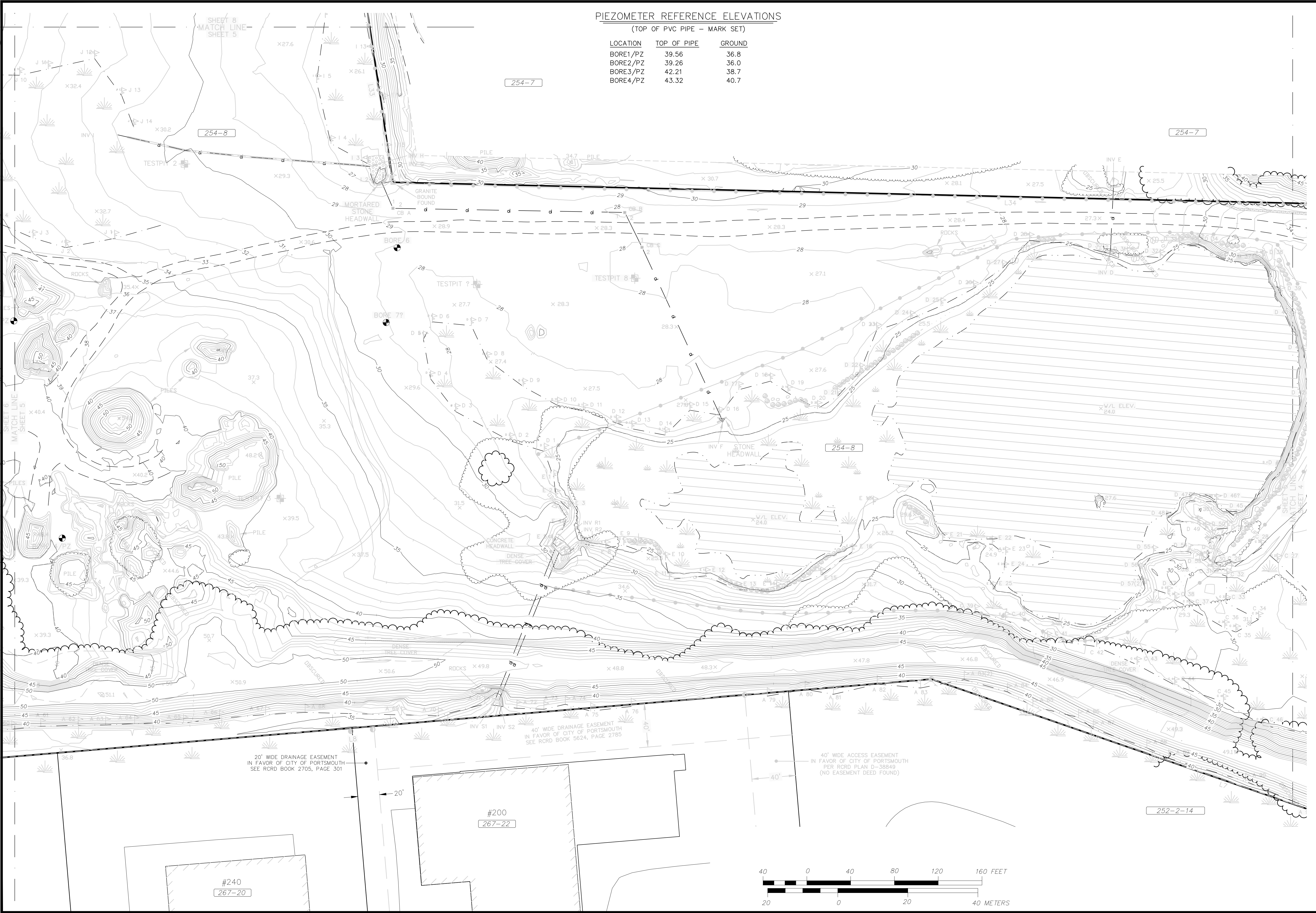
TBM 7
SPIKE FOUND
IN BASE 30" PINE
EL= 37.19
(0.5' ABOVE GROUND)

TBM TABLE





City of Portsmouth, New Hampshire Department of Public Works		designed by: -----	date: July 2019
Multi-purpose Recreation Fields 680 Peverly Hill Road		drawn by: AGL	project no: 1119
Existing Conditions Plan		approved by: -----	file name: 1119 ECP.dwg
drawing no: V-204		scale: 0 40' 80' Scale 1" = 40'	
sheet: ----- of -----		no. revision date by	
CMA ENGINEERS Civil/Environmental/Structural		Portsmouth NH • Manchester NH • Portland ME 603/431-6196 • 603/627-0708 • 207/541-4223	
c m a e n g i n e e r s . c o m			

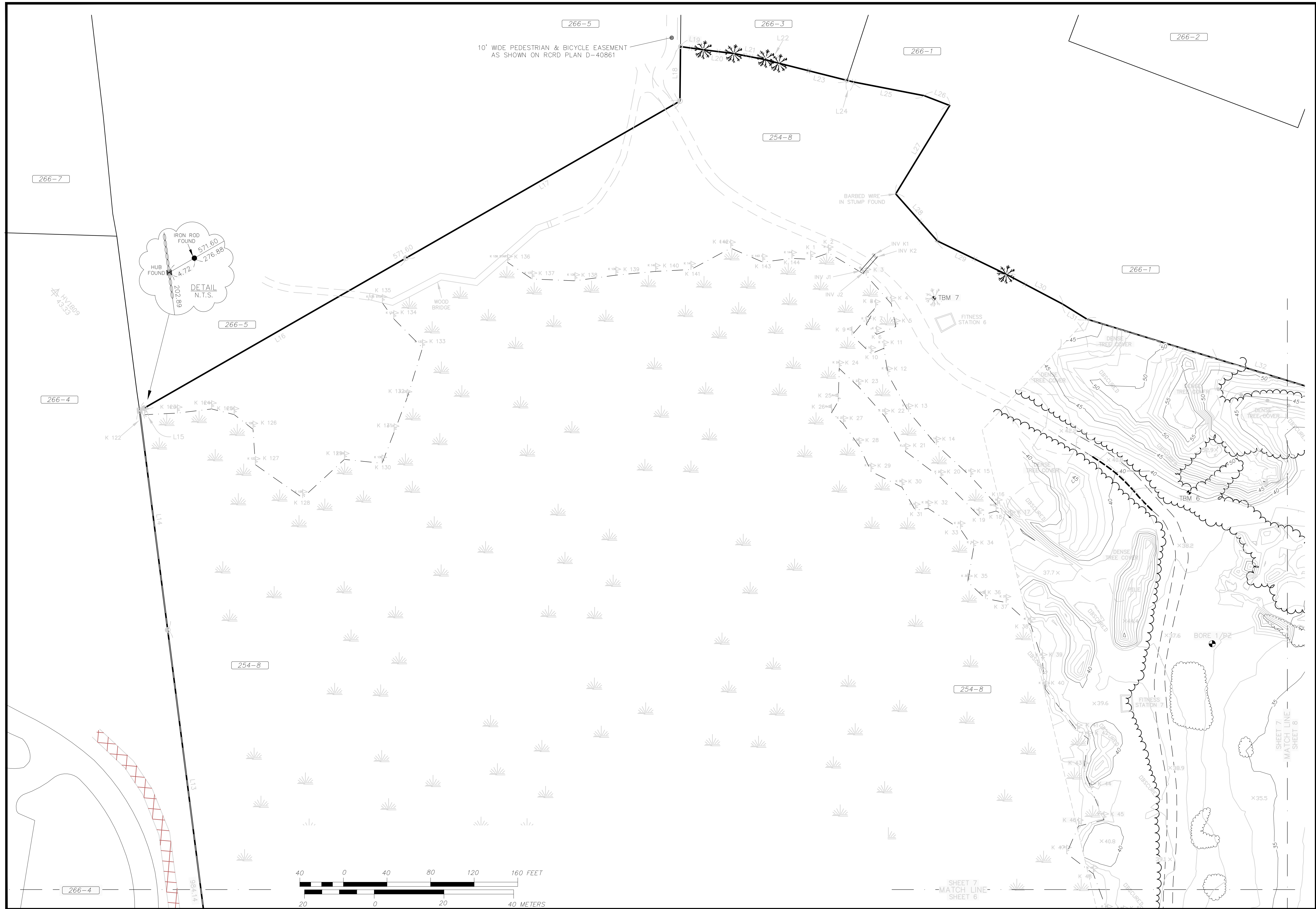


PIEZOMETER REFERENCE ELEVATIONS

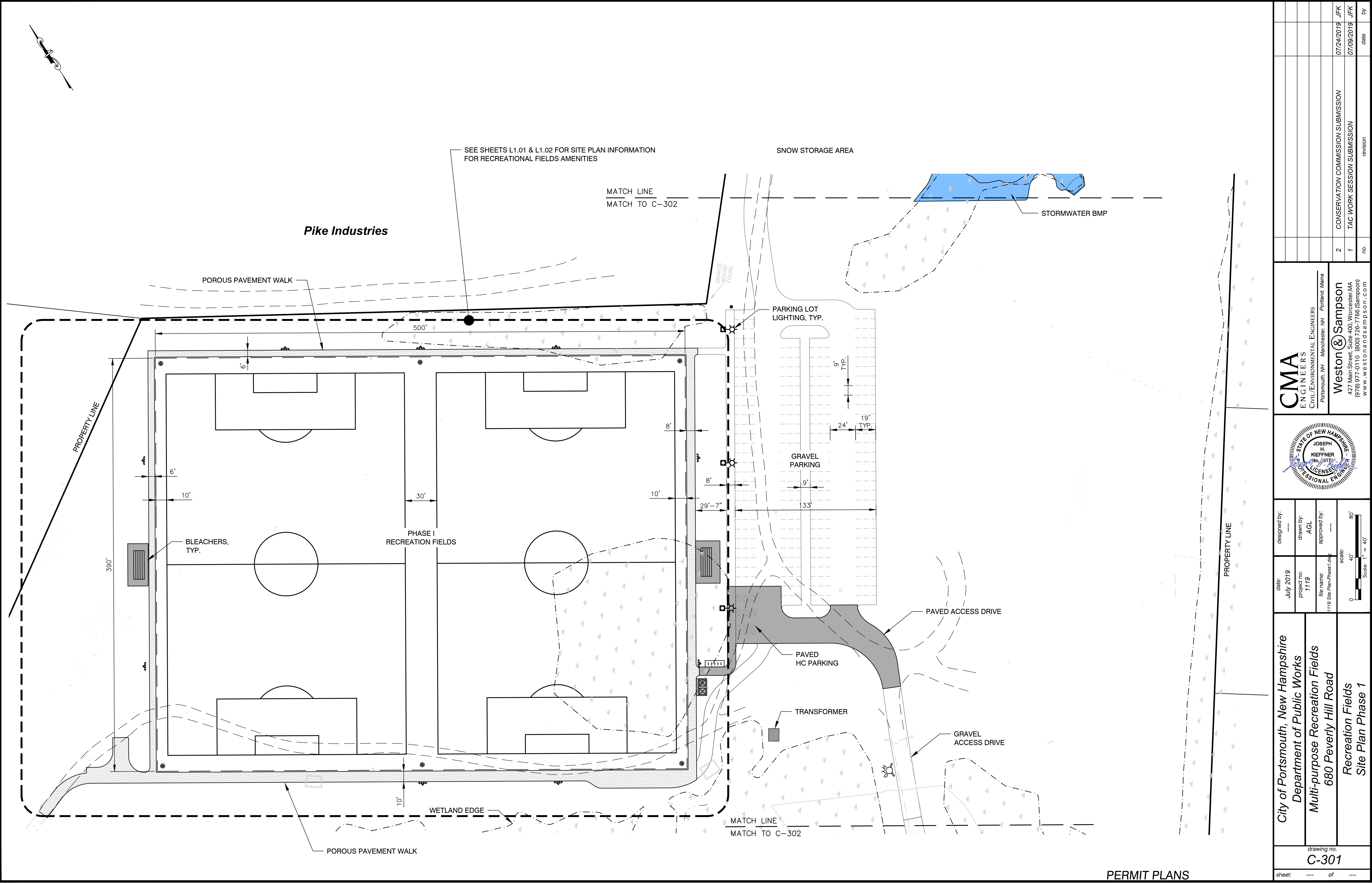
(TOP OF PVC PIPE - MARK SET)

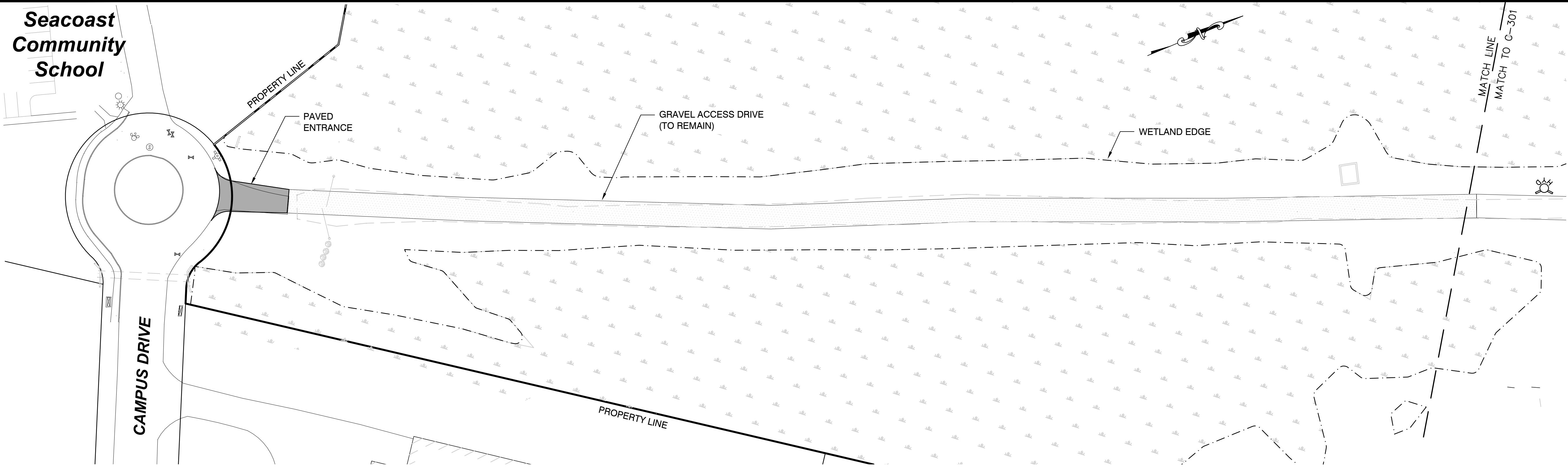
LOCATION	TOP OF PIPE	GROUND
BORE1/PZ	39.56	36.8
BORE2/PZ	39.26	36.0
BORE3/PZ	42.21	38.7
BORE4/PZ	43.32	40.7

City of Portsmouth, New Hampshire Department of Public Works		drawing no. V-205	
Multi-purpose Recreation Fields 680 Peverly Hill Road		sheet: ---- of ----	
Existing Conditions Plan		date: July 2019	
designed by: ----		project no: 1119	
drawn by: AGI		file name: 1119 ECP.dwg	
approved by: ----		scale: 1" = 40'	
no. revision		by date	
CMA ENGINEERS Civil/Environmental/Structural		Portsmouth NH • Manchester NH • Portland ME 603/431-6196 • 603/627-0708 • 207/541-4223	
c m a e n g i n e e r s . c o m			

