



**February 8, 2022**

**Medway Planning & Economic Development Board  
Meeting**

**Medway DPW Water Quality Treatment  
Facility Site Plan – 19 Populatic Street**

- Notice dated January 12, 2022 to continue the public hearing to February 8, 2022

**REVISED SUBMITTAL DOCUMENTS**

- Letter dated January 25, 2022 from Jim Cray, P.E. of Wright Pierce in response to Tetra Tech's first review letter and feedback from the January 11, 2022 hearing
- Revised Project Narrative dated January 25, 2022
- Revised Site Plan and architectural drawings – January 2022
- Requests for Waivers from *Site Plan Rules and Regulations*
- Fire Truck Autoturn Analysis (new) - undated
- Construction Management Plan (new) by Wright Pierce dated January 25, 2022
- Generator Enclosure Sound Data Sheet

**Other Documents**

- DRC review letter dated January 31, 2022
- Tetra Tech review letter dated February 2, 2022 on the revised submittal package
- SAC notes on waiver requests
- SAC notes on zoning compliance
- Letter from Jack Mee dated February 3, 2022 re: parking

## Board Members

Matthew Hayes, P.E., *Chair*  
Robert Tucker, *Vice Chair*  
Richard Di Iulio, *Clerk*  
Jessica Chabot, *Member*  
Thomas Gay, *Associate Member*



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# TOWN OF MEDWAY

## COMMONWEALTH OF MASSACHUSETTS


## PLANNING AND ECONOMIC DEVELOPMENT BOARD

RECEIVED TOWN CLERK  
JAN 12 '22 PM4:11

## MEMORANDUM

January 12, 2022

TO: Stefany Ohannesian, Town Clerk  
Town of Medway Departments, Boards and Committees

FROM: Susy Affleck-Childs, Planning and Economic Development Coordinator 

RE: **Public Hearing Continuation for Medway DPW Water Quality Treatment Facility Site Plan** (19 Populatic Street)  
Continuation Date – Tuesday, February 8, 2022 at 7:00 p.m.

At its January 11, 2022 meeting, the Planning and Economic Development Board voted to continue the public hearing on the application of the Town of Medway for approval of a major site plan for the proposed water quality treatment facility and associated garage and operations office to be constructed at 19 Populatic Street to the Board's meeting on Tuesday, January 25, 2022 at 7:30 p.m. at Medway Town Hall, 155 Village Street.

The Town plans to construct a 15,640 square foot facility with 4,800 sq. ft. of garage space, 3,240 sq. ft. of operations/office space for the Town's DPW water personnel, and 7,600 sq. ft. for the water treatment area. The facility will treat up to 2.12 million gallons of blended raw water per day from three Town well sites to remove minerals and to supplement the water to achieve improved disinfection, pH adjustment, corrosion control, and dental health. Site improvements include 17 parking spaces, landscaping, lighting, and stormwater management measures to comply with local and state policies. Access to the site will continue to be via the existing paved driveway off of Populatic Street commonly referred to as Water Street; a secondary limited access is planned from Populatic Street for deliveries and fire department access when needed.

The proposed building and site improvements are shown on a plan titled *Town of Medway, Populatic Water Treatment Plant*, dated October, 2021, prepared by Wright-Pierce of Andover, MA. The application, site plan, stormwater report, architectural drawings, and associated documents are on file at the offices of the Town Clerk and the Planning and Economic Development Board and are posted at the Board's web page at: <https://www.townofmedway.org/planning-economic-development-board/pages/town-medway-water-quality-treatment-plant-and-facility>.

Based on the review by the Board's engineering consultant and the discussion at the 1-11-22 public hearing, the applicant will be revising the site plan. Upon receipt it will be posted to the Board's web page. We welcome your review and comments by February 3<sup>rd</sup>. Please don't hesitate to contact me if you have any questions. Thanks.



January 25, 2022

Ms. Susan E. Affleck-Childs  
Medway Planning and Economic Development Coordinator  
Medway Town Hall  
155 Village Street  
Medway, MA 02053

**SUBJECT: Populatic Water Treatment Plant – Major Site Plan Review  
19 Populatic Street, Medway, Massachusetts**

Dear Susan,

Wright-Pierce has received Tetra Tech's comments on the Major Site Plan Review submission for the Populatic Water Treatment Plant project. We have prepared the following letter and attachments in response to these comments.

#### Site Plan Review

1. The Applicant has not included a Neighborhood Impact Assessment in their Development Impact Statement. The Project Narrative discusses impacts on the neighborhood which should be summarized in this section of the document. (Ch. 200 §204-3.F.3)

***Response: The Development Impact Statement has been updated to include the Neighborhood Impact Assessment. Refer to Attachment A.***

2. A Construction Management Plan (CMP) is not provided in the Plans or as a separate document. This may be necessary to understand how the construction will occur given the existing facility will remain operational during construction. (Ch. 200 §204-3.H)

***Response: A Construction Management Plan (CMP) for the proposed project is included as Attachment B.***

3. Earth removal calculations are not provided in the Plans. (Ch. 200 §204-3.I)

***Response: Earth removal calculations have been added to Sheet C-4. Revised drawings are included as Attachment C.***

4. Earth fill estimates are not provided in the Plans. (Ch. 200 §204-3.J)

***Response: Earth fill estimates have been added to Sheet C-4. Revised drawings are included as Attachment C.***

5. A copy of an Order of Resource Area Delineation (ORAD) from Medway Conservation is not provided. The site is located adjacent to the Charles River and Flood Zone, therefore, an ORAD may be relevant for the Project. (Ch. 200 §204-3.K)

***Response: A Notice of Intent (NOI) was filed with the Medway Conservation Commission on November 8, 2021. Comments have been received on the submission and we will be issuing our responses to the Commission under separate cover. A copy of the final Order of Conditions will be forwarded to the PEDB upon receipt.***

6. All elevations in the Plans refer to the NGVD29 Datum. Elevations shall refer to North America Vertical Datum of 1988 (NAVD88) as specified in the rules and regulations (Ch. 200 §204-4.C)

***Response: The reference to NGVD29 Datum on the plans is incorrect. The design elevations depicted on the plans are in the correct NAVD88 datum. Civil Site Layout Note 11 on drawing C-1 has been updated in the revised set of drawings to reflect the correct datum. Refer to Attachment C.***

7. A locus map is included on the Cover Sheet and no formal Site Context Sheet has been provided. The scale of the locus map is set to 1-inch equals 2,000-feet which does not meet the maximum required scale of 1-inch equals 1,000-feet. A Site Context Sheet shall be provided per the applicable Regulation. (Ch. 200 §204-5.B)

***Response: A Site Context Sheet has been added to the revised plan set as drawing C-1A. Refer to Attachment C.***

8. The Applicant has not included an inventory of existing trees at the site in the size required by the Regulations. Drip lines are also required for those trees. (Ch. 200 §204-5.C.3)

***Response: The survey base plan utilized for the project was supplied by the Owner's Project manager. The project requires a clear cut to construct the proposed improvements. We have identified hardwood trees larger than 18" on the plans. The significant oak tree along Populatic Street has been identified to remain. None of the other larger hardwoods are located in the areas where clearing is proposed. We are requesting a waiver for the requirement of showing drip-lines for the existing trees. Refer to Waiver Requests included as Attachment D.***

9. Front setback line is shown on the Layout Sheet, however, both side and rear setbacks are not represented and shall be included on the Plans. (Ch. 200 §204-5.D.1)

***Response: Side and rear setback lines have been added to sheet C-3 in the revised drawing set. Refer to Attachment C.***

10. The Applicant has proposed 17 parking spaces, 1 space per anticipated employee with 3 additional spaces. The Medway Zoning Bylaw does not specify a requirement for this type of facility; therefore, the nearest comparable use may be applied. TT believes the Water Treatment Plant is best represented as a warehouse/distribution or manufacturing facility. In that case, the proposed number of spaces does not meet the minimum requirements (23 Spaces) outlined in Table 3 of the Medway Zoning Bylaws. Additionally, we recommend the Applicant confirm where employee parking will be sited as the spaces at the rear of the facility (12 spaces) would not meet the minimum number of employees using the facility as stated in the Project narrative. (Ch. 200 §204-5.D.3)

***Response: A waiver is being requested for this requirement. Parking has been discussed with the Medway Water Department and the spaces proposed were deemed adequate to accommodate the future number of employees and anticipated operations at the facility. Refer to Waiver Requests included as Attachment D.***

11. The Applicant has not provided a separate Erosion and Sediment Control Plan which we anticipate will be required during the Applicant's Notice of Intent process with Medway Conservation Commission. (Ch. 200 §204-5.D.5)

***Response: Erosion and Sediment Controls are shown on sheets C-4, C-9 and C-10 in the revised drawing set. Refer to Attachment C.***

12. The Applicant has not included any site amenities such as bike rack which may be applicable to this Project, particularly for the employees of the facility. (Ch. 200 §204-5.D.12)

***Response: Site amenities have been discussed with the Medway Water Department. No additional amenities are being proposed per the Water Department's request.***

13. A Master Signage Plan is not included in the Plans. TT expects this to be submitted separately for signage approval. (Ch. 200 §204-5.D.14)

***Response: Master Signage Plan is shown on sheet C-3 in the revised drawing set. Refer to Attachment C.***

14. The Applicant has provided a lighting plan showing 26 proposed light sources connected to the building with no proposed light trespass on abutting properties. Height of luminaires should be specified along with the hours of illumination. TT also recommends the lighting symbols be better represented on the lighting plan as it is hard to determine the location of each proposed lamp. (Ch. 200 §204-5.D.15)

***Response: The lighting plan C-11 has been updated to include hours of illumination. Proposed lighting will be photocell controlled and illuminated from dusk until dawn. The height of luminaires are approximately 17' on the garage and treatment building areas and approximately 12' on the operations building area. They are also***

*shown on Sheet A-201. The photometric plan shows no light spillover onto Populatic Street or adjacent properties. Refer to revised drawings in Attachment C.*

15. Horizontal site distances at the site driveways are not provided in the Plans. (Ch. 200 §204-5.D.16)

*Response: Horizontal site distances of greater than 200-feet were confirmed in the field at the new driveway location and they exceed the minimum of 155 feet in both directions for a speed limit of 25 mph. The site distances have been included on sheet C-3 in the revised drawing set. Refer to Attachment C.*

16. A table representing conformance with Zoning Bylaw requirements is provided on site Layout sheet. However, the table is missing minimum lot frontage and maximum building height. TT recommends proposed values be provided rather than "less than" or "greater than" symbols. (Ch. 200 §204-5.D.17)

*Response: The Site Layout Sheet (C-3) has been updated in the revised drawing set to include the missing lot frontage and maximum building height. Refer to Attachment C.*

17. The Applicant has not proposed any sidewalks at the site, particularly to secondary entrances proposed around the buildings. Additionally, pursuant to Section 5.5.4. I, c. of the Zoning Bylaw, sidewalks shall be provided along the entire frontage of the subject property along existing public ways. (Ch. 200 §207-9.B)

*Response: The site layout has been updated in the revised drawing set to include site sidewalks for access to the two proposed doorways on the southwest side of the facility. Refer to Attachment C. Populatic Street does not currently have sidewalks on either side of the road between Walker Street and the Franklin town line. Including sidewalks for this one property is not practicable and therefore a waiver is requested. Refer to Waiver Requests included as Attachment D.*

18. It does not appear the Applicant is proposing curb on the Project. The Applicant appears to be utilizing Low Impact Development techniques where pavement sheet flows to swales which would negate the need for proposed curb along the entirety of the edge of pavement. However, site entrances and exits shall be clearly delineated by vertical granite curbing or other approved material along the entire radius of the opening, shall extend at least 12 feet beyond each side along the gutter line of the road and at least the first 25 feet of a driveway, and shall be sloped at the end to prevent a vertical obstruction to exit. (Ch. 200 §207-11.A.4)

*Response: A waiver is being requested for this requirement. There currently isn't any curb in the vicinity of the new treatment facility. A small amount of granite would be expensive and bituminous curb could be easily damaged at the entrance. Refer to Waiver Requests included as Attachment D.*

19. An Autoturn (or equal) analysis of the site is recommended to ensure applicable emergency apparatus can actively respond to an emergency at the facility. This shall be coordinated with the Medway Fire Department. (Ch. 200 §207-11.B.8)

***Response: An Autoturn analysis was completed during the design phase and emergency access was discussed with the Medway Fire Department. Attachment E includes the Autoturn analysis assuming a WB-63 type vehicle.***

20. The Applicant has not proposed any means for electric vehicle charging at the site. (Ch. 200 §207-12.I)

***Response: Electric vehicle charging is not currently proposed for the site.***

21. The Applicant has proposed a generator pad located to the rear of the site. The generator is required to be fully screened to mitigate noise and appearance. Additionally, the Plans do not detail how the generator will be fueled. If fuel storage will be proposed at the site it should be noted on the Plans and properly permitted. (Ch. 200 §207-16.B)

***Response: The proposed back-up generator is to be fueled via natural gas. A sound attenuation enclosure is proposed around the generator to mitigate noise. Refer to Attachment F for additional information on anticipated sound decibel levels. Additional screening for appearance is not currently proposed in order to provide adequate clearance for maintenance and as required by Code.***

22. The Applicant has proposed a dumpster pad located to the rear of the site. The dumpster is required to be screened on all sides and to the full height of the container. (Ch. 200 §207-17.C)

***Response: The dumpster's proposed location is not visible from Populatic Street or abutting properties. The existing dumpster onsite is not currently screened. The Medway DPW has requested a waiver for this requirement in order to make maintenance and plowing easier for DPW staff. Refer to Waiver Requests included as Attachment D.***

23. At least one deciduous shade or canopy tree shall be provided for every 6 parking spaces. Only trees providing shade to the parking area shall be counted as meeting this requirement. (Ch. 200 §207-19.C.1.d)

***Response: The landscaping plan (C-6) has been updated in the revised drawing set to include additional shade trees in the parking area to meet this requirement. Refer to Attachment C.***

24. Minimal screening of the Project has been provided along the northern side of the project, particularly between the project site and the abutters to the north. We recommend the Applicant provide screening along the north side of Water Street. (Ch. 200 §207-19.D)

***Response: The Landscaping Plan (C-6 has been updated in the revised drawing set to include additional screening on the north side of Water Street. Refer to Attachment C.***

25. The site appears to have minimal areas for snow storage (snow shall not be stored in stormwater best management practices [BMP's]). The snow storage area(s) shall be located and graded such that the runoff from melting snow shall not enter the public way, stormwater BMP's and wetland resource areas. (Ch. 200 §207-21)

***Response: The snow storage areas have been added to sheet C-4 in the revised drawing set. Refer to Attachment C. Due to the constraints on the site, space is limited for snow storage and snow may need to be hauled off site during certain storm events.***

#### General Site Plan Comments

26. We recommend the Applicant consider widening Water Street to minimum 20 feet or to the satisfaction of the Medway Fire Department.

***Response: The proposed width of Water Street is currently adequate for emergency access and abutter access to their driveway. Refer to Attachment E for Auto-Turn analysis for additional details.***

27. The proposed accessible parking space and adjacent access aisle do not appear to be adequately sized. The proposed space shall be a van space since there is only one proposed accessible space required. Additionally, per MA AAB, van spaces shall be minimum 8 feet wide with an adjacent 8-foot access aisle. Also, if parking at the rear of the facility is meant for employees, we recommend an additional accessible space at the rear of the site to accommodate employee parking. Signage shall also be proposed for all accessible parking.

***Response: The accessible parking space has been updated on the revised plans to reflect the minimum spacing required for a van. Refer to Attachment C.***

28. The proposed cut-in for the finished water to the existing 8-inch water main in Populatic does not appear to be to town standard. The town typically requires three valves at the connection point, two on the existing main and one on the new. We recommend the Applicant continue to coordinate with the Town regarding this item. Additionally, we recommend the Applicant show the proposed raw water connection point from the off-site Oakland and Village Street wells to help the PEDB better understand the scope of that connection.



1/25/2022

Ms. Susan E. Affleck-Childs

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***Response: Details on site piping connections will continue to be coordinated with the Medway Water Department.***

29. It appears finish water piping is being connected to existing raw water piping in Water Street. We recommend the Applicant/engineer confirm with Medway DPW if this is the intended scope or if any of the existing water main in Water Street will be abandoned to limit co-mingling of raw and finish water.

***Response: Finished water and raw water are not proposed to be cross-connected per MassDEP requirements. The proposed finished piping is proposed to be connected to the existing finished piping on site.***

30. We recommend the Applicant provide narrative related to proposed fence at the site and its intent. The proposed fences are open ended and may not provide security for pedestrians who may want to enter the rear portions of the facility.

***Response: Site security has been discussed with the Medway Water Department and the proposed fencing shown on the site reflects the feedback provided by the Town. The primary purpose of the fencing is to prevent unauthorized vehicle access to the site, rather than pedestrian access. The proposed security system for the facility includes cameras mounted at each building corner which will provide 360-degree monitoring of the facility. Installation of a full perimeter fence around the entire property is not cost effective or necessary given the proposed security system for the facility.***

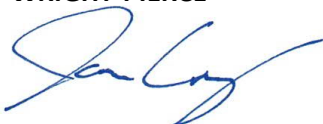
31. 31. The Applicant should add details for proposed 2-foot mow strip, sewer and drain manhole (not a standard 4-foot manhole for both as they have different requirements), concrete equipment pads and any other site amenity proposed on the Project.

***Response: Details have been updated on the revised drawing set. Refer to Attachment C***

If you have any questions or need any additional information, please don't hesitate to contact us.

Sincerely,

**WRIGHT-PIERCE**



James Cray, PE

Lead Project Engineer

[jim.cray@wright-pierce.com](mailto:jim.cray@wright-pierce.com)

cc: Peter Pelletier, Medway DPW Director

Barry Smith, Medway Water and Sewer Superintendent

**MAJOR SITE PLAN REVIEW**

**TOWN OF MEDWAY, DPW**

**WATER AND SEWER DIVISION**

**POPULATIC WATER TREATMENT PLANT**

**MEDWAY, MA**

**SUBMITTED TO:**

Medway Planning and Economic Development Board  
155 Village Street  
Medway, MA 02053

**SUBMITTED ON BEHALF OF:**

Town of Medway, DPW Water & Sewer Division  
45B Holliston Street  
Medway, MA 02053

**PROJECT ENGINEER:**

Wright-Pierce  
600 Federal Street; Suite 2151  
Andover, MA 01810

**PREPARED BY:**

Caron Environmental Consulting, LLC  
247 Bragg Hill Road  
Westminster, MA 01473

Originally Submitted November 8, 2021

**Revised: January 25, 2022**



## ***PROJECT NARRATIVE:***

### ***Introduction:***

This Major Site Plan Review application is for the proposed Water Treatment Plant (WTP) and associated vehicle garage and operations office to be located on Populatic Street in Medway, Massachusetts. The proposed WTP is located on land owned by the Town of Medway and is accessible via a paved drive known as Water Street which connects to Populatic Street. The site currently contains the Populatic Wells, a chemical feed building, an office building, a supply house and a garage.

The site for the proposed Populatic Water Treatment Plant (WTP) is located at 19 Populatic Street on a 9.80-acre parcel owned by the Town. The parcel identification number is 71-027 and it is zoned AR-2 (Agricultural Residential 2). The property is also within the Town's Floodplain District as it has areas mapped as Flood Zone AE. In addition to the main parcel there are two smaller separate parcels recently purchased by the Town. The parcels are zoned AR-2 and 0.34 and 0.49 acres in size and have Parcel Identification numbers of 71-025 and 71-026.

The site is bordered on the east by the Charles River, the south by an electric transmission line corridor, the west by Populatic Street and adjacent residential property and the north by residential property and fields. All properties directly abutting the site and across the Charles River are also zoned AR-2. Water Street, which serves as the driveway for the existing Water Department facilities runs along the north side of the site, it does not appear that Water Street is a public right-of-way. The existing residence at 15 Populatic Street has a driveway connection to Water Street.

A boundary and topographic survey of the site and surrounding areas was prepared by Merrill Associates in 2020 (subconsultant to Environmental Partners). This survey included the two parcels on the north side of Water Street. The property generally slopes from Populatic Street down to the Charles River and ranges in elevation from approximately 143 to 132 at the mean high-water line of the River. The site is partially developed on the eastern side with the existing Medway Water Department facilities consisting of office and garage space along with pumping, supply and chemical buildings. The undeveloped western portion of the site is a mix of upland areas with existing mature vegetation and low areas near the river with wetlands. The undeveloped area along Populatic Street consists of mature trees with a mix of coniferous and deciduous species and low shrubs.

The WTP will treat blended raw water from three well sites: the Populatic Street Wells, the Oakland Street Well and the Village Street Well. The Populatic Street Well site includes two wells and is the location of the new water treatment facility. The Oakland Street well site and the Village Street well site are remote sites and raw water will be piped to the new facility through dedicated raw water transmission mains.

The WTP will treat the raw water for iron and manganese removal using GreensandPlus™ pressure filtration as the primary treatment process, with potassium permanganate used as the primary oxidant. Other chemical feed systems include sodium hypochlorite for disinfection, potassium hydroxide for pH adjustment, blended phosphate for corrosion control and sodium fluoride for dental health. The facility will also include an aeration tower which will be used to raise the pH and reduce chemical usage. While not currently required the WTP has been designed to accommodate future treatment equipment for PFAS removal and a baffled clearwell for log-4 viral inactivation to meet Groundwater Rule requirements.

As many of the current operations on the site will be consolidated into the new facility, the supply house and garage are proposed to be demolished.

#### ***1). Current and Proposed Uses:***

The site is currently utilized by the Town of Medway as part of its public water supply operations. The site contains the Populatic Wells, a chemical feed building, an office building, a supply house, a garage, paved access driveways, lawn and wooded areas. The site is located adjacent to the Charles River.

The site will continue to be utilized for the town's public water supply operations, with the proposed WTP to be constructed on the front of the site. The proposed building will consolidate many of the site's current operations and will include operations space and a garage. The Populatic Street Wells will continue to be used for raw water supply. The existing chemical feed building will no longer be required once the new WTP is online.

#### ***2). Description of Site Improvements:***

The proposed site improvements include construction of a 16,040 SF facility on the front of the site, comprised of 4,800 SF of garage, 3,640 SF of operations/office space and 7,600 SF of water treatment plant area. The proposed site design includes paved driveways, one leading to the buildings main entrance and the other wrapping around the building from Water Street to a new, additional entrance from Populatic Street. Seventeen parking spaces are proposed. On the back side of the building an aeration tower and dumpster pad are proposed. Also to the rear of the building a transformer and generator will be installed. The site grading will generally conform to the existing conditions and stormwater will flow away from the building. Stormwater will be captured by a series of swales/shallow ditches and conveyed to an extended dry detention basin located on the downgradient portion of the site.

Several site constraints guided the development of the site design including the following:

- 35 foot setback along Populatic Street
- Continued operation of the adjacent Water Department facilities during construction
- Visual/noise buffering considerations for adjacent residences
- AE Flood Zone on the east

- Wetland buffers/setbacks on the east
- Water Street to the north
- Narrow buildable land on the south side
- Existing drainage culvert and ditch on the south side

The above constraints formed the boundaries of what is deemed the “buildable area” within the site. Within this buildable area various arrangements of the buildings, parking and circulation were tested to determine a layout that maximized usability and minimized impervious area and encroachment into the site constraints.

The site layout was designed with consideration for the adjacent residential used on the west side of Populatic Street. Items such as the generator and aeration tower that may occasionally generate noise use the proposed building as a buffer. Similarly, the garage and associated roll-up doors were oriented in a manner not to be visible from Populatic Street. Site lighting has been minimized to the extent practical and the fixtures used are wall-mounted, downward facing lights with shields. Landscaping has been provided along Populatic and Water Streets with the intent of visually buffering the proposed building. Additional landscaping is proposed on the south side of the building for additional buffering.

To provide for connections to the existing wells on and off site, and to connect to the distribution water mains, various new water mains will be installed on the site.

As many of the current operations on the site will be consolidated into the new facility, the supply house and garage are proposed to be demolished, and those areas will be restored (loamed and seeded).

### ***3.) Description of Proposed Building:***

The proposed WTP is a 16,040 SF facility comprised of 4,800 SF of garage, 3,640 SF of operations/office space and 7,600 SF of water treatment plant area.

The process area will be approximately 77-feet wide, 105-feet long and approximately 22-feet tall with a flat roof. It will have four chemical storage rooms and a SCADA/lab room. These rooms will be capped off and enclosed with structural ceiling systems below the roof framing. The remaining area will be for pumps and filters and an open area for future installation of PFAS treatment vessels. The PFAS area will be depressed approximately 7-feet to accommodate the large PFAS vessels while keeping the roof the same height over the entire process area.

The vehicle storage garage will be approximately 60-feet wide, 84-feet long and approximately 22-feet tall with a flat roof. It will have four double deep vehicular storage bays for storing up to 8 vehicles. The space will also include two storage rooms of approximately 9-feet by 23-feet each with a storage mezzanine above.

The operations area will be approximately 52-feet wide, 66-feet long and approximately 14-feet tall with a flat roof. It will have 3 offices, a meeting/break room, women's and men's locker room, and support spaces such as an electrical room and a mechanical room.

#### ***4.) Project Water and Sewer Demand:***

The WTP will treat blended raw water from three well sites: the Populatic Street Wells (01G), the Oakland Street Well (02G) and the Village Street Well (05G). The Populatic Street Well site includes two wells and associated pumps which have a total approved pumping volume of 0.87 MGD; the Oakland Street Well has an approved pumping volume of 0.59 MGD; and the Village Street Well has an approved pumping volume of 0.66 MGD. The WTP has been designed to treat a maximum of 2.12 million gallons per day (MGD), or 1,475 gallons per minute (GPM). The operational flow rate of the WTP will vary based upon season and demand, but is anticipated to operate at an average of 1.3 MGD, or 900 GPM.

The backwash water generated from the filtration process will be directed to recycle tanks where the solids will be allowed to settle. The resulting supernatant will be recycled to the head of the facility and the settled solids will be pumped to the sewer and treated at the Charles River Pollution Control District (CRPCD) Wastewater Treatment Facility (WWTF). Although the estimated settled solids produced will vary based on raw water quality and the volume of water treated at the facility, a conservative estimate is that settled solids will be pumped to the sewer approximately once a month. This would equate to a total volume of 15,000 gallons, or approximately 500 gallons per day (GPD) on average. The pumping rate and duration will be dictated by the CRPCD.

It is anticipated that domestic water usage by employees on the site will be 280 GPD, and that a similar volume will be discharged to the CRPCD sewer.

#### ***5.) Expected Number of Employees:***

It is anticipated that 12 employees will be utilizing the site.

#### ***6.) Proposed Hours of Operation:***

The main hours of operation on the site are 7:00 am to 5:00 pm, Monday to Friday. The water supply system, including the proposed WTP, operate continuously. Due to this, some activities will take place outside of regular hours to sustain operations, perform maintenance and to deal with emergencies.

#### ***7.) Existing and Proposed Means of Access and Egress:***

Access to the site is currently via a paved driveway known as Water Street. This access will continue to be utilized for access to the WTP building and the other water supply operations on the site. This will

serve as the entrance for visitors. A new driveway will wrap around the rear of the building to a secondary access from Populatic Street proposed just to the south of the WTP. This secondary access is being provided to allow delivery vehicle circulation. The WTP will receive chemical and other supply deliveries, often via semi-trailer truck. The proposed layout will allow for efficient and safe delivery by allowing vehicles to circulate around the building without having to back up. In addition this layout provides for three-sided access for the Fire Department in the event of emergencies.

Site distances at the new intersection at Populatic Street are greater than 200-feet which exceed the required site distance for a 25 miles per hour zone of 150-feet.

Visitor parking and the associated pedestrian access to the building will be located at the northwest corner of the building. Visitors are expected to consist of vendors, consultants, etc. Additional parking for employees will be located to the east and south of the building, and there will be multiple pedestrian access points to be utilized by employees and for operations.

#### ***8.) Number of Parking Spaces:***

The site design proposes seventeen new parking spaces. There are several other existing, informal parking spaces adjacent to the existing buildings on the site.

No specific number of parking spaces appears to be required by regulation. The number proposed is based on the anticipated 12 employees, plus an additional 4 spaces for visitors and one accessible van parking spot.

#### ***9.) Calculation of Proposed Lot Coverage and Impervious Surface:***

Currently 6.2% of the 9.8-acre site is covered by the existing buildings and other impervious areas. Upon completion of the proposed construction there will be 13.4% lot coverage. These lot coverages are broken down as follows:

##### **Existing Lot Coverage:**

Buildings: 0.9% (3970 s.f.)  
Other Impervious: 5.2% (22,370 s.f.)  
Total: 6.2% (26,340 s.f.)

##### **Change in Lot Coverage:**

Buildings: 3.2% (13,615 s.f.) (new building minus demolition)  
Other Impervious: 4.0% (17,050 s.f.)  
Total: 7.2% (30,665 s.f.)

##### **Proposed Lot Coverage:**

Buildings: 4.1% (17,585 s.f.)  
Other Impervious: 9.2% (39,420 s.f.)  
Total: 13.4% (57,005 s.f.)

***10.) Timetable for Project Completion:***

Construction is anticipated to begin in the summer of 2022 and be completed in the fall/winter of 2023.

***11.) Proposed Mitigation Measures:***

Stormwater flows are being controlled and mitigated by the stormwater management system, which will ensure that there is no increase in flow rate and that the stormwater is treated in compliance with the town's requirements and DEP's Stormwater Policy.

Grading on the site has been designed to prevent any loss in flood storage and will slightly increase flood storage on the site.

Two existing buildings on the site, which are located close to the Charles River, are being demolished and those locations will be restored with grass surfacing.

Landscaping is proposed around the building, particularly along Populatic Street to improve the aesthetics of the site and to provide visual buffering for the adjacent residential areas.

The proposed lighting has been located and shielded to minimize light impacts off-site. A photometric plan has been provided demonstrating that no off-site light spillover will occur.

Upon completion many of the current operations on the site will be consolidated at the WTP building, moving those operations much further away from the Charles River.

***12.) List of Other Permits:***

Federal:

- Stormwater Pollution Prevention Plan: To be submitted once the contractor is determined and prior to construction beginning.

State:

- Environmental Notification Form: To be submitted concurrent to this application or shortly thereafter.
- Massachusetts Historical Commission Project Notification: To be submitted concurrent to this application.

- Notice of Intent under the Massachusetts Wetlands Protection Act: To be submitted concurrent to this application.
- BRP WS-25D4 – Approval of Treatment Facility Modifications, from MassDEP Central Region: To be submitted at 90% design completion which is scheduled for January 2022.

Local:

- Notice of Intent under the Medway Wetland Bylaw: To be submitted concurrent to this application.
- Scenic Road: To be submitted concurrent to this application.
- Land Disturbance Permit: To be submitted concurrent to this application.
- Design Review Committee: Review to be performed concurrent with this application.

***13.) Other Information:***

The site is located within the Groundwater Protection District, and there had been some preliminary discussion that a Special Permit might be required. The Zoning Bylaw, however, specifies that the project is a permitted use per Section 5.6.3 E.1.h which lists the following permitted use: “Construction, maintenance, repair and enlargement of drinking water supply facilities...”.

## ***DEVELOPMENT IMPACT STATEMENT:***

### ***Neighborhood Impact Assessment***

The building is proposed as far as possible from the road while staying as far as possible from, or minimizing encroachment into, environmentally sensitive areas including the Riverfront Area, 100-year Flood Zone and the Wetlands Buffer Zone. The building and its associated infrastructure also need to be set back from and not interfere with the existing water supply infrastructure on the site. The landscape plan has been designed to visually buffer the building from the Populatic Street and nearby residences to the extent practical.

The project is consistent with the goals of the Medway Master Plan (MMP). One goal of the MMP is to increase the commercial/industrial tax base. A sufficient supply of high-quality water is necessary to meet that goal, which is the purpose of this project. A second goal of the MMP is to increase the quantity and quality of the public water supply. Again, that is the sole purpose of this project. A third goal of the MMP is to maintain and increase the amount of open space available to the public. By utilizing land that the public does not have access to for this project it enables the town to maintain other public land for open space. A fourth goal of the MMP is to protect water resources. This project will help achieve this goal by moving activities further from the Charles River.

A good supply of high-quality water is one a key requirement, if not the most important requirement, for a high quality of life. The only purpose of this project is to supply high quality water to the residents of the town. The project has been designed to avoid and minimize quality of life impacts to the nearby residences. The new building will be consolidating activities that already take place on the site so there will be no meaningful increase in traffic, noise or general activity. Accordingly, the only impact is a visual one, which is being mitigated to the extent possible with landscaping and the building design.

The project will place no additional demands on public services, and its purpose is to improve public services.

### ***Traffic Impact Assessment:***

There should be little change to the volume and timing of traffic generated by the site as it is primarily consolidating operations already taking place at the site. Traffic is presently and will continue to be generated by 14 employees going to and from the site, water department vehicles going to and from various sites, occasional visitors/vendors, and intermittent deliveries of materials and supplies.

As the WTP will run continuously there will likely be two trips per day generated even on weekends and holidays. There will also be added deliveries needed to supply the WTP with treatment materials, but this is likely to be one or two added deliveries per month.



### ***Environmental Impact Assessment:***

#### ***1.) Air and Water Quality:***

The water treatment process does not generate any significant airborne pollutants or odors. Backwash from the processes will be directed to two backwash/recycling tanks. When solid levels in the tanks reach a certain level they will be pump discharged to the sewer operated by the Charles River Pollution Control District (CRPCD) and then treated at its Wastewater Treatment Facility (WWTF).

#### ***2.) Surface Water and Groundwater:***

In order to protect both surface and groundwater quality stormwater flows are being controlled and mitigated by the stormwater management system, which will ensure that there is no increase in flow rate and that the stormwater is treated in compliance with the town's requirements and DEP's Stormwater Policy. Stormwater will be captured by a series of swales/shallow ditches and conveyed to an extended dry detention basin located on the downgradient portion of the site.

#### ***3.) Flooding Potential:***

The 100-year flood plain borders the proposed development along the eastern and southern portions of the site. Based on the spatial site constraints, some of the site grading will impact the 100-year flood plain. The 100-year flood plain elevation is 137.5 NGVD. To ensure that the proposed development will not result in increased flooding in other areas, the incremental loss of flood plain volume has been compensated in other areas of the site. To quantify this volume, an analysis was completed for the proposed impacts and results are presented below showing that an additional 10,000 c.f. of volume was added below elevation 137.50.

Stage (ft.)	Fill Volume (c.f.)	Cut Volume (c.f.)	Change in Storage (c.f.)
132	0	0	0
133	223	5,620	+5,397
134	538	4,383	+3,845
135	1,007	2,987	+1,980
136	1,450	1,761	+311
137	1,737	1,061	-676
137.5	921	270	-651
		NET	<b>+10,205</b>

#### **4.) *Increases to Impervious Surfaces:***

Currently 6.2% of the 9.8-acre site is covered by the existing buildings and other impervious areas. Upon completion of the proposed construction there will be 13.4% lot coverage. These lot coverages are broken down as follows:

##### **Existing Lot Coverage:**

Buildings: 0.9% (3970 s.f.)  
Other Impervious: 5.2% (22,370 s.f.)  
Total: 6.2% (26,340 s.f.)

##### **Change in Lot Coverage:**

Buildings: 3.2% (13,615 s.f.) (new building minus demolition)  
Other Impervious: 4.0% (17,050 s.f.)  
Total: 7.2% (30,665 s.f.)

##### **Proposed Lot Coverage:**

Buildings: 4.1% (17,585 s.f.)  
Other Impervious: 9.2% (39,420 s.f.)  
Total: 13.4% (57,005 s.f.)

Runoff from the impervious surfaces will be managed by the stormwater management system. Stormwater will be captured by a series of swales/shallow ditches and conveyed to an extended dry detention basin located on the downgradient portion of the site. This system will provide for the treatment of water quality and will ensure that there is no increase in flow from the site.

#### **5.) *Potential for Erosion:***

The topography on the site is generally gently sloping. As a result, the erosion potential is minimal. Erosion controls are proposed along the down-gradient sides of the project to provide for the capture of any sediment that is generated. These controls will be maintained and supplemented as necessary, and will be in conformance with the requirements of the Order of Conditions and the Stormwater Pollution Prevention Plan.

#### **6.) *Noise Levels:***

Items such as the generator and aeration tower that may occasionally generate noise use the proposed building as a buffer. Similarly, the garage and associated roll-up doors were oriented in a manner to use the building as a buffer from noise from their operations. The generator will only be used in the event of a power failure, but will be needed to be run periodically to ensure it is functioning properly. The day

to day noise generated from the facility will be quite low and intermittent, and similar to the current noise level.

**7.) *Harmful or Noxious Emissions:***

The WTP facility will not generate any harmful or noxious emissions.

**8.) *Damage or Threat to Wetlands and Flood Plains:***

The site abuts the Charles River and as a result there is Riverfront Area, Bordering Land Subject to Flooding (100-year flood plain), Bank, Bordering Vegetated Wetland and buffer zones on the site. The proposed facility is located as far from the river and its associated wetlands as possible and is not located in any of these resource areas or the buffer zone.

Based on the spatial site constraints, some site grading will be necessary within Bordering Land Subject to Flooding. The 100-year flood plain elevation is 137.5 NGVD. To ensure that the proposed development will not result in increased flooding in other areas, the incremental loss of flood plain volume has been compensated in other areas of the site, as noted above in Section 3 Flood Potential.

A small amount of work is proposed within the Riverfront Area. This work will include the demolition of the existing garage and the existing supply house. Both of these structures are located within the inner Riparian Zone and are as close as 10 feet to the river. These areas will be restored and seeded with grasses. This will result in removing 2,025 s.f. of impervious area from the Riverfront Area, and the operations associated with these structures will be consolidated at the new facility, well-away from the River.

The work proposed within the 100-foot buffer zone is limited to the demolition of the garage and supply house, and the restoration of those areas, as described above.

**9.) *Smoke:***

The WTP facility will not produce any smoke.

**10.) *Odors:***

The WTP facility will not produce any odors.

**11.) *Vibration:***

The various pumps within the WTP facility may produce slight amounts of vibration. That vibration, however, should not be felt outside of the building itself. The emergency generator will also produce

minor vibration when it is in use, but will include a sound enclosure. A small blower motor on the aeration tower behind the WTP will produce minor vibrations but will be dampened with mounting equipment and won't be noticeable unless directly adjacent to the blower.

***12.) Waste Disposal:***

Waste generated from the facility's process is limited to solids produced during the filtration process. The backwash water generated from the filtration process will be directed to recycle tanks where the solids will be allowed to settle. The resulting supernatant will be recycled to the head of the facility and the settled solids will be pumped to the sewer and treated at the Charles River Pollution Control District (CRPCD) Wastewater Treatment Facility (WWTF). Although the estimated settled solids produced will vary based on raw water quality and the volume of water treated at the facility, a conservative estimate is that settled solids will be pumped to the sewer approximately once a month. This would equate to a total volume of 15,000 gallons, or approximately 500 gallons per day (GPD) on average. The pumping rate and duration will be dictated by the CRPCD.

Other common waste generated by the operation of the WTP facility and associated Water Department operations will be recycled to the extent practical. Waste that can't be recycled will be disposed of in the dumpster which is to be located to the rear of the building.

***13.) Off-site Environmental Drainage Impacts:***

In order to avoid any off-site drainage impact runoff from the project will be mitigated by a stormwater management system, which will ensure that there is no increase in flow rate and that the stormwater is treated in compliance with the town's Stormwater Bylaws and DEP's Stormwater Policy. Stormwater will be captured by a series of swales/shallow ditches and conveyed to an extended dry detention basin located on the downgradient portion of the site. This system discharges toward the Charles River, over 100 feet from the Bordering Vegetated Wetlands along the river.

# TOWN OF MEDWAY, MASSACHUSETTS

## CONTRACT DRAWINGS FOR POPULATIC WATER TREATMENT PLANT

JANUARY 2022  
PERMIT SUBMITTAL

### DRAWING INDEX

#### GENERAL

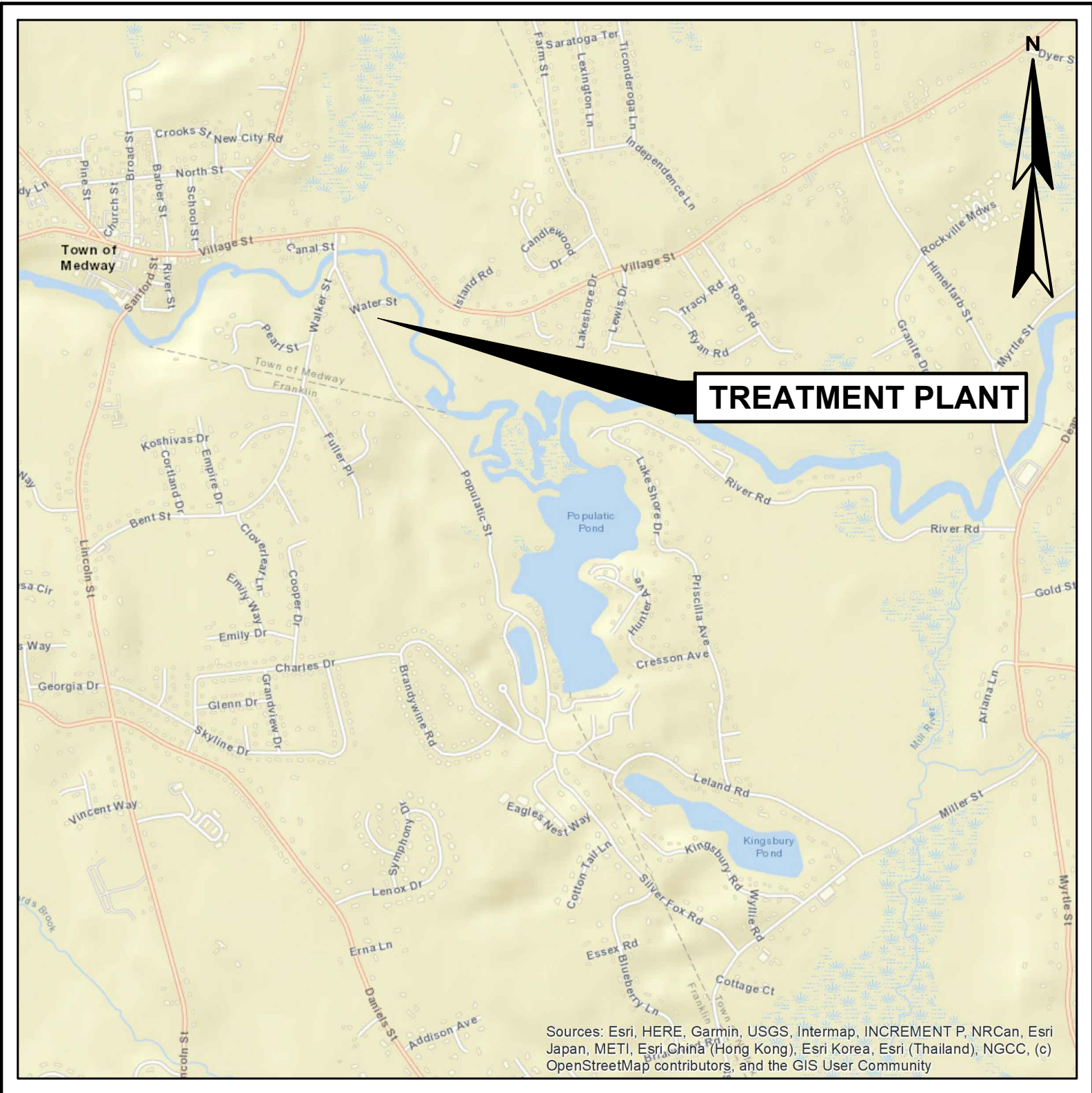
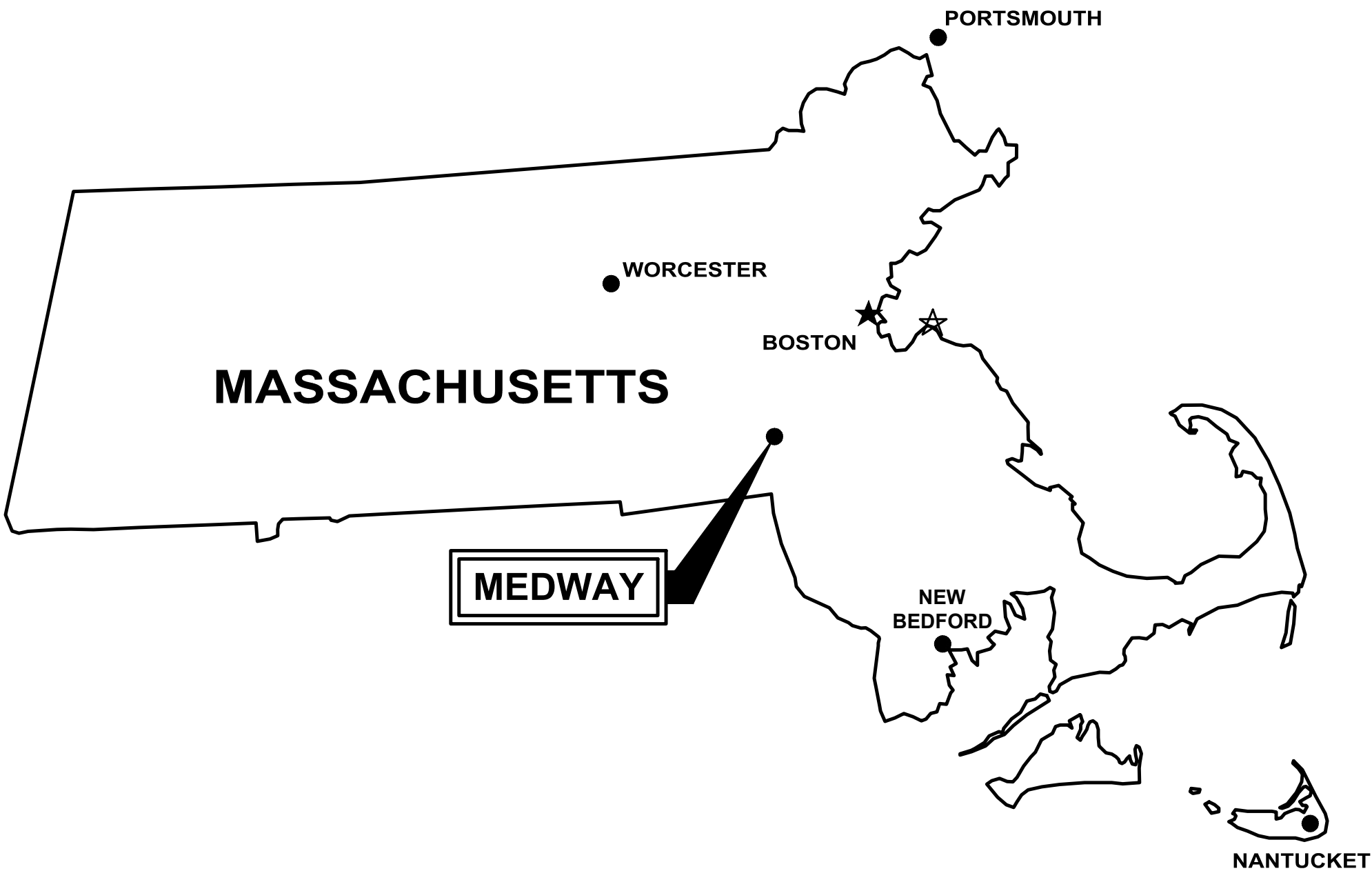
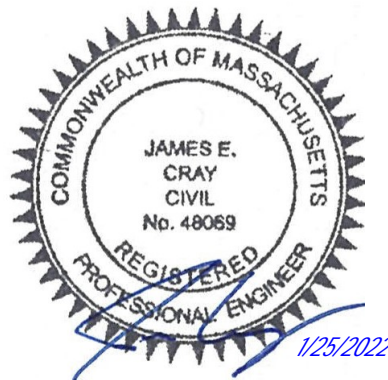
---	COVER SHEET
<b>CIVIL</b>	
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#### APPENDIX - RENDERINGS

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AP-03	BUILDING PERSPECTIVE III



**LOCATION PLAN**  
SCALE: 1"=2,000'

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GENERAL NOTES

1. THE OWNER WILL BE RESPONSIBLE FOR OBTAINING THE PERMITS LISTED IN THE SUPPLEMENTARY OR SPECIAL CONDITIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIAR WITH THE APPLICABLE PROVISIONS OF EACH PERMIT AS THEY APPLY TO THE WORK PRIOR TO BIDDING AND ABIDE BY THOSE PROVISIONS DURING CONSTRUCTION. COPIES OF ALL OBTAINED PERMITS ARE AVAILABLE FOR REVIEW FROM THE OWNER. ALL OTHER PERMITS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
2. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRAFFIC FLOW AT ALL TIMES. CONTRACTOR SHALL INSTALL AND MAINTAIN TRAFFIC CONTROL SIGNS IN ACCORDANCE WITH THE MUTCD AND ALL STATE AND LOCAL REGULATIONS. THE CONTRACTOR IS REQUIRED TO SUBMIT A TRAFFIC CONTROL PLAN TO THE OWNER PRIOR TO COMMENCING CONSTRUCTION. THE POLICE DEPARTMENT AND FIRE DEPARTMENT ARE TO BE NOTIFIED AT LEAST 24-HOURS IN ADVANCE OF ANY STREET CLOSING OR DETOUR. REFER TO SPECIFICATION SECTION 01570.
3. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
4. CONTRACTOR SHALL COMPLY WITH THE COORDINATION REQUIREMENTS AND RELATED COSTS, IF ANY, AS SPECIFIED IN SPECIFICATION SECTION 01050.
5. CONTRACTOR SHALL NOTE THAT, IN GENERAL, ALL EXISTING CONDITION INFORMATION ON THE DRAWINGS ARE SHOWN WITH A LIGHTER LINE WEIGHT AND WITH A SLANTED TYPE TEXT.
6. REFER TO THE EROSION CONTROL PLAN AND NOTES PRIOR TO ANY LAND DISTURBING ACTIVITY.
7. FERTILIZER USE IS PROHIBITED ON THE SITE DUE TO THE ZONE 1 WELLHEAD PROTECTION AREA.

