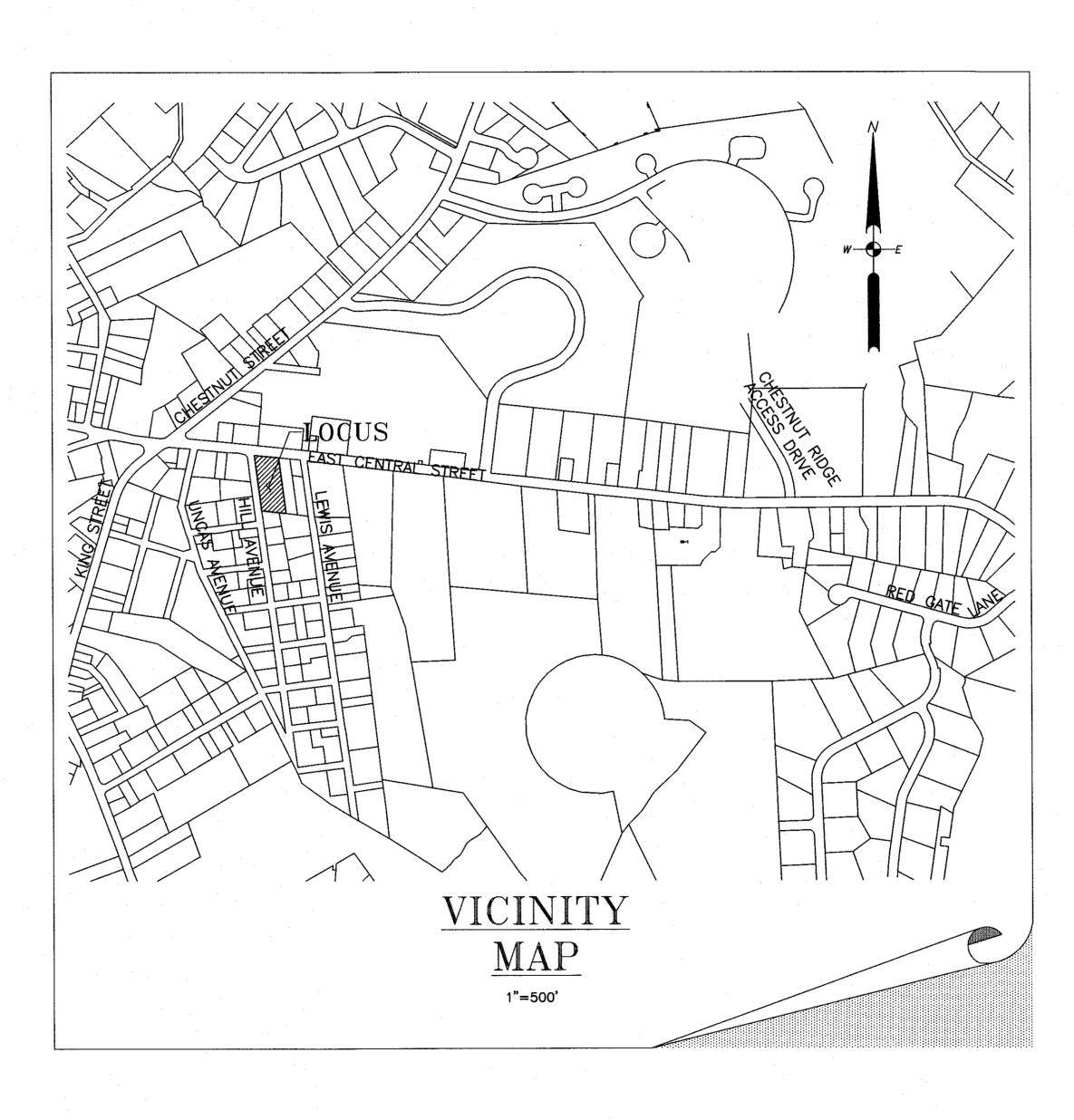
TAJ ESTATES OF FRANKLIN II SITE PLAN & SPECIAL PERMIT 230 EAST CENTRAL STREET FRANKLIN, MASSACHUSETTS

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PURPOSE OF PLAN

 SITE PLAN AND SPECIAL PERMIT APPROVAL TO CONSTRUCT A MULTIFAMILY BUILDING WITH IN THE COMMERCIAL I ZONING DISTRICT.

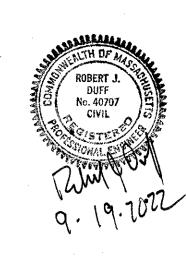
CERTIFICATE OF VOTE NOTE

SEE CERTIFICATE OF VOTE FROM THE FRANKLIN PLANNING BOARD VOTING TO APPROVE WITH CONDITIONS ON MONDAY AUGUST 8, 2022 FOR A PLAN ENTITLED "TAJ ESTATES OF FRANKLIN, SITE PLAN AND SPECIAL PERMIT, 230 EAST CENTRAL STREET FRANKLIN, MA", PLAN DATED NOVEMBER 11, 2021 BY GUERRIERE & HALNON, INC., SEE SHEET 1A.

NOTE:

 ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO MAJOR CONSTRUCTION OR SOIL DISTURBANCE ON SITE.





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	FRANKLI	N PLANN	ING BOARD	
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UTILITIES ARE PLOTTED AS A COMPILATION OF RECORD DOCUMENTS, MARKINGS AND OTHER OBSERVED EXISENCE TO DEVELOR A VIEW OF THE UNDERGROUND UTILITIES AND SHOULD BE CONSIDERED APPROXIMATE LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY AND RELIABLY DEPICTED ADDITIONAL UTILITIES, NOT EVIDENCED BY RECORD DOCUMENTS OR OBSERVED PHYSICAL EVIDENCE, MAY EXIST. CONTRACTORS (IN ACCORDANCE WITH MASS.G.L. CHAPTER 82 SECTION 40 AS AMENDED) MUST CONTACT ALL UTILITY COMPANIES BEFORE EXCAVATING AND DRILLING AND CALL DIGSAFE AT 1(888)DIG—SAFE\[\frac{1}{2}33\].

LEGAL NOTES

CONSTRUCTION ON THIS LAND IS SUBJECT TO ANY EASEMENTS, RIGHTS—OF—WAY, RESTRICTIONS, RESERVATIONS, OR OTHER LIMITATIONS WHICH MAY BE REVEALED BY AN EXAMINATION OF THE TITLE.

OWNE

TAJ ESTATES OF FRANKLIN II, LLC 95 EAST MAIN STREET, SUITE 100 WESTBOROUGH, MA. 01581

DEED BOOK 40009 PAGE 445 ASSESSORS MAP 285 LOT 069

APPLICANT

TAJ ESTATES OF FRANKLIN II, LLC MOHIUDDIN AHMED, MANAGER 95 EAST MAIN STREET, SUITE 100 WESTBOROUGH, MA. 01581

TAJ ESTATES OF FRANKLIN II SITE PLAN & SPECIAL PERMIT 230 EAST CENTRAL STREET FRANKLIN MASSACHUSETTS

COVER SHEET

NOV	EMBER 11, 2021
DATE	REVISION DESCRIPTION
01/17/22	TOWN COMMENTS - REV1
01/28/22	TOWN COMMENTS - REV2
02/17/22	TOWN COMMENTS - REV3
04/12/22	ADDED RET. WALL — REV4
05/31/22	TOWN COMMENTS - REV5
1	

ENDORSEMENT PLAN SET

7/14/22 TOWN COMMENTS - REV6



55 WEST CENTRAL ST. PH. (508) 528-3221 FRANKLIN, MA 02038 FX. (508) 528-7921 www.gandhengineering.com

1 **0F 12**



PLANNING BOARD

2022 AUG 18 A 8 22 RECEIVED

August 17, 2022 Nancy Danello, Town Clerk Town of Franklin 355 East Central Stree

Franklin, MA 02038

Applicant: Mohinddin Ahmed 95 Main Street #100 Westborough, MA 01581 Taj Estates of Franklin II, LLC

95 Main Street #100

Westborough, MA 01581

Nancy Danello, Town Clerk Franklin, Mass. to herby certify that no appeal has been received since the decision of the Planning Board Board, or during the twenty day appeal period. Attest have y danello Date: Sept. 4 2020

A True Copy of the Record

ATTEST: Yeary Wille

Town Clerk, Franklin, MA

Phone: (508) 520-4907

LUMN UE LENGTHEIDER GO

Guerriere & Halnon, Inc., Franklin, MA Plan Date: November 11, 2021 230 East Central Street Property Location: Map 285 Lot 069

Dear Mrs. Danello:

Please be advised that at its meeting on Monday, August 8, 2022 the Planning Board upon motion duly made and seconded, voted (3-2) to Approve the Special Permit and Site Plan at 230 East Central Street for \$185 Attachment 7, 6.1: Multifamily in Commercial I Zoning District. The project is approved by simple majority under Ch40A, Section 9 of the MGL. The Project Description, Public Hearing Presentation, Findings of Fact, Conditions and the Decision, are listed on pages 2 -10, attached hereto.

(f) Number, height, bulk, location and siting of building(s) and structure(s) will not result in abutting

properties being deprived of light or fresh air circulation or being exposed to flooding or subjected to

Beth Wierling

-Jennifer Williams voted no, because she believes that a significant bulk of the proposed project

structures shown on the western side of the plan could be completed without excessive noise or

remain outstanding that would contribute to understanding constructability of the retaining wall

Beth Wierling

-Jennifer Williams said no, because she does not believe (that they meet criteria H) for all of the

Both Wierling said no, for all of the reasons she previously stated. In addition, she believes the

particular characteristics of the site being only one acre, and the proposal to construct thirty-three

associated parking, lighting, and site infrastructure needed to support thirty-three units of multifamily housing will have an adverse effect which will overbalance its beneficial effects on both

reasons given so far. Ultimately the project is far too dense for the site in which it is being

units of multi-family housing creating a density of thirty-three units/acre, along with the

the request for soil logs to test at locations to verify MF Engineering and Design results that

(g) Water consumption and sewer use, taking into consideration current and projected future local water

The proposed use will not have adverse effects which overbalance its beneficial effects on either the

neighborhood or the Town, in view of the particular characteristics of the site and of the proposal in

vibrations which will impact the abutters. There are outstanding peer review comments including

-Beth Wierling voted no, because it is unclear if the constructability of the retaining wall

Jennifer Williams NO

Jennifer Williams YES

Gregory Rondeau YES

William David YBS

Gregory Rondeau YES

William David YES

William David YES

the neighborhood and the town.

relation to that site.

Rick Power

cc: Owners/Applicant/Applicant's Engineer/ Building Commissioner/DPW/Engineering/BETA Group, Inc.

excessive noise, odor, light, vibrations, or airborne particulates.

will deprive neighbors of light as well as contribute to noise in the area

and any noise or vibrations that might impact the neighbors.

supply and demand and wastewater treatment capacity, will not be excessive.

proposed, which the benefits do not outweigh the negatives in this case.

SPECIAL PERMIT/SITE PLAN 230 East Central Street

The existing sites consists of a single parcel of land within the Commercial I Zoning District and with the Water Resource District. The parcel currently contains on single family residential structure built in 1850. The applicant proposed to construct a 14,212+ sq/ft., three (3) story building, with forty-one (41) single bedroom residential units, a site driveway and parking areas for tenants. The Site Plans include landscaping, municipal utilities and stormwater management. After several public hearings, the final Site Plan included 33 residential units and 2 commercial spaces.

<u>PUBLIC HEARING</u> SPECIAL PERMIT/SITE PLAN

A proper and complete notice of the December 6, 2021 public hearing was posted in the Franklin Municipal Building and in the appropriate local newspaper in accordance with the Franklin Zoning Code and Massachusetts General Laws. A proper and complete notice was also sent to all persons and parties required by law to receive such notice. The Planning Board continued to hold public hearings on January 10, 2022, January 24, 2022, February 7, 2022, February 28, 2022, March 28, 2022, April 25, 2022, May 23, 2022, June 6, 2022, June 27, 2022, and July 25, 2022. Incorporated as part of the record are the following:

The Planning Board reviewed (1) the applicant's detailed written application including answers to Special Permit Findings (a) through (g), and (2) comments and review letters from various Town Departments, including but not limited to, Department of Planning & Community Development, Department of Public Works/Engineering and Franklin Fire Department. The Planning Board also reviewed engineering eports from their peer review Consultant

The Planning Board upon motion duly made and seconded, voted (5-0) to close the public hearing on July 25, 2022 for the Site Plan and Special Permits for §185 Attachment 7, 6.1: Multifamily in Commercial I

> SPECIAL PERMIT/SITE PLAN 230 East Central Street

Mr. Richard Cornetta, attorney on behalf of the applicant Taj Estates of Franklin II LLC, and Ms. Amanda Cavaliere of Guerriere & Halnon, Inc. addressed the Planning Board. Mr. Cornetta noted a principal of Tai Estates was in the audience. He stated the property is about one (1) acre located within the Commercial I zoning district. Currently, the property has a single-family residence on it that is unoccupied. The plans are to remove the structure with the redevelopment of the site. The proposed redevelopment is the construction of a three-story, 14,200 sq. ft. commercial mixed-use residential building containing 41 single-bedroom apartment style residential units with 900 sq. ft. commercial space located on the first-floor front portion of the building. He stated that in order to do this, they need to seek approvals including a Special Permit to allow multi-family housing style in the commercial district. They would also need an associated site plan approval. They have identified no wetlands in the project. Ms. Cavaliere reiterated that as this property is located in the Commercial I zoning district, a Special Permit is needed. They are requesting a waiver for one parking space per unit as opposed to 1.5 spaces as required

in zoning. They have three visitor spaces in the back. The project will be serviced by Town water and sewer. There is an infiltration system in the parking lo

Mr. Crowley stated that BETA anticipates submitting their final review tomorrow. Mr. Gary James of BETA stated that Ms. Love and Mr. Maglio covered the major items. He has the same issues with the infiltration system as noted by Mr. Maglio. He discussed the possible impact on the sewer line and recommended Mr. Maglio comment on that. He stated that they are making a 10 ft. cut near Hill Avenue which is a shallow bedrock area which may require blasting to get in the foundation. He recommended the applicant do test pit data to determine if blasting will be needed. He commented that there are no trees proposed around the parking lot. He agreed with Ms. Love that there is not enough parking.

Planning Board members made comments. In response, Ms. Cavaliere reviewed the provided parking schedule. She stated that she would include the number of spaces required if the waiver were not granted. She reviewed the landscape plan and stated that she will show signage on the plan. She stated renderings would be provided with the next submittal. Ms. Wierling suggested a traffic study be provided as there is a lot going on in that area already, and this is proposed for 41 units. Mr. Crowley stated that BETA could look at that. Ms. Williams noted that this development would be more than .5 miles from the train station. She agreed that there is not enough parking, and this is an extremely dense project. Chair Rondeau asked about the underground retention system and the proximity to the Town easement. He noted his concern about traffic. He agreed it is a fairly dense project. He suggested the applicant look at the parking spaces, creening, lighting, and fire department access around the site.

units. She reviewed the updated parking. She stated that they are proposing 36 parking spaces for the of spaces required is 55; they are proposing 44. She stated that all work has been removed from the sewer one-bedroom units; however, she thinks that the number of parking spaces to units is insufficient even if not disagree that it should be given a good look; however, the density may be a little too dense. It is vedged between some single-family homes, and there is a lot of impervious. She recommended looking at a few less units. She noted the location of the dumpster as it abuts residential.

Planner, Amy Love stated that at the rear of the building there are two parking spaces within 10 ft. of the provided 51 parking spaces; however, only 44 meet the zoning requirements. The applicant will require a percent impervious as 80 percent is permitted. The applicant is to provide documentation on the

The Planning Board held several additional Public hearings to discuss the density of the project, the issue with the wall being constructing and how it will impact the abutting property. The Applicant provided explanations and details in response, but not to the satisfactory of the Board. The Board continued to discuss the lowering the amount of the units, additional parking spaces and concerns about encroachment onto the abutting properties. Many member of the public attended and discussed their concerns with the

The Applicant at the last public hearing provided the necessary amount of parking spaces, to be 50 with 33 residential units and 2 commercial spaces on the lot. Along with the Site changes proposed, the Applicant also indicated they would be agreeable to 10% of the units being affordable, under the State guidelines. The Planning Board discussed conditions to be added to the decision pertaining to the affordable units, encroachment on Hill Ave and fencing on the east side of the property. The affordable units would need to be deed restricted for the property to be acceptable.

After a complete presentation and discussion of the project, Planning Board members closed the Public

FINDINGS OF FACTS

The applicant submitted their proposed findings with the original application on November 12, 2021 and revised findings on May 16, 2022 and both are on record.

SPECIAL PERMIT/SITE PLAN

Special Permit: (1) §185 Attachment 7, 6.1: Multifamily in Commercial I Zoning District.

(a) Proposed project addresses or is consistent with neighborhood or Town need. Jennifer Williams YES Gregory Rondeau YES Beth Wierling William David

-Beth Wierling said no, because in the location proposed, at the density of thirty-three units per acre, the proposed project does not address neighborhood need

(b) Vehicular traffic flow, access and parking and pedestrian safety are properly addressed Jennifer Williams Gregory Rondeau YES Beth Wierling

-Jennifer Williams said no, because she does not believe that, with the density on the site and the challenges on the site that already exist, that the increasing the number of vehicles coming in and out of the site, and the increase in the number of pedestrians coming in and out of the site, are properly addressing the very concerning safety challenges in this area of town.

(c) Public roadways, drainage, utilities and other infrastructure are adequate or will be upgraded to

accommodate development. Gregory Rondeau YES Rick Power YES William David YES

ennifer Williams Beth Wierling

-Jennifer Williams said no, because-similar to her last comment-she believes this is already failing the town in regards to public roadways and infrastructure, and therefore will not -Beth Wierling said no, because the town of Franklin public roadways are not adequate and will

not be appraded to accommodate development, and as has been noted in the traffic study, existing traffic conditions at the Route 140/King Street/Chestnut Street intersection are currently operating at or over capacity, defined as level service E or F during the weekday peak hour. There are existing inadequacies on town roadways. The applicant has indicated they would contribute \$5000 to conducting a signaltiming study. However, the applicant did not indicate what, if anything, they would do to assist with costs to address upgrades that may result from the study to improve the coordination between pedestrians, bicycle and/or vehicular traffic at intersections. It is of the utmost importance the town of Franklin have the safest possible coordination of our traffic signals for all that utilize roadways. As a result of this project, we have pedestrians walking on the sidewalks,

(d) Neighborhood character and social structure will not be negatively impacted.

Gregory Rondeau YES Beth Wierling Rick Power

homes, with two-family and three-family homes mixed in. The few two-family and three-family homes that exist in the area have an appearance and site features such as lighting, trash removal, and impervious coverage that is consistent with that of a primarily single-family home neighborhood. In addition, the mix of single-family, two-family, and three-family homes in the neighborhood creates a density that is non-impactful to the neighborhood character. In addition, existing residences are one to two stories tall, with housing densities that are well below the thirty-three units/acre that are being presented with this project. The mean height of the main gable at Taj Estates is forty feet, much greater than the average height of the surrounding existing residential buildings whose average roofline height is twenty-six feet. Tai Estates. as it is currently designed, will introduce site features-many of which are a few feet away from abutting residential homes—such as 24-hour site lighting, noise related to trash removal service for on-site dumpster, backup beepers during winter months due to snow removal, fifty-five parking spaces as well as other features that are inconsistent with the existing neighborhood character. The neighborhood character will be negatively impacted by a building that does not fit in in any aspect of its character with the abutting neighborhood.

(e) Project will not destroy or cause substantial damage to any environmentally-significant natural resource, habitat, or feature or, if it will, proposed mitigation, remediation, replication or compensatory

Gregory Rondeau YES Rick Power

Jennifer Williams YES Beth Wierling

BEING A MAJORITY

FRANKLIN PLANNING BOARD

RECORD DOCUMENTS, MARKINGS AND OTHER OBSERVED EXIDENCE TO DEVELOR A VIEW OF THE UNDERGROUND UTILITIES AND SHOULD BE CONSIDERED APPROXIMATE LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY AND RELIABLY DEPICTED ADDITIONAL UTILITIES, NOT EVIDENCED BY RECORD DOCUMENTS OR OBSERVED PHYSICAL EVIDENCE MAY EXIST / CONTRACTORS (IN ACCORDANCE WITH MASS.G.L. CHAPTER 82 SECTION 40 AS AMENDED) MUST CONTACT ALL UTILITY COMPANIES BEFORÉ EXCAVATING AND DRILLING AND CALL DIGSAFE AT 1(888)DIG-SAFE{7233}.

OWNER

DEED BOOK 40009 PAGE 445 ASSESSORS MAP 285 LOT 069

TAJ ESTATES OF FRANKLIN II. LLC MOHIUDDIN AHMED, MANAGER 95 EAST MAIN STREET, SUITE 100

TAJ ESTATES OF FRANKLIN II SITE PLAN & SPECIAL PERMIT 230 EAST CENTRAL STREET FRANKLIN MASSACHUSETTS

CERTIFICATE OF VOTE

NOVI	EMBER 11, 2021
DATE	REVISION DESCRIPTION
01/17/22	TOWN COMMENTS - REV1
01/28/22	TOWN COMMENTS - REV2
02/17/22	TOWN COMMENTS - REV3
04/12/22	ADDED RET. WALL - REV4
05/31/22	TOWN COMMENTS - REV5
7/14/22	TOWN COMMENTS - REV6
9/12/22	ENDORSEMENT PLAN SET
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JOB NO. **F4478**

Based upon the information submitted during the public hearings, Planning Board's specific findings, the

Planning Board specifically determines that allowing Site Plan and Special Permit \$185 Attachment 7.

6.1: Multifamily in Commercial I Zoning District, will not have adverse effects which overbalance its

beneficial effects on either the neighborhood or the Town, in view of the particular characteristics of the

site and of the proposal in relation to that site. Accordingly, at the Planning Board meeting on August 8, 2022 the Planning Board, upon motion duly made and seconded, voted (3-2) to Approve the applicant's request to allow the Site Plan and Special Permit at 230 East Central Street, under CH40A, Section 9 of the MGL.

