HALEY WARD

ENGINEERING | ENVIRONMENTAL | SURVEYING

APPLICATION REPORT

ZBA AND PLANNING BOARD

For

MAP 03, LOT 75 (FORMERLY 39)

Map ID: 014/003.0-0075-0000.0

Prepared For:

ASHLAND DEPARTMENT OF PUBLIC WORKS
20 Ponderosa Rd.
Ashland, MA 01721

APRIL 12, 2021
JN: 3010101.317

Report Prepared By:
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HALEYWARD.COM

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2.0 PROJECT NARRATIVE

This introductory narrative will summarize the proposed project, its history and background, and completed work to date. Many of the application's requirements are explained in this section, but those requiring further explanation have dedicated sections that follow.

2.1 Project Overview and Background Information

The Town of Ashland's Department of Public Works (DPW) plans to address low water pressure conditions within the Independence Lane neighborhood with the proposed installation of a water booster station located on Independence Lane, west of Oak Street in Ashland, MA. This booster station is not only important for mitigating low residential pressure but critical for providing fire protection safety to the community.

An easement of former parcel 3-39 was taken by eminent domain, see appended Order of Taking, establishing an easement of 27,501 SF. This was taken from a larger, recently combined parcel 3-75 (3-39 and 3-75), which was 515,315 square feet (SF), or 11.83 acres and was set aside as open space for the Independence Lane development. The proposed structure is just 195 SF; it is a packaged, prefabricated unit designed to industries standards with a minimal footprint. The parcel is designated Residential A, or Zone R1. There are no existing building structures on this parcel.

The proposed project would be designated as a municipal facility as it would be an asset of the Ashland DPW's Water and Sewer Department. This proposed water booster station includes an exterior mounted emergency generator in a sound attenuated enclosure. The site would include a small driveway and parking area, underground utility connections and their appurtenances. The utilities would include gas and electrical power connections. Its connection to the water distribution system will be via an 8" inlet and 8" outlet. The proposed structure would not be manned. Water operators would temporarily visit the station for regular inspections.

The proposed site's impact is on all levels kept to a minimum; the site will only be developed to accommodate the prefabricated station, an emergency generator, and a short, paved driveway and parking area. Soil disturbance is estimated at only 1,500 SF and impervious area to just 715 SF. The site's paved area generally slopes to the road where catch basins will redirect it to the stormwater retention basin or directly to the basin itself, ensuring minimal impact. The other finished area of the site would be crushed stone which will allow local absorption of precipitation. A review of NRCS Soil Maps indicates the site contains primarily Canton fine sandy loam, which consists of fine sandy loam to a depth of 16 inches, gravelly fine sandy loan to 22 inches, and is

underlain by gravelly loamy sand to 67 inches. This soil is defined as well drained and runoff from the developed site is not expected to be an issue.

A study of the booster station siting has been completed and is appended to this application report. This study addresses alternatives and also impacts to the Independence Lane residential area, namely noise and aesthetics. These considerations address many of Zoning Bylaw's Section 5 General Requirements. The siting study additionally includes example photos of the proposed booster station.

Of note on the site is an existing stormwater retention basin located adjacent to the proposed booster station constructed in approximately 1997. This is not considered a wetland resource area. This important feature of the site restricted the location of the proposed booster station, as discussed later in the dimensional requirements section.

A letter has also been written to the Ashland Conservation Commission to notify them of the proposed project. The letter indicates that the proposed project appears to be outside protected wetland resources and asked for the commission to confirm a Wetlands Protection Act permit is not required. The proposed project site is outside the closest 100 ft buffer zone, as illustrated by the supporting map in the appended letter. This site is not within any habitat areas or flood plans. The parcel is not impacted by any areas with jurisdiction under the Wetlands Protection Act.

The project has been designed in accordance with the principles stated in the Bylaws. This narrative is intended to document compliance with the Bylaws. The following sections documents compliance categorized by Bylaw section, with noted exceptions outlined in the ZBA application section.

2.2 ZBA Application – Special Permit and Variance

This application to the Zoning Board of Appeals is for a Special Permit (Bylaw Section 9.3) and a Variance (Bylaw Section 9.2.2.2).

2.2.1 Use Regulations, Bylaw Section 3.0

This application for a Special Permit was prepared because the proposed use, municipal facility - specifically a DPW/Water and Sewer Department water booster station, requires a Board of Appeals review, given the parcels' R1/Residential A zoning status.

In the following Bylaw table, Municipal buildings and facilities for 'RA' zoned properties are designated as 'BA.'

SECTION 3.0 USE REGULATIONS

TABLE OF PRINCIPAL USE REGULATIONS									
PRINCIPAL USES									
B. EXEMPT AND INSTITUTIONAL USES	**RA**	**RB**	**RM**	**CH**	**CD**	**CV**	**CN**	**I**	
Use of land or structures for religious purposes	Y	Y	Y	Y	Y	Y	Y	Y	
Use of land or structures for educational purposes on land owned or leased by the commonwealth or any of its agencies, subdivisions or bodies politic or by a religious sect or denomination, or by a nonprofit educational corporation	Y	Y	Y	Y	Y	Y	Y	Y	
Child care facility	Y	Y	Y	Y	Y	Y	Y	Y	
Municipal buildings and facilities, including vehicle storage, fire and police station	BA	BA	BA	Y	Y	Y	Y	Y	

3.1.2 Special Permit: Board of Appeals. A use designated in the Table by the letters "BA" may be permitted as a special permit only if the Board of Appeals so determines and grants a special permit therefor as provided in Section 9.4 of this Bylaw subject to such restrictions as are set forth elsewhere in this Bylaw, and such restrictions as said Board may establish.

The following Bylaw language describes conditions required to grant a Special Permit: 9.3.2 Criteria. Special permits shall be granted by the Special Permit Granting Authority, unless otherwise specified herein, only upon its written determination that the adverse effects of the proposed use will not outweigh its beneficial impacts to the town or the neighborhood, in view of the particular characteristics of the site, and of the proposal in relation to that site. In addition to any specific factors that may be set forth in this By-Law, the determination shall include consideration of each of the following:

1. Community needs served by the proposal;
2. Traffic flow and safety, including parking and loading;
3. Adequacy of utilities and other public services;
4. Neighborhood character and social structures;
5. Impacts on the natural environment; and
6. Potential fiscal impact, including impact on town services, tax base, and employment.

The beneficial impacts to the town and neighborhood far outweigh the adverse effects of the proposed use. On nearly all Bylaw points of consideration, this project results in a net benefit:

- Improving community needs by supplying reliable and higher residential pressure and critically public safety by increasing fire flow capacity.
- No impact to traffic flow or safety

- Improving a deficient water utility
- Minimal impact to the neighborhood due to an extremely small structure footprint (195 SF) and an average/midline roof height of just 9'-8"
- Minimal impacts to the natural environment due to small site footprint - soil disturbance is estimated at 1,500 SF. There will be minimal new impervious surfaces, 715 SF.

This project is solely intended to serve the town of Ashland by providing more reliable water and public safety through improved fire flow. Alternatives have been studied and this site appears to be the best option for the Town. It is therefore requested that a Special Permit be granted by the Zoning Board of Appeals for Municipal facility use in the R1/RA zone, or similar relief as necessary.

2.2.2 Dimensional Requirements, Bylaw Section 4.0

A Variance is requested from the ZBA due to the proposed project not meeting frontage and lot size dimensional requirements. From Table 4.1.1:

Section 4.1 Dimensional Requirements	Required	Actual
Minimum Lot Area (SF)	30,000	27,501
Minimum Lot Frontage (ft)	150	272
Minimum Front Yard (ft)	40	15
Minimum Side Yard (ft)	10	35
Minimum Rear Yard (ft)	30	150
Maximum Height (ft)	35	9.7

The frontage dimensional requirement cannot be met because of the limited space due to the stormwater retention structure on the site. Moving the proposed booster station back from the front of the property would generate several unwanted negative results: significantly more soil disturbance, grading of the site, loss of side yard, and disturbance of heavily vegetated areas of the parcel.

The lot area for the easement taken is 27,501 SF, although lot 75's full size is 515,315 SF.

For front yard and lot area dimensional requirements that are not met, each of the requirements for the grant of a variance set forth in G.L. c. 40A, Section 10 have been satisfied for the following reasons:

- A literal enforcement of the provisions of the Zoning By-Law would involve substantial hardship, financial or otherwise, for the following reasons:
    - Moving the station further back to grant the front yard would add considerable cost to the DPW project for site work: grading and soil

disturbance, demolition and razing of trees and vegetation – none of which are desirable to the ZBA or Planning Board.
    - Increasing lot size would an additional 2,499 SF to meet the 30,000 SF residential requirement would serve no purpose for the town or DPW. This is not a residential application; the small footprint and impact of the project does not warrant the slight increase in lot area. Furthermore, Lot 75's full size is 515,315 SF.

- Said substantial hardship is owing to circumstances relating to the soil condition, shape, or topography of such land or structures for the following reasons:
    - The shape and topography of the site are best suited to the proposed location of the station. If moved further back from the road, the site declines towards the stormwater retention structure and would further disturb soil area, require more grading, and additional significantly increase the amount of razing and clearing of trees and vegetation. Retention basin structure would additionally be negatively affected by a closer siting of the proposed station.

- Said substantial hardship especially affects said land or structures, but does not affect generally the zoning district in which it is located, for the following reasons:
    - The zoning district is residential. A Special Permit is being requested to the ZBA or use as a municipal facility. This project is intended solely to serve the residential area its located. Given the small footprint, a larger lot size would not serve any purpose for the municipal facility as it is vegetated open space.

- Desirable relief may be granted without detriment to the public good, for the following reasons:
    - No harm or detriment to the neighborhood for either front yard or minor lot area deficiencies.

- Desirable relief may be granted without nullifying or substantially derogating from the intent or purpose of the Town of Lancaster Zoning By-Law for the following reasons:
    - The dimensional requirements in question are for residentially zoned projects. A Special Permit is being requested to the ZBA or use as a municipal facility and therefore does not derogate the intent of the Bylaws.

It is therefore requested that a Variance be granted by the ZBA for not meeting the frontage dimensional requirement, or similar dimensional requirement relief.

2.3 Planning Board Site Plan Review

This application to the Planning Board is for a Site Plan Review (Bylaw Section 9.4). Below are specific requirements for the Site Plan Review followed by a narrative

response to those requirements and a response to Bylaw Section 5.0 General Requirements and Section 8.0 Overlay Districts.

2.3.1 Site Plan Review

Relevant language from the Bylaws is as follows:

9.4.2 Purpose. The purpose of site plan review is to further the purposes of this chapter and to ensure that new development is designed in a manner which reasonably protects safety or internal circulation and egress, provides adequate access to each structure for fire and service equipment, assures adequate utility service and drainage, protects visual and environmental qualities, and protects the property values in the town. Site plan review and design plan review are intended to require plan submittal for review by the Planning Board or its designee, as advisory to the Building Inspector and the Special Permit Granting Authority (SPGA), prior to the issuance of a building or special permit.

9.4.6 Site Plan Review Criteria and Design Plan Review; General Criteria. The following criteria shall be considered by the aforementioned Boards in the review and evaluation of a site plan, consistent with a reasonable use of the site for the purposes permitted or permissible by the regulations of the district in which it is located. If the proposal also requires a special permit, it must conform to the special permit requirements set forth herein. The development shall be integrated into the existing terrain and surrounding landscape and shall be designed to protect abutting properties and community amenities. Before approval of a site plan, the Planning Board may request the applicant to make modifications in the proposed design of the project to ensure that these criteria are met. Site plans shall, to the extent feasible:

1. Minimize use of wetlands, steep slopes, floodplains and hilltops;
2. Minimize obstruction of scenic views;
3. Preserve unique natural or historical features;
4. Minimize tree, vegetation and soil removal and grade changes;
5. Maximize open space retention;
6. Screen objectionable features from neighboring properties and roadways.
7. Consideration shall be given to the impacts of the project on town services and infrastructure.
8. Electric, telephone, cable television, gas, water, sewer, drainage, and other such utilities shall be underground except in cases of extreme physical and environmental constraints.
9. Exposed storage areas, machinery, service areas, truck loading areas, utility buildings and structures and other unsightly uses shall be set back or screened to protect the neighbors and those using public ways from objectionable features. Such areas shall not impede the flow of traffic on public ways.
10. When applicable, the site plan shall show measures to reduce and abate noise generated from the site that will impact surrounding properties.

11. The site plan shall comply with all zoning requirements for parking, loading, signage, dimensions and environmental performance standards and all other provisions of this By-law.
12. The site plan shall be consistent with the objectives of the Comprehensive Plan and other applicable specific plans adopted by the Planning Board.

The proposed project was designed to minimally impact the neighborhood and site. It is a prefabricated municipal facility. It is a standard design for the industry and therefore is meets circulation, egress, and access requirements. Its small size and footprint will ensure that visual and environmental qualities in the neighborhood and town are not negatively impacted. Property values should increase – the station's purpose is to deliver higher residential water pressure and provide critical fire flow safety.

It will be integrated into the existing terrain and surrounding landscape and will protect abutting properties. As discussed in the initial project narrative and in the appended siting study, the emergency generator will be enclosed in a sound attenuating enclosure to minimize noise in the neighborhood.

Furthermore, the proposed project meets Bylaw Section 9.4.6 requirements:

- No wetlands, steep slopes, floodplains, or hilltops are used.
- No scenic views are obstructed.
- Tree, vegetation, and soil removal are minimized by utilizing an existing clearing at the front of the lot.
- The open space parcel for this neighborhood will be further protected as part of this project. The town's acquisition of an easement on parcel 3-75 will ensure it remains open space.
- This project directly improves town infrastructure and services.
- Utilities will be underground to the greatest extent possible
- By minimizing the station design into a prefabricated unit, the facility's size and footprint has been reduced to the greatest extent possible.
- Generator noise will be abated as discussed with a sound attenuating enclosure.

A letter has also been written to the Ashland Conservation Commission to notify them of the proposed project. The letter indicates that the proposed project appears to be outside protected wetland resources and asked for the commission to confirm a Wetlands Protection Act permit is not required. The proposed project site is outside the closest 100 ft buffer zone, as illustrated by the supporting map in the appended letter. Additional storm water management information:

For this Site Plan Review, it is requested a waiver be granted from the Stormwater Management Bylaw, Chapter 343-3 Applicability, Stormwater Management Permit (SMP) application. A SMP is triggered by a Site Plan Review, but as outlined below the proposed project falls well below the applicability threshold for a SMP on all accounts.

Given the minimal soil disturbance, grading, and impervious area, a waiver to the SMP application is requested.

- Soil disturbance will be approximately 1,500 square feet, well below 10,000 square feet, and will not be more than 50% of the parcel. The parcel (easement) size is 27,501 square feet, therefore only 5.5% will be disturbed.
- New impervious area will be approximately 715 square feet, well below 50% of the parcel. The parcel (easement) size is 27,501 square feet, therefore only 2.6% is impervious.
- Disturbance will not include 15% or greater slope and will not approach 5,000 square feet.
- The project will not fill, alter, degrade a wetland, body of water, floodplain, or isolated depression subject to flooding.

The appended site plans were prepared by Greg Eldridge, P.E., MA Mechanical Engineer, #40710.

2.3.2 General Requirements, Bylaw Section 5.0

Bylaw Section 5 covers the following: off-street parking, loading, illumination, signs, landscaping, corner clearance, environmental standards, and site alternation. The majority of these requirements have been discussed above. The remaining are explained as follows:

- Bylaw Table 5.1.2 titled 'Schedule of Parking Area Requirements' does not list municipal facilities, nor is there a comparable use. Parking for this DPW/Water Department station will be minimized for water operator regular inspections. No other parking use is required by the DPW.
- There is no loading required at the site.
- No street facing signs are proposed at this time.
- External lighting will conform to Bylaw Section 5.3.6 standards. There are two external lights mounted on the station that will be operated by an internal switch.
- Site impact will be minimal due to the aforementioned small building area. Landscaping has not been planned given this is a highly vegetated existing site. The vegetation will be kept intact to the greatest extent possible. Site alteration will be minimal.
- Erosion control will be accomplished by best management practices. Erosion control will be required during construction to protect against sediment runoff. At the conclusion of construction, all disturbed areas will be revegetated in-kind to the existing conditions.

Additionally, an appended study of the booster station siting addresses impacts to the Independence Lane residential area, namely noise and aesthetics. The siting study additionally includes example photos of the proposed booster station.

2.3.3 Overlay Districts, Bylaw Section 8.0

The following Overlay districts are included in the Bylaw:

- Ashland Downtown District A
- Floodplain Overlay District (FPOD)
- Groundwater Protection Overlay District (GPOD)
- Photovoltaic Installations Overlay District (PIOD)
- Pond Street Mixed Use Overlay District (PSMUOD)

The proposed site is not a part of these Overlay districts, therefore there will be no impact. As discussed in the initial project narrative, wetlands are not impacted either. An appended Conservation Commission letter further explains this and includes a map.

3.0 Conclusion

In conclusion, the application to the Zoning Board of Appeals for a Special Permit (Bylaw Section 9.3) and a Variance (Bylaw Section 9.2.2.2) and that to the Planning Board for a Site Plan Review respond to Ashland's Chapter 282 Zoning Bylaw requirements. The proposed project is an Ashland DPW, Water and Sewer Department municipal facility, specifically a water booster station. Its sole purpose is to serve the town of Ashland and specifically the Independent Lane neighborhood and surrounding area. Its minimal footprint, design, and site impact inherently align it with the intent of the Zoning Bylaws.

ATTACHMENTS

Haley and Ward, Inc.
Civil and Environmental Engineers

"Client Service and Engineering Excellence...Since 1897"

December 17, 2013

Via First Class Mail

Mr. David Manugian, Director
Ashland Department of Public Works
20 Ponderosa Road
Ashland, MA 01721

Re: Independence Lane booster station siting

Dear Mr. Manugian:

We are writing this letter to summarize the results of our station siting process for the proposed Independence Lane Water Booster pump station.

It is our understanding that the town of Ashland intends to address low water pressure conditions within Independence Lane with the installation of a water booster station on Independence Lane. Secondarily the booster station will be designed and constructed to support a potential development's domestic water and fire protection needs. The equipment for the potential development will not be installed at this time and would include a large capacity pump and electric motor. The station would be designed and constructed to handle the additional equipment installation at a later date.

STATION SITING

The first phase of the siting process involved review of the pressure study report prepared by Haley and Ward dated September 6, 2013, which determined the dwellings that would benefit from the installation of a water booster station. This identified the appropriate areas of the project limits where a station could be located to provide the required benefit. Two areas, Independence Lane near the Oak Street intersection and Independence Lane near the Oregon Road intersection were targeted for a station siting.

The next phase of the station siting process included research into available vacant land, electric power and water pipes. Available land within the two selected areas was limited due to major elevation changes, especially on the Oregon Road end of the project. We could not locate a site on the Oregon Road end of the project that would provide the required vacant land that was conducive to constructing a booster station. The Oak Street end of the project included a vacant parcel that has the required open space, relatively flat grades, electrical power within a short distance and a water main in the roadway layout.