EXISTING SITE CONDITIONS

1. THE LOCATIONS OF UNDERGROUND UTILITIES AND STRUCTURES, AS SHOWN ON THE DRAWINGS, ARE APPROXIMATE AND MAY NOT BE COMPLETE. THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE BASED ON PREVIOUS CONSTRUCTION DESIGN PLANS, RECORD DRAWINGS AND SURVEY DATA, WHICH ARE AVAILABLE FOR INSPECTION AT THE ENGINEER'S OFFICE. NO GUARANTEE IS MADE THAT UTILITIES OR STRUCTURES WILL BE ENCOUNTERED WHERE SHOWN, OR THAT ALL UNDERGROUND UTILITIES AND STRUCTURES ARE SHOWN. ALL LOCATIONS AND SIZES OF EXISTING UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD WITH TEST PITS AS REQUIRED PRIOR TO BEGINNING CONSTRUCTION OF NEW FACILITIES OR PIPING THAT MAY BE AFFECTED. THE CONTRACTOR WILL REALIGN NEW PIPE LOCATIONS AS REQUIRED TO CONFORM TO EXISTING LINES AND AS APPROVED BY THE ENGINEER.
2. BELOW GRADE UTILITY INFORMATION IS BASED ON INFORMATION PROVIDED BY EACH UTILITY. LOCATION OF PUBLIC UTILITIES SHOWN IS ONLY APPROXIMATE AND MAY NOT BE COMPLETE. PRIVATE UNDERGROUND UTILITIES SUCH AS, BUT NOT LIMITED TO, SEWER LINES, WATER LINES AND BURIED ELECTRICAL SERVICE ENTRANCES ARE NOT SHOWN. THE CONTRACTOR SHALL ASCERTAIN THE LOCATION AND SIZE OF EXISTING UTILITIES IN THE FIELD WITH THE RESPECTIVE UTILITY COMPANY REPRESENTATIVE PRIOR TO COMMENCING WORK. REFER TO SPECIFICATION SECTION 01050. ADDITIONAL TEST PITS, BEYOND THOSE SHOWN, MAY BE REQUIRED. UTILITY CONTACTS ARE AS FOLLOWS:
3. THERE ARE NO KNOWN HAZARDOUS ENVIRONMENTAL CONDITIONS WITHIN THE AREA OF WORK. REFER TO SPECIFICATION SECTION 00900-SC-5.06. IF THE PRESENCE OF HAZARDOUS ENVIRONMENTAL CONDITIONS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER IMMEDIATELY. ALL ACTIVITIES, HANDLING AND DISPOSAL OF HAZARDOUS ENVIRONMENTAL CONDITIONS AND MATERIALS SHALL BE IN ACCORDANCE WITH OSHA, FEDERAL, STATE, AND LOCAL REGULATIONS.

SITE DEMOLITION

1. REFER TO THE EXISTING SITE PLAN, FOR ADDITIONAL INFORMATION REGARDING EXISTING FACILITIES. REFER TO THE LAYOUT DRAWING FOR LIMITS OF WORK.
2. REFER TO ARCHITECTURAL, STRUCTURAL, PROCESS, MECHANICAL, PLUMBING, INSTRUMENTATION AND ELECTRICAL DRAWINGS FOR SPECIFIC INFORMATION REGARDING DEMOLITION AND REMOVAL.
3. REFER TO SPECIFICATION SECTION 01010A, WHICH CONTAINS INFORMATION ON CONSTRAINTS OF CONSTRUCTION SEQUENCING.
4. DEMOLISH/REMOVE EXISTING PIPING AS REQUIRED FOR CONSTRUCTION OF NEW FACILITIES. ALL PIPING, EQUIPMENT AND MATERIALS TO BE DEMOLISHED AND/OR REMOVED FROM SERVICE SHALL BE COORDINATED WITH THE OWNER AND ENGINEER BEFORE COMMENCING THAT WORK. EXISTING PIPING THAT NEEDS TO BE REMOVED TO CONSTRUCT THE NEW FACILITIES, BUT IS TO REMAIN, SHALL BE REINSTALLED/REPLACED AS NEEDED.
5. ALL EXISTING PIPING AND UTILITIES WHICH ARE BENEATH PROPOSED STRUCTURES, AND ARE TO BE ABANDONED, SHALL BE REMOVED TO A MINIMUM OF 5-FEET OUTSIDE OF THE STRUCTURE. PIPE AND UTILITIES BENEATH PROPOSED STRUCTURES THAT ARE TO REMAIN SHALL BE CONCRETE ENCASED, UNLESS OTHERWISE INDICATED. REFER TO THE STRUCTURAL DRAWINGS FOR DETAILS.
6. CONTRACTOR SHALL COORDINATE WITH OWNER PRIOR TO ABANDONING OR REMOVING ANY EXISTING UTILITIES. SEVERING OF EXISTING UTILITIES FOR ABANDONMENT, OR REMOVAL OF A SEGMENT FROM SERVICE, SHALL BE PERFORMED IN SUCH A MANNER AS TO ALLOW THE REMAINING ACTIVE SEGMENT TO CONTINUE IN ITS INTENDED SERVICE. CAP ACTIVE SEGMENTS WITH APPROPRIATE FITTINGS, JOINT RESTRAINT, ETC. TO ENSURE THEIR INTEGRITY. PLUG ENDS OF ABANDONED PIPE SEGMENTS WITH CONCRETE UNLESS SPECIAL CIRCUMSTANCES DICTATE PLUGGING ABANDONED PIPES WITH BLIND FLANGES, RESTRAINED MECHANICAL JOINT PLUGS, ETC. AS APPROPRIATE.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND DISPOSING OF ALL DEMOLISHED PIPING, EQUIPMENT AND MATERIALS. DISPOSAL SHALL BE IN ACCORDANCE WITH ALL STATE AND LOCAL REGULATIONS. THE OWNER RESERVES THE RIGHT TO RETAIN ANY SUCH PIPING, EQUIPMENT AND MATERIALS DESIGNATED FOR DEMOLITION. SUCH MATERIALS TO BE RETAINED SHALL BE PROPERLY STORED IN AN ON-SITE LOCATION. COORDINATE LOCATION AND MATERIALS TO BE SALVAGED WITH THE OWNER/ENGINEER. REFER TO SPECIFICATION SECTION 02050A.
8. THE CONTRACTOR SHALL KEEP A RECORD OF DEMOLITION AS PART OF THE PROJECT RECORD DOCUMENTS IN ACCORDANCE WITH SPECIFICATION SECTION 01720.
9. THE CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO ENSURE THAT ALL PROCESS FLOWS ARE MAINTAINED DURING CONSTRUCTION. GRAVITY OR PUMPED BYPASSES AND OTHER MEANS OF MAINTAINING FLOW SHALL BE SUBJECT TO THE REVIEW AND ACCEPTANCE OF THE ENGINEER. THE CONTRACTOR SHALL COORDINATE ANY TEMPORARY STOPPAGES OR BYPASSES WITH THE OWNER AND ENGINEER. FEDERAL AND STATE REGULATIONS REQUIRE THAT THE TREATMENT FACILITY REMAIN IN OPERATION (ALL TREATMENT, DISINFECTION, SLUDGE HANDLING AND DISPOSAL PROCESSES) THROUGHOUT CONSTRUCTION, AND THAT DISCHARGE PERMITS ARE MET. REFER TO SPECIFICATION SECTION 01010A.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE APPROPRIATE DISPOSAL OF FLOWS RESULTING FROM PRECIPITATION AND GROUNDWATER DEWATERING OPERATIONS. REFER TO SPECIFICATIONS SECTION 02240 FOR REQUIREMENTS RELATED TO CONSTRUCTION DEWATERING.

SITE CLEARING, GRUBBING AND GRADING

1. STRIPPING OF TOPSOIL (LOAM) SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02115. REFER TO THE LAYOUT AND GRADING DRAWINGS FOR LIMIT OF WORK AND STRIPPING.
2. CONTRACTOR SHALL MINIMIZE CLEARING OPERATIONS. CLEARING AND GRUBBING SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02110. CLEARING LIMITS SHALL BE AS INDICATED ON THE DRAWINGS, BUT AT ALL TIMES WITHIN EXISTING ROAD RIGHTS-OF-WAY AND PROPERTY LINES ON STATE OR COUNTY-OWNED PROPERTY OR EASEMENTS. ALL CLEARING AND GRUBBING MATERIAL SHALL BE THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF AT A SITE PROVIDED BY THE CONTRACTOR IN COMPLIANCE WITH ALL STATE AND LOCAL LAWS.
3. THE CONTRACTOR SHALL FOLLOW ALL ENDANGERED SPECIES ACT 4(D) RULES REGARDING THE NORTHERN LONG EARED BAT. THIS INCLUDES AVOIDANCE OF TREE REMOVAL DURING THE MONTHS OF JUNE AND JULY. CONTRACTOR SHALL PLAN ACCORDINGLY.
4. CONTRACTOR SHALL PROVIDE PROPER EROSION CONTROL AND DRAINAGE MEASURES IN ALL AREAS OF WORK, AND CONFINE SOIL SEDIMENT TO WITHIN THE LIMITS OF EXCAVATION AND GRADING. PRIOR TO BEGINNING EXCAVATION WORK, EROSION CONTROL FENCE SHALL BE INSTALLED AT THE DOWN GRADIENT PERIMETER OF THE ACTUAL LIMITS OF GRUBBING AND/OR GRADING, AND AS SHOWN ON THE DRAWINGS. EROSION CONTROL MEASURES SHOWN ON THE DRAWINGS ARE A MINIMUM, CONTRACTOR SHALL TAKE ALL OTHER NECESSARY MEASURES. EROSION CONTROL FENCE SHALL ALSO BE INSTALLED AT THE DOWN GRADIENT PERIMETER OF THE TOPSOIL STOCKPILES. ALL DISTURBED EARTH SURFACES SHALL BE STABILIZED IN THE SHORTEST PRACTICAL TIME AND TEMPORARY EROSION CONTROL DEVICES SHALL BE EMPLOYED UNTIL SUCH TIME AS ADEQUATE SOIL STABILIZATION HAS BEEN ACHIEVED. TEMPORARY STORAGE OF EXCAVATED MATERIAL SHALL BE STABILIZED IN A MANNER THAT WILL MINIMIZE EROSION. ALL INSTALLED EROSION CONTROL FACILITIES SHALL BE REMOVED AT THE END OF THE PROJECT. REFER TO SPECIFICATION SECTION 02270.
5. ALL STORM DRAINAGE INLETS SHALL BE PROTECTED BY HAY BALE FILTERS TO PREVENT ENTRY OF SEDIMENT FROM RUNOFF WATERS DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL COLLECTED SEDIMENT, AND THAT WHICH COLLECTS IN THE STORM DRAIN SYSTEM. REFER TO THE CIVIL DETAIL DRAWINGS.
6. TEST PIT AND/OR BORING LOGS FOR THE PROJECT SITE ARE INCLUDED IN APPENDIX A OF THE SPECIFICATIONS. THESE ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. PLEASE NOTE THAT THE SOIL DESCRIPTIONS PROVIDED ON THE TEST PIT BORING LOGS DO NOT REPRESENT FIELD CONDITIONS OTHER THAN AT THE SPECIFIC SUBSURFACE EXPLORATION LOCATIONS. THE CONDITIONS BETWEEN SUBSURFACE EXPLORATION LOCATIONS MAY VARY FROM THOSE SHOWN ON THE TEST BORING LOGS.

7. CONTRACTOR SHALL CONTROL DUST ON THE CONSTRUCTION SITE TO A REASONABLE LIMIT, AS DETERMINED BY THE ENGINEER, AND AS OUTLINED IN SPECIFICATION SECTION 01562.
8. CONTRACTOR SHALL NOT TRACK OR SPILL EARTH, DEBRIS OR OTHER CONSTRUCTION MATERIAL ON PUBLIC OR PRIVATE STREETS AND PLANT DRIVES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE ASSOCIATED CLEAN UP.
9. ALL CATCH BASINS, MANHOLES, VALVE PITS, VALVE BOXES AND OTHER BURIED FACILITIES WITH SURFACE ACCESS SHALL BE ADJUSTED TO MATCH FINAL GRADES, UNLESS OTHERWISE INDICATED.
10. THE CONTRACTOR SHALL NOT HAVE ANY RIGHT OF PROPERTY IN ANY MATERIALS TAKEN FROM ANY EXCAVATION. SUITABLE EXCAVATED MATERIAL MAY BE INCORPORATED IN THE PROJECT, WITH EXCESS MATERIAL DISPOSED OF AT A LOCATION PROVIDED BY THE CONTRACTOR. THESE PROVISIONS SHALL IN NO WAY RELIEVE THE CONTRACTOR OF OBLIGATIONS TO PROPERLY DISPOSE OF AND REPLACE ANY MATERIAL DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING. THE CONTRACTOR SHALL DISPOSE OF UNSUITABLE AND EXCESS MATERIAL IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE CONTRACT DOCUMENTS.
11. CONTRACTOR SHALL REMOVE AND REPLACE, OR REPAIR, ALL CURBS, SIDEWALKS, PAVEMENT AND OTHER ITEMS DAMAGED BY CONSTRUCTION ACTIVITIES TO AT LEAST THEIR ORIGINAL CONDITION, TO THE SATISFACTION OF THE OWNER AND ENGINEER.
12. WHERE EXISTING PAVEMENT IS REMOVED AND REPLACED, MATCH EXISTING GRADES TO THE EXTENT POSSIBLE. COORDINATE FINE GRADING WITH THE ENGINEER.
13. ALL ROAD AND DRIVE CROSS SLOPES SHALL PITCH 1/4-INCH PER FOOT MINIMUM. ALL PAVED SURFACES SHALL PITCH MIN. 2% UNLESS OTHERWISE NOTED. REFER TO THE CIVIL DETAIL DRAWINGS.
14. ALL NON-ROADWAY AREAS THAT ARE EXCAVATED, FILLED, OR OTHERWISE DISTURBED BY THE CONTRACTOR SHALL BE LOAMED, GRADED, LIMED, FERTILIZED, SEEDED AND MULCHED, UNLESS OTHERWISE NOTED. THE TOP 6-INCHES OF SOIL SHALL BE LOAM FROM A TOWN APPROVED SUPPLIER. REFER TO SPECIFICATION SECTION 02485, LANDSCAPING/LOAM AND SEED.
15. THE BASE COURSE PAVING SHALL BE INSTALLED PRIOR TO NOVEMBER 15 AND THE FINAL PAVING SHALL BE INSTALLED AFTER APRIL 15.

CIVIL SITE LAYOUT

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THIS PROVIDED LAYOUT INFORMATION THROUGHOUT THE COURSE OF CONSTRUCTION. REPORT ANY LAYOUT DISCREPANCIES IMMEDIATELY TO THE ENGINEER.
2. REFER TO THE PIPING AND GRADING PLANS FOR ADDITIONAL LAYOUT INFORMATION.
3. CONTRACTOR SHALL EXCAVATE TEST PITS, WHERE NECESSARY, PRIOR TO CONSTRUCTION LAYOUT AND RESULTS REPORTED TO THE ENGINEER FOR REVIEW FOR CONFORMANCE TO THE PLANS. TEST PITS ARE REQUIRED WHERE SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER.
4. IN GENERAL, THE GIVEN STRUCTURE LOCATIONS ARE TO THE OUTSIDE FACE OF THE STRUCTURE FOUNDATION WALL, NOT FOOTINGS. REFER TO THE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR BUILDING AND STRUCTURE DIMENSIONS. RADII SHOWN FOR ROADS ARE TO EDGE OF PAVEMENT.
5. PLACE CRUSHED STONE MOWING STRIP AROUND THOSE STRUCTURES AS INDICATED ON THE DRAWINGS. REFER TO THE CIVIL DETAIL DRAWINGS.
6. THE LOCATIONS AND LIMITS OF ALL ON-SITE WORK AND STORAGE AREAS SHALL BE REVIEWED/COORDINATED WITH, AND ACCEPTABLE TO, THE OWNER AND ENGINEER. THE CONTRACTOR SHALL LIMIT ACTIVITIES TO THESE AREAS. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR THE LOCATIONS OF CONSTRUCTION TRAILER(S).
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RE-ESTABLISHING AND RESETING ALL EXISTING PROPERTY MONUMENTATION DISTURBED BY CONSTRUCTION. THIS WORK SHALL BE DONE BY A LAND SURVEYOR REGISTERED IN THE STATE OF MASSACHUSETTS, AT NO ADDITIONAL COST TO THE OWNER.
8. WRITTEN DIMENSIONS SHALL PREVAIL. DO NOT SCALE DISTANCES FROM THE DRAWINGS. REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER.
9. BOLLARD LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE BOLLARD LOCATIONS WITH THE ENGINEER. REFER TO THE CIVIL DETAIL DRAWINGS.
10. PARKING SPACES SHALL BE 9' WIDE X 18' LONG, UNLESS SHOWN OTHERWISE.
11. UNLESS OTHERWISE NOTED, ALL ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88). ORIENTATION IS GRID NORTH ON THE NAD 83 MASSACHUSETTS STATE PLAN, U.S. FOOT COORDINATE SYSTEM. PROJECT BENCH MARK IS SHOWN ON THE DRAWINGS. CONTRACTOR SHALL VERIFY BENCHMARK ELEVATIONS PRIOR TO USING IN CONSTRUCTION.
12. EXISTING CONDITIONS SITE PLAN DEVELOPED FROM 2020 SURVEY DRAWING PREPARED BY MERRILL ASSOCIATES (SUBCONTRACTED TO ENVIRONMENTAL PARTNERS) AND EXISTING RECORD DRAWING INFORMATION.
13. WETLAND BOUNDARIES DELINEATED BY PINEBROOK CONSULTING IN JUNE 2020. WETLANDS FLAGS SURVEYED BY MERRILL ASSOCIATES..

CIVIL SITE PIPING

1. PROCESS FLOW DIAGRAM AND PIPING LEGEND ARE ON THE PROCESS DRAWINGS. THE PROCESS PIPING SCHEDULE AND ADDITIONAL PIPING NOTES ARE LOCATED IN SPECIFICATION SECTION 15050.
2. ALL PIPE LINES SHALL SLOPE UNIFORMLY BETWEEN ELEVATIONS INDICATED ON THE DRAWINGS. NO CRESTS IN PIPING WILL BE PERMITTED. CONCRETE THRUST BLOCKS OR OTHER ACCEPTABLE RESTRAINT SYSTEM IS REQUIRED ON ALL FITTINGS ON PRESSURE PIPE. WHERE A RESTRAINED JOINT SYSTEM IS USED, THE NUMBER OF PIPES WITH RESTRAINED JOINTS ON EITHER SIDE OF THE FITTING SHALL BE DESIGNED TO REFLECT THE PROJECT SOIL CONDITIONS AND PEAK SURGE PRESSURE IN THE PIPING SYSTEM. SEE THE CIVIL DETAIL DRAWINGS FOR THRUST BLOCK DETAILS. PROVIDE ALL BENDS (HORIZONTAL AND VERTICAL) AS REQUIRED TO MEET THE GRADES AND ALIGNMENT INDICATED ON THE DRAWINGS.
3. THE CONTRACTOR SHALL ASCERTAIN THE LOCATION AND SIZE OF EXISTING PIPING AND UTILITIES IN THE FIELD BY TEST PIT EXCAVATION PRIOR TO COMMENCING INSTALLATION OF ANY OF THE NEW PIPING AFFECTED. WHERE NEW PIPE CONNECTS TO EXISTING PIPING OR STRUCTURAL PENETRATION, CONTRACTOR SHALL VERIFY ELEVATION BY TEST PIT, AS REQUIRED, PRIOR TO INSTALLATION OF ANY OF THE ASSOCIATED/AFFECTED NEW PIPING. IDENTIFIED CONFLICTS WITH EXISTING PIPING AND UTILITIES WILL BE REVIEWED WITH THE ENGINEER PRIOR TO COMMENCING INSTALLATION. THE HORIZONTAL ALIGNMENT OF NEW PIPING MAY BE ADJUSTED IN THE FIELD SUBJECT TO PRIOR REVIEW AND ACCEPTANCE OF THE ENGINEER. CONTRACTOR SHALL BE RESPONSIBLE FOR LAYOUT OF ALL PROPOSED WORK AS SHOWN ON THE DRAWINGS AND REPORT ANY LAYOUT DISCREPANCIES IMMEDIATELY TO THE ENGINEER.
4. ALL PRESSURIZED PIPES (I.E. PLANT WATER, TOWN WATER, SOLUTION LINES, HEAT, ETC.) INSTALLED BENEATH STRUCTURES SHALL BE ENCASED IN CONCRETE. SEE STRUCTURAL DRAWING FOR DETAILS.
5. ALL BURIED CONNECTIONS TO STRUCTURES SHALL HAVE SLEEVE TYPE FLEXIBLE CONNECTIONS APPROXIMATELY 4-FEET FROM THE STRUCTURES. ALL SLEEVE TYPE COUPLINGS ON PRESSURE LINES SHALL BE RESTRAINED (SOLID SLEEVE). REFER TO SPECIFICATION SECTION 15088.
6. PROVIDE CAST OR DUCTILE IRON WALL CASTINGS, OR GALVANIZED STEEL PIPE SLEEVES, FOR ALL PIPE PENETRATIONS MADE THROUGH CONCRETE FOUNDATIONS, WALLS AND SLABS. ALL WALL SLEEVES AND WALL CASTINGS SHALL HAVE WATERSTOPS. SEE PROCESS, MECHANICAL AND STRUCTURAL DRAWINGS FOR LOCATIONS OF PENETRATIONS. NEW PENETRATIONS THROUGH EXISTING STRUCTURE WALLS SHALL BE BY CORING MACHINE AND LINK-TYPE SEALS, UNLESS OTHERWISE INDICATED. OPENINGS TO BE COMPATIBLE WITH REQUIRED PIPING AND STANDARD LINK SEAL SIZES. SEE PROCESS DETAIL DRAWINGS. REFER TO SPECIFICATION SECTION 15092.
7. TRENCH INSULATION SHALL BE USED WHERE DEPTH OF COVER IS LESS THAN 5-FEET. INSULATION TO BE CLOSED CELL EPDM ENCASED IN PVC PIPE AND PROPERLY SEALED TO PREVENT WATER INTRUSION. REFER TO THE CIVIL DETAIL DRAWINGS FOR THE TRENCH INSULATION DETAIL.
8. TRENCH INSULATION SHALL BE USED WHEN THERE IS LESS THAN 2-FEET BETWEEN THE FORCE MAIN AND A CULVERT. INSULATION TO BE CLOSED CELL EPDM ENCASED IN PVC PIPE AND PROPERLY SEALED TO PREVENT WATER INTRUSION. REFER TO THE CIVIL DETAIL DRAWINGS FOR THE TRENCH INSULATION DETAIL.
9. MANHOLES ARE 4-FEET IN DIAMETER UNLESS OTHERWISE NOTED. THE TOP OF MANHOLE FRAMES SHALL BE SET FLUSH WITH FINISH GRADE, UNLESS OTHERWISE NOTED ON DRAWINGS. MANHOLES TO HAVE 26-INCH DIAMETER COVERS.
10. PIPES WITHIN VALVE PITS (MANHOLES) SHALL BE SUPPORTED 12-INCHES ABOVE BOTTOM OF MANHOLE ON ADJUSTABLE PIPE SADDLE SUPPORTS, IN ACCORDANCE WITH SPECIFICATION SECTION 15094, UNLESS OTHERWISE INDICATED.
11. CONTRACTOR SHALL RE-SHAPE INVERTS AS REQUIRED WHEN CONNECTING INTO EXISTING MANHOLES.
12. REFER TO SPECIFICATION SECTION 02200 FOR PIPE AND STRUCTURE BEDDING AND BACKFILL REQUIREMENTS.

13. COMPACTION TESTS WILL BE PERFORMED IN ACCORDANCE WITH SPECIFICATION SECTION 02200. ANY SETTLEMENT OCCURRING WITHIN ONE-YEAR OF FINAL COMPLETION OF THE WORK SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST.
14. OPEN TRENCHES IN THE ROADWAY MUST BE BACKFILLED AT THE END OF THE WORKDAY. OPEN TRENCHES OUTSIDE OF THE RIGHT OF WAY AND AT THE END OF PIPE RUNS MAY BE LEFT OPEN IF THE CONTRACTOR PROVIDES ADEQUATELY SAFE PLATING, BARRICADING AND LIGHTS.
15. IN THOSE INSTANCES WHERE POWER OR TELEPHONE POLE SUPPORT IS REQUIRED, THE CONTRACTOR SHALL PROVIDE A MINIMUM 48-HOUR NOTICE TO THE RESPECTIVE UTILITY POLE OWNER. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR TEMPORARY BRACING OF UTILITIES.
16. WHERE NEW PIPING IS TO BE CONNECTED TO EXISTING PIPING, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ADAPTERS, FITTINGS, AND ADDITIONAL PIPE AS REQUIRED TO COMPLETE THE CONNECTION. CONTRACTOR SHALL VERIFY LOCATION, ELEVATION, ORIENTATION AND MATERIAL OF CONSTRUCTION. TEST PITS SHALL BE USED AS REQUIRED.
17. ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE UNLESS OTHERWISE NOTED ON THE CIVIL EXISTING CONDITIONS AND DEMOLITION PLAN. ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
18. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ALL DEMOLITION MATERIALS IN ACCORDANCE WITH SPECIFICATION SECTION 02050.
19. WHERE POSSIBLE, WATER LINES SHOULD BE INSTALLED OVER WASTEWATER OR SLUDGE LINES. A MINIMUM SEPARATION OF 18-INCHES BETWEEN THE BOTTOM OF THE WATER LINE AND THE TOP OF THE WASTEWATER OR SLUDGE LINE SHALL BE MAINTAINED, IF POSSIBLE. WHERE A WATER LINE CROSSES UNDER A WASTEWATER OR SLUDGE LINE, A FULL LENGTH OF PIPE SHALL BE CENTERED ABOVE THE WATER LINE SO THAT BOTH JOINTS WILL BE AS FAR FROM THE WATER LINE AS POSSIBLE.
20. ALL STRUCTURES AND PIPELINES LOCATED ADJACENT TO ANY TRENCH EXCAVATION SHALL BE PROTECTED AND FIRMLY SUPPORTED BY THE CONTRACTOR UNTIL THE TRENCH IS BACKFILLED. DAMAGE TO ANY SUCH STRUCTURES CAUSED BY OR RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. ALL UTILITIES REQUIRING REPAIR, RELOCATION OR ADJUSTMENT AS A RESULT OF THE PROJECT SHALL BE COORDINATED THROUGH THE OWNER.
21. PIPING ON THE PIPING PLAN HAS BEEN SHOWN BROKEN FOR CLARITY ONLY. PIPE BREAKS DO NOT INDICATE RELATIVE ELEVATIONS OF PIPING.
22. ELECTRICAL CONDUIT RUNS ARE INDICATED ON THE ELECTRICAL DRAWINGS [AND ARE SHOWN IN DASHED/PHANTOM LINEWEIGHT ON THE CIVIL DRAWINGS FOR CONVENIENCE]. CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION, EXCAVATION AND BACKFILLING REQUIRED FOR THE ELECTRICAL CONDUITS, AND SHALL FURNISH AND INSTALL ELECTRICAL MANHOLES AND HANDHOLES. COORDINATE THE LOCATION OF THE ELECTRICAL MANHOLES AND HANDHOLES, AND THE REQUIRED OPENING SIZES, WITH THE ELECTRICAL CONTRACTOR.
23. WHENEVER PROPOSED STRUCTURES ARE LOCATED PARTLY WITHIN A PAVED AREA AND PARTLY IN A NON-PAVED AREA, A BITUMINOUS CONCRETE PAVED APRON 2-FEET WIDE SHALL BE SUPPLIED AROUND THE PROPOSED COVER. PAVEMENT SHALL SLOPE AWAY FROM THE COVER.

CIVIL ABBREVIATIONS

&	AND	MIN	MINIMUM
Ø, DIA	DIAMETER	MW	MONITORING WELL
#, NO	NUMBER	N	NORTH
APP'D	APPROVED	NGVD	NATIONAL GEODETIC VERTICAL DATUM
BLDG	BUILDING	N/A	NOT AVAILABLE/APPLICABLE
CB	CATCH BASIN	NTS	NOT TO SCALE
CEN	CENTER	OD	OUTSIDE DIAMETER
CFS	CUBIC FEET PER SECOND	PC	PERFORATED CLAY
CI	CAST IRON	PSF	POUNDS PER SQUARE FOOT
CL	CENTERLINE	PSI	POUNDS PER SQUARE INCH
CMP	CORRUGATED METAL PIPE	PS	PRIMARY SLUDGE
CO	CLEANOUT	PT	POINT OF TANGENCY
CONC	CONCRETE	PVC	POLYVINYL CHLORIDE
COR	CORNER	RCP	REINFORCED CONCRETE PIPE
CY	CUBIC YARD	RD	ROOF DRAIN
DEMO	DEMOLITION	REQ'D	REQUIRED
DMH	DRAIN MANHOLE	RW	RAW WATER
DI	DUCTILE IRON	S	SLOPE, SEWER
DR	DRAIN	SD	STORM DRAIN
DWVG	DRAWING	SF	SQUARE FEET
EL	ELEVATION	SMH	SANITARY SEWER MANHOLE
EMH	ELECTRIC MANHOLE	SQ	SQUARE
FFE	FINISHED FLOOR ELEVATION	STA	STATION
FM	FORCE MAIN	T, XFMR	TRANSFORMER
FT	FEET	TBM	TEMPORARY BENCH MARK
FW	FINISH WATER	THK	THICKNESS
G	GAS	TOS	TOP OF STRUCTURE
HYD	HYDRANT	TYP	TYPICAL
HMA	HOT MIX ASPHALT	UD	UNDERDRAIN
IN	INCH	UG	UNDERGROUND
INF	INFLUENT	UGE	UNDERGROUND ELECTRIC
INV	INVERT	VC	VITRIFIED CLAY
LBS	POUNDS	W/	WITH
MAX	MAXIMUM	W	POTABLE WATER
MH	MANHOLE		

EXISTING	LEGEND	PROPOSED
	PROPERTY/ROW LINE	
	SETBACK LINE	
	EASEMENT LINE	
	CENTERLINE	
	EDGE OF PAVEMENT	
	CURBING	
	EDGE OF GRAVEL	
	EDGE OF CONCRETE	
	CONTOUR	
	BUILDING	
	STONEWALL	
	TREELINE	
	CHAIN LINK FENCE	
	STOCKADE FENCE	
	BARB WIRE FENCE	
	RETAINING WALL	
	GUARDRAIL	
	SEWER	
	SEWER FORCE MAIN	
	GAS	
	WATER	
	STORM DRAIN	
	UNDERDRAIN	
	CULVERT	
	UNDERGROUND ELECTRIC	
	OVERHEAD ELECTRIC	
	UNDERGROUND TELEPHONE	
	UNDERGROUND CABLE TV	
	IRON PIPE/REBAR	
	DRILLHOLE	
	MONUMENT	
	SURVEY CONTROL POINT	
	SPOT ELEVATION	
	SEWER MANHOLE	
	DRAINAGE MANHOLE	
	CATCH BASIN	
	ELECTRIC MANHOLE	
	TELEPHONE MANHOLE	
	SHUTOFF VALVE	
	WATER SERVICE SHUTOFF	
	YARD HYDRANT	
	HYDRANT	
	GAS SERVICE SHUTOFF	
	GAS GATE VALVE	
	UTILITY POLE	
	UTILITY POLE W/ GUY	
	UTILITY POLE W/ LIGHT	
	LIGHT POLE	
	BOLLARD	
	FLAGPOLE	
	CONIFEROUS TREE	
	DECIDUOUS TREE	
	SHRUB	
	WETLAND FLAG	
	EDGE OF WATER	
	STREAM	
	EDGE OF WETLANDS	
	FLOODPLAIN	
	WETLANDS	
	DRAINAGE FLOW	
	DRAINAGE SWALE	
	PAVEMENT MARKINGS	
	SIGN	
	MAILBOX	
	TEMPORARY BENCH MARK	
	TEST PIT	
	TEST BORING	
	TEST PROBE	
	MONITORING WELL	
	LIMIT OF WORK	
	SILT FENCE	
	RIPRAP	
	RAILROAD	
	MATCHLINE	
	ROCK OUTCROP	
	RESTORE PAVEMENT	

PROJECT NO: 20600  
DESIGNED: C.DIAGLE  
CAD COORD: B.JONES  
CAD: D.METZ  
CHECKED: J.PREBLE  
DATE: 1/25/2022  
APPROVED: J.CRAY  
DATE: 1/25/2022  
SUBMISSION: 90% DESIGN REVIEW

COMMONWEALTH OF MASSACHUSETTS  
JAMES E. CRAY  
CIVIL  
NO. 46868  
PROFESSIONAL SEAL

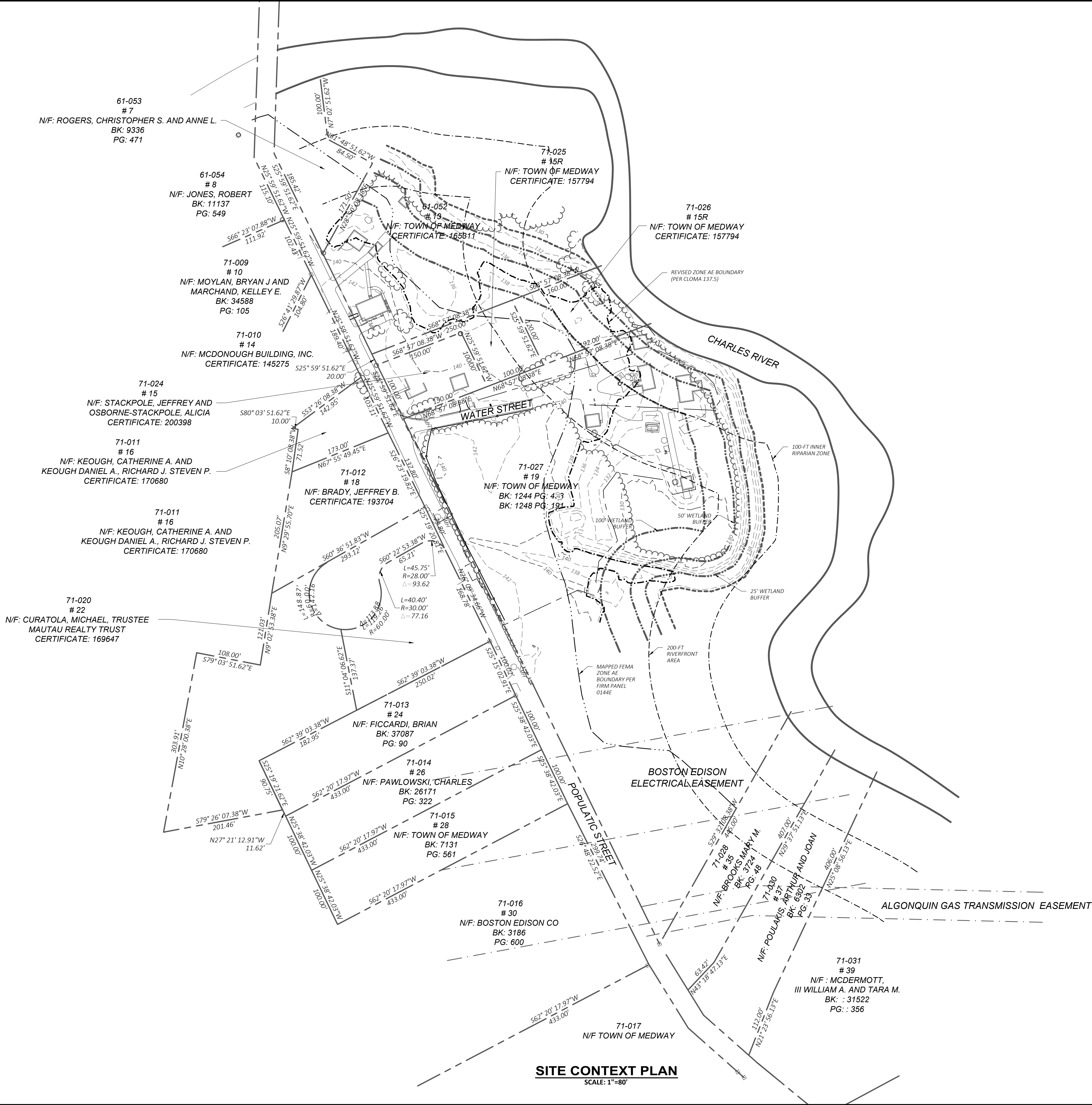
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MEDWAY, MASSACHUSETTS  
POPULATIC WATER TREATMENT PLANT

GENERAL NOTES, LEGEND AND ABBREVIATIONS

DRAWING  
C-1







REVISIONS	
NO	DATE
1	1/2022
PERMITTING RESUBMISSION	
1	
2	
3	
4	
5	

PROJECT NO: 20600  
DESIGNED: C.DAGLE  
CAD COORD: B.JONES  
CAD: D.METZ  
CHECKED: J.PREBLE  
DATE: 1/17/2022  
APPROVED: J.CRAY  
DATE: 1/17/2022  
SUBMISSION: 90% DESIGN REVIEW





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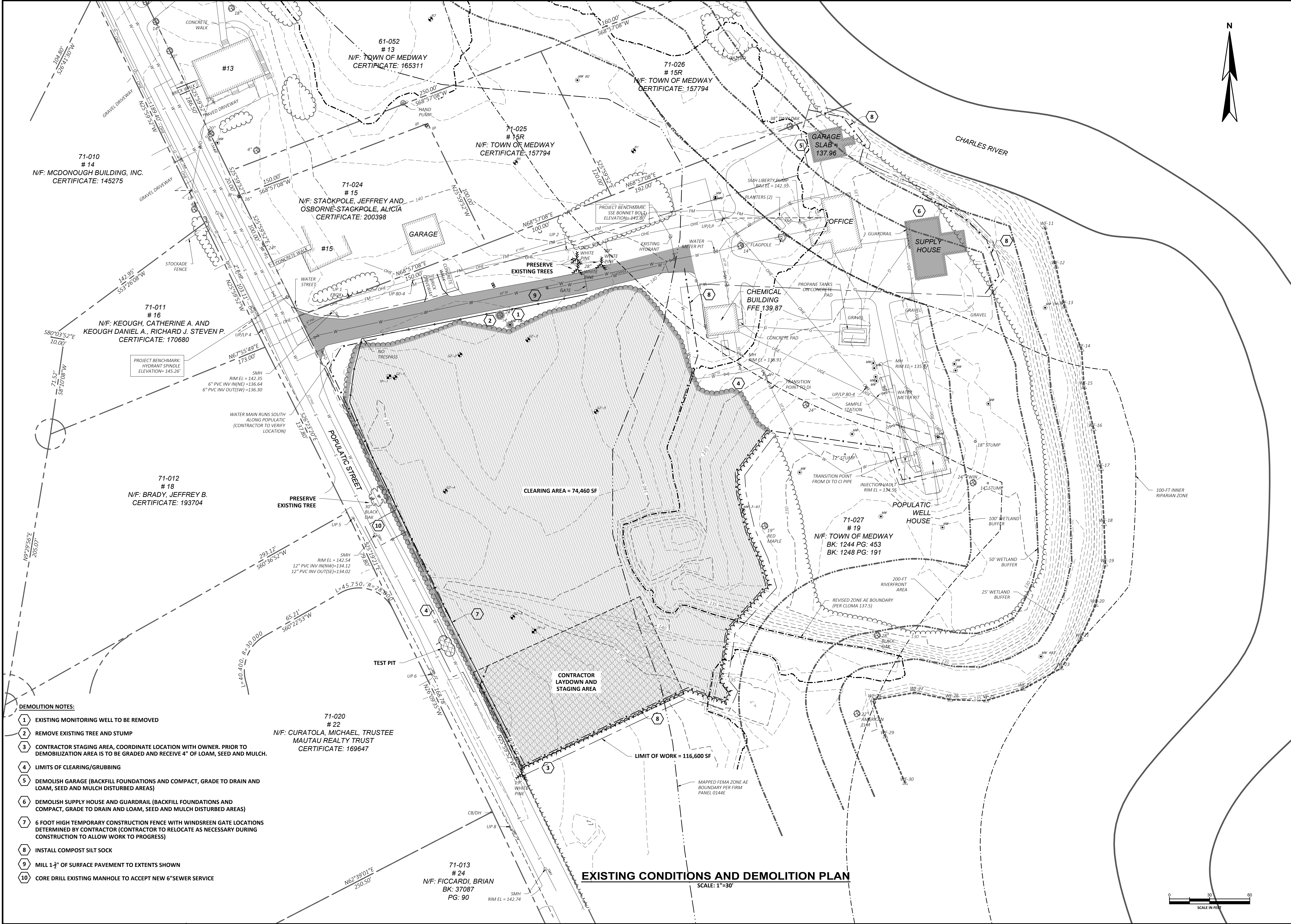
MEDWAY, MASSACHUSETTS  
POPULATIC WATER TREATMENT PLANT

SITE CONTEXT PLAN

DRAWING  
C-1A



LAST SAVED BY: DANIEL METZ 1/25/2022 1:53 PM  
A:\ENGINE\MA\MEDWAY\20600-WTP\_DESIGN\DRAWINGS\CVI 20600-CS-EXISTINGCONDITIONS.DWG [ 20600-CS-EXISTINGCONDITIONS | 12.5849 ] [ 1/25/2022 2:56:05 PM ] DANIEL METZ



- DEMOLITION NOTES:**
- 1 EXISTING MONITORING WELL TO BE REMOVED
  - 2 REMOVE EXISTING TREE AND STUMP
  - 3 CONTRACTOR STAGING AREA, COORDINATE LOCATION WITH OWNER. PRIOR TO DEMOBILIZATION AREA IS TO BE GRADED AND RECEIVE 4" OF LOAM, SEED AND MULCH.
  - 4 LIMITS OF CLEARING/GRUBBING
  - 5 DEMOLISH GARAGE (BACKFILL FOUNDATIONS AND COMPACT, GRADE TO DRAIN AND LOAM, SEED AND MULCH DISTURBED AREAS)
  - 6 DEMOLISH SUPPLY HOUSE AND GUARDRAIL (BACKFILL FOUNDATIONS AND COMPACT, GRADE TO DRAIN AND LOAM, SEED AND MULCH DISTURBED AREAS)
  - 7 6 FOOT HIGH TEMPORARY CONSTRUCTION FENCE WITH WINDSCREEN GATE LOCATIONS DETERMINED BY CONTRACTOR (CONTRACTOR TO RELOCATE AS NECESSARY DURING CONSTRUCTION TO ALLOW WORK TO PROGRESS)
  - 8 INSTALL COMPOST SILT SOCK
  - 9 MILL 1 1/2" OF SURFACE PAVEMENT TO EXTENTS SHOWN
  - 10 CORE DRILL EXISTING MANHOLE TO ACCEPT NEW 6" SEWER SERVICE

**EXISTING CONDITIONS AND DEMOLITION PLAN**  
SCALE: 1"=30'



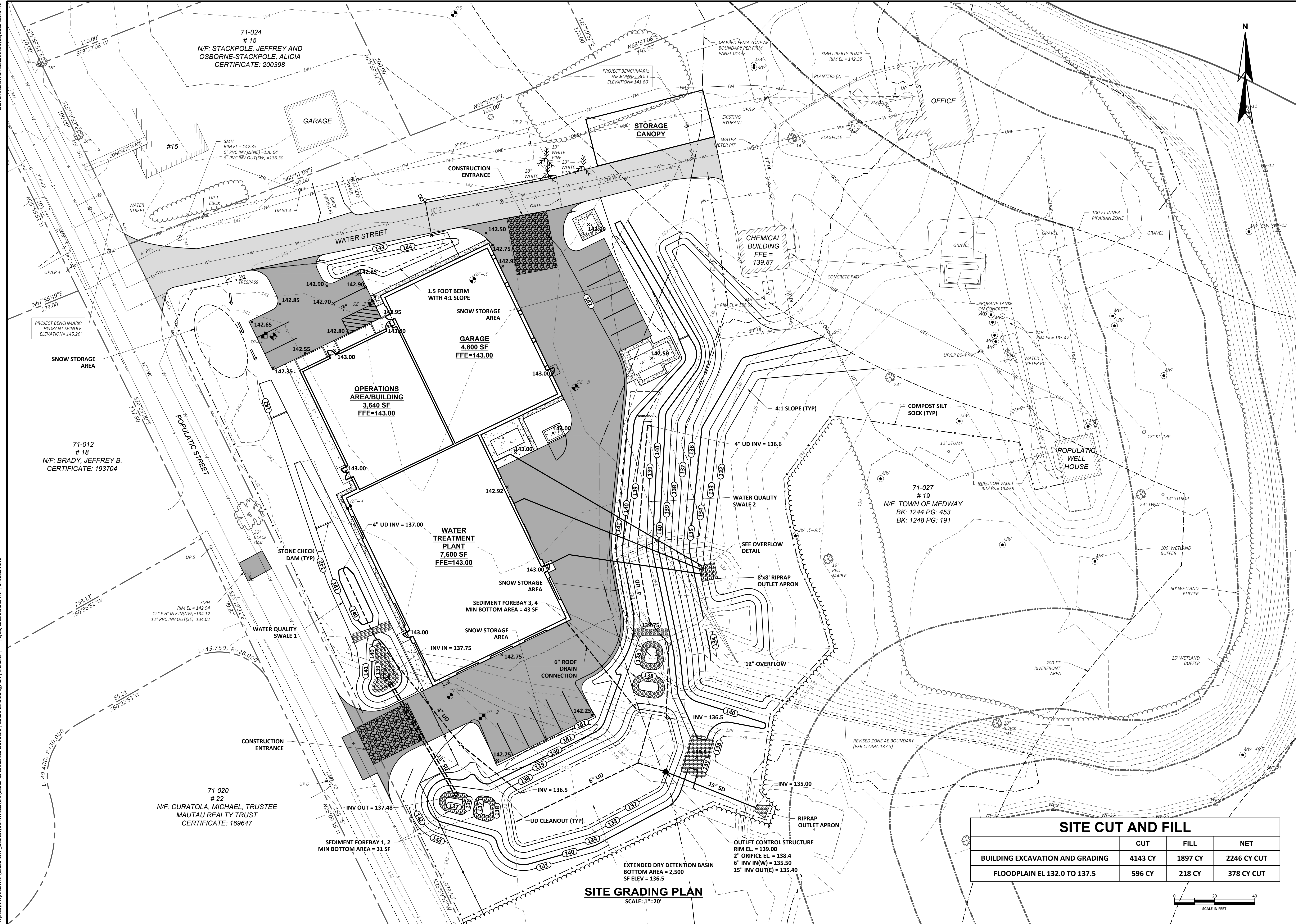
REVISIONS		APPD	DATE
PERMITTING RESUBMISSION			1/2022
NO	Δ		
PROJECT NO: 20600		DESIGNED: CDAGLE	
		CAD COORD: BJONES	
		CAD: D.METZ	
		CHECKED: J.PREBLE	
		DATE: J.CRAY	
		APPROVED: J.CRAY	
		DATE:	
		SUBMISSION: 90% DESIGN REVIEW	
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MEDWAY, MASSACHUSETTS POPULATIC WATER TREATMENT PLANT		EXISTING CONDITIONS AND DEMOLITION PLAN	
DRAWING		C-2	







