Application Packet for PAA 2026-02 - Franklin Hampshire Habitat for Humanity – To review the updated site plan relative to proposed layout/design changes to the water/sewer connections, stormwater, and parking; and to review the updated landscape plan pursuant to conditions 1 and 2 of the previously approved PAA 2026-1 Plan Approval Under Smart Growth Overlay 40R Districts, located at 0 First Street (Assessor's Map/Parcel 04-0-0031) Neighborhood Business (NB) Zoning District & Smart Growth Overlay Zoning Sub-District B

From: Megan McDonough
To: Maureen Pollock
Cc: Terry Reynolds
Subject: Re: Updated site plan and landscape plan
Date: Thursday, November 12, 2026 12:12:29 PM
Attachments: Site Plan Set 10-15-26.pdf
20261019-Montague HFH-Planting Plan-1.pdf

Hello Maureen -

- For the landscaping plan, we have added additional tree planting and a plan to remove one tree near first street that will be negatively impacted by trenching.
- For the Site plan you will see:
  - Individual water and sewer connections into the road way
  - A stone berm at the base of the shady glen slope
  - An adjustment of the inlet for the large rain garden at the shady glen slope so that it is in the public ROW
  - An adjustment to the sidewalk layout to accommodate the drainage inlet location
  - The addition of a concrete barricade at the future public parking area.
  - A shift of the sewer line location for the one-story house to move that trench further from the trees we are seeking to preserve

I think that summarizes the main changes. **Terry, did I miss anything?**

Can the DPW confirm their plan to widen the alley on the second street side as discussed during our on site meeting last month?

Thanks,

Megan McDonough (She/her), Executive Director
(NEW NAME!) Franklin Hampshire Habitat for Humanity
(NEW EMAIL!) Megan@fhhabitat.org, 413-586-5430 x 106

From: Maureen Pollock <mpollock@montague-ma.gov>
Sent: Thursday, November 12, 2026 11:51 AM
To: Megan McDonough <megan@fhhabitat.org>
Subject: RE: Updated site plan and landscape plan

Hi Megan,

Could you please describe what are the changes to the updated site plan?

From:	superintendent@TurnersFallsWater.com
To:	Maureen Pollock; Bill Ketchen - Building Inspector; chief@turnersfallsfire.org; Kyle Cogswell; Samuel Urkiel - DPW Superintendent; Ashley Gough - Health Director
Cc:	Walter Ramsey; Chris Nolan-Zeller
Subject:	RE: FW: Updated site plan and landscape plan
Date:	Tuesday, November 17, 2026 12:14:22 PM

Hello everyone,

Maureen, these plans look great from a water stand point. I like the individual taps/water lines for each home much better. I'm assuming I don't need to worry about these following comments or concerns until the next phases of the project, but I'll want to approve any materials and fittings used for the water lines, and also make sure they understand the process, the fee, and Water Dept. responsibilities vs. contractor responsibilities for the water taps. Again, I'm assuming that gets hashed out in the following phases but if anyone has questions they can reach me. Thank you.

Jeff Hildreth
Superintendent

Turners Falls Water Department
Cell: (413) 219-0982
Office: (413) 863-4542
Fax: (413) 863-3175

From: "Maureen Pollock" <mpollock@montague-ma.gov>
Sent: 11/17/26 11:45 AM
To: "Bill Ketchen - Building Inspector" <BuildingInspector@montague-ma.gov>,"Jeff Hildreth" <superintendent@turnersfallswater.com>,"chief@turnersfallsfire.org" <chief@turnersfallsfire.org>,"Kyle Cogswell" <kcogswell@turnersfallsfire.org>,"Samuel Urkiel - DPW Superintendent" <samuelu@montague-ma.gov>,"Ashley Gough - Health Director" <healthdir@montague-ma.gov>
Cc: "Walter Ramsey" <WalterR@montague-ma.gov>,"Chris Nolan-Zeller" <ChrisN@montague-ma.gov>
Subject: FW: Updated site plan and landscape plan

Hi everyone,

Habitat for Humanity has updated its site plan and landscape plan for Planning Board review and approval. Please see the attached plans and Megan McDonough's description of the proposed changes below. I have highlighted her description in yellow.

Please review the updates and send me any comments or questions so I can share them with the applicant and the Planning Board.

The Board is scheduled to review these proposed changes at its meeting on Tuesday, November 24. If possible, please send me your comments or questions by Monday so I have time to

distribute them in advance.

Thanks,

Maureen

Maureen Pollock (she/her)

Planning Director

Town of Montague

Department of Planning & Conservation

1 Avenue A

Turners Falls, MA 01376

Phone: (413) 863-3200 x 112

Web: www.montague-ma.gov/planning

Email: mpollock@montague-ma.gov

From: Megan McDonough <megan@fhhabitat.org>
Sent: Thursday, November 12, 2026 12:12 PM
To: Maureen Pollock <mpollock@montague-ma.gov>
Cc: Terry Reynolds <terry@treynoldsengineering.com>
Subject: Re: Updated site plan and landscape plan

Hello Maureen -

- For the landscaping plan, we have added additional tree planting and a plan to remove one tree near first street that will be negatively impacted by trenching.
- For the Site plan you will see:
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I think that summarizes the main changes. **Terry, did I miss anything?**

Can the DPW confirm their plan to widen the alley on the second street side as discussed during our on site meeting last month?

Thanks,

Megan McDonough (She/her), Executive Director

(NEW NAME!) Franklin Hampshire Habitat for Humanity

(NEW EMAIL!) Megan@fhhabitat.org, 413-586-5430 x 106

From: Maureen Pollock <mpollock@montague-ma.gov>
Sent: Thursday, November 12, 2026 11:51 AM
To: Megan McDonough <megan@fhhabitat.org>
Subject: RE: Updated site plan and landscape plan

Hi Megan,

Could you please describe what are the changes to the updated site plan?