In review of the proposed subdivision drawings for the Independence Lane development the vacant parcel of land was identified as an open space parcel for a storm water retention structure.

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We reviewed the existing electrical power within the area. Independence Lane was constructed with underground electric power distribution to the houses. The electric service is single phase power that is not applicable to the operation of a booster station envisioned for this project. The preliminary design for this booster station requires three phase power. Three phase power is available on the above ground utility poles installed on Oak Street, however only single phase power was available on Oregon Road.

The above analysis indicates the preferred booster station siting is the Oak Street end of Independence Lane. We are enclosing an aerial site plan of the proposed site with a preliminary layout of the proposed structures.

IMPACT TO INDEPENDENCE LANE RESIDENCES

Once the preferred site was identified we conducted a preliminary site layout of proposed buildings and equipment. This was conducted while considering the potential impacts to the local residences. Two major items were considered during this layout; noise and aesthetics.

Noise generated by an aboveground booster station would be nonexistent to residences inside their homes. The proposed station includes water pumps and motors that generate a low level of noise during normal operation that may only be heard by a person walking along the sidewalk by the station.

The higher level of noise generation would be the auxiliary powered generator. The generator is a self contained natural gas powered engine that drives the generator to create power during a power outage. The generator will be installed inside a sound attenuating enclosure that minimizes the decibels (dB) from the unit. The preliminary unit reported dB level is 72 dB at a 23 foot distance. A comparison for dB level is a vacuum cleaner at a 10 foot distance. The generator noise will only be present when there is a power outage or when the unit exercises during the week. Typically the units are programmed to exercise once per week for a 30 minute period, possible during the 9am hour.

In addition to the sound attenuating enclosures we have located the generator between the booster station and the existing earth berm to the east side of the property. This will provide additional sound attenuation from the local dwellings. The approximate size of the generator structure is 8 feet long by 3.5 feet wide by 5 1/2' feet high.

We have reviewed options for the station enclosure, which include above ground built in place buildings, aboveground prefabricated buildings and underground concrete structures. We recommend utilizing the above ground structure for several reasons. An underground structure while it reduces the visual impacts to the surroundings it provides and unsafe working condition for the operators. It also increases the costs of the project by requiring a large excavation for the structure installation.

We recommend a prefabricated structure to substantially reduce construction time at the site and reduce project costs. We recommend the installation of plantings to provide additional buffer for the proposed structures.

We are enclosing pictures of typical prefabricate stations to provide a visual of potential station appearances.

If you have any questions or comments please do not hesitate to contact our office.

Yours very truly,

HALEY AND WARD, INC.

Gregory J. Eldridge, P.E.
Vice President

Cc: David Miller and Roy Correia via email

J:\Ashland\317 Independence Lane Booster\Letters\317-012 Booster station siting.doc

Typical Prefabricated Booster Pump Station Buildings
Manufactured at a factory, shipped to site and installed on concrete pad.

Conservation Commission Letter

HALEY WARD
ENGINEERING | ENVIRONMENTAL | SURVEYING
FORMERLY: CES INC

March 12, 2021

Ashland Conservation Commission
101 Main Street
Ashland, MA 01721
Attention: Maeghan Dos Anjos

Re: Independence Lane Booster Station Wetlands information

Attention: Ashland Conservation Commission Members;

We are writing this letter on behalf of the Ashland Department of Public Works to notify the Conservation Commissioner of a water booster station project. Ashland is facilitating the installation of a water booster pump station in Independence Lane to resolve low water pressure in the development. The project will include the installation of a pre-packaged water booster station and an emergency generator.

The location of the station appears to be on land that is outside protected wetland resources. Since the project is near a wetland resource, Ashland DPW wanted to make sure the commission was aware of the project and to confirm our understanding that a Wetlands Protection Act permit is not required.

Attached is an aerial map, provided to the Ashland DPW by Meaghan Dos Anjos during a site walk. The aerial map depicts the closet wetland resource area and 100 ft buffer zone in blue, plus the project site in red. This indicates that the construction site is well outside the 100-foot buffer zone of the documented wetland that runs across Oak Street.

The project site is adjacent to a drainage detention basin that appears to have been constructed in 1997. Therefore, this is not considered a wetland resource area. The project will include the installation of silt sock to collect runoff from the site during construction.

63 Great Road, Suite 200, Maynard, MA 01754
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In consideration of Stormwater Management, we confirmed the following.

1. Pump station project will not require a Site Plan Review.
2. Soil disturbance will be approximately 1,500 square feet, well below 10,000 square feet, and will not be more than 50% of the parcel. Parcel size is 515,307 square feet.
3. Impervious area will be approximately 1,020 square feet, well below 50% of the parcel.
4. Disturbance will not include 15% or greater slope and will not approach 5,00 square feet.
5. The project will not fill, alter, degrade a wetland, body of water, floodplain or isolated depression subject to flooding.

We hope this information provides answers to any questions the Commission might have in relation to the project. If you have any additional questions, please do not hesitate to contact our office of the Ashland DPW.

Sincerely,
CES, Inc.

Gregory J. Eldridge, P.E.
Vice President Senior Project Manager

Cc: Doug Small, Dan Mauer & Evan White -Ashland DPW

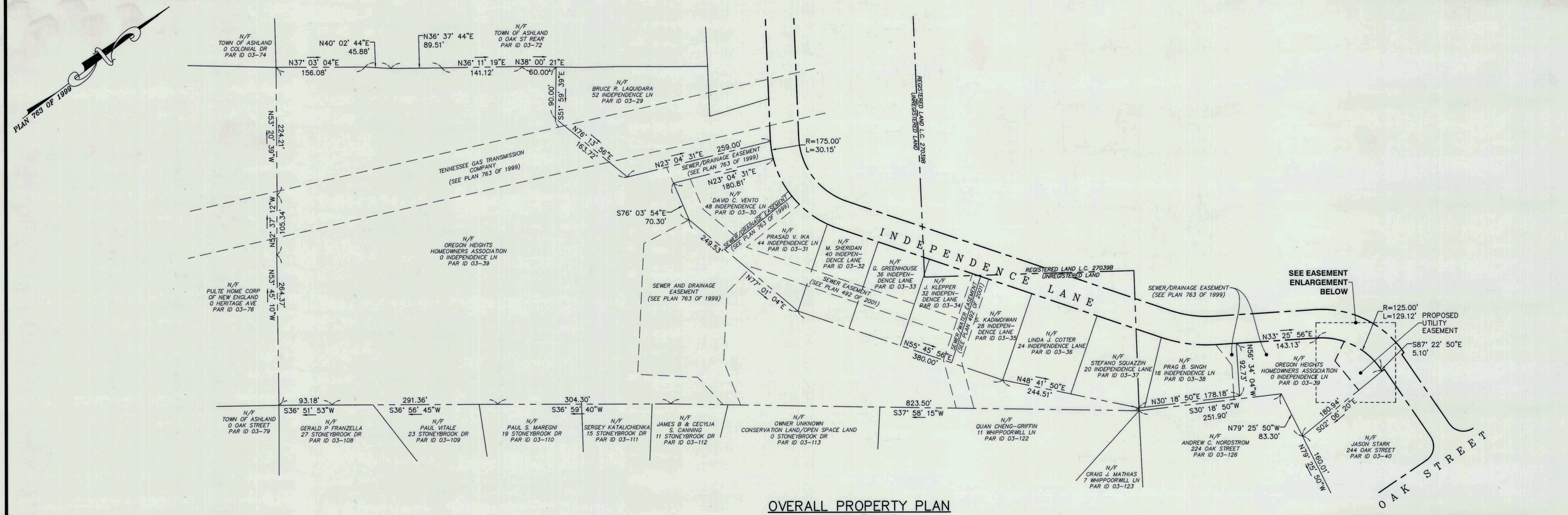
Enclosures: Wetlands map

P:\MA\Jobs\3010101 Ashland\317 Independence Lane Booster\Letters\317-027 Booster station site wetlands consideration.docx


Construction site
7
11
16
20
244

Certified Plot Plan*

**The certified plot plan submittal is a recently prepared easement plan stamped and signed by a registered land surveyor specifically for this site. The easement was ultimately not taken, but this plot plan should satisfy all requirements for a certified plot plan as it was prepared to the same or higher standards.*



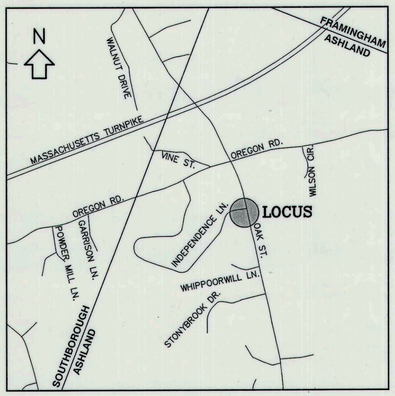
OVERALL PROPERTY PLAN

SCALE: 1" = 80'

GRAPHIC SCALE

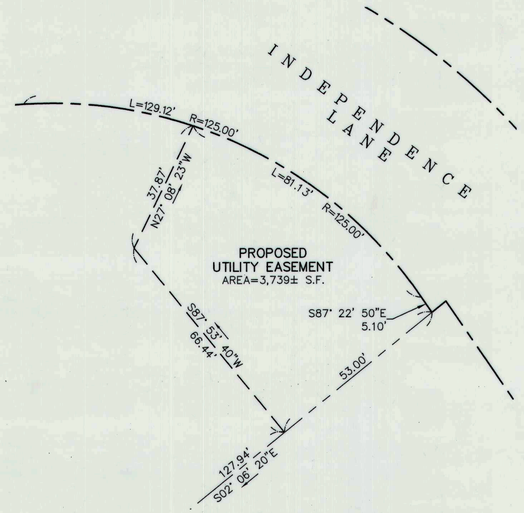
80 0 40 80 160 320

(IN FEET)
1 inch = 80 ft.



LOCUS

1" = 1000'



UTILITY EASEMENT ENLARGEMENT

SCALE: 1" = 20'

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NOTE:

1. THE SOLE PURPOSE OF THIS PLAN IS TO SHOW A UTILITY EASEMENT TO BE TAKEN BY THE TOWN OF ASHLAND.
2. AREA OF UTILITY EASEMENT – 3,739 S.F. ±
3. THIS PLAN WAS CREATED WITHOUT THE BENEFIT OF AN ON-THE-GROUND INSTRUMENT SURVEY. ALL EXISTING PROPERTY, RIGHT OF WAY, AND EASEMENT LINES HAVE BEEN COMPILED FROM PLANS AND DEEDS OF RECORD.

DEED REFERENCE:

BRISTOL SOUTH REGISTRY OF DEEDS

"DECLARATION OF OREGON HEIGHTS HOMEOWNERS' ASSOCIATION", RECORDED IN DEED BOOK 31159, PAGE 551.

PLAN REFERENCE:

MIDDLESEX SOUTH REGISTRY OF DEEDS

PLAN No. 763 OF 1999
PLAN No. 492 OF 2001
LAND COURT PLAN 27039B

UNRECORDED PLAN

"STREET ACCEPTANCE PLAN FOR OREGON HEIGHTS IN ASHLAND, MA", DATED 8/5/03

*UNRECORDED PLAN USED TO SUPPLEMENT MISSING DIMENSIONAL LABEL ON SUBDIVISION PLAN.

THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE PROCEDURAL AND TECHNICAL STANDARDS FOR THE PRACTICE OF LAND SURVEYING IN THE COMMONWEALTH OF MASSACHUSETTS.

THE CERTIFICATIONS SHOWN HERE ARE INTENDED TO MEET REGISTRY OF DEED REQUIREMENTS AND ARE NOT A CERTIFICATION TO TITLE OR OWNERSHIP OF PROPERTY SHOWN.

I CERTIFY THAT THE PREPARATION OF THIS PLAN CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

HAVELOCK J. PURSEGLOVE, PLS #54318 DATE: 12/2/2020

THE PROPERTY LINES SHOWN ARE THE LINES DIVIDING EXISTING OWNERSHIPS, AND THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED, AND NO NEW LINES FOR DIVISION OF EXISTING OWNERSHIP OR FOR NEW WAYS ARE SHOWN.

HAVELOCK J. PURSEGLOVE, PLS #54318 DATE: 12/2/2020

FOR REGISTRY USE ONLY

TOWN OF ASHLAND

INDEPENDENCE LANE
PROPOSED UTILITY EASEMENT PLAN

GCG ASSOCIATES, INC.
WILMINGTON MASSACHUSETTS

SCALE: AS NOTED DATE: DECEMBER 2, 2020

JOB NO.\FILE NAME: 20100-EASEMENT PLAN-2
DESIGNED BY: J.P.G.
DRAWN BY: J.P.G.
CHECKED BY: M.J.C.
PLAN NO. 1 OF 1

12/2/2020

File: EASEMENT PLAN Plot Style: GCG2018-COLOR.ctb Plotted By: John Gelfand

20100-EASEMENT PLAN-2.dwg Saved: 12/10/2020 2:22 PM Plotted: Dec 10, 2020 2:22 pm

Certified Abutters List

April 7, 2021

To The Ashland DPW
0 Independence Lane
Town of Ashland
Map 3 Parcel 39 (nka 75)

PARCEL ID	PARCEL ADDRESS	OWNER NAME 1	OWNER NAME 2	MAILING ADDRESS	CITY/TOWN	STATE	ZIP
03-036-00-000	24 INDEPENDENCE LN	COTTER LINDA J		24 INDEPENDENCE LN	ASHLAND	MA	01721
03-037-00-000	20 INDEPENDENCE LN	SGUAZZIN STEFANO	NUSSIO MARILENA	20 INDEPENDENCE LN	ASHLAND	MA	01721
03-038-00-000	16 INDEPENDENCE LN	SINGH PRAG B		16 INDEPENDENCE LN	ASHLAND	MA	01721
03-040-00-000	244 OAK ST	STARK JASON	BAER CHRISTINA E	244 OAK ST	ASHLAND	MA	01721
03-045-00-000	254 OAK ST	KERR LORETTA P		254 OAK ST	ASHLAND	MA	01721
03-046-00-000	248 OAK ST	DACRUZ CIRLEIA	DE ABREAU EDVALDO M	248 OAK ST	ASHLAND	MA	01721
03-048-00-000	7 INDEPENDENCE LN	PANYAM HEMANTH & PREMCHANDAR NARMADHA	N/O CHINNAPPA SURESH B & SERESH SAVITHA	7 INDEPENDENCE LN	ASHLAND	MA	01721
03-049-00-000	11 INDEPENDENCE LN	PAPAYANNOPOULOS IOANNIS	CATHERINE J PAPAYANNOPOULOS	11 INDEPENDENCE LN	ASHLAND	MA	01721
03-050-00-000	15 INDEPENDENCE LN	PENG QIANG	CUI JINGPING	15 INDEPENDENCE LN	ASHLAND	MA	01721
03-051-00-000	17 INDEPENDENCE LN	MAHBOOB KAMRAN	KAMRAN MAHNAZ	17 INDEPENDENCE LN	ASHLAND	MA	01721
03-052-00-000	23 INDEPENDENCE LN	PADMANABHAN RAJESH	INDUMATHI PADMANABHAN	23 INDEPENDENCE LN	ASHLAND	MA	01721
03-122-00-000	11 WHIPPOORWILL LN	CHENG-GRIFFIN QUAN	GRIFFIN ANDREW T	11 WHIPPOORWILL LN	ASHLAND	MA	01721
03-123-00-000	7 WHIPPOORWILL LN	MATHIAS CRAIG J & DONNA LYNN	N/O MCQUILLAN JAMES W & PAMELA C J	7 WHIPPOORWILL LN	ASHLAND	MA	01721
03-124-00-000	3 WHIPPOORWILL LN	KOURNIOTIS CHRISTOS	OLGA KOURNIOTIS	3 WHIPPOORWILL LN	ASHLAND	MA	01721
03-125-00-000	216 OAK ST	BARROS SUZANA		216 OAK ST	ASHLAND	MA	01721
03-126-00-000	224 OAK ST	NORDSTROM ANDREW C	MESSIER DANIEL M	224 OAK ST	ASHLAND	MA	01721
03-131-00-000	247 OAK ST	BRIASCO JOHN J TR JOHN J BRIASCO RLTY TR	CATHERINE BRIASCO TR CATHERINE BRIASCO	105 OREGON RD	ASHLAND	MA	01721
03-132-00-000	241 OAK ST	STONE RONALD M	GAIL C STONE	241 OAK ST	ASHLAND	MA	01721
03-133-00-000	221 OAK ST	FRIC CHARLES	CYNTHIA ANN FRIC	14 TOP HILL RD	BRIDGTON	ME	04009
03-155-00-000	7 WILSON CIRCLE	NANOF PHILLIP	JACLYN NANOF	7 WILSON CIRCLE	ASHLAND	MA	01721
03-156-00-000	3 WILSON CIRCLE	NEVES ANTONIO M	TRUSTEE FO THE NEVES LIVING TRUST	3 WILSON CIRCLE	ASHLAND	MA	01721
03-158-00-000	222 OAK ST	ROSHAN RAKESH	PANKAJ SWARNICA	222 OAK ST	ASHLAND	MA	01721

The above reflects the latest information available on our records.