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SITE CUT AND FILL			
	CUT	FILL	NET
BUILDING EXCAVATION AND GRADING	4143 CY	1897 CY	2246 CY CUT
FLOODPLAIN EL 132.0 TO 137.5	596 CY	218 CY	378 CY CUT

PROJECT NO: 20600  
DESIGNED: CDARGLE  
CAD COORD: B. JONES  
CAD: D. METZ  
CHECKED: J. PREBLE  
DATE: 1/2/2022  
APPROVED: J. CRAY  
DATE: 1/2/2022  
SUBMISSION: 90% DESIGN REVIEW

COMMONWEALTH OF MASSACHUSETTS  
JAMES E. CRAY  
CIVIL  
No. 46689  
REGISTERED PROFESSIONAL ENGINEER

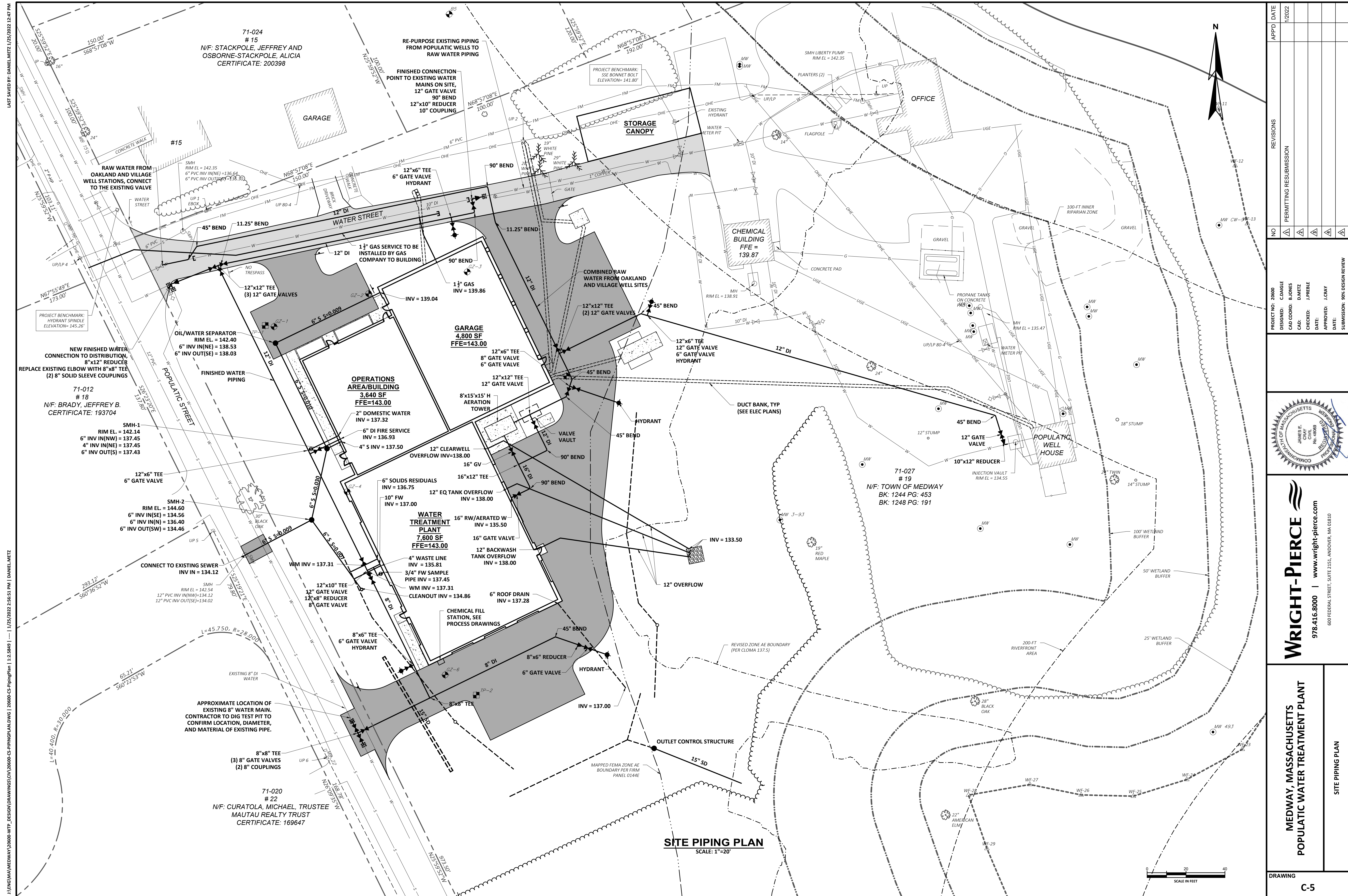
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MEDWAY, MASSACHUSETTS  
POPULATIC WATER TREATMENT PLANT

SITE GRADING PLAN

DRAWING  
**C-4**

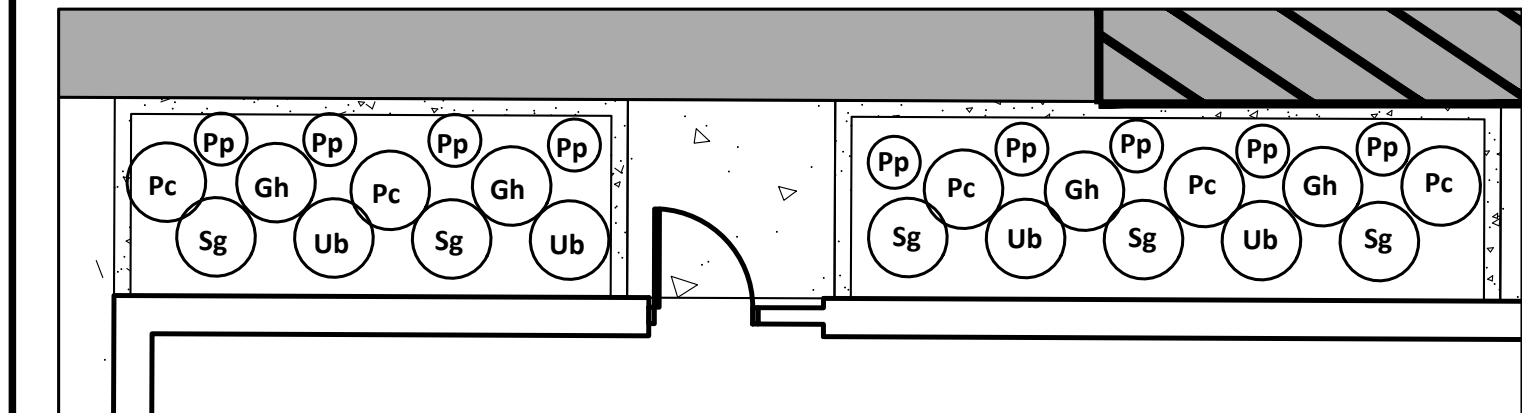
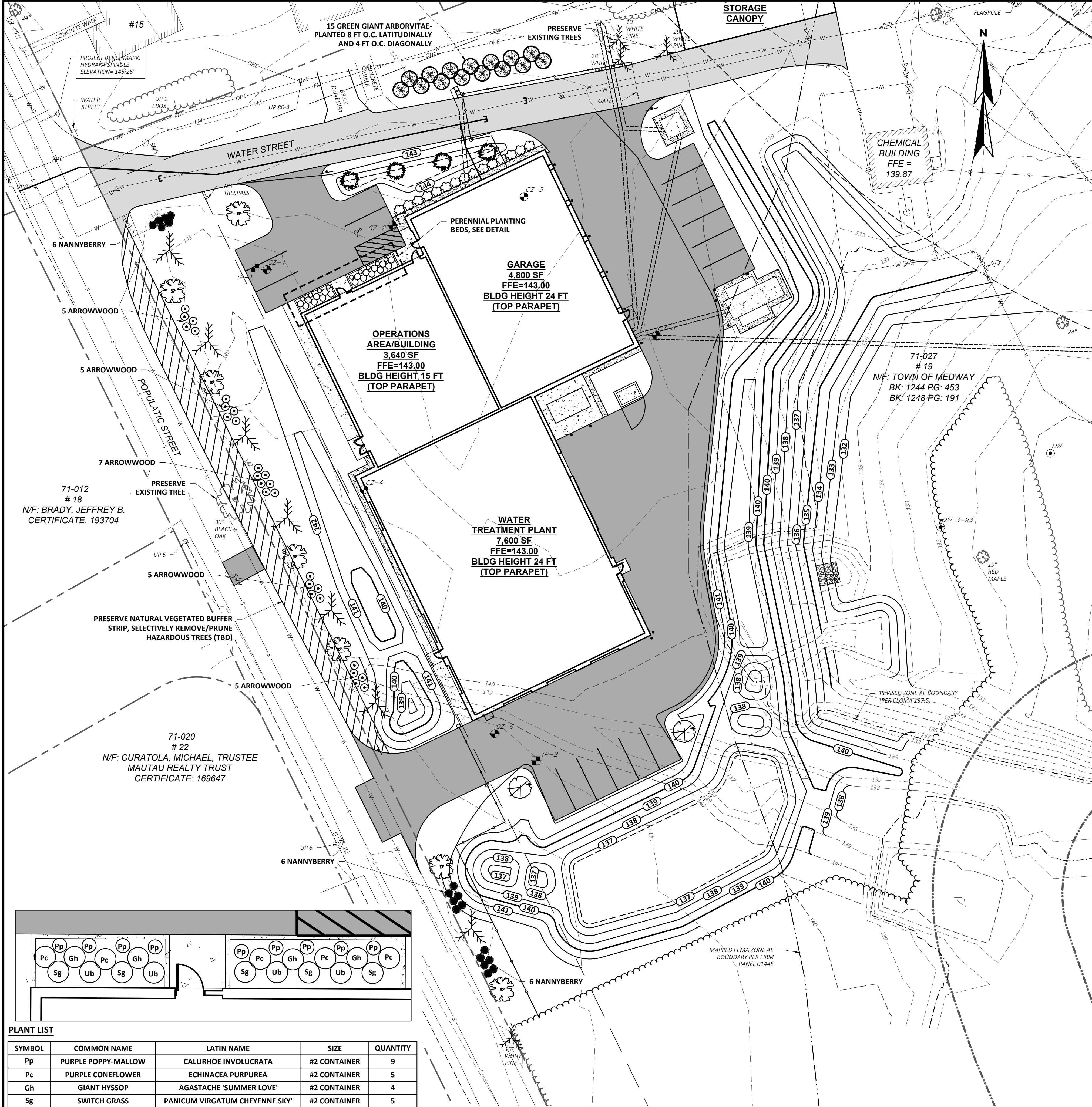




DRAWING	<b>WRIGHT-PIERCE</b> MEDWAY, MASSACHUSETTS POPULATIC WATER TREATMENT PLANT  978.416.8000   <a href="http://www.wright-pierce.com">www.wright-pierce.com</a> 600 FEDERAL STREET, SUITE 2151, ANDOVER, MA 01810  SITE PIPING PLAN		PROJECT NO.: 20600 DESIGNED: C.DARGLE CAD COORD: B. JONES CAD: D.METZ CHECKED: J.PRESLE DATE:	NO PERMITTING RESUBMISSION NO NO NO NO NO NO	REVISIONS 1/2/2022	APP'D. DATE
			APPROVED: J. CHAY DATE:	NO NO NO NO NO NO	NO NO NO NO NO NO	NO NO NO NO NO NO
			SUBMISSION: 90% DESIGN REVIEW	NO NO NO NO NO NO	NO NO NO NO NO NO	NO NO NO NO NO NO
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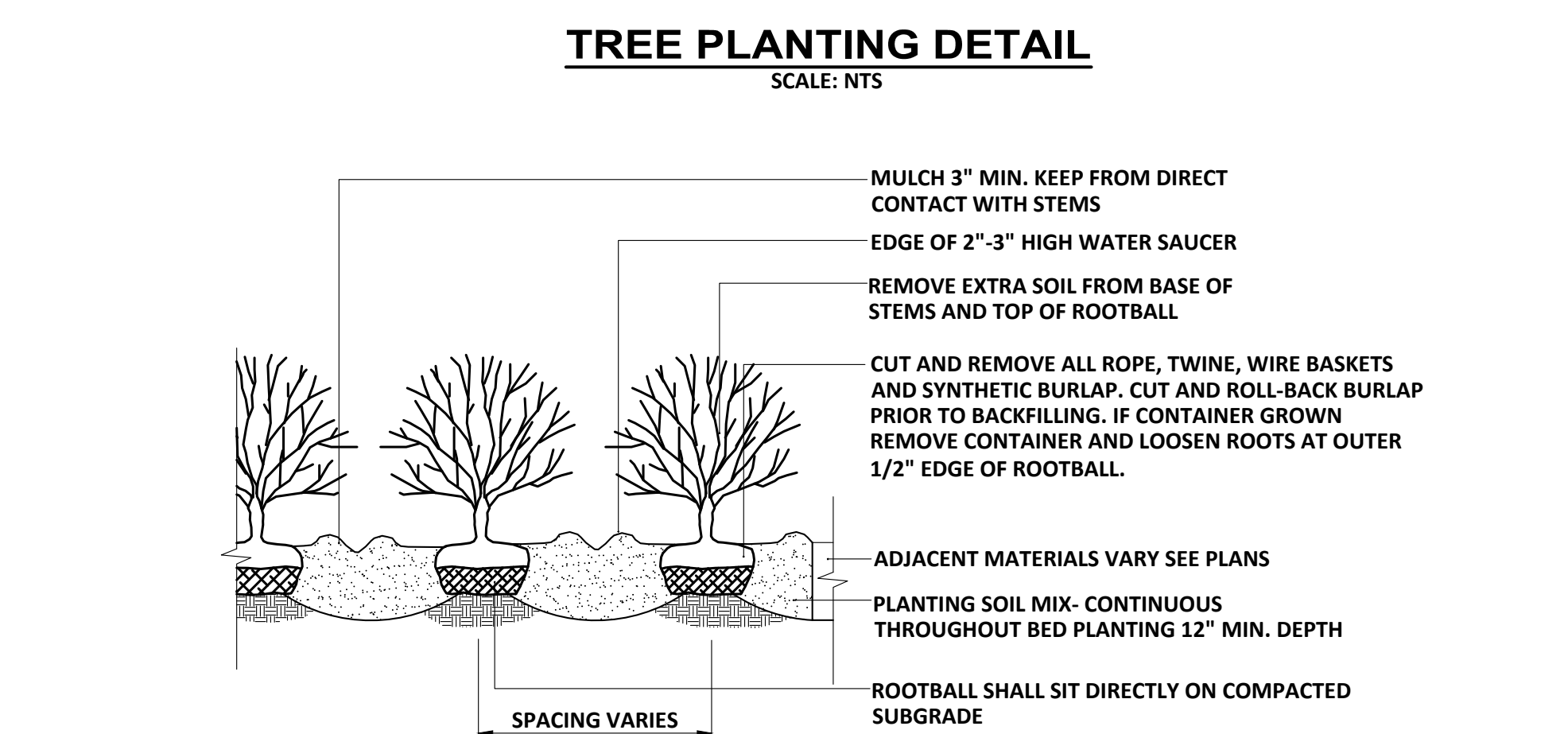
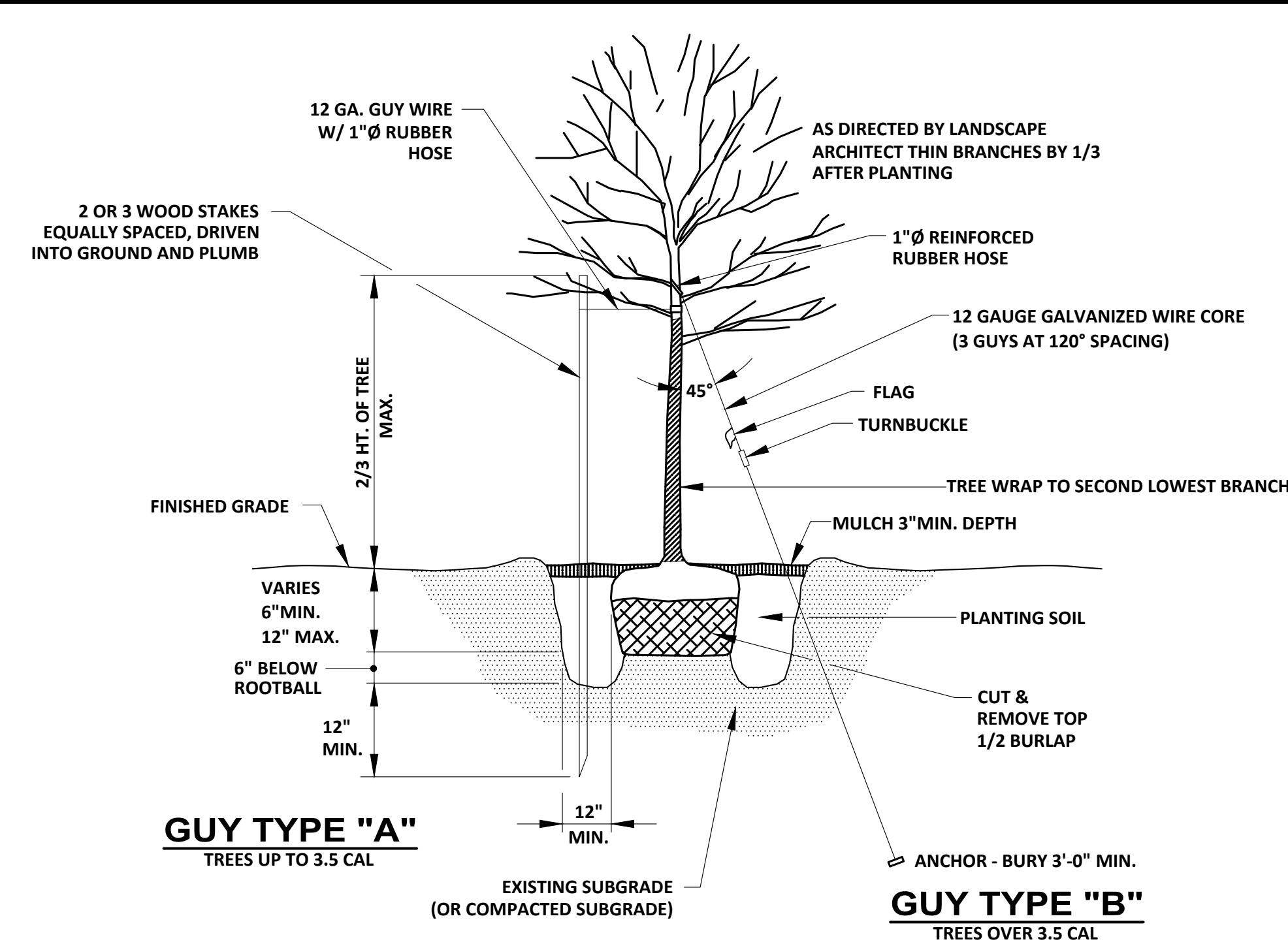
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A:\ENGINEERING\20600-WPT-DESIGN\DRAWINGS\CIV\20600-CS-LANDSCAPEPLAN.DWG | 20600-CS-LANDSCAPEPLAN | 1:2.5849 | 1/25/2022 2:57:14 PM | DANIEL METZ



SYMBOL	COMMON NAME	LATIN NAME	SIZE	QUANTITY
Pp	PURPLE POPPY-MALLOW	CALLIRHOE INVOLUCRATA	#2 CONTAINER	9
Pc	PURPLE CONEFLOWER	ECHINACEA PURPUREA	#2 CONTAINER	5
Gh	GIANT HYSSOP	AGASTACHE 'SUMMER LOVE'	#2 CONTAINER	4
Sg	SWITCH GRASS	PANICUM VIRGATUM CHEYENNE SKY	#2 CONTAINER	5
Ub	UPRIGHT LITTLE BLUESTEM	SCHIZACHRYIUM 'STANDING OVATION'	#2 CONTAINER	4

PERENNIAL PLANTING BEDS PLAN  
SCALE: 1"=20'

SITE LANDSCAPE PLAN AND DETAILS  
SCALE: 1"=20'



SHRUB PLANTING BED  
SCALE: NTS

- SITE LANDSCAPE WORK-LAWS**
- ALL AREAS DISTURBED DUE TO CONSTRUCTION OPERATIONS AND NOT DESIGNATED FOR OTHER SURFACE TREATMENT SHALL RECEIVE A 6" DEPTH OF TOPSOIL, AND SHALL BE FINE-GRADED AND SEEDED TO LAWN, PER LANDSCAPE SPECIFICATIONS.
  - ALL LAWN AREAS SHALL RECEIVE ADEQUATE TEMPORARY IRRIGATION, AS SPECIFIED AND REQUIRED.
  - NEW LAWNS AREAS SHALL BE HYDRO-SEEDED WHERE SHOWN AND AS SPECIFIED. MECHANICAL SEEDING (BRILLION OR APPROVED EQUIPMENT) MAY BE ALLOWED IF APPROVED BY THE OWNER'S REPRESENTATIVE. THOSE AREAS SHALL BE HYDRO-MULCHED OR STRAW-MULCHED WITH A CHOPPER/BLOWER AND A TACKIFIER AFTER MECHANICAL SEEDING.
- PLANTING NOTES:**
- LANDSCAPE CONTRACTOR SHALL REVIEW ALL SITE UTILITY PLANS AND COORDINATE WITH THE GENERAL CONTRACTOR TO AVOID HAZARDS AND CONFLICTS WITH EXISTING/NEW UNDERGROUND UTILITIES.
  - ALL PLANTS SHALL BE HEALTHY NURSERY STOCK MEETING REQUIREMENTS OF NURSERYMEN'S ASSOCIATION STANDARDS FOR TYPE, SIZE, AND CONDITION. ALL OTHERS WILL BE REJECTED.
  - OWNER'S REPRESENTATIVE WILL INSPECT ALL PLANT BEDS PRIOR TO ANY PLANTING.
  - ALL PLANT BEDS SHALL RECEIVE A 3" SETTLED DEPTH OF AGED SHREDDED HEMLOCK BARK MULCH, IMMEDIATELY AFTER INSTALLATION OF MULCH, THE CONTRACTOR SHALL THOROUGHLY WET ALL BEDS WITH THE EQUIVALENT OF 2" RAINFALL TO SETTLE MULCH TO 3" DEPTH.
  - PLANT LIST IS INFORMATIONAL ONLY. IF THERE IS A DISCREPANCY BETWEEN QUANTITIES SHOWN ON THE PLANT LIST AND THOSE SHOWN ON THE PLANS, QUANTITIES SHOWN ON THE PLAN SHALL GOVERN.
  - ALL TREE PITS AND PLANT BEDS SHALL RECEIVE PREPARED PLANTING SOIL MIXTURE AS DETAILED AND SPECIFIED. PLANT BEDS: 12" DEPTH WITH SURFACE 3" BELOW FINISHED GRADE TO ALLOW FOR MULCH.

SYMBOL	COMMON NAME	LATIN NAME	SIZE	QUANTITY
	NORTHERN RED OAK	QUERCUS RUBRA	2.5"-3" CALIPER	7
	WHITE PINE	PINUS STROBIS	8'-10' HEIGHT	7
	FLOWERING DOGWOOD	CORNUS FLORIDA	2"-2.5" CALIPER	4
	RED MAPLE	ACER RUBRUM 'OCTOBER GLORY'	2.5"-3" CALIPER	2
	THUJA STANDISHII X PLICATA 'GREEN GIANT'	GREEN GIANT ARBORVITAE	8-10 FT HEIGHT	15
	CREeping JUNIPER	JUNIPEROUS HORIZONTALIS	#5 CONTAINER	15
	NANNYBERRY	VIBURNUM LENTAGO	#5 CONTAINER	18
	ARROWWOOD	VIBURNUM DENTATUM	#5 CONTAINER	27



DATE	1/2022
APPROVED	
REVISIONS	
PERMITTING RESUBMISSION	
NO	
PROJECT NO: 20600	DESIGNED: A.DUFFY(GZA)
CAD COORD: B.JONES	CAD: D.METZ
CHECKED: J.PREBLE	DATE: 1/2022
APPROVED: J.CRAY	DATE: 1/2022
SUBMISSION: 90% DESIGN REVIEW	

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MEDWAY, MASSACHUSETTS  
POPULATIC WATER TREATMENT PLANT

SITE LANDSCAPE PLAN AND DETAILS

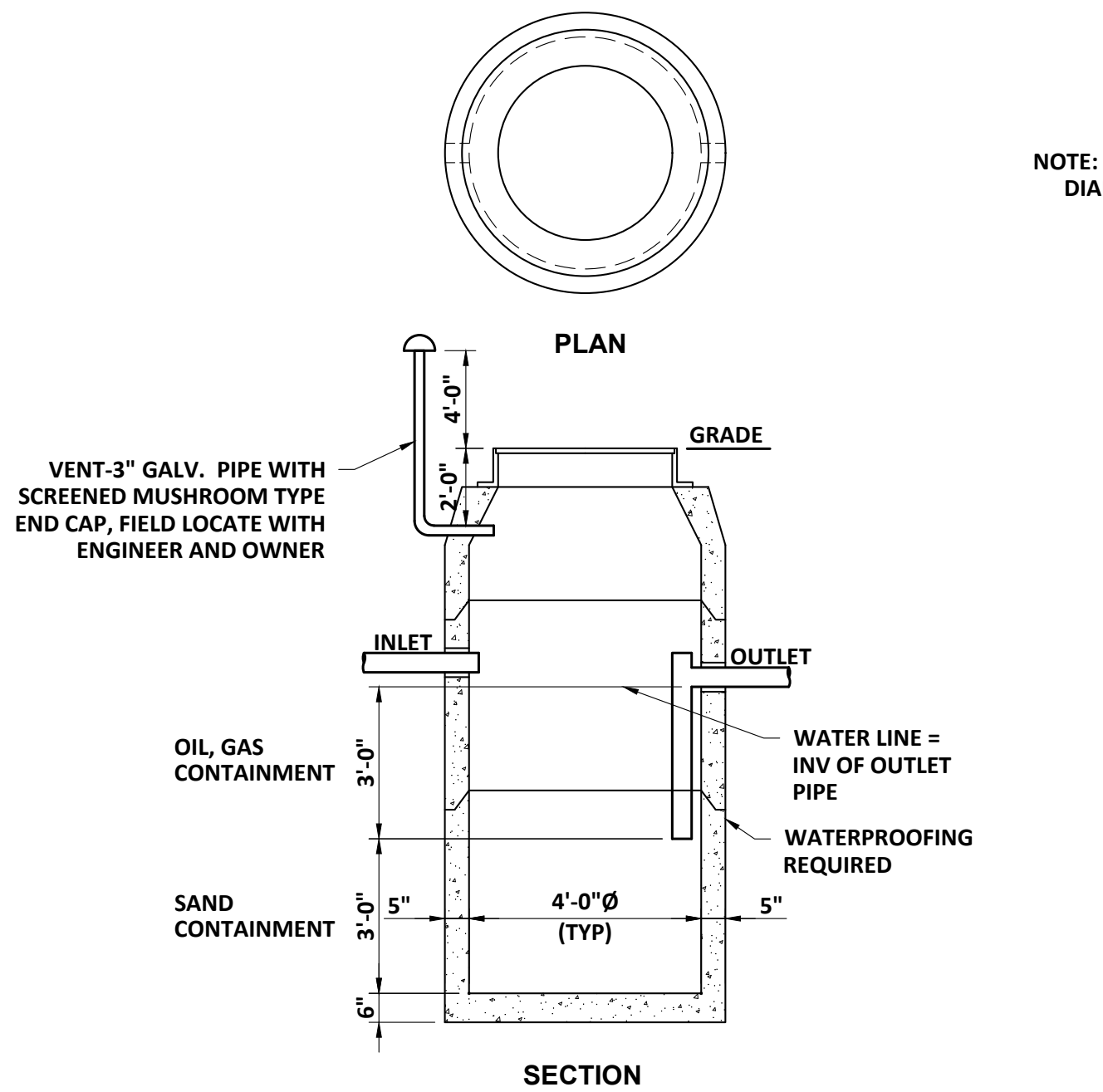
DRAWING  
C-6



- NOTES:**
1. TYPICAL SANITARY MANHOLE TO BE 4 FEET IN DIAMETER.
  2. 5'-0" DIAMETER FOR ALL MANHOLE DEPTHS GREATER THAN 12 FEET OR WHEN ORDERED BY THE ENGINEER.
  3. MIN WALL THICKNESS AND 2" MIN BASE THICKNESS WITH 5'-0" DIAMETER MANHOLES.
  4. INNER EDGE OF BRICK TABLE TO BE AT ELEVATION OF CROWN OF TOP OF PIPE.
  5. DESIGN LOAD - HS20.
  6. ALL INVERTS SHALL BE 4,000 PSI CEMENT CONCRETE IN VOID AREAS AND RED SEWER BRICK CONSTRUCTION.
  7. INVERTS SHALL NOT BE BUILT ABOVE GRADE. ALL INVERTS SHALL BE BUILT IN PLACE WITH ALL PIPES INSTALLED.
  8. IF UNSUITABLE MATERIAL OR UNSTABLE SOILS ARE ENCOUNTERED AT SUBGRADE, OVER-EXCAVATE UP TO 3'-0" BELOW BOTTOM OF STRUCTURE AND REPLACE WITH COMPACTED SAND-GRAVEL FILL OR 3/4" CRUSHED STONE WRAPPED IN NON-WOVEN FILTER FABRIC.

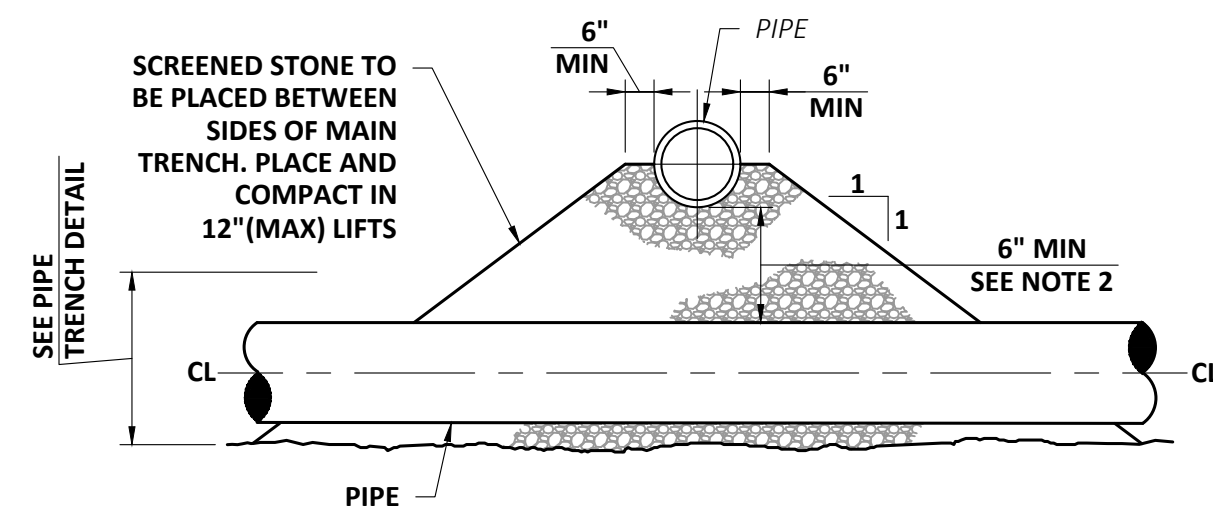
## TYPICAL SEWER MANHOLE

SCALE: "NTS"



## OIL/WATER SEPARATOR

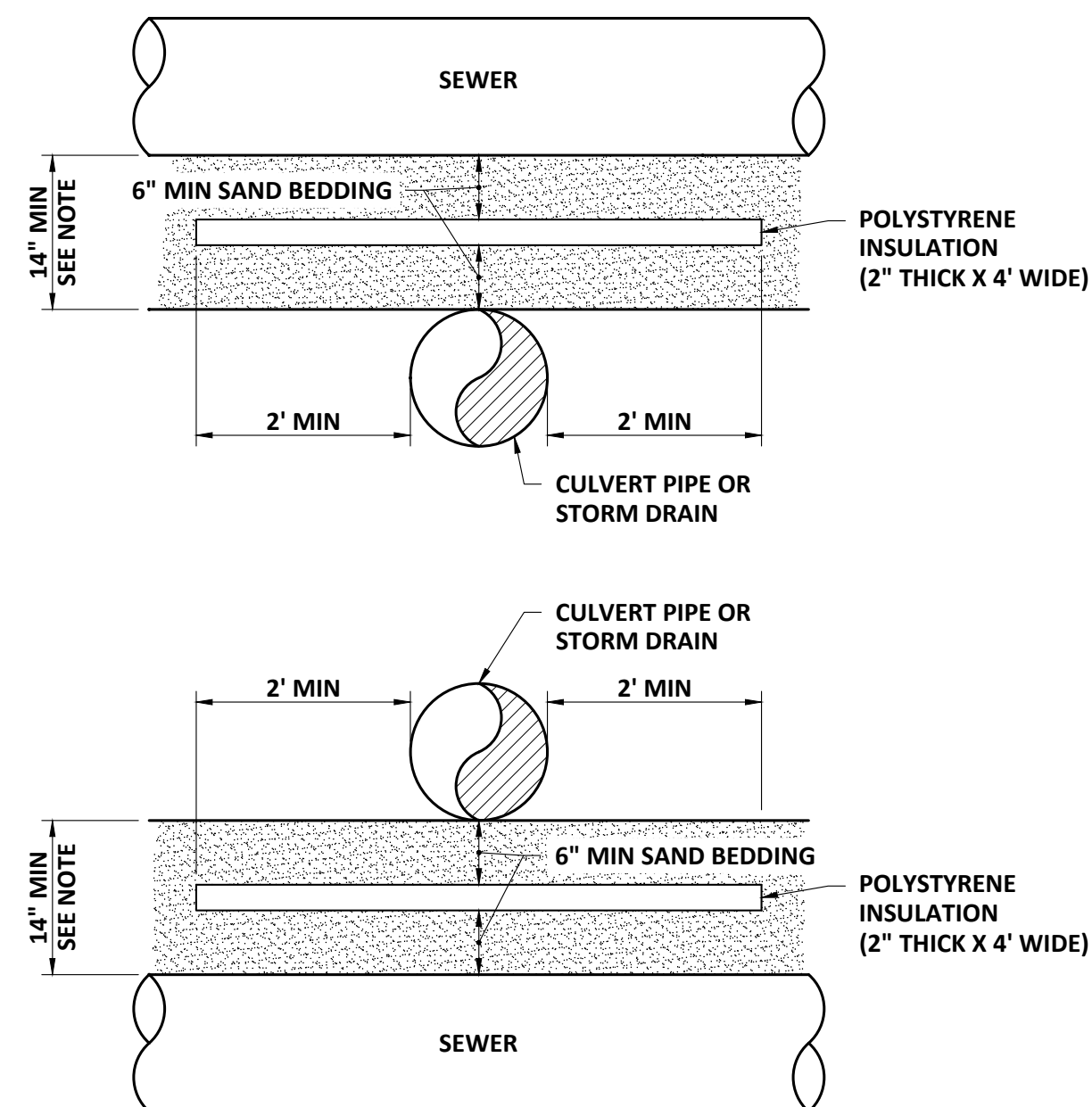
**SCALE: NTS**



- NOTES:**
1. JOINTS ON EACH PIPE TO BE AS FAR FROM INTERSECTION AS POSSIBLE.
  2. IF LESS THAN 12", FLOWABLE FILL MAY BE REQUIRED RATHER THAN SCREENED STONE TO FACILITATE PROPER PIPE BEDDING AND COMPACTION AT ENGINEER'S DISCRETION. REFER TO SPECIFICATIONS SECTION 02225 FOR ADDITIONAL INFORMATION.

## PIPE CROSSING

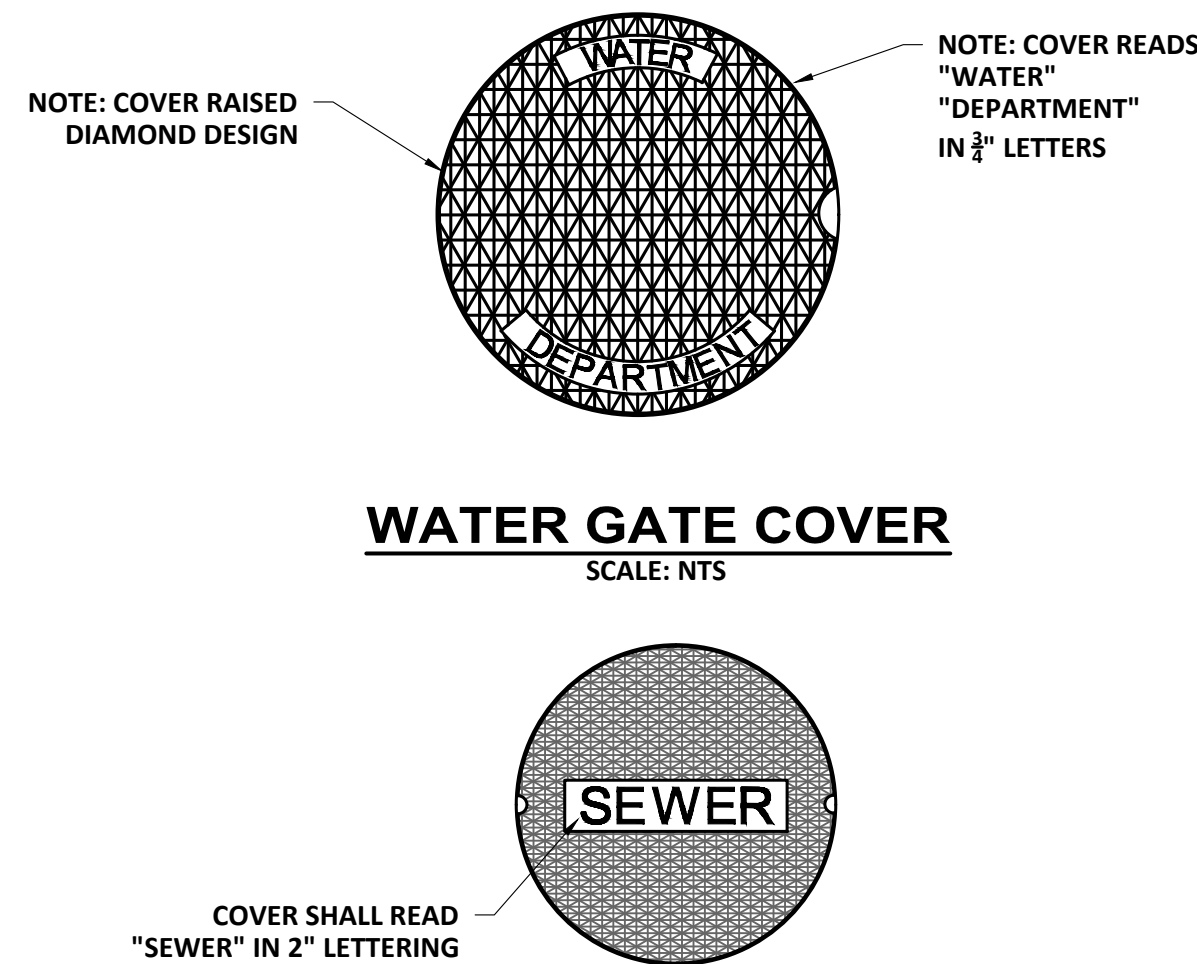
**SCALE: NTS**



**NOTE:**  
INSULATION TO BE USED WHERE PIPE  
SEPARATION IS 24" OR LESS.

## CULVERT PIPE / STORM DRAIN CROSSING

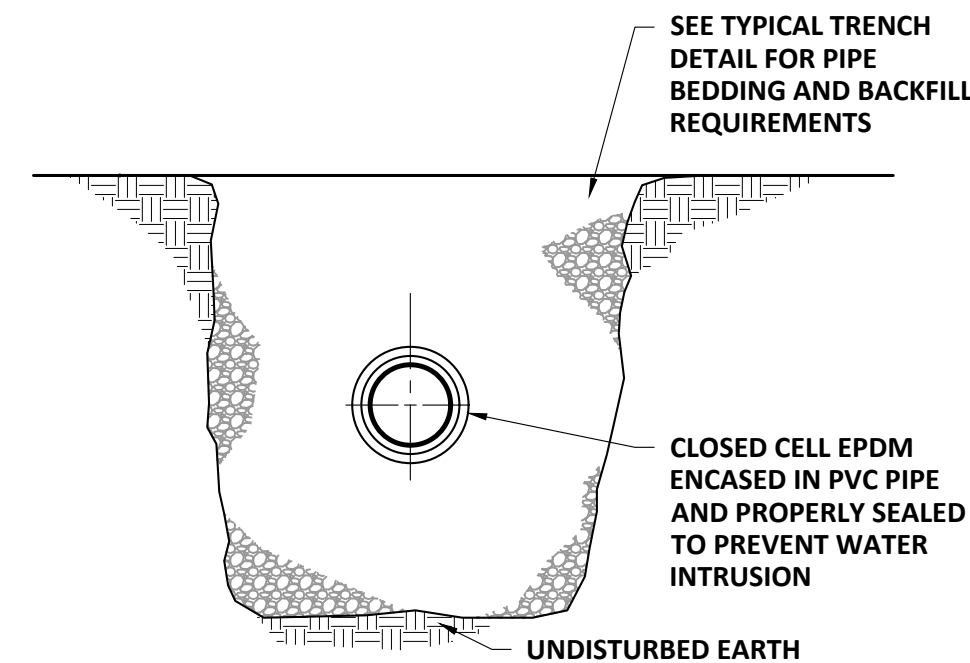
SCALE: NTS



- NOTES:**
1. COVER LETTERING DETAIL APPLIES TO ALL COVER SIZES AND WATERTIGHT MANHOLE COVERS IN ACCORDANCE WITH NOTES IN TYPICAL MANHOLE DETAIL.
  2. ALL COVERS MUST BE MIN 26 INCH WIDE. COVERS MUST BE AS SPECIFIED BY EICO ITEM 2111A COVER OR APPROVED EQUAL.
  3. ALL FRAMES MUST BE MIN 6 INCH HIGH. FRAMES MUST BE AS SPECIFIED BY EICO ITEM 2111Z FRAME OR APPROVED EQUAL.