The following members of the Planning Board were present at the hearing and voted as follows: Gregory Rondeau YES

Jennifer Williams NO Beth Wierling William David YES

At the Planning Board meeting on August 16, 2022 upon motion duly made and seconded, voted (5-0) to Approve Special Conditions, Waiver and Standard Conditions, which are all listed below. Also, at the Planning Board meeting on August 16, 2022 the Planning Board, upon motion duly made and seconded, voted (5-0) that the conditions be attached to the original decision and recorded at the Registry of Deeds.

Any person aggrieved by the above decision of the Franklin Planning Board may file an appeal pursuant to Massachusetts General Laws Chapter 40A, Section 17. Such appeal must be filed within twenty (20) days after the filing of the notice of the Board's decision with the Town Clerk This Certificate of Vote shall become effective only upon the recording of a copy certified by the Town Clerk with the Norfolk County Registry of Deeds. A copy of the recorded Certificate of Vote shall be submitted to the Board

STANDARD CONDITIONS OF APPROVAL 230 East Central Street

- 1. This Special Permit shall not be construed to run with the land and shall run with the Site Plan as endorsed by the Planning Board. A new Special Permit shall be required from the Planning
- Board if any major change of use or major change to the site plan is proposed. 2. This Special Permit shall lapse if a substantial use or construction has not begun, except for good cause, within twenty four (24) months of approval, unless the Board grants an extension No final Certificate of Occupancy shall be issued until all requirements of the Special Permit have been completed to the satisfaction of the Board unless the applicant has submitted a Partial Certificate of Completion for the remainder of the required improvements and received approval by the Planning Board. The applicant's engineer or surveyor, upon completion of all equired improvements, shall submit a Certificate of Completion. The Board or its agent(s) shall complete a final inspection of the site upon filing of the Certificate of Completion by the applicant. Said inspection is further outlined in condition #4.
- 3. Construction or operations under this Special Permit shall conform to any subsequent amendment of the Town of Franklin Zoning Bylaw (§185) unless the use or construction is commenced within a period of six (6) months after the issuance of this Special Permit and, in cases involving construction, unless such construction is continued through to completion as continuously and expeditiously as is reasonable.
- The Planning Board will use outside consultant services to complete construction inspections upon the commencement of construction. The Franklim Department of Public Works Director, directly and through employees of the Department of Public Works and outside consultant services shall act as the Planning Board's inspector to assist the Board with inspections necessary to ensure compliance with all relevant laws, regulations and Planning majority vote of the Board.
- Actual and reasonable costs of inspection consulting services shall be paid by the owner/applicant before or at the time of the pre-construction meeting. Should additional inspections be required beyond the original scope of work, the owner/applicant shall be equired to submit fees prior to the issuance of a Final Certificate of Completion by the Planning Board (Form H). Said inspection is further outlined in condition #4.

6. No alteration of the Special Permit and the plans associated with it shall be made or affected

- other that by an affirmative vote of the members of the Board at a duly posted meeting and upon the issuance of a written amended decision. All applicable laws, by-laws, rules, regulations, and codes shall be complied with, and all
- necessary licenses, permits and approvals shall be obtained by the owner/applicant. Prior to the endorsement of the site plan, the following shall be done:
- . The owner/applicant shall make a notation on the site plan that references the Special Permit and the conditions and dates of this Certificate of Vote.
- · A notation shall be made on the plans that all erosion mitigation measures shall be in place prior to major construction or soil disturbance commencing on the site. · All outstanding invoices for services rendered by the Town's Engineers and other
- reviewing Departments of the Town relative to their review of the owner/applicant's application and plans shall have been paid in full. . The owner/applicant shall submit a minimum of six copies of the approved version of the

roadway. All cleanups shall occur within twenty-four (24) hours after first written notification

- to the owner/applicant by the Board or its designee. Failure to complete such cleanup may result in suspension of construction of the site until such public way is clear of debris.
 - owner/applicant, and his contractor(s), the Department of Public Works and the Planning Board's Inspector.
 - 14. Prior to the endorsement, the following is required:
 - · Soil logs and test pit locations be shown on the revised plans from M.F. Engineering & Design to verify results, for the retaining wall.
 - The Appendix is not specifically noted in the O&M plan. The long-term Operation and Maintenance plan should be a stand-along document. Therefore, Appendix 11 should be directly incorporated into the plan and reference. Along with the sample Inspection for and a
 - The manifold invert be raised to Elevation 278.95. This would provide an additional 12" of sediment storage in the separator row and further protect the long-term viability of the system. If any disturbance is shown on Hill Ave, then the Applicant is to submit an alternative plan to the Planning Board that shows no disturbance on Hill Ave.

9. Prior to any work commencing on the subject property, the owner/applicant shall provide plans to limit construction debris and materials on the site. In the event that debris is carried onto any public way, the owner/applicant and his assigns shall be responsible for all cleanup of the

- 10. The owner/applicant shall install erosion control devices as necessary and as directed by the 11. Prior to construction activities, there shall be a pre-construction meeting with the
- 12. Any signage requires the Applicant to file with the Design Review Commission.
- 13. The Certificate of Vote is to be added to the plans.

SPECIAL CONDITIONS OF APPROVAL SPECIAL PERMIT/SITE PLAN 230 East Central Street

- 1. The Applicant must meet the requirements under MGL Chapter 184, Affordable Housing Guidance, providing a deed restriction on the property for the 10% affordable units, in perpetuity. This must be completed prior to commencement of construction and preconstruction meeting. If this condition is not met, then the Special Permit fails to comply with Chapter 40A, Section 9 and the project would require a Super Majority vote for
- 2. Bollards will be inset to the fence posts centered to the parking spaces along the east side of the property, in front of the fence on the 230 East Central Street property.
- 3. A Limited Site Plan is required prior to occupancy of the two Commercial spaces within the building. 4. The Applicant will contribute \$5,000 towards a future "traffic signal study" for the intersection at West Central Street and King Street, funds are to be submitted to the Town
- prior to the Building permit. 5. Test holes should be conducted directly in the area of the proposed infiltration structure,
- prior to commencement of construction. 6. Commercial space will not be used as a leasing office.
- 7. There will be no disturbance to Hill Ave. 8. Prior to issuance of a Building Permit and start of any site work, property lines shall be staked and reviewed by DPW and Building Commissioner.

Waiver
SPECIAL PERMIT/SITE PLAN
230 East Central Street

1. §185-21.C.(4) - No screening will be provided along the Hill Ave right-of-way

A True Copy of the Record ATTEST: Young Toull-



Ms. Caveliere reviewed the revised site plan. She stated that the most significant change is the reduction in building size, Originally, it was proposed at approximately 14,000 sq. ft.; that has been reduced by approximately 2,000 sq. ft. As well, the number of units has been reduced from 41 to 35 one-bedroom units, two office spaces, three visitor spaces, and three handicap spaces. She stated that the total number easement. She reviewed the revised landscaping plan. Ms. Williams stated that she agreed Franklin needs it were 1.2 spaces per unit. With 44 spaces there is not enough parking. Ms. Wierling stated that she does

right of way; the applicant will require a waiver for these parking spaces. She stated that the applicant has waiver for parking since 7 spaces do not meet the required width. The building and parking area is at 78.8 ownership of Hill Avenue. She stated that the question is who owns the street and is the applicant allowed to work in the right of way.

project, being traffic, safety and the size of the project.

accommodate an increase in all things in this area.

cyclists navigating the roadway corridors, or vehicles navigating through the intersections to the adjacent neighborhoods, all aspects of the roadways need to be safe and adequately studied and

Jennifer Williams YES William David -Beth Wierling said no, because directly abutting neighborhood consists mainly of single-family

measures are adequate.

William David YES

LEGAL NOTES

APPROVED DATE:

UTILITIES ARE PLOTTED AS A COMPILATION OF

CONSTRUCTION ON THIS LAND IS SUBJECT TO ANY EASEMENTS, RIGHTS-OF-WAY, RESTRICTIONS, RESERVATIONS, OR OTHER LIMITATIONS WHICH MAY BE REVEALED BY AN EXAMINATION OF THE TITLE.

TAJ ESTATES OF FRANKLIN II, LLC 95 EAST MAIN STREET, SUITE 100 WESTBOROUGH, MA. 01581

APPLICANT

WESTBOROUGH, MA. 01581



55 WEST CENTRAL ST. PH. (508) 528-3221 FRANKLIN, MA 02038 FX. (508) 528-7921 www.gandhengineering.com

SHEET 1A OF 12

NOTES

- 1. THIS LAND IS ZONED COMMERCIAL I.
- 2. THIS SITE IS NOT LOCATED FLOOD HAZARD ZONE PER FEMA FLOOD MAP 25021C0309E, EFFECTIVE DATE 7/17/2012.
- 3. NO WETLANDS HAVE BEEN IDENTIFIED.
- 4. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES IN THE FIELD. ANY DISCREPANCY WITH THE PLANS SHOULD BE REPORTED TO THE DESIGN ENGINEER UPON DISCOVERY.
- 5. REFER TO FRANKLIN ASSESSORS MAP 285 PARCELS 69.
- 6. THIS SITE IS LOCATED IN A WATER RESOURCE DISTRICT.

COMMERCIAL

MINIMUM LOT AREA

MINIMUM LOT DEPTH MINIMUM LOT WIDTH

BLDG HEIGHT

MINIMUM YARDS FRONT SIDE

REAR

MINIMUM LOT FRONTAGE

STRUCTURES

FROM THIS REQUIREMENT.

THE PLANNING BOARD.

RESOURCE DISTRICT

% OF LOT UPLAND COVERED BY:

STRUCTURES+PAVING

BUT NO NEW STRUCTURES SHALL BE REQUIRED TO PROVIDE A DEEPER YARD

THAN THAT EXISTING ON THAT PARCEL

UPON ADOPTION OF THIS AMENDMENT.

⁷PERMITTED RESIDENTIAL USES MUST OBSERVE

REQUIREMENTS OF THE GENERAL RESIDENTIAL

V DISTRICT FOR RESIDENTIAL USE BUILDINGS

ONLY. MIXED USE BUILDINGS ARE EXEMPT

¹⁴THE 10 FT SIDE SETBACK IS ONLY REQUIRED

ON ONE SIDE OF LOT; IF LOT ABUTS A RESIDENTIAL DISTRICT A 20 FT SETBACK IS

REQUIRED ON THE ABUTTING SIDE.

⁵BUILDINGS UP TO 50 FEET IN HEIGHT,

REGARDLESS OF THE NUMBER OF STORIES,

**NON-RESIDENTIAL IMPERVIOUS COVERAGE

SHALL NOT EXCEED 80% IN A WATER

MAY BE PERMITTED BY SPECIAL PERMIT FROM

FRANKLIN ZONING BYLAW SECTION 185 ATTACHMENT 9; LAST AMENDED 03-13-2019 BY AMENDMENT 19-831

- 7. ALL REFERENCED DEEDS ARE ON RECORD AT THE NORFOLK COUNTY REGISTRY OF
- 8. THIS SITE IS NOT LOCATED WITHIN A NATURAL HERITAGE AND ENDANGERED SPECIES PROGRAM AREA.

5,000 SF

50' 50'

45 3 STORIES/40'

LEGEND

B	CATCH BASIN	,	\$	LIGHT POLE	
0	DRAIN MANHOLE		b	UTILITY POLE	
(Ē)	ELECTRIC MANHOLE		-3	GUY WIRE	
(S)	SEWER MANHOLE			SIGN	
0	MANHOLE		•	WETFLAG	
GV X	GAS VALVE		р	UTILITY POLE	
GM	GAS METER		☆	PROP. STREET LIGHTING	
ో	GAS SHUT OFF VALVE		x 000.0	SPOT ELEVATION	
wv 	WATER VALVE			RIPRAP	
*50	WATER SHUT OFF VALVE				
*	FIRE HYDRANT				
	000 —		CONTOUR		
	D		EXISTING DRAIN LINE		
	w		EXISTING WATER LINE		
	G	EXISTING (GAS LINE		
-	S		SEWER LII	VE	

Ħ	CATCH BASIN		≎	LIGHT POLE
0	DRAIN MANHOLE		മ	UTILITY POLE
(E)	ELECTRIC MANHOLE		-3	GUY WIRE
(S)	SEWER MANHOLE		-0-	SIGN
0	MANHOLE		•	WETFLAG
GV Z	GAS VALVE		þ	UTILITY POLE
GM	GAS METER		☆	PROP. STREET LIGHTING
ð	GAS SHUT OFF VALVE		x 000.0	SPOT ELEVATION
XX	WATER VALVE			RIPRAP
*5	WATER SHUT OFF VALVE			
**	FIRE HYDRANT			
000		EXISTING	CONTOUR	
	D	EXISTING DRAIN LINE		
	w	EXISTING WATER LINE		
	G	EXISTING	GAS LINE	
	. C	EVICTAIO	CEWED LI	

PLAN REFERENCES:

1. PLAN NO. 393-1997, PL. BK. 448

2. SEE ANR PLAN ENTITLED "PLAN OF LAND 230 EAST CENTRAL STREET FRANKLIN MASSACHUSETTS," DATED APRIL 30, 2018, PREPARED BY GUERRIERE & HALNON, INC, PLANNING BOARD ENDORSED MAY 7, 2018 ON WHICH THE INTERIOR DEED LINE IS DEPICTED AS "TO BE REMOVED."

WOOD FRAME HOUSE x283.3 LAWRÉNCE & R = 283.9DOOLEY USE: RESIDENTIAL **APPROXIMATE** DWELLING x283.3 TOCKADE REMNANTS FENCE PAVED DRIVEWAY SHED "4 mmmin Undergrowth ROVANI USE: RESIDENTIAL DWELLING UNCAS AVENUE CONDOMINIUM USE: RESIDENTIAL **DWELLING** x283.4 LOT 1 PLAN REFERENCE 1 LOT\1A PLAN REFERENCE 2 $(0.7\pm AC)$ $AREA=43,756\pm SF$ $(1.005 \pm AC)$ LOT 2 PLAN REFERENCE 1 COMMERCIAL I SINGLE FAMILY IV SEE PLAN REFERENCE 2 $(0.3\pm AC)$ N/F TAYAL USE: RESIDENTIAL **DWELLING** R=293.28 |=283.60 (RECORD FROM 2015 TOWN 4*S-BUILT) ¦* SEWER EASEMENT-APPROXIMATE *i=278.0±* (2741 - 135)IRWIN (RECORD MARCHAND FROM TOWN USE: RESIDENTIAL USE: RESIDENTIAL DWELLING **DWELLING APPROXIMATE** #29 HILL AVE. LEDGE STREET

(COUNTY LAYOUT DATED JUNE 7, 1955)

(COUNTY LAYOUT DATED NOVEMBER 24, 1914)

(PLAN BK. 74 PLAN NO 3584)

PORCH

EXIST. SINGLE

R=285.1. I=278.2×

COUNTY TAKING

 $A=150\pm SF$

APPROX.

EXIST. PAVEMENT

3382-112

R=285.17-

R=20.00

L=36.13'

T=25.37

Δ=103'30'17'

(PLAN BK. 197 PLAN NO. 849) 5

CENTRAL STREET

114.09'

R=284.28

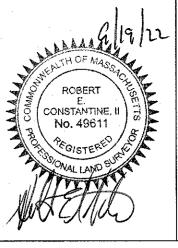
∠ 179.97′

COMMERCIAL

EXIST.

DRIVE

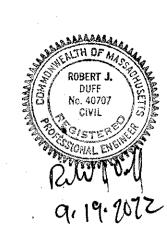
G N84:26'51"W



(F)SBDH

(F)SBDH

R=284.14



FRANKLIN PLANNING BOARD

LEGAL NOTES UTILITIES ARE PLOTTED AS A COMPILATION OF

RECORD DOCUMENTS, MARKINGS AND OTHER OBSERVED EVIDENCE TO DEVELOR A VIEW OF THE UNDERGROUND UTILITIES AND SHOULD BE CONSIDERED APPROXIMATE LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES
CANNOT BE ACCURATELY, COMPLETELY AND
RELIABLY DEPICTED ADDITIONAL UTILITIES, NOT
EVIDENCED BY RECORD DOCUMENTS OR OBSERVED PHYSICAL EVIDENCE, MAYEXIST / CONTRACTORS (IN ACCORDANCE WITH MASS.G.L. CHAPTER 82 SECTION 40 AS AMENDED) MUST CONTACT ALL UTILITY COMPANIES BEFORE EXCAVATING AND DRILLING AND CALL DIGSAFE AT 1(888)DIG-SAFE{7233}.

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TAJ ESTATES OF FRANKLIN II, LLC 95 EAST MAIN STREET, SUITE 100 WESTBOROUGH, MA. 01581

DEED BOOK 40009 PAGE 445 ASSESSORS MAP 285 LOT 069

APPLICANT

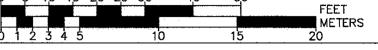
TAJ ESTATES OF FRANKLIN II, LLC MOHIUDDIN AHMED, MANAGER 95 EAST MAIN STREET, SUITE 100 WESTBOROUGH, MA. 01581

TAJ ESTATES OF FRANKLIN II SITE PLAN & SPECIAL PERMIT 230 EAST CENTRAL STREET FRANKLIN MASSACHUSETTS

EXISTING CONDITIONS

NOVI	EMBER 11, 2021
DATE	REVISION DESCRIPTION
01/17/22	TOWN COMMENTS - REV1
01/28/22	TOWN COMMENTS - REV2
02/17/22	TOWN COMMENTS - REV3
04/12/22	ADDED RET. WALL - REV4
05/31/22	TOWN COMMENTS - REV5

7/14/22 TOWN COMMENTS - REV6 9/12/22 ENDORSEMENT PLAN SET GRAPHIC SCALE: 1"=20'





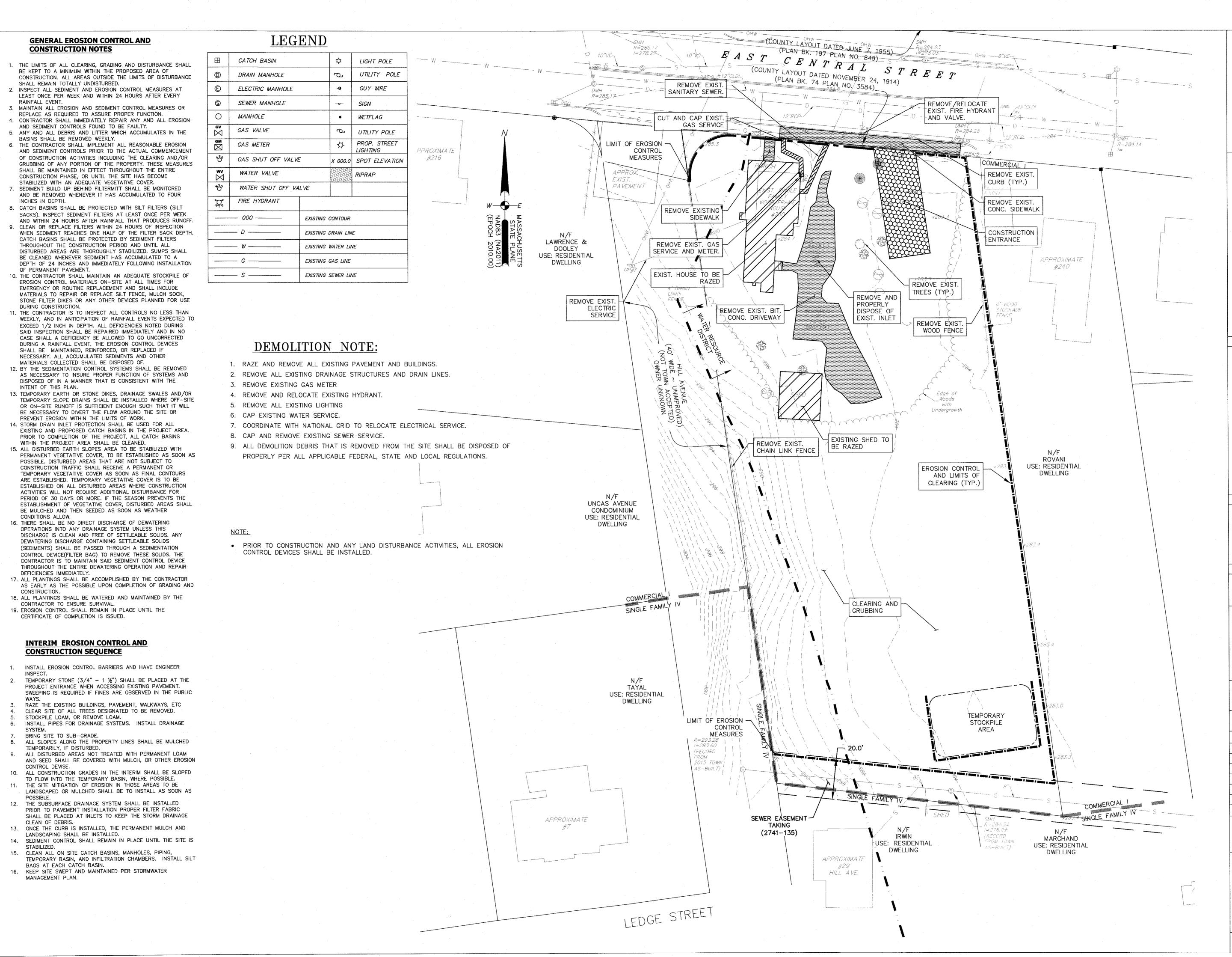
ENGINEERING & LAND SURVEYING 55 WEST CENTRAL ST. PH. (508) 528-3221 FRANKLIN, MA 02038 FX. (508) 528-7921 www.gandhengineering.com

JOB NO. **F4478** SHEET 2 OF 12

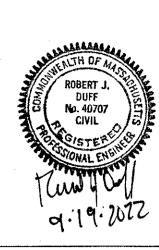
DEEP TESTS TAKEN 11/14/17 BY DN PERC. TESTS TAKEN 11/14/17 BY DN

SOIL EVALUATOR DON NIELSEN SOIL EVALUATOR DON NIELSEN

_285.3 _ DTH#1		H#3 283.9 DTH#4	285.8 DTH#5		286.8 DTH#7
Ap L. 0"-12"	Ap L. 0"-24" A L	Ap L. 0"-18" Ap L. 282.4	0"-18" Ap L.	0"-10" Ap L.	0"-12" Ap L. 0"-12"
Bw L.S. 7.5Y5/4	Bw B	3w .S. 18"-32" Bw L.S. 281.4	18"-30" Bw L.S. 283.2		12"-24" Bw L.S. 12"-24"
C1 76" 60"	C1 F.S. 10YR5/6 42"-84" S	C1 32"-84" C1 S.L. 280.4	30"-42" C1 L.S.	32"-48" C1 L.S.	24"-48" C1 L.S. 32"-42"
C2 M.S. 10YR4/4	C2 C2 C C C C C C C C	C2 /F.S. R5/3 84"-144" C2 F.S. 10YR5/6	C2 F./M.S. 10YR5/6	C2 F./M.S. 273.6	48"-120" C2 F./M.S. 10YR5/6 42"-84"
	MOIST BOT HOLE NO	C3 M./C.S. 10YR5/3 F.S. 272.6	C3 M.S. 10YR5/3 SOME 277.8	C3 M.S. 10YR5/3 SOME 272.6 STONES	C3 M.S. 120"-132" 10YR5/3 SOME STONES 84"-96"
		NO G.W. NO MOTTLE			