Richard E. Ball, M.A.A.
Director of Assessing

4/7/21
Date

Property Card

RESIDENTIAL PROPERTY RECORD CARD 2022 ASHLAND

Situs : 0 INDEPENDENCE LN | **Map ID: 014/003.0-0075-0000.0** | **Map: 003.0 Block: 0075 Lot: 0000.0** | Card: 1 of 1 | Printed: April 6, 2021

CURRENT OWNER

PULTE HOME CORP OF NEW ENGLAND
P O BOX 142
ASHLAND MA 01721

GENERAL INFORMATION

Tax Class	TAXABLE	Price		Road Type	TWO-WAY
NBHD	505.01	Sale Date		Road Condition	PAVED
Class	201	Type		Traffic	MEDIUM
Calc'd Acres	11.83	Validity		Water	PUBLIC SYS
		Grantor		Sewer	SEWER
		Book/Page			

Land Information

Seg	Type	Code	NBHD	Zone	Method	Sq Ft	Acres	Infl Fact	Infl %	Value	Sup?	Class
1	U	201	505.01	R1	A	515315	11.83			41,228	N	R

Assessment Information

	Assessed	Cost	Income	Market
Current Land	41,200	41,200	0	0
Current Building	0	0	0	0
Current Total	41,200	41,200	0	0
Current Net Assessment	41,200			
Prior Year Land	41,200	41,200	0	0
Prior Year Building	0	0	0	0
Prior Year Total	41,200	41,200	0	0
Prior Year Net Assessment	41,200			

Outbuilding Data

Type	Size 1	Size 2	Area	Qty	Yr Blt	Grade	Condition	Value

Entrance Information

Date	ID	Entry Code	Source
10-JUN-07	REB		

RESIDENTIAL PROPERTY RECORD CARD 2022 ASHLAND

Situs : 0 INDEPENDENCE LN	Parcel Id: 014/003.0-0075-0000.0	Class: RESIDENTIAL OPEN LAND	Card: 1 of 1	Printed: April 6, 2021

Dwelling Information

Style		Year Built	
Story height		Eff Year Built	
Attic		Roof	
Exterior Walls		Foundation	
Masonry Trim		SFLA	

Basement

Basement		# Car Bsmt Gar	
Bsmt Area		Bsmt Grade	
Fin Bsmt Area		Fin Bsmt Grade	
BSMT RecRm Area:			

Heating & Cooling

Heating/AC	
Fuel Type	
System Type	

Fireplaces

Fireplaces	

Room Detail

Bedrooms		Full Baths	
Total Rooms		Half Baths	
Custom Feat 1	-	Extra Fixtures	
# of Custom Feat 1		Kitchen Quality	
Custom Feat 2	-	Bath Quality	
# of Custom Feat 2			

Adjustments

Int vs Ext		Unfinished Area	
		Occupancy	

Grade & Depreciation

Grade		Market Adj	
Condition		Functional	
CDU		Economic	
Cost & Design	0	% Good Ovr	
% Complete		RCNLD	

Dwelling Computations

% Good		Economic	
% Good Override		% Complete	
Functional		C&D Factor	

Permits

Num	Date	ID	Amount	Type	Description	% Complete	Open/Closed	Inspection	Completed	Fee

Order of Taking – Easement

Town of Ashland

Commonwealth of Massachusetts

ORDER OF TAKING

Eminent Domain Taking of Permanent Easement in
Lot 10, 0 Independence Lane (f/k/a Wauseeka Drive)

Board of Selectmen meeting Date:_____, 2021

Member	In Favor	Opposed	Abstained	Not Present
Greaves	___	___	___	___
Magnani	___	___	___	___
Kinsman	___	___	___	___
Mitchell	___	___	___	___
Scherer	___	___	___	___

Pursuant to the authority granted by G.L. c. 83, § 1, the Board of Selectmen hereby takes by eminent domain, as approved by Article 10 at the December 9, 2020 Special Town Meeting, a permanent easement in the property located in Ashland at 0 Independence Lane, Ashland MA (Tax Parcel ID #03-39) shown as Lot 10 on plan entitled "Subdivision Plan of Land in Ashland" GLM Engineering Consultants, Inc. Surveyors, February 11, 1998 and filed with the Land Registration Office for the Middlesex County Registry of Deeds Southern District as Plan 27039-B on Certificate No. 217582 (Sheet 1 and 3of 3). Consisting of 27,501 square feet of land, more or less, according to said plan and also shown as Parcel B on a plan entitled "Definitive Subdivision of 'Oregon Heights' Cluster Development '45 Lot Single Family Residential Subdivision' in Ashland, Massachusetts" prepared by GLM Engineering Consultants, Inc., dated August 11, 1997,Revised October 20, 1997, Applicant: A&N Realty Trust, and recorded with said Registry as Plan 763 (Sheet 6 of 6) of 1999, Book 30418, Page 177. Consisting of 487,806 square feet of land, more or less, according to said plan.

The purpose of the taking is for the installation, construction and maintenance of a water booster pump station by the Town of Ashland and is necessary for the health and welfare of the inhabitants of Ashland and is to be used for municipal purposes under the care custody and control of the Select Board.

The land in which the aforesaid rights and easements are taken is believed to belong to the named parties listed on Exhibits A and B attached hereto, but if the name of the owner of any of said land or of any interest therein is not stated or is not correctly stated,

it is to be understood that such land or interest is owned by an owner or owners unknown to us.

All trees upon the land in which rights are hereby taken as well as any structures affixed thereto or running underneath are included in this taking.

The Select Board has voted to award no consideration for this taking as it has been provided as a gift from the owners thereof.

WITNESS our hands and seals in Ashland on this the day of_____, 2021

Town of Ashland
Board of Selectmen

_____	_____
Yolanda Greaves. Chair	Joseph J. Magnani, Jr.
_____	_____
Brandi Kinsman	Steven Mitchell
	_____
	Robert K. Scherer

COMMONWEALTH OF MASSACHUSETTS

Middlesex, ss.

On this____ day of_____, 2021, before me, the undersigned notary public, personally appeared the above-named members of the Town of Ashland Board of Selectmen, who proved to me through satisfactory evidence of identification, being_____, to be the persons whose names are signed on the above document, and acknowledged to me that they signed it voluntarily for its stated purpose.

_____

Notary Public

My Commission Expires

EXHIBIT A

The supposed owner of Lot 10 is Oregon Heights Homeowners Association by virtue of deed dated January 2, 2003 and filed with the Middlesex South Registry District of the Land Court on Certificate of Title Number 226693, Book 1263, Page 143. The following are the members of the Oregon Heights Homeowners Association whose deeds are filed in said Registry of Deeds:

REGISTERED LAND

OWNER(S) NAME(S)	PROPERTY ADDRESS	CERTIFICATE OF TITLE NO.	DOCUMENT #
Suresh Babu Chinnappa and Seresh Savitha	7 Independence Lane Ashland, MA 01721	271315	1821200
Ionannis A. Papayannopoulos and Catherine J. Papayannopoulos	11 Independence Lane Ashland, MA 01721	222512	1183627
Qiang Peng and Cui Jingping	15 Independence Lane Ashland, MA 01721	229962	1306711
Prag B. Sinch	16 Independence Lane Ashland, MA 01721	250192	1585517
Kamran Mahboob and Mahnaz Kamran	17 Independence Lane Ashland, MA 01721	260083	1706845
Stefano Sguazzin and Marilena Nussio	20 Independence Lane Ashland, MA 01721	222376	1181923
Rajesh Padmanabhan and Indumathi Padmanabhan	23 Independence Lane Ashland, MA 01721	221162	1168837
Matthew E. Fertig and Carolyn M. Fertig	27 Independence Lane Ashland, MA 01721	221312	1170604
Khalid Jaleel and Bathoola Fathima	31 Independence Lane Ashland, MA 01721	221218	1169451
James A. Klepper and Mynette Shifman	32 Independence Lane Ashland, MA 01721	234999	1387991
Praveen K. Garg and Meenal Garg	35 Independence Lane Ashland, MA 01721	221638	1174852
Matthew Kelly and Margarita Kelly	36 Independence Lane Ashland, MA 01721	270212	1811018
Shridhar Kulkarni and Jayalaxmi Kulkarni	39 Independence Lane Ashland, MA 01721	250110	1584268
Bradley J. Holas and Georgina M. Holas	107 Independence Lane Ashland, MA 01721	224953	1218085
Brian E. Siet and Wendy B. Siet	115 Independence Lane Ashland, MA 01721	231717	1344653
Dar Efroni and Einat Efroni	119 Independence Lane Ashland, MA 01721	226117	1239335
Asma Ahmed	131 Independence Lane Ashland, MA 01721	257557	1679786
Richard Gulden and Miriam Gulden	135 Independence Lane Ashland, MA 01721	230492	1316322

EXHIBIT B

The supposed owner of Parcel B is the Oregon Heights Homeowners Association by virtue of deed dated January 2, 2003 and recorded with the Middlesex South Registry of Deeds at Book 37762, Page 451. The following are the members of the Oregon Heights Homeowners Association whose deeds are recorded in said Registry of Deeds:

RECORDED LAND

OWNER(S) NAME(S)	PROPERTY ADDRESS	BOOK	PAGE
Kamran Mahboob and Mahnaz Kamran	17 Independence Lane Ashland, MA 01721	65856	506
Stefano Sguazzin and Marilena Nussio	20 Independence Lane Ashland, MA 01721	33575	504
Rajesh Padmanabhan and Indumathi Padmanabhan	23 Independence Lane Ashland, MA 01721	32740	535
Linda J. Cotter	24 Independence Lane Ashland, MA 01721	49711	326
Sunil Kadimdiwan and Suneha Kadimdiwan	28 Independence Lane Ashland, MA 01721	33282	277
James A. Klepper and Mynette Shifman	32 Independence Lane Ashland, MA 01721	46079	495
Praveen K. Garg and Meenal Garg	35 Independence Lane Ashland, MA 01721	33103	72
Matthew Kelly and Margarita Kelly	36 Independence Lane Ashland, MA 01721	72451	28
Shridhar Kulkarni and Jayalaxmi Kulkarni	39 Independence Lane Ashland, MA 01721	58037	134
Matthew D. Sheridan and Kelly R.Sheridan	40 Independence Lane Ashland, MA 01721	33634	401
Songtao Xu	43 Independence Lane Ashland, MA 01721	68876	124
Bijendra Pal Malik and Sarita Malik	44 Independence Lane Ashland, MA 01721	75860	36
David C. Vento and Bridgette Vento	48 Independence Lane Ashland, MA 01721	67586	536
Bruce R. Laquidara and Eileen T. Allison	52 Independence Lane Ashland, MA 01721	40306	398
Aravinda S. Akkammanavar and Swati A. Arvind	56 Independence Lane Ashland, MA 01721	36562	225
Yong H. Lin and Sui Fan Kwok	57 Independence Lane Ashland, MA 01721	35577	418
Matthew R. Strandberg and Rebecca L. Strandberg	60 Independence Lane Ashland, MA 01721	66038	383
Anthony V. Uglialoro and Lisa M. Uglialoro	61 Independence Lane Ashland, MA 01721	36352	425

Keith A. White and Theresa A. Scavone	65 Independence Lane Ashland, MA 01721	74581	480
Nirav Dalal and Khyati Trivedi	66 Independence Lane Ashland, MA 01721	62481	97
Alan J. Rosoff and Meredith L. Rosoff	69 Independence Lane Ashland, MA 01721	35926	350
Peter P. Graham and Denise M. Graham	72 Independence Lane Ashland, MA 01721	63839	145
Ruoqi Peng and Haixin Yu	73 Independence Lane Ashland, MA 01721	62249	506
Matt J. Baun and Rachelle Prantil-Baun	76 Independence Lane Ashland, MA 01721	51099	55
Brian Robert Herrera and Jacqueline Marisol Herrera	80 Independence Lane Ashland, MA 01721	48967	586
Semeon Kourtelidis and Marie S. Kourtelidis	84 Independence Lane Ashland, MA 01721	35490	465
Vivian A. Caballero	88 Independence Lane Ashland, MA 01721	51854	387
Chien Chun Chen and Yongmei Alexis Chen	91 Independence Lane Ashland, MA 01721	35433	175
Peter L. Navarro and Nuria Y. Navarro	92 Independence Lane Ashland, MA 01721	35639	442
Steven Ustaris and Katherine Ustaris	95 Independence Lane Ashland, MA 01721	57037	187
Paul A. Fichtner and Jeffrey M. Paradis	96 Independence Lane Ashland, MA 01721	71274	332
Theresa A. McHale	99 Independence Lane Ashland, MA 01721	59811	449
Amgad Mina and Maria W. Mina	100 Independence Lane Ashland, MA 01721	36280	55
Sean T. Keaveny and Heather L. Keaveny	103 Independence Lane Ashland, MA 01721	35085	203
Bradley J. Holas and Georgina M. Holas	107 Independence Lane Ashland, MA 01721	35861	150
Asma Ahmed	131 Independence Lane Ashland, MA 01721	64165	354

Site Plan

TOWN OF ASHLAND, MASSACHUSETTS
BOARD OF SELECTMEN

INDEPENDENCE LANE WATER BOOSTER STATION

OWNER

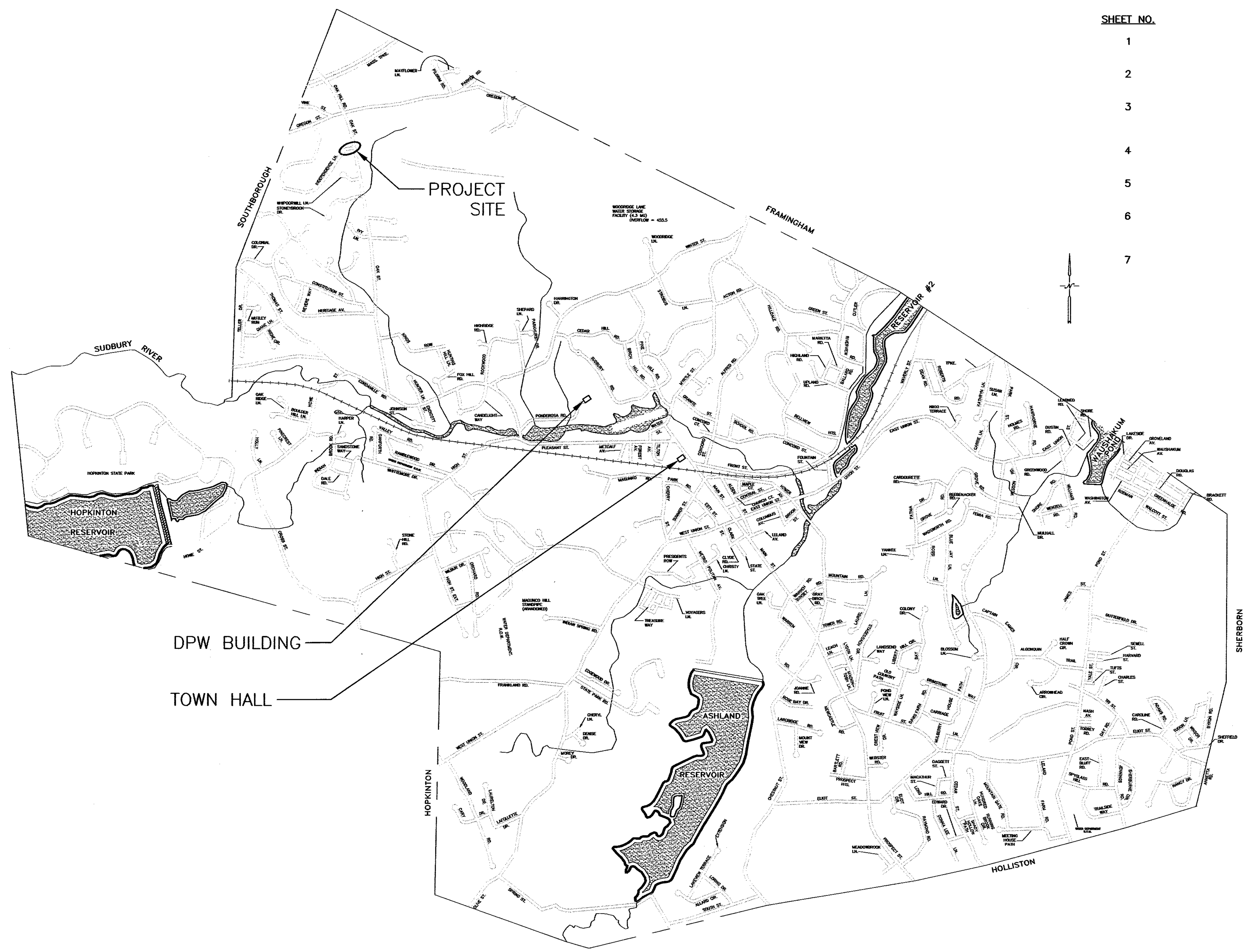
PULTE HOME CORP OF NEW ENGLAND
PO BOX 142, ASHLAND MA 01721

APPLICANT

ASHLAND DEPARTMENT OF PUBLIC WORKS
20 PONDEROSA RD, ASHLAND MA 01721

ENGINEER

HALEY WARD, INC.
63 GREAT RD, MAYNARD MA 01754



INDEX

ASSESSORS MAP 3, LOT 75 (FORMERLY 39)

LOT ADDRESS: 0 INDEPENDENCE LN, ASHLAND MA

ZONING DISTRICT: RESIDENTIAL R1/RA

DEED BOOK 31159, PAGE 541

PROPOSED USE: MUNICIPAL FACILITY – ZBA SPECIAL PERMIT

DIMENSIONAL REQUIREMENTS

	REQUIRED	ACTUAL	
LOT AREA (SF):	30,000	27,501 EASEMENT, LOT 515,315	– VARIANCE REQUESTED
LOT FRONTAGE (FT):	150	272	
FRONT YARD (FT):	40	15	– VARIANCE REQUESTED
SIDE YARD (FT):	10	35	
REAR YARD (FT):	30	150	
HEIGHT (FT):	35	9.7 (AVERAGE HEIGHT OF ROOF)	
BUILDING FOOTPRINT AREA:		195 SF	
BUILDING COVERAGE % OF SITE:		0.7% (EASEMENT)	
IMPERVIOUS AREA:		715 SF	
SOIL DISTURBANCE:		~1,500 SF	

APRIL 2021

1.2021 CHANGE NOTES
1. DRAWINGS LISTED AS REVISED REFLECT THE CHANGE IN BOOSTER STATION SIZE FROM 18'–8" TO 20'–3". THIS CHANGED THE STATION CONCRETE SLAB SIZE FROM 21'–5" TO 21'–11".
2. ELECTRICAL DRAWINGS LISTED AS REVISED TO REFLECT THE ADDITION OF A THIRD DOMESTIC PUMP AND THE ELIMINATION OF THE SCADA PLC, AND THE CHANGE TO HAVE THE CONTROL PANEL PLC ACT AS THE SCADA PLC.