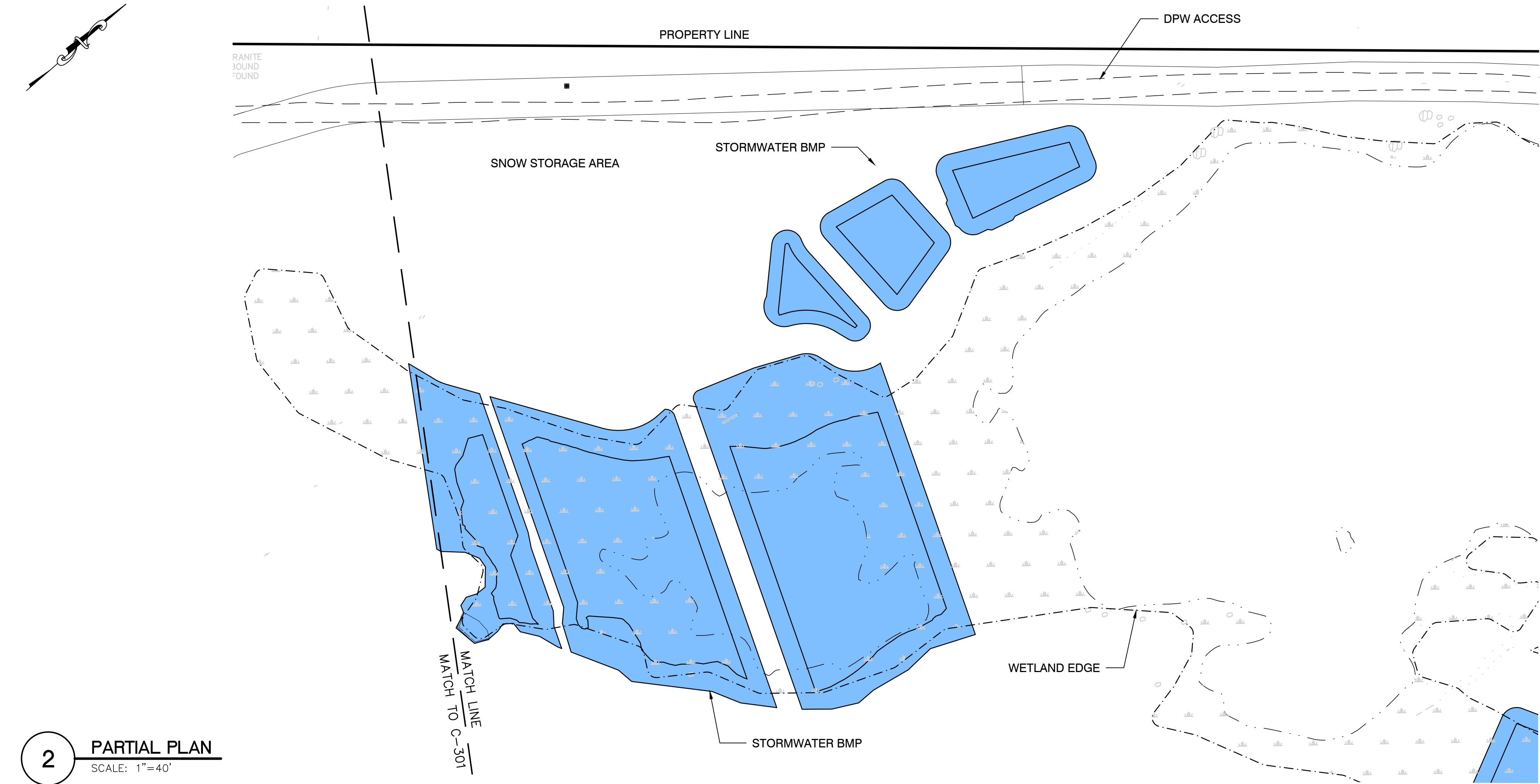


<div>City of Portsmouth, New Hampshire Department of Public Works</div> <div>Multi-purpose Recreation Fields 680 Peaverly Hill Road</div> <div>Existing Conditions Plan</div>	<div>date: July 2019</div>	<div>designed by: ----</div>	<div>CMA ENGINEERS</div> <div>CIVIL/ENVIRONMENTAL/STRUCTURAL</div> <div>Portsmouth, NH • Manchester, NH • Portland, ME 603/431-6196 • 603/627-0708 • 207/541-4223 c m a e n g i n e e r s . c o m</div>	no.	revision	date	by
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	<div>scale: <div>040'80'</div><div>Scale: 1" = 40'</div></div>						
	drawing no. V-207						
sheet: ---- of ----							





1 ACCESS ROAD PLAN
SCALE: 1"=40'



2 PARTIAL PLAN
SCALE: 1"=40'

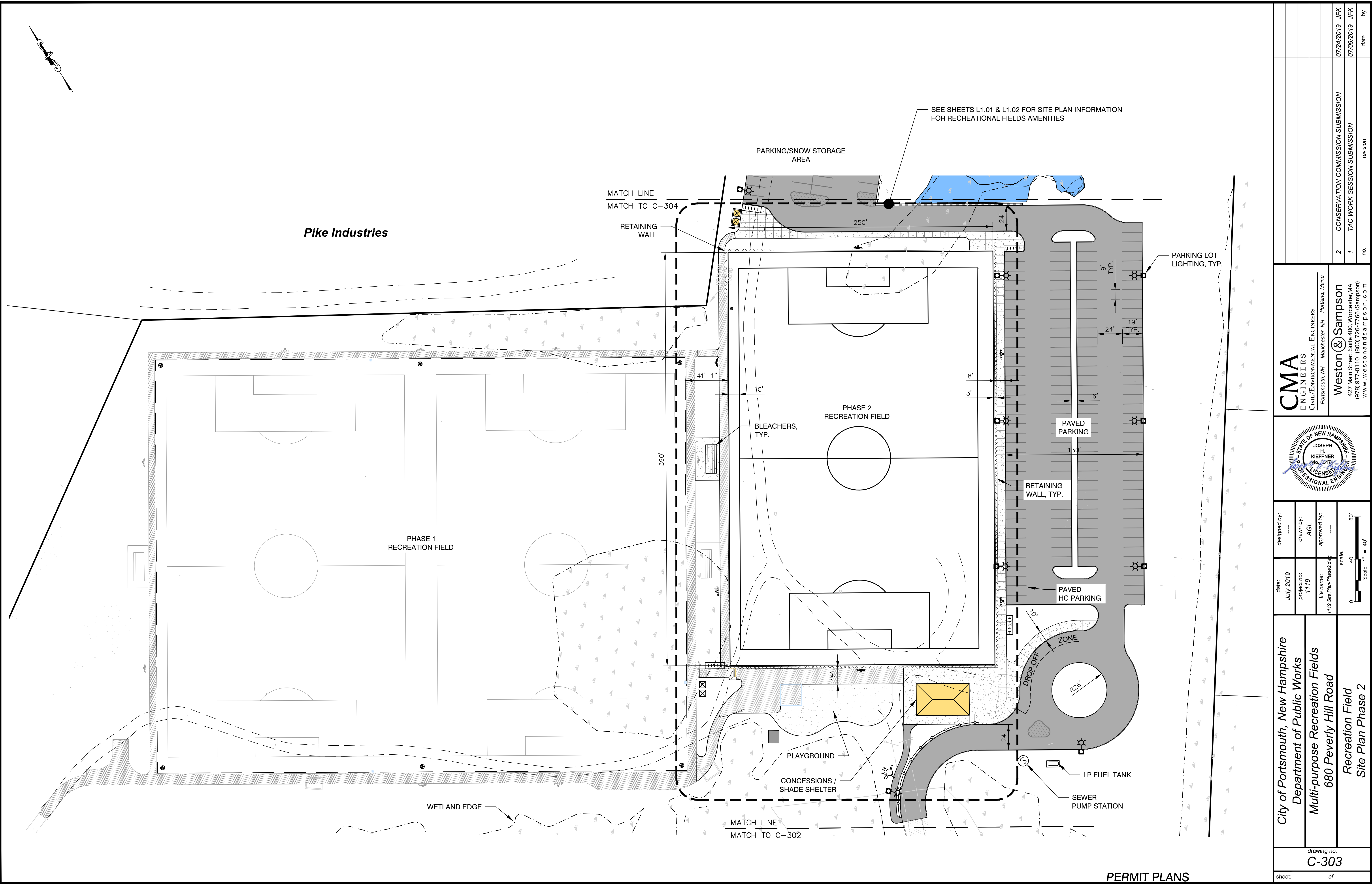
PERMIT PLANS

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	
date: July 2019	project no: 1119	designed by: -----	drawn by: AGL
file name: 1119 Site Plan-Phase1.dwg		approved by: -----	scale: 0 40' 80'
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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 Phase 1		drawing no. C-302	
sheet: ----- of -----		no. 2 1	
date: 07/24/2019		revision: 1	
JFK		JFK	
CONSERVATION COMMISSION SUBMISSION		TAC WORK SESSION SUBMISSION	
07/24/2019		07/09/2019	
JFK		JFK	
by		date	

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





2 PARTIAL PLAN
SCALE: 1"=40'

PERMIT PLANS

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

designed by:
date: July 2019
project no: 1119
file name: 1119 Site Plan-Phase2.dwg

drawn by: AGJ

approved by:

scale:
0 40' 80'
Scale: 1" = 40'

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Civil/Environmental Engineers
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JOSEPH H. KIEFFNER
No. 517
LICENSED PROFESSIONAL ENGINEER
STATE OF NEW HAMPSHIRE

no.

revision

date

by

2

CONSERVATION COMMISSION SUBMISSION

07/24/2019

JFK

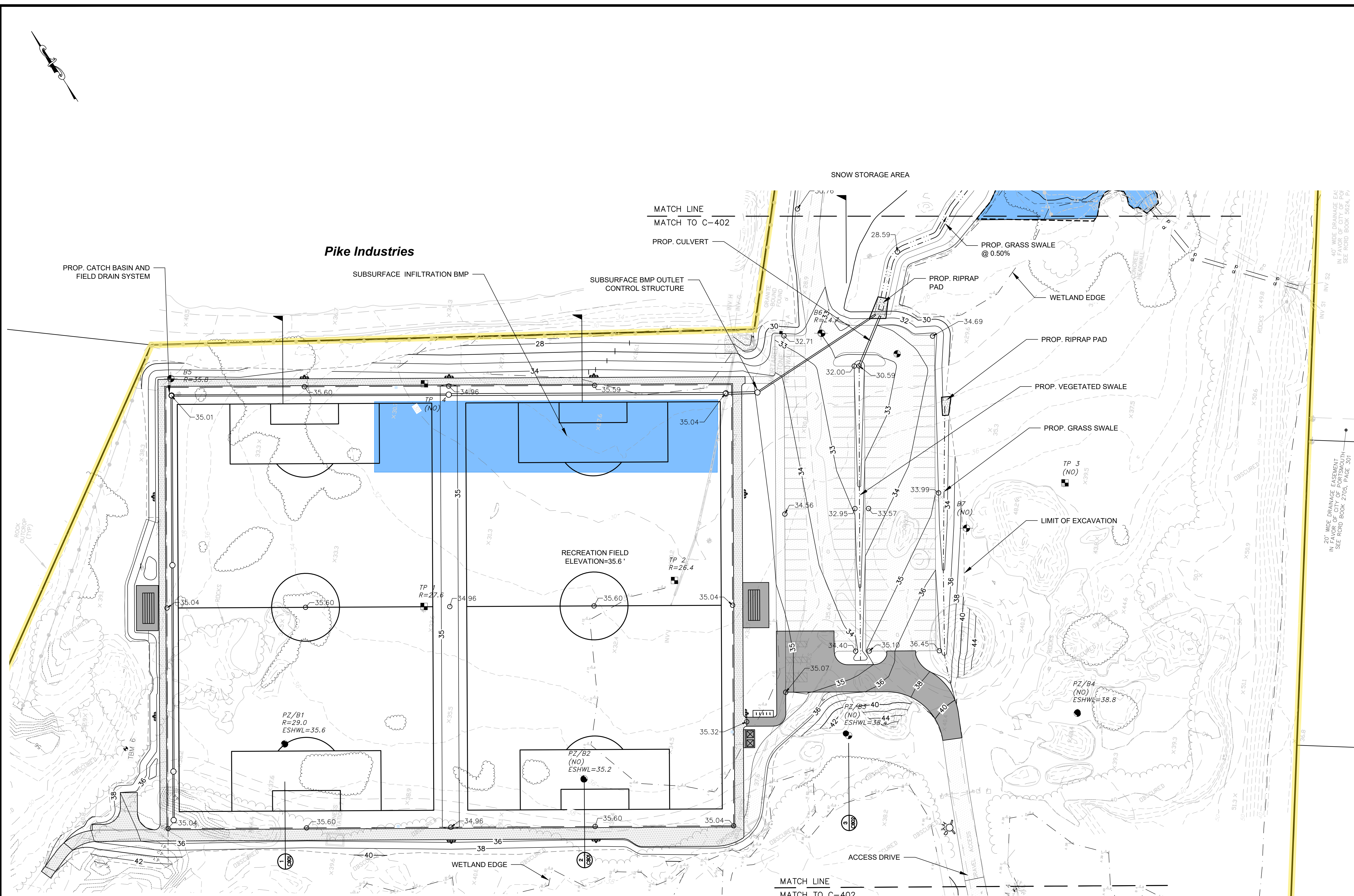
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TAC WORK SESSION SUBMISSION

07/09/2019

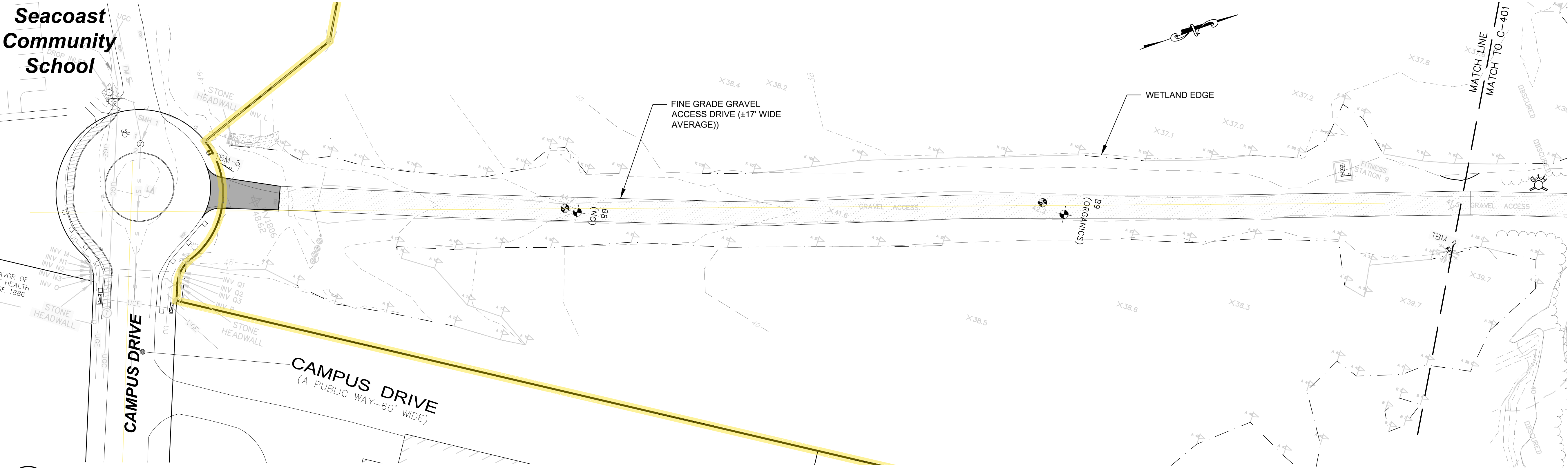
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\\nh12\mnt-projects\CADD\PROJECTS\1119 Portsmouth Athletic Fields\Production\1119 Site Plan-Phase2.dwg Date Plotted: Jul 23, 2019 -- 7:56am Plotted By: SFORTIER

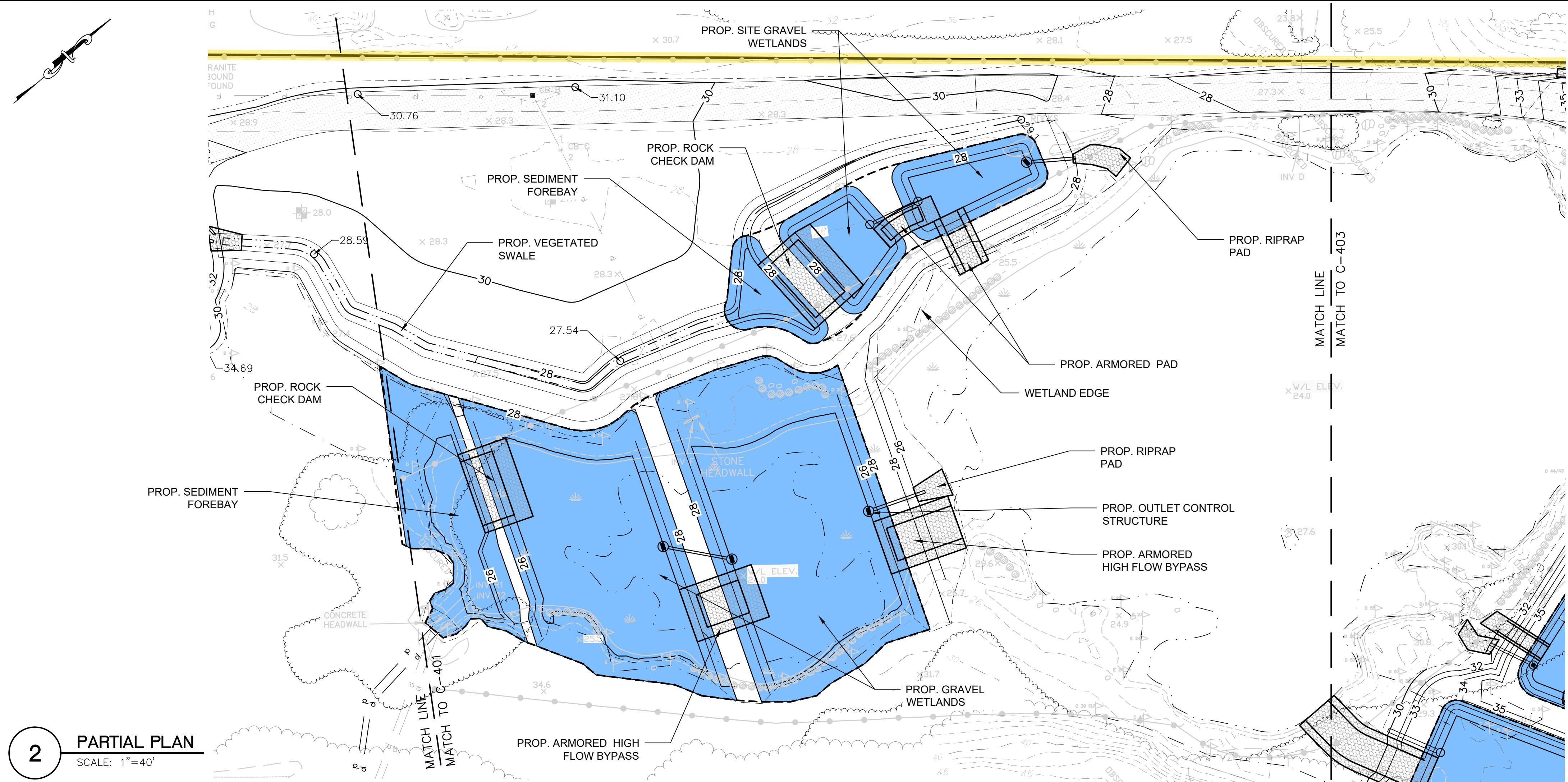


City of Portsmouth, New Hampshire Department of Public Works		drawing no. C-401	
Multi-purpose Recreation Fields 680 Peverly Hill Road		sheet: ---- of ----	
Recreation Fields Grading & Drainage Plan Phase 1		date: July 2019	
designed by: AG		project no: 1119	
drawn by: AG		file name: 1119 Grading Plan-Phase 1.dwg	
approved by: AG		scale: 1" = 40'	
Professional Engineer Seal: JOSEPH H. KIEFFNER, No. 2517, LICENSED PROFESSIONAL ENGINEER, STATE OF NEW HAMPSHIRE		no. 2	
CMA ENGINEERS Civil/Environmental Engineers Portsmouth, NH Manchester, NH Portland, Maine		revision 1	
Weston & Sampson 427 Main Street, Suite 400, Worcester, MA (978) 977-0110 (800) 726-7766 (Sampson) www.westonandsampson.com		date 07/24/2019	
		JFK	
		07/09/2019	
		JFK	
		by	