	FRANKLIN	PL	ANNING	BOARD	
			,		
***************************************	RFING	. A	MAJORI	TY	

LEGAL NOTES

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OWNER

TAJ ESTATES OF FRANKLIN II, LLC 95 EAST MAIN STREET, SUITE 100 WESTBOROUGH, MA. 01581

DEED BOOK 40009 PAGE 445 ASSESSORS MAP 285 LOT 069

APPLICANT

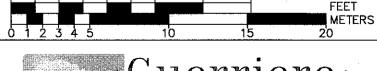
TAJ ESTATES OF FRANKLIN II, LLC MOHIUDDIN AHMED, MANAGER 95 EAST MAIN STREET, SUITE 100 WESTBOROUGH, MA. 01581

TAJ ESTATES OF FRANKLIN II SITE PLAN & SPECIAL PERMIT 230 EAST CENTRAL STREET FRANKLIN MASSACHUSETTS

DEMOLITION & EROSION CONTROL PLAN

NOVI	EMBER 11, 2021
DATE	REVISION DESCRIPTION
01/17/22	TOWN COMMENTS - REV1
01/28/22	TOWN COMMENTS - REV2
02/17/22	TOWN COMMENTS - REV3
04/12/22	ADDED RET. WALL - REV4
05/31/22	TOWN COMMENTS - REV5
7/14/22	TOWN COMMENTS - REV6
9/12/22	ENDORSEMENT PLAN SET

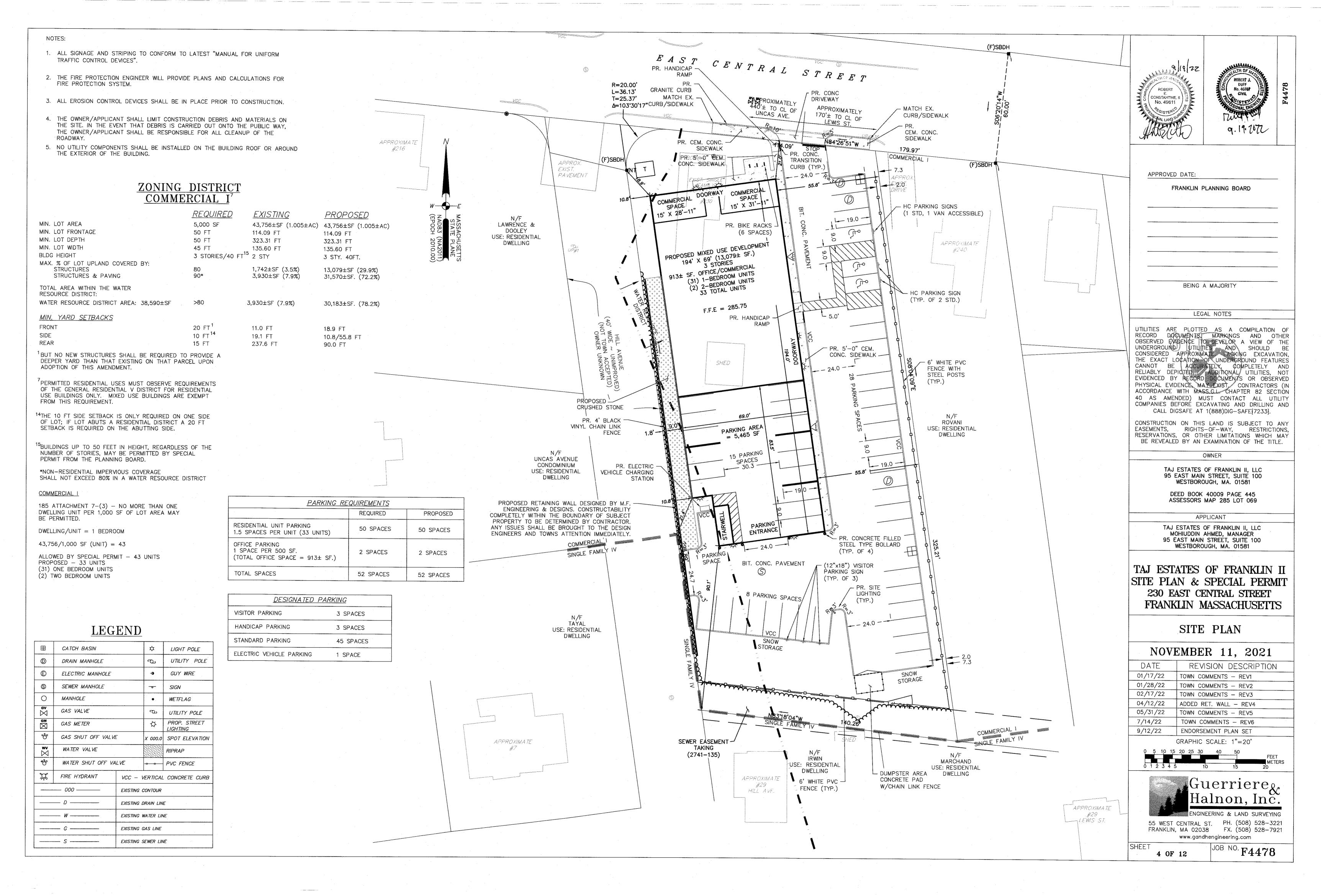
GRAPHIC SCALE: 1"=20'

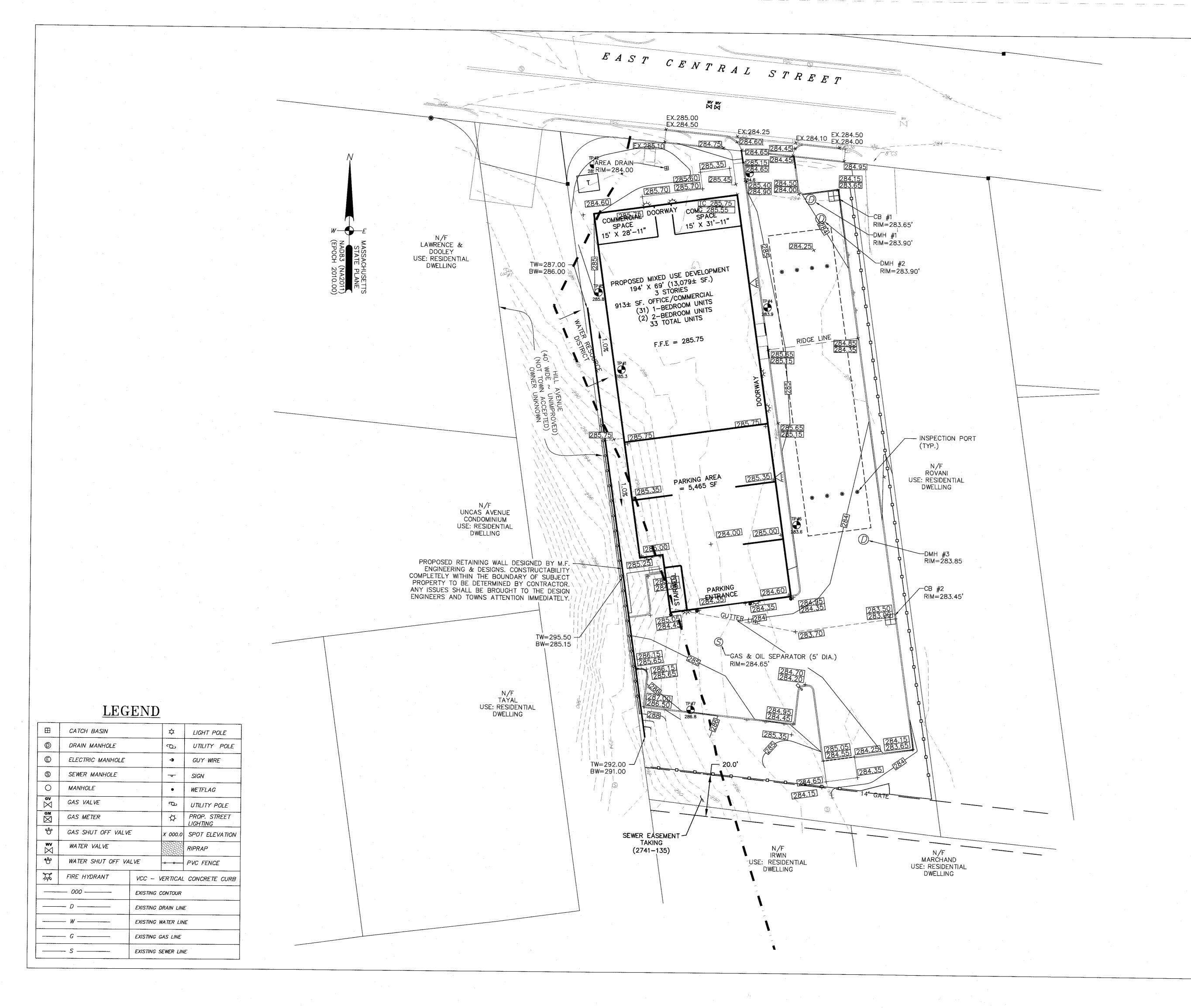


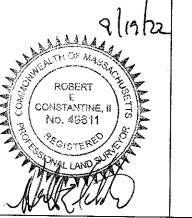


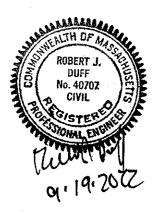
55 WEST CENTRAL ST. PH. (508) 528-3221 FRANKLIN, MA 02038 FX. (508) 528-7921 www.gandhengineering.com

JOB NO. **F4478** 3 OF 12









	FRANKLIN PLANNING BOARD
	TRANSIN PLANING BOARD
	
	BEING A MAJORITY

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OWNER

TAJ ESTATES OF FRANKLIN II, LLC 95 EAST MAIN STREET, SUITE 100 WESTBOROUGH, MA. 01581

DEED BOOK 40009 PAGE 445 ASSESSORS MAP 285 LOT 069

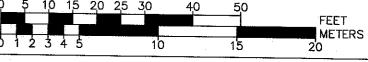
APPLICANT

TAJ ESTATES OF FRANKLIN II, LLC MOHIUDDIN AHMED, MANAGER 95 EAST MAIN STREET, SUITE 100 WESTBOROUGH, MA. 01581

TAJ ESTATES OF FRANKLIN II SITE PLAN & SPECIAL PERMIT 230 EAST CENTRAL STREET FRANKLIN MASSACHUSETTS

GRADING PLAN

Nov	EMBER 11, 2021
DATE	REVISION DESCRIPTION
01/17/22	TOWN COMMENTS - REV1
01/28/22	TOWN COMMENTS - REV2
02/17/22	TOWN COMMENTS - REV3
04/12/22	ADDED RET. WALL - REV4
05/31/22	TOWN COMMENTS - REV5
7/14/22	TOWN COMMENTS - REV6
9/12/22	ENDORSEMENT PLAN SET



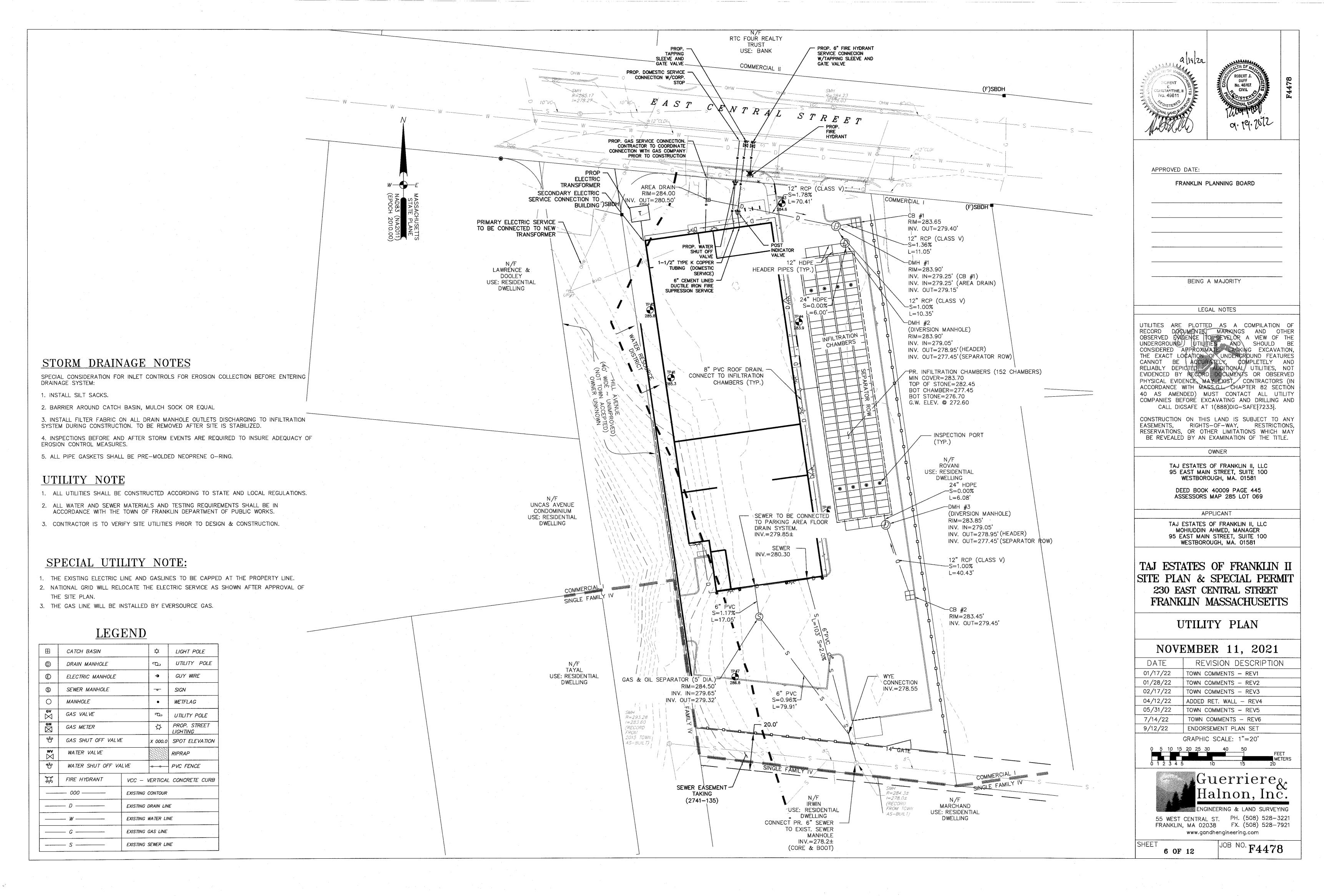
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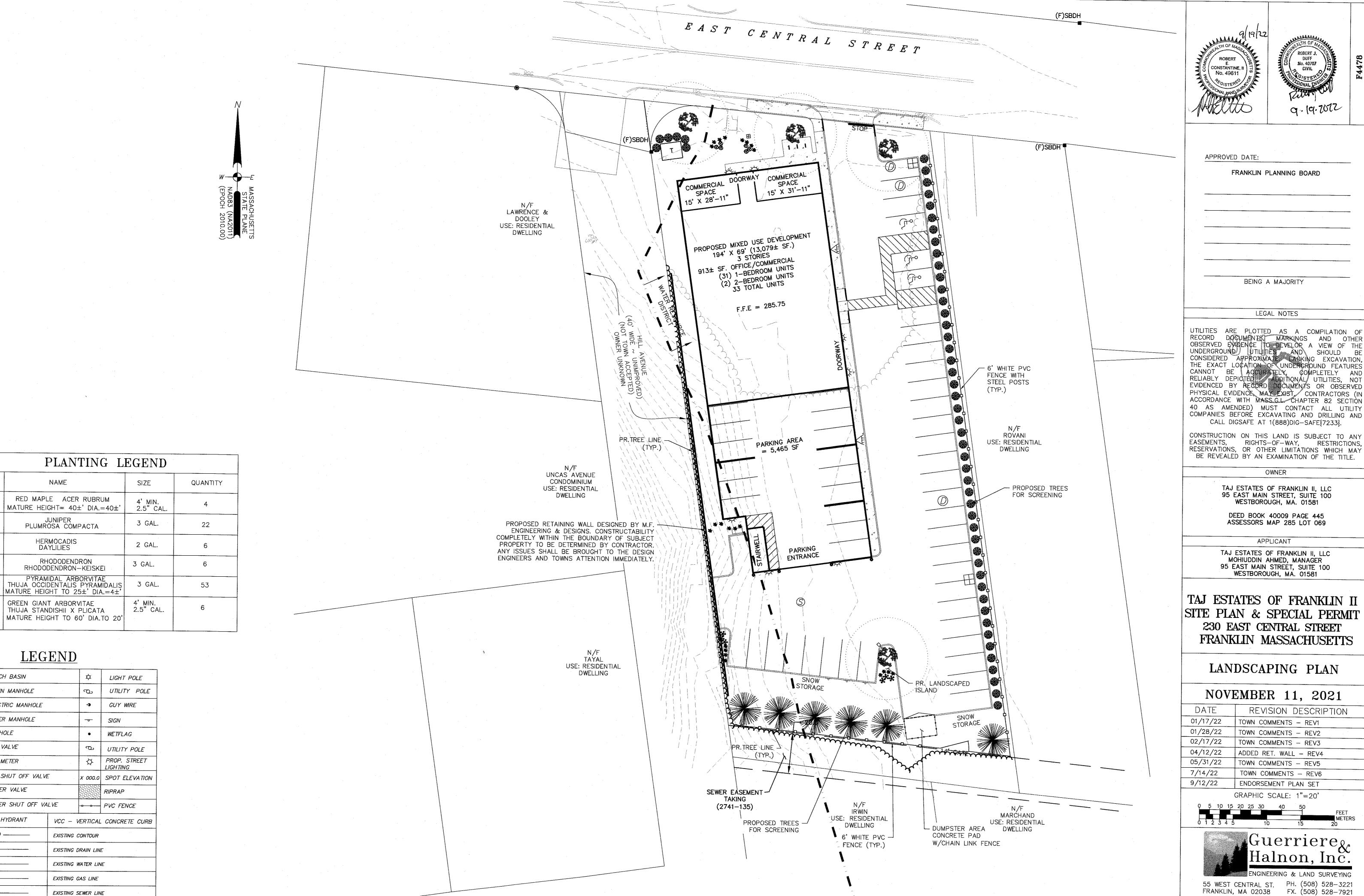


55 WEST CENTRAL ST. PH. (508) 528-3221 FRANKLIN, MA 02038 FX. (508) 528-7921

www.gandhengineering.com JOB NO. F4478

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SYMBOL

❸

 \blacksquare

0

CATCH BASIN

DRAIN MANHOLE

SEWER MANHOLE

MANHOLE

GAS VALVE

GAS METER

WATER VALVE

FIRE HYDRANT

_____ 000 _____

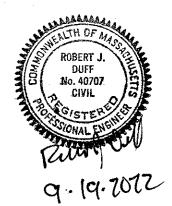
—— S ———

ELECTRIC MANHOLE

GAS SHUT OFF VALVE

WATER SHUT OFF VALVE

NAME



FRANKLIN PLANNING BOARD

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TAJ ESTATES OF FRANKLIN II, LLC 95 EAST MAIN STREET, SUITE 100 WESTBOROUGH, MA. 01581

ASSESSORS MAP 285 LOT 069

TAJ ESTATES OF FRANKLIN II, LLC MOHIUDDIN AHMED, MANAGER 95 EAST MAIN STREET, SUITE 100

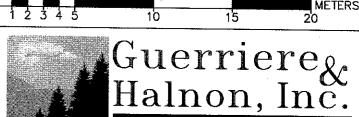
TAJ ESTATES OF FRANKLIN II SITE PLAN & SPECIAL PERMIT 230 EAST CENTRAL STREET FRANKLIN MASSACHUSETTS

LANDSCAPING PLAN

NOVEMBER 11, 2021

DATE	REVISION DESCRIPTION
01/17/22	TOWN COMMENTS - REV1
01/28/22	TOWN COMMENTS - REV2
02/17/22	TOWN COMMENTS - REV3
04/12/22	ADDED RET. WALL - REV4
05/31/22	TOWN COMMENTS - REV5
7/14/22	TOWN COMMENTS - REV6
9/12/22	ENDORSEMENT DIANISET

GRAPHIC SCALE: 1"=20'



ENGINEERING & LAND SURVEYING 55 WEST CENTRAL ST. PH. (508) 528-3221

FRANKLIN, MA 02038 FX. (508) 528-7921 www.gandhengineering.com

7 OF 12

THIS PHOTOMETRIC PLAN IS BASED SOLELY UPON PROPRIETARY INFORMATION SUPPLIED BY THE LUMINAIRE MANUFACTURER AND CLIENT RECOMMENDATION.

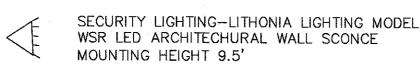
LUMINAIRE LOCATIONS, LIGHTING PATTERNS, AND ILLUMINATION LEVELS WERE PREPARED UTILIZING INFORMATION SUPPLIED BY THE LUMINAIRE MANUFACTURER AND THE SOFTWARE PACKAGE SIMPLY OUTDOOR. IT'S VALUES SHOULD BE CONSIDERED APPROXIMATE IN NATURE AND SHALL BE VERIFIED BY THE LUMIN MANUFACTURER PRIOR TO INSTALLATION.

ACTUAL PERFORMANCE OF LIGHTING PATTERNS AND/OR ILLUMINANCE VALUES MAY VARY DUE TO VARIATIONS IN LIGHT HEIGHT, ELECTRICAL VOLTAGE, LAMP WATTAGE, AND OTHER VARIABLE FIELD CONDITIONS, OR USING A LUMINAIRE OTHER THAN SPECIFICALLY NOTED HEREON.