TOWN OF ASHLAND, MASSACHUSETTS
BOARD OF SELECTMAN

INDEPENDENCE LANE WATER BOOSETR STATION

Haley Ward, Inc.
63 GREAT ROAD, SUITE 200,
MAYNARD, MASSACHUSETTS 01754-2097
PHONE: (978) 648-6025 FAX: (978) 648-6068
www.haleyward.com

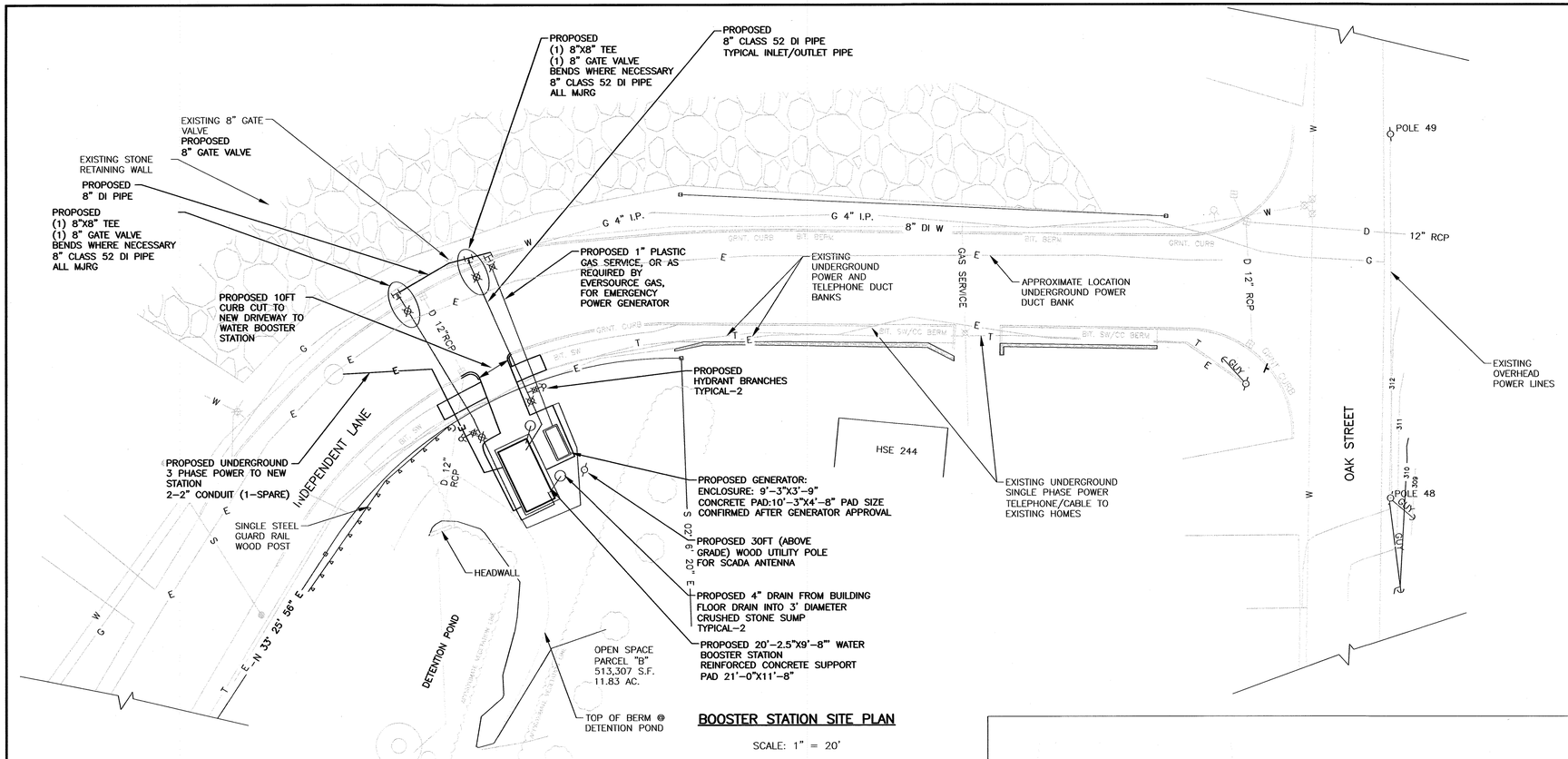
COMMONWEALTH OF MASSACHUSETTS — GREGORY J. ELDRIDGE — CIVIL — No. 40710 — REGISTERED PROFESSIONAL ENGINEER

CHECKED	DATE	BY
REVISED	DATE	BY
1	1.2021	GJE

SHEET NO.: 1 OF 7
CONTRACT NO.: N/A
SCALE: AS NOTED
DATE DRAWN: JUNE 2019
DRAWN BY: GJE
FILE NO.: ASH-317-001.DWG

DWG. NO.

1



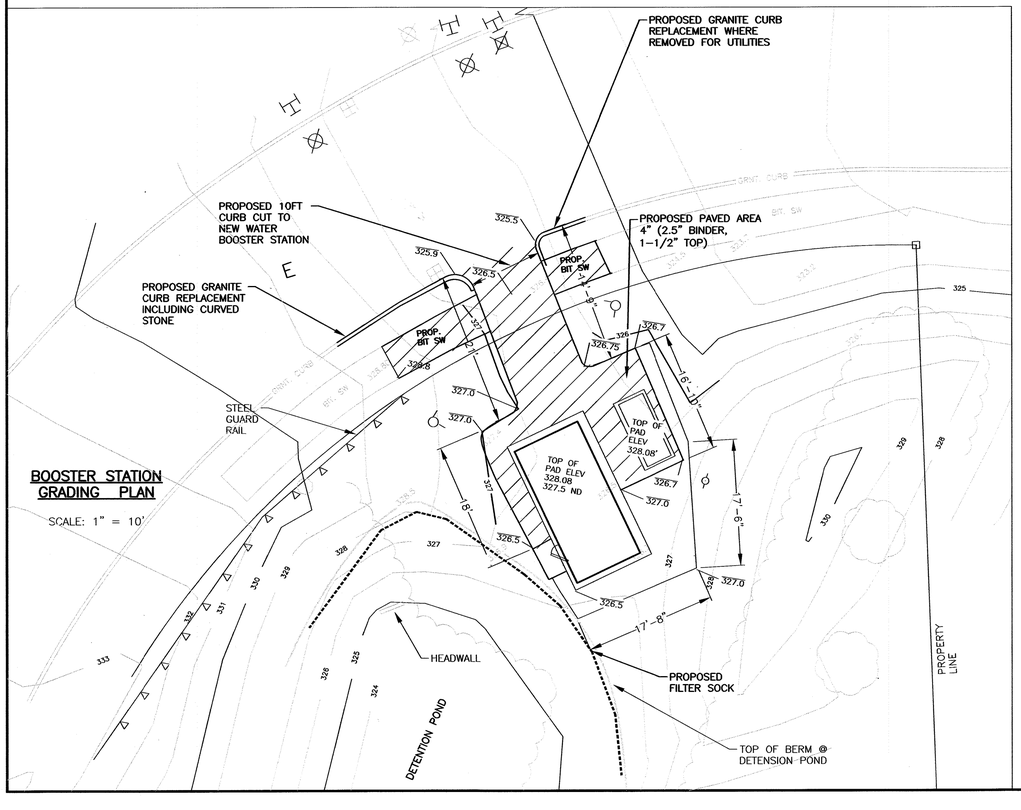
BOOSTER STATION SITE PLAN

SCALE: 1" = 20'

LEGEND:

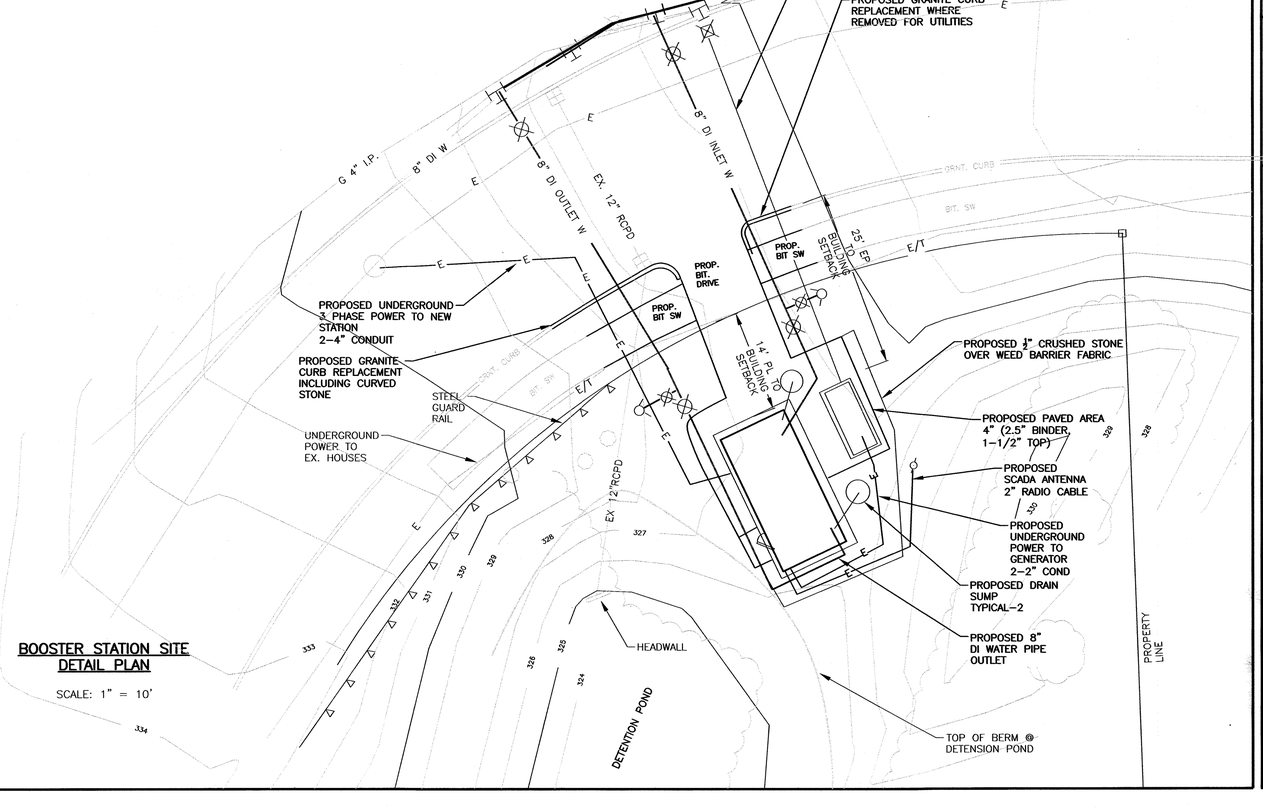
- EDGE OF PAVEMENT
- RIGHT OF WAY AND APPROXIMATE LOCATION OF PROPERTY LINES
- 24" EXISTING GAS LINE
- EXISTING WATER MAIN XX=PIPE MATERIAL
- EXISTING WATER SERVICE WITH CURB STOP
- EXISTING CONTOUR ELEVATION
- EXISTING POST/RAIL FENCE
- NEW WATER
- BORDERING VEGETATED WETLAND (BVW)
- SILT SOCK
- BVW 100' BUFFER ZONE
- MEAN ANNUAL HIGH WATER LINE
- RIVER FRONT AREA BOUNDARY
- EXISTING RIP–RAP
- DRAIN MANHOLE
- UTILITY POLE
- UTILITY POLE W/GUY
- GAS GATE
- EXISTING MANHOLE
- CB WITH GRANITE THROAT STONE
- EXISTING FIRE HYDRANT
- EXISTING WATER GATE
- NEW FIRE HYDRANT
- NEW WATER GATE
- NEW SOLID SLEEVE
- SIGN
- PROPOSED SPOT GRADE

REVISION NOTES:
1.REVISION MADE 3.12.2021
a. CHANGED BOOSTER STATION BUILDING AND GENERATOR SIZE TO MATCH APPROVED EQUIPMENT SIZE
b. ADDED FLOOR DRAINS AND STONE SUMPS
2. REVISION MADE 4.9.2021
c. MOVE STATION WEST ON SITE



BOOSTER STATION GRADING PLAN

SCALE: 1" = 10'



BOOSTER STATION SITE DETAIL PLAN

SCALE: 1" = 10'

TOWN OF ASHLAND, MASSACHUSETTS
BOARD OF SELECTMEN

INDEPENDENCE LANE BOOSTER STATION

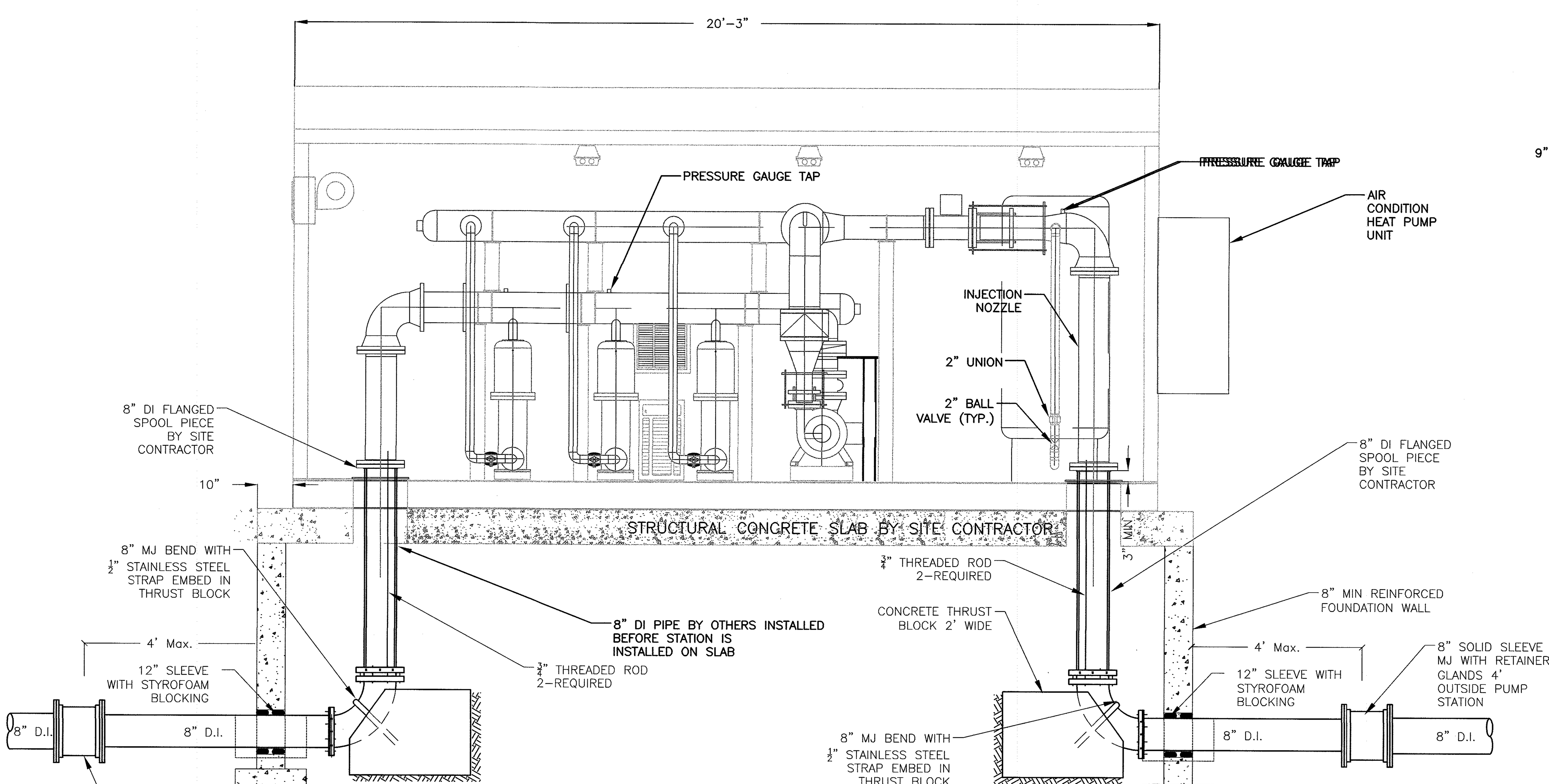
SITE PLAN

Haley and Ward, Inc.
63 GREAT ROAD, SUITE 200,
MAYNARD, MASSACHUSETTS 01754–2097
PHONE: (978) 648–6025 FAX: (978) 648–6068
www.haleyward.com

CHECKED	DATE	BY
REVISED	DATE	BY
1	3.12.2021	GJE
2	4.9.2021	GJE

SHEET NO.: 2 OF 7
CONTRACT NO.: N/A
SCALE: AS NOTED
DATE DRAWN: 2019
DRAWN BY: GJE
FILE NO.: esh317–000.dwg

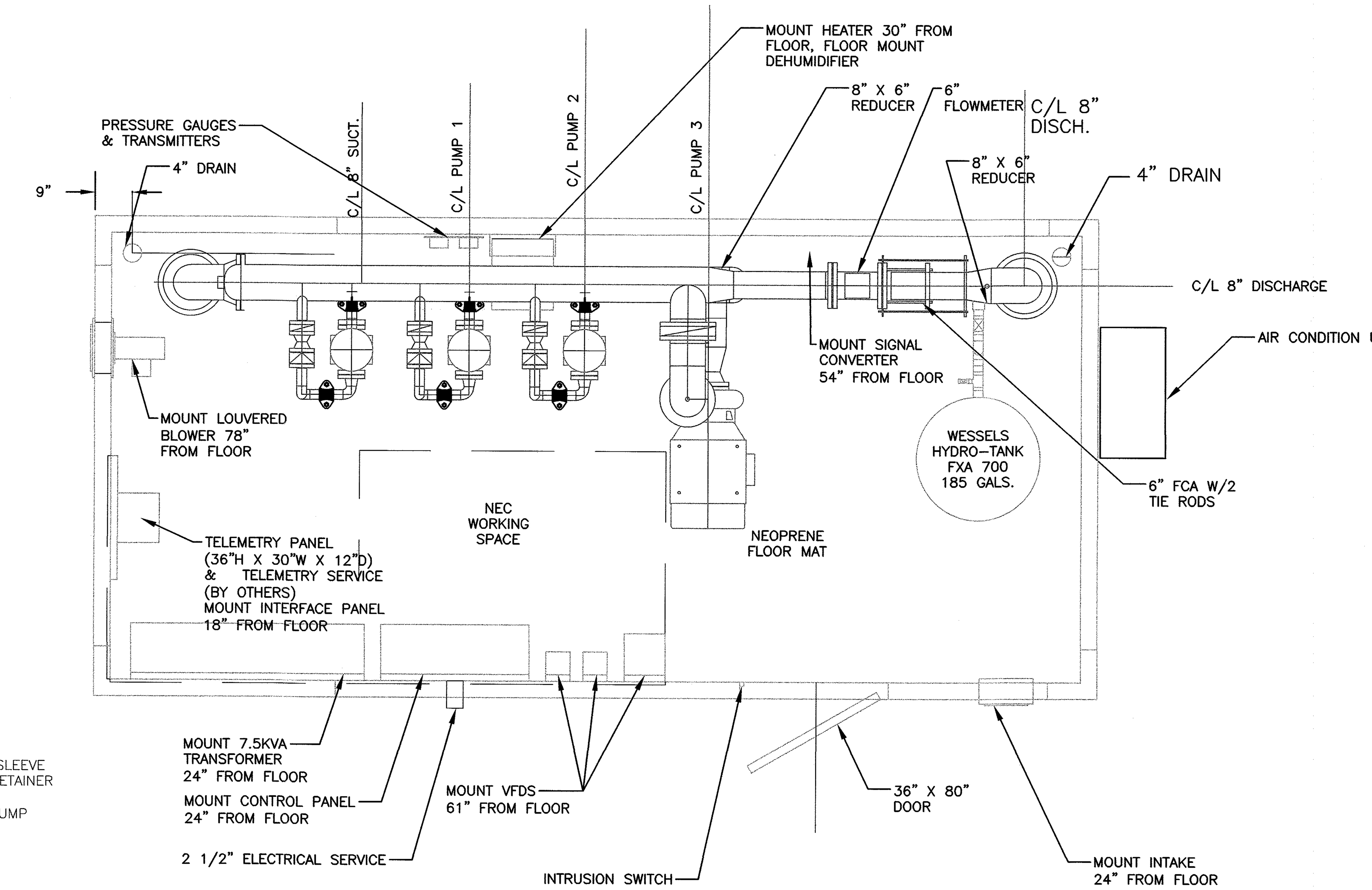
DWG. NO.
SPR



CONCRETE SLAB NOTES:
1. SEE DWG S-1 FOR DETAILS REGARDING OPTIONAL CONCRETE SLAB SETUP.
2. CONTRACTOR AHS OPTION TO INSTALL FROST WALL OR CONCRETE SLAB ON GRADE PROVIDED BUILDING DEPARTMENT APPROVES SLAB ON GRADE.