Seacoast
Community
School



1 ACCESS ROAD PLAN
SCALE: 1"=40'



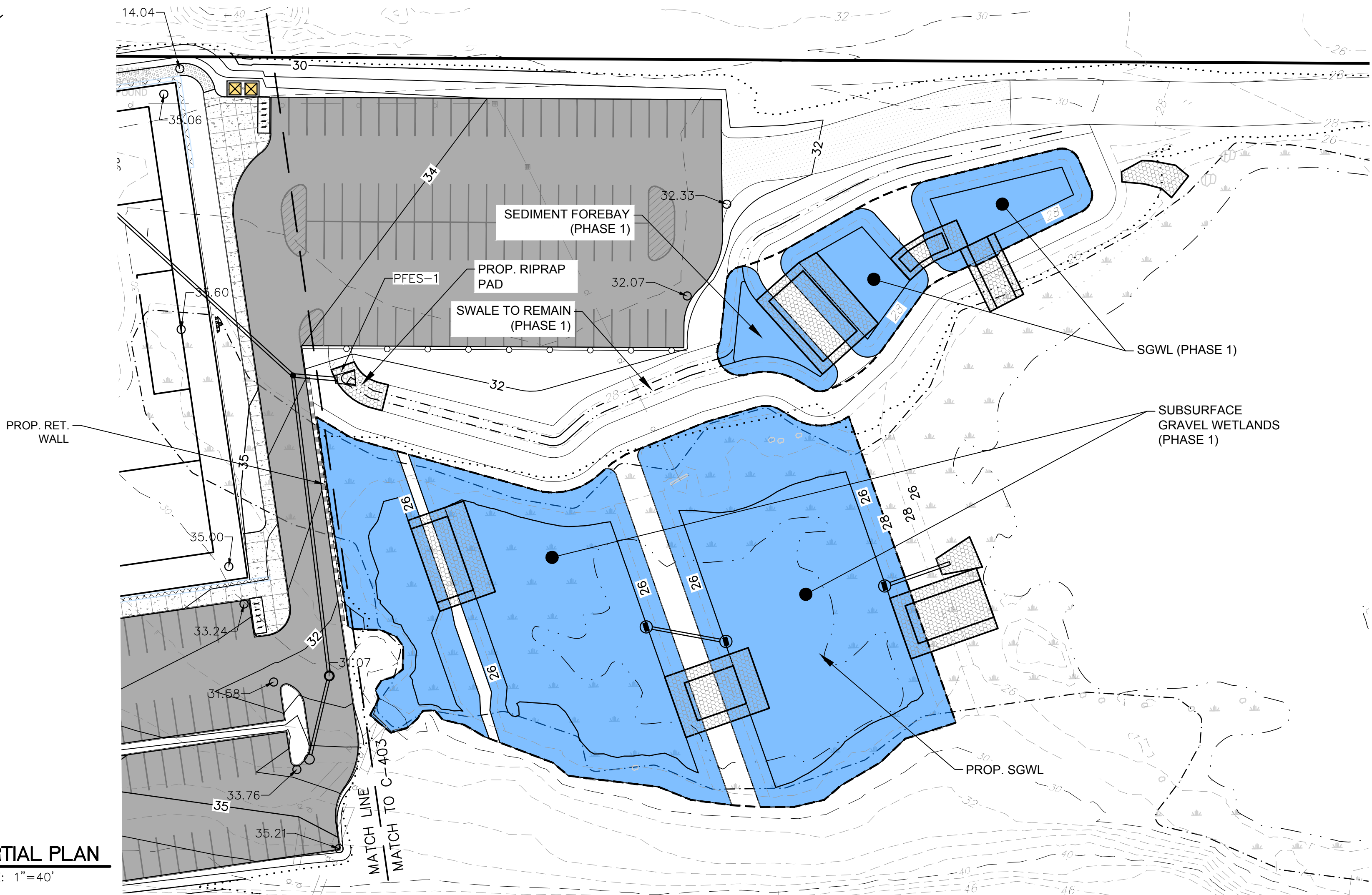
2 PARTIAL PLAN
SCALE: 1"=40'

PERMIT PLANS

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 ----	
date: July 2019	project no: 1119	designed by: AGL	drawn by: AGL	approved by: 1119 Grading Plan-Phase dwg	scale: 0 40' 80' Scale: 1" = 40'
CMA ENGINEERS Civil/Environmental Engineers Portsmouth, NH Manchester, NH Portland, Maine				Weston & Sampson 427 Main Street, Suite 400, Worcester, MA (978) 977-0110 (800) 726-7766 (Sampson) www.westonandsampson.com	
2 CONSERVATION COMMISSION SUBMISSION				07/24/2019 JFK	
1 TAC WORK SESSION SUBMISSION				07/09/2019 JFK	
no.				revision	
date				by	

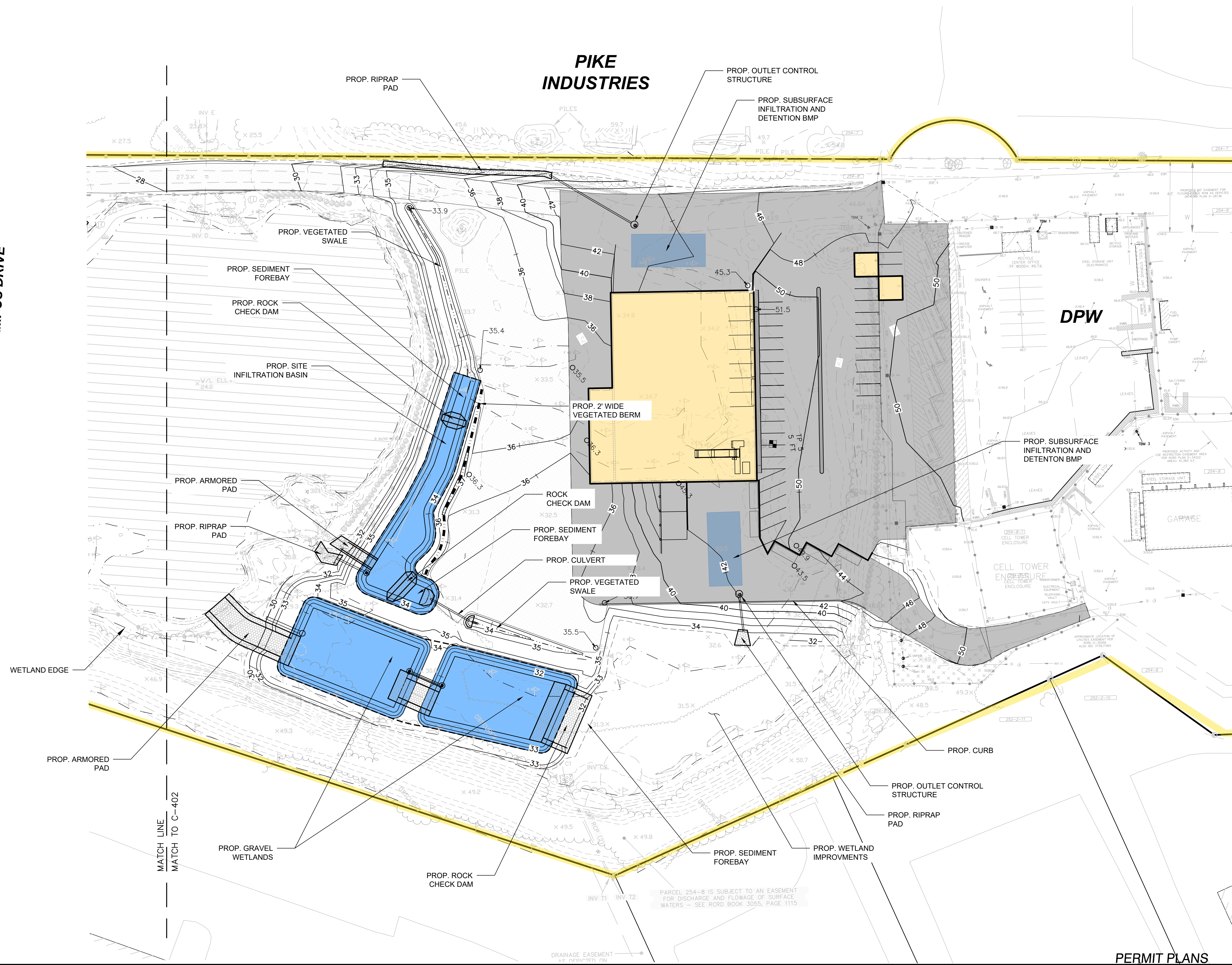


PERMIT PLANS





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

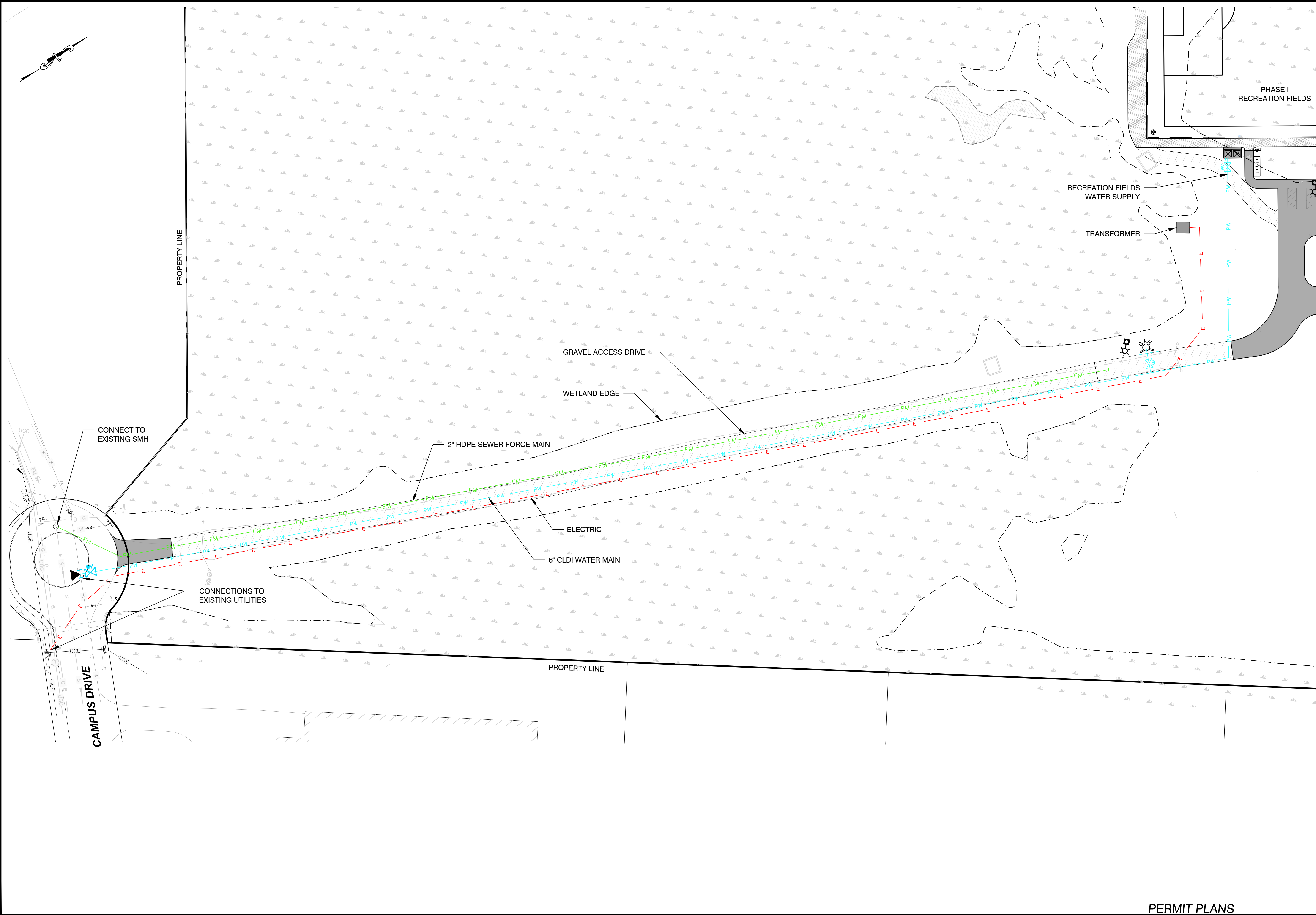
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Multi-purpose Recreation Fields 680 Peverly Hill Road		drawn by: AGL	project no: 1119
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drawing no. C-404		scale: 0 40' 80' Scale: 1" = 40'	
sheet: ----- of -----		no. 2	
revision		no. 1	
date		date	
by		by	
JFK		JFK	
07/24/2019		07/09/2019	
CONSERVATION COMMISSION SUBMISSION		TAC WORK SESSION SUBMISSION	
1		2	
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Civil/Environmental Engineers		Civil/Environmental Engineers	
Portsmouth, NH Manchester, NH Portland, Maine		Portsmouth, NH Manchester, NH Portland, Maine	
CMA ENGINEERS		CMA ENGINEERS	