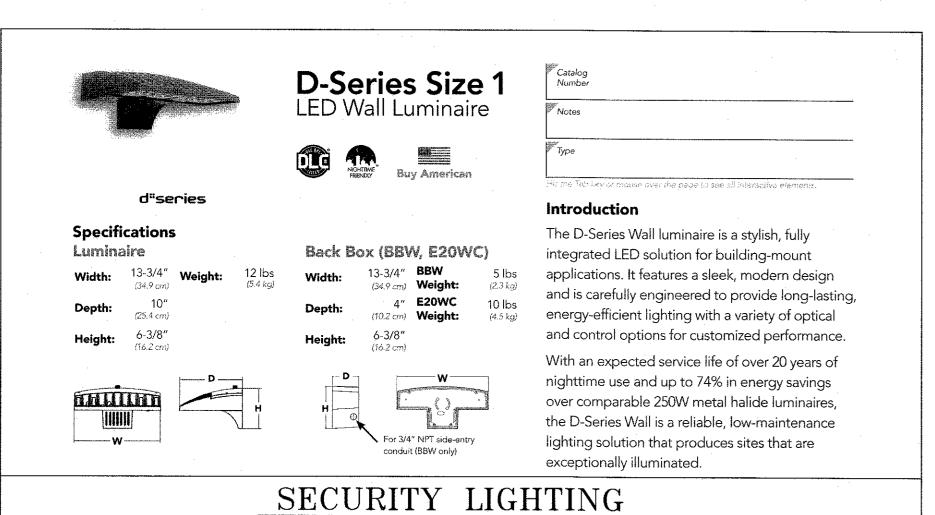
GUERRIERE & HALNON, INC ASSUMES NO RESPONSIBILITY FOR ANY SAFETY AND/OR SECURITY RISKS DUE TO INADEQUATE LIGHT LEVELS WHICH MAY OCCUR AFTER INSTALLATION.

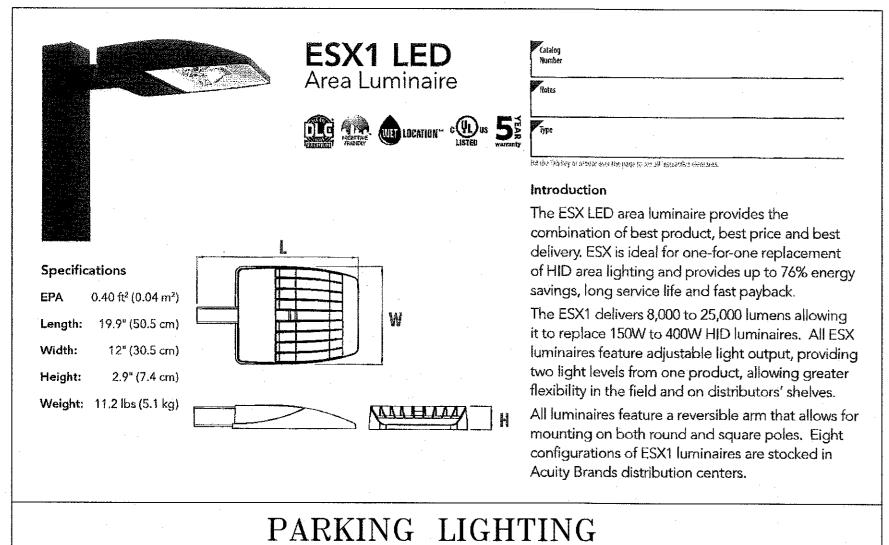
LIGHT LEGEND

PEDESTRIAN LIGHTING— LITHONIA LIGHTING
MODEL OLLWD— LED WALL CYLINDER LIGHT
MOUNTING HEIGHT 6.5'



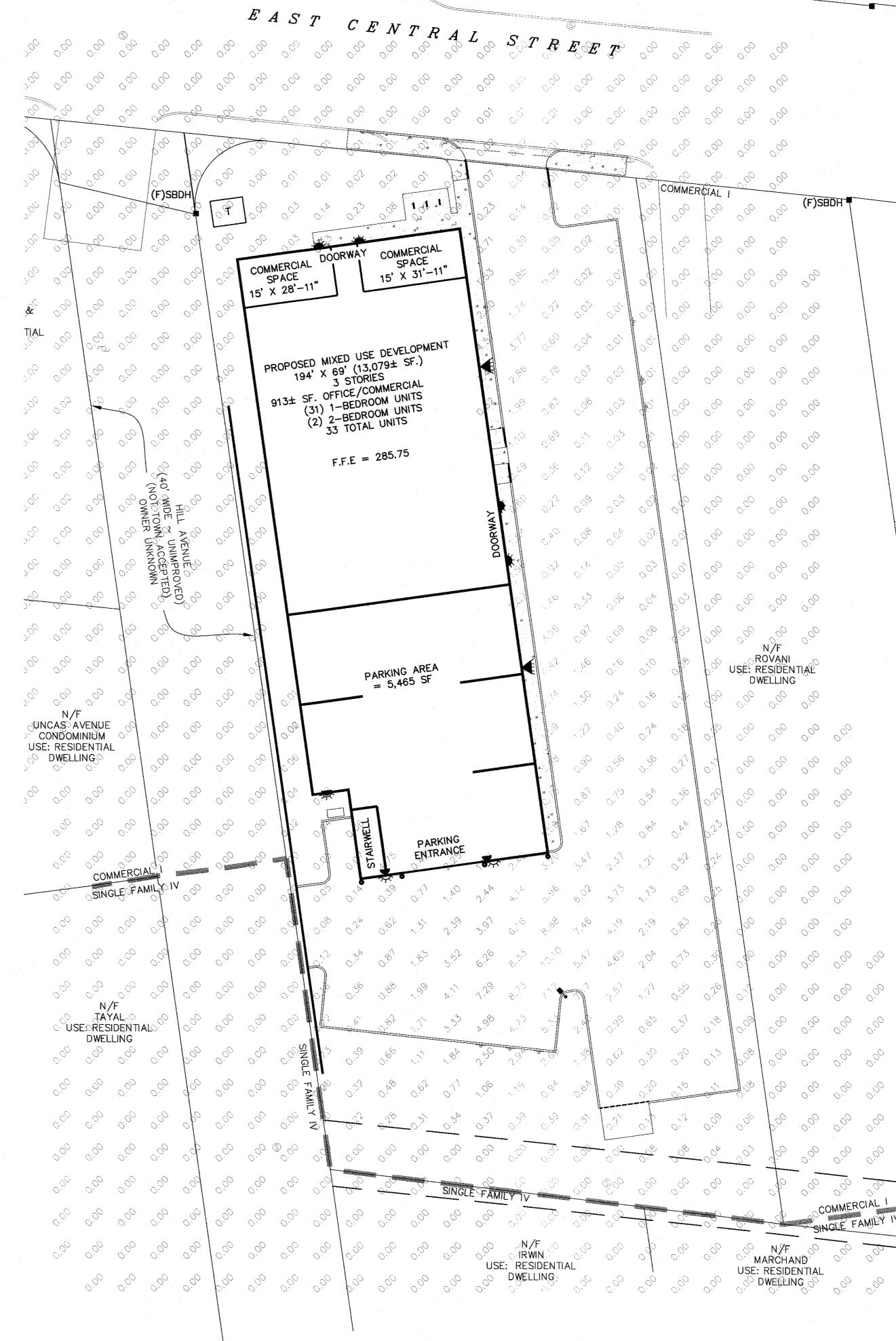
PARKING LIGHTING— LITHONIA LIGHTING
MODEL ESX1 LED AREA LUMINAIRE
MOUNTING HEIGHT 20'

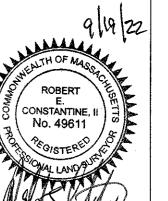


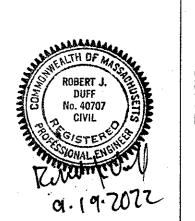




LEGEND CATCH BASIN \Rightarrow LIGHT POLE മ UTILITY POLE DRAIN MANHOLE (E) ELECTRIC MANHOLE GUY WIRE S SEWER MANHOLE SIGN 0 MANHOLE WETFLAG GAS VALVE UTILITY POLE PROP. STREET GAS METER LIGHTING GAS SHUT OFF VALVE (000.0 SPOT ELEVATION WATER VALVE RIPRAP WATER SHUT OFF VALVE → PVC FENCE FIRE HYDRANT VCC - VERTICAL CONCRETE CURB ----- *000* ------EXISTING CONTOUR EXISTING DRAIN LINE EXISTING WATER LINE EXISTING GAS LINE ---- G -----EXISTING SEWER LINE







APPROVED DATE:

FRANKLIN PLANNING BOARD

BEING A MAJORITY

LEGAL NOTES

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OWNER

TAJ ESTATES OF FRANKLIN II, LLC 95 EAST MAIN STREET, SUITE 100 WESTBOROUGH, MA. 01581

DEED BOOK 40009 PAGE 445 ASSESSORS MAP 285 LOT 069

OWNER/APPLICANT

MOHIUDDIN AHMED 95 MAIN STREET, SUITE 100 WESTBOROUGH, MA. 01581

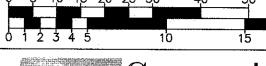
TAJ ESTATES OF FRANKLIN II
SITE PLAN & SPECIAL PERMIT
230 EAST CENTRAL STREET
FRANKLIN MASSACHUSETTS

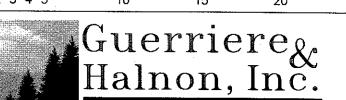
PHOTOMETRIC PLAN

NOVEMBER 11, 2021

	DATE	REVISION DESCRIPTION
	01/17/22	TOWN COMMENTS - REV1
	01/28/22	TOWN COMMENTS - REV2
	02/17/22	TOWN COMMENTS - REV3
	04/12/22	ADDED RET. WALL - REV4
	05/31/22	TOWN COMMENTS - REV5
Ř	7/14/22	TOWN COMMENTS - REV6
	9/12/22	ENDORSEMENT PLAN SET

GRAPHIC SCALE: 1"=20'





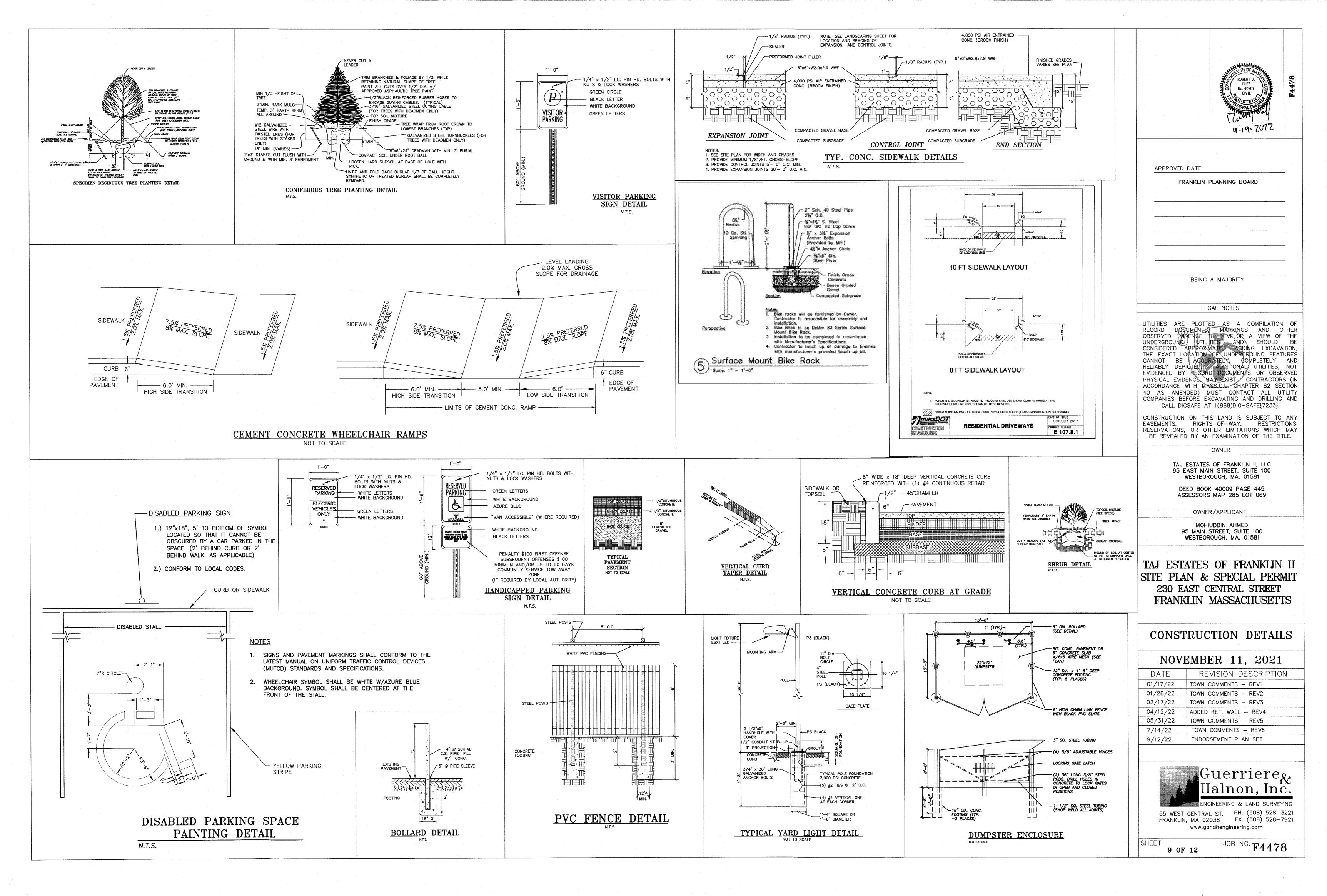
ENGINEERING & LAND SURVEYING

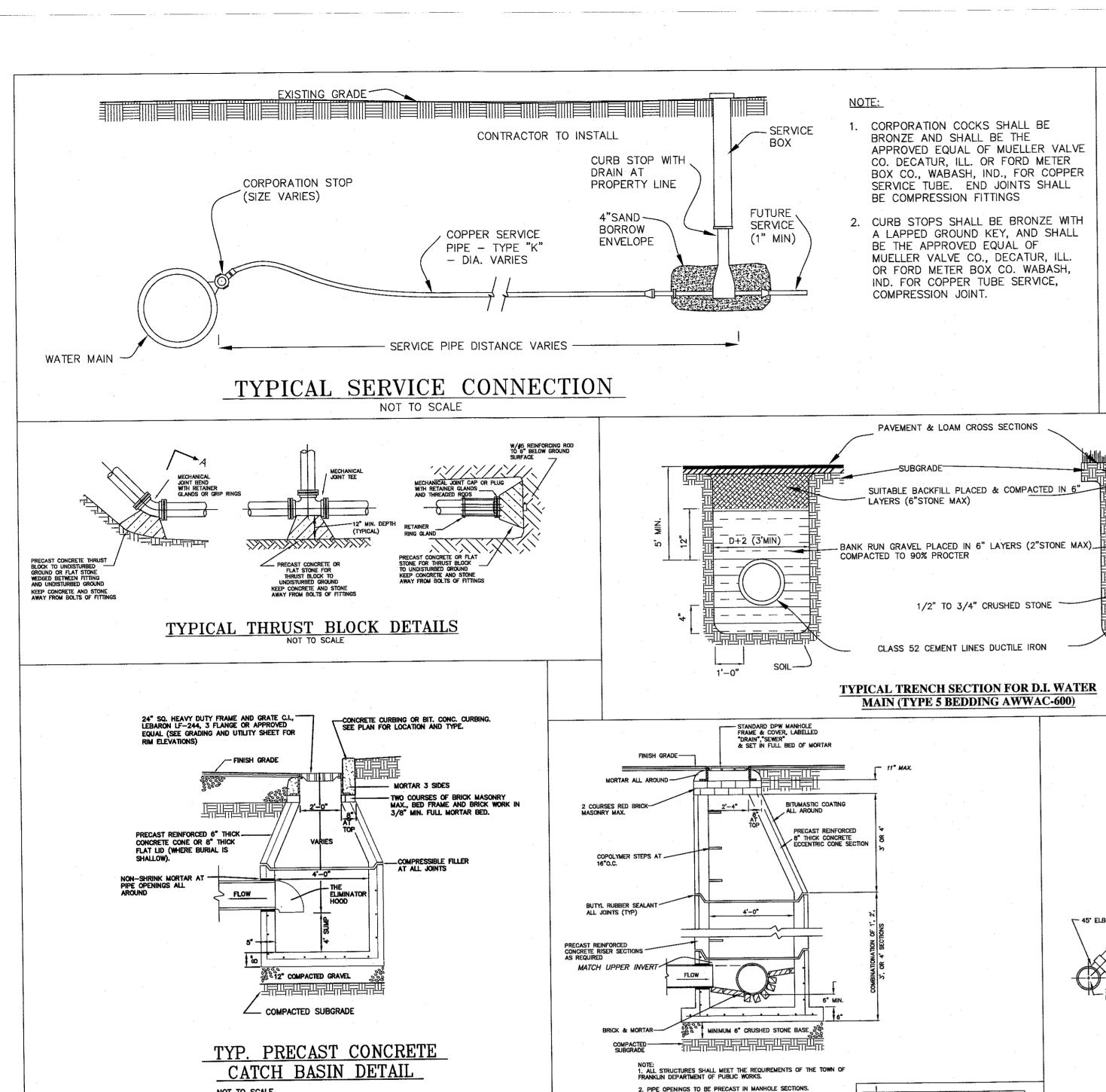
55 WEST CENTRAL ST. PH. (508) 528-3221
FRANKLIN, MA 02038 FX. (508) 528-7921

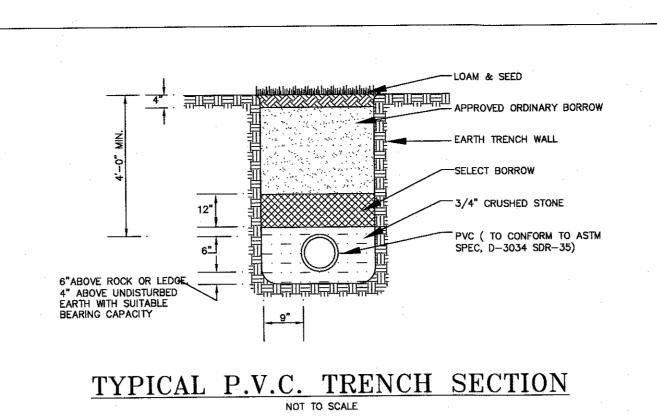
www.gandhengineering.com

JOB NO. 70

8 OF 12

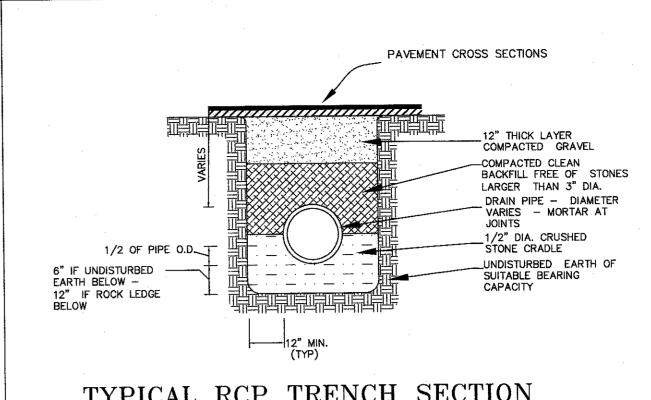


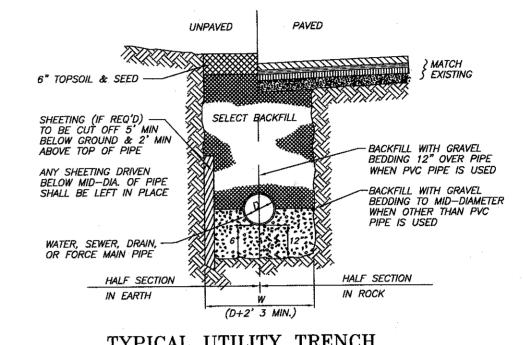




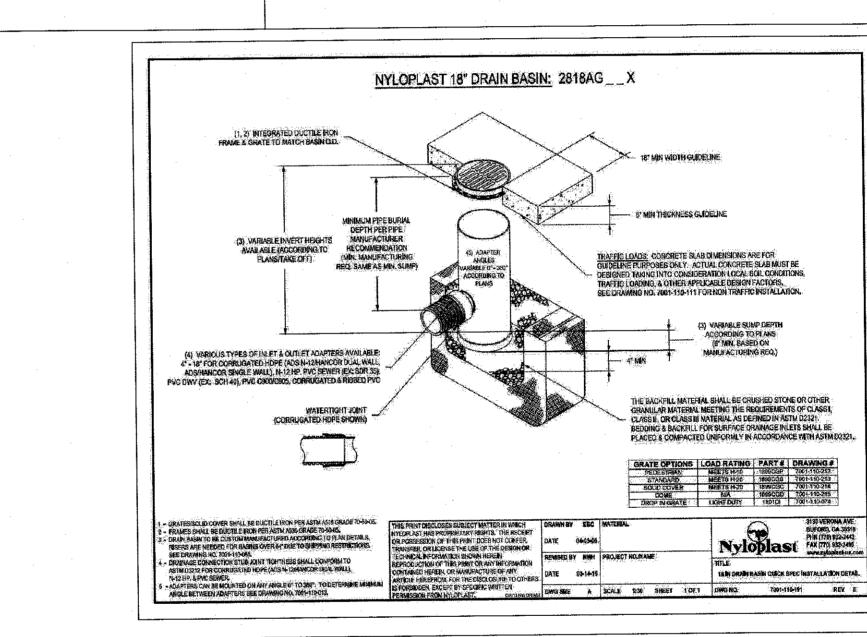
DOWN-SPOUT

ROOF DRAIN DETAIL
N.T.S.