## SEWER MANHOLE COVER

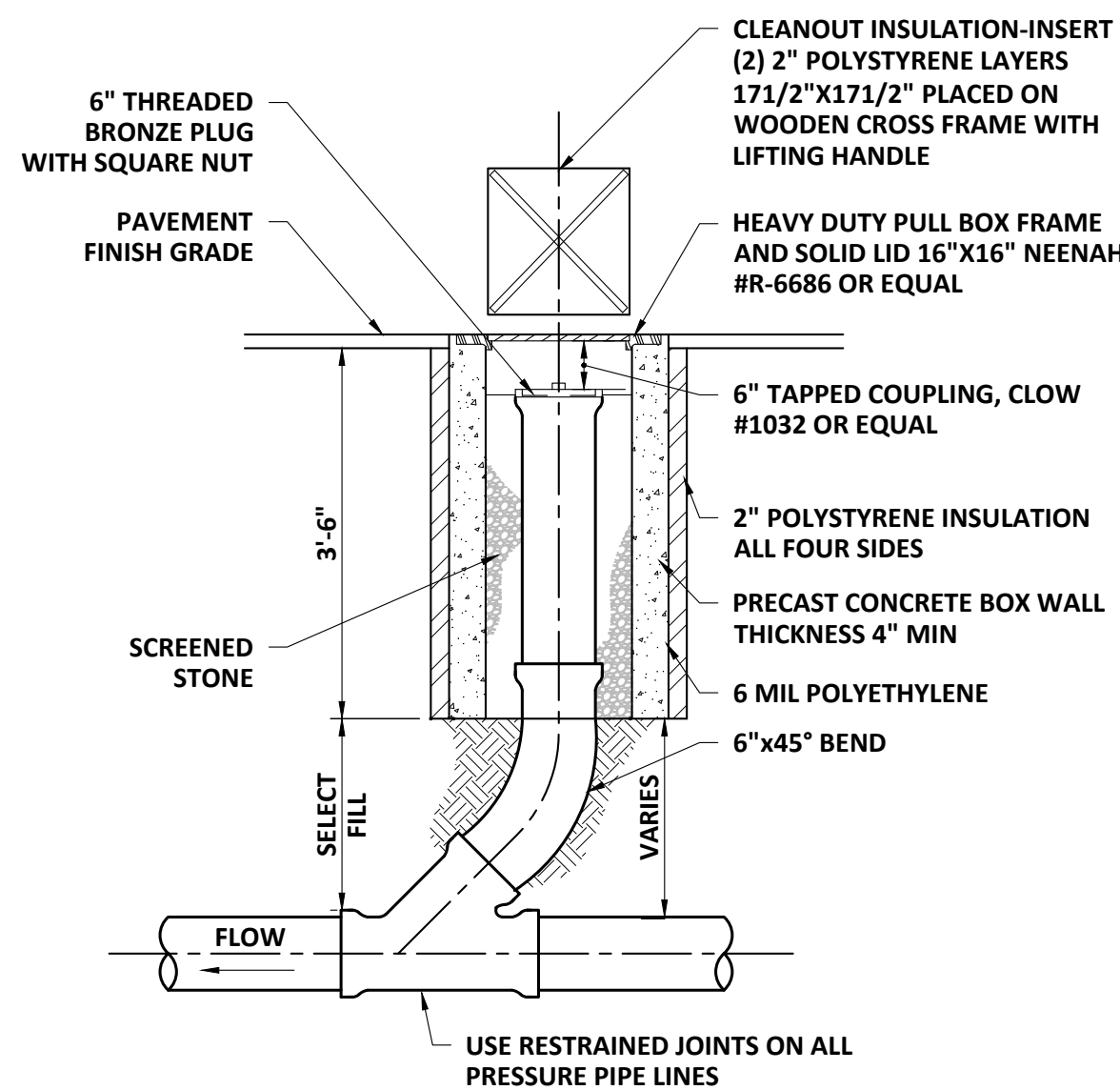
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**NOTE:**  
**TRENCH PIPE INSULATION TO BE USED WHERE DEPTH OF COVER IS LESS THAN 5 FEET OR AS DIRECTED BY THE ENGINEER**

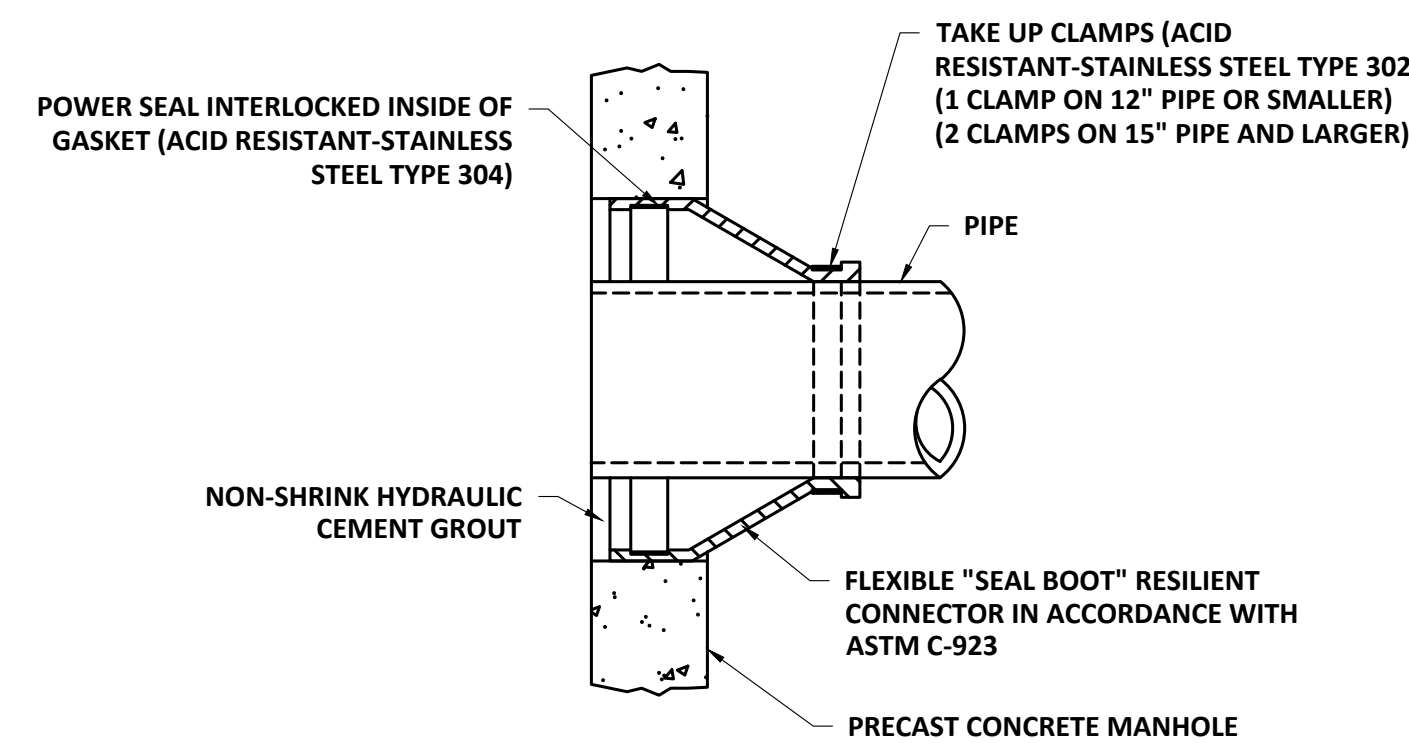
## TRENCH PIPE INSULATION

**SCALE: NTS**



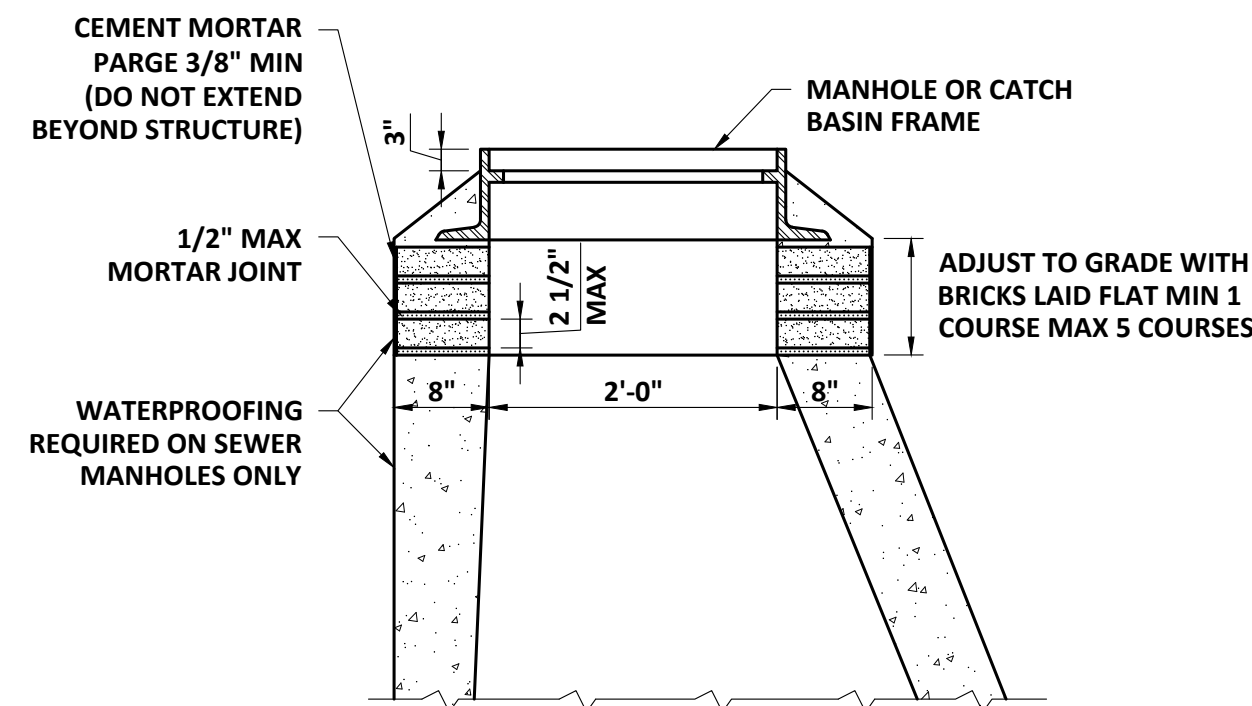
## TYPICAL CLEANOUT

SCALE: NTS



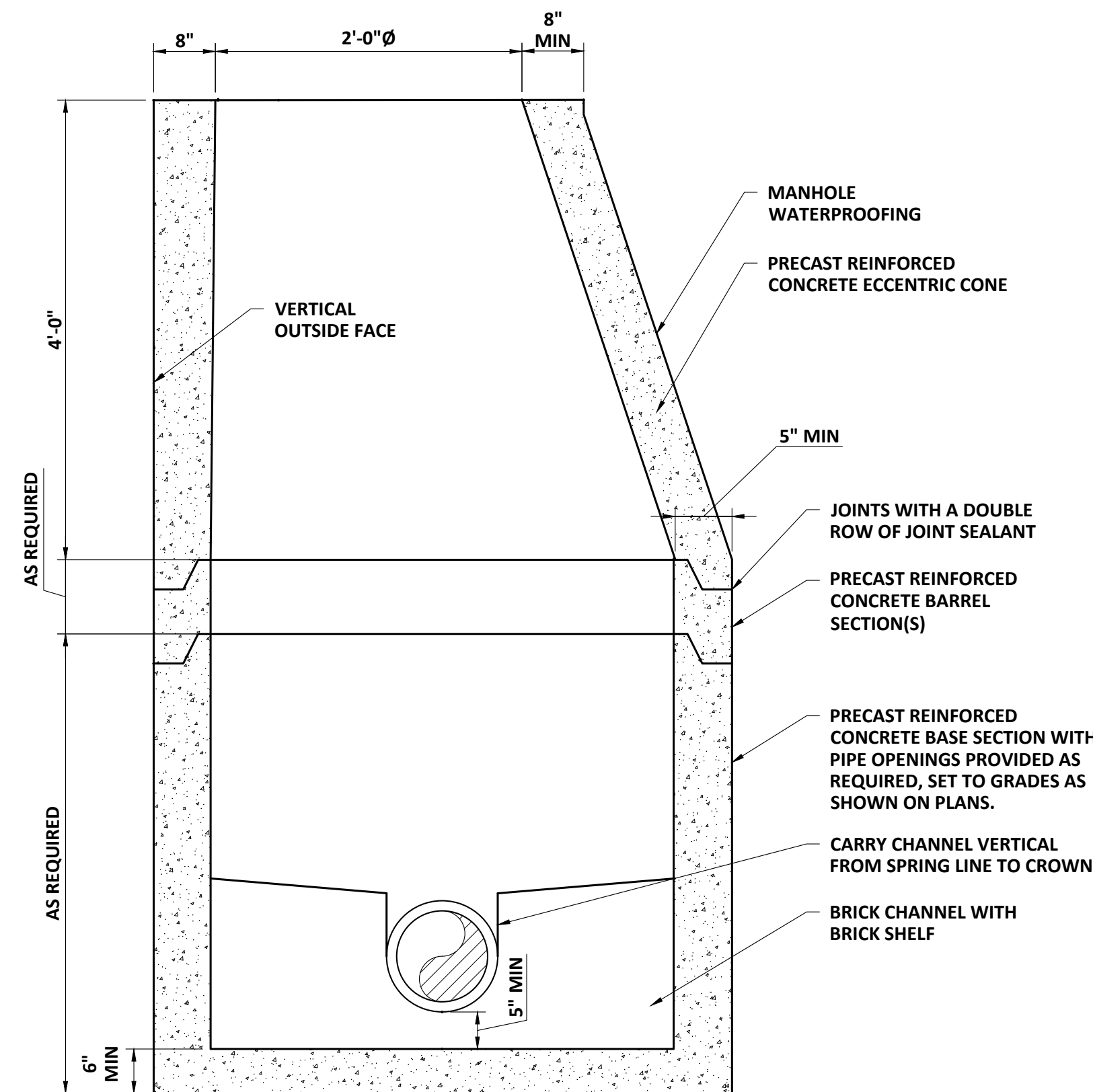
## MANHOLE SEAL

**SCALE: "NTS"**



## MANHOLE FRAME INSTALLATION

SCALE: "NTS"



- NOTES:**
1. MANHOLE CHANNELS REQUIRING A CHANGE IN DIRECTION ARE TO BE BUILT ON A SMOOTH CURVE OF THE LONGEST POSSIBLE RADIUS. IF SIDE PIPES ENTER CHANNEL, SHAPE TO RECEIVE ADDED SIDE FLOW.
  2. USE A FLAT SLAB TOP MANHOLE WHEN THE HEIGHT DIFFERENCE BETWEEN THE HIGHEST INVERT AND RIM IS LESS THAN 6'-0" AND WHEN MANHOLE DIAMETER IS GREATER THAN 4'-0".

## TYPICAL 4-FT MANHOLE

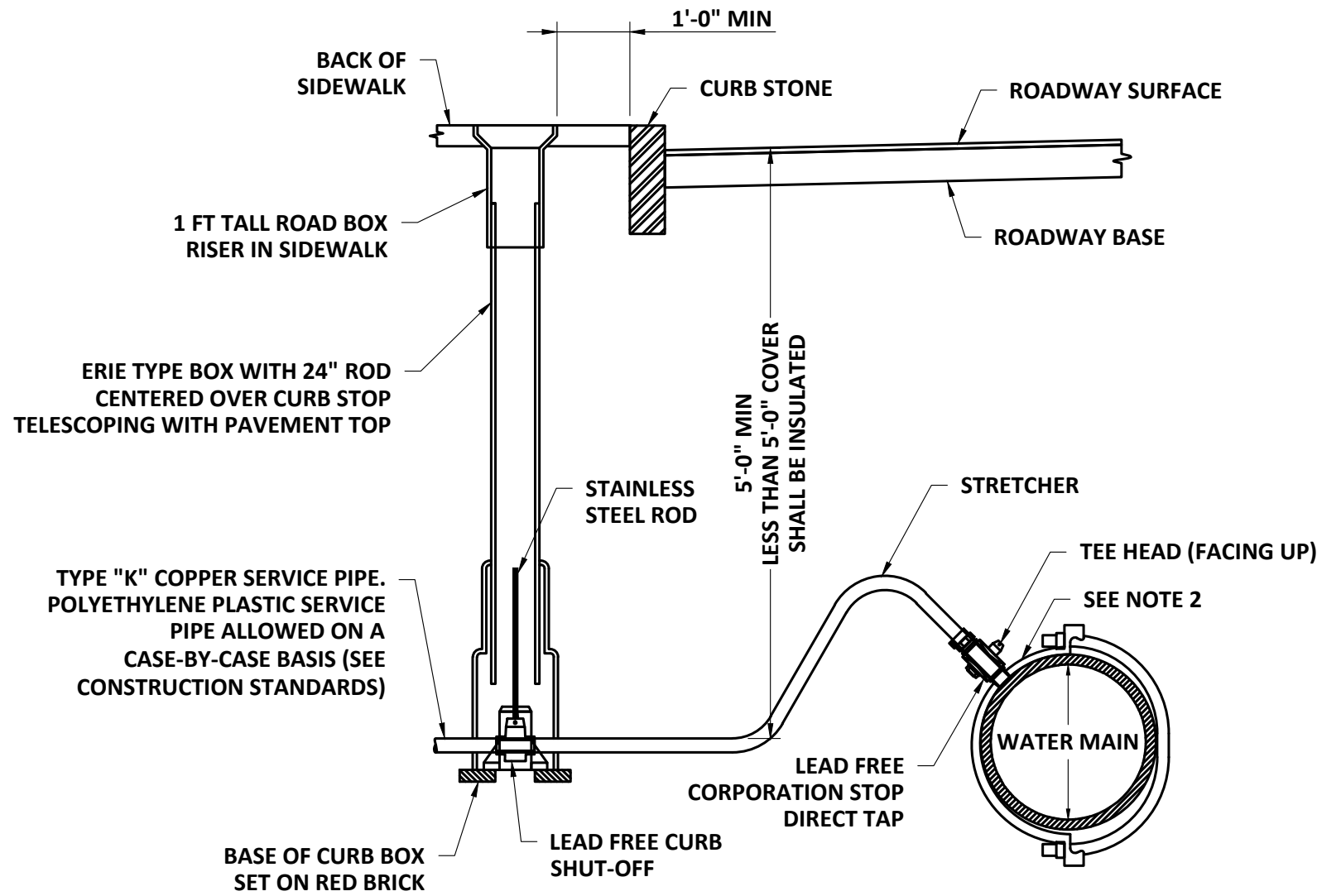
SCALE: "NTS"

<div>MEDWAY, MASSACHUSETTS POPULATIC WATER TREATMENT PLANT</div>	<div>WRIGHT-PIERCE</div> <div>978.416.8000   <a href="http://www.wright-pierce.com">www.wright-pierce.com</a></div> <div>600 FEDERAL STREET, SUITE 2151, ANDOVER, MA 01810</div>	<div><div>COMMONWEALTH OF MASSACHUSETTS</div><div>JAMES E. WRIGHT</div><div>CIVIL</div><div>No. 40069</div><div>REGISTERED PROFESSIONAL ENGINEER</div></div>	PROJECT NO.: 20600		DESIGNED: C.DANGLE	REVISIONS	NO	APPD. DATE
			CAD COORD: B.JONES					
			CAD: D.METZ					
			CHECKED: J.PREBLE					
			DATE:					
APPROVED: J.CRAY		SUBMISSION: 90% DESIGN REVIEW						
DATE:								
PERMITTING RESUBMISSION								
1/2022								
DRAWING		C-7		DETAILS I				

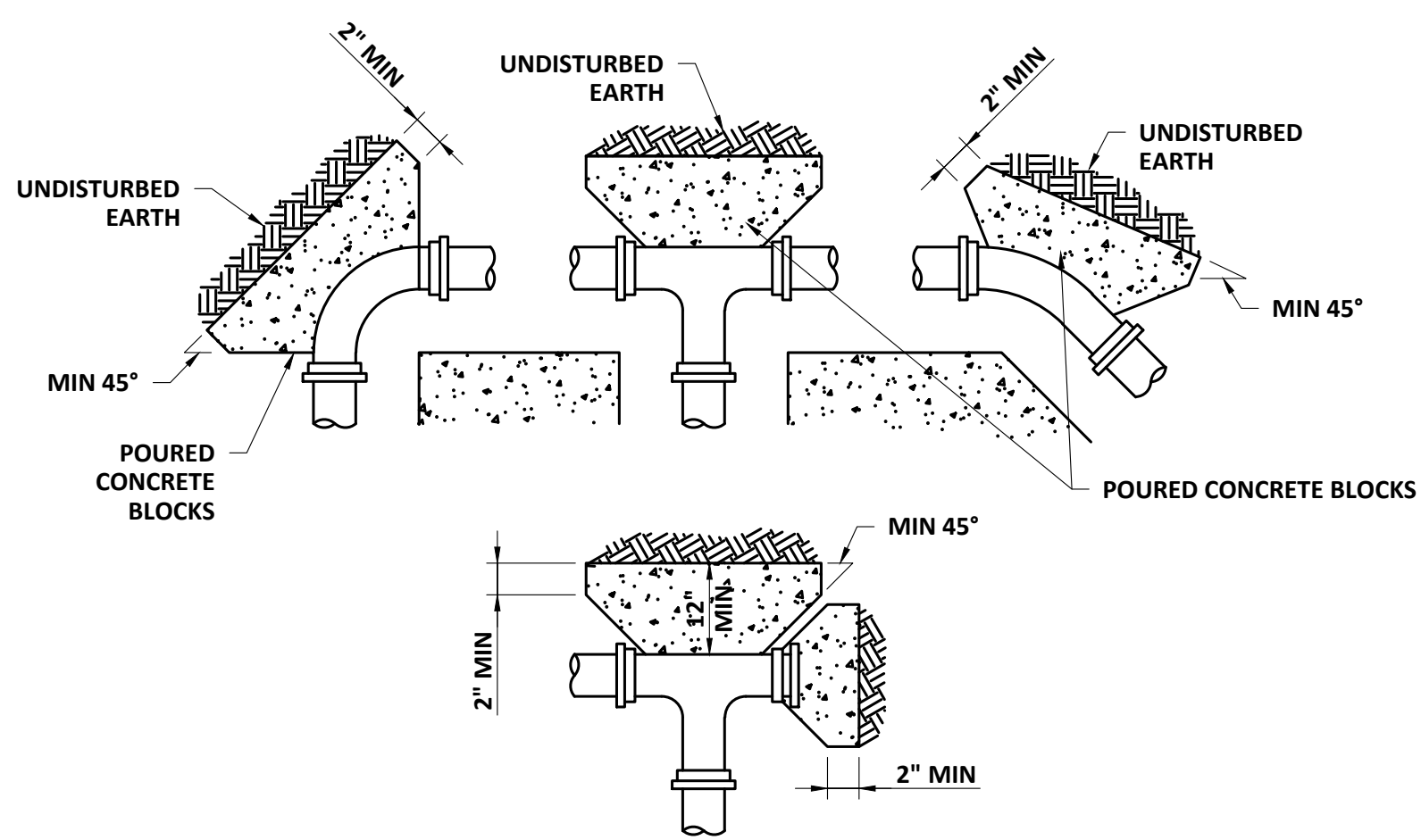


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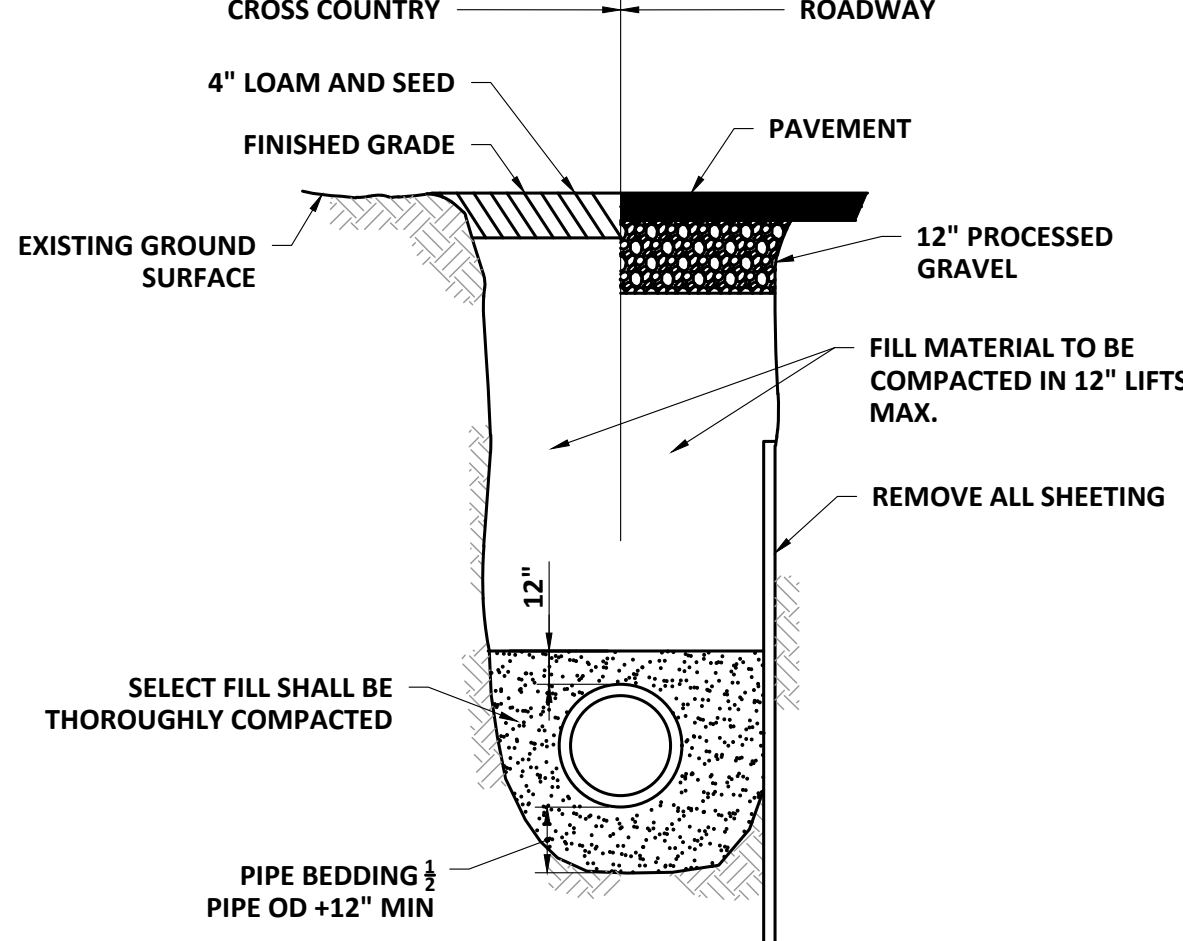
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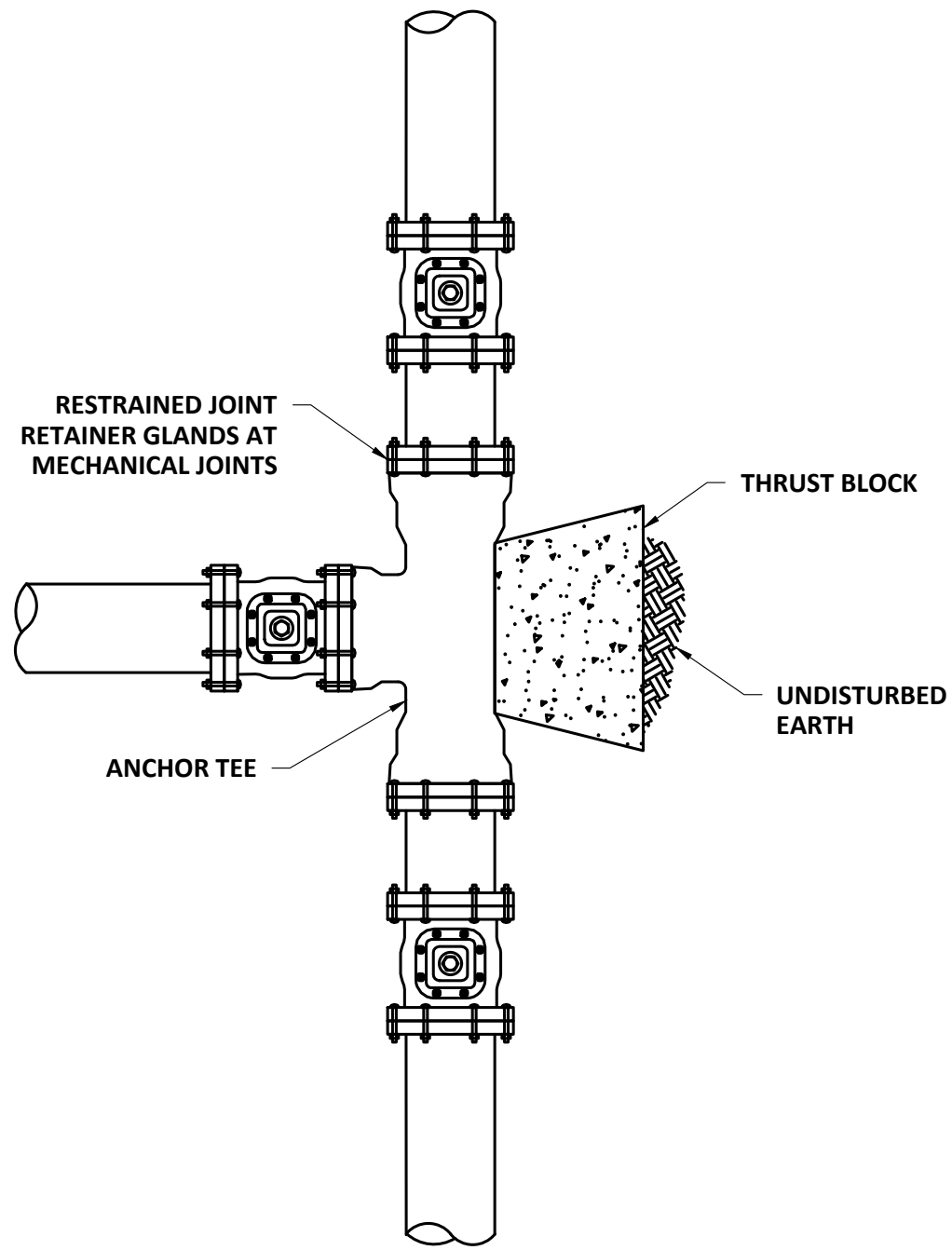
WATER CONNECTION FOR 1"-2" SERVICE  
SCALE: NTS



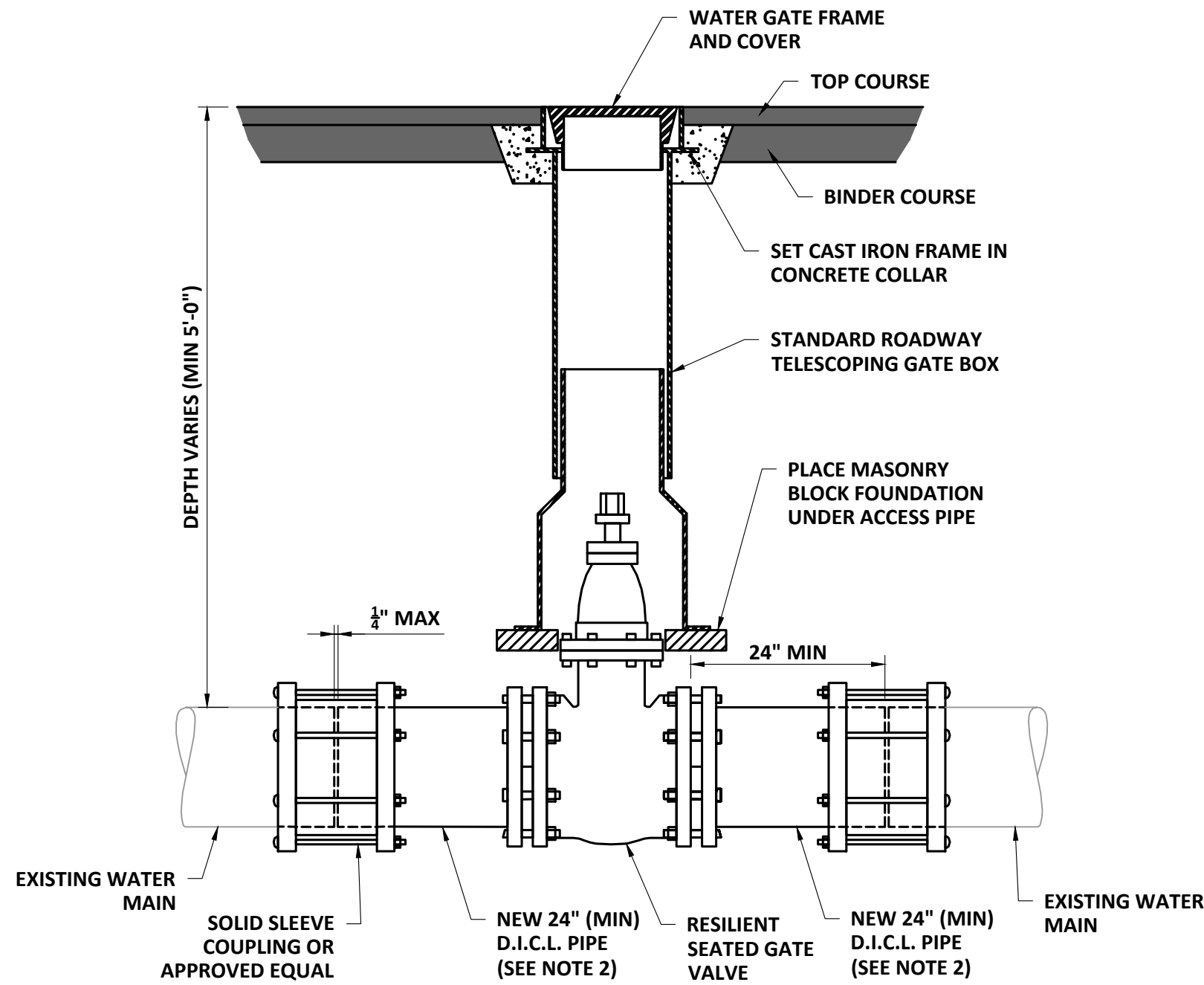
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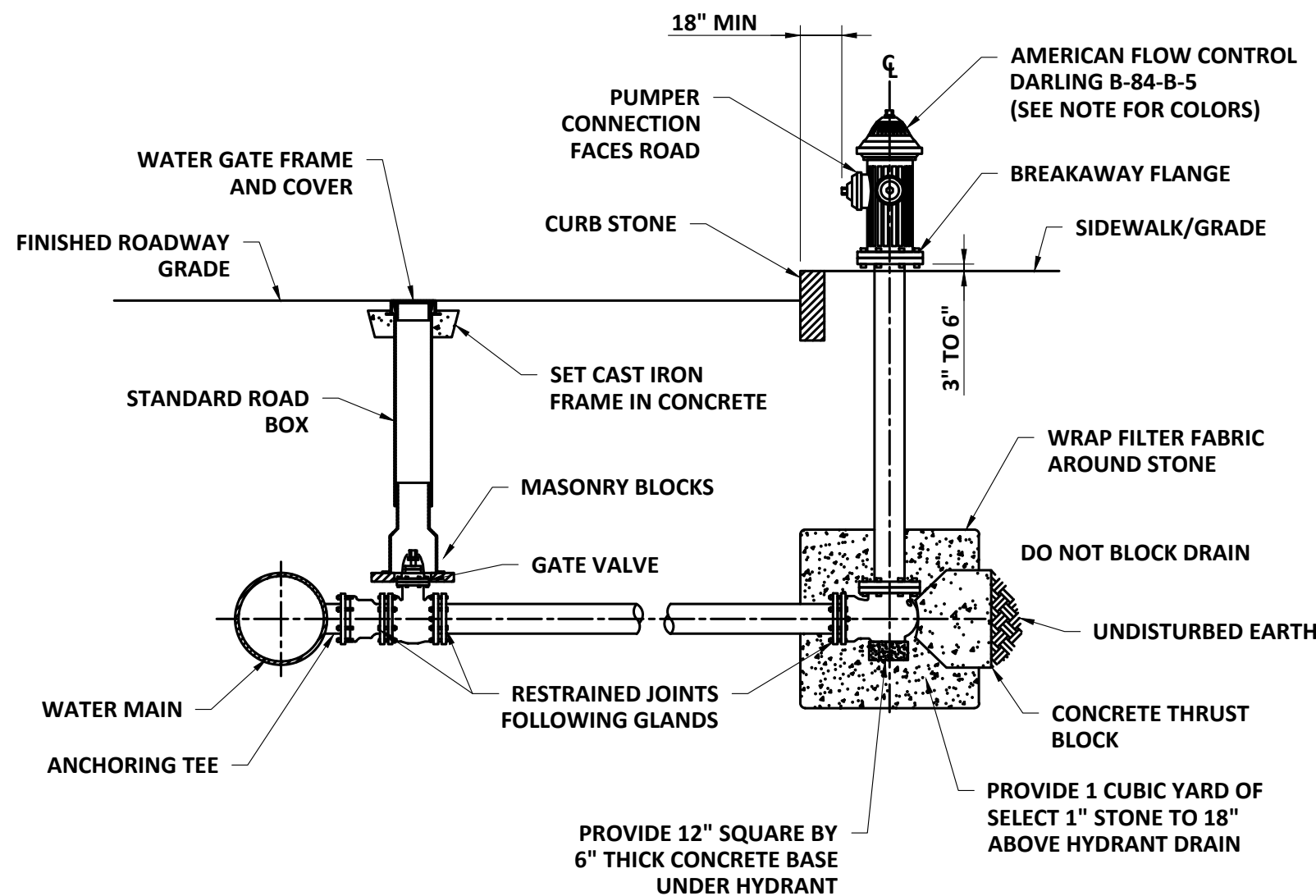
TYPICAL TRENCH  
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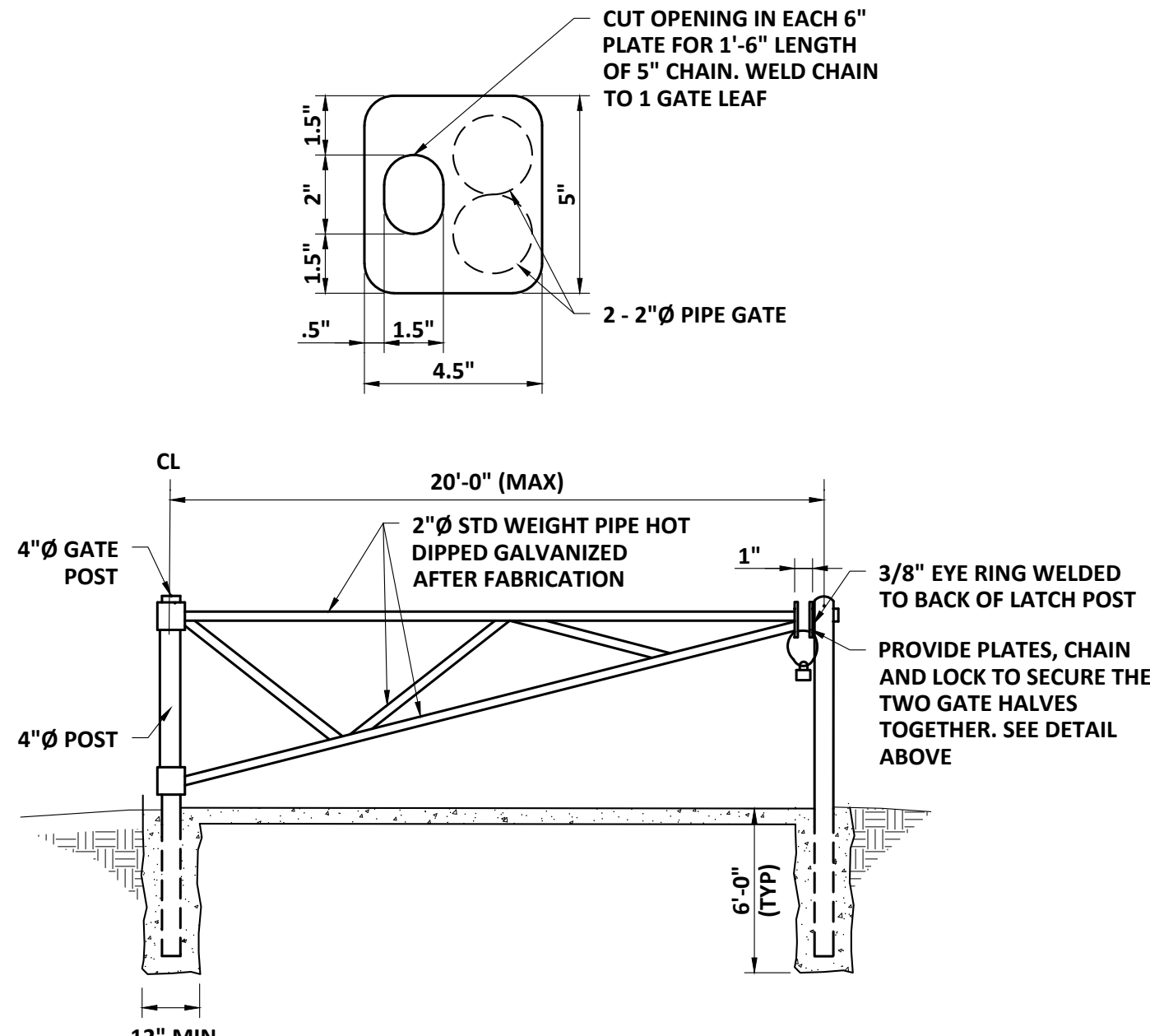
ANCHOR TEE INSTALLATION  
SCALE: NTS



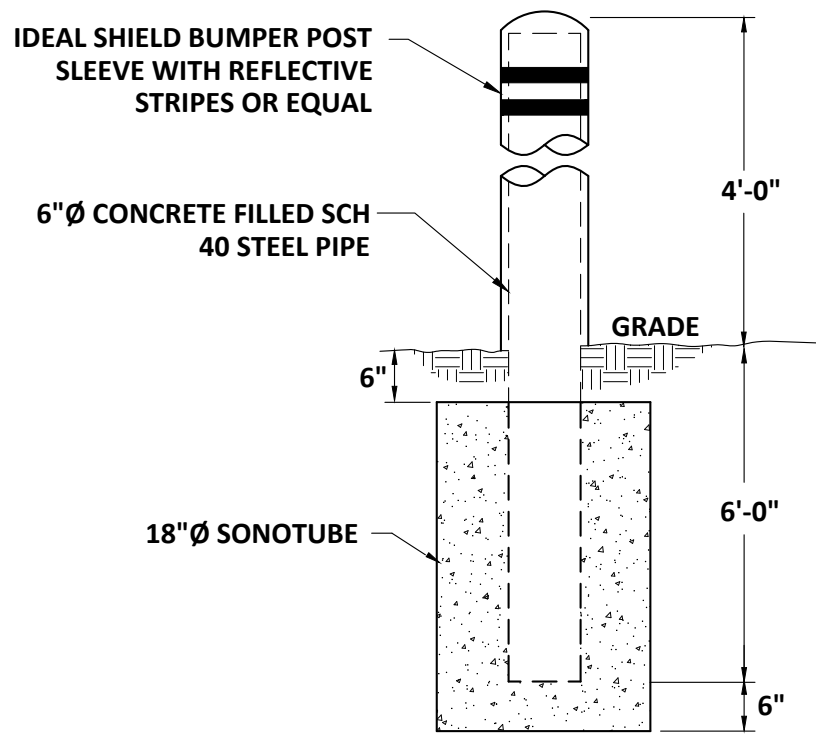
GATE VALVE  
SCALE: NTS



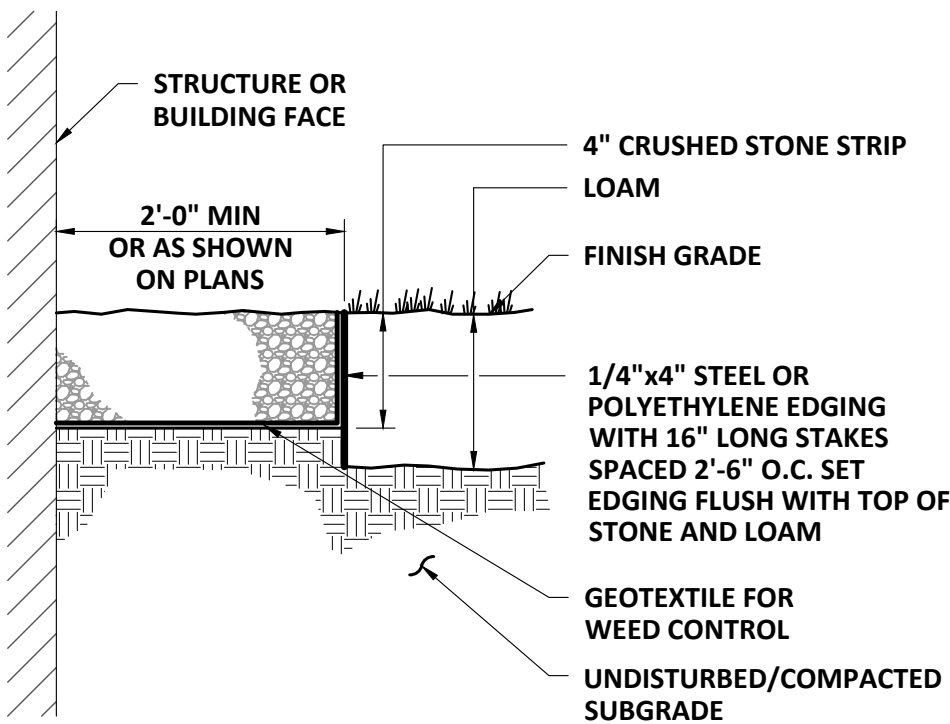
FIRE HYDRANT INSTALLATION  
SCALE: NTS



SINGLE LEAF PIPE GATE  
SCALE: NTS



BOLLARD  
SCALE: NTS



CRUSHED STONE MOWING STRIP  
SCALE: "NTS"

REVISIONS		DATE
NO	DESCRIPTION	DATE
1	PERMITTING RESUBMISSION	1/2022
2		
3		
4		
5		

PROJECT NO: 20600	DESIGNED: C.DAGLE	PROJECT NO: 20600
CAD COORD: B.JONES	CHECKED: J.PREBLE	DESIGNED: C.DAGLE
CAD: D.METZ	DATE: J.CRAY	CAD COORD: B.JONES
APPROVED: J.CRAY	DATE: J.CRAY	CAD: D.METZ
SUBMISSION: 90% DESIGN REVIEW		APPROVED: J.CRAY

COMMONWEALTH OF MASSACHUSETTS  
JAMES E. CRAY  
No. 44699  
REGISTERED PROFESSIONAL ENGINEER  
MECHANICAL ENGINEERING

**WRIGHT-PIERCE**  
978.416.8000 | www.wright-pierce.com  
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MEDWAY, MASSACHUSETTS  
POPULATIC WATER TREATMENT PLANT

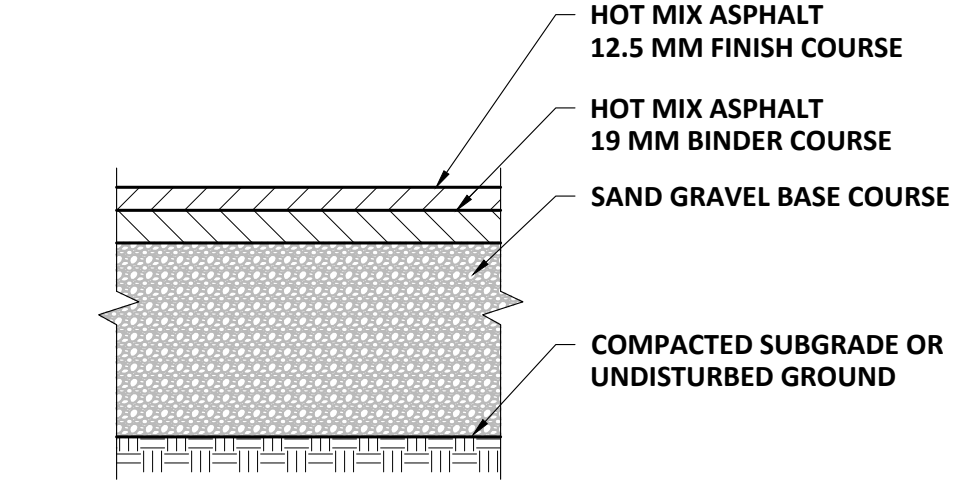
DETAILS II

DRAWING  
C-8



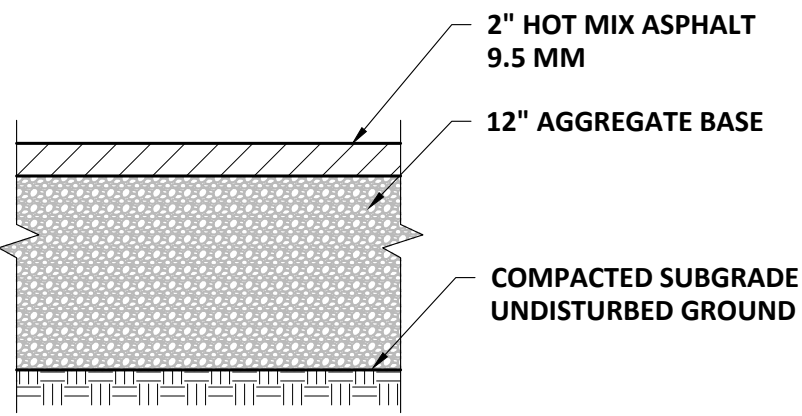
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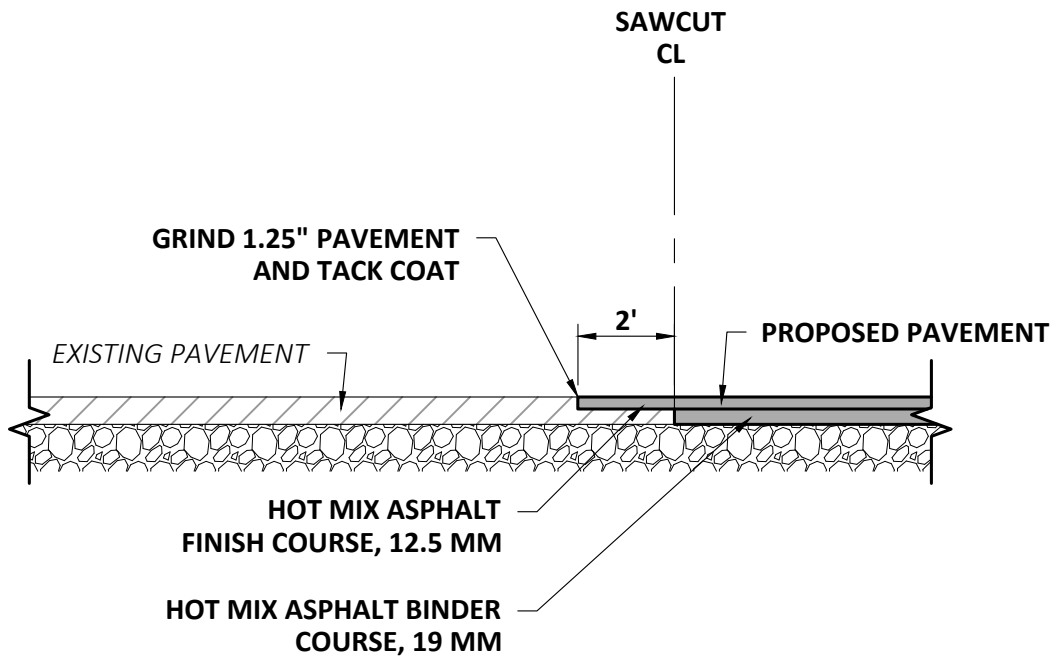


PAVEMENT MINIMUM THICKNESS		
LAYER	CAR PARKING	TRUCK LOADING/H-20 ROADWAYS
FINISH COURSE	1 1/2 INCHES	1 1/2 INCHES
BINDER COURSE	1 1/2 INCHES	2 1/2 INCHES
SAND-GRAVEL BASE COURSE	12 INCHES	20 INCHES

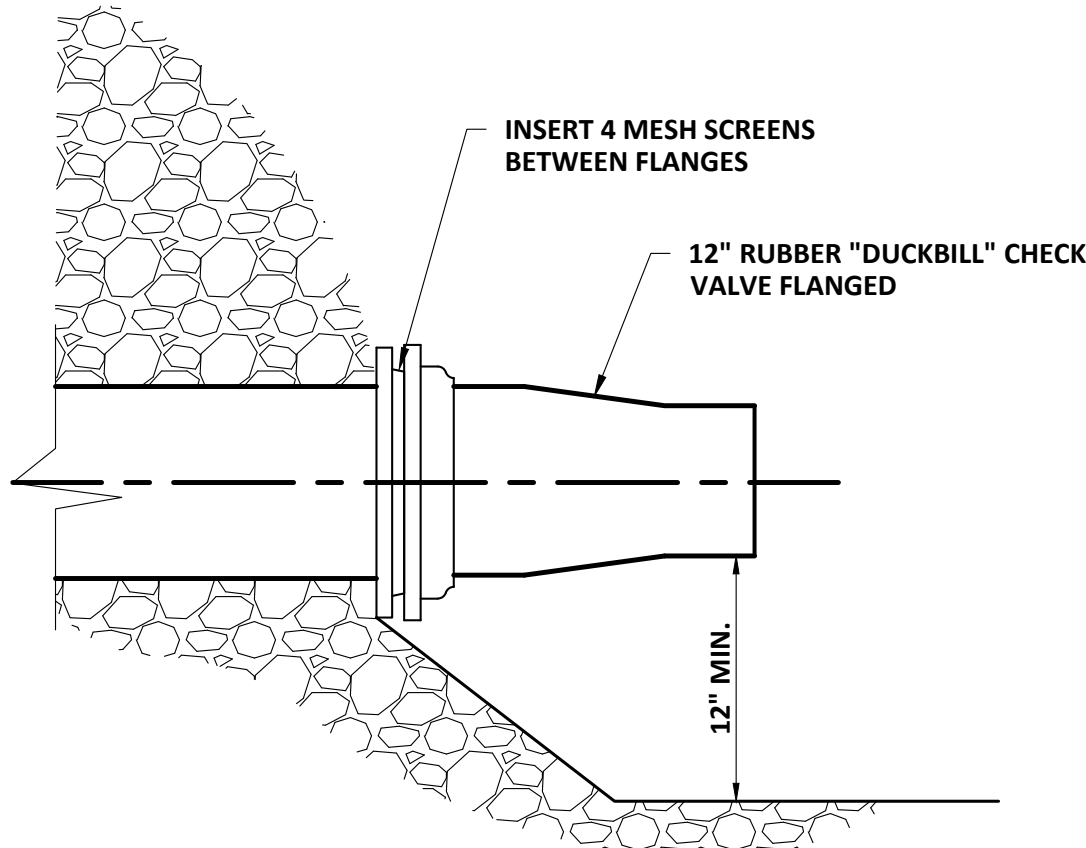
**PAVEMENT**  
SCALE: "NTS"