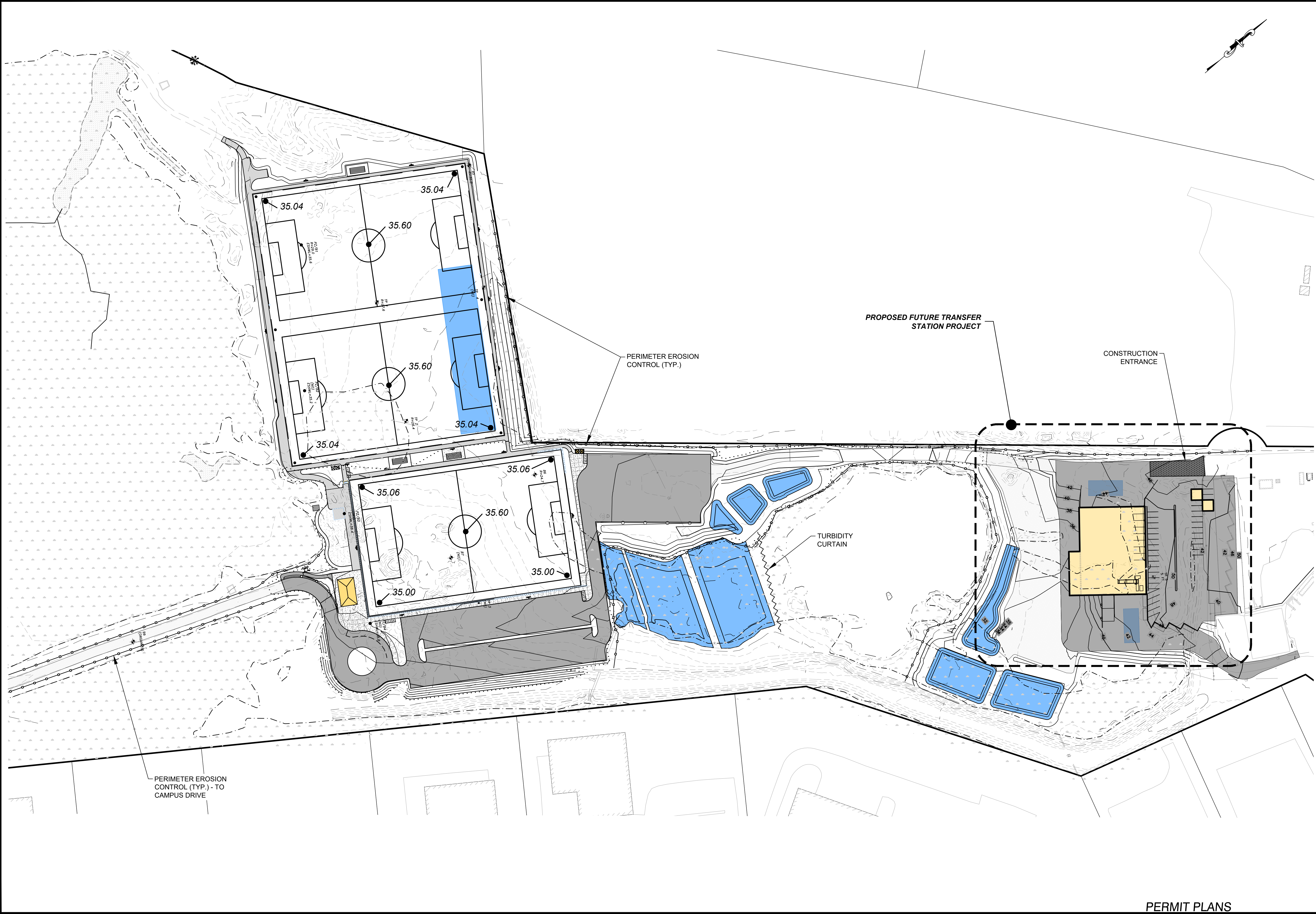
DPW

PERMIT PLANS

City of Portsmouth, New Hampshire Department of Public Works Multi-purpose Recreation Fields 680 Peverly Hill Road Transfer Station Grading & Drainage Plan	date: July 2019	designed by: -----			Weston & Sampson 427 Main Street, Suite 400, Worcester, MA (978) 977-0110 (800) 726-7766 (Sampson) www.westonandsampson.com	2 CONSERVATION COMMISSION SUBMISSION 1 TAC WORK SESSION SUBMISSION	07/24/2019 JFK 07/09/2019 JFK	no. revision date by
	project no: 1119	drawn by: AGL						
	file name: 1119 Grading Plan-Phase	approved by: dwg -----						
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sheet:	of							

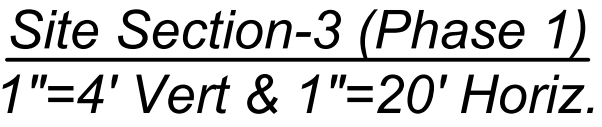


City of Portsmouth, New Hampshire Department of Public Works Multi-purpose Recreation Fields 680 Peverly Hill Road Recreation Fields Utility Plan Phase 1		designed by: ----- date: July 2019	drawn by: AGL project no: 1119	approved by: ----- file name: 1119 Utility Plan-Phase 1.dwg	scale: 0' 40' 80' Scale: 1" = 40'
drawing no. C-501		sheet: ----- of -----			
CMA ENGINEERS Civil/Environmental Engineers Portsmouth, NH Manchester, NH Portland, Maine Weston & Sampson 427 Main Street, Suite 400, Worcester, MA (978) 977-0110 (800) 726-7766 (Sampson) www.westonandsampson.com		2 CONSERVATION COMMISSION SUBMISSION		07/24/2019 JFK	by
1 TAC WORK SESSION SUBMISSION		no.		07/09/2019 JFK	date
		revision			





PERMIT PLANS

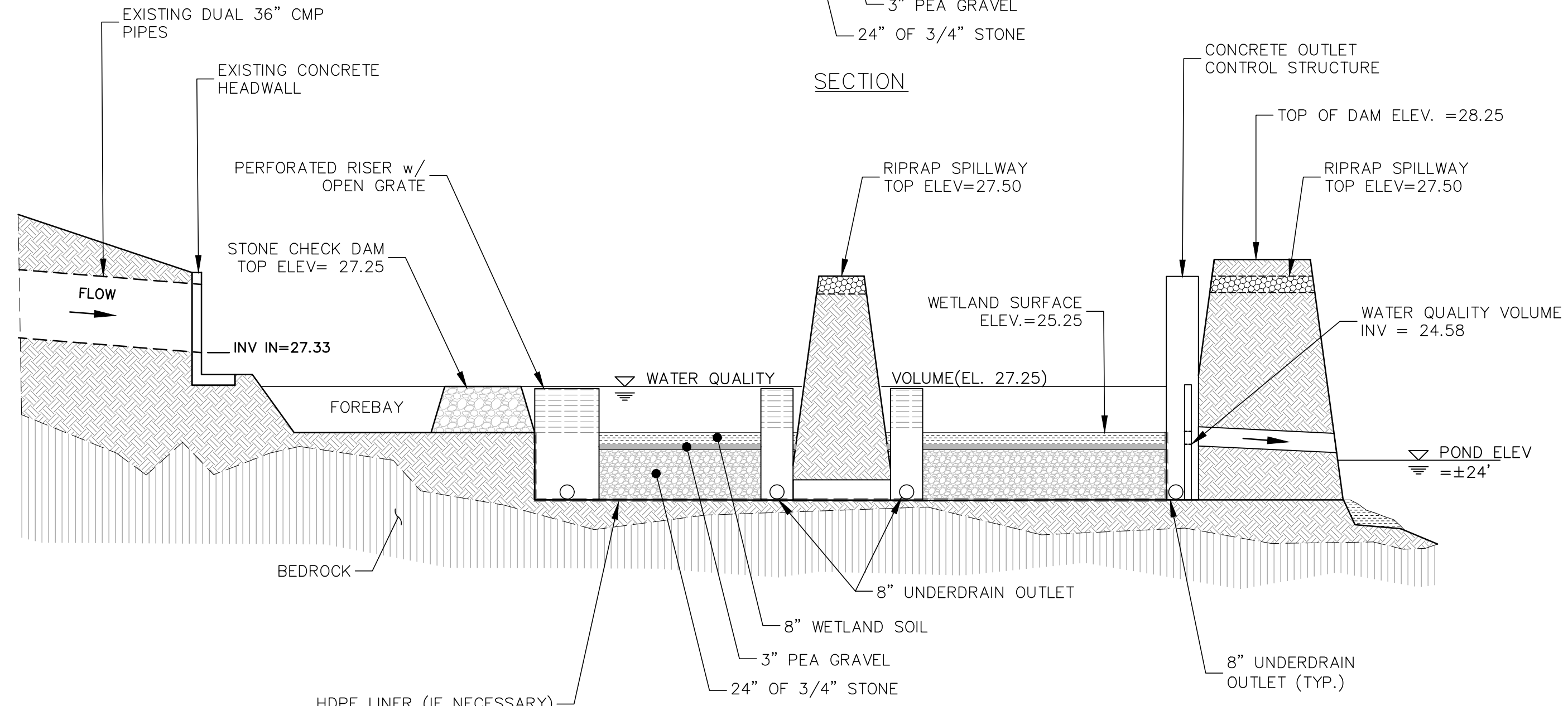
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date: July 2019	designed by: ----	project no: 1119	drawn by: AGL	approved by: 1119 Grading Plan-Overall.dwg	scale: 0' 80' 160' Scale: 1" = 80'
CMA ENGINEERS Civil/Environmental Engineers Portsmouth, NH Manchester, NH Portland, Maine			Professional Engineer JOSEPH KIEFFNER No. 317 LICENSED		
Weston & Sampson 427 Main Street, Suite 400, Worcester, MA (978) 977-0110 (800) 726-7766 (Sampson) www.westonandsampson.com			no. revision date by		
2 CONSERVATION COMMISSION SUBMISSION			07/24/2019 JFK		
1 TAC WORK SESSION SUBMISSION			07/09/2019 JFK		



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.

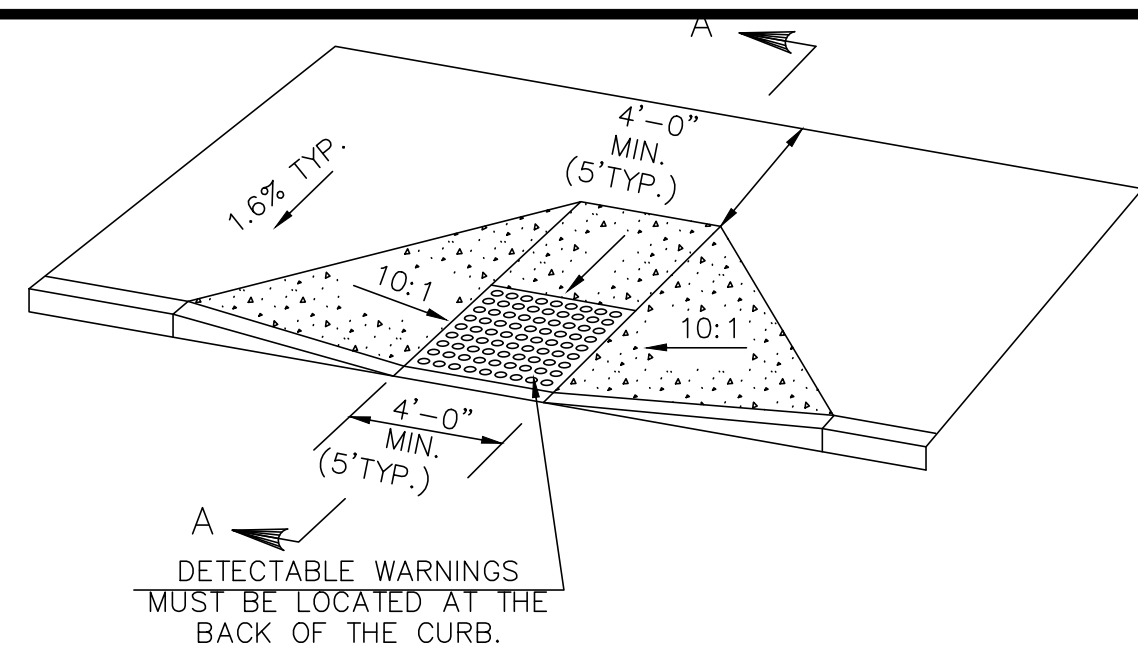
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		project no: 1119		drawn by: AGL			
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<div>CMA ENGINEERS</div> <div>CIVIL/ENVIRONMENTAL/STRUCTURAL</div> <div>Portsmouth, NH • Manchester, NH • Portland, ME 603/431-6196 • 603/627-0708 • 207/641-4223</div> <div>c m a e n g i n e e r s . c o m</div>				date: 07/24/2019		JFK	
				revision 2		CONSERVATION COMMISSION SUBMISSION	
				revision 1		TAC WORK SESSION SUBMISSION	
				no.			by
drawing no. C-802							
sheet: ---- of ----							



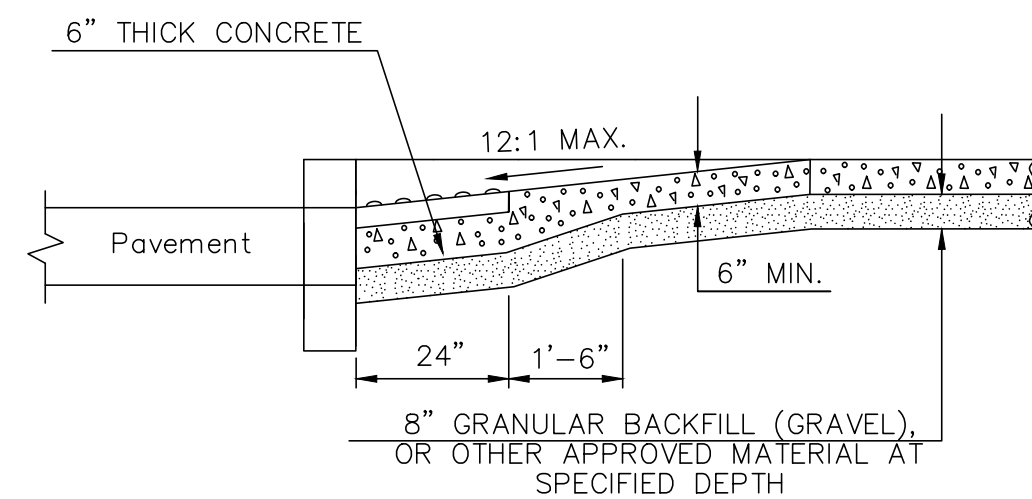


\\mht2\MHT-Projects\CADD\PROJECTS\1119 Portsmouth Athletic fields\Production\1119 DETAILS.dwg Date Plotted: Jul 23, 2019 - 7:59am Plotted By: SFORTIER

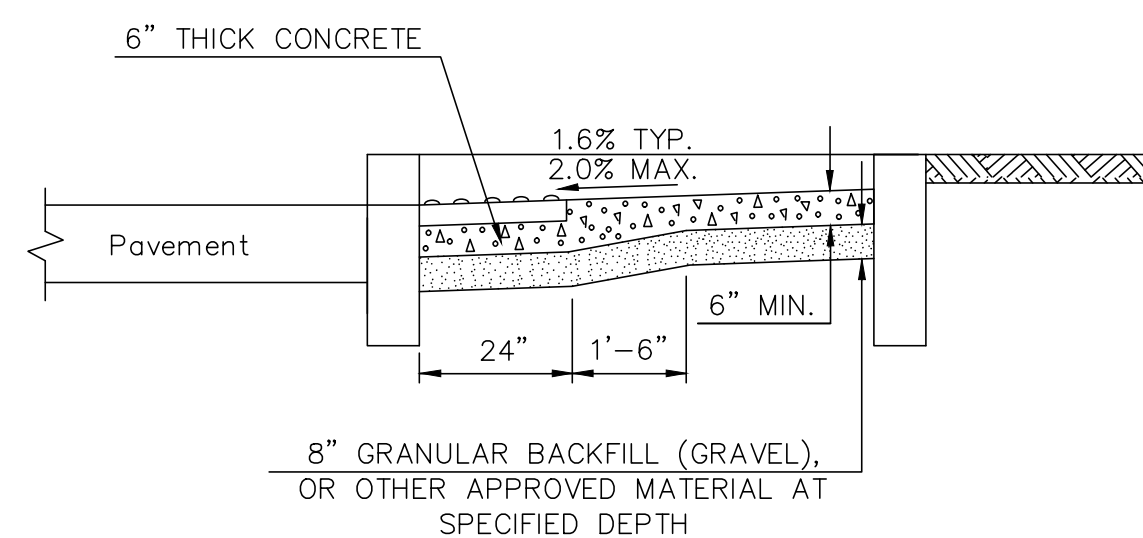
City of Portsmouth, New Hampshire Department of Public Works Multi-purpose Recreation Fields 680 Peverly Hill Road Erosion Control Details & Notes	date: July 2019	designed by: -----	<div>  </div> <div> CIVIL/ENVIRONMENTAL/STRUCTURAL Portsmouth, NH • Manchester, NH • Portland, ME 603/431-6196 • 603/627-0708 • 207/541-4223 c m a e n g i n e e r s . c o m </div>	no. _____ revision _____ date _____ by _____
	project no: 1119	drawn by: AGL		
	file name: 1119 DETAILS.dwg	approved by: -----		
	scale: -----			