1/M1 **SECTION**

SCALE: 1/2" = 1'



CHANGE NOTES
1.CHANGES MADE ON 1.19.101 WAS TO INCREASE LENGTH OF STATION BUILDING FROM 18'-8 ½" TO 20'-3" AS REQUIRED BY THE SELECTED USEMCO BOOSTER STATION

TOWN OF ASHLAND, MASSACHUSETTS
BOARD OF SELECTMEN

INDEPENDENCE LANE WATER BOOSTER STATION

MECHANICAL DETAILS

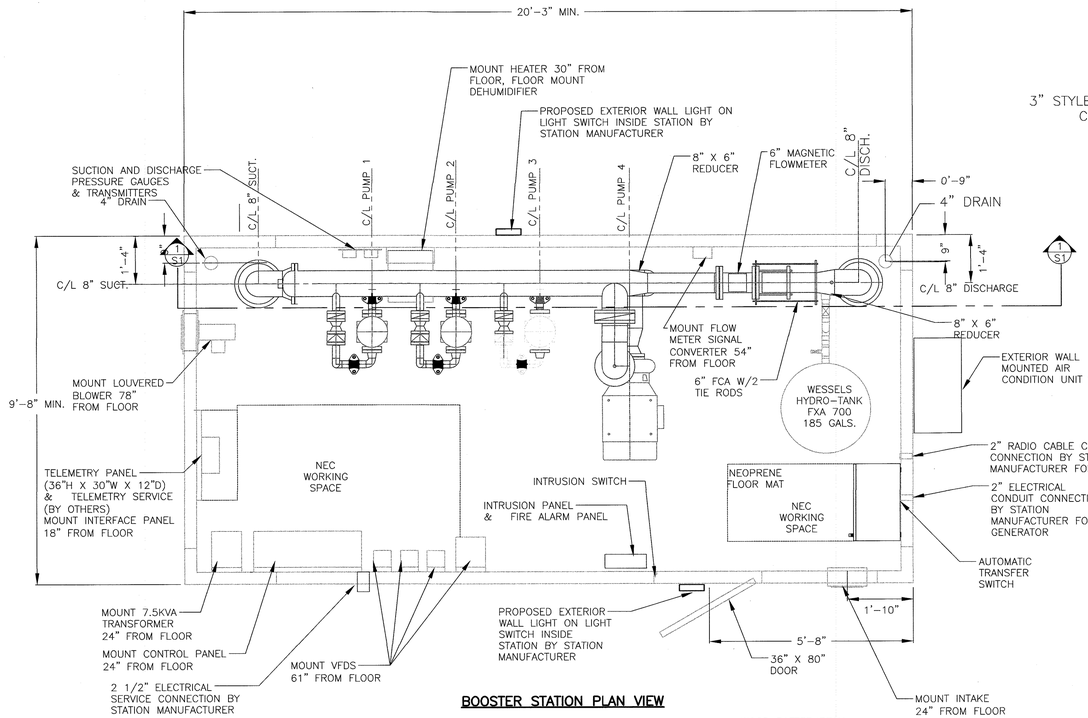
Haley and Ward, Inc.
63 GREAT ROAD, SUITE 200, MAYNARD, MASSACHUSETTS 01754-2097
PHONE: (978) 648-6025 FAX: (978) 648-6068
www.haleyward.com

CHECKED	DATE	BY
1	1	1
REVISED	DATE	BY
1	1.2021	GJE

SHEET NO.: ? OF ?
CONTRACT NO.: N/A
SCALE: AS NOTED
DATE DRAWN: JUNE 2019
DRAWN BY: GJE
FILE NO.: ASH 317-M1

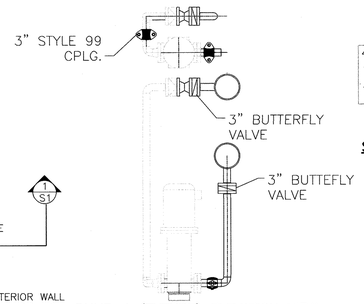
DWG. NO.

M1R



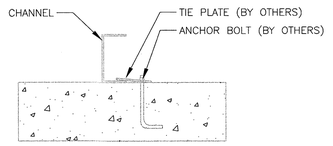
BOOSTER STATION PLAN VIEW

SCALE: 1/2" = 1'



PUMP 4 (FUTURE) ELEVATION VIEW

NOT TO SCALE



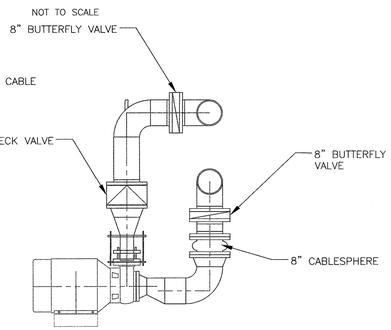
STATION ANCHOR SYSTEM DETAIL

NOT TO SCALE

FLOOR DRAIN NOTE:
1. STATION MANUFACTURER TO INSTALL CAST IRON 4" DIAMETER FLOOR DRAIN IN STATION FLOOR.
2. SITE CONTRACTOR TO FURNISH AND INSTALL 3" CAST IRON DRAIN FROM FLOOR DRIAN TO UNDERGROUND STONE SUMP AREA, 3 FOOT DIAMETER BY 2 FOOT DEEP

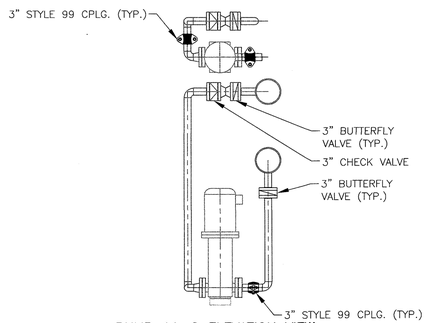
PAINT REQUIREMENTS

APPLY 8 MILS EPOXY ENAMEL INTERIOR OF PIPING: FUSION BONDED EPOXY COATED PER AWWA C213



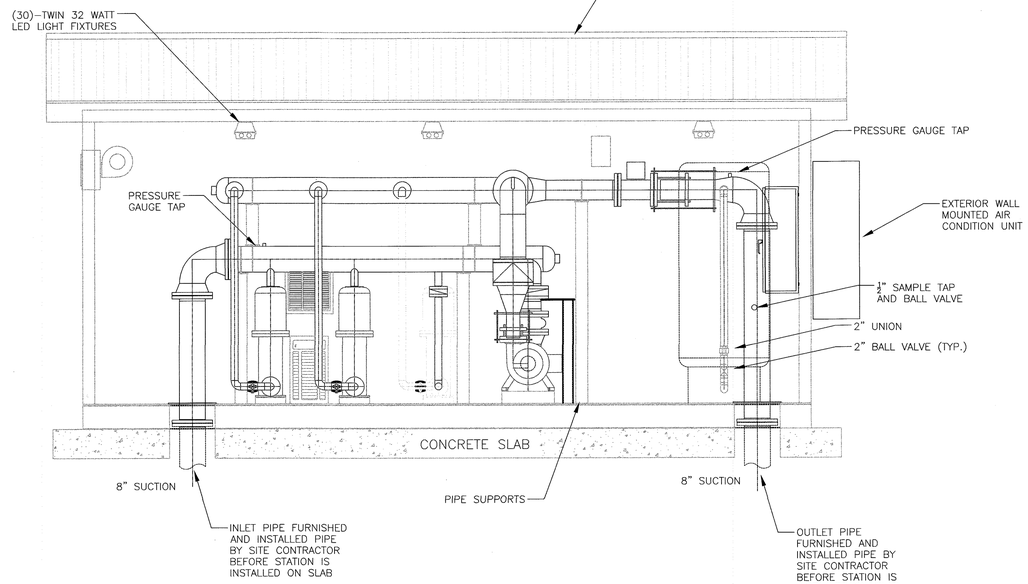
PUMP 3 ELEVATION VIEW

NOT TO SCALE



PUMP 1& 2 ELEVATION VIEW

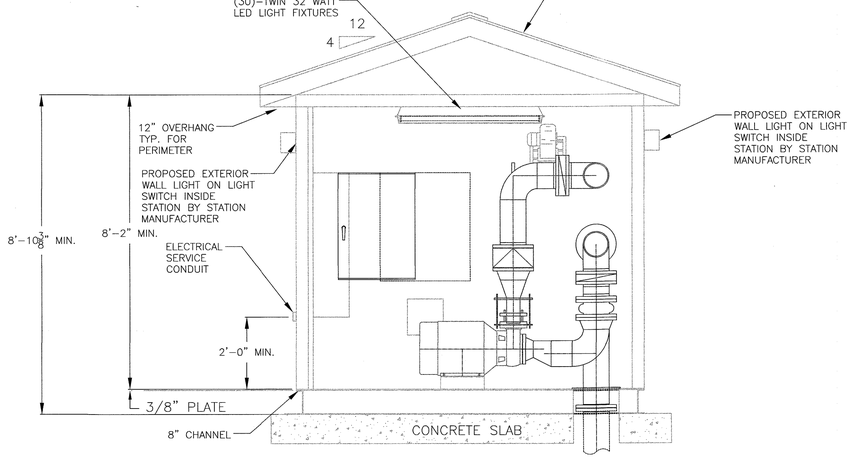
NOT TO SCALE



BOOSTER STATION ELEVATION VIEW WEST END

SCALE: 1/2" = 1'

NOTE:
INDEPENDENTLY SUPPORTED.
PIPE EXTERNAL TO STATION MUST BE



BOOSTER STATION ELEVATION VIEW SOUTH END

SCALE: 1/2" = 1'

CHANGE NOTES
1.CHANGES MADE ON 1.19.101 WAS TO INCREASE LENGTH OF STATION BUILDING FROM 18'-8 ½" TO 20'-3" AS REQUIRED BY THE SELECTED USEMCO BOOSTER STATION

GRAPHIC SCALE
1' 0 1' 2' 4' FEET

TOWN OF ASHLAND, MASSACHUSETTS
BOARD OF SELCTMEN

INDEPENDENCE LANE WATER BOOSTER STATION

BUILDING AND MECHANICAL DETAILS

Haley Ward, Inc.
63 GREAT ROAD, SUITE 200,
MAYNARD, MASSACHUSETTS 01754-2097
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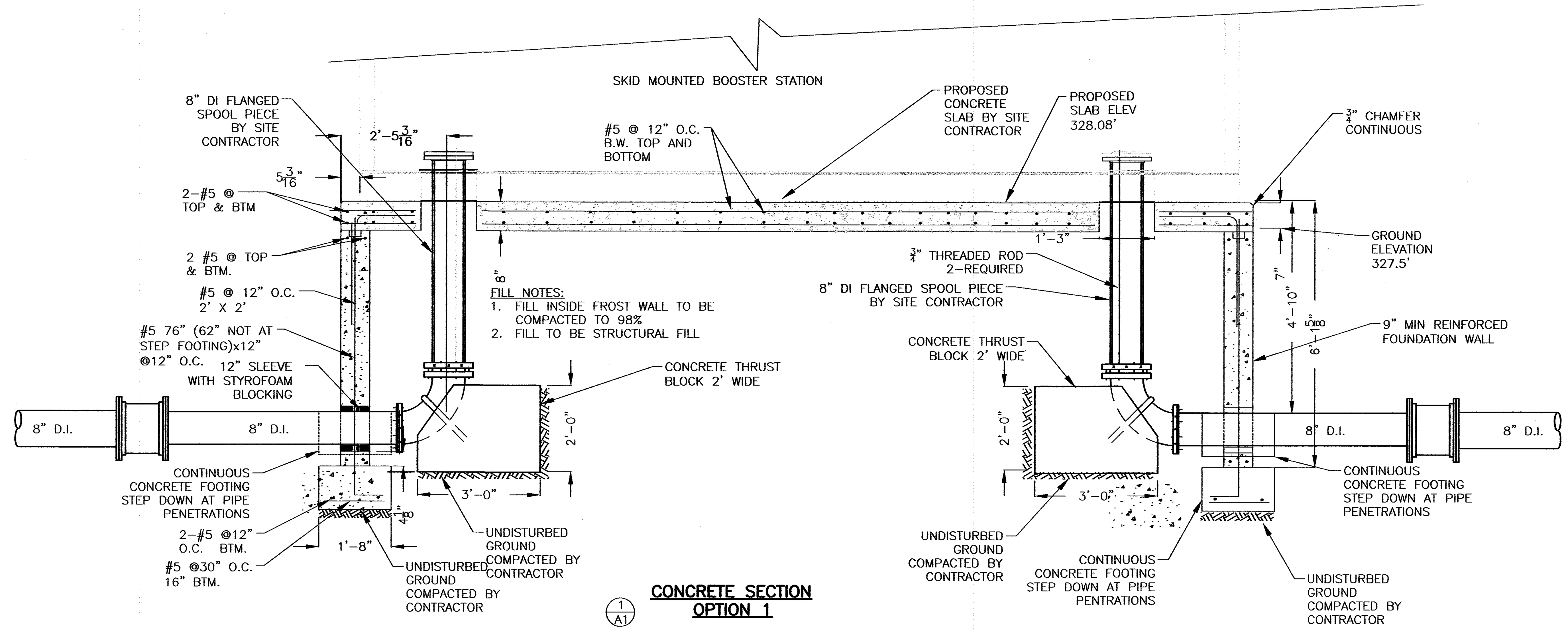
www.haleyward.com

COMMONWEALTH OF MASSACHUSETTS
GREGORY J. CLERMONT
No. 40710
REGISTERED PROFESSIONAL ENGINEER

CHECKED	DATE	BY
	DATE	BY
REVISED	1.19.2021	GJC
1		

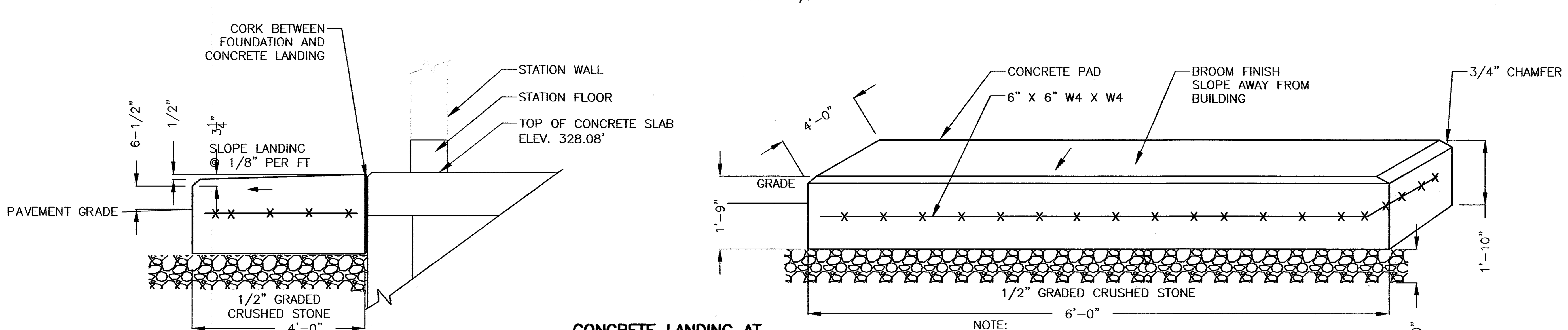
SHEET NO.: 3 OF 7
CONTRACT NO.: N/A
SCALE: AS NOTED
DATE DRAWN: JUNE 2019
DRAWN BY: LJC
FILE NO.:ASH317-A1

DWG. NO.
A1R



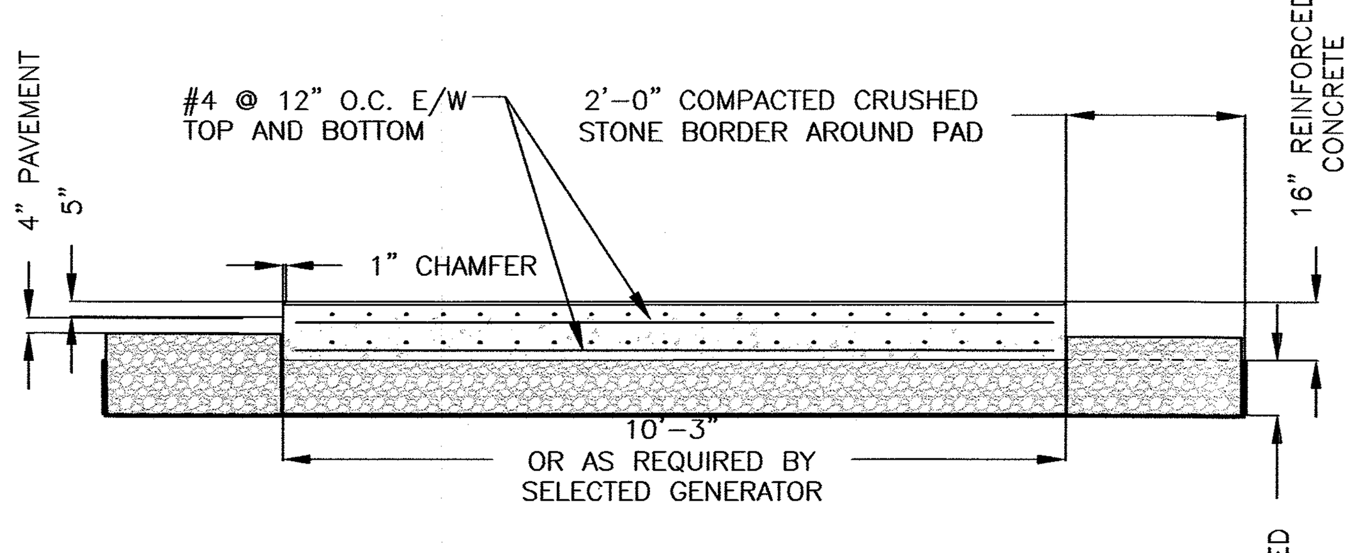
CONCRETE SECTION OPTION 1 (1/A1)

SCALE: 1/2" = 1'