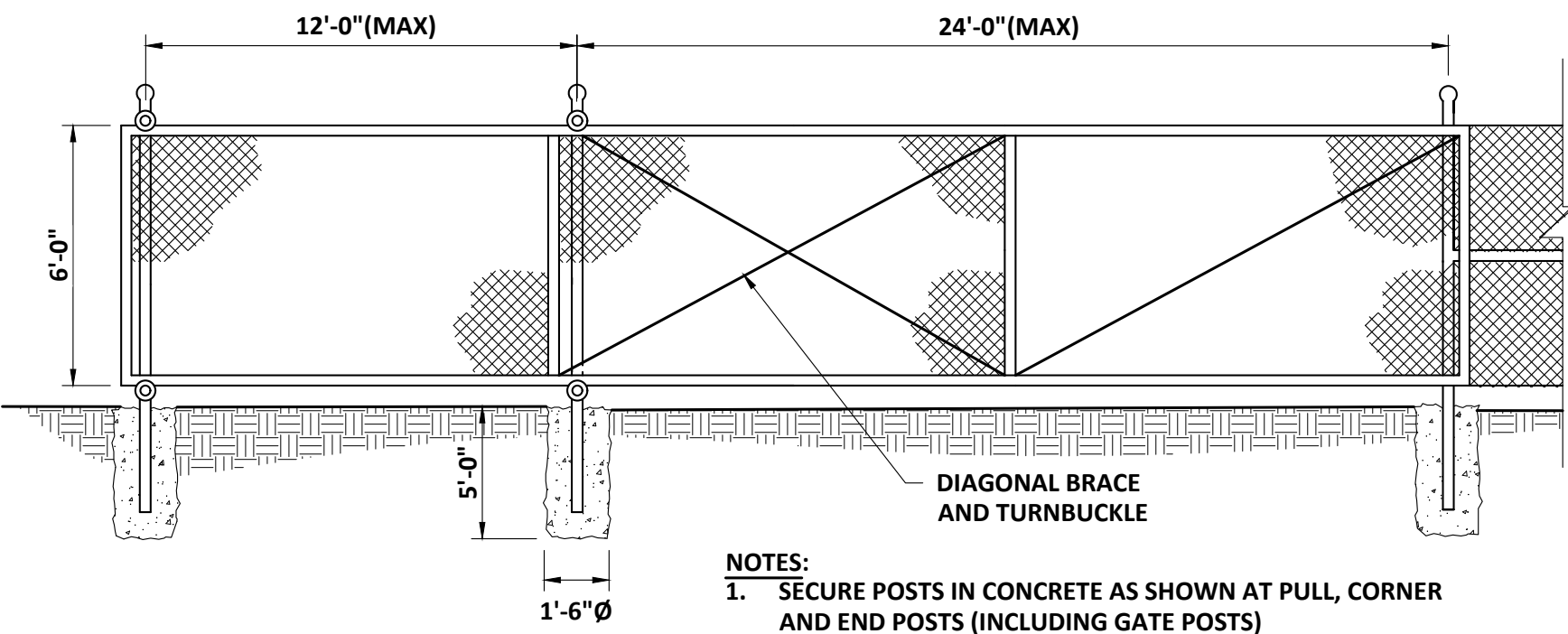
**WALKWAY PAVEMENT**  
SCALE: "NTS"



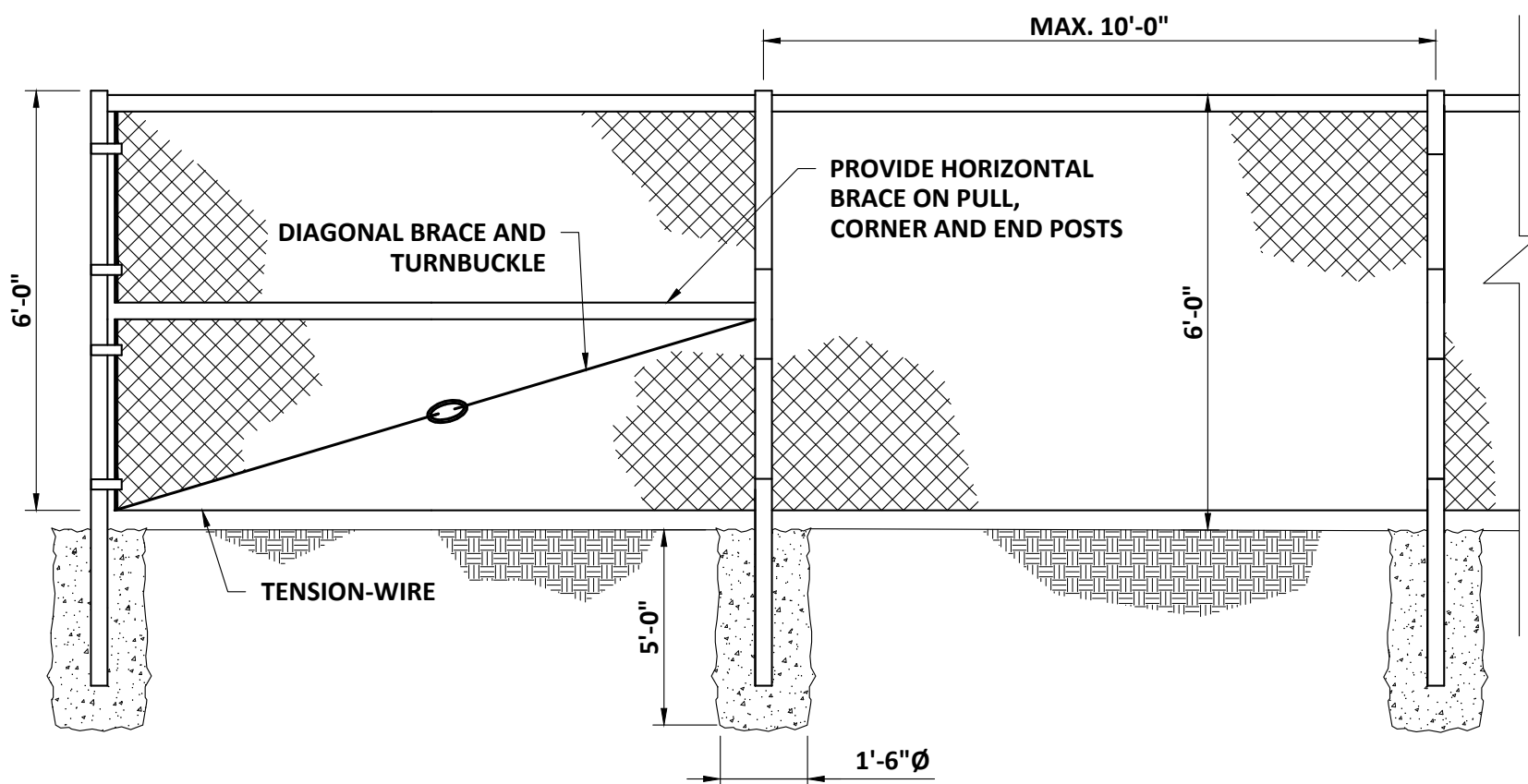
**SHIPLAP PAVEMENT JOINT**  
SCALE: "NTS"



**PROCESS TANK OVERFLOW OUTLET**  
SCALE: "NTS"

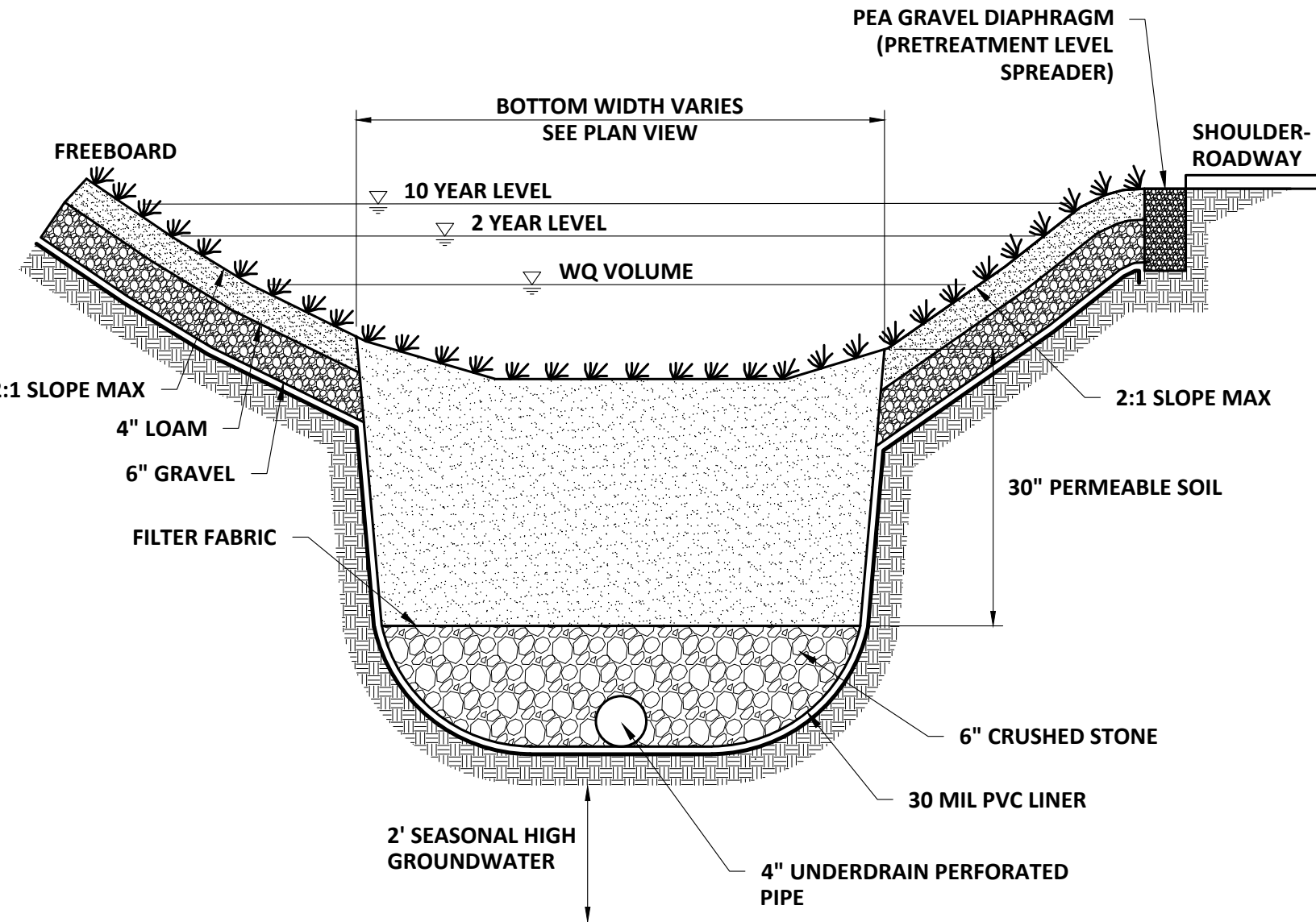


**CHAIN LINK FENCE CANTILEVER GATE**  
SCALE: NTS



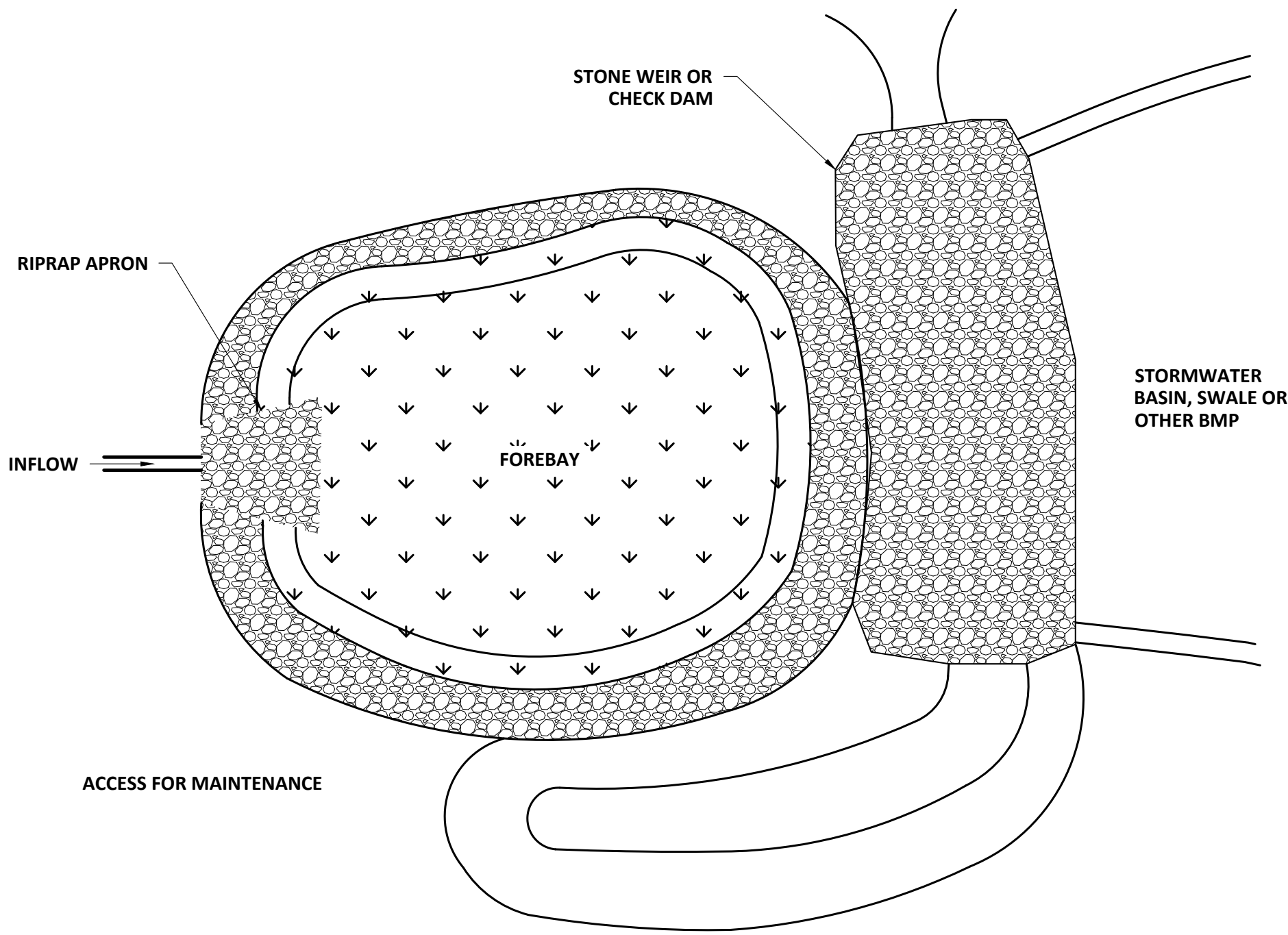
- NOTES:
1. SECURE POSTS IN CONCRETE AS SHOWN AT PULL, CORNER AND END POSTS (INCLUDING GATE POSTS)
  2. IF CHAINLINK FENCE IS INSTALLED IN UNFRACTURED LEDGE, POST SHALL PENETRATE 2'-0" INTO THE LEDGE AND SHALL BE GROUTED INTO 6"Ø HOLE.

**CHAINLINK FENCE**  
SCALE: "NTS"

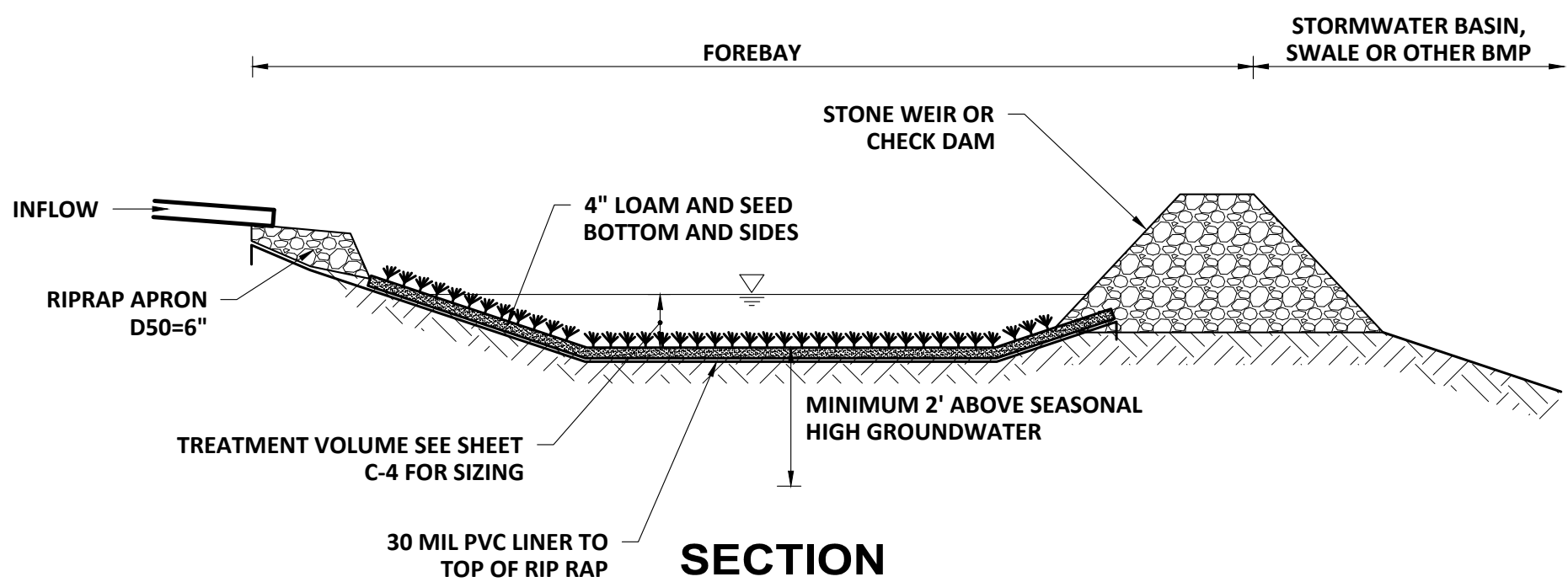


- NOTE:  
PEA GRAVEL DIAPHRAGM IS ONLY REQUIRED ADJACENT TO WATER QUALITY SWALE 2

**WATER QUALITY SWALE**  
SCALE: "NTS"

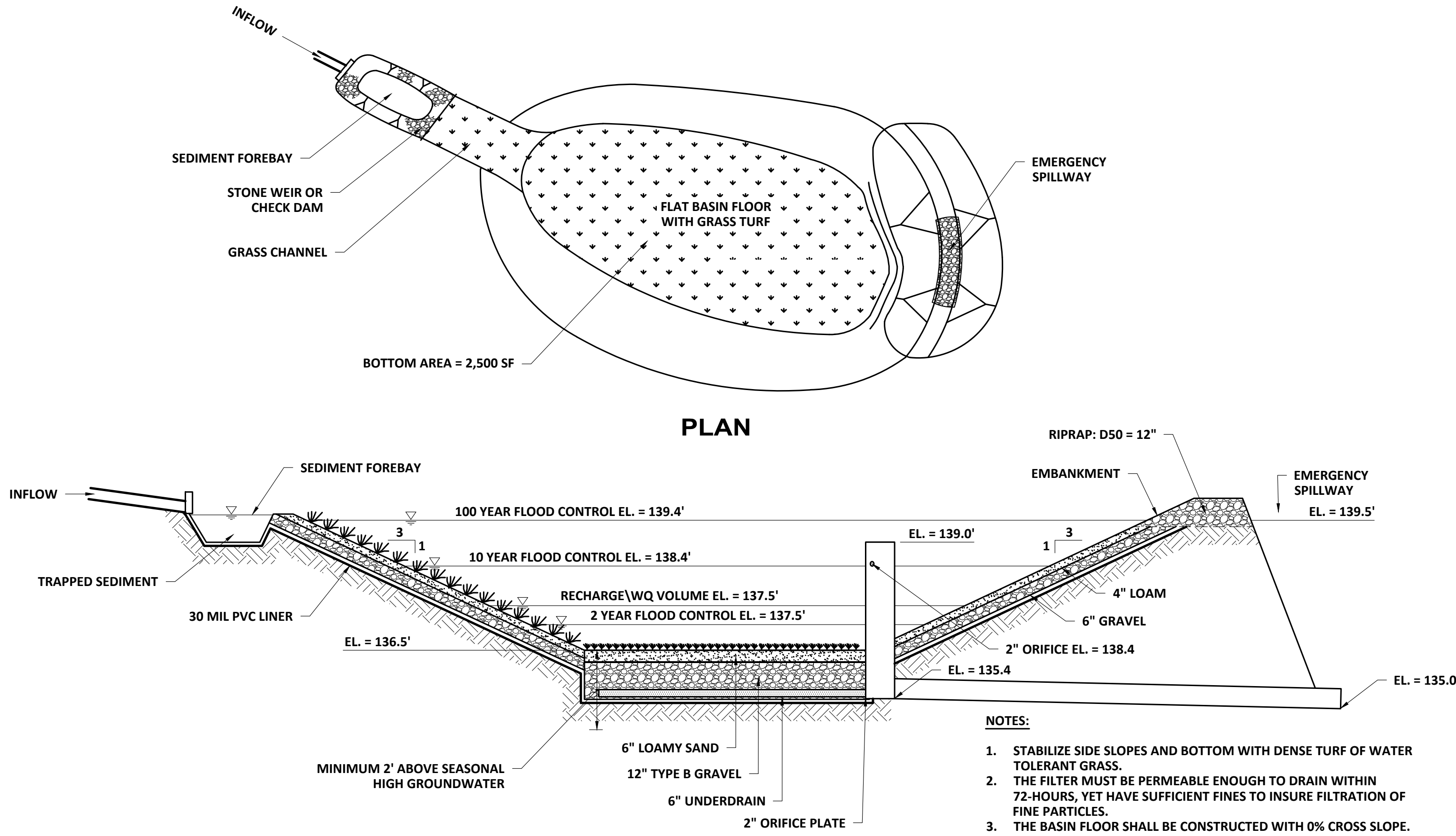


**PLAN**



**SECTION**

**SEDIMENT FOREBAY**  
NTS

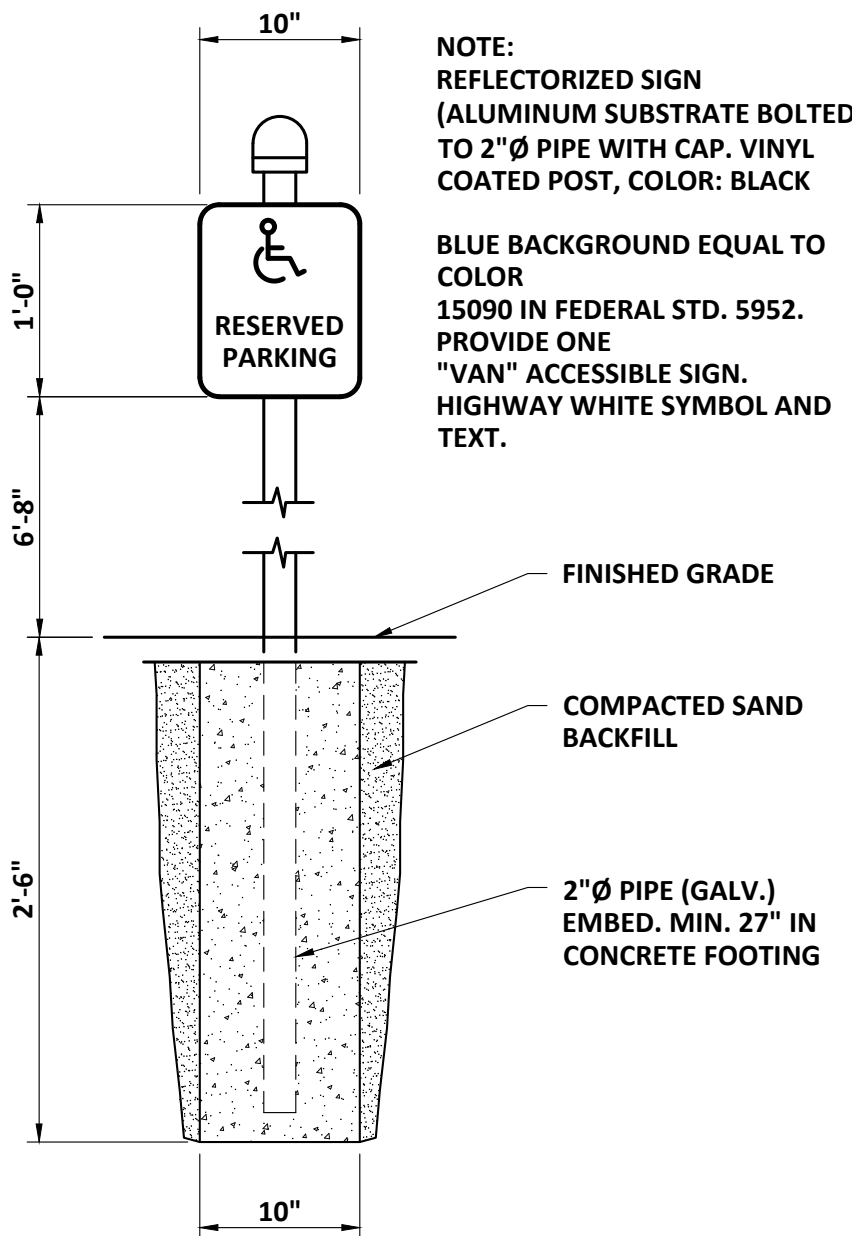


**PLAN**

**SECTION**

**EXTENDED DRY DETENTION BASIN**  
NTS

- NOTES:
1. STABILIZE SIDE SLOPES AND BOTTOM WITH DENSE TURF OF WATER TOLERANT GRASS.
  2. THE FILTER MUST BE PERMEABLE ENOUGH TO DRAIN WITHIN 72-HOURS, YET HAVE SUFFICIENT FINES TO INSURE FILTRATION OF FINE PARTICLES.
  3. THE BASIN FLOOR SHALL BE CONSTRUCTED WITH 0% CROSS SLOPE.
  4. EXTENDED DRY DETENTION BASIN AND VEGETATION SHALL NOT BE INSTALLED UNTIL UPSTREAM AREA HAS BEEN STABILIZED UNLESS RUNOFF FROM CONTRIBUTING DRAINAGE AREA HAS BEEN DIVERTED.
  5. UNDERDRAIN SHALL BE BEDDED AND BACKFILLED WITH CRUSHED STONE WRAPPED IN FABRIC.



**ACCESSIBLE PARKING SIGN**  
SCALE: NTS

REVISIONS		DATE
NO	PERMITTING RESUBMISSION	1/2022

PROJECT NO: 20600	DESIGNED: C.DARGLE	DATE: 1/2022
CAD COORD: B.JONES	CAD: D.METZ	
CHECKED: J.PREBLE	DATE: 1/2022	
APPROVED: J.CRAY	DATE: 1/2022	
SUBMISSION: 90% DESIGN REVIEW		

COMMONWEALTH OF MASSACHUSETTS  
JAMES E. CRAY  
No. 40869  
REGISTERED PROFESSIONAL ENGINEER

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978.416.8000 | www.wright-pierce.com  
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MEDWAY, MASSACHUSETTS  
POPULATIC WATER TREATMENT PLANT

DETAILS III

DRAWING  
C-9



EROSION AND SEDIMENTATION CONTROL NOTES

- THIS PLAN HAS BEEN DEVELOPED AS A STRATEGY TO CONTROL SOIL EROSION AND SEDIMENTATION DURING AND AFTER CONSTRUCTION. THIS PLAN IS BASED ON THE STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION IN URBAN AND SUBURBAN AREAS AS CONTAINED IN THE "MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS", FRANKLIN, HAMPDEN, HAMPSHIRE CONSERVATION DISTRICTS, DATED MARCH, 1997; REPRINT MAY, 2003.
- THE PROPOSED LOCATIONS OF SILTATION AND EROSION CONTROL STRUCTURES REQUIRED FOR THE PROJECT ARE SHOWN ON SHEET C-2. PROVIDE SILT FENCE, STONE CHECK DAMS AND OTHER EROSION CONTROL MEASURES AS REQUIRED TO ADEQUATELY PREVENT SEDIMENT TRANSPORT AS NOTED IN THE BMP.
- ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE IN ACCORDANCE WITH THE "MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS", FRANKLIN, HAMPDEN, HAMPSHIRE CONSERVATION DISTRICTS, DATED MARCH, 1997.
  - THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE MAINTAINED IN AN UNTREATED OR UNVEGETATED CONDITION FOR THE MINIMUM TIME REQUIRED. IN GENERAL, AREAS TO BE VEGETATED SHALL BE PERMANENTLY STABILIZED WITHIN 15 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF THE SOIL.
  - SEDIMENT BARRIERS (SILT FENCE, STONE CHECK DAMS, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF UPGRADIENT DRAINAGE AREAS.
  - INSTALL SILT FENCE AT TOE OF SLOPES TO FILTER SILT FROM RUNOFF. SEE SILT FENCE DETAIL FOR PROPER INSTALLATION. SILT FENCE WILL REMAIN IN PLACE PER NOTE #5.
  - ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSITION. SEDIMENT DEPOSITS MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE PERMANENTLY STABILIZED.
  - NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL (2 TO 1) UNLESS STABILIZED WITH PERMANENT EROSION CONTROL MEASURES.
  - IF FINAL SEEDING OF THE DISTURBED AREAS IS NOT TO BE COMPLETED 30 DAYS PRIOR TO THE ANTICIPATED DATE OF THE FIRST KILLING FROST, USE TEMPORARY MULCHING (DORMANT SEEDING MAY BE ATTEMPTED AS WELL) TO PROTECT THE SITE AND DELAY PERMANENT SEEDING, UNTIL UPGRADIENT AREAS ARE STABILIZED.
  - WHEN FEASIBLE, TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINISH GRADED SHALL BE COMPLETED 30 DAYS PRIOR TO THE FIRST KILLING FROST.
  - DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO THE SITE AND REGRADED ONTO OPEN AREAS. POST SEEDING SEDIMENT, IF ANY, WILL BE DISPOSED OF IN AN ACCEPTABLE MANNER.
  - REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND REVEGETATED AS FOLLOWS:
    - A MINIMUM OF FOUR (4) INCHES OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE.
    - APPLY LIMESTONE ACCORDING TO SOIL TEST. APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE (138 LB PER 1,000 SQ. FT.).
    - FOLLOWING SEED BED PREPARATION, DITCHES AND BACK SLOPES WILL BE SEEDED WITH A MIXTURE OF 47% CREEPING RED FESCUE, 5% REDTOP, AND 48% TALL FESCUE. THE LAWN AREAS WILL BE SEEDED WITH A PREMIUM TURF MIXTURE OF 44% KENTUCKY BLUEGRASS, 44% CREEPING RED FESCUE, AND 12% PERENNIAL RYE GRASS. SEEDING RATE IS 3.0 LBS PER 1000 SQ. FT. LAWN QUALITY SOD MAY BE SUBSTITUTED FOR SEED.
    - HAY MULCH AT THE RATE OF 70-90 LBS PER 1000 SQUARE FEET OR A HYDRO-APPLICATION OF CELLULOSE FIBER SHALL BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER WILL BE USED ON HAY MULCH FOR WIND CONTROL.
    - \*\*\*USE OF FERTILIZER PROHIBITED ON THIS SITE DUE TO THE ZONE 1 WELLHEAD PROTECTION AREA.\*\*\*
  - ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE WORK AREA IS STABILIZED.
  - WETLANDS (EXCEPTING THOSE WHICH ARE TO BE FILLED IN ACCORDANCE WITH STATE AND FEDERAL REGULATIONS) WILL BE PROTECTED WITH SILT FENCE INSTALLED AT THE EDGE OF THE WETLAND OR THE BOUNDARY OF WETLAND DISTURBANCE.
  - IN GENERAL, AREAS WITHIN 100 FEET OF DELINEATED WETLANDS OR STREAMS SHALL HAVE A MAXIMUM PERIOD OF EXPOSURE OF NOT MORE THAN 15 DAYS.
  - FOLLOW APPROPRIATE EROSION CONTROL MEASURES PRIOR TO EACH STORM IN ALL AREAS WITHIN 100 FEET OF DELINEATED WETLANDS OR STREAMS.
- TOWN SPECIFIC EROSION AND SEDIMENTATION CONTROL NOTES**
- OWNER: PETER PELLETIER - DIRECTOR OF DEPARTMENT OF PUBLIC WORKS - (508) 533-3275 ENGINEER: WRIGHT-PIERCE - 600 FEDERAL STREET, SUITE 2151, ANDOVER, MA - (978) 416-8000
  - TITLE - SEE TITLE BLOCK, DATE - SEE TITLE BLOCK, NORTH ARROW (ALL PLAN SHEETS), NAMES OF ABUTTERS (C-1A), SCALE (ALL SHEETS), LEGEND (C-1) AND LOCUS MAP (COVER SHEET).
  - LOCATION AND DESCRIPTION OF NATURAL FEATURES INCLUDING THE FOLLOWING:
    - WATER BODIES, WETLAND RESOURCE AREAS AND FLOOD PLAIN INFORMATION (C-2)
    - EXISTING VEGETATION (C-2)
    - HABITATS MAPPED MASSACHUSETTS NATURAL HERITAGE & ENDANGERED SPECIES PROGRAM (C-2)
  - LOCUS OF EXISTING ABUTTING STREETS SHOWING DRAINAGE AND DRIVEWAY LOCATIONS (C-1A)
  - EXISTING SOILS, VOLUME AND NATURE OF IMPORTED SOIL MATERIALS (C-4)
  - TOPOGRAPHICAL FEATURES INCLUDING EXISTING AND PROPOSED CONTOURS (C-4)
  - SURVEYED PROPERTY LINES (C-1A, C-2)
  - DRAINAGE PATTERNS (C-4)
  - LIMIT OF WORK (C-2)
  - LOCATION (C-4) AND DETAILS OF EROSION AND SEDIMENT CONTROL MEASURES (C-10)
  - PATH AND MECHANISM TO DIVERT UNCONTAMINATED WATER (C-4)
  - LOCATION (C-4) AND DESCRIPTION OF INDUSTRIAL DISCHARGES: THE OVERFLOW DISCHARGES ARE FROM THE EQUALIZATION TANK, BACKWASH TANKS AND CLEARWELL TANK. ALL OF THE OVERFLOWS ARE REQUIRED PER MASS DEP RULES.
  - STORMWATER RUNOFF CALCULATIONS (REFER TO THE PROJECT SPECIFIC STORMWATER MANAGEMENT PLAN)
  - DESCRIPTION OF CONSTRUCTION WASTE MATERIALS: CONSTRUCTION WASTE SHALL BE STORED IN DUMPSTER AND DISPOSED OF OFF SITE IN ACCORDANCE WITH STATE AND FEDERAL LAWS
  - DESCRIPTION OF PROVISION FOR PROJECT PHASING WHEN GREATER THAN ONE ACRE IS TO BE ALTERED OR DISTURBED: CONTRACTOR SHALL NOT DISTURB MORE THAN ONE ACRE AT A TIME WITHOUT STABILIZATION.
  - TIMING, SCHEDULES AND SEQUENCE OF DEVELOPMENT: GENERAL GUIDELINES FOR IMPORTANT STEPS IN THE SEQUENCE OF DEVELOPMENT ARE PRESENTED ON SHEET C-10.
  - MAINTENANCE SCHEDULE FOR THE CONSTRUCTION PERIOD (C-10)

EROSION CONTROL DURING WINTER CONSTRUCTION

- WINTER CONSTRUCTION PERIOD DEFINED: NOVEMBER 1 THROUGH APRIL 15.
- WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
- EXPOSED AREA SHOULD BE LIMITED TO THAT WHICH CAN BE MULCHED IN ONE DAY PRIOR TO ANY PRECIPITATION EVENT.
- AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR HAY AT A RATE OF 100 POUNDS PER 1,000 SQUARE FEET (WITH OR WITHOUT SEEDING) OR DORMANT SEEDED, MULCHED, AND ADEQUATELY ANCHORED BY AN APPROVED ANCHORING TECHNIQUE. IN ALL CASES, MULCH SHALL BE APPLIED SUCH THAT SOIL SURFACE IS NOT VISIBLE THROUGH THE MULCH.
- BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE-FREEZING TEMPERATURES, THE SLOPES SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1 AND IF THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED, AND IS SMOOTH, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE 200%-300% HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED. IF CONSTRUCTION CONTINUES DURING FREEZING WEATHER, ALL EXPOSED AREAS SHALL BE GRADED BEFORE FREEZING AND THE SURFACE TEMPORARILY PROTECTED FROM EROSION BY THE APPLICATION OF MULCH. SLOPES SHALL NOT BE LEFT EXPOSED OVER THE WINTER OR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS TREATED IN THE ABOVE MANNER. UNTIL SUCH TIME AS WEATHER CONDITIONS PERMIT, ALL DITCHES TO BE FINISHED WITH THE PERMANENT SURFACE TREATMENT, EROSION SHALL BE CONTROLLED BY THE INSTALLATION OF BALES OF HAY OR STONE CHECK DAMS IN ACCORDANCE WITH THE STANDARD DETAILS.
- BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE EITHER WOOD CELLULOSE FIBER OR BE ANCHORED WITH MULCH NETTING OR CHEMICAL TACK.
  - MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3%, FOR SLOPES EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 8%.
  - MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15%. AFTER OCTOBER 1, THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.
- AFTER NOVEMBER 1, THE CONTRACTOR SHALL APPLY DORMANT SEEDING OR MULCH AND ANCHORING ON ALL BARE EARTH AT THE END OF EACH WORKING DAY.
- DURING WINTER CONSTRUCTION PERIODS, ALL SNOW SHALL BE REMOVED FROM AREAS OF SEEDING AND MULCHING PRIOR TO PLACEMENT.

MULCH ANCHORING

ANCHOR MULCH WITH: MULCH NETTING (AS PER MANUFACTURER); CHEMICAL TACK (AS PER MANUFACTURER'S SPECIFICATIONS); OR BE WOOD CELLULOSE FIBER (2000 LBS/ACRE). WETTING FOR SMALL AREAS AND ROAD DITCHES MAY BE PERMITTED.

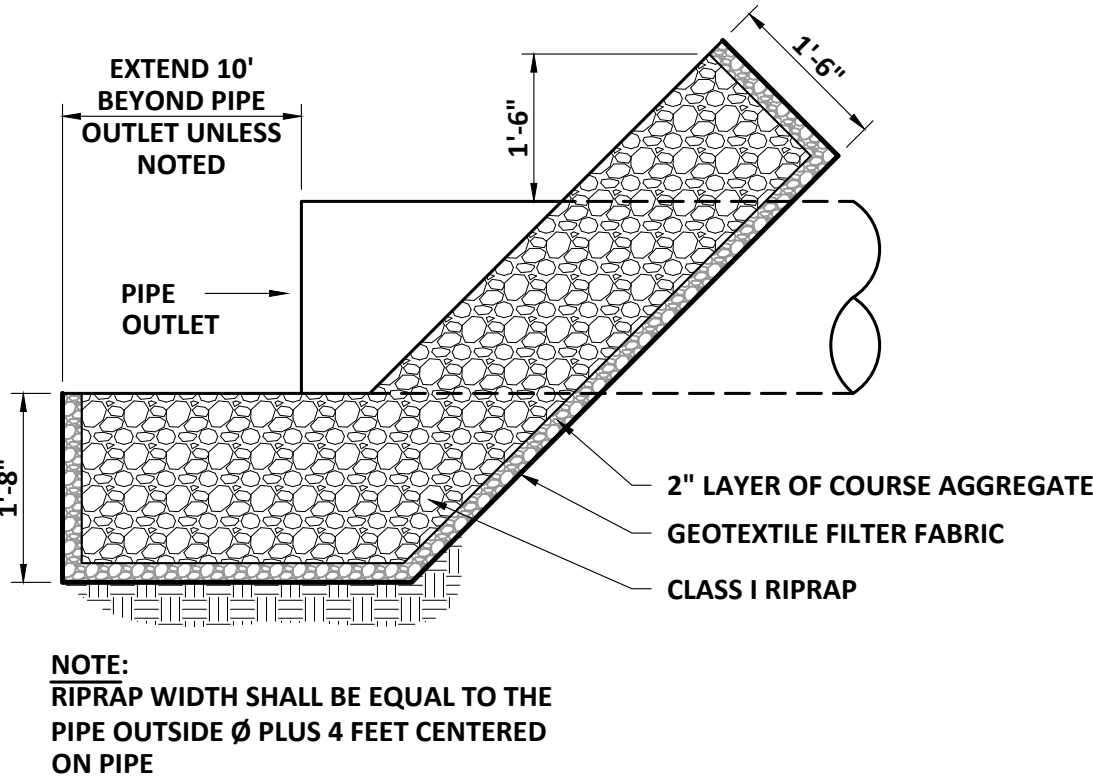
ADDITIONAL TEMPORARY SEED MIXTURE (OR PERIODS LESS THAN 12 MONTHS)		
DATES	SEED	RATE
4/1 - 7/1 8/15 - 9/15	OATS	80 LBS/ACRE
4/1 - 6/1 (8/15 - 9/15)	ANNUAL RYE GRASS	40 LBS/ACRE
(8/15 - 10/15)	WINTER RYE	120 LBS/ACRE
(11/1 - 4/1)	MULCH W/ DORMANT SEED	80 LBS/ACRE*
(5/1 - 6/30)	FOXTAIL MILLET	30 LBS/ACRE

\*SEED RATE ONLY

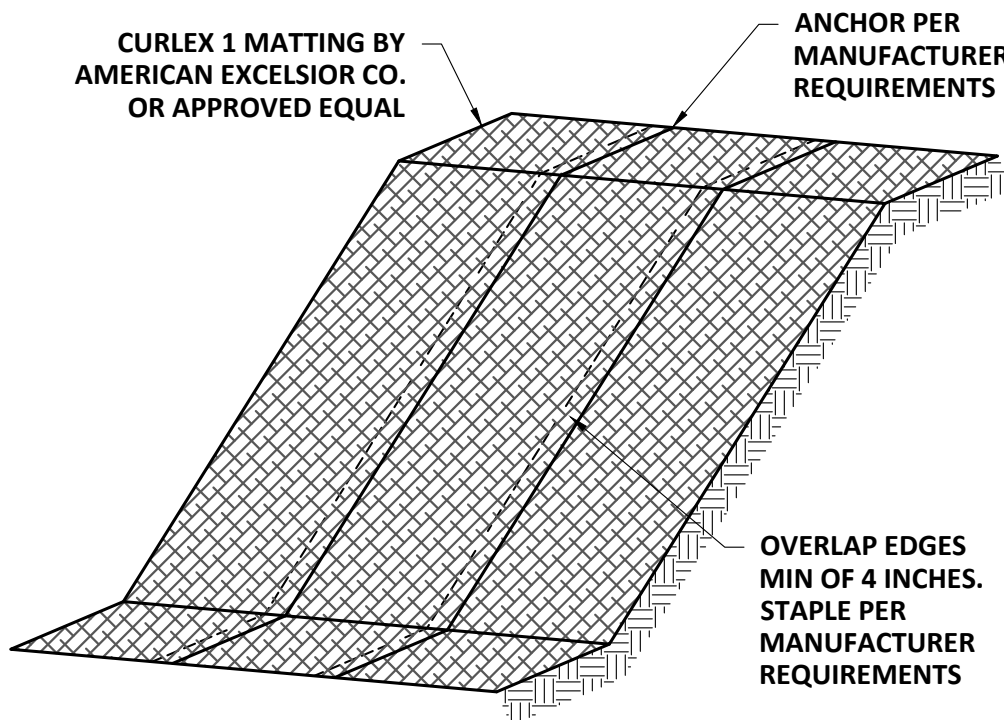
MULCH AND MULCH ANCHORING

LOCATION	MULCH	RATE (1000 S.F.)
PROTECTED AREA	STRAW OR HAY *	100 POUNDS
WINDY AREAS	STRAW OR HAY (ANCHORED) *	100 POUNDS
MODERATE TO HIGH VELOCITY AREAS OR STEEP SLOPES (GREATER THAN 3:1)	JUTE MESH,	AS REQUIRED
	EXCELSIOR MAT OR EQUIV.	AS REQUIRED

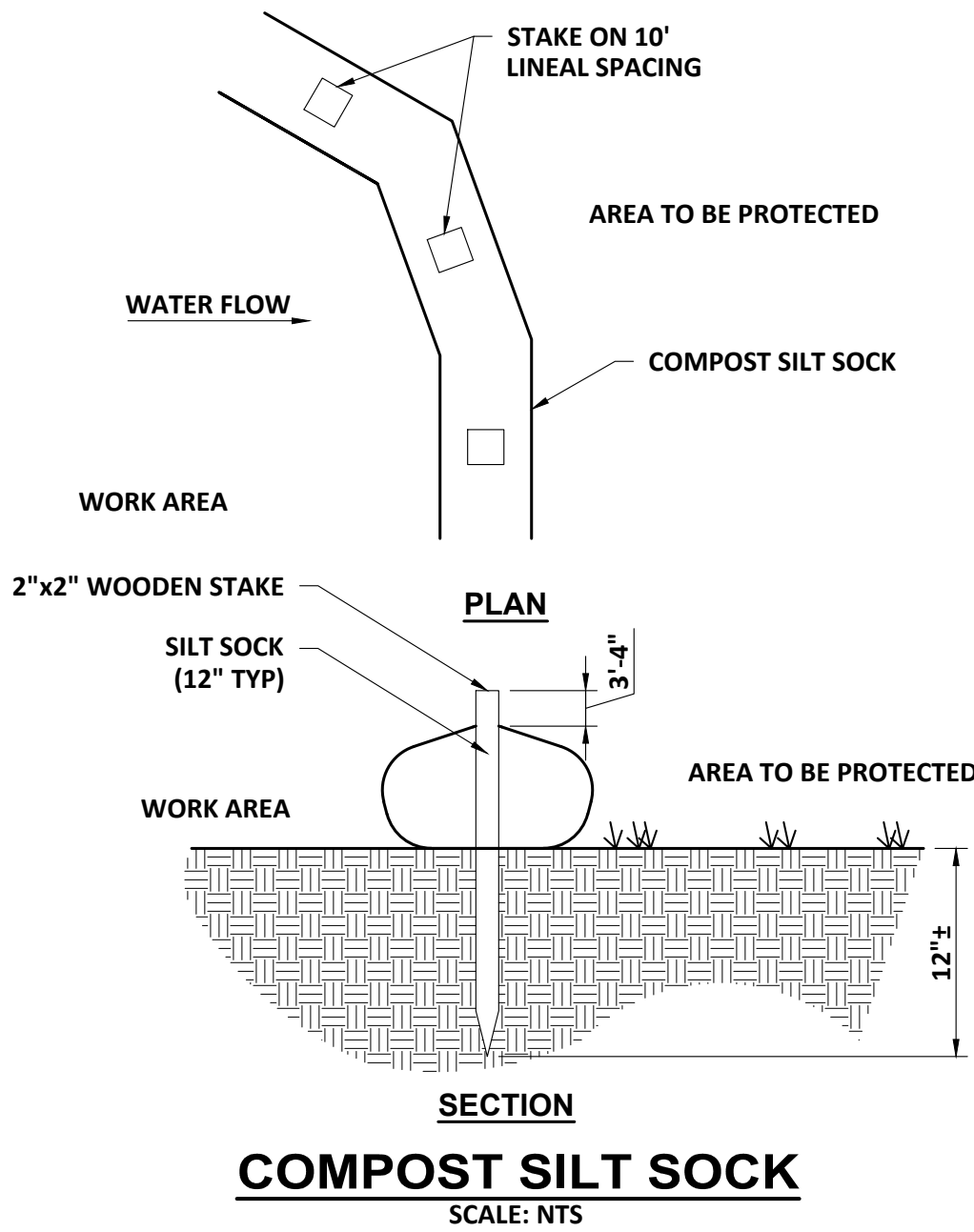
\* A HYDRO-APPLICATION OF CELLULOSE FIBER MAY BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER SHALL BE USED ON HAY MULCH FOR WIND CONTROL.