TYPICAL UTILITY TRENCH

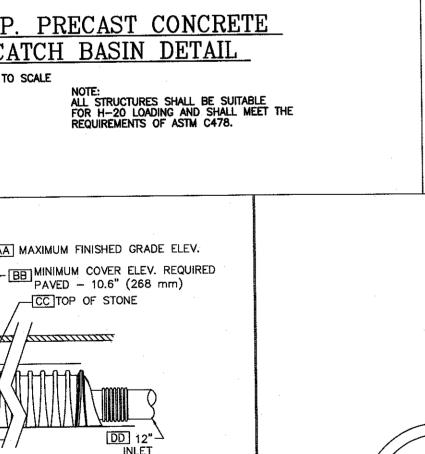


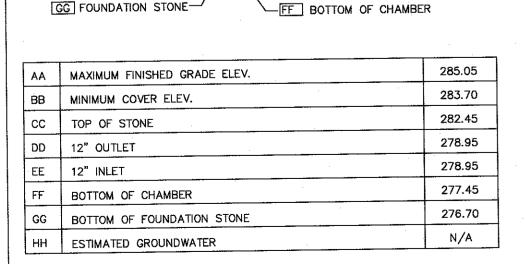
NOT TO SCALE

[AA] MAXIMUM FINISHED GRADE ELEV.

CC TOP OF STONE

ALL STRUCTURES SHALL BE SUITABLE FOR H-20 LOADING AND SHALL MEET THE REQUIREMENTS OF ASTM C478.



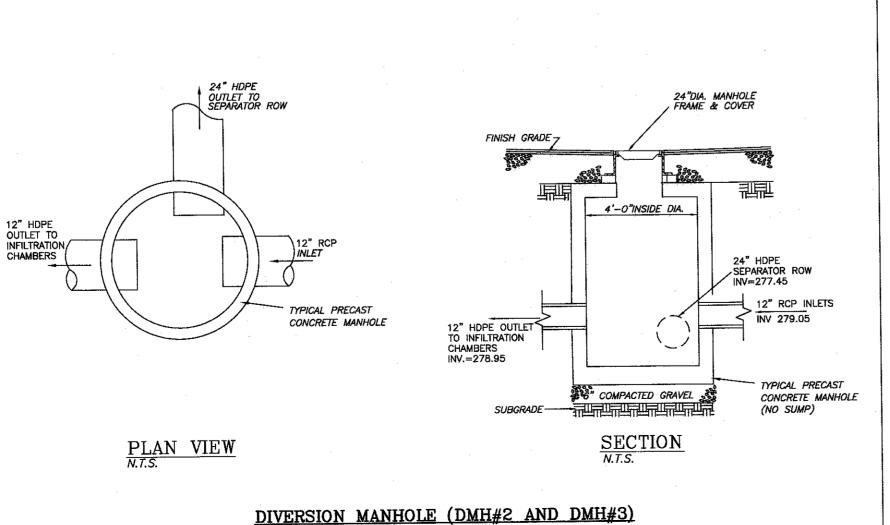


902HD CHAMBERS

EE 12" INLET

 CHAMBERS ARE TO BE INSTALLED PER MANUFACTURER SPECIFICATIONS. SEE STORMWATER REPORT FOR INSTALLATION INSTRUCTIONS AND DETAILS. 2. ISOLATOR ROW TO BE PROVIDED IN ACCORDANCE WITH MANUFACTURER

CULTEC 902HD CHAMBER SYSTEM ELEVATIONS



3. MANHOLE DESIGN SPECIFICATIONS SHALL CONFORM TO PRECAST REINFORCED CONCRETE MANHOLE SECTIONS A.S.T.M. DESIGNATION C 478, LATEST REVISION.

3. ALL PIPE GASKETS SHALL BE PRE-MOLDED NEOPRENE O-RING TYPE.

PRECAST CONCRETE DRAIN **MANHOLE**

NOT TO SCALE

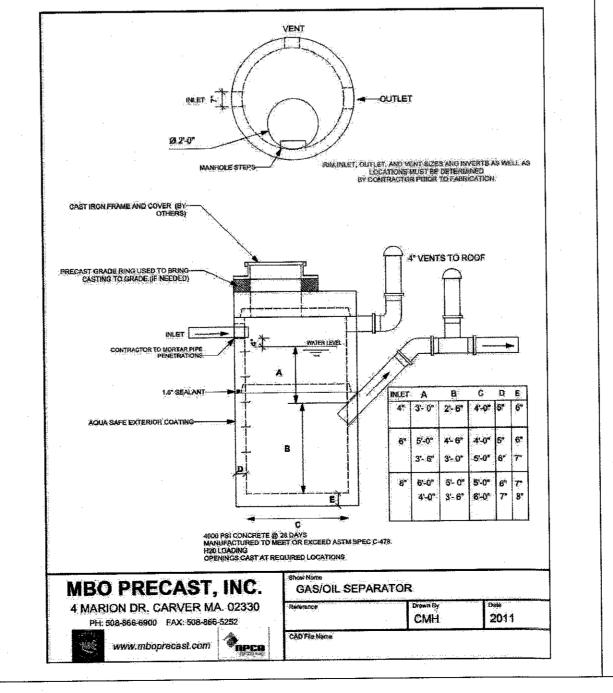
1/2" TO 3/4" CRUSHED STONE

9/ - 24" DIA. -

----- 48" DIA.

ALTERNATE TOP SLAB

(STEEL REINFORCED FOR H-20 LOADING)



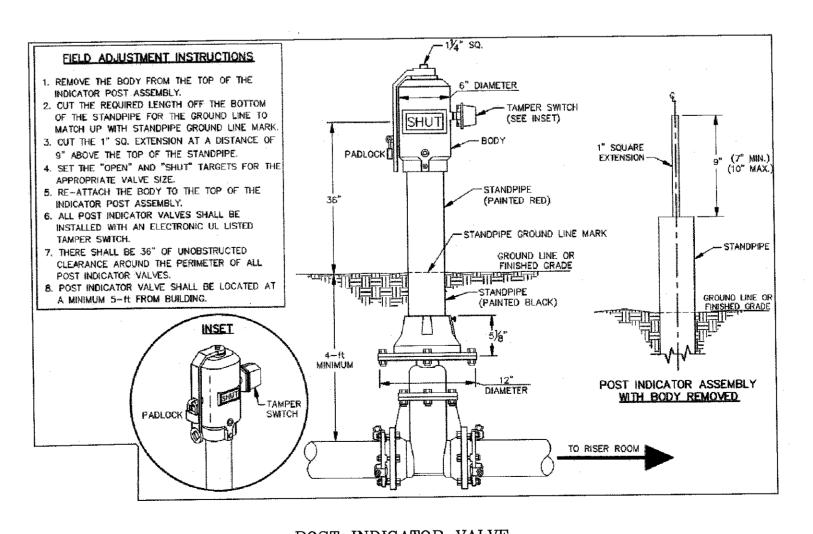
6" PVC-SLOPE=1/4"/FT. MIN.

TYPICAL PVC SEWER

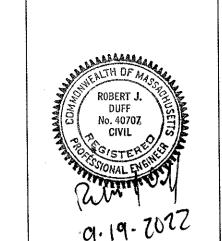
SERVICE CONNECTION

PROPERTY LINE

7- 45° ELBOW



POST INDICATOR VALVE
DETAIL
N.T.S.



APPROVED DATE: FRANKLIN PLANNING BOARD BEING A MAJORITY

UTILITIES ARE PLOTTED AS A COMPILATION OF APPROXIMATE LACKING EXCAVATION, EVIDENCED BY RECORD DOCUMENTS OR OBSERVED ACCORDANCE WITH MASS.G.L. CHAPTER 82 SECTION 40 AS AMENDED) MUST CONTACT ALL UTILITY COMPANIES BEFORE EXCAVATING AND DRILLING AND CALL DIGSAFE AT 1(888)DIG-SAFE{7233}.

LEGAL NOTES

CONSTRUCTION ON THIS LAND IS SUBJECT TO ANY EASEMENTS, RIGHTS-OF-WAY, RESTRICTIONS, RESERVATIONS, OR OTHER LIMITATIONS WHICH MAY BE REVEALED BY AN EXAMINATION OF THE TITLE.

OWNER

TAJ ESTATES OF FRANKLIN II, LLC 95 EAST MAIN STREET, SUITE 100 WESTBOROUGH, MA. 01581

DEED BOOK 40009 PAGE 445 ASSESSORS MAP 285 LOT 069

OWNER/APPLICANT

MOHIUDDIN AHMED 95 MAIN STREET, SUITE 100 WESTBOROUGH, MA. 01581

TAJ ESTATES OF FRANKLIN II SITE PLAN & SPECIAL PERMIT 230 EAST CENTRAL STREET FRANKLIN MASSACHUSETTS

CONSTRUCTION DETAILS

NOVEMBER 11, 2021

DATE	REVISION DESCRIPTION
01/17/22	TOWN COMMENTS - REV1
01/28/22	TOWN COMMENTS - REV2
02/17/22	TOWN COMMENTS - REV3
04/12/22	ADDED RET. WALL - REV4
05/31/22	TOWN COMMENTS - REV5
7/14/22	TOWN COMMENTS - REV6
9/12/22	ENDORSEMENT PLAN SET



55 WEST CENTRAL ST. PH. (508) 528-3221 FRANKLIN, MA 02038 FX. (508) 528-7921 www.gandhengineering.com

10 OF 12

CULTEC RECHARGER 902HD CHAMBERS ARE DESIGNED FOR UNDERGROUND STORMWATER MANAGEMENT. THE CHAMBERS MAY BE USED FOR RETENTION, RECHARGING, DETENTION OR CONTROLLING THE FLOW OF ON-SITE STORMWATER RUNOFF.

CHAMBER PARAMETERS

1. THE CHAMBERS SHALL BE MANUFACTURED IN THE U.S.A. OR CANADA BY CULTEC, INC. OF BROOKFIELD, CT (CULTEC, COM, 203-775-4416)

2.THE CHAMBERS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". THE LOAD CONFIGURATION SHALL INCLUDE:

A INSTANTANEOUS AASHTO DESIGN TRUCK LIVE LOAD AT MINIMUM COVER

B. MAXIMUM PERMANENT (50-YEAR) COVER LOAD C. 1-WEEK PARKED AASHTO DESIGN TRUCK LOAD

3.THE CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F3430-20 "STANDARD SPECIFICATION FOR CELLULAR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS"

4.THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRED BRIDGE DESIGN SPECIFICATIONS SECTION 12.12, WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS, THE STRUCTURAL DESIGN OF THE CHAMBERS SHALL INCLUDE THE

FOLLOWING: A. THE CREEP MODULUS SHALL BE 50-YEAR AS SPECIFIED IN ASTM F3430

B. THE MINIMUM SAFETY FACTOR FOR LIVE LOADS SHALL BE 1.75 C. THE MINIMUM SAFETY FACTOR FOR DEAD LOADS SHALL BE 1.95 5. THE CHAMBER SHALL BE STRUCTURAL FOAM INJECTION MOLDED OF BLUE VIRGIN HIGH

MOLECULAR WEIGHT IMPACT-MODIFIED POLYPROPYLENE. 6.THE CHAMBER SHALL BE ARCHED IN SHAPE

7.THE CHAMBER SHALL BE OPEN-BOTTOMED 8. THE CHAMBER SHALL BE JOINED USING AN INTERLOCKING OVERLAPPING RIB METHOD. CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS, HAVING NO SEPARATE

9.THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC RECHARGER ® 902HD SHALL BE 48 INCHES (1219 MM) TALL, 78 INCHES (1981 MM) WIDE AND 4.25 FEET (1.30 M) LONG. THE

INSTALLED LENGTH OF A JOINED RECHARGER 902HD SHALL BE 3.67 FEET (1.12 M). 10. MULTIPLE CHAMBERS MAY BE CONNECTED TO FORM DIFFERENT LENGTH ROWS. EACH ROW SHALL BEGIN AND END WITH A SEPARATELY FORMED CULTEC RECHARGER ® 902HD END CAP. MAXIMUM INLET OPENING ON THE END CAP IS 30 INCHES (750 MM) HDPE OR 36

INCHES (900 MM) PVC. 11. THE CHAMBER SHALL HAVE TWO SIDE PORTALS TO ACCEPT CULTEC HVLV™ FC-48 FEED

CONNECTORS TO CREATE AN INTERNAL MANIFOLD, MAXIMUM ALLOWABLE PIPE SIZE IN THE SIDE PORTAL IS 10 INCHES (250 MM) HDPE AND 12 INCHES (300 MM) PVC. 12 THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV™ FC-48 FEED CONNECTOR SHALL BE 12 INCHES (305 MM) TALL, 16 INCHES (406 MM) WIDE AND 49 INCHES (1245

13. THE NOMINAL STORAGE VOLUME OF THE RECHARGER 902HD CHAMBER SHALL BE 17.31 FT³/ FT (1.61 M ³ / M) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF A JOINED RECHARGER 902HD SHALL BE 63.47 FT 3 / UNIT (1.80 M 3 / UNIT) - WITHOUT STONE.

14. THE NOMINAL STORAGE VOLUME OF THE HVLV™ FC-48 FEED CONNECTOR SHALL BE 0.913 FT3 / FT (0.085 M 3 / M) - WITHOUT STONE 15. THE RECHARGER 902HD CHAMBER SHALL HAVE 5 CORRUGATIONS.

OPENING AT THE TOP CENTER OF EACH CHAMBER, CENTERED ON THE CORRUGATION 17. THE CHAMBER SHALL BE MANUFACTURED IN A FACILITY EMPLOYING CULTEC'S QUALITY

16. THE CHAMBER SHALL BE CAPABLE OF ACCEPTING A 6 INCH (150 MM) INSPECTION PORT

CONTROL AND ASSURANCE PROCEDURES. 18. MAXIMUM ALLOWABLE COVER OVER THE TOP OF THE CHAMBER SHALL BE 8.3 FEET (2.53

(900 MM) PVC.

END CAP PARAMETERS 1. THE CULTEC RECHARGER⁽⁸⁾ 902HD END CAP (REFERRED TO AS 'END CAP') SHALL BE MANUFACTURED IN THE U.S.A. BY CULTEC, INC. OF BROOKFIELD, CT (CULTEC.COM,

203-775-4416). 2.THE END CAP SHALL BE TWIN-SHEET THERMOFORMED OF VIRGIN HIGH MOLECULAR WEIGHT POLYETHYLENE.

3.THE END CAP SHALL BE JOINED AT THE BEGINNING AND END OF EACH ROW OF CHAMBERS USING AN INTERLOCKING OVERLAPPING RIB METHOD. CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS, HAVING NO SEPARATE COUPLINGS.

4.THE NOMINAL DIMENSIONS OF THE END CAP SHALL BE 48.5 INCHES (1231 MM) TALL, 78 INCHES (1982 MM) WIDE AND 9.7 INCHES (246 MM) LONG, WHEN JOINED WITH A RECHARGER 902HD CHAMBER, THE INSTALLED LENGTH OF THE END CAP SHALL BE 6.2

5. THE NOMINAL STORAGE VOLUME OF THE END CAP SHALL BE 5.34 FT 3 /FT (0.50 M 3 / M) -WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF AN INTERLOCKED END CAP SHALL BE 2.76 FT 3 / UNIT (0.08 M 3 / UNIT) - WITHOUT STONE. 6.MAXIMUM INLET OPENING ON THE END CAP IS 30 INCHES (750 MM) HDPE OR 36 INCHES

7.THE END CAP SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12.

CULTEC HVLV FC-48 FEED CONNECTOR PRODUCT SPECIFICATIONS

CULTEC HVLV FC-48 FEED CONNECTORS ARE DESIGNED TO CREATE AN INTERNAL MANIFOLD FOR CULTEC RECHARGER MODEL 902HD STORMWATER CHAMBERS

1. THE FEED CONNECTOR SHALL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT.

(203-775-4416 OR 1-800-428-5832) 2. THE FEED CONNECTOR SHALL BE VACUUM THERMOFORMED OF BLACK HIGH MOLECULAR

WEIGHT HIGH DENSITY POLYETHYLENE (HMWHDPE). 3. THE FEED CONNECTOR SHALL BE ARCHED IN SHAPE.

4. THE FEED CONNECTOR SHALL BE OPEN-BOTTOMED. 5. THE NOMINAL DIMENSIONS OF THE CULTEC HVLV FC-48 FEED CONNECTOR SHALL BE 12

INCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 49 INCHES (1245 mm) LONG. 6. THE NOMINAL STORAGE VOLUME OF THE HVLV FC-48 FEED CONNECTOR SHALL BE 0.913 FT³ / FT (0.085 m³ / m) - WITHOUT STONE.

7. THE HVLV FC-48 FEED CONNECTOR SHALL HAVE 4 CORRUGATIONS.

8. THE HVLV FC-48 FEED CONNECTOR MUST BE FORMED AS A WHOLE UNIT HAVING TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT SHALL FIT INTO THE SIDE PORTALS OF THE CULTEC RECHARGER STORMWATER CHAMBER AND ACT AS CROSS FEED CONNECTIONS CREATING AN INTERNAL MANIFOLD.

9. THE FEED CONNECTOR SHALL BE DESIGNED TO WITHSTAND AASHTO HS-25 DEFINED LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.

10. THE FEED CONNECTOR SHALL BE MANUFACTURED IN AN ISO 9001:2008 CERTIFIED FACILITY

CULTEC NO. 410™ NON-WOVEN GEOTEXTILE CULTEC NO. 410™ NON -WOVEN GEOTEXTILE MAY BE USED WITH CULTEC CONTACTOR® AND RECHARGER® STORMWATER INSTALLATIONS TO PROVIDE A BARRIER THAT PREVENTS SOIL INTRUSION INTO THE STONE.

GEOTEXTILE PARAMETERS

1. THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT (203-775-4416 OR 1-800-428-5832)

2. THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE.

3. THE GEOTEXTILE SHALL HAVE A TYPICAL WEIGHT OF 4.5 OZ/SY (142 G/M). 4. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH VALUE OF 120 LBS (533 N) PER ASTM

D4632 TESTING METHOD. 5. THE GEOTEXTILE SHALL HAVE AN ELONGATION @ BREAK VALUE OF 50% PER ASTM D4632 TESTING METHOD.

6. THE GEOTEXTILE SHALL HAVE A MULLEN BURST VALUE OF 225 PSI (1551 KPA) PER ASTM D3786 TESTING METHOD.

7. THE GEOTEXTILE SHALL HAVE A PUNCTURE STRENGTH VALUE OF 65 LBS (289 N) PER ASTM

8. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE VALUE OF 340 LBS (1513 N) PER ASTM D6241 TESTING METHOD.

9. THE GEOTEXTILE SHALL HAVE A TRAPEZOID TEAR VALUE OF 50 LBS (222 N) PER ASTM D4533 TESTING METHOD.

10. THE GEOTEXTILE SHALL HAVE A AOS VALUE OF 70 U .S. SIEVE (0.212 MM) PER ASTM D4751 TESTING METHOD. 11. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY VALUE OF 1.7 SEC-1 PER ASTM D4491

TESTING METHOD. 12. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATE VALUE OF 135 GAL/MIN/SF (5500 L/MIN/SM) PER ASTM D4491 TESTING METHOD

13. THE GEOTEXTILE SHALL HAVE A UV STABILITY @ 500 HOURS VALUE OF 70% PER ASTM

CULTEC NO. 4800 WOVEN GEOTEXTILE IS DESIGNED AS A UNDERLAYMENT TO PREVENT SCOURING CAUSED BY WATER MOVEMENT WITHIN THE CULTEC CHAMBERS AND FEED CONNECTORS UTILIZING THE CULTEC MANIFOLD FEATURE. IT MAY ALSO BE USED AS A COMPONENT OF THE CULTEC SEPARATOR ROW TO ACT AS A BARRIER TO PREVENT SOIL/CONTAMINANT INTRUSION INTO THE STONE WHILE ALLOWING FOR

GEOTEXTILE PARAMETERS

1. THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT

(203-775-4416 OR 1-800-428-5832)

2. THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH OF 550 X 550 LBS (2,448 X

2,448 N) PER ASTM D4632 TESTING METHOD. 4. THE GEOTEXTILE SHALL HAVE A ELONGATION @ BREAK RESISTANCE OF 20 X 20% PER ASTM D4632 TESTING METHOD.

THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE OF 5,070 X

(74 X 74 KN/M) PER ASTM D4595 TESTING METHOD. 6. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 2% STRAIN OF 960 X 1,096 LBS/FT

(14 X 16 KN/M) PER ASTM D4595 TESTING MET THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 5%

STRAIN OF 2,740 X 2, 740 LBS/FT (40 X 40 KN/M) PER ASTM D4595 TESTING METHOD. 8. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 10%

STRAIN OF 4,800 X 4,800 LBS/FT (70 X 70 KN/M) PER ASTM D4595 TESTING METHOD.

9. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE RESISTANCE OF 1,700 LBS (7,560 N) PER ASTM D6241 TESTING METHOD.

10. THE GEOTEXTILE SHALL HAVE A TRAPEZOIDAL TEAR RESISTANCE OF 180 X 180 LBS (801 X 801 N) PER ASTM D4533 TESTING METHOD.

11. THE GEOTEXTILE SHALL HAVE AN APPARENT OPENING SIZE OF 40 US STD. SIEVE

(0.425 MM) PER ASTM D4751 TESTING METHOD.

12. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY RATING OF 0.15 SEC-1 PER ASTM D4491 TESTING METHOD.

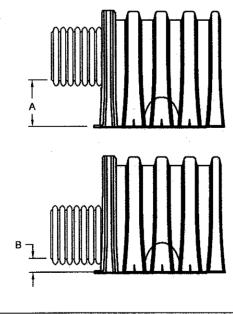
13. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATING OF 11.5 GPM/FT2 (470 LPM/M2) PER ASTM D4491 TESTING METHOD.