CONCRETE LANDING AT EXTERIOR DOOR

NOT TO SCALE

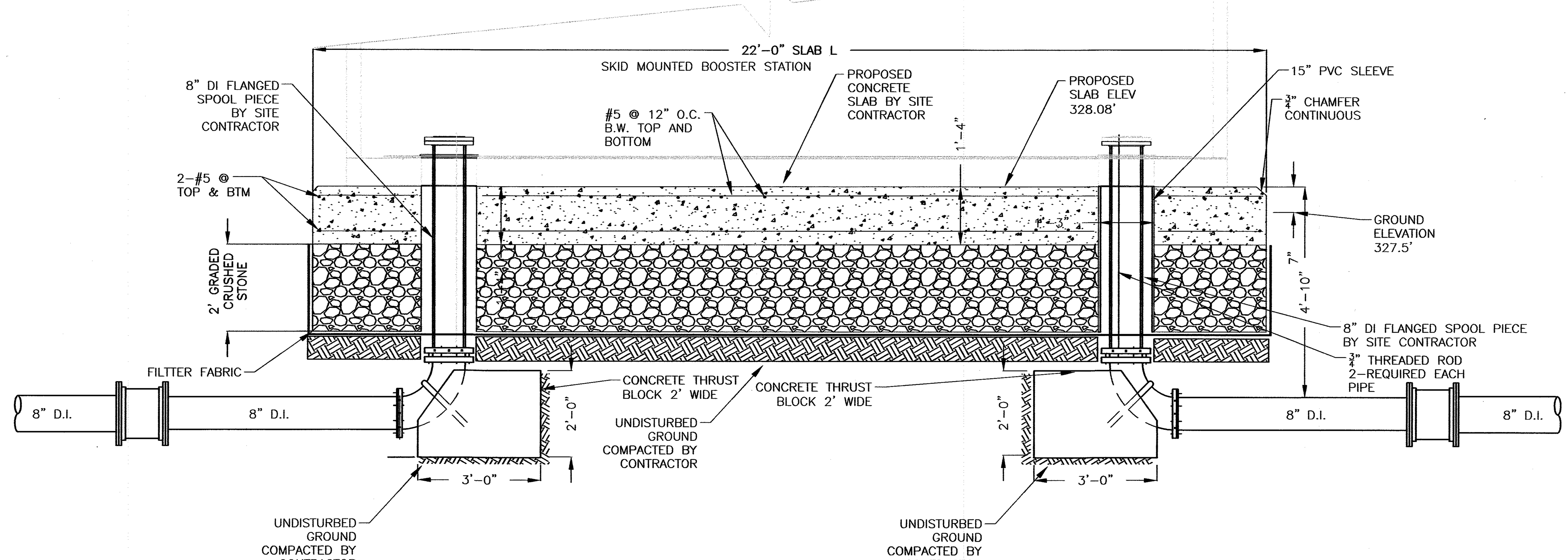


AUXILIARY POWER GENERATOR PAD

NOT TO SCALE

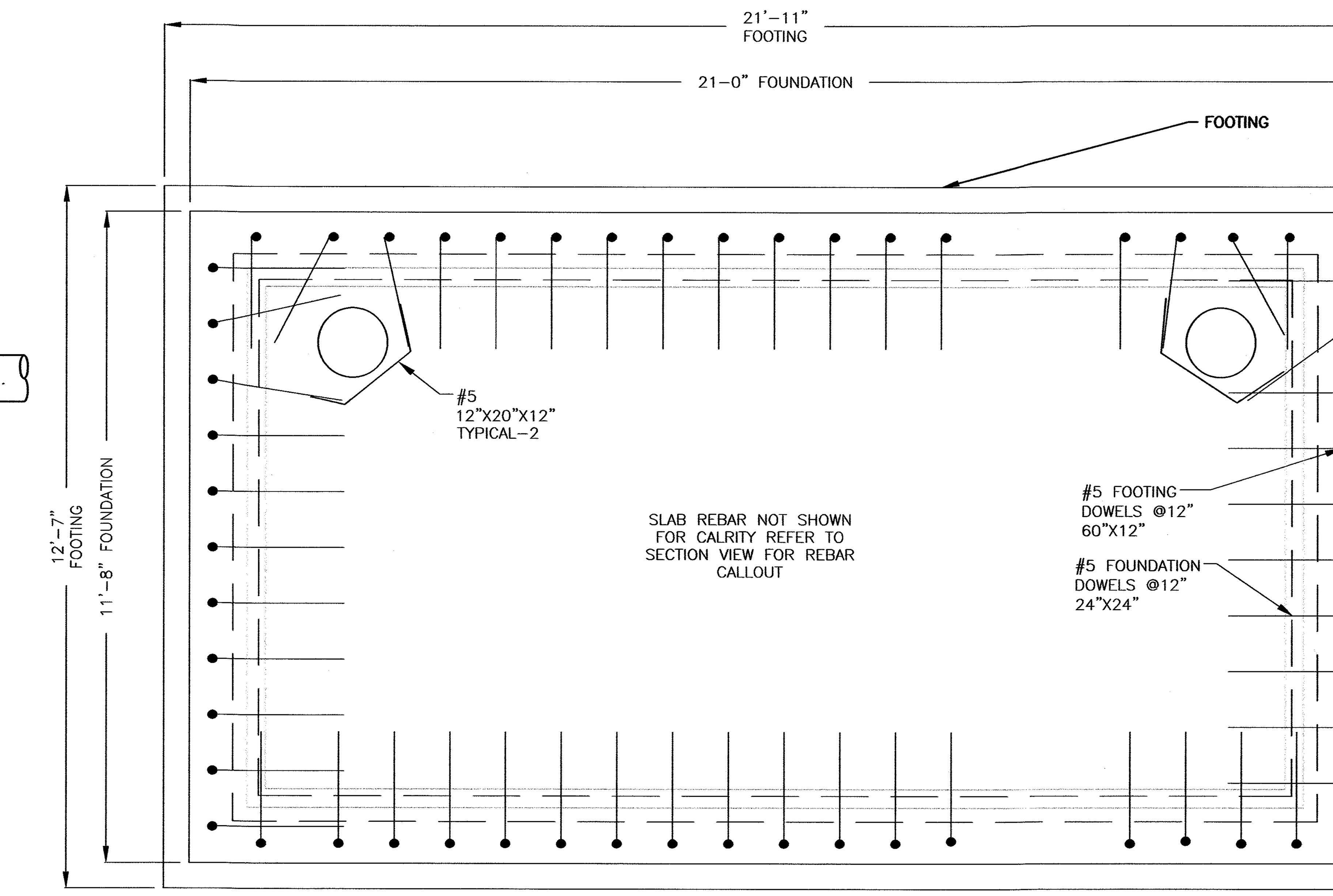
NOTES:

1. PROPOSED GENERATOR PAD APPROX. SIZE 10'-3" LONG BY 4'-8" WIDE BY 16" THICK. FINAL PAD SIZE BASED ON SELECTED GENERATOR SKID SIZE PLUS 6" ALL SIZE
2. TOP REINFORCEMENT AT 2" BELOW TOP SURFACE.
3. BOTTOM REINFORCEMENT AT 3" ABOVE BOTTOM GRADE



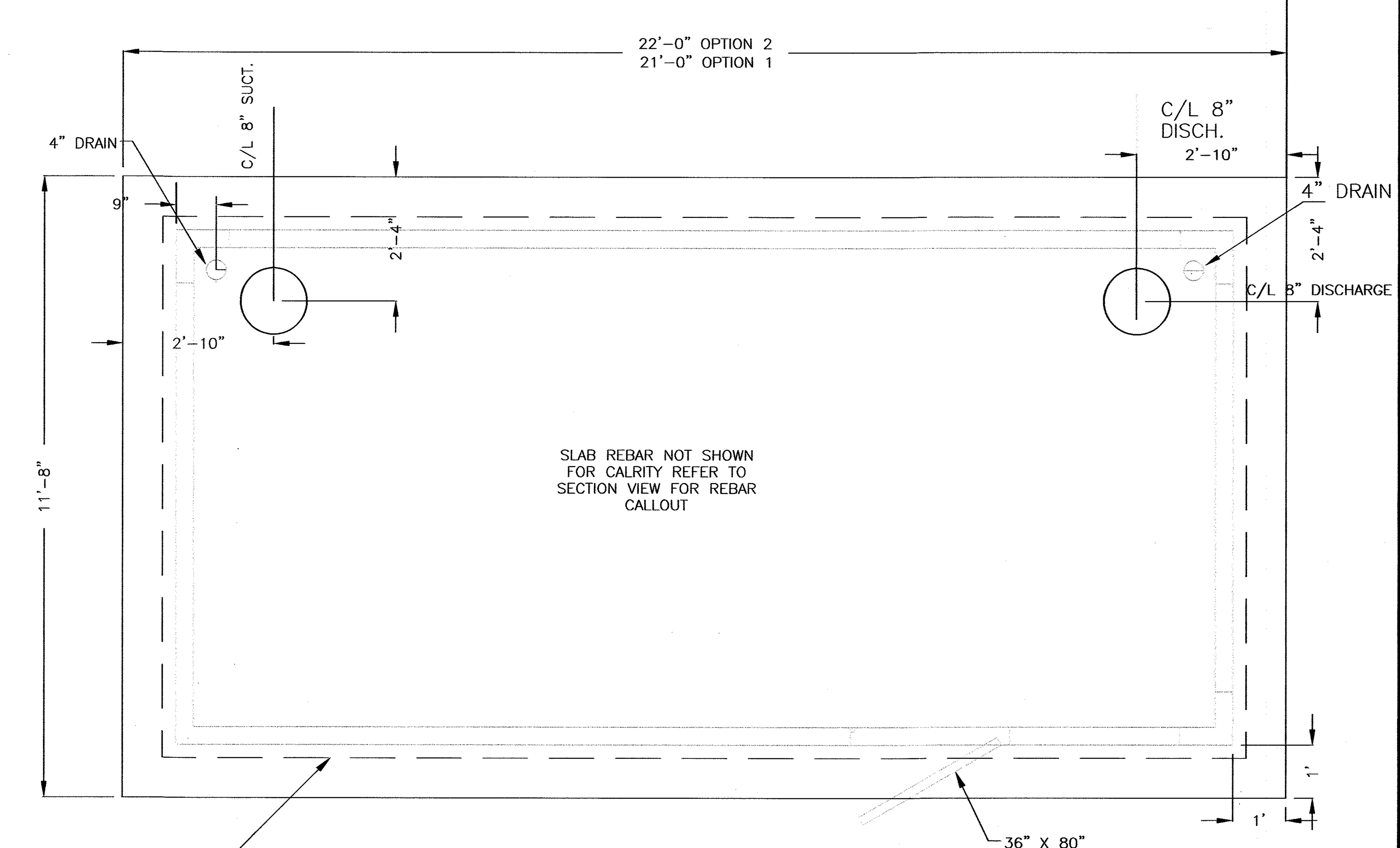
CONCRETEN SLAB SECTION OPTION 2 (A1)

SCALE: 1/2" = 1'



PROPOSED CONCRETE FOOTING AND FOUNDATION PLAN VIEW OPTION 1

SCALE: 1/2" = 1'



PROPOSED CONCRETE SLAB PLAN VIEW OPTION 1 & 2

SCALE: 1/2" = 1'

CONCRETE SLAB NOTES

1. CONCRETE SLAB SIZE IS APPROXIMATE. ACTUAL SIZE TO BE ONE FOOT LARGER IN ALL DIRECTIONS FROM SELECTED WATER BOOSTER STATION SKID.
2. THERE ARE 2 OPTIONS FOR THE CONCRETE SLAB ON THIS PROJECT; 1) FROST WALL FOUNDATION, FOOTING AND STRUCTURAL SLAB OR 2) CONCRETE STRUCTURAL SLAB ON GRADE.
3. CONTRACTOR'S OPTION SELECTED REQUIRES APPROVAL BY THE ASHLAND BUILDING DEPARTMENT

CHANGE NOTES

1.CHANGES MADE ON 1.19.101 WAS TO INCREASE LENGTH OF STATION BUILDING FROM 18'-8 1/4" TO 20'-3" AS REQUIRED BY THE SELECTED USEMCO BOOSTER STATION.
CHANGE IN STATION CONCRETE FOOTING WAS FROM 21'-5" TO 21'-11". THROUGH REDUCTION OF SLAB OVERHAND ON LONG ENDS.

2. CHANGES ON 3.12.2021 WAS
   a. SHORTEN FOUNDATION LENGTH, IN SECTION 1/A1, TO MATCH PLAN VIEW LENGTH.
   b. SLAB ON GRADE REMAINED THE SAME, WHICH IS LONGER.
   c. PLAN VIEW FOUNDATION SLAB CALL OUT LENGTH CHANGED FROM 18'-4" TO 20'-0". AS SHOWN WAS CORRECT.
   d. ADDED LENGTH OPTIONS IN SLAB PLAN VIEW FOR OPTION1 & 2

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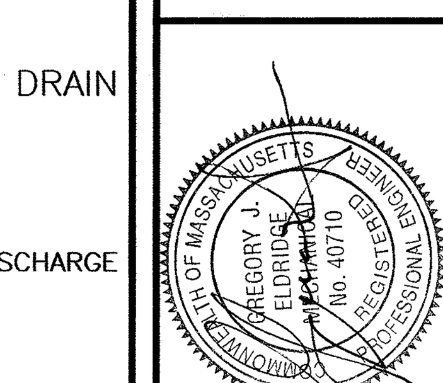
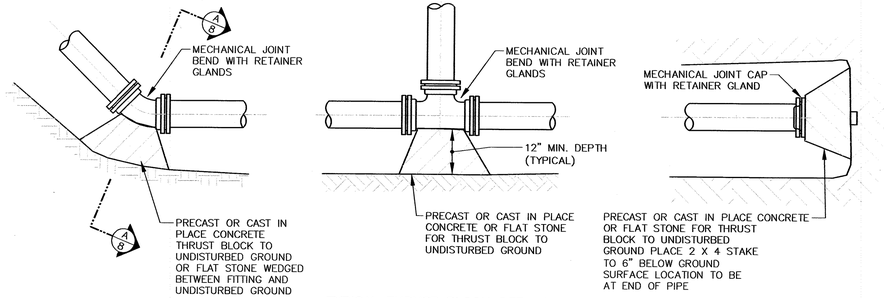


CHECKED	DATE	BY
REVISED	DATE	BY
1	1.2021	GJE
2	3.12.2021	GJE

SHEET NO.:	4 OF 7
CONTRACT NO.:	N/A
SCALE:	AS NOTED
DATE DRAWN:	JUNE 2019
DRAWN BY:	GJE
FILE NO.:	ASH 317-S1

DWG. NO.

S1R

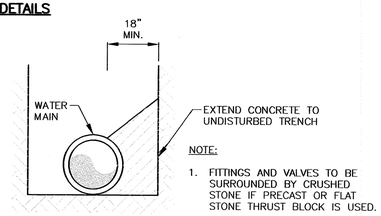


TYPICAL THRUST BLOCK DETAILS

NO SCALE

PIPE DIAMETER	BENDS				TEE
	11.25	22.5	45	90	
6	1	1	1	2	1.5
8	1	1	2	3	2.5
12	1	2	3.5	6.5	5

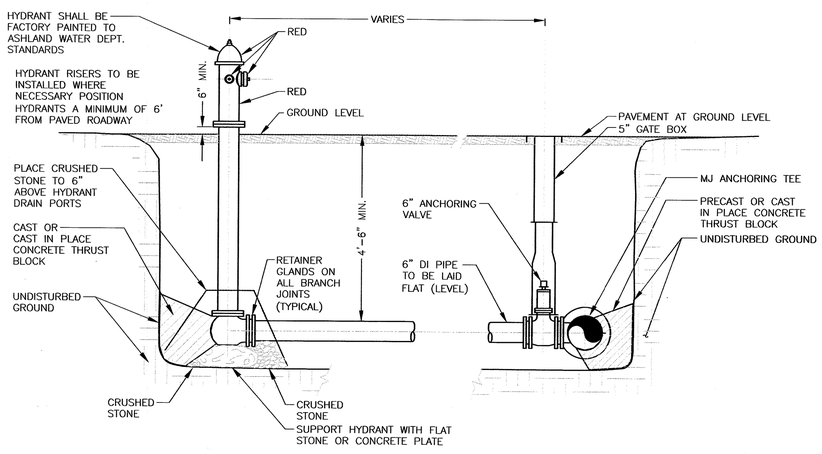
THRUST BLOCK BEARING AREA (SF)
(BASED UPON 100 psi WATER PRESSURE AND 3000 PSF BEARING LOAD CAPACITY)



NOTE:

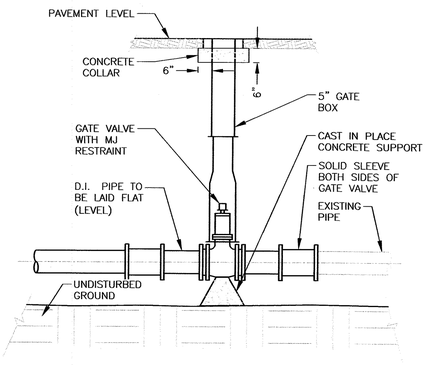
1. FITTINGS AND VALVES TO BE SURROUNDED BY CRUSHED STONE IF PRECAST OR FLAT STONE THRUST BLOCK IS USED.

A/B NO SCALE



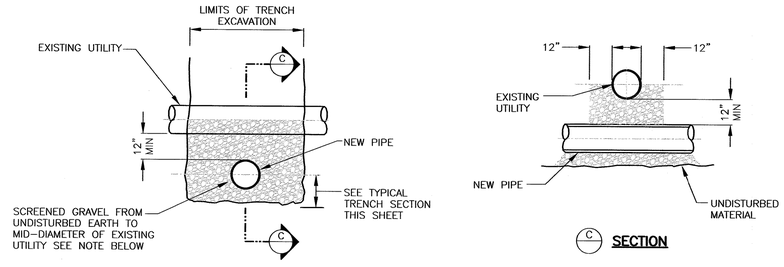
TYPICAL HYDRANT ASSEMBLY INSTALLATION

NOT TO SCALE

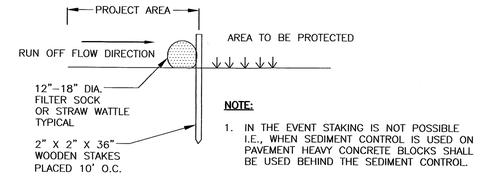


TYPICAL GATE VALVE INSTALLATION

NOT TO SCALE



TYPICAL SECTION

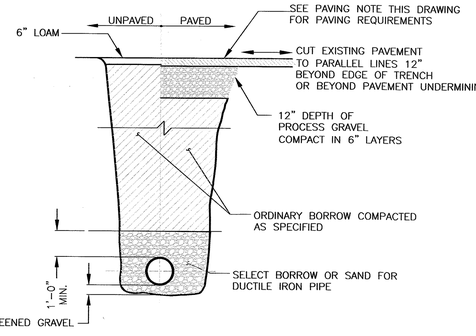


NOTE:

1. IN THE EVENT STAKING IS NOT POSSIBLE I.E., WHEN SEDIMENT CONTROL IS USED ON PAVEMENT HEAVY CONCRETE BLOCKS SHALL BE USED BEHIND THE SEDIMENT CONTROL.

TYPICAL FIILTER SOCK DETAIL

NOT TO SCALE

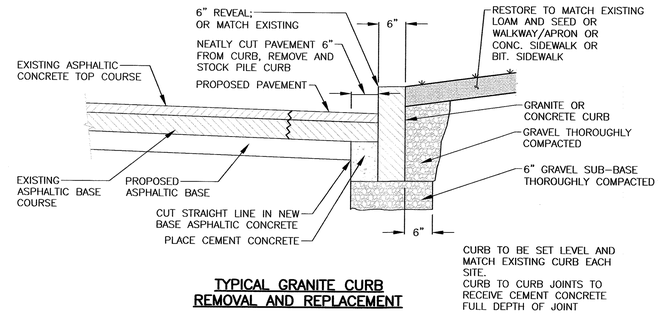


TYPICAL PIT SECTION FOR WATER MAINS

NOT TO SCALE

PAVING NOTES:

1. EXISTING ROADWAY PAVEMENT IS APPROXIMATELY FIVE (5)-INCHES THICK.
2. PROPOSED TRENCH PAVEMENT TO BE 2-1/2" TEMPORARY AND FIVE INCHES PERMANENT (3-1/2" BINDER 1-1/2" TOP).