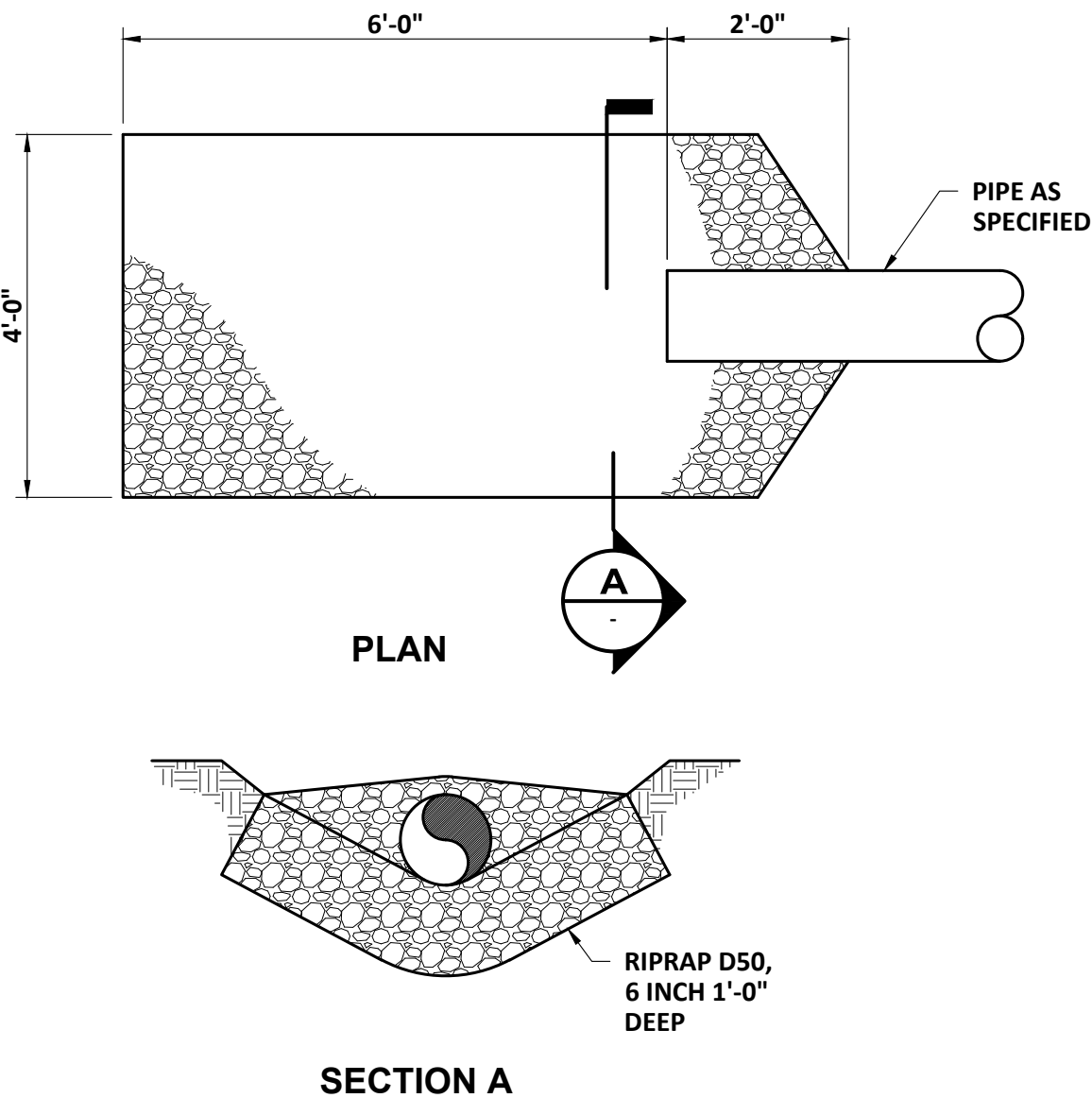
PIPE OUTLET RIPRAP  
SCALE: NTS



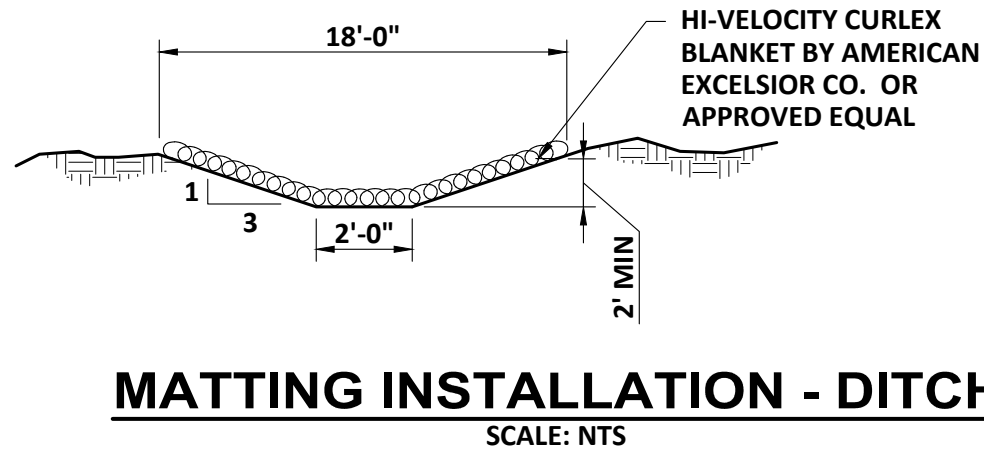
EROSION CONTROL MATTING - SLOPES  
SCALE: "NTS"



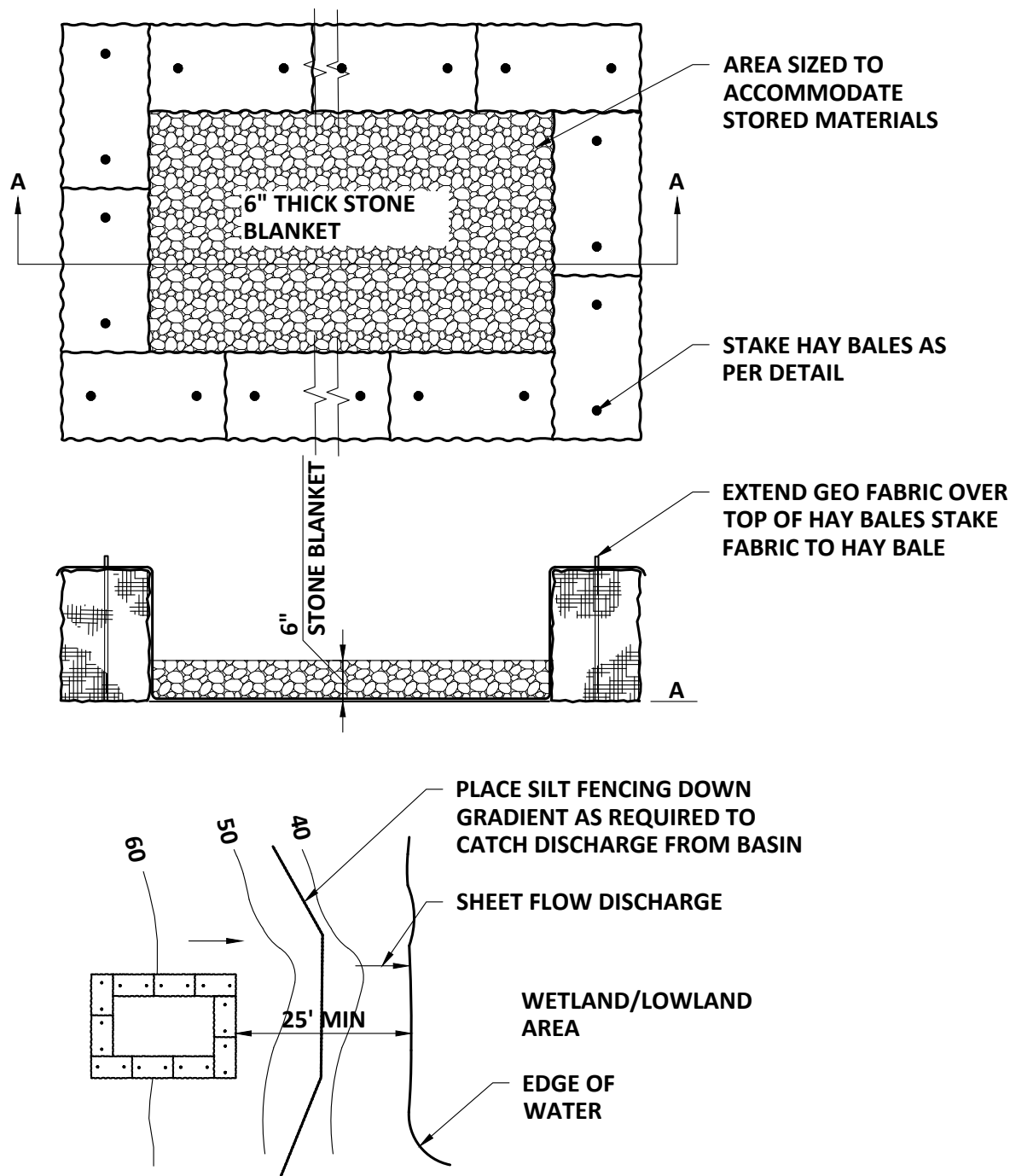
- NOTES:
- ALL MATERIAL TO MEET SPECIFICATIONS
  - SILT SOCK COMPOST/SOIL/ROCK/SEED FILL TO MEET APPLICATION REQUIREMENTS
  - SILT SOCK DEPICTED IS FOR MINIMUM SLOPES. GREATER SLOPES MAY REQUIRE LARGER SOCKS PER THE ENGINEER
  - COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.



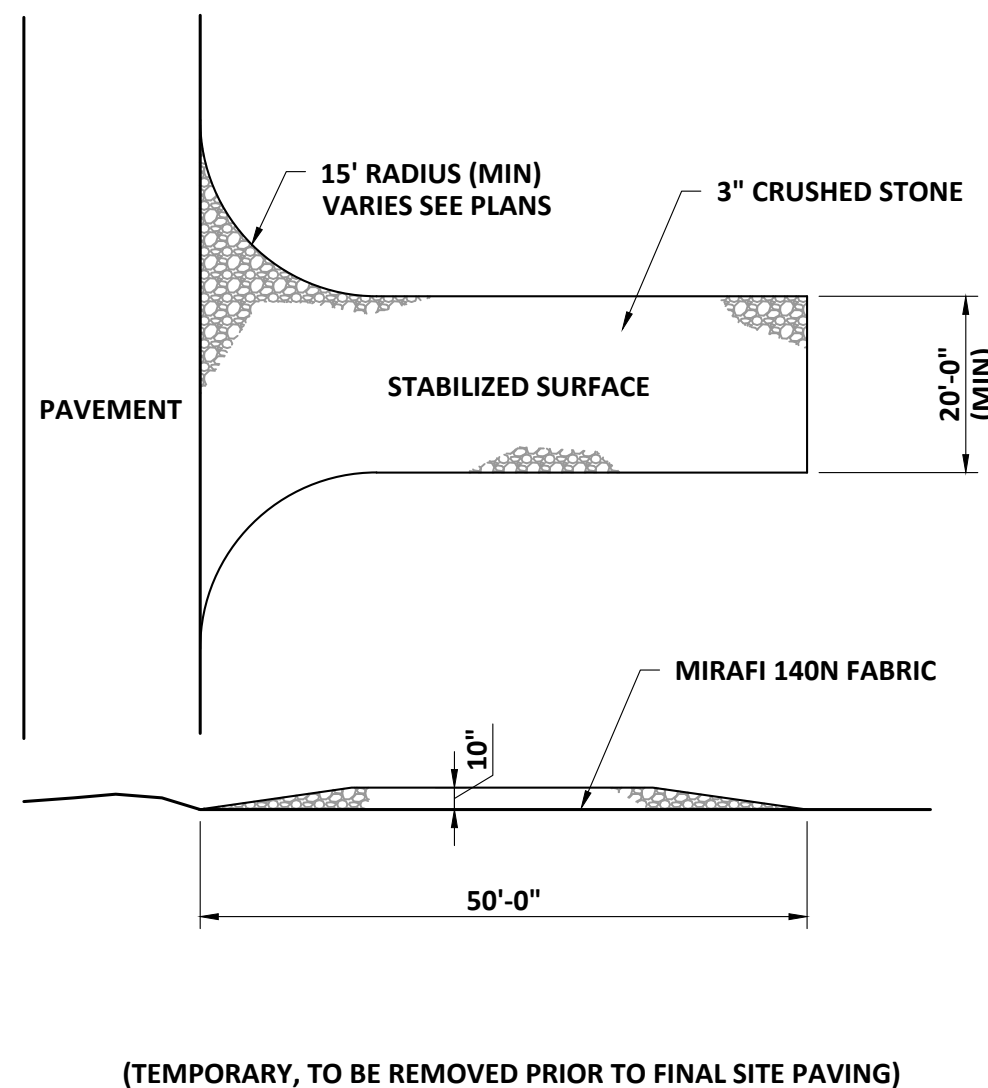
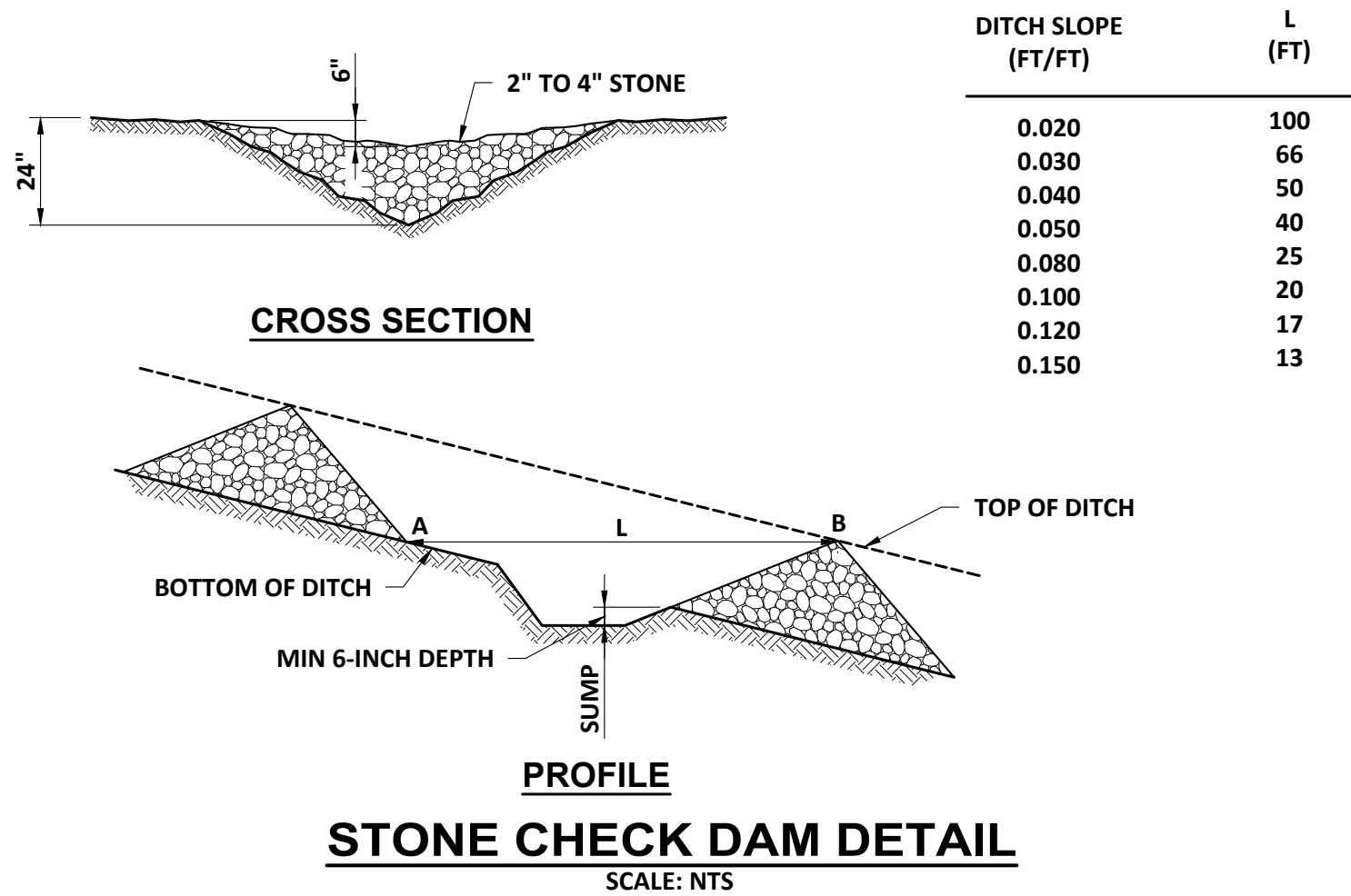
STONE INLET APRON  
SCALE: NTS



MATTING INSTALLATION - DITCH  
SCALE: NTS



TEMPORARY HAY BALE SEDIMENT BASIN  
SCALE: "NTS"



STABILIZED CONSTRUCTION ENTRANCE  
SCALE: "NTS"

PROJECT NO: 20600	DESIGNED: C.DAIGLE	CAD COORD: B.JONES	CAD: D.METZ	CHECKED: J.PREBLE	DATE: 1/2/2022	APPROVED: J.CRAY	DATE:	SUBMISSION: 90% DESIGN REVIEW
PERMITTING RESUBMISSION								
NO	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ
COMMONWEALTH OF MASSACHUSETTS JAMES E. JONES CIVIL ENGINEER NO. 44898 REGISTERED PROFESSIONAL								
<b>WRIGHT-PIERCE</b> 978.416.8000   www.wright-pierce.com 600 FEDERAL STREET, SUITE 2151, ANDOVER, MA 01810								
MEDWAY, MASSACHUSETTS POPULATIC WATER TREATMENT PLANT					EROSION CONTROL NOTES AND DETAILS			
DRAWING C-10								



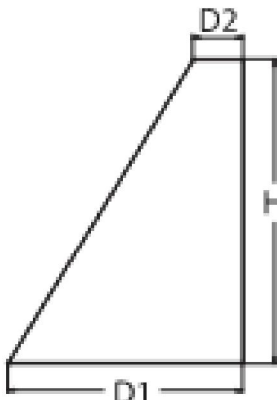


WEDGE2 LED  
Architectural Wall Sconce



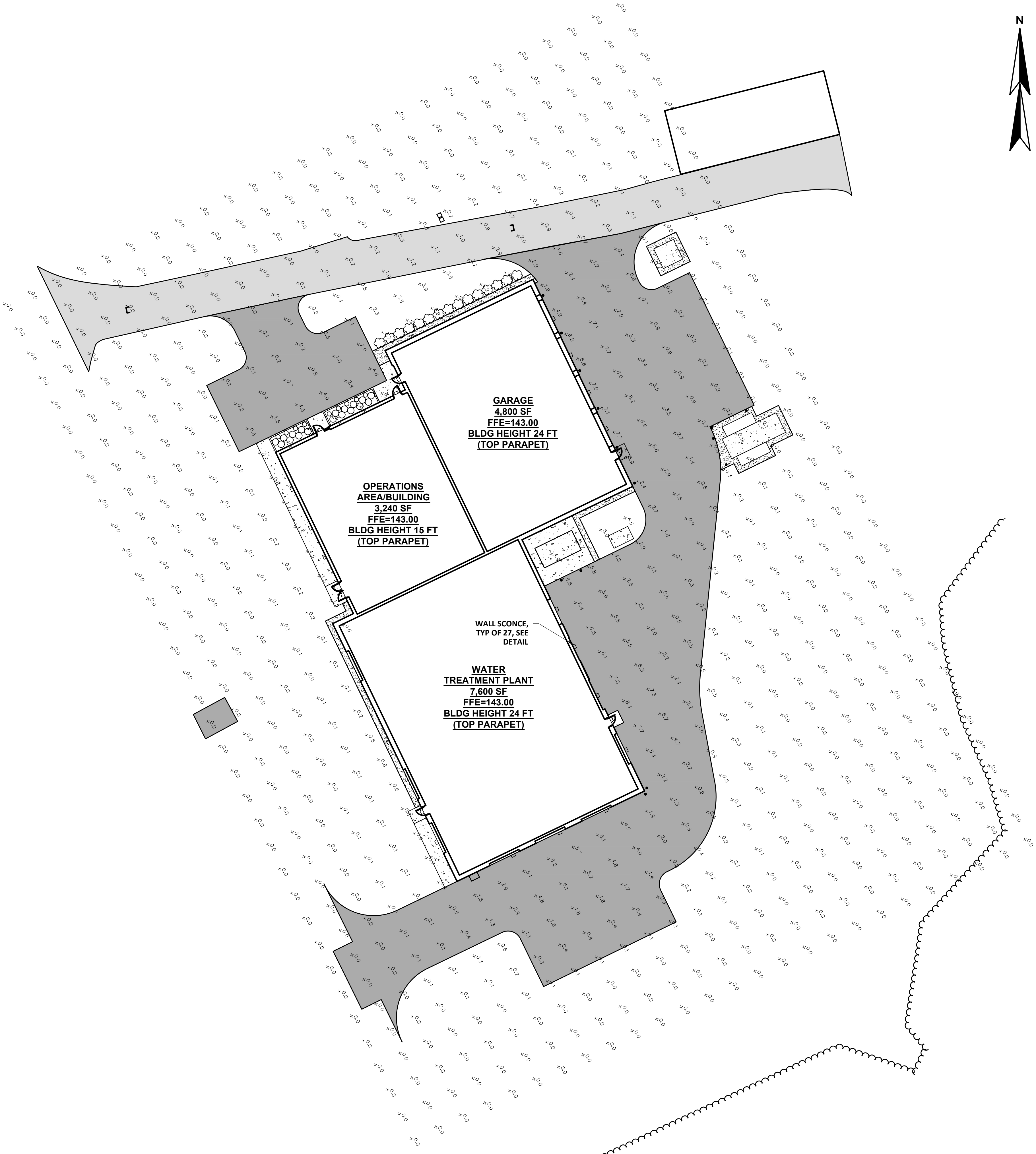
Specifications

- Depth (D1): 7"  
Depth (D2): 1.5"  
Height: 9"  
Width: 11.5"  
Weight: 13.5 lbs  
(without options)



STATISTICS						
DESCRIPTION	SYMBOL	AVG.	MAX	MIN.	MAX / MIN	AVG / MIN
CALC ZONE: SITE	+	0.70 FC	9.5 FC	0.00 FC	N/A	N/A

SCHEDULE							
SYMBOL	QUANTITY	MANUFACTURER	CATALOG NUMBER	DESCRIPTOIN	# OF LAMPS	LUMENS PER LAMP	WATTAGE
	26	LITHONIA LIGHTING	WDGE2 LED P3SW 30K 80CRI VW	WEDGE2 LED WITH P3SW - PERFORMANCE PACKAGE, 3000K, 80CRI, VISUAL COMFORT WIDE OPTIC	1	3015	22.99



SITE LIGHTING PLAN  
SCALE: 1"=20'

PROJECT NO: 20600  
DESIGNED: A.MEDJAMIA  
CAD COORD: B.JONES  
CAD: D.METZ  
CHECKED: J.PREBLE  
DATE: 1/2/2022  
APPROVED: J.CRAY  
DATE: 1/2/2022  
SUBMISSION: 90% DESIGN REVIEW

COMMONWEALTH OF MASSACHUSETTS  
JAMES E. CRAY  
CIVIL ENGINEER  
No. 44669  
REGISTERED PROFESSIONAL  
EXPIRATION DATE 12/31/2024

MEDWAY, MASSACHUSETTS  
POPULATIC WATER TREATMENT PLANT

978.416.8000 | www.wright-pierce.com  
600 FEDERAL STREET, SUITE 2151, ANDOVER, MA 01810

SITE LIGHTING PLAN

DRAWING  
C-11

REVISIONS		DATE
NO	PERMITTING RESUBMISSION	1/2022
1		
2		
3		
4		



ABBREVIATIONS:

&	AND	HB	HOSE BIB
@	AT	HDWE	HARDWARE
AAH	ATTIC ACCESS HATCH	HM	HOLLOW METAL
ACP	ACOUSTICAL CEILING PANEL	HORIZ	HORIZONTAL
ACM	ASBESTOS CONTAINING MATERIAL	HP	HIGH POINT
AFF	ABOVE FINISH FLOOR	HR	HOOR
AHU	AIR HANDLING UNIT	INSUL	INSULATION
ALUM(AL)	ALUMINUM	L	ANGLE
BIT	BITUMINOUS	LAV	LAVATORY
BLDG	BUILDING	LS	LIGHT SWITCH
BOT	BOTTOM	MAX	MAXIMUM
BS	BRICK SHELF	MECH	MECHANICAL
C	CAULK	MFR	MANUFACTURER
CAB	CABINET	MIN	MINIMUM
CARP	CARPET	MJ	MASONRY JOINT
℄	CENTER LINE	MO	MASONRY OPENING
CBB	CONTINUOUS BOND BEAM	MTD	MOUNTED
CDM	CAVITY DRAINAGE MATERIAL	NIC	NOT IN CONTRACT
CJ	CONTROL JOINT	NO (#)	NUMBER
CJV	CONTROL JOINT (VENEER ONLY)	NTS	NOT TO SCALE
CMU	CONCRETE MASONRY UNIT	P	PLUMBING (PAINT)
COORD	COORDINATE	PSI	POUNDS PER SQUARE INCH
CONC	CONCRETE	PT	PRESSURE TREATED
CONT	CONTINUOUS	PWD	PLYWOOD
CPT	CARPET TILES	RD	ROOF DRAIN
CT	CERAMIC TILES	REINF	REINFORCING
CTR	CENTER	REQ'D	REQUIRED
DIA	DIAMETER	RO	ROUGH OPENING
DIM	DIMENSION	S	SEALANT
DN	DOWN	SCHED	SCHEDULE
DWG	DRAWING	SD	SOAP DISPENSER
EL	ELEVATION (HEIGHT)	SF	SQUARE FEET (FOOT)
ELEV	ELEVATION (PICTORAL)	SIM	SIMILAR
EP	EPOXY PAINT	SL	SHAFT LINER
EQ	EQUAL	SPEC	SPECIFICATIONS
ES	EACH SIDE	T	TREAD
EXIST	EXISTING	TOC	TOP OF CONCRETE
EXT	EXTERIOR	TOM	TOP OF MASONRY
FD	FLOOR DRAIN	TOS	TOP OF STEEL
FFE	FINISH FLOOR ELEVATION	TTD	TOILET TISSUE DISPENSER
FIN	FINISH	TYP	TYPICAL
FR	FIRE RATED	VERT	VERTICAL
FRP	FIBERGLASS REINFORCED PLASTIC	W/	WITH
FT	FEET (FOOT)	WC	WATER CLOSET
FV	FIELD VERIFY		
GALV	GALVANIZED		
GWB	GYPSUM WALL BOARD		

MATERIALS LEGEND

	CONCRETE MASONRY UNIT (CMU)		BATT INSULATION
	CMU WITH 1-HR FIRE RATING		RIGID INSULATION
	CMU WITH 2-HR FIRE RATING		SPRAY FOAM INSULATION
	BRICK		FINISH WOOD
	CONCRETE		PLYWOOD
	EARTH		METAL
	DIMENSIONAL LUMBER OR WOOD BLOCKING		

SYMBOLS LEGEND

	DRAWING NUMBER		DOOR TAG
	SECTION		WINDOW TAG
	SHEET NUMBER		CAULKING (FIRE RATED WHERE APPLICABLE)
	DRAWING NUMBER		SEALANT
	DETAIL		RAKE THE JOINT AND CAULK
	SHEET NUMBER		RAKE THE JOINT AND SEAL
	NAME ELEVATION		PARTITION TAG
	ROOM TAG		PHOTO TAG
	ROOM NUMBER		
	ELEVATION LABEL		
	INTERIOR ELEVATION		
	SHEET NUMBER		

ARCHITECTURAL NOTES

- ALL DIMENSIONS INDICATED ON THE PLANS ARE NOMINAL, REFER TO THE DETAILS FOR MORE SPECIFIC INFORMATION.
- ALL INTERIOR AND EXTERIOR MASONRY WALLS SHALL HAVE HORIZONTAL JOINT REINFORCING AS INDICATED ON THE STRUCTURAL DRAWINGS.
- ALL INTERIOR WALLS SHALL BE PINNED AT TOP AND BOTTOM. SEE DETAILS.
- ALL INTERIOR EXPOSED EDGES OF CMU WALLS SHALL BE BULL NOSE (ROUNDED) BLOCK.
- ALL MASONRY OPENINGS (MO'S) AND ROUGH OPENINGS (RO) ARE NOMINAL. COORDINATE ALL MASONRY OPENINGS AND ROUGH OPENINGS WITH THE ITEMS AND EQUIPMENT TO BE INSTALLED.
- PROVIDE A LINTEL FOR ALL MASONRY OPENINGS OVER 8". FOR LINTELS NOT SHOWN, THE MINIMUM SHALL BE A BOND BEAM LINTEL WITH 2 - #5 REBARS WITH A BRICK ANGLE AT VENEER WALLS. FOR LARGER OPENINGS NOT SHOWN, UTILIZE A LINTEL FROM THE SCHEDULE THAT IS COMPARABLE FOR THE SPAN AND LOAD CONDITION.
- PROVIDE MASONRY OPENINGS FOR THE DUCTWORK PENETRATING THE CMU WALLS. REFER TO THE MECHANICAL DRAWINGS AND COORDINATE WITH THE OTHER DISCIPLINES.
- COORDINATE WITH ALL OTHER DRAWINGS, DISCIPLINES AND TRADES FOR THE LOCATION OF PIPE SLEEVES AND ITEMS BUILT INTO OR ANCHORED TO THE CMU WALLS.
- GROUT THE CMU SOLID AT AREAS WHERE ANCHORS ARE TO BE INSTALLED. CHECK ALL DRAWINGS AND COORDINATE WITH ALL DISCIPLINES FOR ITEMS ANCHORED TO THE CMU WALLS.
- EXPANSION ANCHORS ARE TO HAVE A MINIMUM OF 4 3/4" EMBEDMENT UNLESS INDICATED OTHERWISE.
- CONTROL JOINTS IN THE MASONRY WALLS ARE NOT TO EXTEND THROUGH THE BOND BEAM LOCATED AT THE TOP OF THE WALL. RAKE AND CAULK A JOINT AT THE TOP BOND BEAM.

WALLS LEGEND:

	EXISTING WALL/PARTITION
	CMU BACKUP BLOCK WITH AIR BARRIER, 2" RIGID INSULATION, AIR SPACE AND SPLIT FACED CMU VENEER.
	CMU INTERIOR PARTITION, FULL HEIGHT FROM SLAB BELOW TO UNDERSIDE OF STRUCTURE ABOVE, UNO.
	1-HOUR RATED CMU INTERIOR PARTITION, FULL HEIGHT FROM SLAB BELOW TO UNDERSIDE OF STRUCTURE ABOVE; UL DESIGN U906.
	CIP CONCRETE WALL WITH 2" RIGID INSULATION ON INTERIOR SIDE AND GWB OR FRP PLYWOOD PANELS.
	CIP CONCRETE WALL
	1-HR RATED CIP CONCRETE WALL; IBC TABLE 720.1(2) ITEM #4-1.1.
	2-HR RATED CIP CONCRETE WALL; IBC TABLE 720.1(2) ITEM #4-1.1.
	METAL STUD PARTITION WITH (1) LAYER OF 5/8" TYPE 'X' GWB EACH SIDE.
	1-HR RATED METAL STUD PARTITION WITH (1) LAYER OF 5/8" TYPE 'X' GWB EACH SIDE.

EGRESS LEGEND

	FIRE EXTINGUISHER
	COMMON PATH OF TRAVEL
	MAXIMUM PATH OF TRAVEL
	OCCUPANTS PER SF
	OCCUPANT LOAD
	CUMULATIVE OCCUPANT LOAD

LINTEL NOTES

- SEE THE STRUCTURAL DRAWINGS FOR THE MINIMUM BEARING REQUIRED AT MASONRY LINTELS.
- REFER TO THE STRUCTURAL DRAWINGS FOR THE BEARING CONDITIONS OF THE STEEL BEAM LINTELS IN THE WOOD STUD AND CONCRETE MASONRY (CMU) WALLS.
- ALL STEEL LINTELS AND BOLTS SHALL BE HOT DIPPED GALVANIZED .
- INFILL STEEL "W" SHAPE LINTELS WITH CMU WHEN IN A MASONRY WALL. USE CORRUGATED TIES FASTENED TO THE WEB OF THE BEAM AT 16" ON CENTER TO SECURE THE MASONRY INFILL.
- HEADED SHEAR STUDS SHALL BE 3/8" Ø, 6" LONG WELDED TO THE STEEL LINTELS AT 1'-4" ON CENTER.
- ALL WELDS SHOWN SHALL BE 3 INCHES LONG AT 1'-0" ON CENTER WITH A CONTINUOUS SEAL WELD.
- PROVIDE A LINTEL FOR ALL MASONRY OPENINGS OVER 8". FOR LINTELS NOT SHOWN, THE MINIMUM SHALL BE A BOND BEAM LINTEL WITH 2 - #5 REBARS WITH A BRICK ANGLE AT VENEER WALLS. FOR LARGER OPENINGS NOT SHOWN, OR FOR OPENINGS IN EXISTING WALLS, UTILIZE A LINTEL FROM THE SCHEDULE THAT IS COMPARABLE FOR THE SPAN AND LOAD CONDITION.

CODE NOTES

APPLICABLE CODES  
9TH EDITION MASSACHUSETTS STATE BUILDING CODE CMR 780:  
2015 INTERNATIONAL BUILDING CODE (IBC) AS AMENDED BY 780 CMR  
2018 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) AS AMENDED BY 780 CMR 13.00  
ACCESSIBILITY  
521 CMR ARCHITECTURAL ACCESS BOARD REGULATIONS  
2010 ADA STANDARDS FOR ACCESSIBLE DESIGN  
UNIFORM STATE PLUMBING CODE 248 CMR 10.00  
527 CMR MASSACHUSETTS COMPREHENSIVE FIRE SAFETY CODE  
NFPA 1 - FIRE PREVENTION CODE, 2015 EDITION AS AMENDED

DESCRIPTION OF BUILDING AND WORK  
THE MEDWAY WATER TREATMENT PLANT WILL BE A NEW 1-STORY BUILDING AND HOUSE A TRUCK STORAGE GARAGE (GARAGE AREA), OFFICE/EMPLOYEE AREAS (OPERATIONS AREA) AND WATER TREATMENT EQUIPMENT AREAS (PROCESS AREA).

ACCESSIBILITY  
THE OPERATIONS AREA WILL BE FULLY ACCESSIBLE. EQUIPMENT AND STORAGE AREAS DO NOT MEET THE DEFINITION OF PUBLIC USE PER 521 CMR AND ARE NOT REQUIRED TO BE ACCESSIBLE HOWEVER MUCH OF THESE AREAS WILL BE ACCESSIBLE.

USE GROUP/OCCUPANCY CLASSIFICATION (IBC CHAPTER 3)  
THE BUILDING IS A NON-SEPARATED MIXED USE OF THE FOLLOWING USES:  
BUSINESS GROUP B - OPERATIONS AREA  
MODERATE-HAZARD STORGE GROUP S-1 - GARAGE AREA  
MODERATE-HAZARD FACTORY INDUSTRIAL GROUP F-1 - PROCESS AREA  
HIGH-HAZARD GROUP H-4 - CHEMICAL STORAGE ROOMS  
(THE HIGH HAZARD AREAS WILL BE SEPARATED FROM THE REMAINING USES)

CLASSIFICATION OF OCCUPANCY (NFPA 101 CHAPTER 6)  
THE BUILDING IS A SPECIAL USE INDUSTRIAL OCCUPANCY (NFPA 101 40.1.4.1.2) WITH INCIDENTAL BUSINESS AND STORAGE AREAS. BUSINESS AND STORAGE AREAS WHERE INCIDENTAL TO ANOTHER OCCUPANCY SHALL BE CONSIDERED PART OF THE PREDOMINATE OCCUPANCY AND SUBJECT TO THE PROVISIONS OF THE CODE FOR THE PREDOMINATE OCCUPANCY (NFPA 101 6.1.14.3)

TYPE OF CONSTRUCTION  
TYPE II-B (IBC 602.2), BUILDING ELEMENTS LISTED IN TABLE 601 ARE OF NONCOMBUSTIBLE MATERIALS

AUTOMATIC SPRINKLER SYSTEMS  
AUTOMATIC SPRINKLER SYSTEMS REQUIRED IN BUILDINGS OVER 7500 SF AND BUILDINGS WITH H-OCCUPANCIES (780 CMR TABLE 903.2)

HEIGHTS AND AREAS (IBC TABLES 504.3, 504.4 & 506.2)  
75', 3-STORIES AND 62,000 SF ALLOWED  
<25', 1-STORY AND <16,000 SF ACTUAL

HAZARDOUS STORAGE (IBC SECTION 307)  
STORAGE OF MATERIALS IN QUANTITIES OVER THE EXEMPTED AMOUNTS ARE CLASSIFIED AS A HAZARDOUS USE GROUP.

ROOM	CHEMICAL	HAZARD TYPE	MAX ALLOWED/CA*	STORED AMOUNT	USE/CA*
H104	POTASSIUM HYDROXIDE (45%) KOH	CORROSIVE WATER REACTIVE 1	1000 GALLONS	1910 GALLONS	H-4
H103	SODIUM HYPOCHLORITE (12.5%) NaOCl	CORROSIVE	1000 GALLONS	435 GALLONS	H-4***
H101	BLENDED ORTHO/ POLYPHOSPHATE	N/A	N/A	N/A	H-3**
H101	SODIUM FLUORIDE (SOLID) NaF	TOXIC	1000 POUNDS	2000 POUNDS	H-3
H102	POTASSIUM PERMANGANATE (SOLID) KMnO4	OXIDIZER 2 CORROSIVE	500 POUNDS	660 POUNDS	H-3

\* EXEMPTED QUANTITIES SHALL BE INCREASED 100% IF THE BUILDING IS PROTECTED THROUGHOUT WITH AN APPROVED AUTOMATIC SPRINKLER SYSTEM.

\*\* THOUGH NOT CLASSIFIED AS HAZZARDOUS PER THE BUILDING CODE, THE BLENDED ORTHO/PHOSPAHTE WILL BE STORED IN THE SAME ROOM AS THE CLASSIFIED SODIUM FLUORIDE SO ROOM H101 WILL BE CLASSIED AS AN H-3 USE.

\*\*\* THOUGH THE VOLUME OF SODIUM HYPOCHLORITE STORED IS WITHIN THE ALLOWANCE FOR STORAGE IN A CONTROL ROOM H103 WILL BE DESIGNED TO THE REQUIREMENTS OF AN H-4 USE.

FIRE RESISTANCE REQUIREMENTS OF BUILDING ELEMENTS (IBC TABLE 601)

BUILDING ELEMENT	TYPE II-B
STRUCTURAL FRAME	0-HOUR
EXTERIOR BEARING WALLS	0-HOUR
INTERIOR BEARING WALLS	0-HOUR
INTERIOR NON-BEARING WALLS	0-HOUR
FLOOR CONSTRUCTION	0-HOUR
ROOF CONSTRUCTION	0-HOUR

FIRE RATED ASSEMBLIES REQUIRED  
1-HR REQUIRED BETWEEN H-3/H-4 AND B, F-1 & F-1 USES (IBC TABLE 508.4).

FIRE RATED ASSEMBLY DESIGNS  
1-HR RATED CMU WALLS (UL DESIGN NO. U906)  
1-HR RATED FLOOR CEILING ASSEMBLIES (UL DESIGN NO. U502)  
3 1/2" CONC/MTL DECK, 12" STL BAR JOISTS, 7/8" MTL FURRING CHANNELS AND 5/8" TYPE X GWB

OPENINGS IN FIRE RATED ASSEMBLIES (IBC TABLE 716.5)  
DOORS IN 1-HR RATED, NON-EXIT FIRE BARRIERS SHALL HAVE A 3/4-HR RATING.

HEADROOM  
CEILING HEIGHT IN A MEANS OF EGRESS SHALL BE 7'-6" MINIMUM (IBC 1003.2). PROTRUDING OBJECTS ARE ALLOWED TO PROTRUDE BELOW THE MINIMUM CEILING HEIGHT TO 80" UP TO 50% OF THE AREA OF THE MEANS OF EGRESS (1003.3.1).

ONE STEP (IBC 1003.5)  
IN F, S AND H OCCUPANCIES, A SINGLE STEP OF 7" IS ALLOWED AT DOORS. ALL PERSONNEL DOORS WILL BE FLUSH.

ENERGY CONSERVATION CLIMATE ZONE: CLIMATE ZONE 5A (IECC C301.1)

ROOFTOP SOLAR READINESS: 50% OF FLAT ROOFS SHALL BE SOLAR READY (780 CMR 13.00 402.3). THE SOLAR READY AREA IS INDICATED ON THE ROOF PLAN.

ADDITIONAL EFFICIENCY PACKAGE OPTIONS (780 CMR C406.1)  
MORE EFFICIENT HVAC PERFORMANCE IN ACCORDANCE WITH C406.2 (EXCEED MIN EFFICIENCY ≥10%)  
REDUCED LIGHTING POWER DENSITY IN ACCORDANCE WITH CMR 780 C406.3 (DENSITY ≤90% OF ALLOWED)  
ENHANCED ENVELOP PERFORMANCE IN ACCORDANCE WITH C406.8 (EXCEED MIN PERFORMANCE ≥15%)

ASSEMBLY COMPONENT	INSULATION TYPE	TABULAR R-VALUE	PROJECT R-VALUE	ENHANCED PERF. %	ENVELOP AREA (SF)	EQUIVALENT PERF. %
INSULATION ENTIRELY ABOVE ROOF DECK	AVE. R-30ci POLYISO ROOFING INSULATION	R-30ci	R-30ci	0.0%	15,506	0.00%
WALLS, ABOVE GRADE, MASS	2.5" RIGID POLYISOCYANURATE	R-11.4ci	R-16ci	40.35%	12,340	17.12%
SLABS-ON-GRADE, UNHEATED SLABS	2.5" POLYSTYRENE	R-10*	R-12.5*	25.0%	1,234	1.06%
TOTAL ENHANCED PERFORMANCE ----->						18.18%

\* R-10 FOR 24" BELOW REQUIRED, R-10 FOR 48" BELOW PROVIDED

FENESTRATION REQUIREMENTS: (IECC TABLE C402.4)  
FIXED FENESTRATION, U-0.38 REQUIRED, U-0.38 MINIMUM PROVIDED  
OPERABLE FENESTRATION, U-0.45 REQUIRED, U-0.45 MINIMUM PROVIDED  
ENTRANCE DOORS, U-0.77 REQUIRED, U-0.77 MINIMUM PROVIDED  
SHGC, 0.38 REQUIRED, 0.38 MINIMUM PROVIDED

APPD

DATE

1/2022

REVISIONS

PERMITTING RESUBMISSION

NO

1

2

3

4

5

PROJECT NO: 20600

DESIGNED: R.WILLIAMS

CAD COORD: BJONES

CAD: J.BLACKMAN

CHECKED: CMICHAUD

DATE: DATE

APPROVED: DATE

SUBMISSION: 90% DESIGN REVIEW

WRIGHT-PIERCE

978.416.8000 | www.wright-pierce.com

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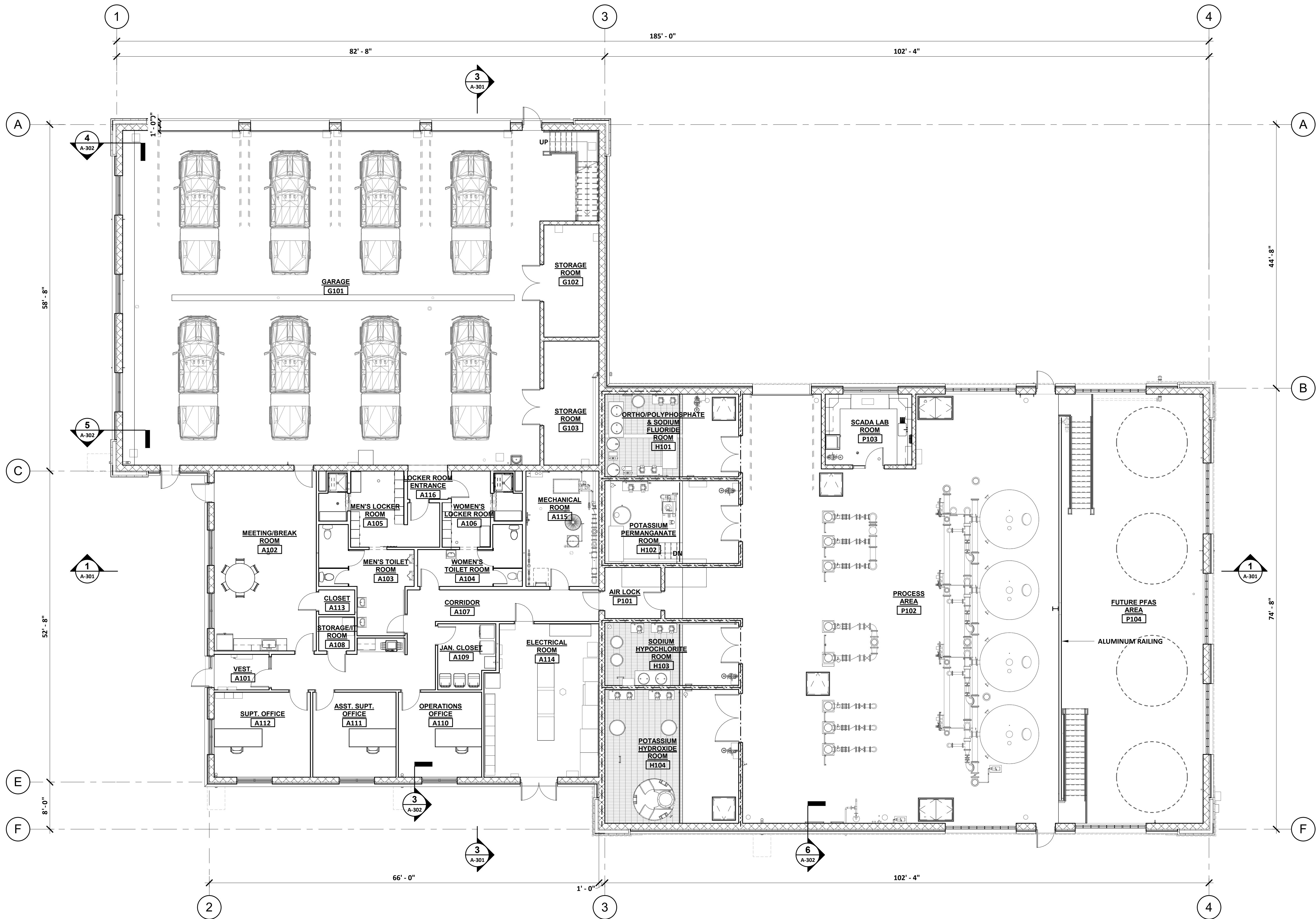
MEDWAY, MASSACHUSETTS  
POPULATIC WATER TREATMENT PLANT

GENERAL NOTES, LEGENDS, ABBREVIATIONS AND CODE NOTES

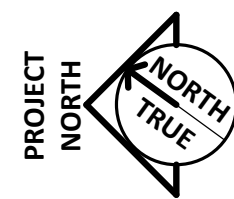
DRAWING

A-001





**FLOOR PLAN**  
SCALE: 1/8" = 1'-0"



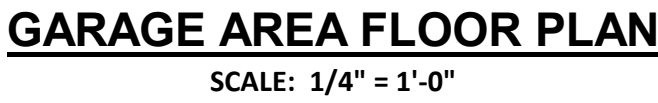
REVISIONS		APPD	DATE
NO	PERMITTING RESUBMISSION		1/2022
1			
2			
3			
4			
5			

PROJECT NO: 20500	DESIGNED: R. WILLIAMS
CAD COORD: B. JONES	CAD: J. BLACKMAN
CHECKED: C. MICHARD	DATE:
APPROVED:	SUBMISSION: 90% DESIGN REVIEW