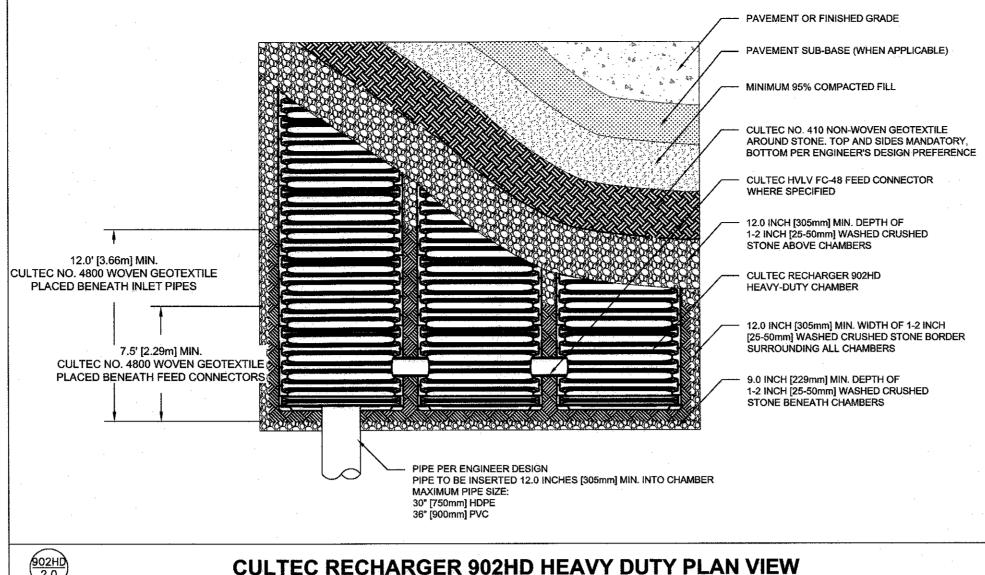
14. THE GEOTEXTILE SHALL HAVE A UV RESISTANCE OF 80% @ 500 HRS. PER ASTM D4355 TESTING METHOD.

GENERAL NOTES

PIPE	A	В
6" [150 mm]	N/A	N/A
8" [200 mm]	N/A	N/A
10" [250 mm]	N/A	N/A
12" [300 mm]	29.50" [749 mm]	2.25" [57 mm]
15" [375 mm]	26.50" [673 mm]	2.25" [57 mm]
18" [450 mm]	23.50" [597 mm]	2.50" [64 mm]
24" [600 mm]	16.50" [420 mm]	3.00" [76 mm]

*THE TYPICAL INVERT TABLE ABOVE IS BASED ON THE INSIDE DIAMETER OF STANDARD CORRUGATED PLASTIC PIPE. THE HEAVY DUTY END CAP HAS PRE-MARKED TRIM LINES FOR PIPE DIAMETERS 12" (300mm), 15" (375mm), 18" (450mm) AND 24" (600mm). PIPES OF ANY SIZE AND MATERIAL UP TO 24" MAY BE PLACED AT CUSTOM LOCATIONS AND CUSTOM INVERTS. THE CROWN OF THE PIPE MUST REMAIN A MINIMUM OF 4" (100mm) FROM THE EDGE OF THE HEAVY DUTY END CAP.





1-2 INCH [25-50mm] WASHED, CRUSHED STONE

WHERE SPECIFIED

PROJECT ENGINEER OF RECORD OR GEOTECHNICAL CONSULTANT IS RESPONSIBLE FOR —

THE CHAMBERS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER

FIELD PLACED CLASS "C" CONCRETE

(OPTION 2) FLUSH WITH PAVEMENT

OR FINISHED GRADE

8.0" [203mm] MIN.

HE CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F3430-20 "STANDARD SPECIFICATION FOR CELLULAR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS"

THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12, WHEN INSTALLED

CULTEC NO. 4800 WOVEN GEOTEXTILE TO BE PLACED BENEATH INTERNAL MANIFOLD -

FEATURE AND BENEATH ALL INLET/OUTLET PIPES (FOR SCOUR PROTECTION)

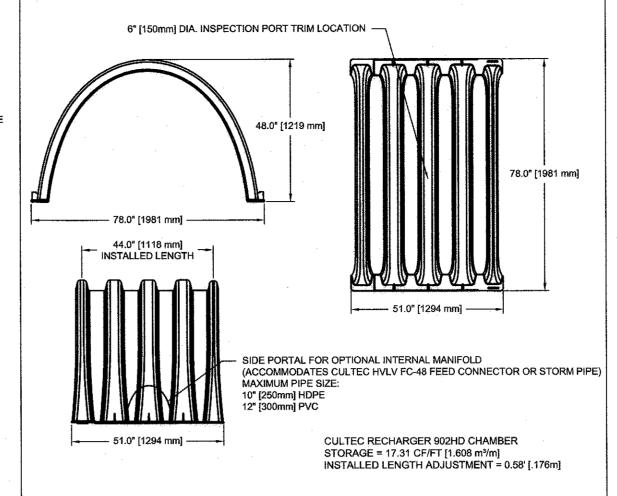
CULTEC RECHARGER 902HD HEAVY DUTY CROSS SECTION

ENSURING THAT THE REQUIRED BEARING CAPACITY OF SUB-GRADE SOILS HAS BEEN MET

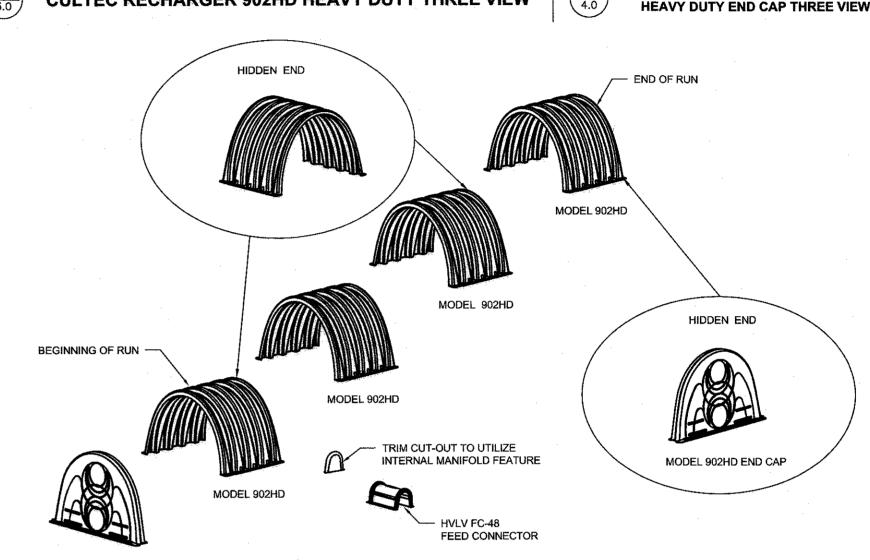
CULTEC HVLV FC-48 FEED CONNECTOR

76.5" [1944 mm] MIN

CENTER TO CENTER



CULTEC RECHARGER 902HD HEAVY DUTY THREE VIEW



30" (750 mm) HDPE

48.5" [1232mm

36" [900 mm] PVC

6.2" [157mm] INSTALLED

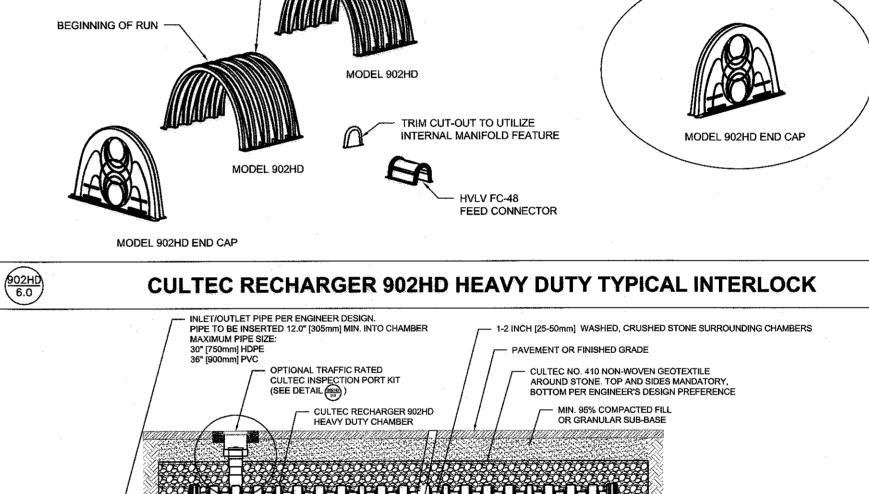
CULTEC RECHARGER 902HD END CAP

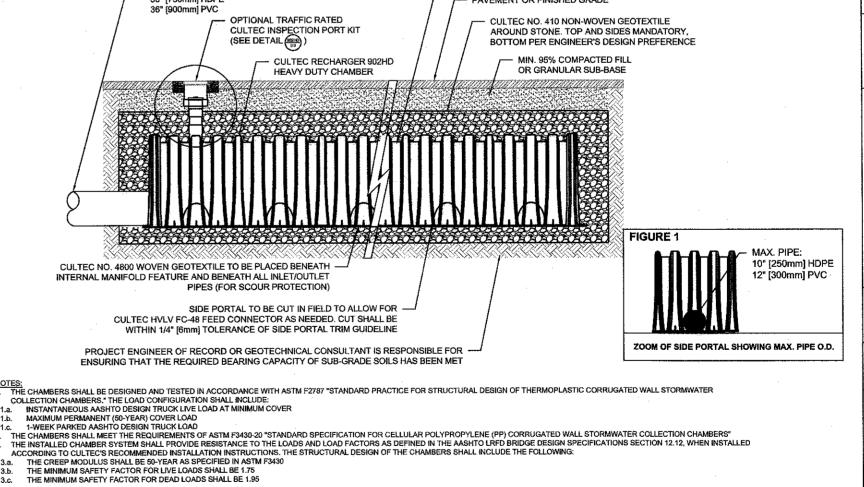
INSTALLED LENGTH ADJUSTMENT = 0.29' [.08m]

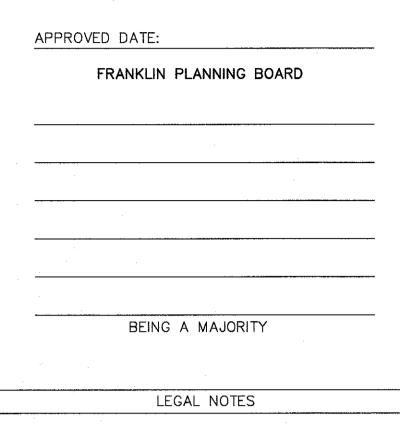
CULTEC RECHARGER 902HD

STORAGE = 5.34 CF/FT [0.50m³/m]

- 9.7" [246mm]







No. 40707

CIVIL

UTILITIES ARE PLOTTED AS A COMPILATION OF RECORD DOCUMENTS, MARKINGS AND OTHER OBSERVED EXIBENCE TO DEVELOR A VIEW OF THE UNDERGROUND UTILITIES AND SHOULD BE CONSIDERED APPROXIMATE ACKING EXCAVATION. THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY,
RELIABLY DEPICTED ADDITIO EVIDENCED BY RECORD DOCUMENTS OR OBSERVED PHYSICAL EVIDENCE, MAY EXIST. CONTRACTORS (IN ACCORDANCE WITH MASS.G.L. CHAPTER 82 SECTION 40 AS AMENDED) MUST CONTACT ALL UTILITY COMPANIES BEFORE EXCAVATING AND DRILLING AND CALL DIGSAFE AT 1(888)DIG-SAFE{7233}.

CONSTRUCTION ON THIS LAND IS SUBJECT TO ANY EASEMENTS, RIGHTS-OF-WAY, RESTRICTIONS, RESERVATIONS, OR OTHER LIMITATIONS WHICH MAY BE REVEALED BY AN EXAMINATION OF THE TITLE.

TAJ ESTATES OF FRANKLIN II, LLC 95 EAST MAIN STREET, SUITE 100 WESTBOROUGH, MA. 01581

DEED BOOK 40009 PAGE 445 ASSESSORS MAP 285 LOT 069

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CONSTRUCTION DETAILS

NOVEMBER 11, 2021

DATE	REVISION DESCRIPTION
01/17/22	TOWN COMMENTS - REV1
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02/17/22	TOWN COMMENTS - REV3
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7/14/22	TOWN COMMENTS - REV6
9/12/22	ENDORSEMENT PLAN SET



55 WEST CENTRAL ST. PH. (508) 528-3221 FRANKLIN, MA 02038 FX. (508) 528-7921 www.gandhengineering.com

CULTEC RECHARGER 902HD TYPICAL PIPE INVERTS

MIN. 95% COMPACTED FILL

CULTEC RECHARGER 902HD -

HEAVY DUTY CHAMBER

OR GRANULAR SUB-BASE

8.3' [2.53m] MAX

COVER DEPTH

COLLECTION CHAMBERS." THE LOAD CONFIGURATION SHALL INCLUDE:

MAXIMUM PERMANENT (50-YEAR) COVER LOAD

1-WEEK PARKED AASHTO DESIGN TRUCK LOAD

- 49.0" [1243 mm] —

INSTANTANEOUS AASHTO DESIGN TRUCK LIVE LOAD AT MINIMUM COVER

THE CREEP MODULUS SHALL BE 50-YEAR AS SPECIFIED IN ASTM F3430

THE MINIMUM SAFETY FACTOR FOR LIVE LOADS SHALL BE 1.75 THE MINIMUM SAFETY FACTOR FOR DEAD LOADS SHALL BE 1.95

CULTEC HVLV FC-48 FEED CONNECTOR THREE VIEW

CULTEC INSPECTION PORT - ZOOM DETAIL

21.1" [536 mm] MIN.

15.0"

[381mm]

CULTEC NO. 410 NON-WOVEN GEOTEXTILE

AROUND STONE, TOP AND SIDES MANDATOR **BOTTOM PER ENGINEER'S DESIGN PREFERENC**

10.6" [268 mm] MIN. FOR PAVED

18.0" [457mm] MIN. FOR UNPAVED

10.5" [268 mm] MIN.

FIELD PLACED CLASS "C" CONCRETE

MIN. 95% COMPACTED

SDR-35 CONNECTION

6" [150mm] SDR-35 BELL END.

CUT FOR 6" [152mm] OF INSERTED PIPE

6.25" [160mm] HOLE TO BE CUT w/ HOLE

SAW CENTERED ON CORRUGATION CREST

OR FINISHED GRADE

GRANULAR FILL

(OPTION 1) 1.50" [40mm] BELOW PAVEMENT

AASHTO HS-25 RATED CAST IRON

12" X 6" [300mm x 150mm] CULTEC INLINE

DRAIN / CLEAN-OUT BASIN w/ GASKETED

FRAME AND SOLID COVER

6" [150mm] PVC SCREW IN CAP

6" [150mm] SDR-35 RISER (LENGTH VARIES)

CULTEC INTERNAL MANIFOLD - OPTIONAL INSPECTION PORT DETAIL

JOB NO. **F4478**

11 OF 12

EROSION CONTROL NOTES:

GRATE,

SECTION END VIEW

TREES, ETC.) TO STABILIZE THE UNION.

PROTECTED AREA

- TAKE EVERY PRECAUTION TO MINIMIZE AND CONTROL EROSION WITHIN THE
- STOCKPILES OF EXCAVATED MATERIALS AND EXPOSED CUT AND FILL SLOPES SHALL BE KEPT TO MINIMUM GRADIENTS WHENEVER POSSIBLE. THESE AREAS SHALL BE PROTECTED WITH HAY, MULCH, GRASS SEED OR COMBINATION OF THE ABOVE TO SLOW DOWN THE RATE OF SURFACE RUN-OFF AND TO REDUCE THE VOLUME OF SUSPENDED SOLIDS IN THE RUN OFF WATER.
- SILTATION BARRIERS SHALL BE STAKED IN PLACE DOWN GRADIENT FROM ALL EXPOSED AREAS OR MATERIAL STORAGE AREAS IN ORDER TO REDUCE THE AMOUNT OF SUSPENDED SOLIDS IN RUNOFF WATER. THE EXACT LOCATION OF THE SILTATION BARRIERS MAY VARY FROM THAT SHOWN ON THE PLANS AND MAY BE ADJUSTMENT IN THE FIELD AS WORK PROGRESSES. SEDIMENTATION BUILDUP OVER SIX INCHES IN DEPTH THAT ACCUMULATES BEHIND THE SILTATION BARRIERS SHALL BE REMOVED. BARRIERS SHALL BE CHECKED AFTER EVERY STORM AND AT REGULAR WEEKLY INTERVALS.
- SILTATION BARRIER SHALL BE INSTALLED WITH WOODEN STAKES IN ACCORDANCE WITH MANUFACTURER DIRECTIONS. BOTTOM 6 INCHES OF FABRIC SHALL BE TOED IN OR BACKFILLED SO THAT TOP OF FABRIC SHALL BE 2 FEET 6 INCHES ABOVE FINISH GRADE.
- ALL AREAS DISTURBED BY CONSTRUCTION ARE TO BE LOAMED (4" MIN.) AND SEEDED IN ORDER TO MINIMIZE DUST AND EROSION.
- FILTER FABRIC IS TO BE PLACED UNDER ALL RIP-RAP AREAS SHOWN ON DESIGN PLANS.
- EROSION CONTROL BARRIERS ARE TO BE PLACED PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITIES.
- THE PROPOSED STORMWATER BASIN IS TO BE UTILIZED AS A SEDIMENTATION POND DURING CONSTRUCTION. IT IS TO BE CONSTRUCTED FIRST IN ORDER TO CONTROL / PREVENT SILTATION FROM DISCHARGING FROM THE SITE AND OR DISTURBING WETLAND AREAS.
- ALL TEMPORARY SEDIMENT POND(S) AND SUMPS ARE TO BE MAINTAINED THROUGHOUT CONSTRUCTION, INSPÉCTED PRIOR TO AND AFTER STORM EVENTS AND CLEANED AS NEEDED.
- 10. TEMPORARY BERM SHALL BE PLACED ALONG THE ENTIRE EDGE OF ROADWAY WITH THE BINDER COURSE AND SHALL REMAIN IN PLACE UNTIL FINISH COURSE IS PLACED.

INSTALLATION BAG DETAIL DETAIL

SILT SACK

CDUMP STRAP

-OVERFLOW

implemented to ensure that storm water management systems function as designed.

The following shall serve as the (O&M) Plan required by Standard 9, as well as the Long-Term

A. Names of Persons or Entity Responsible for Plan Compliance 95 Main Street, Suite 100 Westborough, MA 0158 PH: 508-962-1928

B. Stormwater Management System Owner
Owner: Mohiuddin Ahmed 95 Main Street, Suite 100

- Good housekeeping practices
 1. Maintain site, landscaping and vegetation.
 2. Sweep and pick up litter on pavements and grounds.
 3. Deliveries shall be monitored by owners or representative to ensure that if any spillage occurs, it shall be contained and cleaned up immediately. Maintain pavement and curbing in good repair.
- Requirements for routine inspections and maintenance of stormwater BMPs
 Plans: The stormwater Operation and Maintenance Plan shall consist of all Plans, documents and all local state and federal approvals as required for the subject property
- Record Keeping:

 a. Maintain a log of all operation and maintenance activities for at least three years following construction, including inspections, repairs, replacement and disposal (for disposal, the log shall indicate the type of material and the disposal location).
- b. Make this log available to MassDEP and the Conservation Commission upon
- determine whether the responsible party is implementing the Operation and Maintenance Plan. Descriptions and Designs: The Best Management Practices (BMP) incorporated into the design include the following.

 a. Street Sweeping – Stipulated within the Construction Period Pollution Prevention
- Plan, the Long-Term Pollution Prevention Plan, and the Operation and
- Maintenance Plan. As the amount of TSS removal is discretionary, no credit was taken within the calculations for this BMP.
- Deep sump catch basins with hoods installed to promote TSS Removal of solids and control floatable pollutants. This BMP has a design rate of 25% TSS Removal Infiltration Basin/Separator Row to provide the required recharge and the required 44% pretreatment and 80%TSS removal. Refer to TSS Removal Worksheets in
- d. Spill Containment Kit to contain and clean-up spills that could occur on site.

SEPARATOR ROW™ SPECIFICATIONS

1. CULTEC'S SEPARATOR ROW IS USED AS AN INEXPENSIVE MEANS OF REMOVING TOTA SUSPENDED SOLIDS FROM THE CHAMBER SYSTEM, AS WELL AS PROVIDING EASIER ACCESS

A SEPARATOR ROW IS INSTALLED ON A 1-2 INCH [25-51 mm] WASHED, CRUSHED STONE BASE.

TYPICALLY, THE CULTEC CHAMBER MODEL USED FOR THE SEPARATOR ROW IS THE SAME CHAMBER USED THROUGHOUT THE ENTIRE CHAMBER BED.

STORMWATER IS DISTRIBUTED TO THE SEPARATOR ROW BY A PRIMARY FEED SYSTEM THAT

STORMWATER MANAGEMENT SYSTEM THE DISTRIBUTION SYSTEM MAY BE BY PIPES SET AT A LOWER ELEVATION THAT PERMIT THE FIRST FLUSH TO THE SEPARATOR ROW VERSUS

OTHER PARTS OF THE UNDERGROUND STORMWATER SYSTEM. THIS INITIAL FLOW MAY BE MANAGED BY A BAFFLE OR WEIR. THE SIZING OF THE PIPE(S) THAT PROVIDE STORM WATER

TO THE SEPARATOR ROW IS TO BE DETERMINED BY THE DESIGN ENGINEER AND IS BASED

UPON THE REQUIREMENT TO ACCOMMODATE THE DESIGN FLOW AND SERVICE

DIVERTS FLOW TO THE SEPARATOR ROW AND A SECONDARY BYPASS FEED SYSTEM THAT

2. THE SEPARATOR ROW PERFORMANCE SHALL BE TESTED AND VERIFIED TO THE PROTOCOLS AND PROCEDURES AS DEFINED BY ENVIRONMENTAL TECHNOLOGY

VERIFICATION (ETV) CANADA TO ACHIEVE 80% TSS REMOVAL.