TYPICAL GRANITE CURB REMOVAL AND REPLACEMENT

NOT TO SCALE

TOWN OF ASHLAND, MASSACHUSETTS
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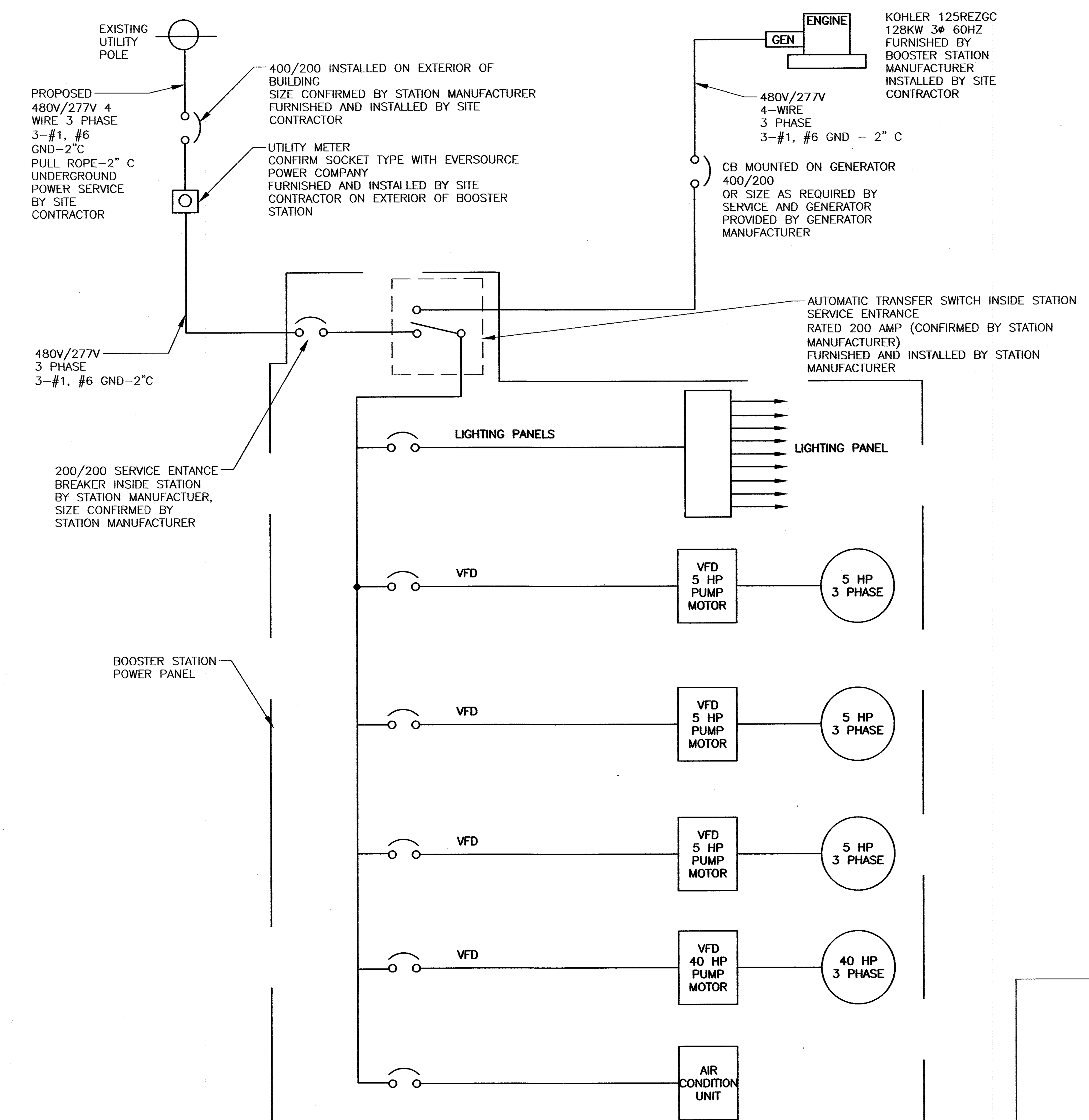
GREGORY J. MORRIS
No. 40710
REGISTERED PROFESSIONAL ENGINEER
CIVIL

CHECKED	DATE	BY
REVISED	DATE	BY

SHEET NO.: 5 OF 7
CONTRACT NO.: N/A
SCALE: NONE
DATE DRAWN: JUNE 2019
DRAWN BY: GJE
FILE NO.: ASH-317-SD1.DWG

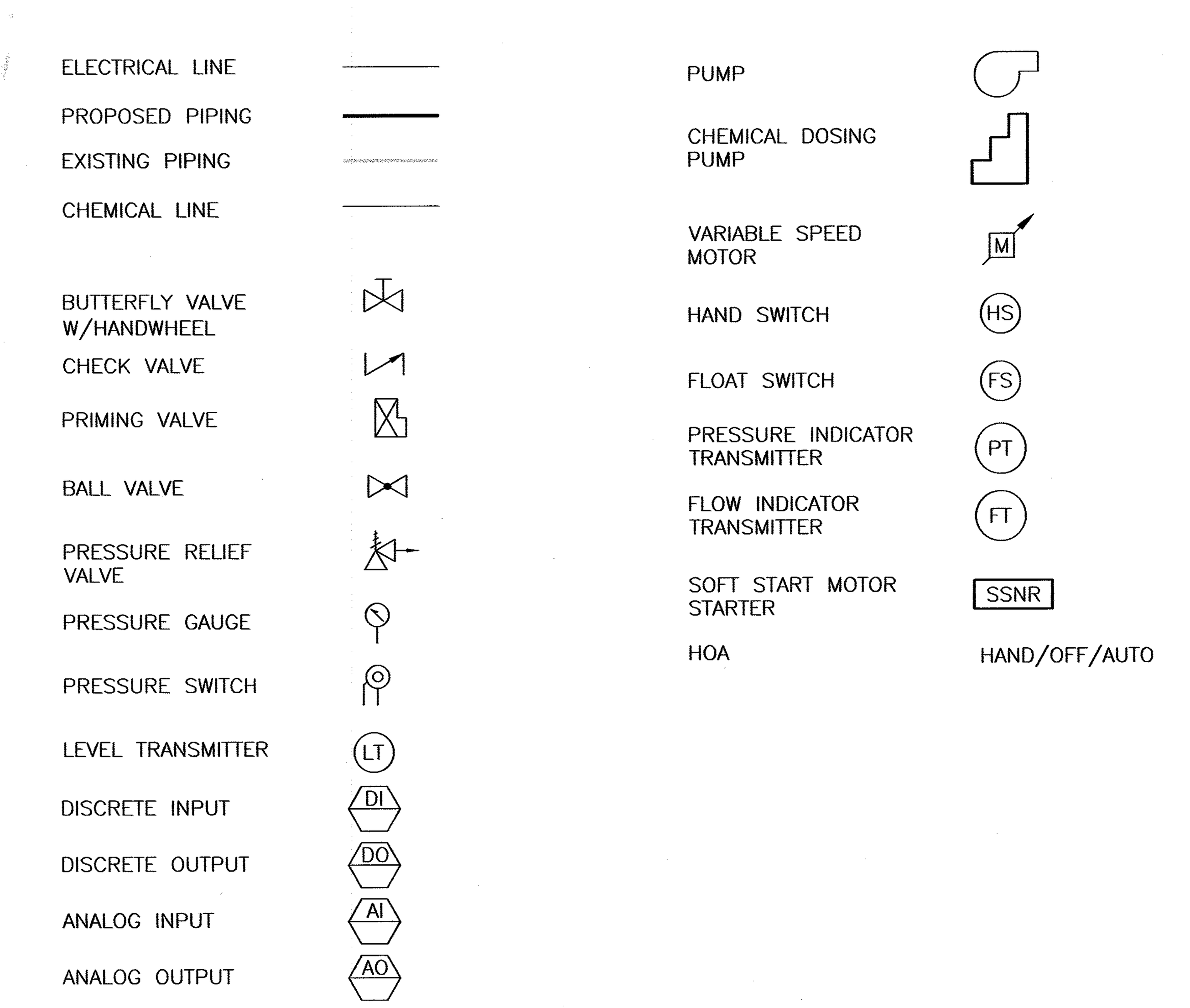
DWG. NO.

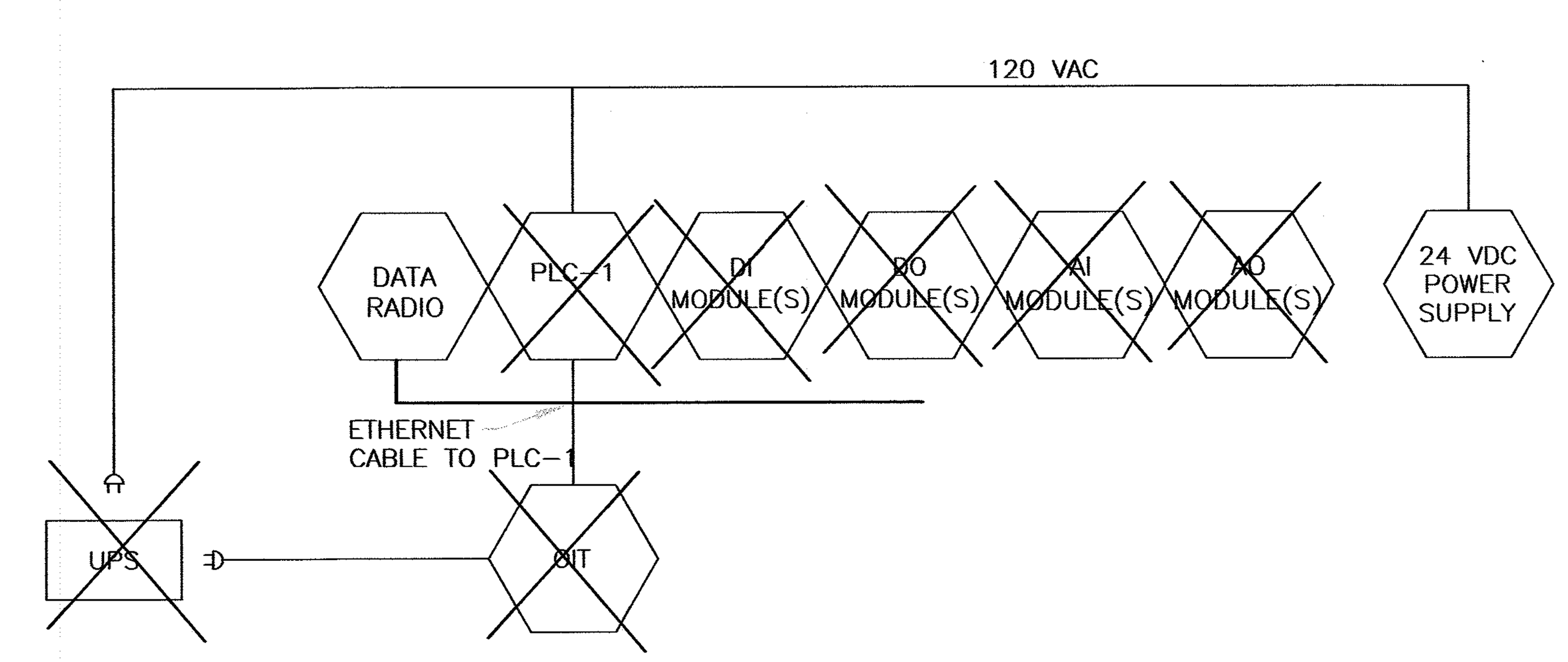
SD1



SINGLE LINE DIAGRAM

LEGEND & ABBREVIATIONS

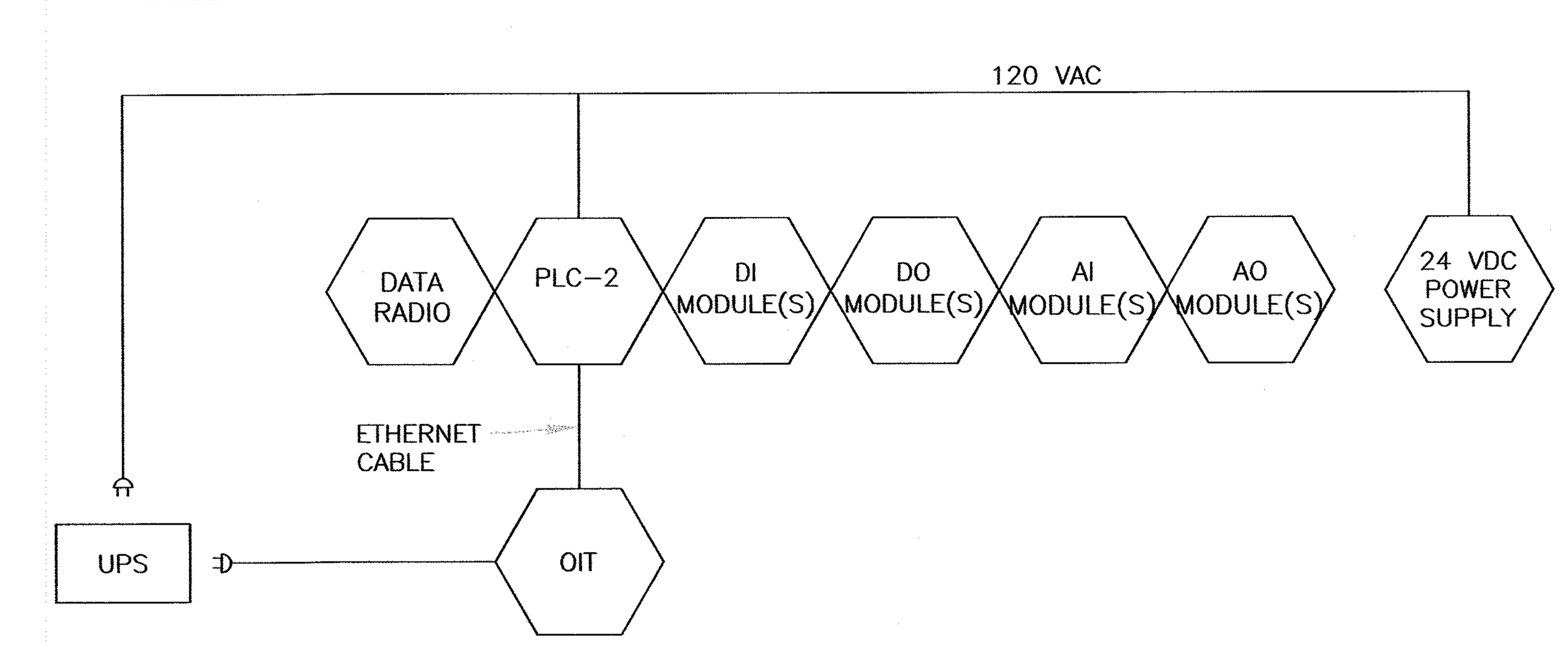




PROPOSED TOWN SCADA RADIO PANEL

NOTE: TOWN SCADA RADIO PANEL

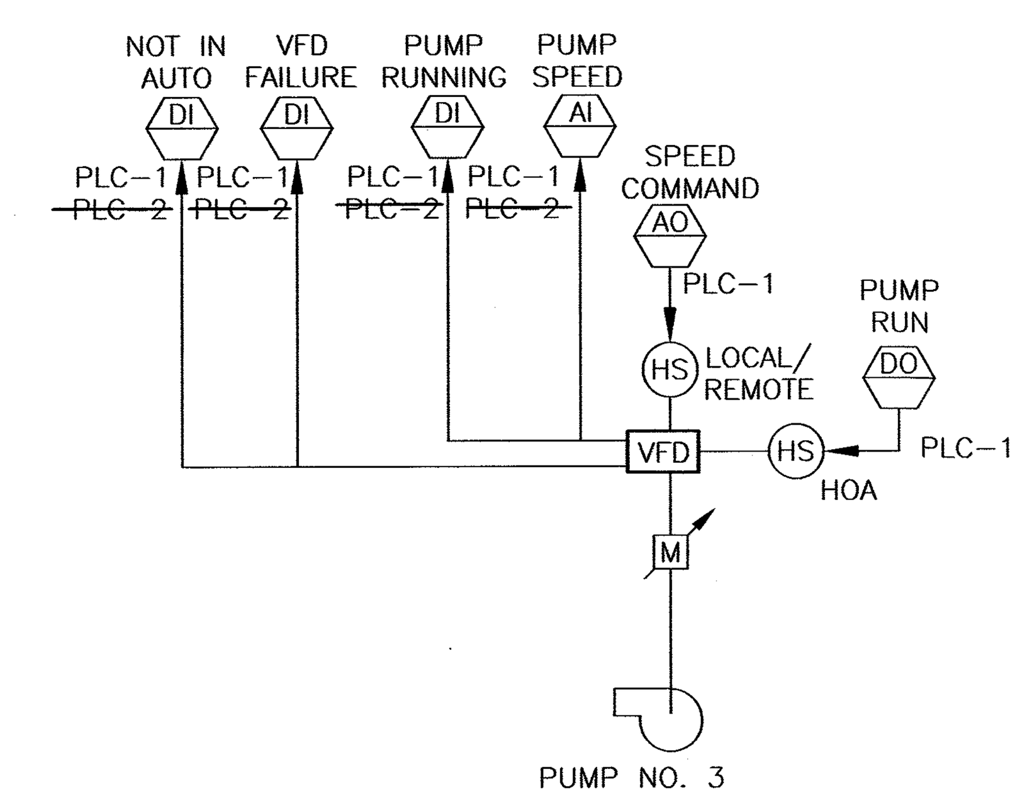
1. STATION MANUFACTURER SHALL PURCHASE SCADA RADIO PANEL FROM NORTHEAST SYSTEMS CONTROLS, INC. JASON ROACHE AND INSTALL SCADA RADIO PANEL COMPLETE AND CONNECT TO PLC-1.
2. RADIO MODEM WILL BE PROGRAMMED BY TOWN'S SCADA TECHNICIAN UNDER THIS PROJECT.
3. ~~CONNECTIONS TO PANEL FOR EQUIPMENT EXTERNAL TO STATION SHALL BE MADE BY SITE CONTRACTOR PER I/O TABLE.~~