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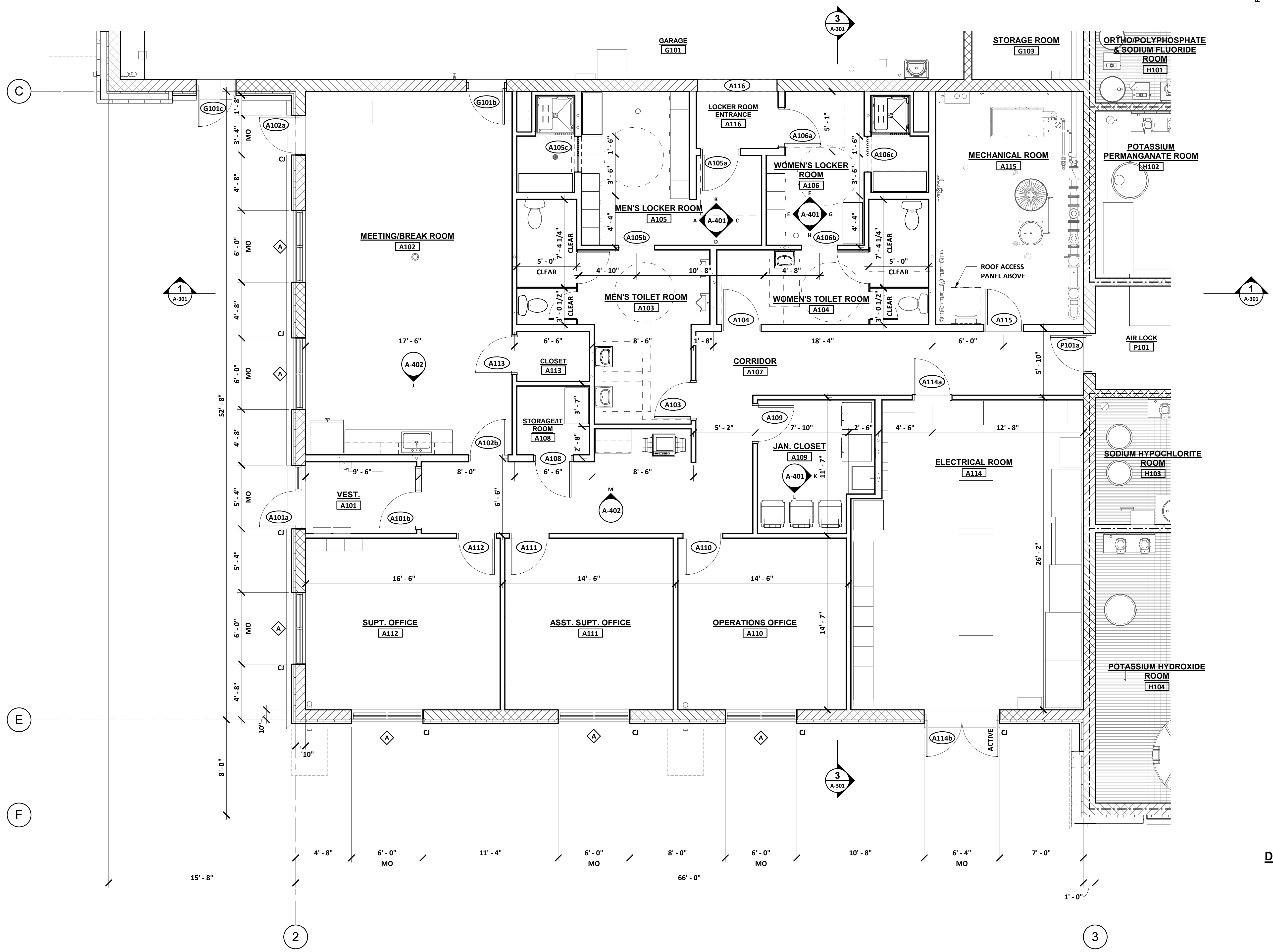
<b>MEDWAY, MASSACHUSETTS POPULATIC WATER TREATMENT PLANT</b>	<b>OVERALL AND CODE PLAN</b>
<b>DRAWING</b> <b>A-002</b>	



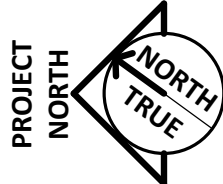
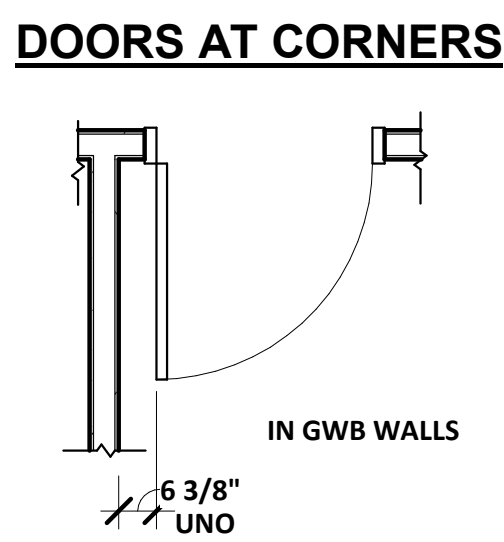




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BM 367 / MA-Medway-20600-WaterTreatmentPlant/20600-AM-WTP.rvt



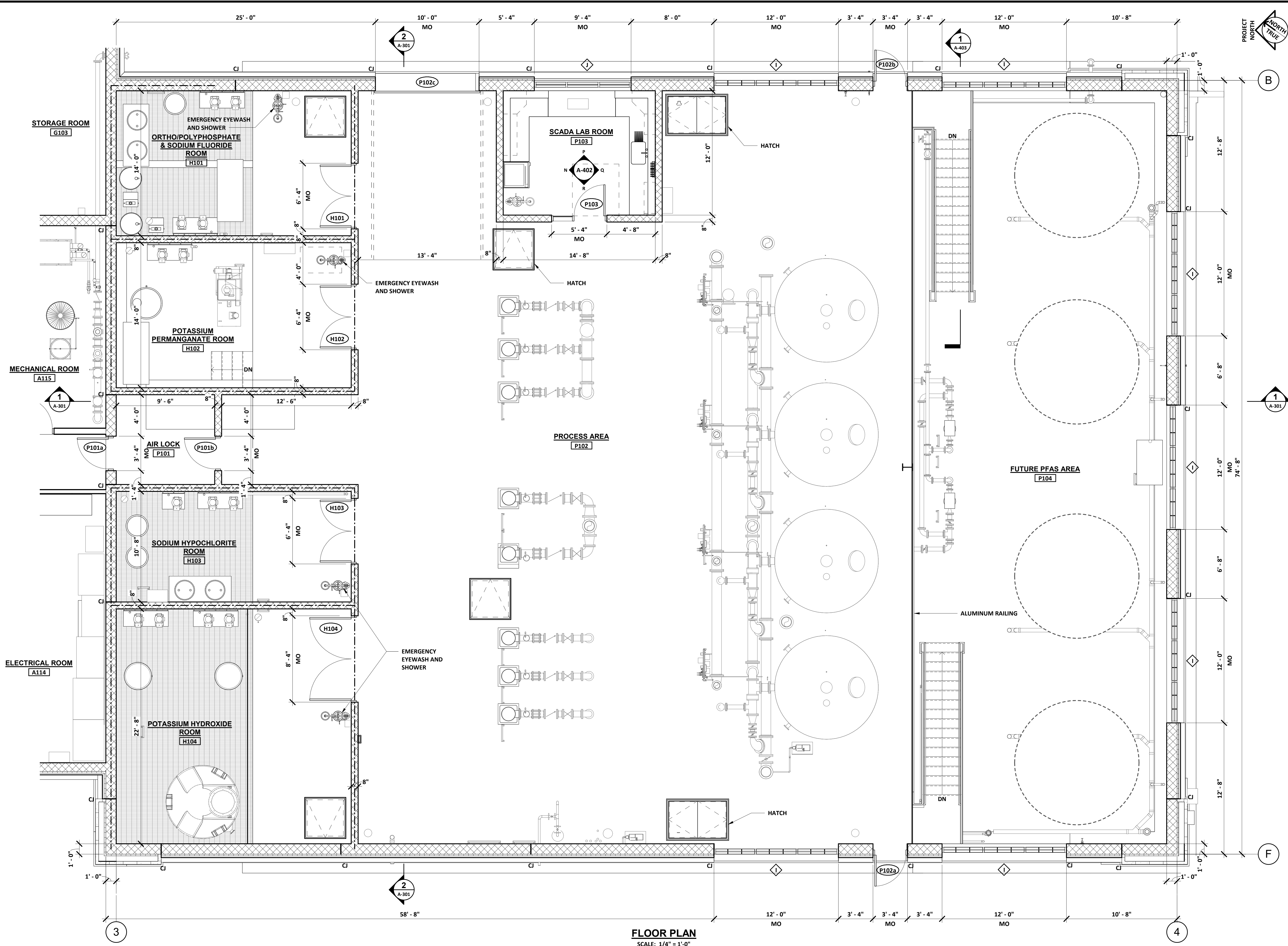
**OPERATIONS AREA FLOOR PLAN**  
SCALE: 1/4" = 1'-0"



DRAWING		OPERATIONS AREA FLOOR PLAN	
MEDWAY, MASSACHUSETTS POPULATIC WATER TREATMENT PLANT		OPERATIONS AREA FLOOR PLAN	
WRIGHT-PIERCE 978.416.8000   www.wright-pierce.com 600 FEDERAL STREET, SUITE 215L ANDOVER, MA 01810		DESIGNED: R. WILLIAMS CAD COORD: B. BLONIS CAD: S. CRILEY CHECKED: C. MICHAUD DATE: _____ APPROVED: _____ SUBMISSION: 90% DESIGN REVIEW	
COMMONWEALTH OF MASSACHUSETTS JAMES E. CRILEY CIVIL No. 4068 REGISTERED PROFESSIONAL ENGINEER		PROJECT NO: 20600 NO. 1 PERMITTING RESUBMISSION NO. 2 NO. 3 NO. 4 NO. 5	
PROJECT NORTH TRUE		APPD DATE 1/2022	

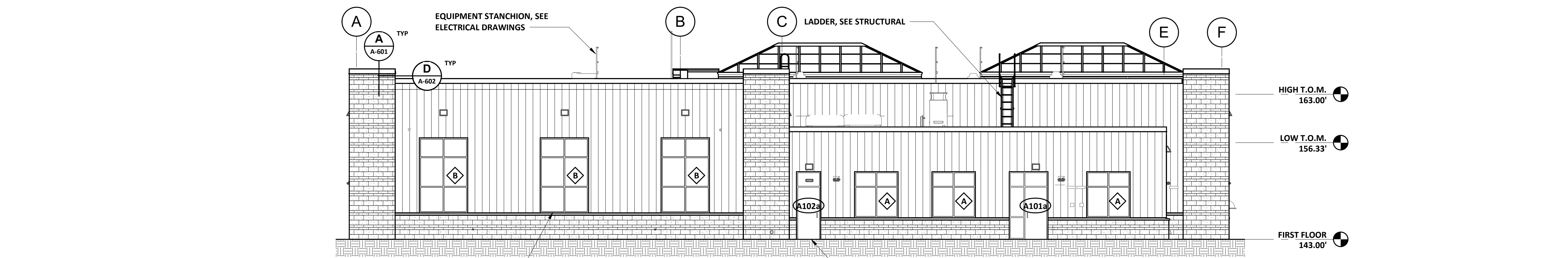


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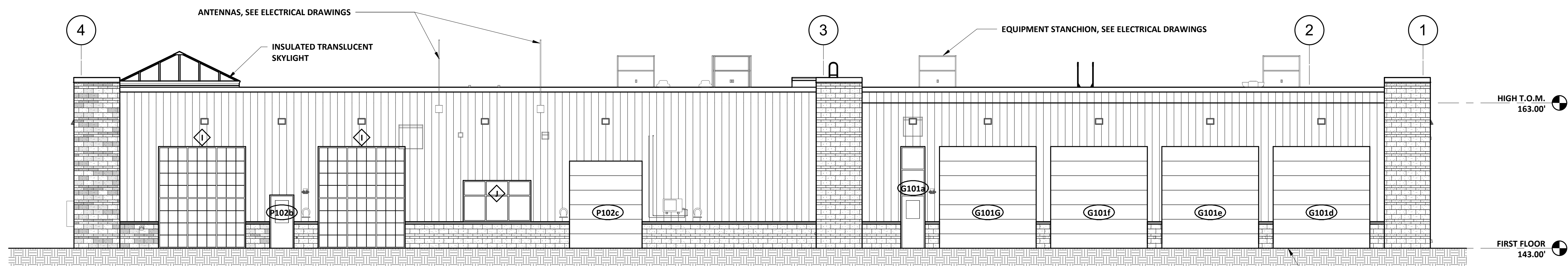


<div><div>DRAWING</div><div>A-103</div></div>		<div><div>MEDWAY, MASSACHUSETTS</div><div>POPULATIC WATER TREATMENT PLANT</div></div> <div><div>PROCESS AREA FLOOR PLAN</div></div>		<div><div><div><div><div><div></div></div></div><div><div>WRIGHT-PIERCE</div></div><div><div>978.416.8000</div><div> </div><div><a href="http://www.wright-pierce.com">www.wright-pierce.com</a></div></div><div><div>600 FEDERAL STREET, SUITE 2151, ANDOVER, MA 01810</div></div></div></div><div><div><div><div>COMMONWEALTH OF MASSACHUSETTS</div><div>JAMES E. CIVIL</div><div>No. 48899</div><div>REGISTERED PROFESSIONAL ENGINEER</div></div><div><div>PROJECT NO. 20600</div><div>DESIGNED: R. WILLIAMS</div><div>CAD COORD: B. JONES</div><div>CAD: S. RICKLEY</div><div>CHECKED: C. MICHAUD</div><div>DATE: APPROVED: DATE: SUBMISSION: 90% DESIGN REVIEW</div></div></div></div></div>		PROJECT NO. 20600		REVISIONS		APPD. DATE	
						DESIGNED: R. WILLIAMS		PERMITTING RESUBMISSION			
						CAD COORD: B. JONES					
						CAD: S. RICKLEY					
						CHECKED: C. MICHAUD					
DATE: APPROVED: DATE: SUBMISSION: 90% DESIGN REVIEW											

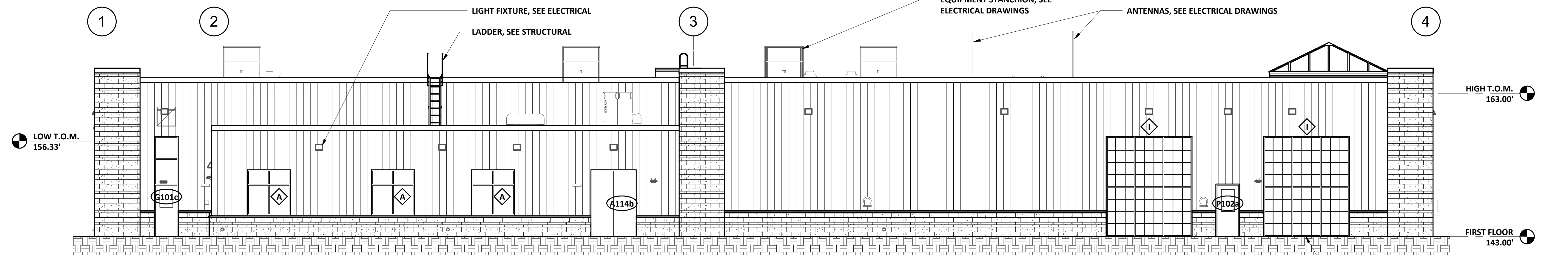




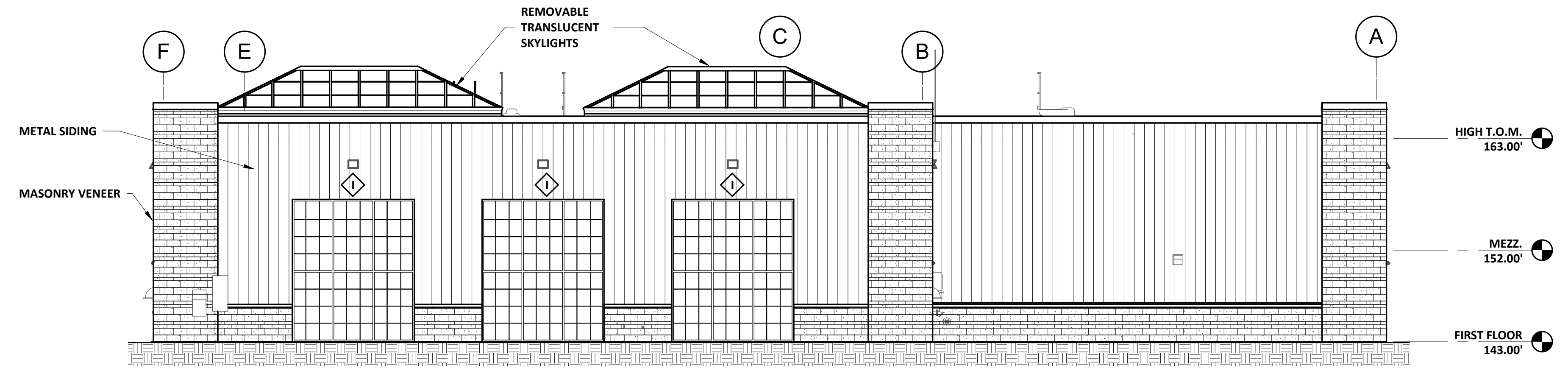
**NORTH ELEVATION**  
SCALE: 1/8" = 1'-0"



**EAST ELEVATION**  
SCALE: 1/8" = 1'-0"



**WEST ELEVATION**  
SCALE: 1/8" = 1'-0"



**SOUTH ELEVATION**  
SCALE: 1/8" = 1'-0"

REVISIONS		APP'D	DATE
NO	1		
NO	2		
NO	3		
NO	4		
NO	5		

PROJECT NO.	DESIGNED BY	CAD COORD.	CAD	CHECKED BY	DATE	APPROVED BY	DATE	SUBMISSION
20600	R. WILLIAMS	B. BLONIS	J. BLACKMAN	C. MICHIAUD	1/2022			PERMITTING RESUBMISSION

COMMONWEALTH OF MASSACHUSETTS  
JAMES E. CIVIL  
No. 46889  
REGISTERED PROFESSIONAL ENGINEER

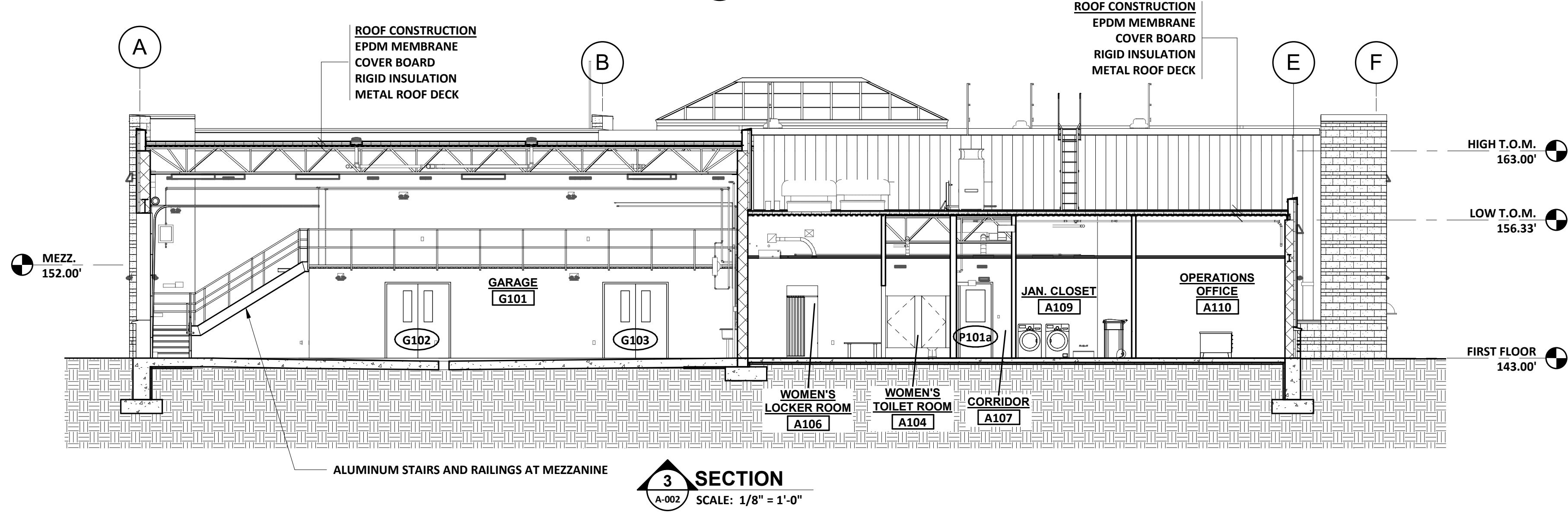
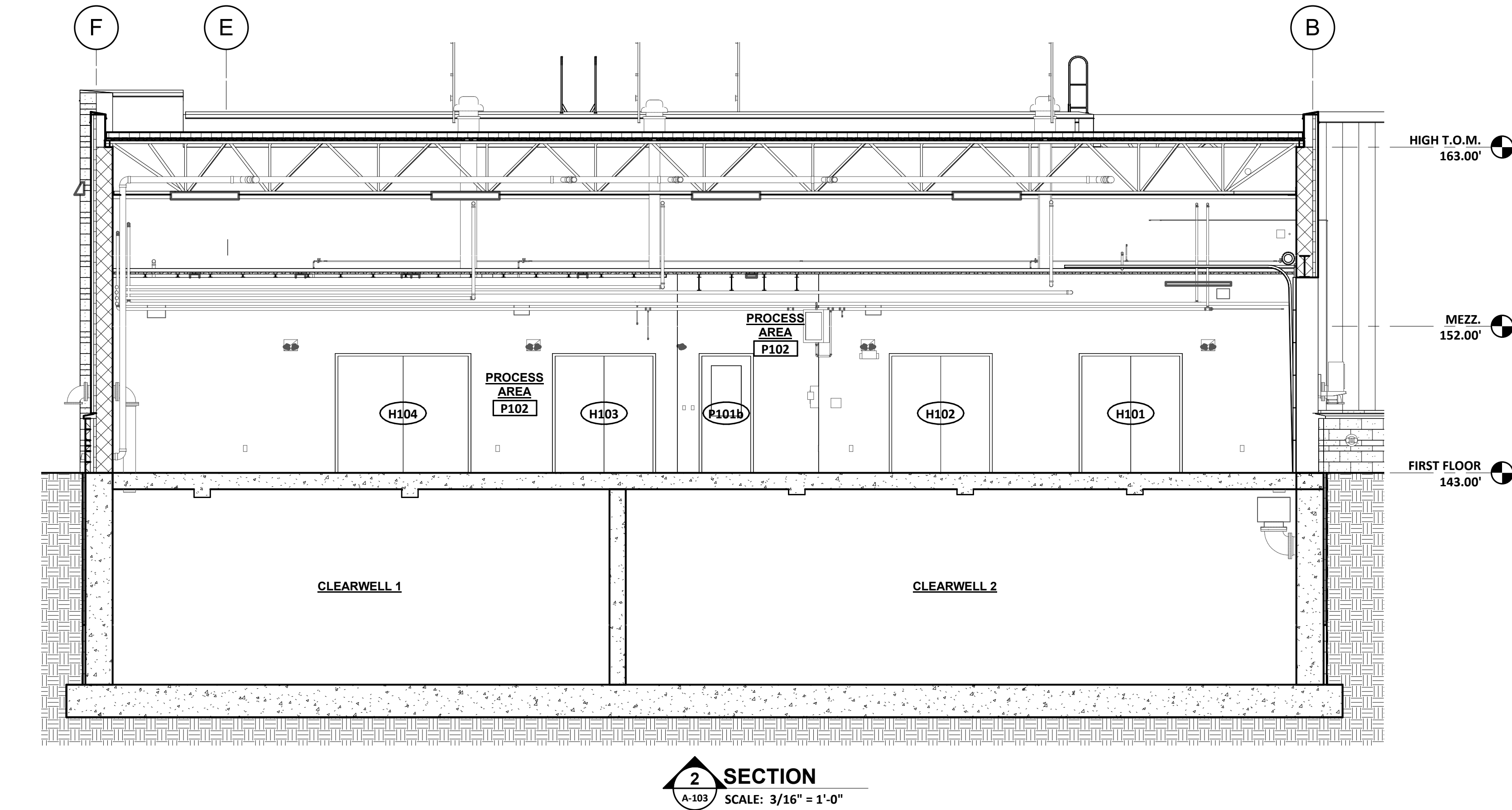
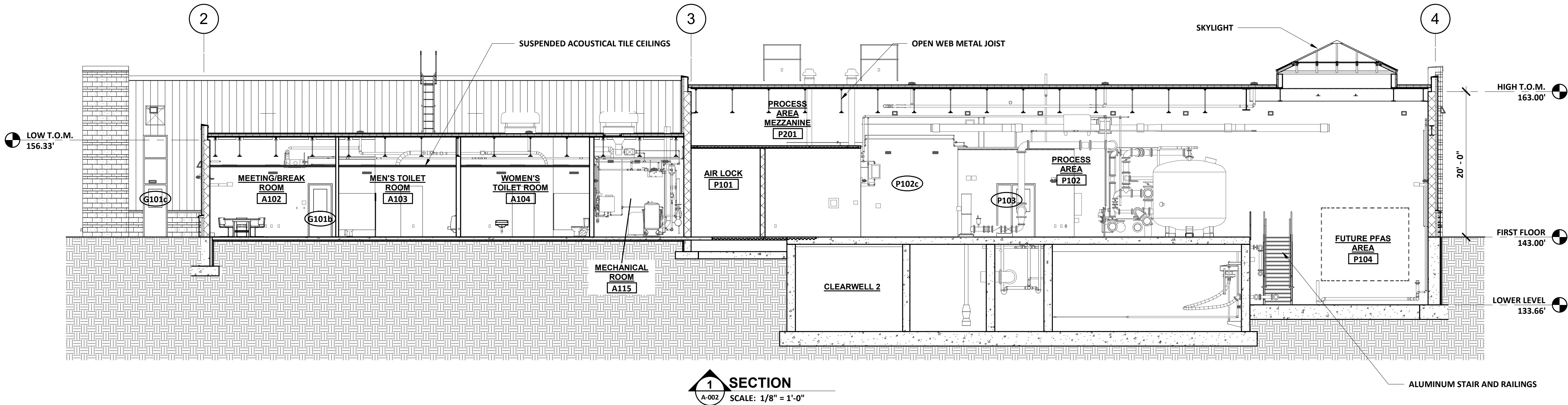
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MEDWAY, MASSACHUSETTS  
POPULATIC WATER TREATMENT PLANT

EXTERIOR ELEVATIONS

DRAWING  
A-201





NORTHWEST 3D VIEW

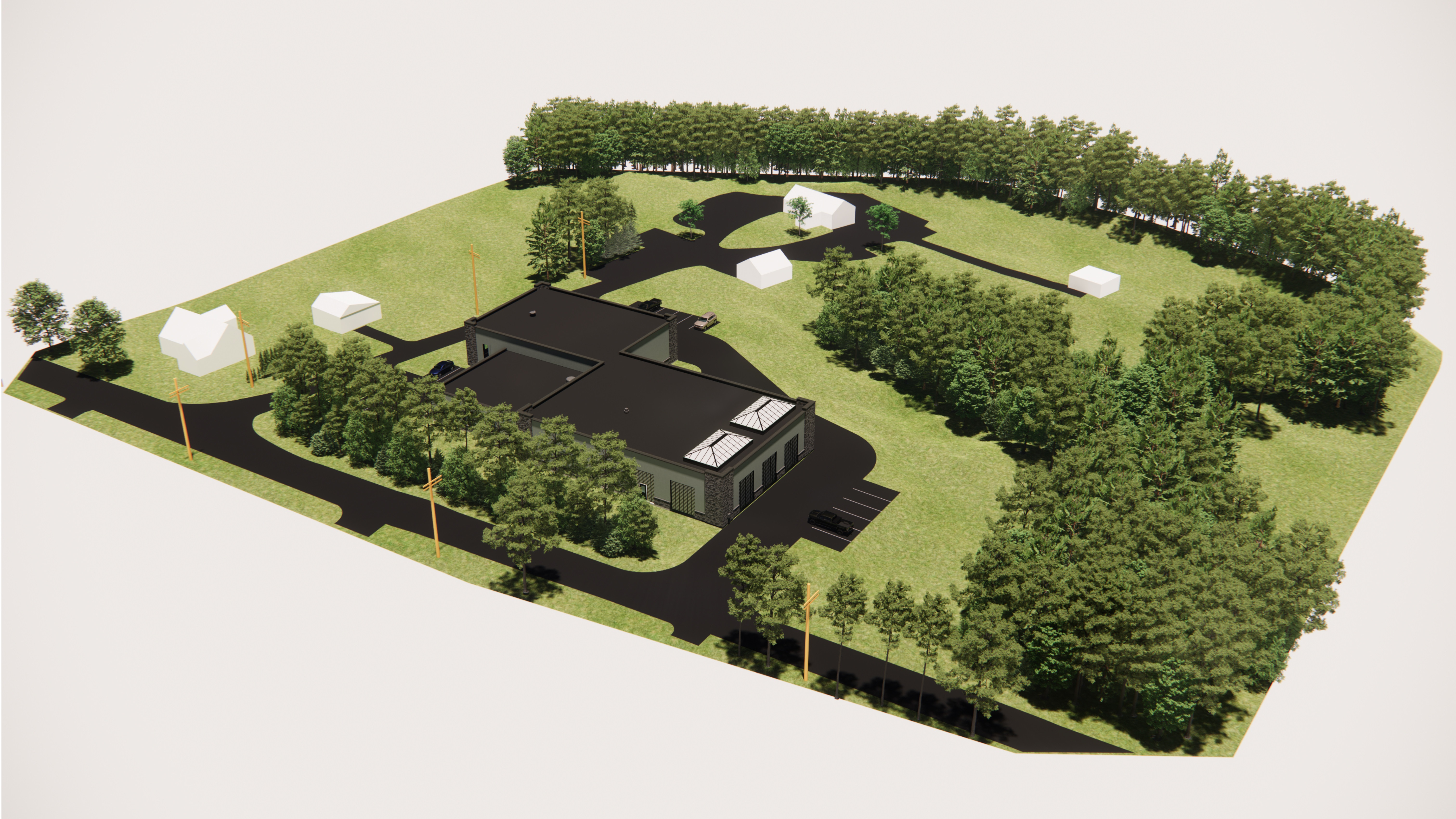


SOUTHWEST 3D VIEW

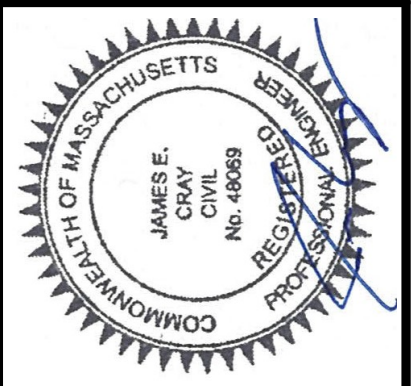
**BUILDING PERSPECTIVE**  
NOTE: PERSPECTIVE VIEW FOR GENERAL REPRESENTATION.  
NOT FOR CONSTRUCTION PURPOSES.

REVISIONS		APPD	DATE
PERMITTING RESUBMISSION			1/2022
NO	1		
NO	2		
NO	3		
NO	4		
NO	5		
PROJECT NO: 20600			
DESIGNED: R. WILLIAMS			
CAD COORD: B. BONES			
CAD: J. BLACKMAN			
CHECKED: C. MICHAUD			
DATE: 1/6/2022			
APPROVED: [Signature]			
DATE: 1/6/2022			
SUBMISSION: 90% DESIGN REVIEW			
<b>WRIGHT-PIERCE</b> 978.416.8000   www.wright-pierce.com 600 FEDERAL STREET, SUITE 215L, ANDOVER, MA 01810			
MEDWAY, MASSACHUSETTS POPULATIC WATER TREATMENT PLANT		SECTIONS AND RENDERING VIEWS	
DRAWING		A-301	





SITE PLAN

DRAWING	MEDWAY, MASSACHUSETTS POPULATIC WATER TREATMENT PLANT		WRIGHT-PIERCE 978.416.8000   www.wright-pierce.com 600 FEDERAL STREET, SUITE 215L, ANDOVER, MA 01810			PROJECT NO: 20600 DESIGNED: R.WILLIAMS CAD COORD: B.JONES CAD: S.RICKLEY CHECKED: Checker DATE: November 2021 APPROVED: Approver DATE: SUBMISSION: FOR REVIEW	NO	REVISIONS	APPD	DATE
	SITE PLAN						1	PERMITTING RESUBMISSION		1/2022
AP-00						2				
						3				
						4				
						5				





MEDWAY, MASSACHUSETTS  
POPULATIC WATER TREATMENT PLANT

BUILDING PERSPECTIVE I

DRAWING  
AP-01

PROJECT NO: 20600

DESIGNED: R.WILLIAMS

CAD COORD: B.JONES

CAD: S.RICKEY

CHECKED: DATE: November 2021

APPROVED: DATE:

SUBMISSION: FOR REVIEW

COMMONWEALTH OF MASSACHUSETTS

JAMES E. RYAN

CIVIL

No. 48889

REGISTERED PROFESSIONAL ENGINEER

NO

1

2

3

4

5

REVISIONS

PERMITTING RESUBMISSION

APP'D

DATE

1/2022





DRAWING		NO		REVISIONS		APPD		DATE	
AP-02		1		PERMITTING RESUBMISSION				1/2022	
MEDWAY, MASSACHUSETTS POPULATIC WATER TREATMENT PLANT  BUILDING PERSPECTIVE II		PROJECT NO: 20600		DESIGNED: R.WILLIAMS		CAD: S. RICKLEY		CHECKED: November 2021	
		CAD COORD: B. JONES		CAD: S. RICKLEY		CHECKED: November 2021		APPROVED: November 2021	
		DATE: November 2021		DATE: November 2021		DATE: November 2021		DATE: November 2021	
		DATE: November 2021		DATE: November 2021		DATE: November 2021		DATE: November 2021	
								SUBMISSION: FOR REVIEW	

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DRAWING

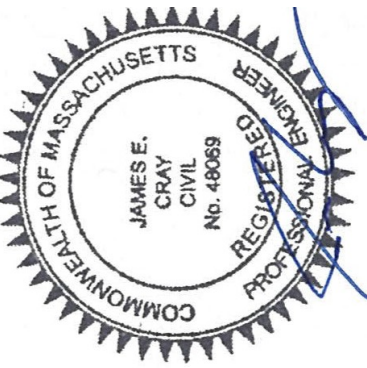
AP-03

MEDWAY, MASSACHUSETTS  
POPULATIC WATER TREATMENT PLANT

BUILDING PERSPECTIVE III



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PROJECT NO: 20600  
DESIGNED: R.WILLIAMS  
CAD COORD: B.JONES  
CAD: S.ICKLEY  
CHECKED: Checker  
DATE: November 2021  
APPROVED: Approver  
DATE:  
SUBMISSION: FOR REVIEW

NO	REVISIONS	APP'D	DATE
1	PERMITTING RESUBMISSION		1/2022
2			
3			
4			
5			



**Medway Planning and Economic Development Board**  
**Request for Waiver from Site Plan Rules and Regulations**  
 Complete 1 form for each waiver request

<b>Project Name:</b>	Medway Water Treatment Plant
<b>Property Location:</b>	19 Populatic Street
<b>Type of Project/Permit:</b>	Major Site Plan Review
<b>Identify the number and title of the relevant Section of the Site Plan Rules and Regulations from which a waiver is sought.</b>	Chapter 200, §204-5.D.1
<b>Summarize the text of the relevant Section of the Rules and Regulations from which a waiver is requested.</b>	Driplines are required to be shown for existing trees onsite as part of the required tree inventory.
<b>What aspect of the Regulation do you propose be waived?</b>	Showing the driplines of existing trees scheduled to remain.
<b>What do you propose instead?</b>	Identification of hardwood trees larger than 18" on the plans.
<b>Explanation/justification for the waiver request. Why is the waiver needed? Describe the extenuating circumstances that necessitate the waiver request.</b>	With the exception of the significant Oak tree scheduled to remain along Populatic Street, none of the other larger hardwoods are located in the areas where clearing is proposed.
<b>What is the estimated value/cost savings to the applicant if the waiver is granted?</b>	N/A
<b>How would approval of this waiver request result in a superior design or provide a clear and significant improvement to the quality of this development?</b>	Granting of this waiver would not have a negative impact on the design as the drip lines of existing hardwood trees scheduled to remain are inconsequential to the overall landscaping design.
<b>What is the impact on the development if this waiver is denied?</b>	No negative impact is anticipated.
<b>What are the design alternatives to granting this waiver?</b>	N/A
<b>Why is granting this waiver in the Town's best interest?</b>	Negative impacts to the project are not anticipated as a result of granting this waiver.
<b>If this waiver is granted, what is the estimated cost savings and/or cost avoidance to the Town?</b>	N/A
<b>What mitigation measures do you propose to offset not complying with the particular Rule/Regulation?</b>	No additional mitigation measures are proposed.
<b>What is the estimated value of the proposed mitigation measures?</b>	N/A
<b>Other Information?</b>	
<b>Waiver Request Prepared By:</b>	Medway DPW / Wright-Pierce
<b>Date:</b>	1/25/2022

**Medway Planning and Economic Development Board**  
**Request for Waiver from Site Plan Rules and Regulations**  
 Complete 1 form for each waiver request

<b>Project Name:</b>	Medway Water Treatment Plant
<b>Property Location:</b>	19 Populatic Street
<b>Type of Project/Permit:</b>	Major Site Plan Review
<b>Identify the number and title of the relevant Section of the Site Plan Rules and Regulations from which a waiver is sought.</b>	Parking Plan: Ch. 200, §204-5.D.5. and Table 3 of the Medway Zoning By-Laws.
<b>Summarize the text of the relevant Section of the Rules and Regulations from which a waiver is requested.</b>	Classification of the water treatment plant as a "warehouse/distribution or manufacturing facility" with respect to the minimum number of parking spaces.
<b>What aspect of the Regulation do you propose be waived?</b>	The minimum of 23 parking spaces required per Table 3 of the Zoning By-Laws.
<b>What do you propose instead?</b>	17 parking spaces as proposed.
<b>Explanation/justification for the waiver request. Why is the waiver needed? Describe the extenuating circumstances that necessitate the waiver request.</b>	The number of proposed parking spaces has been discussed with the Medway Water Department and deemed adequate to accommodate the future number of employees (12) and treatment plant operations. The Medway Zoning By-Laws do not specify a requirement for this type of facility and the nearest comparable use being assigned does not appear applicable.
<b>What is the estimated value/cost savings to the applicant if the waiver is granted?</b>	Approximately \$5,000
<b>How would approval of this waiver request result in a superior design or provide a clear and significant improvement to the quality of this development?</b>	Reducing the amount of impervious surfaces will have a positive impact on stormwater treatment by reducing run-off. Given that this site is a public water supply and within a Zone 1 Protection Area, it is in the Town's best interest to limit impervious surfaces as practical.
<b>What is the impact on the development if this waiver is denied?</b>	More pavement and disturbance so the site.
<b>What are the design alternatives to granting this waiver?</b>	Utilize existing paved areas onsite for overflow parking if ever required.
<b>Why is granting this waiver in the Town's best interest?</b>	See previous comment regarding impervious surfaces.
<b>If this waiver is granted, what is the estimated cost savings and/or cost avoidance to the Town?</b>	Approximately \$5,000
<b>What mitigation measures do you propose to offset not complying with the particular Rule/Regulation?</b>	Utilize existing paved areas onsite for overflow parking if ever required.
<b>What is the estimated value of the proposed mitigation measures?</b>	See previous cost savings estimates.
<b>Other Information?</b>	
<b>Waiver Request Prepared By:</b>	Medway DPW / Wright-Pierce
<b>Date:</b>	1/25/2022

**Medway Planning and Economic Development Board**  
**Request for Waiver from Site Plan Rules and Regulations**  
 Complete 1 form for each waiver request

<b>Project Name:</b>	Medway Water Treatment Plant
<b>Property Location:</b>	19 Populatic Street
<b>Type of Project/Permit:</b>	Major Site Plan Review
<b>Identify the number and title of the relevant Section of the Site Plan Rules and Regulations from which a waiver is sought.</b>	Section 5.5.4. I, c. of the Zoning Bylaw, sidewalks shall be provided along the entire frontage of the subject property along existing public ways. (Ch. 200 §207-9.B)
<b>Summarize the text of the relevant Section of the Rules and Regulations from which a waiver is requested.</b>	See above.
<b>What aspect of the Regulation do you propose be waived?</b>	The sidewalk requirement for the entire frontage of the property.
<b>What do you propose instead?</b>	Match existing conditions.
<b>Explanation/justification for the waiver request. Why is the waiver needed? Describe the extenuating circumstances that necessitate the waiver request.</b>	Populatic Street between Walker Street and the Franklin town line does not have a sidewalk on either side of the road. Including one for this project does not seem practical and provides little benefit to the public as the rest of the street does not have any sidewalks.
<b>What is the estimated value/cost savings to the applicant if the waiver is granted?</b>	Approximately \$90,0000
<b>How would approval of this waiver request result in a superior design or provide a clear and significant improvement to the quality of this development?</b>	Approval of this waiver would reduce the proposed work within Populatic Street and maintain the overall aesthetics of the street.
<b>What is the impact on the development if this waiver is denied?</b>	Additional cost and traffic disruptions during construction.
<b>What are the design alternatives to granting this waiver?</b>	The design alternative is to bring the existing shoulder / right-of-way back to existing conditions (no sidewalk).
<b>Why is granting this waiver in the Town's best interest?</b>	As this is a public project, the additional cost to add a new sidewalk does not appear to provide any significant value to the public or Town.
<b>If this waiver is granted, what is the estimated cost savings and/or cost avoidance to the Town?</b>	Approximately \$90,000
<b>What mitigation measures do you propose to offset not complying with the particular Rule/Regulation?</b>	None are proposed.
<b>What is the estimated value of the proposed mitigation measures?</b>	N/A
<b>Other Information?</b>	
<b>Waiver Request Prepared By:</b>	Medway DPW / Wright-Pierce
<b>Date:</b>	1/25/2022

**Medway Planning and Economic Development Board**  
**Request for Waiver from Site Plan Rules and Regulations**  
*Complete 1 form for each waiver request*

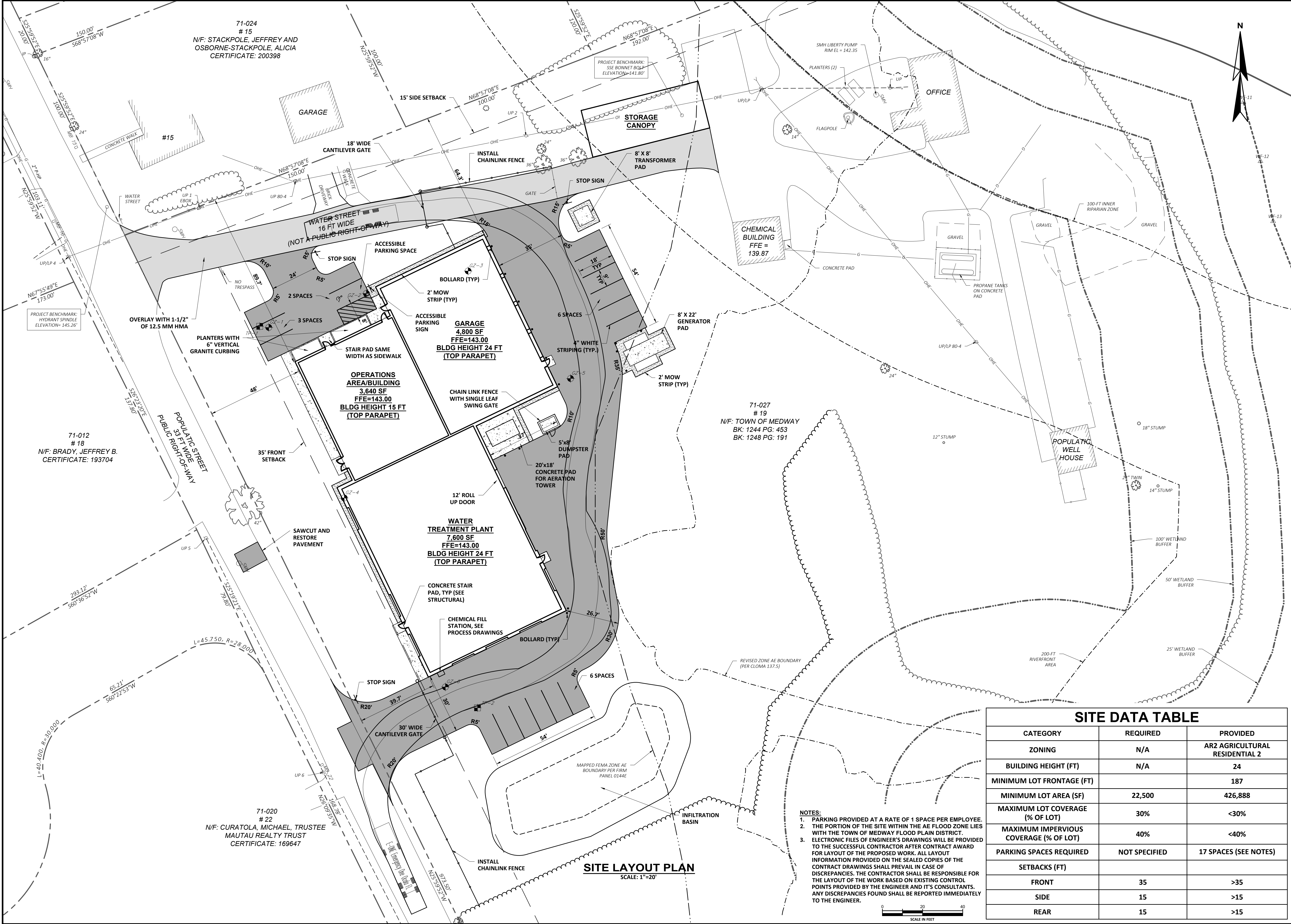
<b>Project Name:</b>	<i>Medway Water Treatment Plant</i>
<b>Property Location:</b>	<i>19 Populatic Street</i>
<b>Type of Project/Permit:</b>	<i>Major Site Plan Review</i>
<b>Identify the number and title of the relevant Section of the Site Plan Rules and Regulations from which a waiver is sought.</b>	Chapter 200, §207-16.B
<b>Summarize the text of the relevant Section of the Rules and Regulations from which a waiver is requested.</b>	Dumpsters are required to be screened on all sides to the full height of the container.
<b>What aspect of the Regulation do you propose be waived?</b>	The screening requirement.
<b>What do you propose instead?</b>	No screening and the ability to relocate the dumpster temporarily if required for maintenance or plowing.
<b>Explanation/justification for the waiver request. Why is the waiver needed? Describe the extenuating circumstances that necessitate the waiver request.</b>	The proposed dumpster location is essentially screened the by the building from Populatic and Water Street. Screening of the dumpster would make maintenance and plowing more difficult for the staff as they would not be able to relocate the dumpster easily if required.
<b>What is the estimated value/cost savings to the applicant if the waiver is granted?</b>	If the waiver is granted, it would reduce O&M time related to the dumpster and plowing operations.
<b>How would approval of this waiver request result in a superior design or provide a clear and significant improvement to the quality of this development?</b>	It would improve operations and provide flexibility for the staff of the new facility.
<b>What is the impact on the development if this waiver is denied?</b>	Additional O&M time.
<b>What are the design alternatives to granting this waiver?</b>	N/A
<b>Why is granting this waiver in the Town's best interest?</b>	It will make plowing the site and maintenance of surrounding equipment easier.
<b>If this waiver is granted, what is the estimated cost savings and/or cost avoidance to the Town?</b>	N/A
<b>What mitigation measures do you propose to offset not complying with the particular Rule/Regulation?</b>	No mitigation measures are proposed.
<b>What is the estimated value of the proposed mitigation measures?</b>	N/A
<b>Other Information?</b>	
<b>Waiver Request Prepared By:</b>	Medway DPW / Wright-Pierce



**Medway Planning and Economic Development Board**  
**Request for Waiver from Site Plan Rules and Regulations**  
 Complete 1 form for each waiver request

<b>Project Name:</b>	Medway Water Treatment Plant
<b>Property Location:</b>	19 Populatic Street
<b>Type of Project/Permit:</b>	Major Site Plan Review
<b>Identify the number and title of the relevant Section of the Site Plan Rules and Regulations from which a waiver is sought.</b>	Chapter 200, §207-11.A.4
<b>Summarize the text of the relevant Section of the Rules and Regulations from which a waiver is requested.</b>	Site entrances and exits shall be clearly delineated by vertical granite curbing or other approved material along the entire radius of the opening, shall extend at least 12 feet beyond each side along the gutter line of the road and at least the first 25 feet of a driveway, and shall be sloped at the end to prevent a vertical obstruction to exit.
<b>What aspect of the Regulation do you propose be waived?</b>	The curbing requirement at the entrances.
<b>What do you propose instead?</b>	No curbing which matches existing conditions on Populatic Street and at the site.
<b>Explanation/justification for the waiver request. Why is the waiver needed? Describe the extenuating circumstances that necessitate the waiver request.</b>	There currently isn't any curb in the vicinity of the new treatment facility. A small amount of granite would be expensive and bituminous curb could be easily damaged at the entrance.
<b>What is the estimated value/cost savings to the applicant if the waiver is granted?</b>	Approximately \$5,000.
<b>How would approval of this waiver request result in a superior design or provide a clear and significant improvement to the quality of this development?</b>	No, however approval would not have a negative impact on design.
<b>What is the impact on the development if this waiver is denied?</b>	Additional cost and disturbance on Populatic Street and potential increase in maintenance cost if curbs are damaged.
<b>What are the design alternatives to granting this waiver?</b>	Keeping the entrances as proposed without curbing.
<b>Why is granting this waiver in the Town's best interest?</b>	Yes
<b>If this waiver is granted, what is the estimated cost savings and/or cost avoidance to the Town?</b>	Approximately \$5,000.
<b>What mitigation measures do you propose to offset not complying with the particular Rule/Regulation?</b>	No additional mitigation measures are proposed.
<b>What is the estimated value of the proposed mitigation measures?</b>	N/A
<b>Other Information?</b>	
<b>Waiver Request Prepared By:</b>	Medway DPW / Wright-Pierce

A:\ENGINEERING\20600-WPT-DESIGN\DRAWINGS\CIV\20600-CS-SITELAYOUTPLAN.DWG | 20600-CS-SITELAYOUTPLAN.DWG | 1:2.5849 | 1/18/2023 1:24:38 PM | DANIEL.METZ  
LAST SAVED BY: DANIEL.METZ 1/18/2023 1:21 PM



- NOTES:
1. PARKING PROVIDED AT A RATE OF 1 SPACE PER EMPLOYEE.
  2. THE PORTION OF THE SITE WITHIN THE AE FLOOD ZONE LIES WITH THE TOWN OF MEDWAY FLOOD PLAIN DISTRICT.
  3. ELECTRONIC FILES OF ENGINEER'S DRAWINGS WILL BE PROVIDED TO THE SUCCESSFUL CONTRACTOR AFTER CONTRACT AWARD FOR LAYOUT OF THE PROPOSED WORK. ALL LAYOUT INFORMATION PROVIDED ON THE SEALED COPIES OF THE CONTRACT DRAWINGS SHALL PREVAIL IN CASE OF DISCREPANCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LAYOUT OF THE WORK BASED ON EXISTING CONTROL POINTS PROVIDED BY THE ENGINEER AND IT'S CONSULTANTS. ANY DISCREPANCIES FOUND SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER.