- Requirements for storage and use of herbicides, and pesticide he application of herbicides or pesticides will be done by professional certified contractor.
- Requirements for handling of pet waste

 Pet waste should never be dumped or washed into the local storm drain system. Waste shall be picked up immediately and placed in bags and properly disposed of in the garbage to be collected and taken to a landfill.
- Provisions for washing of vehicles
 Washing of vehicles shall be done in an area as to eliminate wash water from being directly
 discharged to the local storm drain system. Vehicles should be washed in areas where wash water can be held prior to discharging to the sanitary sewer system or in areas where infiltration
- K. Provisions for solid waste management Waste Management Plan

 a: Dumpster for trash and bulk waste collection shall be stored inside or under a roof.
- Recycle materials whenever possible (paper, plaster cardboard, metal cans). Separate containers for material are recommended. Do not bury waste and debris on site. Certified haulers will be hired to remove the dumpster container waste as needed.
- Recycling products will also be removed off site weekly Snow disposal and plowing plans relative to Wetland Resource Areas
- Winter Road Salt and/or Sand Use and Storage restrictions
 No sand, salt, or chemicals for de-icing will be stored outside
- Sweeping, the act of cleaning pavement can be done by mechanical sweepers, vacuum sweeper or hand sweeper. The quantity of sand is a direct correlation with the treatment of ice and snow and the types of chemicals and spreaders that are being used on site to manage snow. If a liquid de-icer such as calcium chloride is used as a pretreatment to new events the amount of sand is minimized. Sweeping for this site should be done semi-annually at a minimum. Collecting the particulate before it enters the catch basins is cheaper and more environmentally friendly than in a catch basin mixing with oils and greases in the surface water runoff in catch basins.
- Provisions for prevention of illicit discharges to the stormwater management system.
 The discharge into the stormwater system is not being violated, see attachment for illicit. discharges compliance.
- Training the staff or personnel involved with implementing Long-Term Pollution Prevention The owner shall develop policies and procedures for containing the illicit spilling of oils, soda, borr, paper and litter. These wastes provide a degrading of the water quality. The placement of

- BMP Maintenance: After construction it is the responsibility of the owner to perform maintenance. The cleaning of the components of the stormwater management system
- Pavement: The owner shall keep the pavement swept with a mechanical sweeper or hand swept semi-annually at a minimum.

 b. Catch Basins: Shall be cleaned by excavating, pumping or vacuuming. The sediment shall be disposed of off-site by the Owner. Inspect quarterly, remove silt
- Stormwater Infiltration Chamber Inlets and Outlets shall be inspected every three years, spring and fall, and cleaned in accordance with manufacturers
- Infiltration Chamber Separator Row shall be inspected every six months for the first year and annually thereafter. Inspect using the inspection port via a CCTV. Clean with high pressure water through culvert cleaning nozzle when sediment
- ecumulation reaches a depth of 3 inches or more. Infiltration Chambers: Inspect using the inspection port via a CCTV twice per year and after every major event for the first few months. A maintenance log shall be kept for all maintenance activities. See supplemental attachments included in this
- 5. Access Provisions: All of the components of the storm water system will be accessible
- Spill prevention and response plans Inventory materials to be present on-site during construction. Train employees and subcontractors in prevention and clean up procedures.

 All materials stored on site will be stored in their appropriate containers under a roof.

 Follow manufacturers recommendation for disposal of used containers.
- Store only enough product on site to do the job. On site equipment, fueling and maintenance measure inspect on-site vehicles and equipment daily for leaks.
 Conduct all vehicle and equipment maintenance and refueling in one location,
- away from storm drains. Perform major repairs and maintenance off site.
- Use drip pans, drip cloths or absorbent pads when replacing spent fuels. Collect spent fuels and remove from site.
- Spill Containment Kit to contain and clean-up spills that could occur on site. b. Never hose down "dirty" pavement or impermeable surfaces where fluids have
- spilled. Use dry clean up methods (sawdust, cat litter and/or rags and absorbent Sweep up dry materials immediately. Never wash them away or bury them.
- Clean up spills on dirt areas by digging up and properly disposing of contaminated Report significant spills to the Fire Department, Conservation Commission and
- Provisions for maintenance of lawns, gardens, and other landscaped areas
 Use only organic fertilizer. Dispose of clippings outside of the 100-foot buffer zone to the

signs and trash barrels with lids around the site would contribute to a clean water quality site

Q. List of Emergency contacts for implementing Long-Term Pollution Prevention Plan

95 Main Street, Suite 100 Westborough, MA 01581 PH: 508-962-1928 This shall be the contact until such time as the project is sold.

Estimated BMP Maintenance Costs The following prices are estimates of the costs associated with maintenance of the proposed site BMPs. Costs provided are only estimates and may not reflect actual costs to perform the work. Actual costs may vary depending on company/personnel performing the work. Actual costs

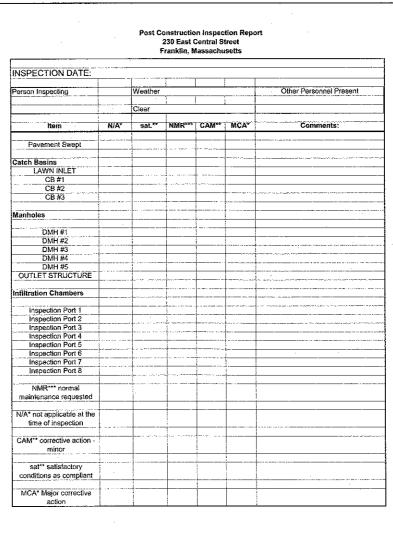
Catch basin cleanin

ENTIRE SEPARATOR ROW TO BE COVERED WITH CULTEC NO.416 NON-WOVEN GEOTEXTILE

PLACE 1 LAYER OF CULTEC No. 4809 WOVEN — GEOTEXTILE (7.5 [2.29m] WIDE ROLL) UNDER ALL SEPARATOR ROW CHAMBERS

may increase over time.

\$ 200 per catch basin per cleaning \$ 500 per cleaning \$ 750 purchase price



- PAVEMENT OR FINISHED GRADE

MIN, 95% COMPACTED FILI

PAVEMENT SUB-BASE (WHEN APPLICABLE)

CULTEC NO. 410 NON-WOVEN GEOTEXTILE

CULTEC No. 4800 WOVEN GEOTEXTILE (FOR SCOUR PROTECTION) TO BE PLACED BENEATH INTERNAL MANIFOLD FEATURE AND BENEATH ALL INLET/OUTLET PIPES

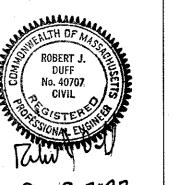
AROUND STONE, TOP AND SIDES

CULTEC HVLV FEED CONNECTOR

CULTEC HEAVY-DUTY CHAMBER

1-2 INCH [25-51 mm] WASHED, CRUSHED STONE TO SURROUND SYSTEM PERIMETER

MINIMUM 95% COMPACTED FILL



APPROVED DATE:

FRANKLIN PLANNING BOARD

BEING A MAJORITY

LEGAL NOTES

ARE PLOTTED AS A COMPILATION OF RECORD DOCUMENTS, MARKINGS AND OTHER OBSERVED EXIBENCE TO DEVELOR A VIEW OF THE UNDERGROUND UTILITIES AND SHOULD BE CONSIDERED APPROXIMATE LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY AND RELIABLY DEPICTED ADDITIONAL UTILITIES, NOT EVIDENCED BY RECORD DOCUMENTS OR OBSERVED PHYSICAL EVIDENCE, MAY EXIST, CONTRACTORS (IN ACCORDANCE WITH MASS.G.L. CHAPTER 82 SECTION 40 AS AMENDED) MUST CONTACT ALL UTILITY COMPANIES BEFORE EXCAVATING AND DRILLING AND CALL DIGSAFE AT 1(888)DIG-SAFE{7233}.

CONSTRUCTION ON THIS LAND IS SUBJECT TO ANY EASEMENTS, RIGHTS-OF-WAY, RESTRICTIONS, RESERVATIONS, OR OTHER LIMITATIONS WHICH MAY BE REVEALED BY AN EXAMINATION OF THE TITLE.

TAJ ESTATES OF FRANKLIN II, LLC 95 EAST MAIN STREET, SUITE 100 WESTBOROUGH, MA. 01581

DEED BOOK 40009 PAGE 445 ASSESSORS MAP 285 LOT 069

OWNER/APPLICANT

WESTBOROUGH, MA. 01581

MOHIUDDIN AHMED 95 MAIN STREET, SUITE 100

TAJ ESTATES OF FRANKLIN II SITE PLAN & SPECIAL PERMIT 230 EAST CENTRAL STREET FRANKLIN MASSACHUSETTS

CONSTRUCTION DETAILS

NOVEMBER 11, 2021

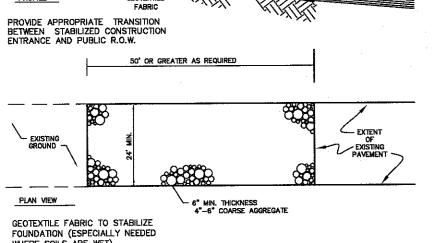
DATE	REVISION DESCRIPTION
01/17/22	TOWN COMMENTS - REV1
01/28/22	TOWN COMMENTS - REV2
02/17/22	TOWN COMMENTS - REV3
04/12/22	ADDED RET. WALL — REV4
05/31/22	TOWN COMMENTS - REV5
7/14/22	TOWN COMMENTS - REV6
9/12/22	ENDORSEMENT PLAN SET

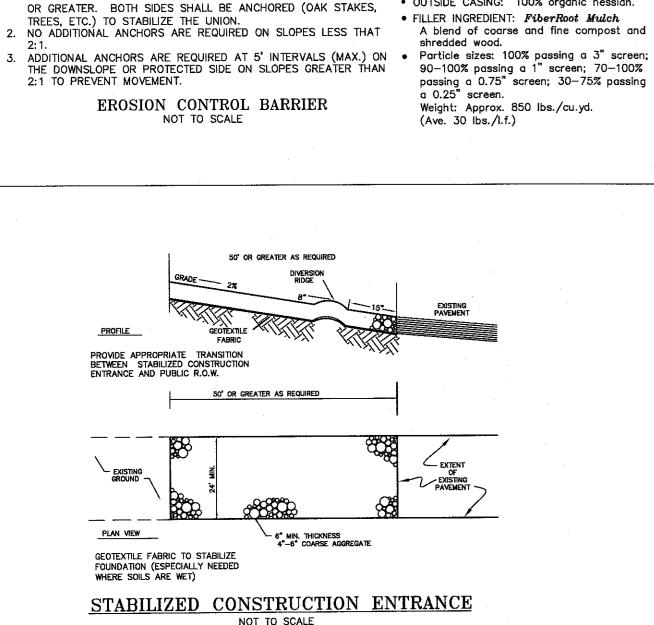


INGINEERING & LAND SURVEYING 55 WEST CENTRAL ST. PH. (508) 528-3221 FRANKLIN, MA 02038 FX. (508) 528-7921 www.gandhengineering.com

JOB NO. **F4478**

12 OF 12





SECTION TOP VIEW

*

2" OR GREATER TREE

OR
OTHER PRE-EXISTING,
EQUIVALENTLY
ANCHORED OBJECT.

I. WHERE SECTION ENDS MEET, THERE SHALL BE AN OVERLAP OF 6"

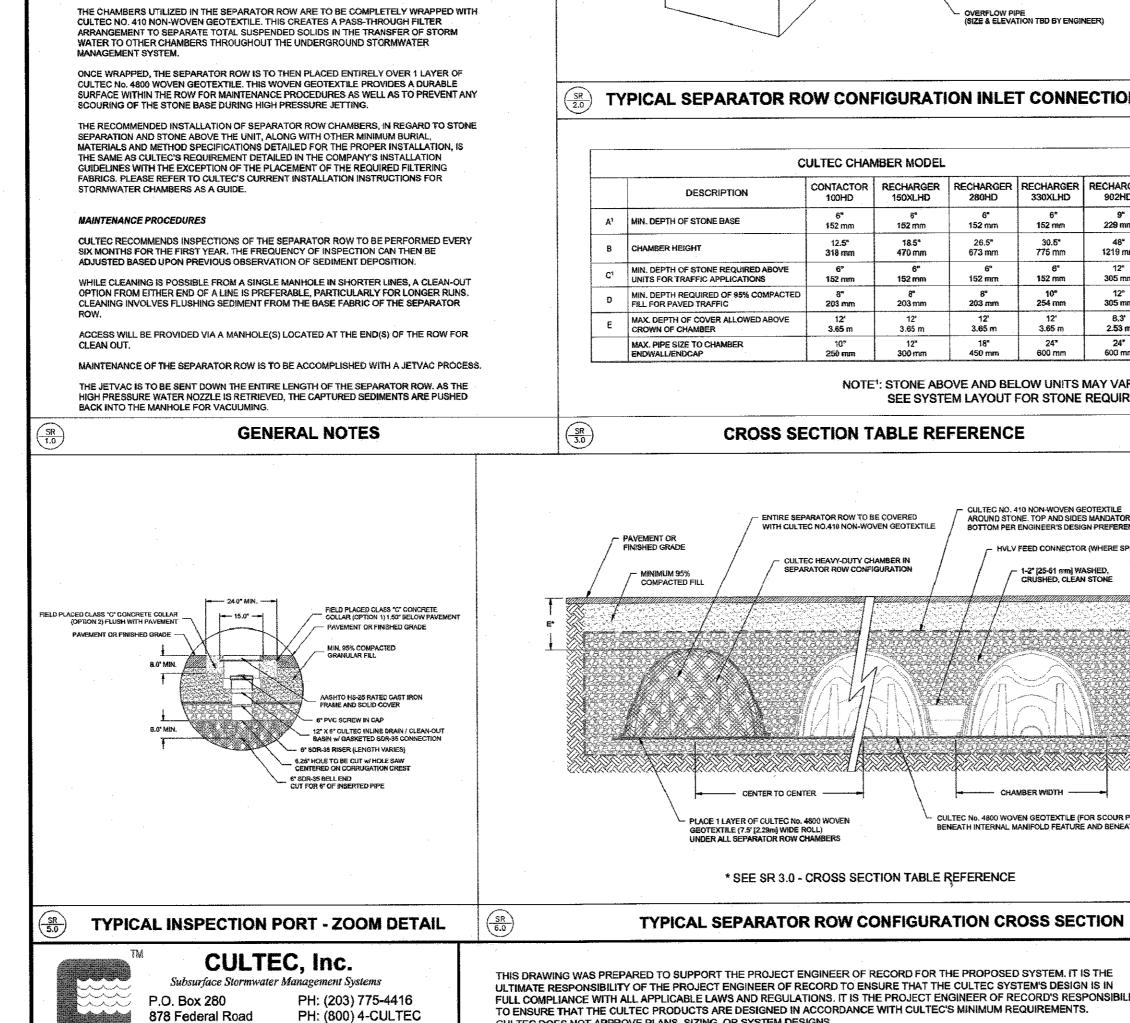
NOT TO SCALE

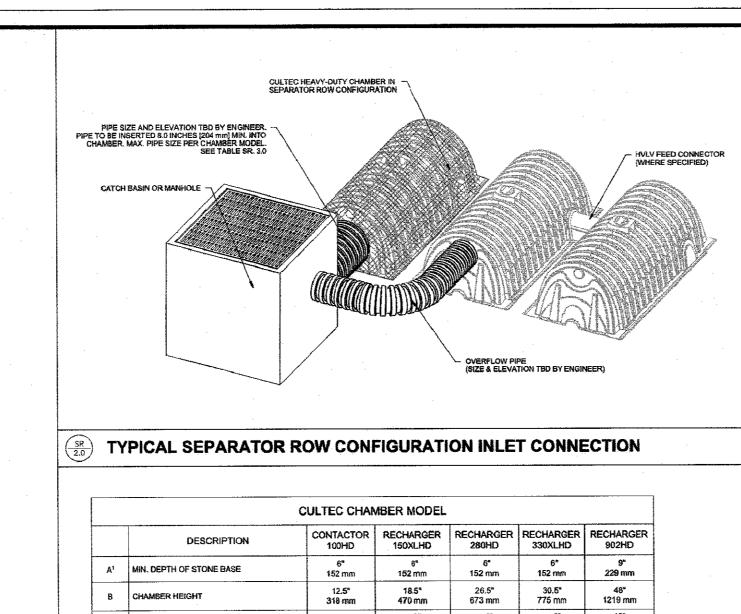
PROTECTED 18"

UNION TOP VIEW

Mulch Sock COMPONENTS:

OUTSIDE CASING: 100% organic hessian.





CULTEC CHAMBER MODEL						
	DESCRIPTION	CONTACTOR 100HD	RECHARGER 150XLHD	RECHARGER 280HD	RECHARGER 330XLHD	RECHARGER 902HD
1	MIN. DEPTH OF STONE BASE	6" 152 mm	6 ⁴ 152 mm	6" 152 mm	6" 152 mm	9" 22 9 mm
3	CHAMBER HEIGHT	12.5° 318 mm	18.5° 470 mm	26.5" 673 mm	30.5* 776 mm	48" 1219 mm
71	MIN. DEPTH OF STONE REQUIRED ABOVE UNITS FOR TRAFFIC APPLICATIONS	6° 152 mm	6" 152 mm	6° 152 mm	6° 152 mm	12" 305 mm
)	MIN. DEPTH REQUIRED OF 95% COMPACTED FILL FOR PAVED TRAFFIC	8" 203 mm	8" 203 mm	8° 203 mm	10" 254 mm	12" 305 mm
=	MAX. DEPTH OF COVER ALLOWED ABOVE CROWN OF CHAMBER	12' 3.65 m	12¹ 3.65 m	12¹ 3.65 m	12' 3.65 m	8,3° 2.53 m
	MAX. PIPE SIZE TO CHAMBER ENDWALL/ENDCAP	10° 250 mm	12" 300 mm	18" 450 mm	24* 600 mm	24* 600 mm

YSTEM. SEE SYSTEM LAYOUT FOR STONE REQUIREMENTS **CROSS SECTION TABLE REFERENCE**

CULTEC NO. 410 NON-WOVEN GEOTEXTILE AROUND STONE. TOP AND SIDES MANDATORY; BOTTOM PER ENGINEER'S DESIGN PREFERENCE - ENTIRE SEPARATOR ROW TO BE COVERED WITH CULTEC NO.418 NON-WOVEN GEOTEXT HVLV FEED CONNECTOR (WHERE SPECIFIED) CULTEC HEAVY-DUTY CHAMBER IN SEPARATOR ROW CONFIGURATION - CENTER TO CENTER - PLACE 1 LAYER OF CULTEC No. 4800 WOVEN GEOTEXTILE (7.5' [2.29m] WIDE ROLL)
UNDER ALL SEPARATOR ROW CHAMBERS

* SEE SR 3.0 - CROSS SECTION TABLE REFERENCE

CULTEC No. 4800 WOVEN GEOTEXTILE (FOR SCOUR PROTECTION) TO BE PLACED BENEATH INTERNAL MANIFOLD FEATURE AND BENEATH ALL INLET/OUTLET PIPES

SEPARATOR ROW **DETAIL SHEET**

SEPARATOR ROW DETAIL SHEET DATE: PROJECT NO:

* SEE SR 3.0 - CROSS SECTION TABLE REFERENCE

(SR) TYPICAL SEPARATOR ROW CONFIGURATION CROSS SECTION WITH INSPECTION PORT DETAIL

HIGH-FLOW BYPASS PIPE

TYPICAL SEPARATOR ROW CONFIGURATION PLAN VIEW

PIPE SIZE AND ELEVATION AS SPECIFIED. THE USE OF THE MAX, PIPE SIZE PER CHAMBER MODEL IS RECOMMENDED. SEE TABLE SR. 3.0

PLACE 1 LAYER OF CULTEC No. 4800 WOVEN SEOTEXTILE (7.5" [2.29m] WIDE ROLL) INDER ALL SEPARATOR ROW CHAMBERS

AVEMENT OR FINISHED GRADE

PH: (800) 4-CULTEC FX: (203) 775-1462

Brookfield, CT 06804

CULTEC www.cultec.com

tech@cultec.com

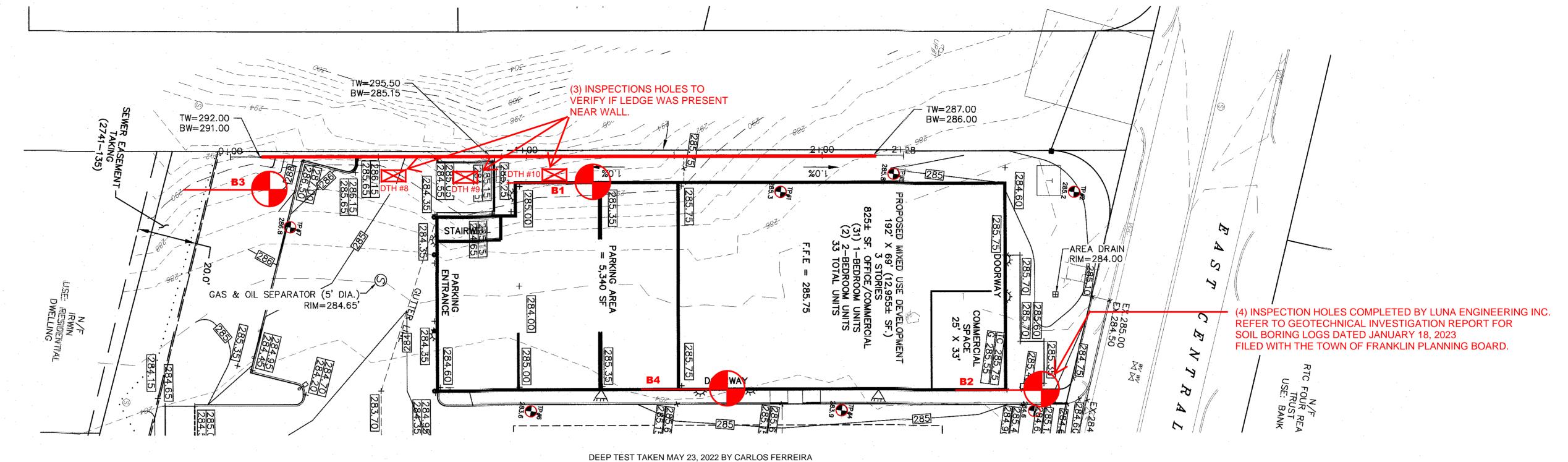
THIS DRAWING WAS PREPARED TO SUPPORT THE PROJECT ENGINEER OF RECORD FOR THE PROPOSED SYSTEM. IT IS THE ULTIMATE RESPONSIBILITY OF THE PROJECT ENGINEER OF RECORD TO ENSURE THAT THE CULTEC SYSTEM'S DESIGN IS IN FULL COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. IT IS THE PROJECT ENGINEER OF RECORD'S RESPONSIBILITY TO ENSURE THAT THE CULTEC PRODUCTS ARE DESIGNED IN ACCORDANCE WITH CULTEC'S MINIMUM REQUIREMENTS. CULTEC DOES NOT APPROVE PLANS, SIZING, OR SYSTEM DESIGNS.

TRAFFIC APPLICATION

- INLET STRUCTURE

24.0° [609 mm] MIN. SUMP

08/2018 DESIGNED BY: CULTEC, INC | CHECKED BY: TECH SHEET NO: SCALE: N.T.S.