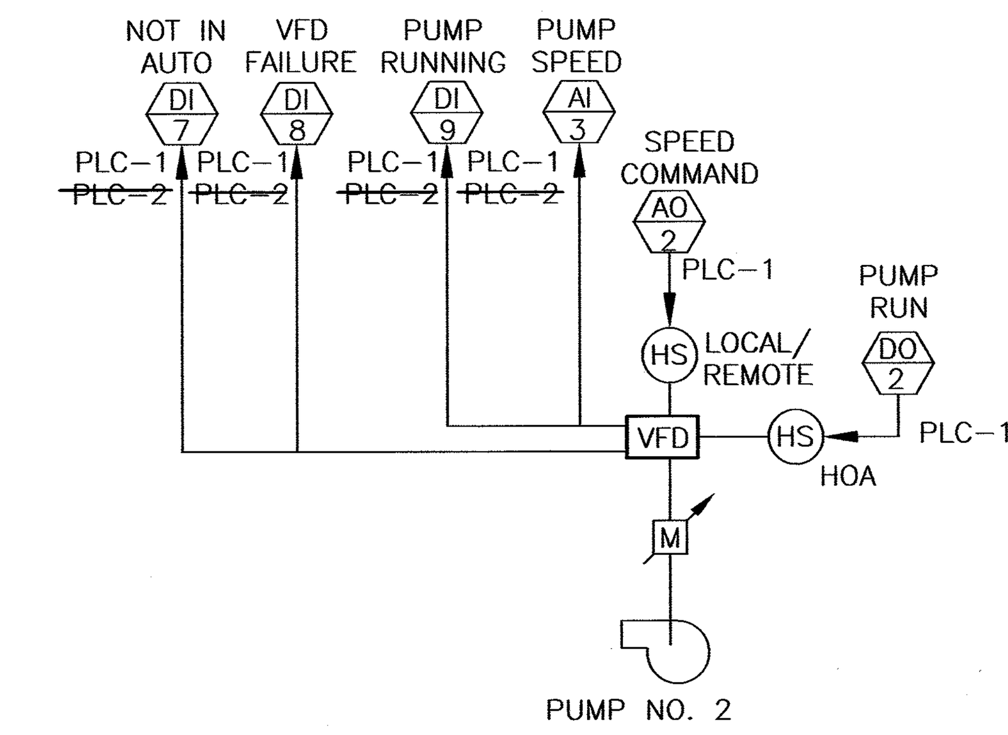
PROPOSED STATION CONTROL PANEL

1.2021 CHANGE NOTES:

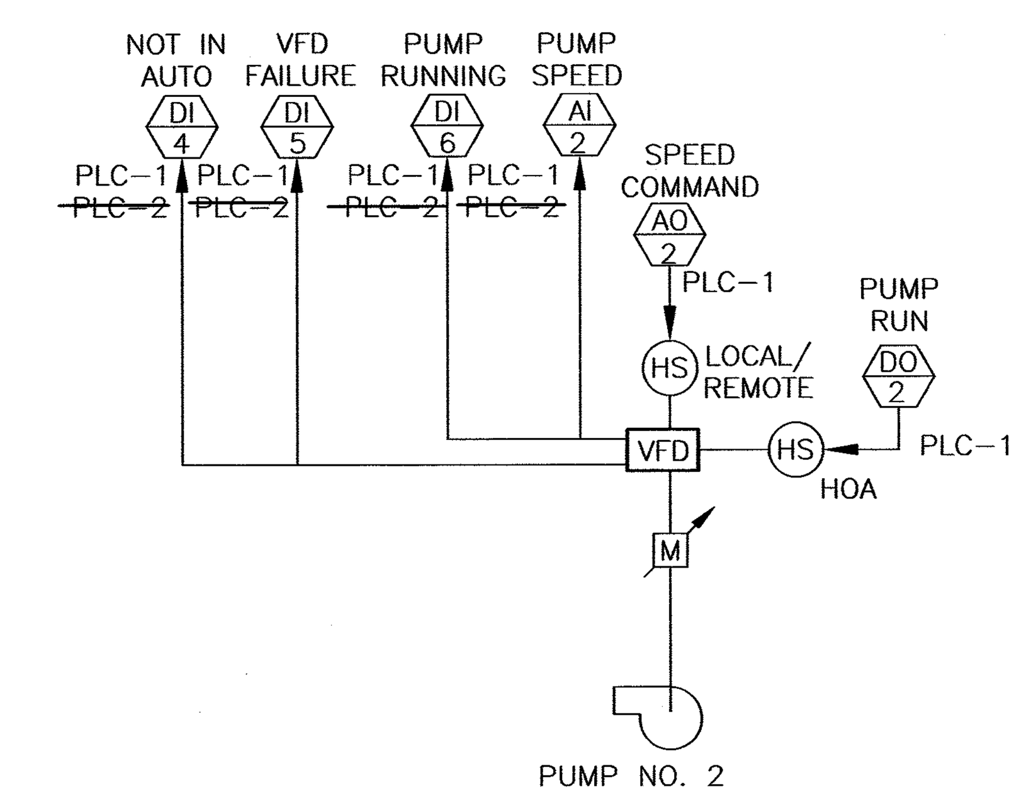
1. CHANGES WERE BASED ON CONSOLIDATION OF TOWN'S SCADA PANEL WITH STATION CONTROL PANEL.
2. SCADA PANEL WILL BE CHANGED TO A SCADA RADIO PANEL.WHERE THE SCADA RADIO WILL PULL ADDRESSES FORM THE CONTROL PANEL PLC.
3. CONTROL PANEL PLC AND TOUCH SCREEN SHALL BE ALLEN BRADLEY UNITS COMPATIBLE WITH TOWN'S SCADA RADIO SYSTEM.
4. PUMP CONTROL SCHEMATIC CHANGED TO INCLUDE A THIRD DOMESTIC PUMP.
5. CONNECTION BETWEEN BOOSTER STATION CONTROL PLC PANEL TO THE TOWN'S SCADA RADIO PANEL SHALL BE MADE BY THE BOOSTER STATION MANUFACTURER.



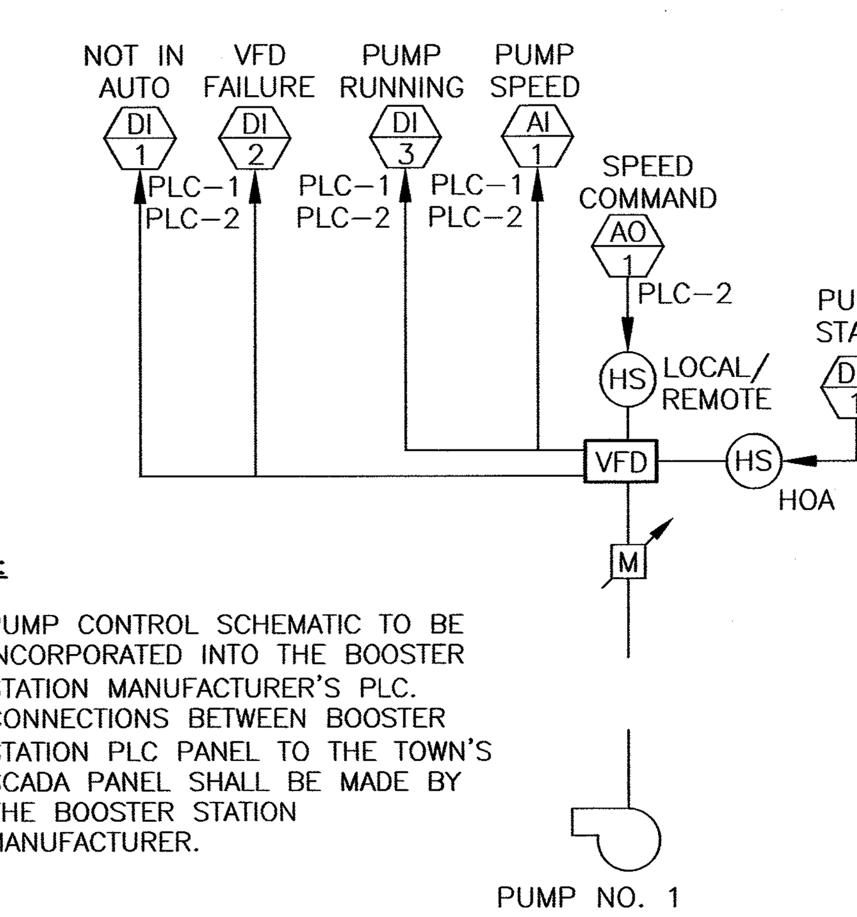
PROPOSED PUMP NO. 3 CONTROL SCHEMATIC



PROPOSED FIRE PUMP NO. 1 CONTROL SCHEMATIC



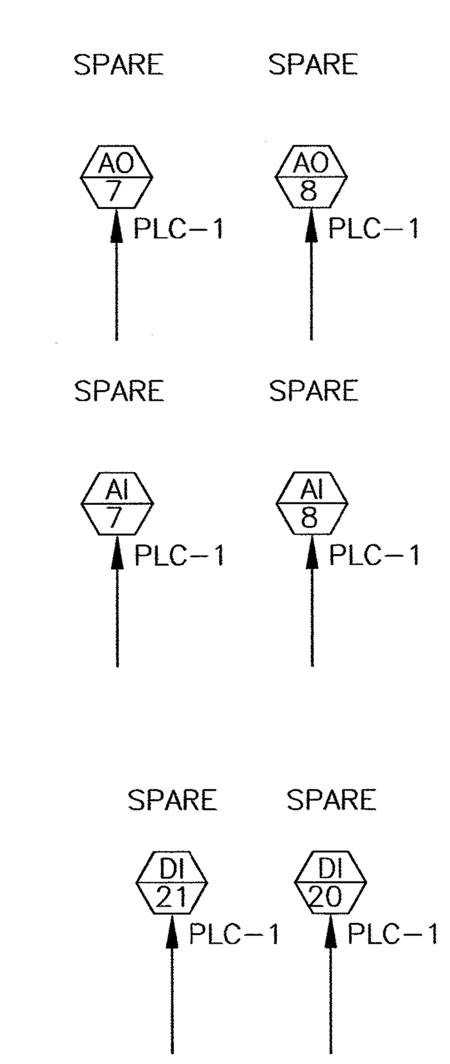
PROPOSED PUMP NO. 2 CONTROL SCHEMATIC



NOTE:

1. PUMP CONTROL SCHEMATIC TO BE INCORPORATED INTO THE BOOSTER STATION MANUFACTURER'S PLC.
2. CONNECTIONS BETWEEN BOOSTER STATION PLC PANEL TO THE TOWN'S SCADA PANEL SHALL BE MADE BY THE BOOSTER STATION MANUFACTURER.

PROPOSED PUMP NO. 1 CONTROL SCHEMATIC

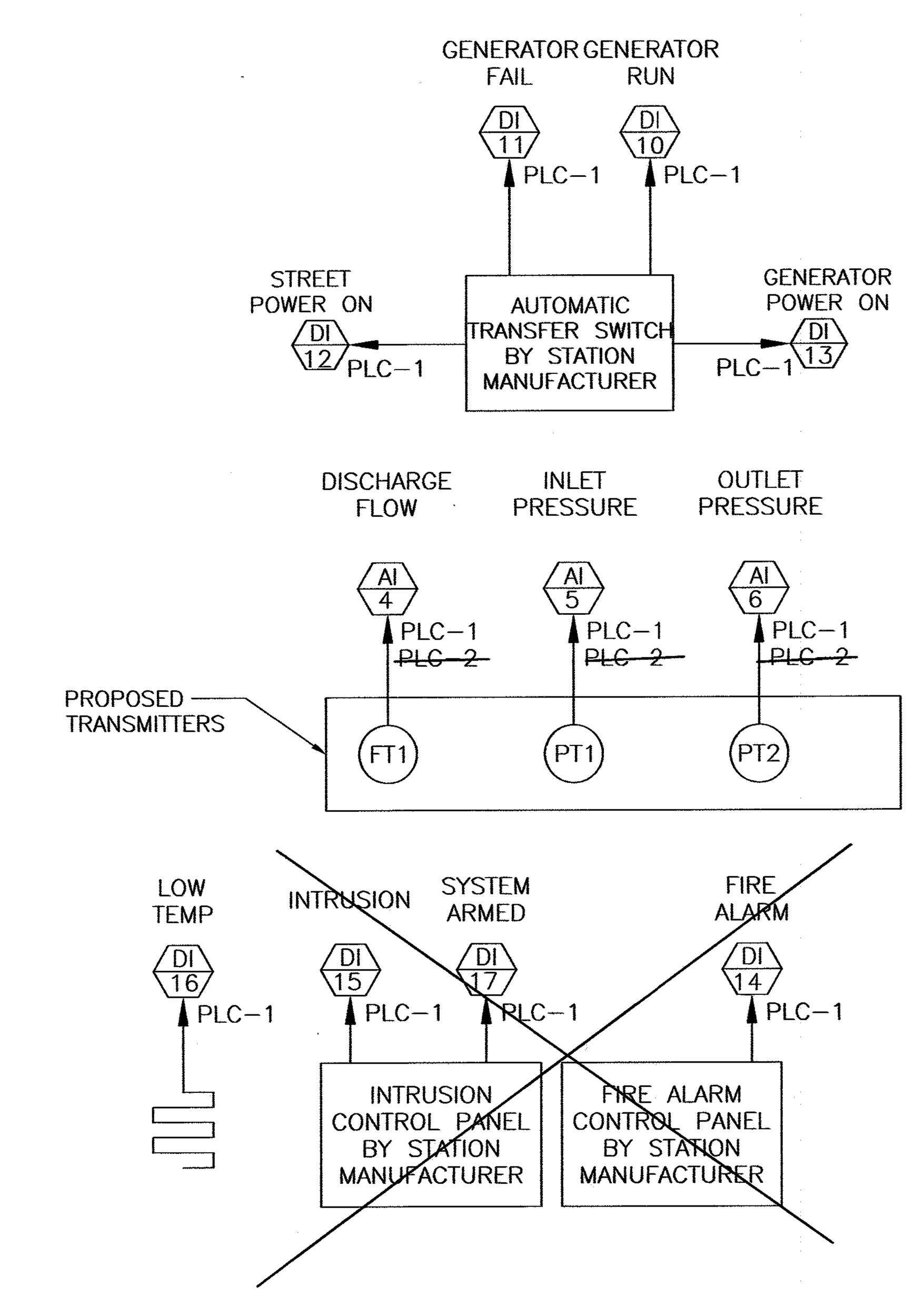


GENERAL INSTRUMENTATION AND SCADA NOTES:

1. BOOSTER STATION MANUFACTURER SHALL PROVIDE PROPOSED INSTRUMENTATION AND ALL ASSOCIATED WIRES, CONDUITS, AND HARDWARE, INSIDE STATION, AND RUN INPUT/OUTPUTS TO PROPOSED PLC CONTROL PANEL.
2. A SCADA RADIO PANEL WILL BE PROVIDED BY STATION MANUFACTURER TO TRANSFER PLC ADDRESSES TO SCADA RADIO FOR TRANSFER TO TOWN'S SCADA SYSTEM.
3. SITE ELECTRICAL CONTRACTOR SHALL TERMINATE AND LABEL WIRES FROM EXTERNAL EQUIPMENT TO CONTROL PLC PANEL.
4. SITE ELECTRICAL CONTRACTOR SHALL PROVIDE LABOR FOR (2)-4 HOUR PERIODS FOR TESTING AND TROUBLE SHOOTING COORDINATED WITH SCADA INTEGRATOR.
5. PROVIDE TERMINAL STRIPS TO CONNECT ALL REQUIRED INPUTS AND OUTPUTS INCLUDING SPARE TERMINALS.
6. BOOSTER STATION MANUFACTURER SHALL MAKE CONDUCTOR CONNECTIONS TO ALL INSTRUMENTS, LABEL, AND RUN THEM TO TERMINAL STRIP IN CONTROL PANEL PANEL.
7. TOWN'S SCADA INTEGRATOR SHALL WORK WITH STATION MANUFACTURER TO OBTAIN PLC ADDRESSES FOR TRANSFER TO SCADA RADIO PANEL AD TEST ACCORDINGLY.
8. FURTHERMORE, AFTER STATION INSTALLATION IS COMPLETE BOOSTER STATION MANUFACTURER SHALL PLAN FOR 8 HOURS OF WORKING ON SITE AND IN CONJUNCTION WITH INTEGRATOR TO BRING INSTRUMENTATION AND CONTROLS ONLINE, AND TROUBLESHOOT.
9. ALL INPUTS AND OUTPUTS TO AND FROM PLC CONTROL PANEL TO BE CONNECTED AT INPUT TERMINALS, INCLUDING ALL ANALOG SIGNALS.
10. SPARE ANALOG INPUTS MUST BE WIRED FROM TERMINALS TO PLC ANALOG INPUT CARD TERMINALS.
11. SPARE DIGITAL INPUTS AND OUTPUTS MUST BE WIRED FROM PLC DIGITAL INPUT AND OUTPUT CARDS TERMINALS.
12. DRAWINGS ARE PARTIAL WIRING DIAGRAM FOR THE PLC CONTROL PANEL.

CONTROLS IO LISTING

TYPE	POINT ID	SCALE
AI	FLOW	100% = 1,500 GPM
AI	SUCTION PRESSURE	100% = 80 PSI
AI	DISCHARGE PRESSURE	100% = 100 PSI
AI	FIRE PUMP SPEED	100% = 60 HRTZ
AI	DOMESTIC PUMP 1 SPEED	100% = 60 HRTZ
AI	DOMESTIC PUMP 2 SPEED	100% = 60 HRTZ
AI	DOMESTIC PUMP 3 SPEED	100% = 60 HRTZ
AO	DOMESTIC PUMP 1 SPEED	100% = 60 HRTZ
AO	DOMESTIC PUMP 2 SPEED	100% = 60 HRTZ
AO	DOMESTIC PUMP 3 SPEED	100% = 60 HRTZ
AO	FIRE PUMP SPEED SET	100% = 60 HRTZ
DI	PUMP 1 NOT IN AUTO	CLOSED = FAULT
DI	PUMP 2 NOT IN AUTO	CLOSED = FAULT
DI	PUMP 3 NOT IN AUTO	CLOSED = FAULT
DI	FIRE PUMP NOT IN AUTO	CLOSED = FAULT
DI	PUMP 1 FAULT	CLOSED = FAULT
DI	PUMP 2 FAULT	CLOSED = FAULT
DI	PUMP 3 FAULT	CLOSED = FAULT
DI	FIRE PUMP FAULT	CLOSED = FAULT
DI	PUMP 1 RUNNING	CLOSED = NORMAL
DI	PUMP 2 RUNNING	CLOSED = NORMAL
DI	PUMP 3 RUNNING	CLOSED = NORAML
DI	FIRE PUMP RUNNING	CLOSED = NORMAL
DI	LOW STATION TEMP	CLOSED = FAULT
DI	STREET POWER	CLOSED = NORMAL
DI	GENERATOR POWER	CLOSED = NORMAL
DI	GENERATOR FAIL	CLOSED = FAULT
DI	GENERATOR RUNNING	CLOSED = NORMAL
DI	FIRE ALARM	CLOSED = FAULT
DI	STATION INTRUSION	CLOSED = FAULT
DI	INRUSION SYSTEM ARMED	CLOSED = NORMAL
DO	PUMP 1 START	CLOSED = RUN
DO	PUMP 2 START	CLOSED = RUN
DO	PUMP 3 START	CLOSED = RUN
DO	FIRE PUMP START	CLOSED = RUN



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1	1.2021	GJE

SHEET NO.:	6 OF 7
CONTRACT NO.:	TBD
SCALE:	AS NOTED
DATE DRAWN:	JUNE 2019
DRAWN BY:	GJE
FILE NO.:	ASH317-E1

DWG. NO.

E1R