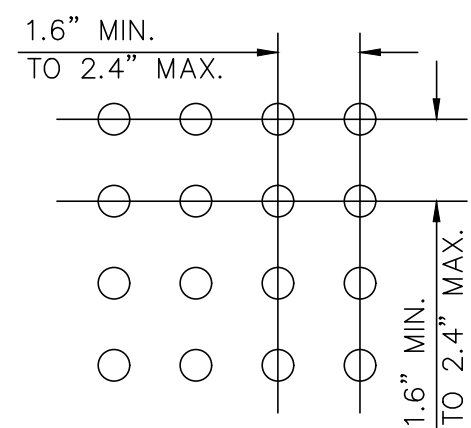
PERPENDICULAR CURB RAMP DETAIL



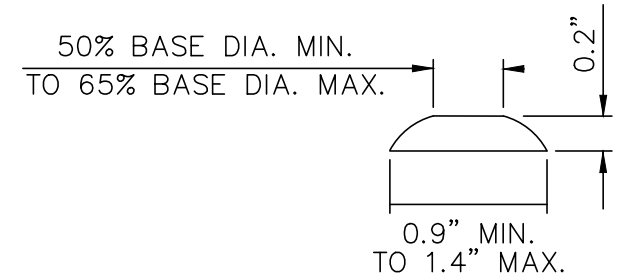
SECTION A-A



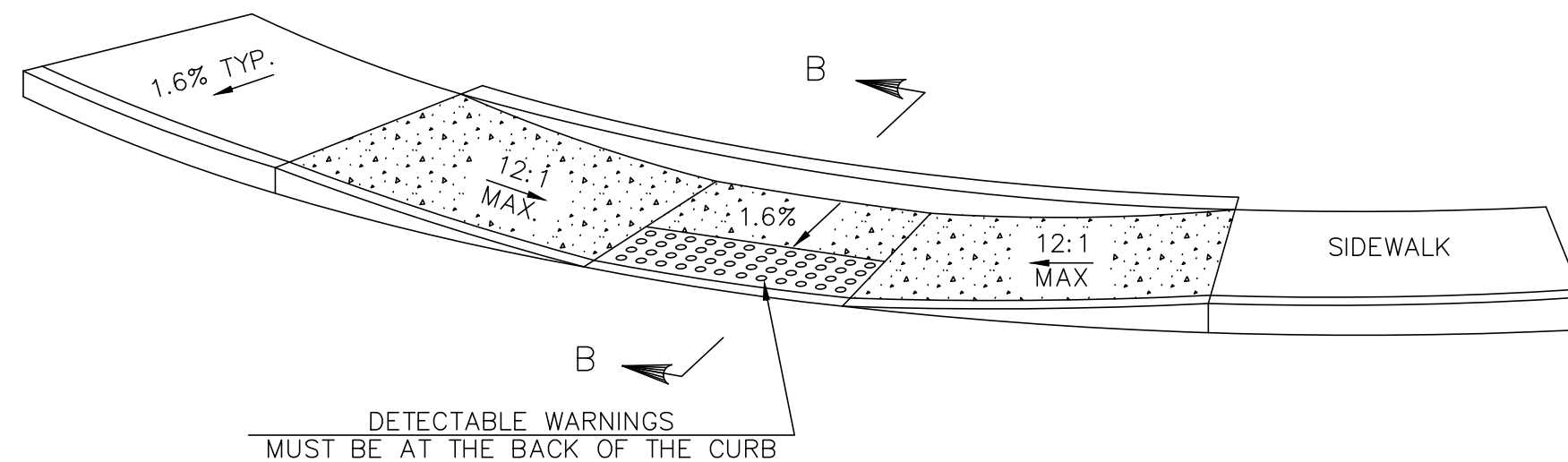
SECTION B-B



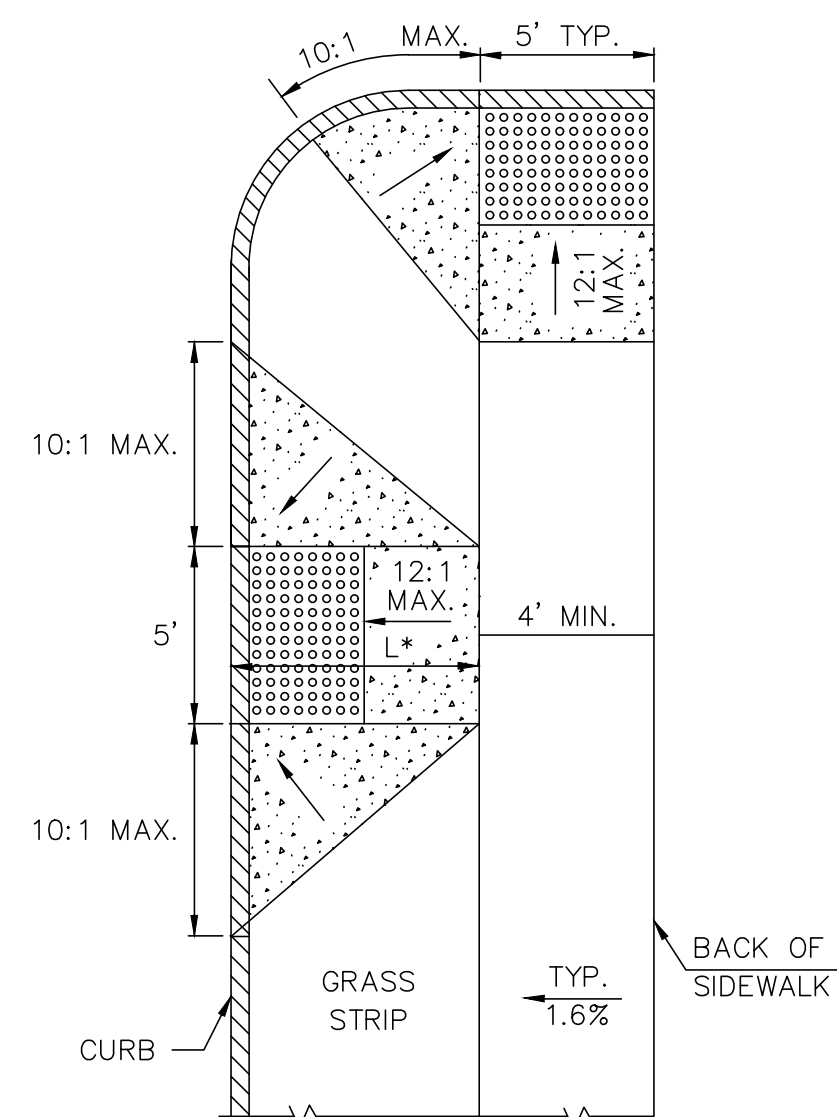
DOME SPACING



DOME SECTION



PARALLEL CURB RAMP DETAIL



PERPENDICULAR RAMP WITH GRASS PANEL

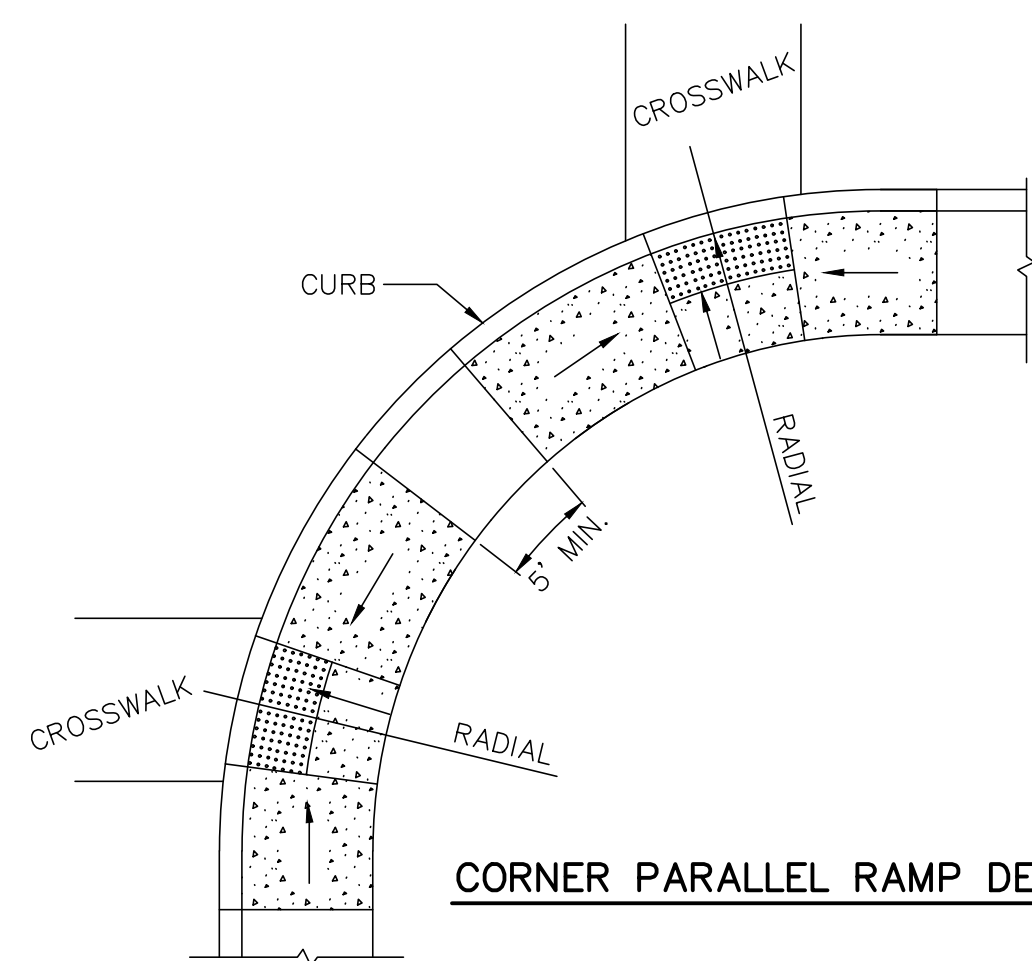
* LENGTH OF RAMP VARIES WITH SLOPE & WIDTH OF GRASS PANEL

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.



CORNER PARALLEL RAMP DETAIL

TRANSITION RAMPS:

BLENDABLE 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, BLENDABLE 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:

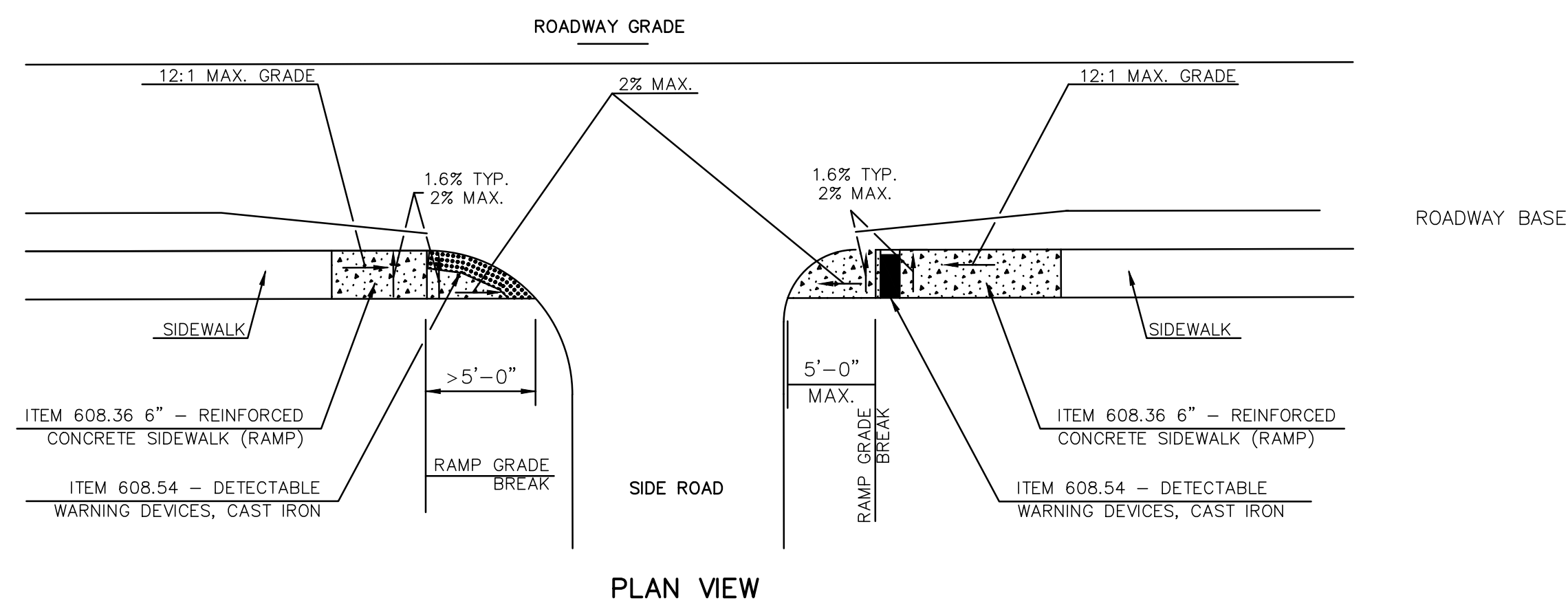
WHERE BOTH ENDS OF THE BOTTOM GRADE ARE LESS THAN 5'- 0" FROM THE BACK OF THE CURB, LOCATE THE DETECTABLE WARNING PANELS ON THE RAMP SURFACE AT THE BOTTOM OF THE RAMP. WHERE EITHER END OF THE BOTTOM GRADE IS GREATER THAN 5'-0" FROM THE BACK OF THE CURB, LOCATE THE DETECTABLE WARNINGS AT THE BOTTOM OF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

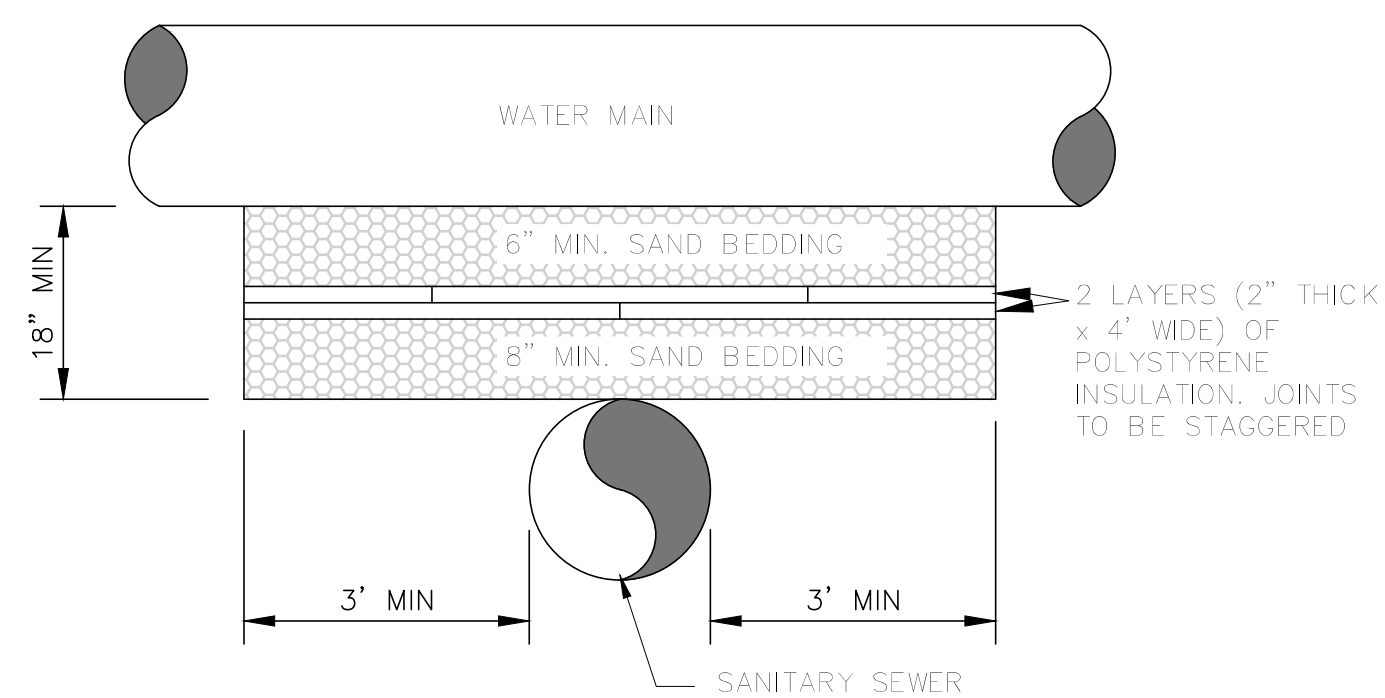


PLAN VIEW

<div>City of Portsmouth, New Hampshire Department of Public Works</div>			<div>designed by: -----</div>																			
<div>Multi-purpose Recreation Fields 680 Peverly Hill Road</div>			<div>project no: 1119</div>		<div>drawn by: AGL</div>																	
<div>Sidewalk & Ramp Details</div>			<div>file name: 1119 DETAILS.dwg</div>		<div>approved by: -----</div>																	
							scale:															