PLAN REFERENCES:

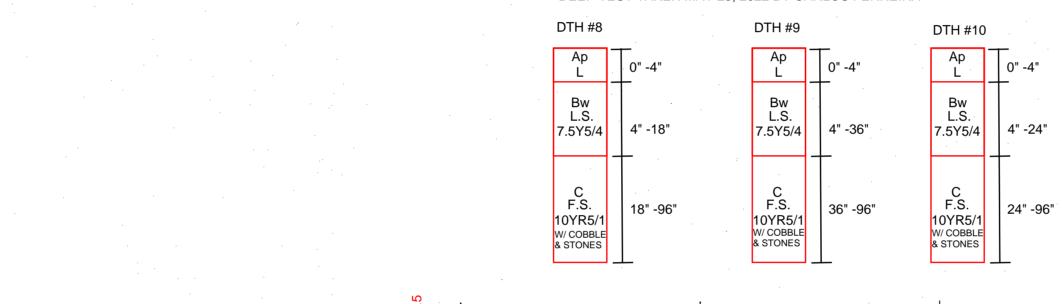
1. PLAN NO. 393-1997, PL. BK. 448

2. SEE ANR PLAN ENTITLED "PLAN OF LAND 230 EAST CENTRAL STREET FRANKLIN MASSACHUSETTS," DATED APRIL 30, 2018, PREPARED BY GUERRIERE & HALNON, INC, PLANNING BOARD ENDORSED MAY 7, 2018 ON WHICH THE INTERIOR DEED LINE IS DEPICTED AS "TO BE REMOVED."

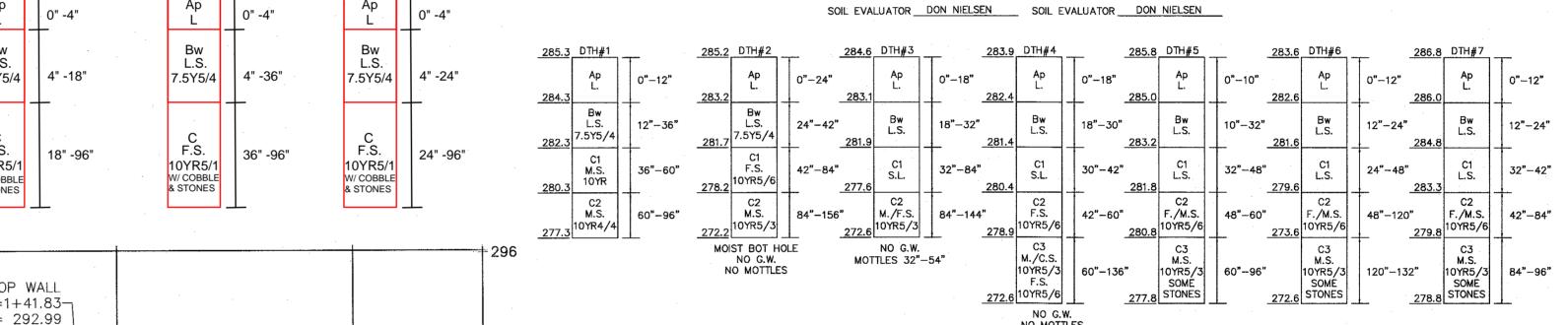
3. TAJ ESTATES OF FRANKLIN II, SITE PLAN & SPECIAL PERMIT 230 EAST CENTRAL STREET, FRANKLIN MA. PREPARED BY GUERRIERE & HALNON, INC. LAST REVISED 4/12/22

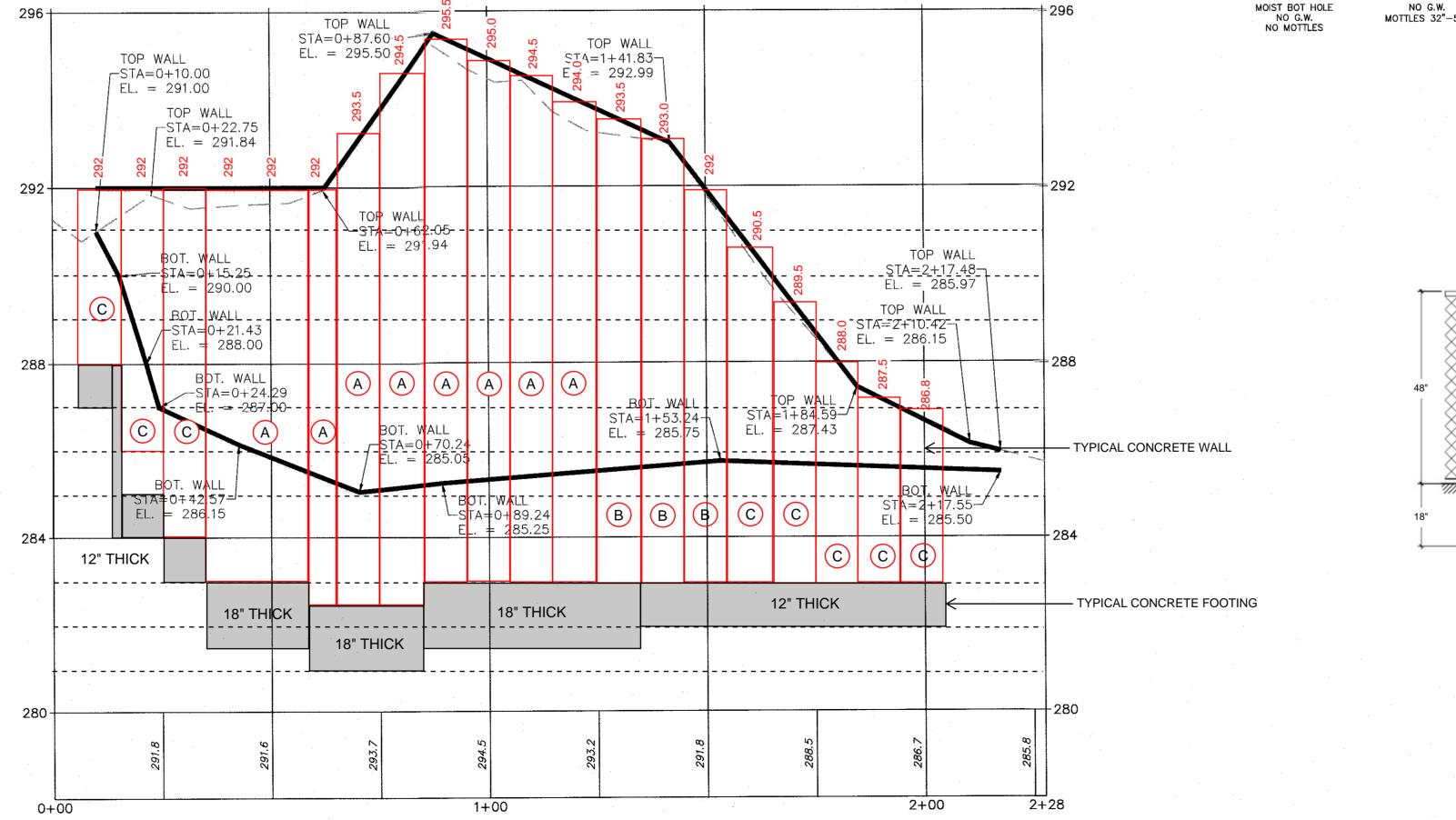
LEGEND

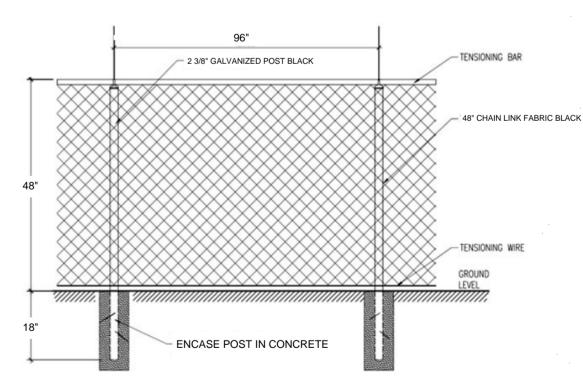
_					
	H	CATCH BASIN DRAIN MANHOLE		✡	LIGHT POLE
	(б	UTILITY POLE
	Œ	ELECTRIC MANHOLE		-0	GUY WIRE
	<u></u>	SEWER MANHOLE		-0-	SIGN
	0	MANHOLE		•	WETFLAG
	GV	GAS VALVE		رص ص	UTILITY POLE
-	GM	GAS METER		Þ	PROP. STREET LIGHTING
	ð	WATER VALVE		x 000.0	SPOT ELEVATION
	₩V				RIPRAP
	*50	WATER SHUT OFF VA	LVE		PVC FENCE
	*	FIRE HYDRANT	VCC - I	VERTICAL	CONCRETE CURB
		000	EXISTING	CONTOUR	
		D	EXISTING I	DRAIN LIN	E
	W		EXISTING WATER LINE		
			EXISTING	GAS LINE	
	s		EXISTING	SEWER LII	VE



ALIGNMENT - RET WALL 0+00 TO 2+27.55







C2 F./M.S.

48"-120"

F./M.S.

S

230 EAST CENTRAL FRANKLIN MA

ADDRESS:

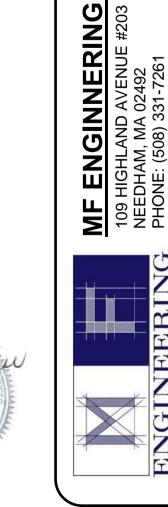
DESIGN

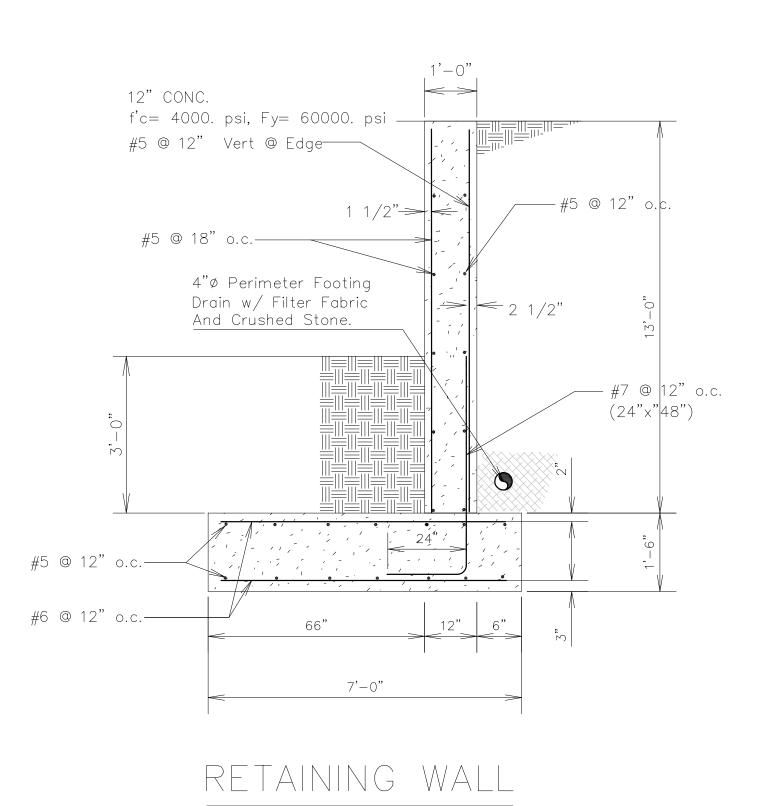
48" CHAIN LINK DETAIL

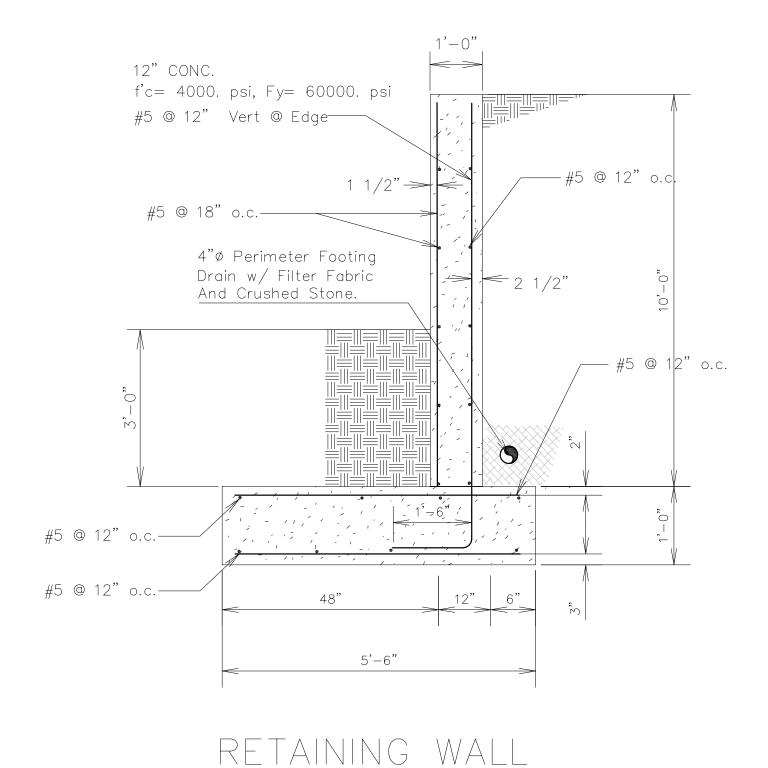
DEEP TESTS TAKEN 11/14/17 BY DN PERC. TESTS TAKEN 11/14/17 BY DN

NO G.W. NO MOTTLES



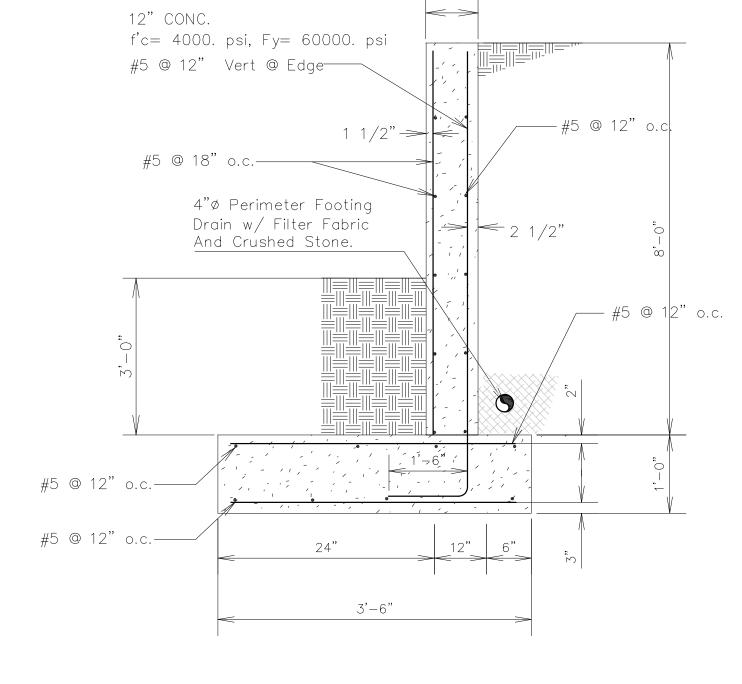






SECTION B

Scale: not to scale



RETAINING WALL

SECTION C Scale: not to scale

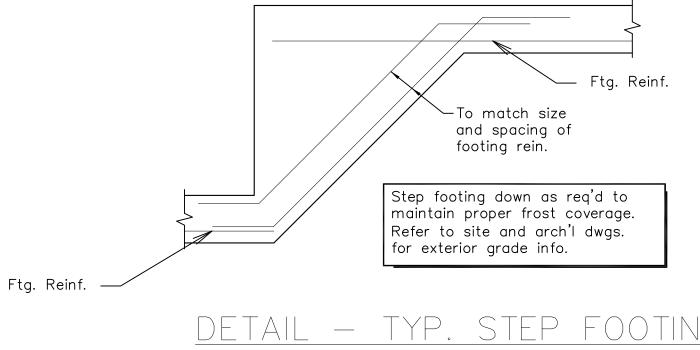
REINFORCED CONCRETE:

- I. All structural concrete shall be normal weight, stone aggregate concrete, and shall be proportioned, mixed and placed under the supervision of a control engineer in accordance with ACI 315, 318 and 301 standards, latest editions. Concrete shall develop the following 28 day strengths: a. Concrete Flatwork exposed to weather: 4000 psi
- (6% air entrained)

SECTION A

Scale: not to scale

- b. Exterior: walls, footings, piers and slabs: 4000 psi (6% air entrained)
- c. Slab on deck: 3500 psf (6% air entrained) d. All other concrete: 3000 psi
- 2. Reinforcing bars including stirrups shall conform to ASTM A615 with 60,000 psi yield strength with minimum anchorage and splice requirements for reinforcing in accordance with ACI 318, latest edition. Welded wire fabric shall conform to ASTM A185.
- 3. Concrete walls shall be cast in alternate panels not exceeding 100 ft. in length. The use of pour strips at splices in horizontal reinforcing may be used to extend the length of pours.
- 4. Slabs on grade shall be placed in accordance with the latest ACI recommendations.
- 5. Slabs on grade shall be placed on a layer of well graded granular material compacted to 95% of maximum dry density.
- 6. Provide concrete pads for mechanical equipment according to the requirements of the manufacturer and in accordance with the typical details, and mechanical drawings.
- 7. Detailing of reinforcement shall be according to the latest edition of ACI 315 "Details and Detailing of Concrete Structures".
- 8. Not all openings through concrete slabs and walls are shown on structural drawings. Openings indicated on the drawings or any additional openings or inserts required must be verified with respective trades before placement of concrete.
- 9. See architectural drawings for finishes, depressions, reglets, notches, and other architectural features. 10. Concrete exposed to the exterior shall be air entrained.
- II. Unless noted otherwise, provide the following clear cover for reinforcing steel:
- a. Footings: 3" b. Foundation Walls: 2"
- c. Interior Slabs: I"
- d. Exterior Slabs: 2"
- e. Columns, Piers or Pilasters: 1 1/2" to ties. 12. All exposed concrete to be rubbed to a smooth finish.
- 13. All Anchor Bolts shall be dryset (Set prior to placement) (wet setting is unacceptable).



DETAIL - TYP. STEP FOOTING

Scale: 1/2" = 1'-0"

INSTALLATION NOTES

- STRIP VEGETATION AND ORGANIC SOIL FROM WALL AND GEOSYNTHETIC ALIGNMENT.
- BENCH CUT ALL EXCAVATED SLOPES. • CONTRACTOR SHALL ENSURE TEMPORARY EXCAVATIONS ARE STABLE AND PROVIDE EXCAVATION
- SUPPORT IF NEEDED. • DESIGN ENGINEER SHALL VERIFY FOUNDATION SOILS AS BEING COMPETENT PER THE DESIGN
- LEVELING PAD SHALL CONSIST OF WELL GRADED ROAD BASE AGGREGATE, 3/4" CRUSHED, ANGULAR
- GRAVEL WITH SOME FINES
- DRAINAGE AGGREGATE SHALL CONSIST OF CLEAN ANGULAR GRAVEL, 3/4" DIAMETER WITH LESS THAN
- DRAINAGE PIPE SHALL BE PERFORATED OR SLOTTED PVC OR CORRUGATED HDPE PIPE.
- REINFORCED BACKFILL SHALL BE FREE OF DEBRIS, ORGANIC SOIL, AND EXPANSIVE SOILS. • COMPACTION SHALL BE TO 95% OF MAXIMUM STANDARD PROCTOR DENSITY. (ASTM D-698)

* COMPACTION WITHIN 3FT. OF WALL SHALL BE LIMITED TO HAND OPERATED EQUIPMENT.

- COMPACTION TESTS SHALL BE TAKEN AS THE WALL IS INSTALLED. THE MINIMUM NUMBER OF TESTS SHALL BE DETERMINED BY THE SITE SOILS ENGINEER.
- CONTRACTOR SHALL SLOPE SITE GRADES TO DIRECT SURFACE RUNOFF AWAY FROM WALL AT END OF EACH DAY TO AVOID WATER DAMAGING THE WALL WHILE UNDER CONSTRUCTION.
- ANY SURFACE DRAINAGE FEATURES, FINISH GRADING, PAVEMENT, OR TURF SHALL BE INSTALLED IMMEDIATELY AFTER WALL IS COMPLETED.
- IF SITE AND SOIL CONDITIONS, WALL GEOMETRY, OR WALL LOADINGS ARE DIFFERENT THAN IN THE DRAWINGS AND THE DESIGN PARAMETERS, THE CONTRACTOR MUST CONTACT DESIGN ENGINEER PRIOR TO PROCEEDING WITH THE CONSTRUCTION OF THE WALL.

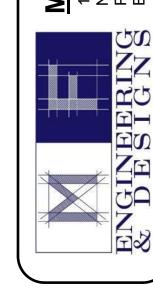
DESIGN PARAMETERS AND PROVISIONS

• THE DESIGN OF THE WALL SYSTEM ASSUMES THE FOLLOWING PARAMETERS:

	FRICTION	UNIT
SOIL CONDITIONS	ANGLE	WEIGHT
REINFORCED BACKFILL	30	125 LBS/CU.FT.
RETAINED BACKFILL	32	125 LBS/CU.FT.
FOUNDATION SOIL	34	130 LBS/CU.FT.
10/0000071710 1010110		

- HYDROSTATIC LOADING = NONE SURCHARGE LOAD AT TOP OF WALL = 0 LBS/SQ.FT. ALLOWABLE BEARING CAPACITY = 4,000 LBS/SQ.FT.
- THE WALL DESIGN ENGINEER ASSUMES NO LIABILITY FOR INTERPRETATION OF SUBSURFACE CONDITIONS, SUITABILITY OF SOIL DESIGN PARAMETERS AND INTERPRETATIONS OF SUBSURFACE GROUNDWATER
- THE OWNER OR OWNER'S REPRESENTATIVE IS RESPONSIBLE FOR ENSURING THE CONDITIONS STATED ABOVE ARE ACCURATE PRIOR TO AND DURING CONSTRUCTION.
- THE OWNER OR OWNER'S REPRESENTATIVE IS RESPONSIBLE FOR ENSURING THE WALL DESIGN ENGINEER IS CONTACTED IF CONDITIONS VARY.





BY:

230 EAST CENTF FRANKLIN MA

SS:

ADDRE

DESIGN INC

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ENGINNERING