SITE DATA TABLE		
CATEGORY	REQUIRED	PROVIDED
ZONING	N/A	AR2 AGRICULTURAL RESIDENTIAL 2
BUILDING HEIGHT (FT)	N/A	24
MINIMUM LOT FRONTAGE (FT)		187
MINIMUM LOT AREA (SF)	22,500	426,888
MAXIMUM LOT COVERAGE (% OF LOT)	30%	<30%
MAXIMUM IMPERVIOUS COVERAGE (% OF LOT)	40%	<40%
PARKING SPACES REQUIRED	NOT SPECIFIED	17 SPACES (SEE NOTES)
SETBACKS (FT)		
FRONT	35	>35
SIDE	15	>15
REAR	15	>15

PROJECT NO: 20600  
DESIGNED: LANTHONY  
CAD COORD: B.JONES  
CAD: D.METZ  
CHECKED: J.PREBLE  
DATE: J.CRAY  
APPROVED: J.CRAY  
DATE: J.CRAY  
SUBMISSION: 90% DESIGN REVIEW

REVISIONS

NO	DATE
1	
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WRIGHT-PIERCE

978.416.8000 | www.wright-pierce.com  
600 FEDERAL STREET, SUITE 2151, ANDOVER, MA 01810

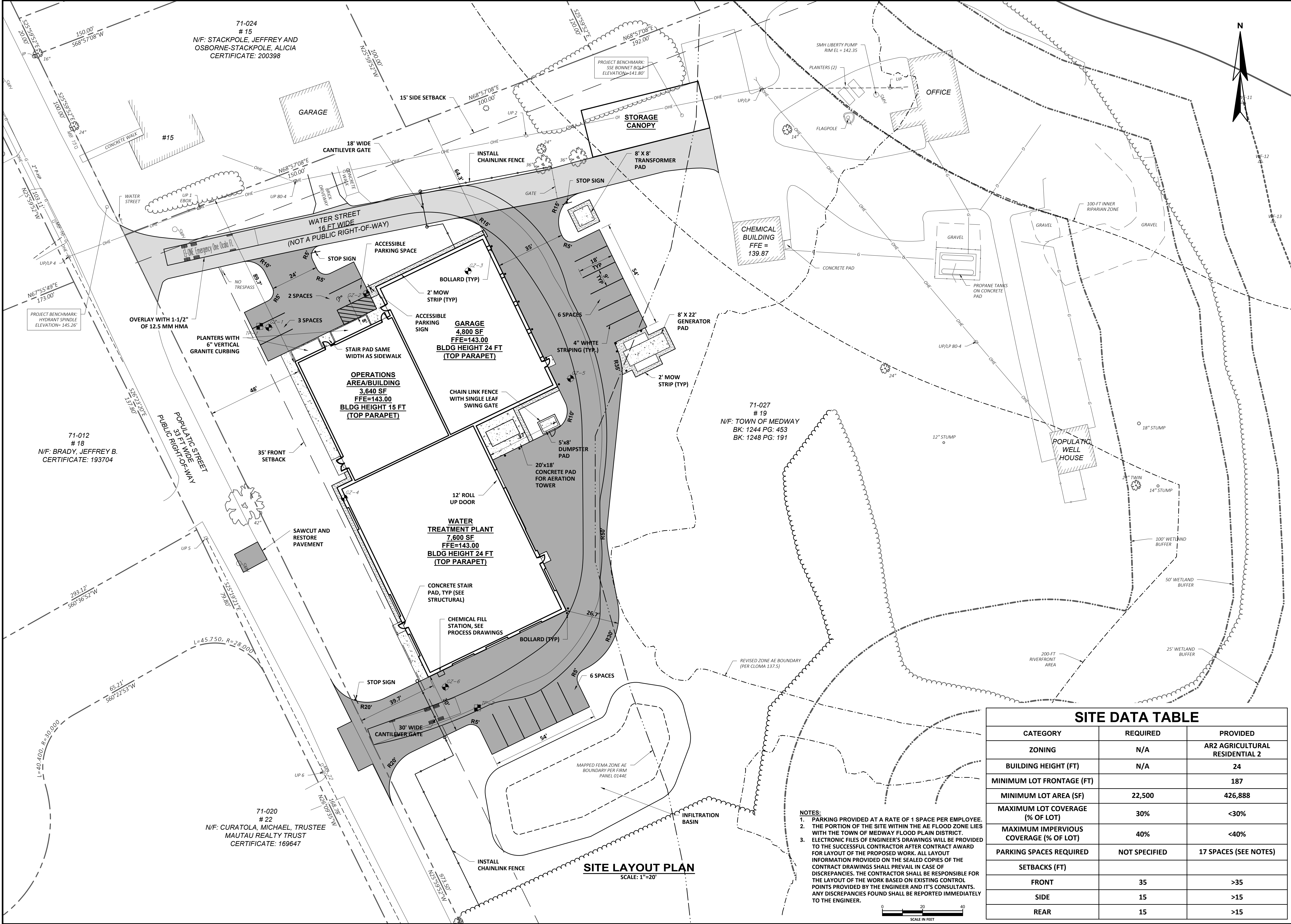
MEDWAY, MASSACHUSETTS  
POPULATIC WATER TREATMENT PLANT

SITE LAYOUT PLAN

DRAWING  
C-3



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LAST SAVED BY: DANIEL.METZ | 1/18/2023 1:21 PM



- NOTES:
1. PARKING PROVIDED AT A RATE OF 1 SPACE PER EMPLOYEE.
  2. THE PORTION OF THE SITE WITHIN THE AE FLOOD ZONE LIES WITH THE TOWN OF MEDWAY FLOOD PLAIN DISTRICT.
  3. ELECTRONIC FILES OF ENGINEER'S DRAWINGS WILL BE PROVIDED TO THE SUCCESSFUL CONTRACTOR AFTER CONTRACT AWARD FOR LAYOUT OF THE PROPOSED WORK. ALL LAYOUT INFORMATION PROVIDED ON THE SEALED COPIES OF THE CONTRACT DRAWINGS SHALL PREVAIL IN CASE OF DISCREPANCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LAYOUT OF THE WORK BASED ON EXISTING CONTROL POINTS PROVIDED BY THE ENGINEER AND IT'S CONSULTANTS. ANY DISCREPANCIES FOUND SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER.

SITE DATA TABLE		
CATEGORY	REQUIRED	PROVIDED
ZONING	N/A	AR2 AGRICULTURAL RESIDENTIAL 2
BUILDING HEIGHT (FT)	N/A	24
MINIMUM LOT FRONTAGE (FT)		187
MINIMUM LOT AREA (SF)	22,500	426,888
MAXIMUM LOT COVERAGE (% OF LOT)	30%	<30%
MAXIMUM IMPERVIOUS COVERAGE (% OF LOT)	40%	<40%
PARKING SPACES REQUIRED	NOT SPECIFIED	17 SPACES (SEE NOTES)
SETBACKS (FT)		
FRONT	35	>35
SIDE	15	>15
REAR	15	>15

PROJECT NO: 20600  
DESIGNED: LANTHONY  
CAD COORD: B.JONES  
CAD: D.METZ  
CHECKED: J.PREBLE  
DATE: J.CRAY  
APPROVED: J.CRAY  
DATE: J.CRAY  
SUBMISSION: 90% DESIGN REVIEW

REVISIONS

APPD DATE

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600 FEDERAL STREET, SUITE 2151, ANDOVER, MA 01810

MEDWAY, MASSACHUSETTS  
POPULATIC WATER TREATMENT PLANT

SITE LAYOUT PLAN

DRAWING  
C-3

Date: **1/25/2022**

Project No.: **20600B**

To: **Medway Planning and Economic Development Board**

From: **Wright-Pierce**

Subject: **Attachment B – Construction Management Plan – Major Site Plan Review**

---

The following memorandum presents the proposed Construction Management Plan (CMP) for the Populatic Water Treatment Plant project as required per Ch. 200 §204-3.H of the Medway By-Laws.

### Maintain Existing Works

#### Existing Operations

1. The Populatic Street Wells, Village Street Well, and Oakland Street Well shall remain operational during construction until the Populatic Water Treatment Plant is complete and ready for final testing. Any shutdowns of existing facilities will require approval from the Owner (Town of Medway).
2. Staggered shutdowns of the existing well stations are anticipated to minimize disruptions and downtime while the well station upgrades are being completed. Refer to proposed Construction Sequence for additional details.

#### Minimize Interference

1. The Contractor shall at all times conduct their operations so as to interfere as little as possible with existing works. The Contractor shall develop a program, in cooperation with the Owner, Engineer, and interested officials, which shall provide for the construction and putting into service of the new works in the most orderly manner possible. This program shall be adhered to except as deviations therefrom are expressly permitted.
2. Work of connecting with, cutting into, and reconstructing existing pipes or structures shall be planned to interfere with the operation of the existing facilities for the shortest possible time and when the demands on the facilities best permit such interference. It may be necessary to work outside of normal working hours to minimize interference. Before starting work, which will interfere with the operation of existing facilities, the Contractor shall do all possible preparatory work and shall see that all tools, materials, and equipment are made ready and at hand.
3. The Contractor's operations shall not hinder the Owner's operations including the delivery, storage and use of materials and supplies, nor hinder staff duties, nor disrupt utility service.
4. The Owner must have access to the existing well sites and equipment at all times unless a specific exception is granted by the Owner.
5. The Contractor shall limit their personnel to the proposed work areas and limits of work.

### Construction Sequence – General

1. Construction of the proposed treatment facilities will disrupt the existing well stations and operations. To maintain treatment and to minimize disruption, the construction must be divided into phases or sequenced appropriately. The construction sequence phases and dates must allow the Populatic Street Wells, Village Street Well and Oakland Street Well stations to maintain operational as described in previous section.



2. The intent of the proposed construction sequence is to allow for start-up, testing, and MassDEP approval of the new treatment facility utilizing the Populatic Well sources for supply, while keeping Village Street and Oakland Street wells operational and supplying water to the system. Once the new treatment facility is approved by MassDEP to begin pumping to the distribution system, the Village Street well can be shut-down and the required upgrades performed. Once Village Street well is approved to be pumping to the new water treatment facility, the final connections at Oakland Street can be performed. The staggered start-up will allow the Town to maintain redundancy and limit offline well sources during final testing.
3. The Contractor shall submit to the Engineer for review and acceptance a complete schedule of his proposed sequence of construction operations prior to commencing any work. This schedule shall include the Contractor's plans for doing the work. The intent is to maintain existing operations at the existing well stations to the greatest extent possible during construction.
4. The Contractor must submit to the Engineer a written request to deviate from the proposed sequence described in the next section, provided he can demonstrate to the Engineer that the continuity and degree of treatment will not be adversely affected.
5. The Contractor shall include the cost of any temporary facilities required to maintain treatment during the construction period in his lump-sum bid price. The cost shall include the cost for all labor, tools, equipment and materials necessary.
6. It shall be recognized that certain interruptions of, and disruptions to, the treatment processes and present plant operations will be required to complete the work of this Contract. Scheduled interruptions requiring interruption of operations at well facilities shall be kept to a minimum frequency and duration. Such interruptions shall be coordinated by the Contractor with the Owner using the Contractor's proposed work schedule but shall not affect the facilities ability to maintain treatment as described above.
7. The Contractor shall notify the Owner a minimum of seven (7) days in advance of any work which may affect or disrupt the operation of the existing facilities and two (2) calendar weeks in advance of removing any wells from service. Once the interruption occurs the Contractor must maintain a workforce on-site to complete the work in the agreed upon time.
8. The Contractor shall have all materials and equipment on-site, and shall receive the Owner's approval, prior to initiating work which requires any part of the existing well facilities to be off-line.
9. Contractor shall coordinate equipment lead times to minimize well shut down periods for the well sites.
10. New equipment and/or treatment units may not be used until specified testing and acceptance procedures are completed and written authorization for their use is given by the Engineer and MassDEP. MassDEP approval is required for the Contractor to achieve Substantial Completion.

### Proposed Construction Sequence

The following general sequence of construction is recommended. The intent of this sequence of construction is to outline in general the anticipated progression of work on the project. Deviations to this sequence of construction will be evaluated upon review of the Contractor's submitted schedule:

1. Bid and Award of Contract.
2. Notice to Proceed.
3. Contractor to identify limits of the clearing and install all required erosion controls in accordance with the contract requirements and any special conditions established by the Town of Medway Conservation Commission.

4. Inspection and approval by the Medway Conservation Commission is required prior to commencing construction activities onsite.
5. Contractor will commence with construction of the Populatic Water Treatment Plant building while keeping existing well sources online and without impacting existing Water Department Operations onsite.
6. Construct all underground utilities that will not affect the existing operation of the Populatic Well Stations and Corrosion Control Facility.
7. Upgrades to the Populatic well sources including pump replacement, power relocation, electrical modifications, and all other activities which require shutdown of the well station or sources will take place as late in schedule as possible, prior to final startup, to minimize the time the well will be offline.
8. Construction of the new Populatic Water Treatment Plant shall be brought to a completion point at which most of the remaining work is associated with the well station upgrades. At this point, the Contractor can request shutdown of the Populatic well sources.
9. All new process treatment equipment and required ancillary systems shall be installed and ready for final testing prior to shut down of the Populatic well sources.
10. Following Engineer and Owner approval for the Populatic well shutdown, construction activities which have the potential to disrupt supply or quality of the water being supplied by the existing Populatic wells can commence. The time that Populatic wells are offline is to be minimized. Perform start-up and testing of equipment and prepare the new treatment facility for final demonstration testing.
11. Commence final demonstration testing of the Populatic Water Treatment Plant (pumping to waste) using the Populatic well sources only and provide proof acceptable to Engineer, Owner, and MassDEP that the facility is operating as designed and reliably producing water of the quantity and quality specified here in and as required by MassDEP. A minimum of 2 weeks of demonstration testing is anticipated to be performed without issue before reliability is proven.
12. Upon MassDEP approval to pump into the distribution system (substantial completion), the Contractor can request shutdown of Village well station and complete the required upgrades.
13. Once the upgrades are complete and the station is ready for final testing, the final connection to the new raw water transmission piping will be coordinated with the Owner, Engineer, and the water main Contractor. Work associated with the new raw water transmission mains is being completed outside of this contract.
14. Perform final testing of the Village Well station pumping under the new control strategy pumping through the Populatic Water Treatment Plant for substantial completion of this station.
15. MassDEP may require a second inspection at Village well and this will be coordinated by the Engineer and Owner prior to substantial completion being granted for Village well.
16. Once Village well is approved to be pumping through the new treatment facility, the final raw water connection at Oakland well can be coordinated with the Engineer, Owner, and the water main Contractor. Work associated with the new raw water transmission mains is being completed outside of this contract.
17. Perform final testing of the Village Well station pumping under the new control strategy pumping through the Populatic Water Treatment Plant.
18. Bring the Populatic Water Treatment Plant to final completion including final landscaping, paving and site work.
19. Demolition of the existing garage and storage facilities cannot be completed until the Town has all required occupancy permits for the new facility and has relocated all equipment being stored in these existing buildings to the new facility. Final sitework and landscaping at these locations to be completed following demolition.



## Sound data sheet

### C750N6 60 Hz spark-ignited generator set (GenSet)

#### A-weighted sound pressure levels (SPLs) @ 7 meters in dB(A)

The reference sound pressure is 20  $\mu$ Pa.

Configuration	Position*								8 position average SPL
	1	2	3	4	5	6	7	8	
Standard unhooded with infinite exhaust	84.6	90.8	92.1	92.8	89.9	92.9	90.9	86.7	90.8
Weather-protective enclosure with muffler	84.8	90	90.6	91.7	86.9	88.9	90.1	84.3	88.4
Sound-attenuated enclosure Level I with muffler	80.8	80	77.7	82	82.1	83.7	78.3	82	80.8
Sound-attenuated enclosure Level II with muffler	78.8	77.2	74.7	77.5	79.0	78.7	76.0	80.7	78.2

\*Position 1 faces the GenSet front. The positions proceed around the GenSet in a counter-clockwise direction in 45° increments. All positions are approximately 7 m (23 ft.) from the surface of the GenSet and approximately 1.2 m (48 in) from floor level.

#### A-weighted sound power levels (SPWLs) @ 1 meter in dB(A)

The reference sound power is 1 pW ( $10^{-12}$  W).

Configuration	Octave band center frequency (Hz)								Total SPWL
	63	125	250	500	1000	2000	4000	8000	
Standard unhooded with infinite exhaust	92.2	103.0	107.5	114.2	115.6	113.4	108.8	103.4	120.1
Weather-protective enclosure with muffler	92.8	104.6	107.3	112.9	115.3	108.7	107.1	100.2	118.8
Sound-attenuated enclosure Level I with muffler	89.8	103.9	102.7	108.5	109.1	105.8	96.2	92.6	113.8
Sound-attenuated enclosure Level II with muffler	91.4	103.2	101.9	104.2	102.8	101.4	92.8	89.8	110.0

Data is based on a 100% rated load with a standard radiator cooling package.  
Sound levels are subject to instrumentation, measurement, installation, and manufacturing variability.  
The sound data for a GenSet with infinite exhaust does not include the exhaust noise contribution.  
Sound power levels are calculated according to ISO 3744 and ISO 8528-10 requirements.





**Town of Medway**  
**DESIGN REVIEW COMMITTEE**  
**155 Village Street**  
**Medway MA 02053**  
**508-533-3291**  
[drc@townofmedway.org](mailto:drc@townofmedway.org)

January 31, 2022

TO: Medway Planning and Economic Development Board  
FROM: Matthew Buckley, Chair  
RE: DRC Comments – Medway DPW Water Quality Treatment Facility, 19 Populatic Street

Dear Members of the Medway Planning and Economic Development Board

The Medway Design Review Committee [DRC] is pleased to provide a comment letter for the site plan for the proposed Medway DPW Water Quality Treatment Facility at 19 Populatic Street. The DRC met with representatives of this project on January 19<sup>th</sup>, 2022 and reviewed an updated plan set with architectural renderings for the site.

The DRC is pleased with the initial site plan and agrees that the styles and architectural format are appropriate and align with the Medway *Design Review Guidelines*. Minor discussions occurred regarding the exploration of small façade changes and landscape design, but the Committee is satisfied that the applicant has achieved a successful design. However, some aspects of the design have not been completed at this time and the DRC has requested the opportunity to review these aspects when available.

The DRC provides several recommendations as follows.

- The DRC would like to see the design of the proposed storage shed along the north west property line.
- The DRC recommends that the end of this proposed shed be screened from the abutters with a vegetative barrier.
- Fencing materials are not included on the current plans. The DRC recommends if chain link fence is used that it be black vinyl coated. The fence and gate at the right front of the building, close to Populatic Street, should be of a vertical pool style.
- The DRC recommends a more developed and robust landscaping plan along the front of the building and edge property along Populatic Street.

The DRC remains available to review any of these elements or subsequent changes and will gladly provide feedback in the most effective manner that will assist these proceedings.

Sincerely,

Matthew Buckley  
Chair



January 11, 2022  
(revised February 2, 2022)

Ms. Susan E. Affleck-Childs  
Medway Planning and Economic Development Coordinator  
Medway Town Hall  
155 Village Street  
Medway, MA 02053

**Re: Populatic Water Treatment Plant  
Major Site Plan Review  
19 Populatic Street  
Medway, Massachusetts**

Dear Ms. Affleck-Childs:

Tetra Tech (TT) has performed a review of the proposed Site Plan for the above-mentioned Project at the request of the Town of Medway Planning and Economic Development Board (PEDB). The proposed Project is located at 19 Populatic Street in Medway, Massachusetts. The Project consists of constructing a new water treatment plant on a 9.8-acre plot which is owned by the Town of Medway. Facilities currently located on the site consist of Populatic Wells, a chemical feed building, an office building, a supply house, and a garage. Operations will continue throughout the construction process and eventually consolidated into the new facility once online. The supply house and garage will be demolished. Additionally, 17 proposed parking spaces are included in the design along with onsite stormwater treatment, an additional entrance to Populatic Street, dumpster pad, and transformer and generator.

TT is in receipt of the following materials:

- A Plan (Plans) set titled "Town of Medway, Massachusetts, Contract Drawing For, Populatic Water Treatment Plant" dated October 2021, prepared by Wright-Pierce (WP).
- Project Architecturals including Floor Plans, Elevations and Renderings, prepared by WP.
- An Application for Major Site Plan Approval, dated November 9, 2021, prepared by WP.
- A Certified List (List) of Abutters, dated September 27, 2021, prepared by The Medway Board of Assessors.
- A Project Narrative (Narrative) titled "Major Site Plan Review, Town of Medway, DPW Water and Sewer Division, Populatic Water Treatment Plant, Medway, MA" dated November 8, 2021, prepared by Caron Environmental Consulting, LLC

The Plans and accompanying materials were reviewed for conformance with the following Regulations and Bylaws:

- Town of Medway Planning & Economic Development Board Rules and Regulations, Chapter 200 – Site Plans, Rules & Regulations for Submission, Review and Approval of Site Plans. (Amended October 8, 2019)

The Project was also reviewed for good engineering practice and overall site plan efficiency. Review of the Project for zoning related matters is being conducted by Town personnel and is excluded from this review.

#### **TT 2/2/22 Update**

The Applicant has supplied TT with a revised submission addressing comments provided in our previous letter including the following documents:

- A Plan (Plans) set titled "Town of Medway, Massachusetts, Contract Drawings for Populatic Water Treatment Plant" dated January 2022, prepared by Wright-Pierce (WP).

- A Response to Comments letter with attachments dated January 25, 2022, prepared by WP.

The revised Plans and supporting information were reviewed against our previous comment letter (January 11, 2022) and comments have been tracked accordingly. Text shown in gray represents information contained in previous correspondence while new information is shown in black text.

## SITE PLAN REVIEW

### Site Plan Rules and Regulations (Chapter 200)

1. The Applicant has not included a Neighborhood Impact Assessment in their Development Impact Statement. The Project Narrative discusses impacts on the neighborhood which should be summarized in this section of the document. (Ch. 200 §204-3.F.3)
  - *WP 1/25/21 Response: The Development Impact statement has been updated to include the Neighborhood Impact Assessment. Refer to Attachment A.*
    - **TT 2/2/22 Update: The Applicant has included a neighborhood impact assessment in their Development Impact Statement. We recommend the PEDB review and comment if necessary during the public hearing process. In our opinion, this item is resolved.**
2. A Construction Management Plan (CMP) is not provided in the Plans or as a separate document. This may be necessary to understand how the construction will occur given the existing facility will remain operational during construction. (Ch. 200 §204-3.H)
  - *WP 1/25/21 Response: A Construction management Plan (CMP) for the proposed project is included as Attachment B.*
    - **TT 2/2/22 Update: The Applicant has included a CMP in the submission. We recommend the PEDB review and comment if necessary during the public hearing process. In our opinion, this item is resolved.**
3. Earth removal calculations are not provided in the Plans. (Ch. 200 §204-3.I)
  - *WP 1/25/21 Response: Earth removal calculations have been added to Sheet C-4. Revised drawings are included as Attachment C.*
    - **TT 2/2/22 Update: The Project will result in approximately 2,600 cubic yards of export material. We recommend the Applicant add material export to the CMP to include a description of the export process and items such as truck routes and export duration to help the PEDB and abutting residents understand the magnitude of potential impacts during the work.**
4. Earth fill estimates are not provided in the Plans. (Ch. 200 §204-3.J)
  - *WP 1/25/21 Response: Earth fill estimates have been added to Sheet C-4. Revised drawings are included as Attachment C.*
    - **TT 2/2/22 Update: The site is a net cut and will require material export. In our opinion, this item is resolved.**
5. A copy of an Order of Resource Area Delineation (ORAD) from Medway Conservation is not provided. The site is located adjacent to the Charles River and Flood Zone, therefore, an ORAD may be relevant for the Project. (Ch. 200 §204-3.K)
  - *WP 1/25/21 Response: A Notice of Intent (NOI) was filed with the Medway Conservation Commission on November 8, 2021. Comments have been received on the submission and we will be issuing our responses to the Commission under separate cover. A copy of the final Order of Conditions will be forwarded to the PEDB upon receipt.*
    - **TT 2/2/22 Update: In our opinion, this item is resolved.**

6. All elevations in the Plans refer to the NGVD29 Datum. Elevations shall refer to North America Vertical Datum of 1988 (NAVD88) as specified in the rules and regulations (Ch. 200 §204-4.C)
  - *WP 1/25/21 Response: The reference to NGVD29 Datum on the plans is incorrect. The design elevations depicted on the plans are in the correct NADV88 datum. Civil Site Layout Note 11 on drawing C-1 has been updated in the revised set of drawings to reflect the correct datum. Refer to Attachment C.*
    - **TT 2/2/22 Update: In our opinion, this item is resolved.**
7. A locus map is included on the Cover Sheet and no formal Site Context Sheet has been provided. The scale of the locus map is set to 1-inch equals 2,000-feet which does not meet the maximum required scale of 1-inch equals 1,000-feet. A Site Context Sheet shall be provided per the applicable Regulation. (Ch. 200 §204-5.B)
  - *WP 1/25/21 Response: A Site Context Sheet has been added to the revised plan set as drawing C-1A. Refer to attachment C.*
    - **TT 2/2/22 Update: In our opinion, this item is resolved.**
8. The Applicant has not included an inventory of existing trees at the site in the size required by the Regulations. Drip lines are also required for those trees. (Ch. 200 §204-5.C.3)
  - *WP 1/25/21 Response: The survey base plan utilized for the project was supplied by the Owner's project manager. The project requires a clear cut to construct the proposed improvements. We have identified hardwood trees larger than 18" on the plans. The significant oak tree along Populatic Street has been identified to remain. None of the other larger hardwoods are located in the areas where clearing is proposed. We are requesting a waiver for the requirement of showing drip-lines for the existing trees. Refer to Waiver Requests included as Attachment D.*
    - **TT 2/2/22 Update: No action necessary until PEDB decision on Waiver Requests.**
9. Front setback line is shown on the Layout Sheet, however, both side and rear setbacks are not represented and shall be included on the Plans. (Ch. 200 §204-5.D.1)
  - *WP 1/25/21 Response: Side and rear setback lines have been added to Sheet C-3 in the revised drawing set. Refer to Attachment C.*
    - **TT 2/2/22 Update: In our opinion, this item is resolved.**
10. The Applicant has proposed 17 parking spaces, 1 space per anticipated employee with 3 additional spaces. The Medway Zoning Bylaw does not specify a requirement for this type of facility; therefore, the nearest comparable use may be applied. TT believes the Water Treatment Plant is best represented as a warehouse/distribution or manufacturing facility. In that case, the proposed number of spaces does not meet the minimum requirements (23 Spaces) outlined in Table 3 of the Medway Zoning Bylaws. Additionally, we recommend the Applicant confirm where employee parking will be sited as the spaces at the rear of the facility (12 spaces) would not meet the minimum number of employees using the facility as stated in the Project narrative. (Ch. 200 §204-5.D.3)
  - *WP 1/25/21 Response: A waiver is being requested for this requirement. Parking has been discussed with the Medway Water Department and the spaces proposed were deemed adequate to accommodate the future number of employees and anticipated operations at the facility. Refer to Waiver Requests included as Attachment D.*
    - **TT 2/2/22 Update: No action necessary until PEDB decision on Waiver Requests.**
11. The Applicant has not provided a separate Erosion and Sediment Control Plan which we anticipate will be required during the Applicant's Notice of Intent process with Medway Conservation Commission. (Ch. 200 §204-5.D.5)
  - *WP 1/25/21 Response: Erosion and Sediment Controls are shown on Sheet C-4, C-9 and C-10 in the revised drawing set. Refer to Attachment C.*
    - **TT 2/2/22 Update: Although erosion controls have been shown on the current version of the Plans, Article 26 of the Medway General Bylaws requires an Erosion and Sediment Control Plan be provided.**



12. The Applicant has not included any site amenities such as bike rack which may be applicable to this Project, particularly for the employees of the facility. (Ch. 200 §204-5.D.12)
- *WP 1/25/21 Response: Site amenities have been discussed with the Medway Water Department. No additional amenities are being proposed per the Water Department's request.*
    - **TT 2/2/22 Update: We recommend this item be discussed during the next public hearing as items such as bike racks have been required by the PEDB during review of prior Projects.**
13. A Master Signage Plan is not included in the Plans. TT expects this to be submitted separately for signage approval. (Ch. 200 §204-5.D.14)
- *WP 1/25/21 Response: Master Signage Plan is shown on Sheet C-3 in the revised drawing set. Refer to Attachment C.*
    - **TT 2/2/22 Update: We believe the intent of the Regulation is to show the PEDB where the proposed site monument sign will be located, if one is being proposed. Additionally, signage has not been provided adjacent to the proposed stormwater basin identifying the basin and including language prohibiting dumping in the basin.**
14. The Applicant has provided a lighting plan showing 26 proposed light sources connected to the building with no proposed light trespass on abutting properties. Height of luminaires should be specified along with the hours of illumination. TT also recommends the lighting symbols be better represented on the lighting plan as it is hard to determine the location of each proposed lamp. (Ch. 200 §204-5.D.15)
- *WP 1/25/21 Response: The lighting plan C-11 has been updated to include hours of illumination. Proposed lighting will be photocell controlled and illuminated from dusk until dawn. The height of luminaires are approximately 17' on the garage and treatment building areas and approximately 12' on the operations building area. They are also shown on Sheet A-201. The photometric plan shows no light spillover onto Populatic Street or adjacent properties. Refer to revised drawings in Attachment C.*
    - **TT 2/2/22 Update: In our opinion, this item is resolved.**
15. Horizontal site distances at the site driveways are not provided in the Plans. (Ch. 200 §204-5.D.16)
- *WP 1/25/21 Response: Horizontal site distances of greater than 200 feet were confirmed in the field at the new driveway location and they exceed the minimum of 155 feet in both directions for a speed limit of 25 mph. the site distances have been included on Sheet C-3 in the revised drawing set. Refer to Attachment C.*
    - **TT 2/2/22 Update: In our opinion, this item is resolved.**
16. A table representing conformance with Zoning Bylaw requirements is provided on site Layout sheet. However, the table is missing minimum lot frontage and maximum building height. TT recommends proposed values be provided rather than "less than" or "greater than" symbols. (Ch. 200 §204-5.D.17)
- *WP 1/25/21 Response: The Site Layout Sheet (C-3) has been updated in the revised drawing set to include the missing lot frontage and maximum building height. Refer to Attachment C.*
    - **TT 2/2/22 Update: In our opinion, this item is resolved.**
17. The Applicant has not proposed any sidewalks at the site, particularly to secondary entrances proposed around the buildings. Additionally, pursuant to Section 5.5.4. I, c. of the Zoning Bylaw, sidewalks shall be provided along the entire frontage of the subject property along existing public ways. (Ch. 200 §207-9.B)
- *WP 1/25/21 Response: The site layout has been updated in the revised drawing set to include site sidewalks for access to the two proposed doorways on the southwest side of the facility. Refer to Attachment C. Populatic Street does not currently have sidewalks on either side of the road between Walker Street and the Franklin town line. Including sidewalks for this one property is not practicable and therefore a waiver is requested. Refer to Waiver Requests included as Attachment D.*
    - **TT 2/2/22 Update: Access has been provided to the two proposed egress doors on the southwest side of the site. However, sidewalk has not been included along the site frontage. We recommend this item be discussed during the next public hearing as prior Projects have been required to provide funding in lieu of construction where sidewalks are not feasible along the site frontage.**

18. It does not appear the Applicant is proposing curb on the Project. The Applicant appears to be utilizing Low Impact Development techniques where pavement sheet flows to swales which would negate the need for proposed curb along the entirety of the edge of pavement. However, site entrances and exits shall be clearly delineated by vertical granite curbing or other approved material along the entire radius of the opening, shall extend at least 12 feet beyond each side along the gutter line of the road and at least the first 25 feet of a driveway, and shall be sloped at the end to prevent a vertical obstruction to exit. (Ch. 200 §207-11.A.4)
- *WP 1/25/21 Response: A waiver is being requested for this requirement. There currently isn't any curb in the vicinity of the new treatment facility. A small amount of granite would be expensive and bituminous curb could be easily damaged at the entrance. Refer to Waiver Requests included as Attachment D.*
    - **TT 2/2/22 Update: No action necessary until PEDB decision on Waiver Requests.**
19. An Autoturn (or equal) analysis of the site is recommended to ensure applicable emergency apparatus can actively respond to an emergency at the facility. This shall be coordinated with the Medway Fire Department. (Ch. 200 §207-11.B.8)
- *WP 1/25/21 Response: An Autoturn analysis was completed during the design phase and emergency access was discussed with the Medway Fire Department. Attachment E includes the Autoturn analysis assuming a WB-63 type vehicle.*
    - **TT 2/2/22 Update: We recommend the Applicant provide written correspondence from the Medway Fire Department regarding emergency access through the site.**
20. The Applicant has not proposed any means for electric vehicle charging at the site. (Ch. 200 §207-12.I)
- *WP 1/25/21 Response: Electric vehicle charging is not currently proposed for the site.*
    - **TT 2/2/22 Update: We anticipate a Waiver Request will be required from this Regulation if it is the intention of the Applicant not to install any EV charging in the Project. We recommend this item be discussed during the next public hearing to determine if a Waiver Request is necessary.**
21. The Applicant has proposed a generator pad located to the rear of the site. The generator is required to be fully screened to mitigate noise and appearance. Additionally, the Plans do not detail how the generator will be fueled. If fuel storage will be proposed at the site it should be noted on the Plans and properly permitted. (Ch. 200 §207-16.B)
- *WP 1/25/21 Response: The proposed back-up generator is to be fueled via natural gas. A sound attenuation enclosure is proposed around the generator to mitigate noise. Refer to Attachment F for additional information on anticipated sound decibel levels. Additional screening for appearance is not currently proposed in order to provide adequate clearance for maintenance and as required by code.*
    - **TT 2/2/22 Update: We anticipate a Waiver Request will be required from this Regulation if it is the intention of the Applicant not to install any additional screening outside of the proposed sound mitigation. We recommend this item be discussed during the next public hearing to determine if a Waiver Request is necessary.**
22. The Applicant has proposed a dumpster pad located to the rear of the site. The dumpster is required to be screened on all sides and to the full height of the container. (Ch. 200 §207-17.C)
- *WP 1/25/21 Response: The dumpster's proposed location is not visible from Populatic Street or abutting properties. The existing dumpster onsite is not currently screened. The Medway DPW has requested a waiver for this requirement in order to make maintenance and plowing easier for DPW staff. Refer to Waiver Requests included as Attachment D.*
    - **TT 2/2/22 Update: No action necessary until PEDB decision on Waiver Requests.**

23. At least one deciduous shade or canopy tree shall be provided for every 6 parking spaces. Only trees providing shade to the parking area shall be counted as meeting this requirement. (Ch. 200 §207-19.C.1.d)
- *WP 1/25/21 Response: The landscaping plan (C-6) has been updated in the revised drawing set to include additional shade trees in the parking area to meet this requirement. Refer to Attachment C.*
    - **TT 2/2/22 Update: The Applicant has proposed a Northern Red Oak adjacent to the front parking area as well as Red Maple's adjacent to the parking stalls on the south side of the site. The parking stalls on the east side have no proposed shade trees but this area is flanked by the proposed electric transformer, the generator and the swale meant for stormwater mitigation. In our opinion, this item is resolved.**
24. Minimal screening of the Project has been provided along the northern side of the project, particularly between the project site and the abutters to the north. We recommend the Applicant provide screening along the north side of Water Street. (Ch. 200 §207-19.D)
- *WP 1/25/21 Response: The Landscaping Plan (C-6) has been updated in the revised drawing set to include additional screening on the north side of water street. Refer to Attachment C.*
    - **TT 2/2/22 Update: In our opinion, this item is resolved.**
25. The site appears to have minimal areas for snow storage (snow shall not be stored in stormwater best management practices [BMP's]). The snow storage area(s) shall be located and graded such that the runoff from melting snow shall not enter the public way, stormwater BMP's and wetland resource areas. (Ch. 200 §207-21)
- *WP 1/25/21 Response: The snow storage areas have been added to Sheet C-4 in the revised drawing set. Refer to Attachment C. Due to constraints on the site, space is limited for snow storage and snow may need to be hauled off site during certain storm events.*
    - **TT 2/2/22 Update: Snow storage areas have been provided on the Plans. However, several areas are shown within or directly upgradient of proposed stormwater BMP's. All plowed snow shall be properly placed to allow pre-treatment to occur prior to entering the water quality swale and extended dry detention basin. We recommend a Condition requiring the Applicant modify the proposed snow storage areas based on the final stormwater design which is currently being reviewed by the Medway Conservation Commission.**

#### General Site Plan Comments

26. We recommend the Applicant consider widening Water Street to minimum 20 feet or to the satisfaction of the Medway Fire Department.
- *WP 1/25/21 Response: The proposed width of Water Street is currently adequate for emergency access and abutter access to their driveway. Refer to Attachment E for Autoturn analysis for additional details.*
    - **TT 2/2/22 Update: We recommend the Applicant provide written correspondence from the Medway Fire Department regarding emergency access to the site.**
27. The proposed accessible parking space and adjacent access aisle do not appear to be adequately sized. The proposed space shall be a van space since there is only one proposed accessible space required. Additionally, per MA AAB, van spaces shall be minimum 8 feet wide with an adjacent 8-foot access aisle. Also, if parking at the rear of the facility is meant for employees, we recommend an additional accessible space at the rear of the site to accommodate employee parking. Signage shall also be proposed for all accessible parking.
- *WP 1/25/21 Response: The accessible parking space has been updated on the revised plans to reflect the minimum spacing required for a van. Refer to Attachment C.*
    - **TT 2/2/22 Update: In our opinion, this item is resolved.**

28. The proposed cut-in for the finished water to the existing 8-inch water main in Populatic does not appear to be to town standard. The town typically requires three valves at the connection point, two on the existing main and one on the new. We recommend the Applicant continue to coordinate with the Town regarding this item. Additionally, we recommend the Applicant show the proposed raw water connection point from the off-site Oakland and Village Street wells to help the PEDB better understand the scope of that connection.
- *WP 1/25/21 Response: Details on site piping connections will continue to be coordinated with the Medway Water Department.*
    - **TT 2/2/22 Update: We have no further comment as the Applicant is actively coordinating with the design engineers for the system. In our opinion, this item is resolved.**
29. It appears finish water piping is being connected to existing raw water piping in Water Street. We recommend the Applicant/engineer confirm with Medway DPW if this is the intended scope or if any of the existing water main in Water Street will be abandoned to limit co-mingling of raw and finish water.
- *WP 1/25/21 Response: Finished water and raw water are not proposed to be cross-connected per MassDEP requirements. The proposed finish piping is proposed to be connected to the existing finished piping on site.*
    - **TT 2/2/22 Update: In our opinion, this item is resolved.**
30. We recommend the Applicant provide narrative related to proposed fence at the site and its intent. The proposed fences are open ended and may not provide security for pedestrians who may want to enter the rear portions of the facility.
- *WP 1/25/21 Response: Site security has been discussed with the Medway Water Department and the proposed fencing shown on the site reflects the feedback provided by the town. The primary purpose of the fencing is to prevent unauthorized vehicle access to the site, rather than pedestrian access. The proposed security system for the facility includes cameras mounted at each building corner which will provide 360-degree monitoring of the facility. Installation of a full perimeter fence around the entire property is not cost effective or necessary given the proposed security system for the facility.*
    - **TT 2/2/22 Update: In our opinion, this item is resolved.**
31. The Applicant should add details for proposed 2-foot mow strip, sewer and drain manhole (not a standard 4-foot manhole for both as they have different requirements), concrete equipment pads and any other site amenity proposed on the Project.
- *WP 1/25/21 Response: Details have been updated on the revised drawing set. Refer to Attachment C.*
    - **TT 2/2/22 Update: In our opinion, this item is resolved.**

These comments are offered as guides for use during the Town's review and additional comments may be generated during the course of review. The Applicant shall be advised that any absence of comment shall not relieve them of the responsibility to comply with all applicable local, state and federal regulations for the Project. If you have any questions or comments, please feel free to contact us at (508) 786-2200.

Very truly yours,



Steven M. Bouley, PE  
Project Manager



Tucker D. Paradee, EIT  
Civil Engineer

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**Medway DPW Water Quality Treatment Facility, 19 Populatic Street**  
**Requests for Waivers from the Site Plan Rules and Regulations**  
**NOTES for discussion at 2-8-22 PEDB meeting**

**Section 204-5. D. 1. *NOTE – I believe the reference should be to Section 204-5 C. 3) re: Existing Landscape Inventory.*** That regulation specifies that the Existing Condition sheet(s) shall show all existing trees with a diameter of fifteen inches or more at four feet above grade and any tree that will be beneficial for screening purposes. Tree drip lines shall also be shown.

The Applicant seeks a waiver to allow for showing only hardwood trees larger than 18” diameter on the plan (this was my suggestion to them) and to not show the driplines of trees that are scheduled to remain.

Board Discussion –

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**Section 204-5 D. 5 – The site plan shall show the location and dimensions of proposed parking, including lot line setbacks, loading and unloading areas with traffic patterns, access lanes and curb radii. The Parking plan shall be in conformance with the provisions of the Zoning Bylaw, Section 7.1.1 Off-Street Parking and Loading.**

**NOTES**

- The 19 Populatic Street site plan shows 17 parking spaces (12 in the back and side and 5 near the front door).
- Section 7.1.1 of the ZBL does not include a parking category for the proposed mixed uses at 19 Populatic Street (office, garage, and water quality treatment facility). As directed by the ZBL language, Tetra Tech has indicated that the proposed DPW use is best represented in the ZBL Parking Table by the warehouse/distribution or manufacturing facility category. When that standard is applied, a total of 23 parking spaces is required (1 space per 2 employees and 1 space per 1,000 sq. ft. of non-office space).

The Applicant seeks a waiver to allow the site plan (with its 17 parking spaces) to not conform with the Zoning Bylaw’s parking standards. Medway DPW feels that 17 spaces are adequate to park the number of current and future employees and to park vehicles related to facility operations (DPW trucks, vans, etc.)

Building Commissioner and Zoning Enforcement Officer Jack Mee has provided a letter dated 2-3-22 regarding parking on the subject site. In light of that letter, the waiver request may not be needed. The letter should be referenced in the Findings section of the Decision.

Board Discussion –

**Section 207 – 9 B) 3) Pursuant to Section 5.5.4.1.e of the Zoning Bylaw, sidewalks shall be provided along the entire frontage of the subject property along existing public ways.**

The Applicant seeks a waiver from this requirement citing that there are no sidewalks presently on Populatic Street between Walker Street and the Franklin town line and installing such a sidewalk would not really be beneficial or practical. The applicable Zoning Bylaw language requires sidewalk construction along the subject site's frontage, or sidewalk construction elsewhere in the community, or a providing a payment in lieu of sidewalk construction to the Town. The frontage length on Populatic Street is approximately 973 feet.

Board Discussion -

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**Section 207-16 B. NOTE – I believe the reference should be to Section 207-17. C. Dumpsters and recycling and trash containers shall be fully screened on all sides and to the full height of the dumpster or container by suitable fencing or enclosure and/or evergreen plantings.**

The Applicant seeks a waiver from this requirement, not wishing to have an enclosure around the dumpster. The Applicant notes that the dumpster is located at the back of the site, out of public view, and is essentially screened by the building itself. Also noted is the challenge of snow plowing and the desire to easily relocate temporarily when needed for maintenance.

Board Discussion

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**Section 207-11 A. 4. Site entrances and exits shall be clearly delineated by vertical granite curbing or other approved materials along the entire radius of the opening, shall extend at least 12 feet beyond each side along the gutter line of the road and at least the first 25 feet of a driveway, and shall be sloped at the end to prevent a vertical obstruction to exist.**

The applicant has requested waiving of the curbing requirement and to not have any curbing., noting that there are no curbs along Populatic Street and at the site. The expense of granite curbing is also noted. Use of bituminous curb instead is not desired as it can be easily damaged.

Board Discussion

## **OTHER WAIVERS THAT MAY BE NEEDED**

**Section 204-5-D. 14 Master Signage Plan with preliminary proposed designs, locations, materials, dimensions and lighting for proposed development sign and all business identification signage , both freestanding and attached; and signage to identify surface stormwater infiltration basins with messages to prohibit the disposing of trash and debris in such basins.**

The Applicant has not provided a master signage plan nor has a waiver been requested.

### **Board Discussion**

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**Section 207-12 Parking I. Electric Vehicle Parking – Industrial, commercial and multi-family housing developments with 15 or more parking spaces shall include parking spaces with electric vehicle charging stations for employee, customer and resident uses. (1 space required for this building.**

The Applicant has not proposed an EV charging station nor has a waiver been requested.

### **Board Discussion**

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**Section 207-16 B. Utilities. Permanently installed generators shall be positioned on cement pads, be located to the rear of the site, and shall be fully screened or bermed to mitigate noise and appearance.**

The Applicant has proposed a sound attenuation enclosure around the generator, but no additional screening (landscaping) for appearance is proposed. What is the appearance of the sound attenuation enclosure?

### **Board Discussion**

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## **Zoning Compliance Issues identified by Tetra Tech**

### **7.1.1 Off- Street Parking and Loading**

**E. 4. Electric Vehicle Parking – Industrial, commercial and multi-family housing developments with 15 or more parking spaces shall include parking spaces with electric vehicle charging stations for employee, customer and resident uses. (1 space required for this building.**

The Applicant has not proposed an EV charging station.

#### **Board Discussion**

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**I. 1. Bicycle Parking facilities shall be provided for any new building. The minimum required number of bicycle spaces shall be one per twenty motor vehicles unless waived during Site Plan Review.**

The Applicant has not proposed a bike rack.

#### **Board Discussion**





**TOWN OF MEDWAY  
BUILDING DEPARTMENT**  
155 Village Street  
Medway, Massachusetts 02053  
508.533.3253

**Jack Mee**  
Building Commissioner &  
Zoning Enforcement  
jmee@townofmedway.org

February 3, 2022

Matt Hayes, Chairman  
Planning & Economic Development  
Town of Medway

Dear Mr. Hayes,

I have reviewed the proposed site plan for the Water Treatment Plant at 19 Populatic Street most specifically for the parking. Barry Smith, Water and Sewer Superintendent has determined that the expected employees for this complex will not exceed 12. Section 7, table 3 of the Medway Zoning Bylaws has a table for calculating the minimum spaces required. This is a unique building consisting of 3 separate areas: Operations Area, Garage, and Water Treatment Plant. It is not expected that these areas will all have employees. In my opinion the Garage building is designed for the parking of the department's vehicles and equipment, thus not typically occupied. The Treatment Plant will be monitored by employees that are expected to be working out of the Operations Area, thus not adding any additional personal or parking demand.

In my review I find it reasonable to apply the calculation from the table for "Business, professional and governmental office, bank" which requires 1 space per 300 sq. ft. to the Operations Area only which is 3,240 SF. Using this analysis this would result in a minimum of 11 required spaces.

Respectfully submitted,

Jack Mee