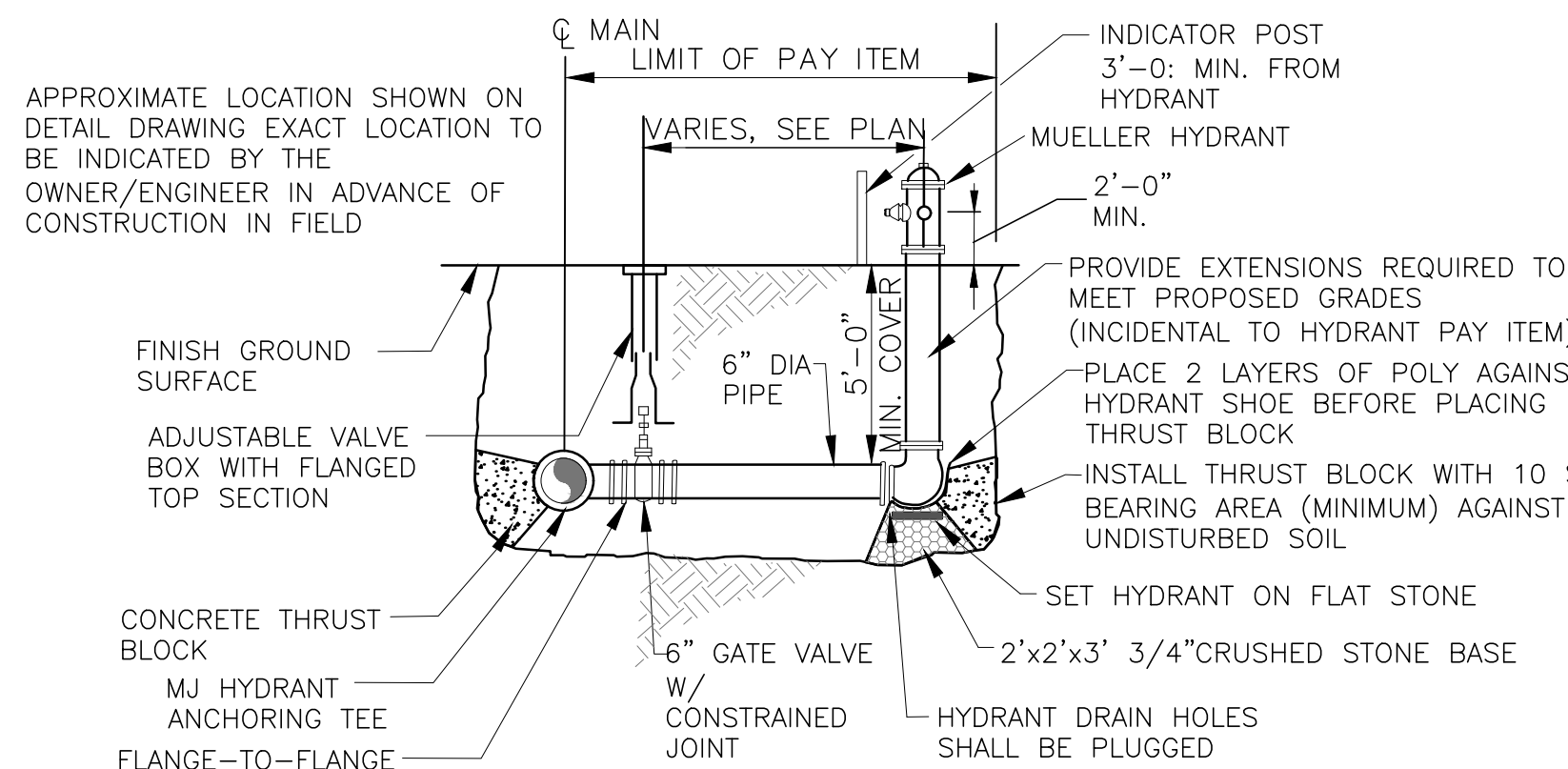
Typical Water Main Trench

Not to Scale



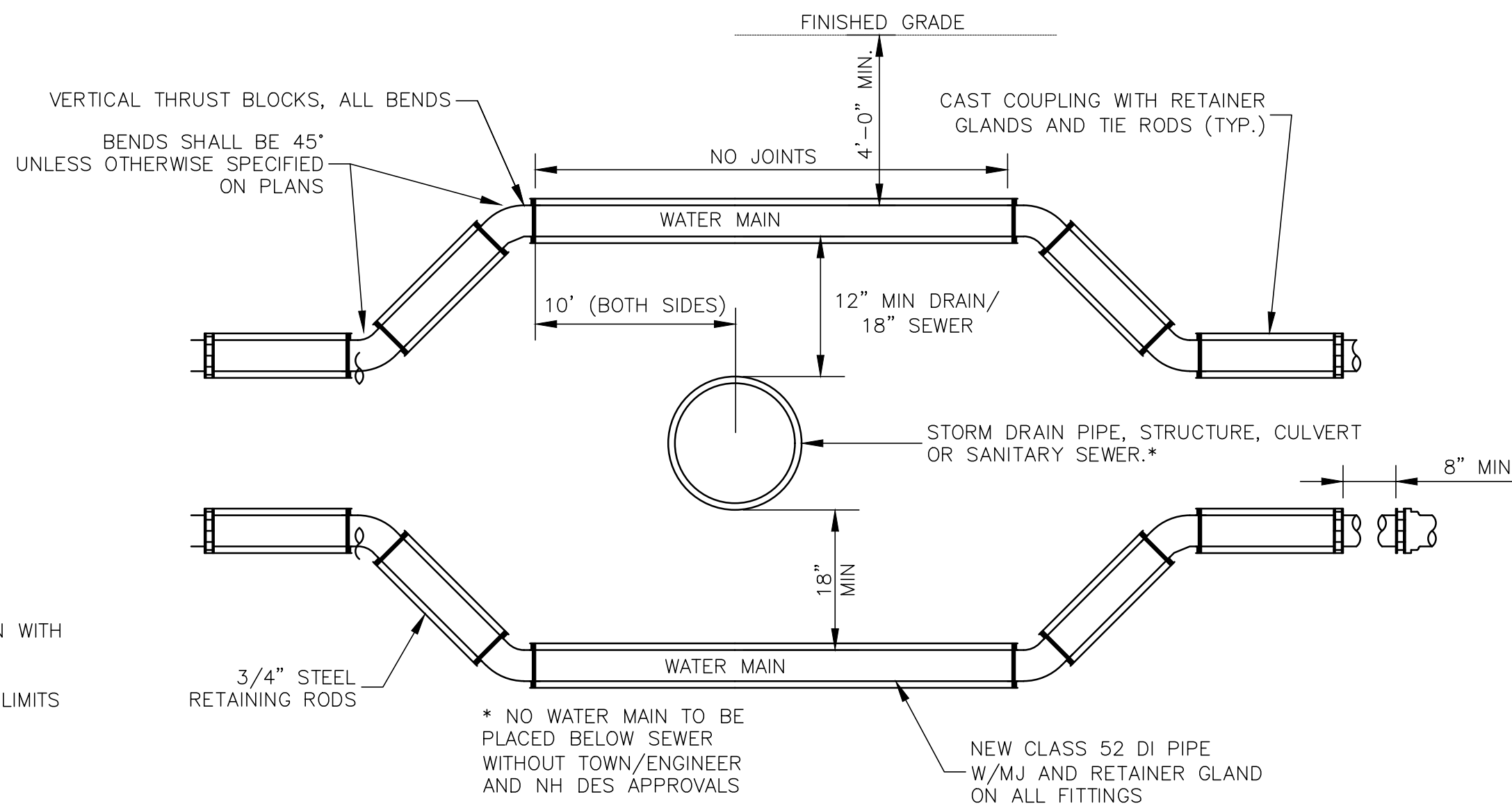
WATER MAIN INSTALLATION NOTES:

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.



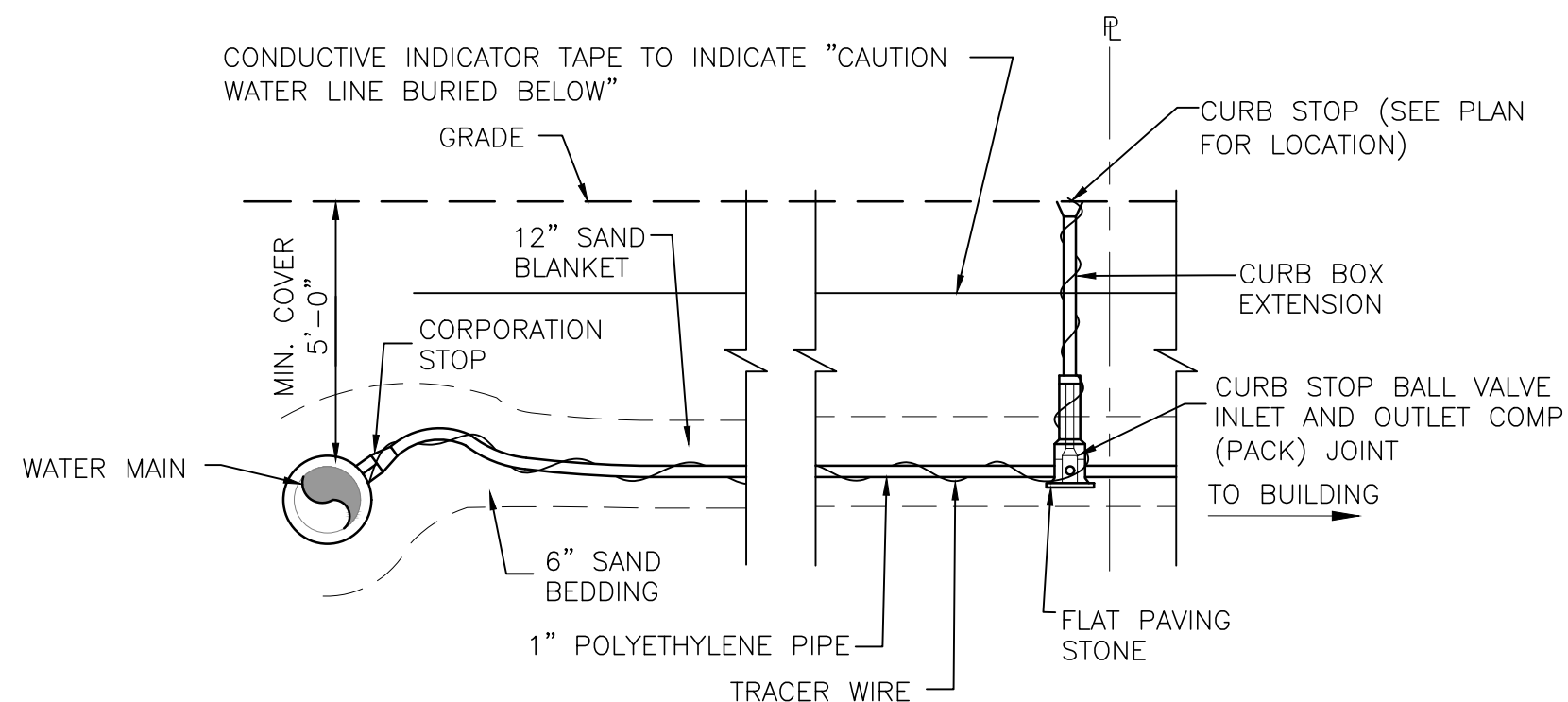
Hydrant Assembly

Not to Scale



Water/Utility Crossing

Not to Scale

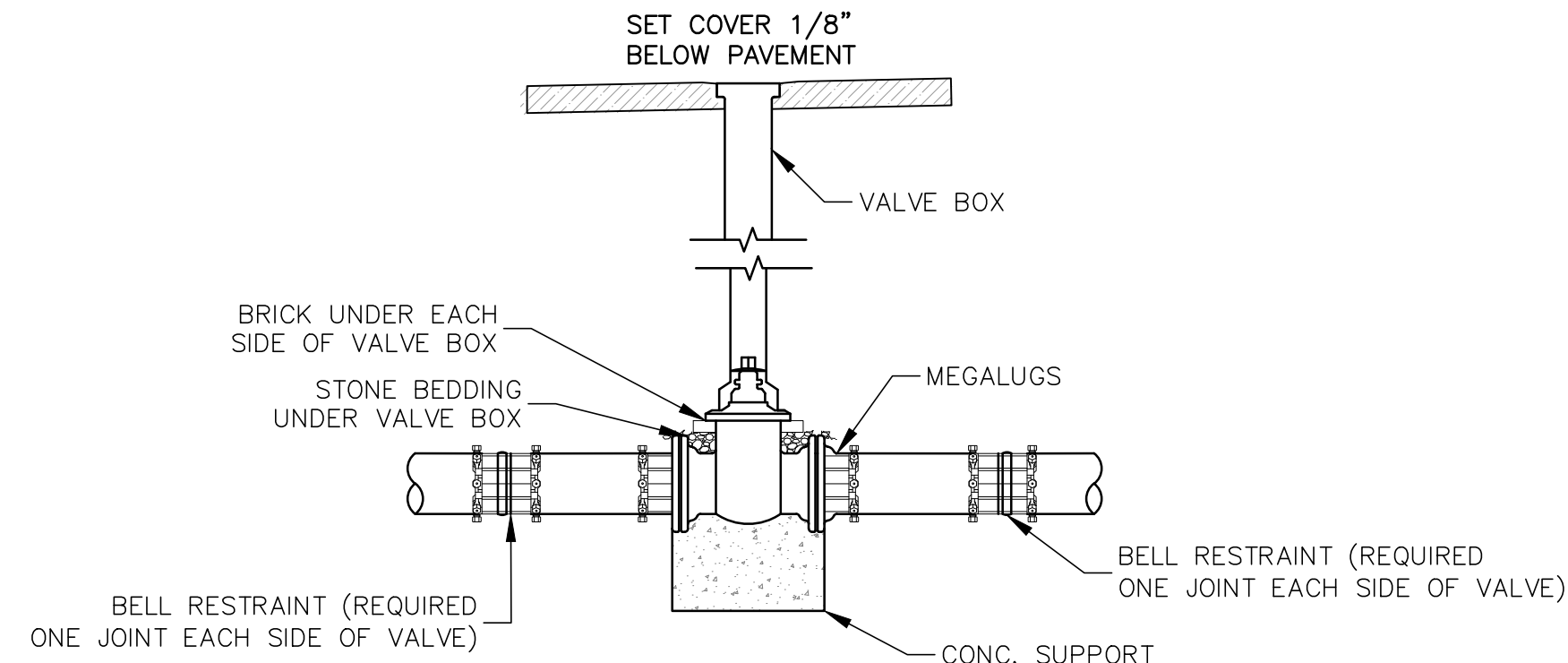


NOTES:

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 CONTINUOUS 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 STIFFENERS 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

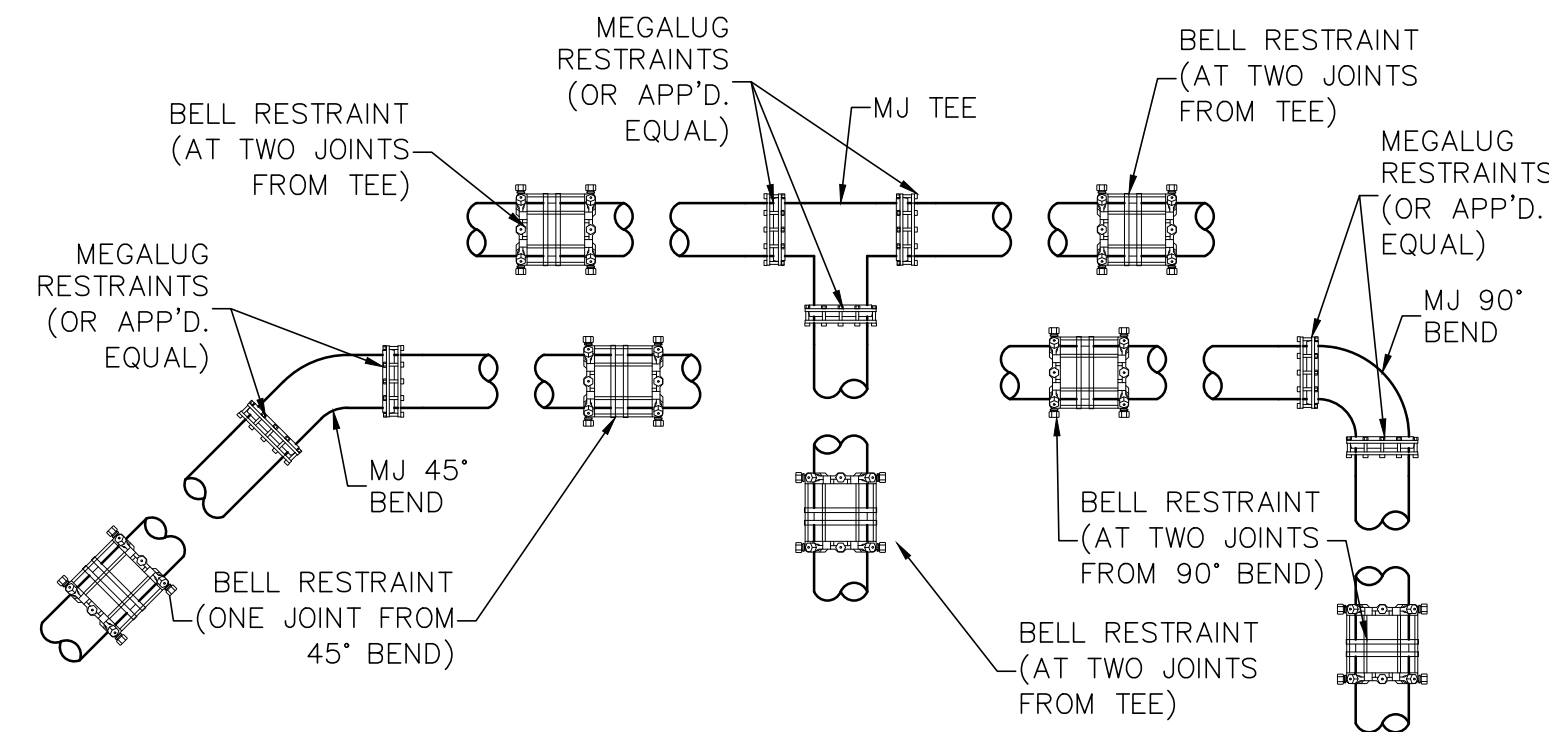


NOTES:

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



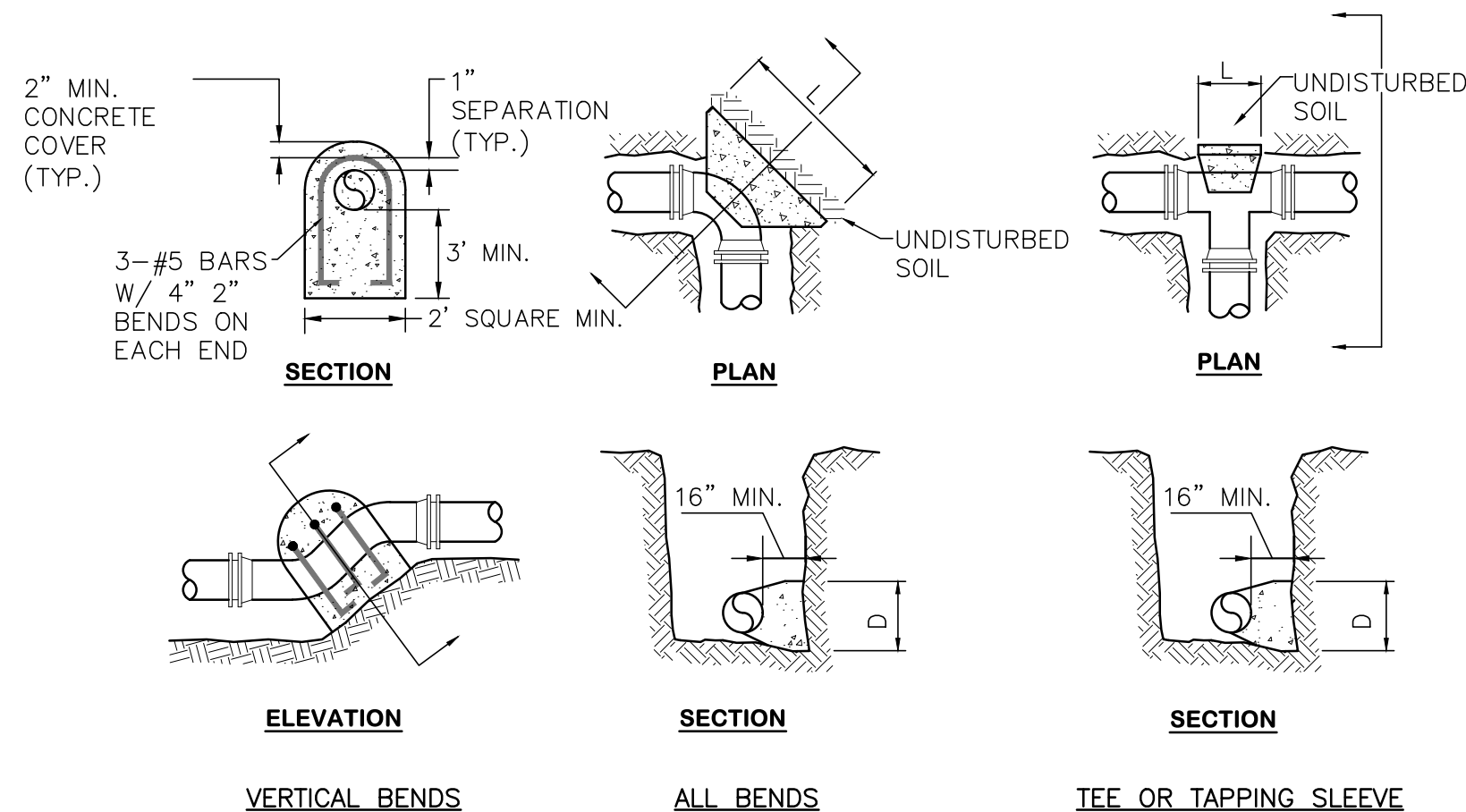
NOTES:

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

VALVE	RESTRAINED JOINTS
IN LINE VALVES	BELL RESTRT'S REQUIRED 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



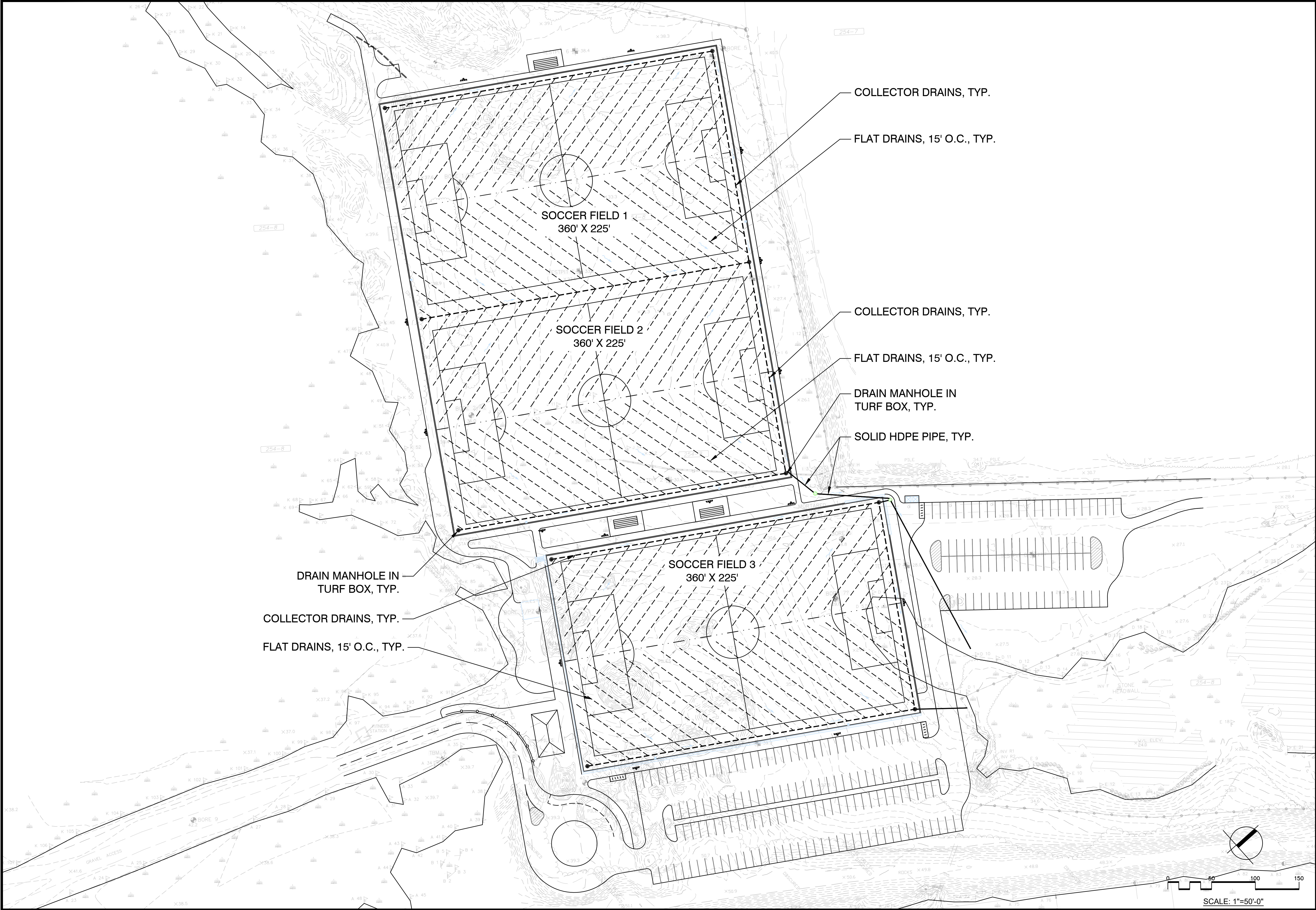
Thrust Blocks

Not to Scale

Nominal Dia. (in)	PIPE SIZE							
	4	6	8	10	12	16	20	24
Tees, Cops, 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				

City of Portsmouth, New Hampshire Department of Public Works		date: July 2019	designed by: -----
Multi-purpose Recreation Fields		project no: 1119	drawn by: AGL
680 Peverly Hill Road		file name: 1119 DETAILS.dwg	approved by: -----
Water Details		scale:	
drawing no. C-906			
sheet: ----- of -----			

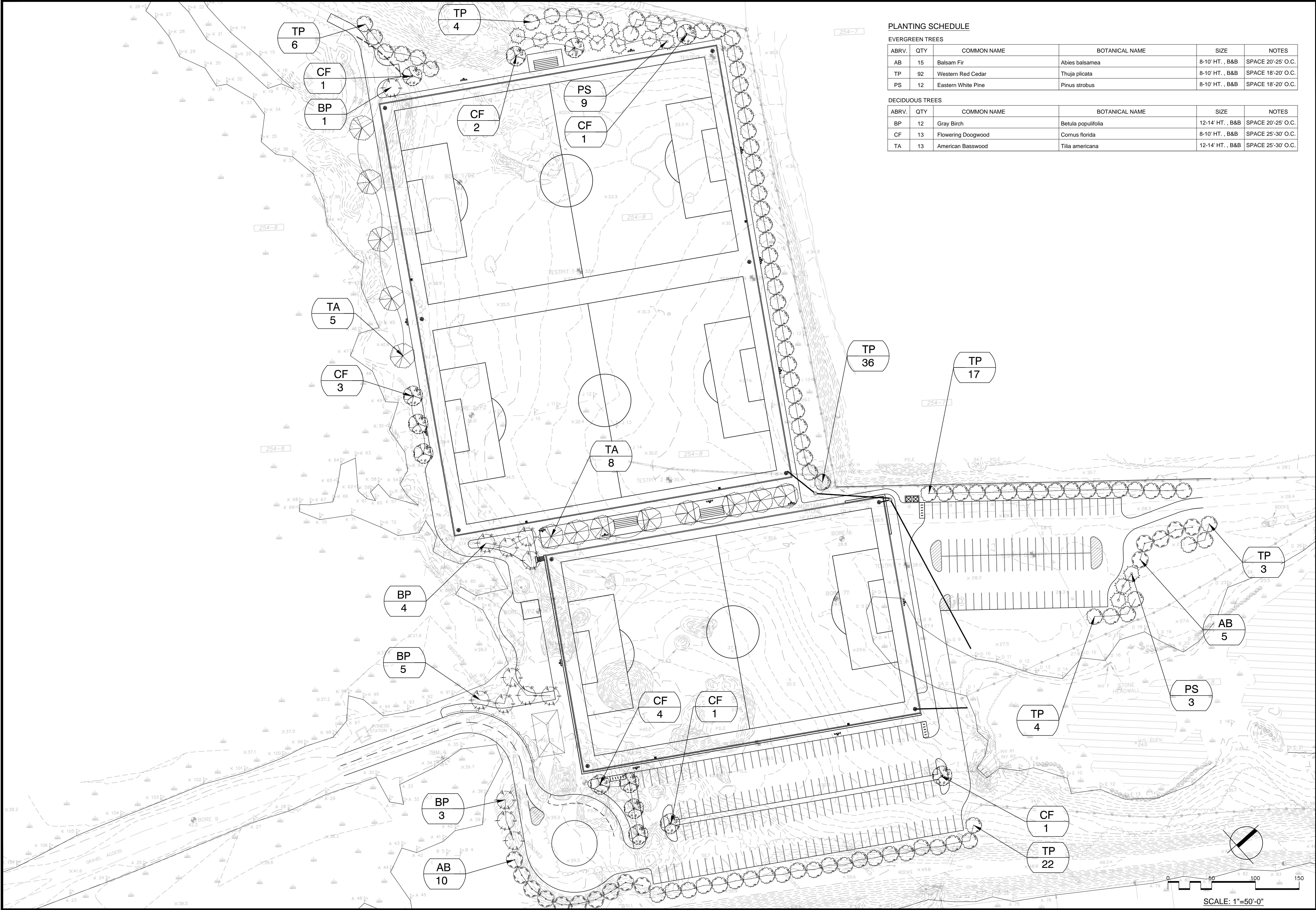




City of Portsmouth, New Hampshire Department of Public Works		designed by: -		date: -	
Multi-purpose Recreation Fields 680 Peverly Hill Road		drawn by: -		project no: -	
Recreation Fields TURF DRAINAGE		approved by: -		file name: XR-LM-OVERALL_A2.dwg	
drawing no: L1.02		scale: -		no.	
sheet: - of -		revision		date	
by		no.		date	

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Portsmouth, NH Manchester, NH Portland, Maine

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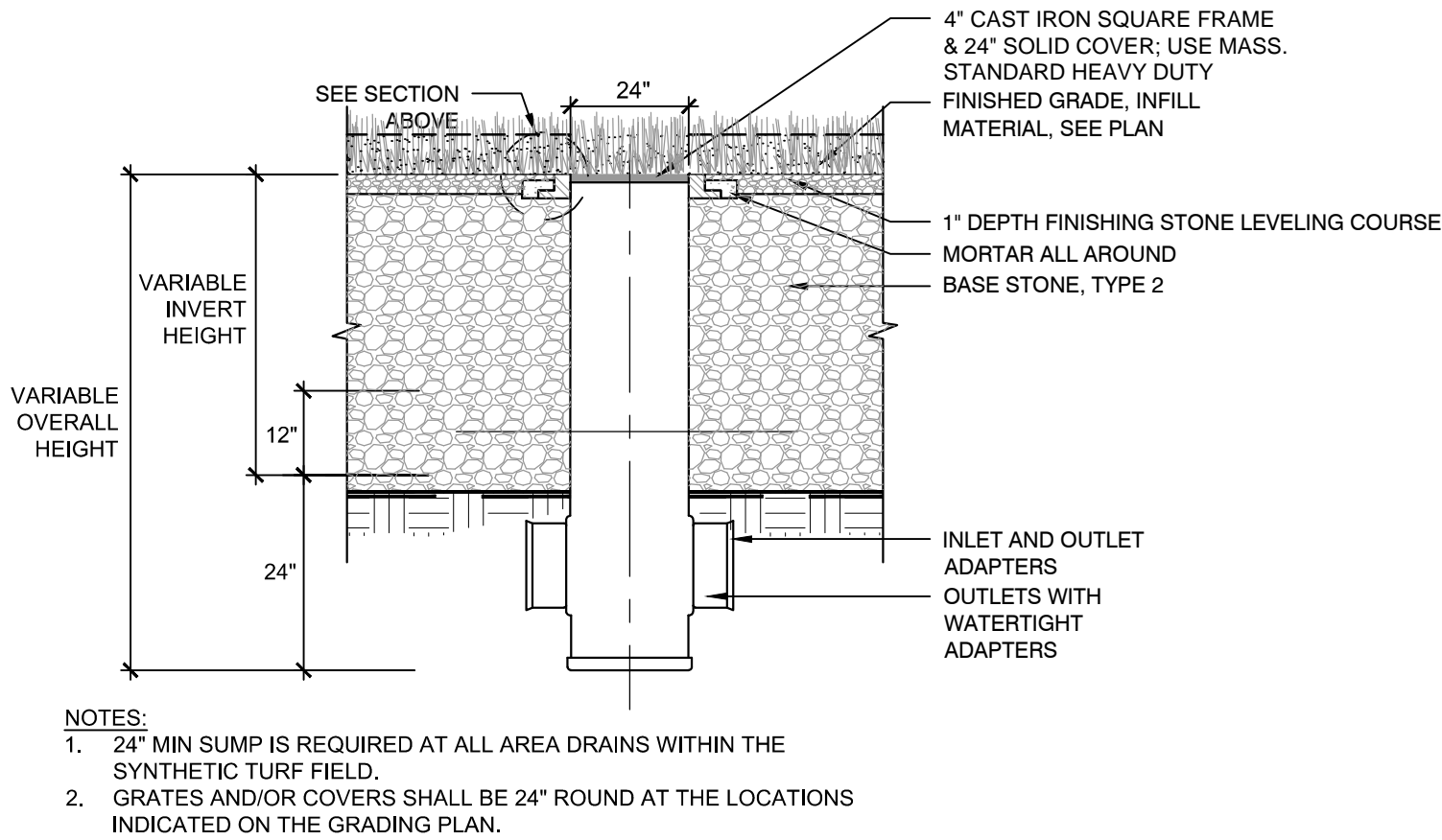
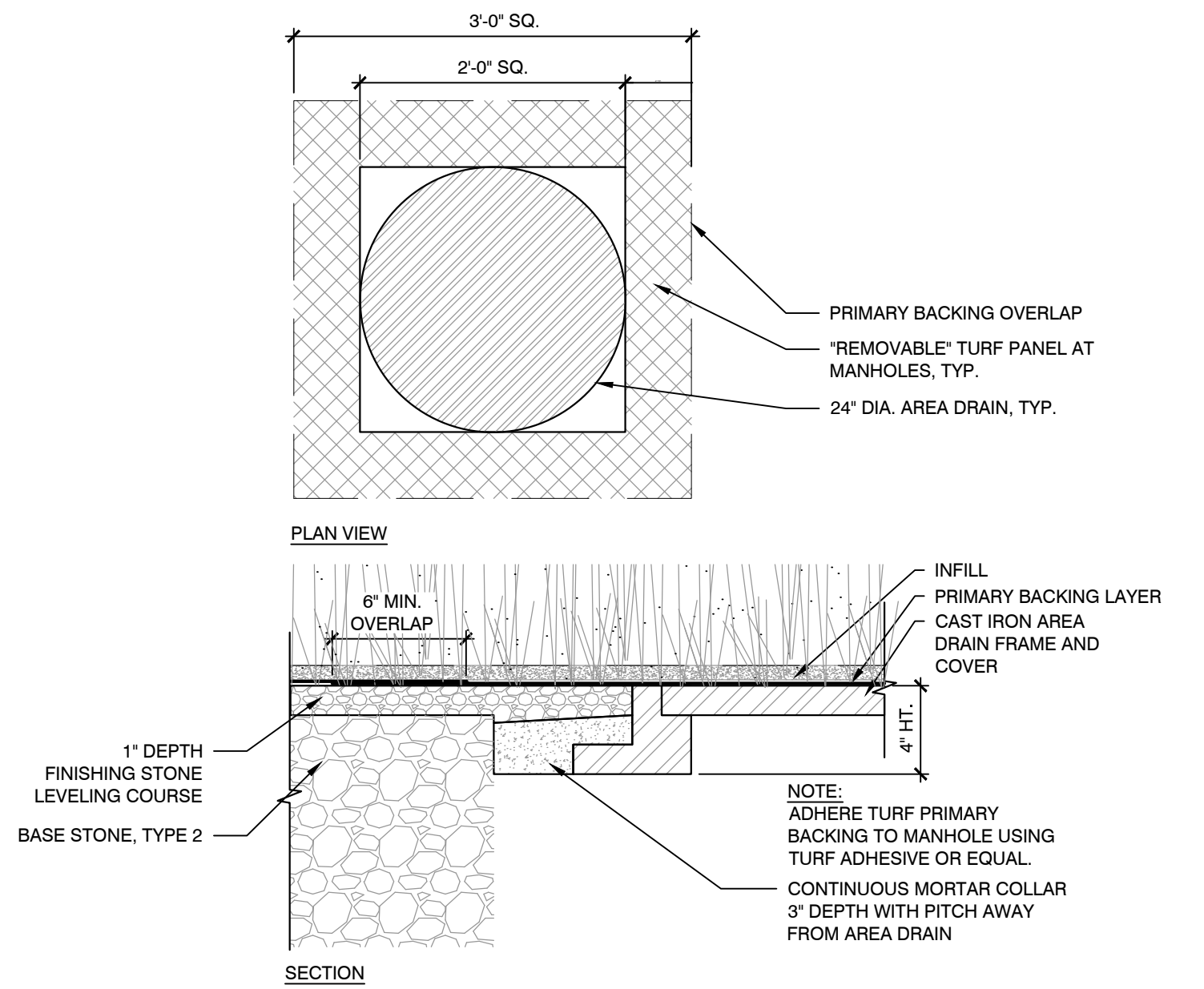


PLANTING SCHEDULE

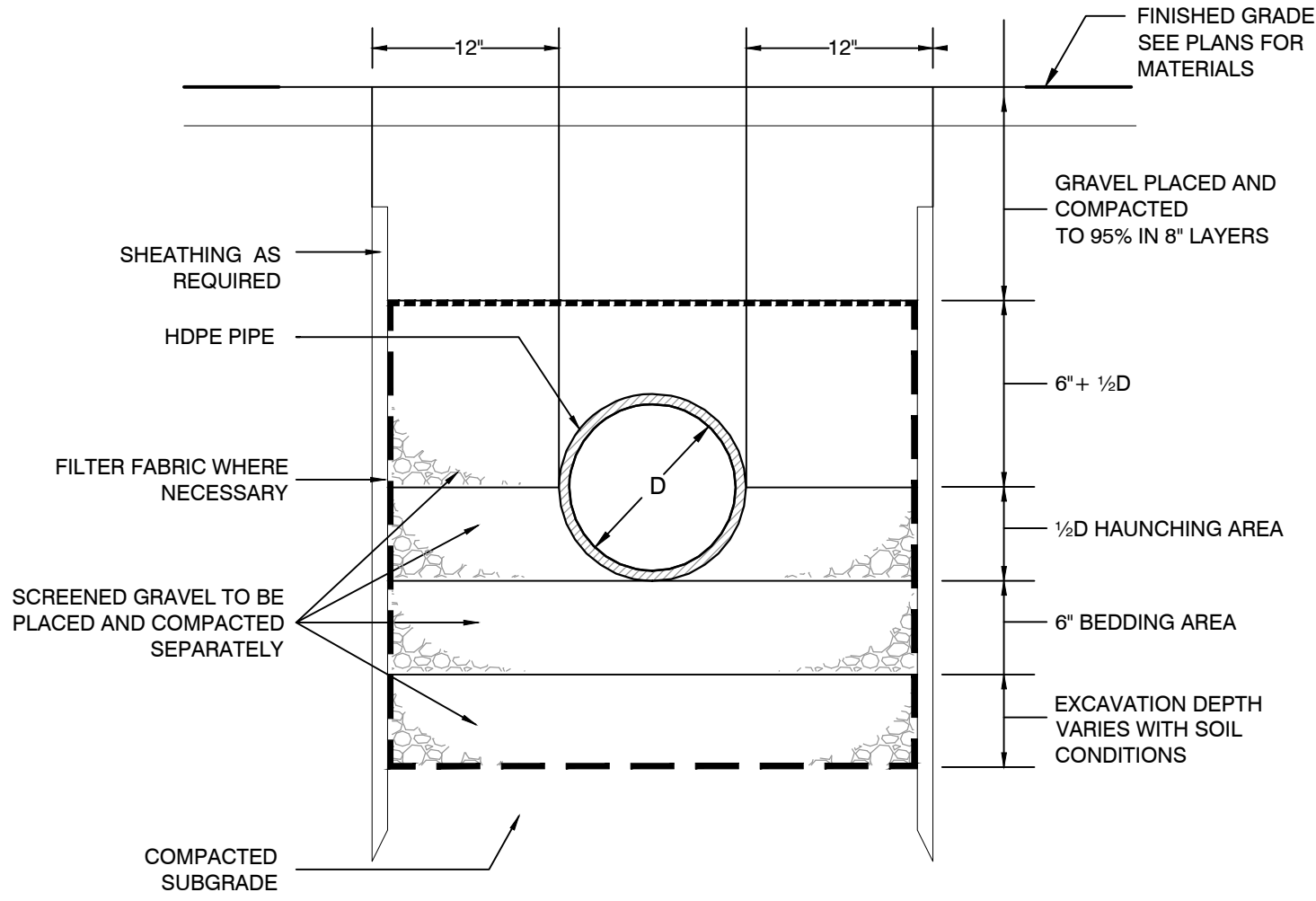
EVERGREEN TREES						
ABRV.	QTY	COMMON NAME		BOTANICAL NAME	SIZE	NOTES
AB	15	Balsam Fir		Abies balsamea	8-10' HT. , B&B	SPACE 20'-25' O.C.
TP	92	Western Red Cedar		Thuja plicata	8-10' HT. , B&B	SPACE 18'-20' O.C.
PS	12	Eastern White Pine		Pinus strobus	8-10' HT. , B&B	SPACE 18'-20' O.C.

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 Dogwood		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.

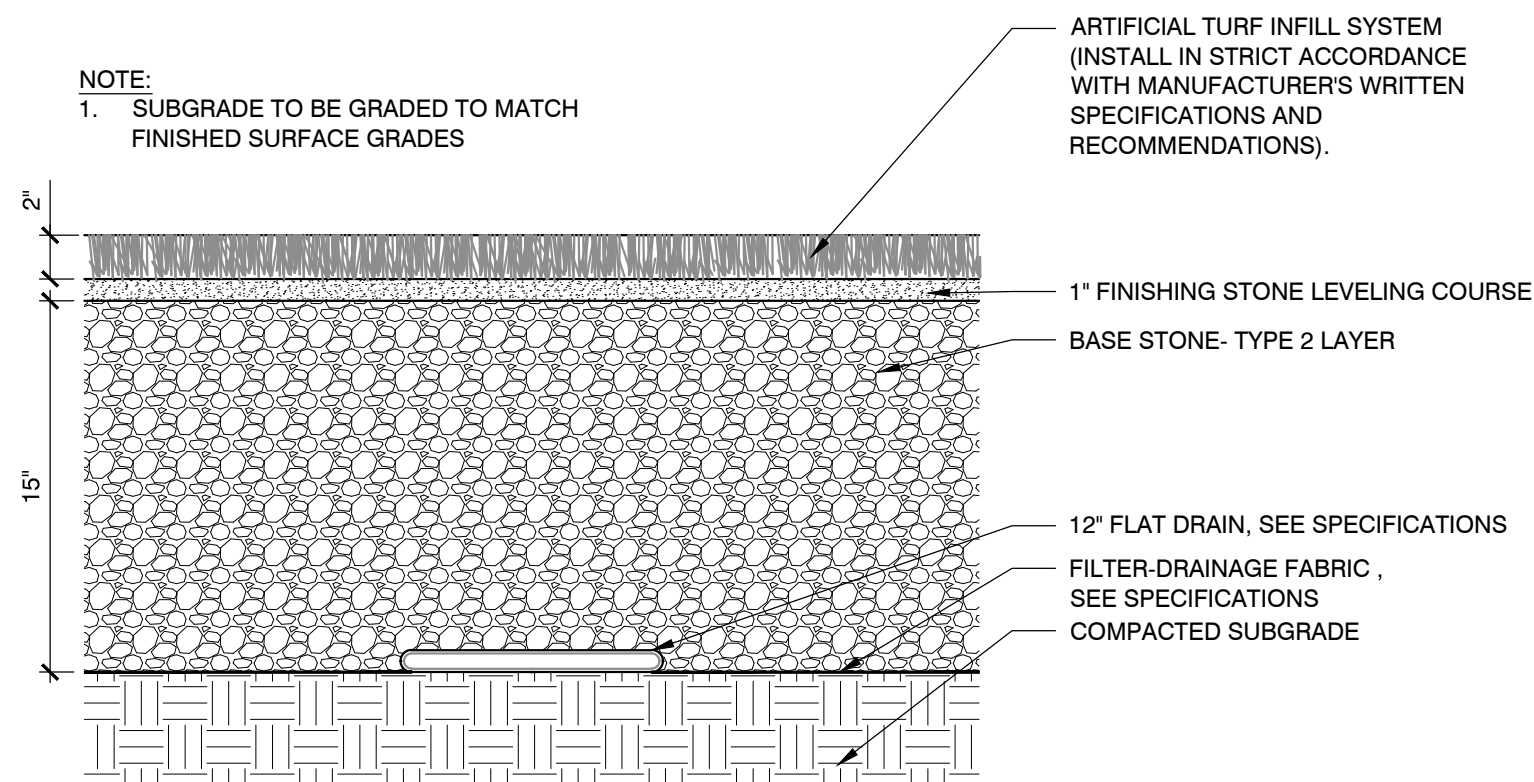
City of Portsmouth, New Hampshire Department of Public Works		designed by: -		date: -	
Multi-purpose Recreation Fields 680 Peverly Hill Road		drawn by: -		project no: -	
Recreation Fields PLANTING PLAN		approved by: -		file name: XR-LM-OVERALL_A2.dwg	
drawing no: L1.03		scale: -		no. -	
sheet: - of -		revision -		date -	
CMA ENGINEERS CIVIL / ENVIRONMENTAL ENGINEERS Portsmouth, NH Manchester, NH Portland, Maine		Weston & Sampson 427 Main Street, Suite 400, Worcester, MA (978) 977-0110 (800) 726-7766 www.westonandsampson.com			



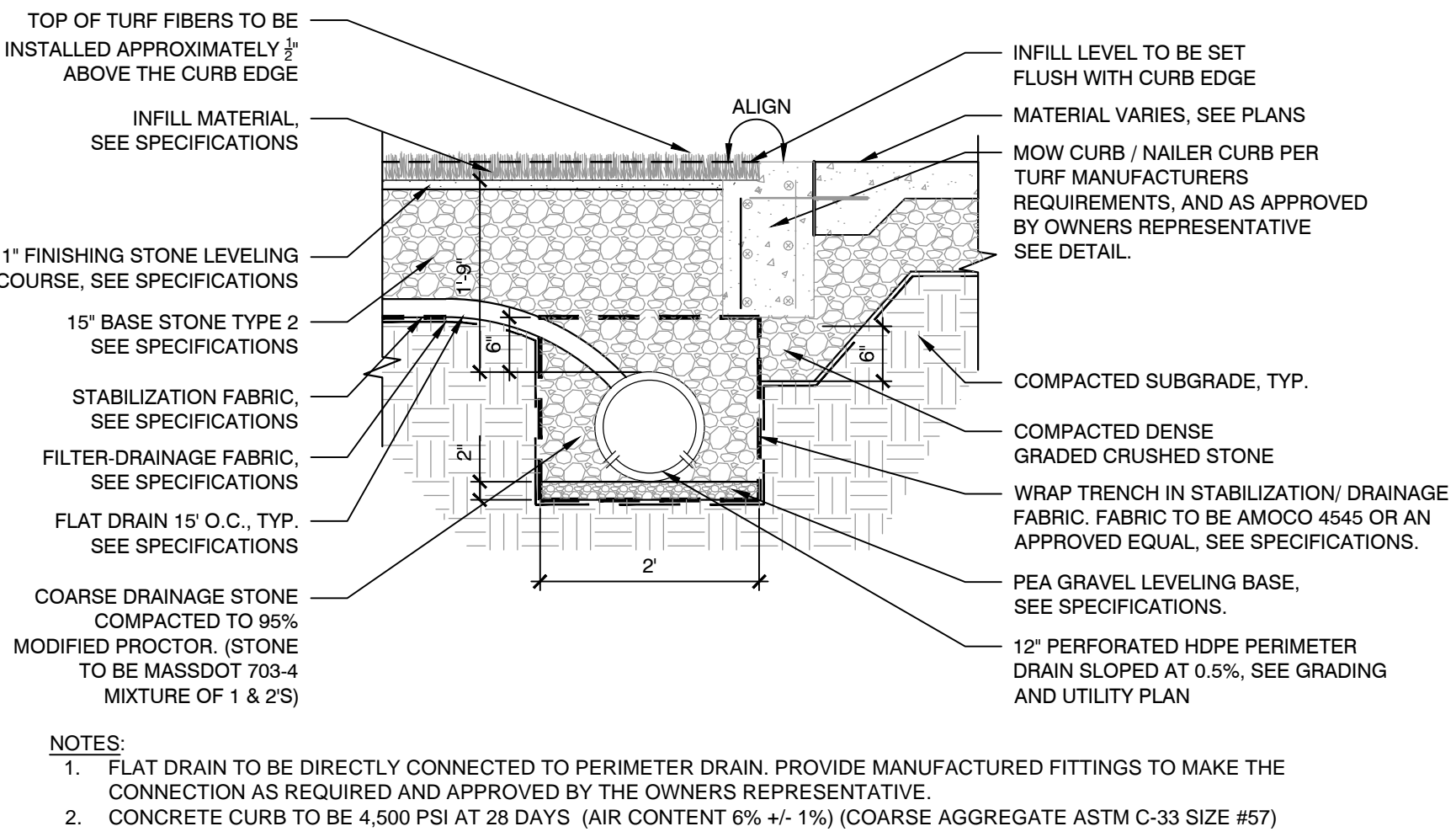
1 PVC DRAINAGE MANHOLE IN TURF FIELD
SCALE: N.T.S.



4 DRAIN PIPE TRENCH
SCALE: N.T.S.



2 SYNTHETIC TURF FIELD
SCALE: N.T.S.



3 COLLECTOR DRAIN
SCALE: N.T.S.

CMA ENGINEERS CIVIL/ENVIRONMENTAL ENGINEERS Portland, Maine Weston & Sampson 427 Main Street, Suite 400, Worcester, MA (978) 977-0110 (800) 726-7766 www.westonandsampson.com				no.	revision	date	by
City of Portsmouth, New Hampshire Department of Public Works Multi-purpose Recreation Fields 680 Peverly Hill Road Recreation Fields DETAILS				drawing no. L1.04			
sheet: - of -							

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	2,040,239	46.84	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			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