Sincerely,

Maureen

Maureen Pollock (she/her)

Planning Director

Town of Montague

Department of Planning & Conservation

1 Avenue A

Turners Falls, MA 01376

Phone: (413) 863-3200 x 112

Web: www.montague-ma.gov/planning

Email: mpollock@montague-ma.gov

From: Megan McDonough <megan@fhhabitat.org>
Sent: Wednesday, October 28, 2026 6:26 PM
To: Maureen Pollock <mpollock@montague-ma.gov>
Subject: Fw: Updated site plan and landscape plan

Hello Maureen -

I wanted to check to see if you had these updated plans. What meeting can we attend?

Thanks,

Megan McDonough (She/her), Executive Director

(NEW NAME!) Franklin Hampshire Habitat for Humanity

(NEW EMAIL!) Megan@fhhabitat.org, 413-586-5430 x 106

From: Megan McDonough
Sent: Thursday, October 22, 2026 6:13 PM
To: Maureen Pollock <mpollock@montague-ma.gov>
Subject: Updated site plan and landscape plan

Hello Maureen -

Please find attached an updated site plan and landscape plan. When would be a good time for

me to present these to the planning board?

Thank you,

Megan McDonough, Executive Director, (She/her)

Franklin Hampshire Habitat for Humanity

(formerly Pioneer Valley Habitat for Humanity)

Mailing Address: PO Box 60642 Florence, MA 01062

NEW Office Location: 221 Pine St., Suite 159, Florence, MA

Phone: 413-586-5430 x 106

NEW EMAIL! >>> megan@fhhabitat.org • www.fhhabitat.org

Building strength, stability and self-reliance through affordable homeownership

PLANTING LEGEND

- PROPERTY LINE
- SETBACKS
- PLANT BED
- LAWN
- CONCRETE
- ASPHALT
- WOOD DECK
- STAIRS
- TREES (CCB)
- SHRUBS (IGS, ARR)
- PERENNIALS (GMM, GTR, AVI)

PLANT SCHEDULE					
ID	**QTY**	**LATIN NAME**	**COMMON NAME**	**SCHEDULE SIZE**	**COMMENTS**
TREES					
AAB	3	Amelanchier x grandiflora'Autumn Brilliance'	Autumn Brilliance Serviceberry	5-6' ht.	multistem, specimen
ARR	1	Acer rubrum 'Red Sunset'	Red Sunset Red Maple	1.5-2" cal., B&B	specimen
CCB	3	Cornus florida 'Cherokee Brave'	Cherokee Brave Dogwood	1.5-2" cal., B&B	specimen
TNP	17	Thuja occidentalis 'North Pole'	North Pole Arborvitae	5-6' ht, B&B	
SHRUBS					
IGS	5	Ilex glabra 'Shamrock'	Shamrock Holly	#7 cont.	
PERENNIALS					
AVI	4	Anemone virginiana	Virginia Anemone	#1 cont.	
GMM	9	Geranium maculatum	Spotted Cranesbill	#1 cont.	
GTR	12	Gillenia trifoliata	Bowman's Root	#1 cont.	
SEED MIXES					
Lawn	Seed mix shall contain 35% Black Beauty Original Tall Fescue Blend, 30% Perennial Ryegrass, 30% Kentucky Bluegrass, and 5% microclover.				
Rain Garden	Seed mix shall be Short Sedge Meadow Mix by Prairie Moon Nursery.				

GREAT FALLS, FIRST STREET PROJECT

FIRST STREET, TURNERS FALLS, MA

General Notes:

1) Existing conditions and topographic data are from the survey from the Spring of 2023, prepared by Holmberg and Howe Land Surveyors (413) 529-1700.

2) True and current conditions may differ from those shown on the plan. Contractor shall verify current conditions in the field prior to construction and notify Owner's Representative of significant discrepencies.

3) Proposed conditions referenced in the landscape plan are from the plans dated 9 June, 2026 prepared by T Reynolds Engineering (413) 387-8078.

4) Do not scale drawings.

Planting Notes:

1) The locations of existing underground utilities are shown in an approximate way only and have not been independently verified by the owner or its representative. The contractor shall determine the exact location of all existing utilities before commencing work, and agrees to be fully responsible for any and all damages which may be caused by the contractor's failure to exactly locate and preserve all underground utilities.

2) Any discrepancies between drawings, specifications, and site conditions shall be reported immediately to the owner's representative for clarification and resolution prior to bidding or construction.

3) All work conducted within public rights-of-way shall conform to the requirements and specifications of the municipal highway department and department of public works standards.

4) Prior to construction, the contractor shall notify Digsafe and be provided with a digsafe number indicating that all existing utilities have been located and marked.

5) Contractor shall supply all plant material in quantities sufficient to complete all plantings shown on this drawing.

6) All plant material shall meet the guidelines established by the American Association of Nurserymen.

7) All plants should be balled in burlap or containerized.

8) Plant species and cultivar substitutions based on availability at time of plant sourcing must be submitted to Owner's Representative in writing.

9) All plants are subject to the approval of the Owner's Representative both at the nursery and at the site.

10) All plant locations shall be reviewed and approved by Owner's Representative prior to installation.

11) Mulch for planted areas to be aged pine bark: partially decomposed and dark brown in color.

12) Safe use of mulch is regulated through 527 CMR 1.00 section 10.13.10.4. The regulation prohibits the new application of mulch within 18" around combustible exteriors of buildings, such as wood or vinyl, but not brick or concrete.

13) Planting soil mix shall be comprised of loam and finished compost proportioned 5 C.Y. to 1 C.Y. or equivalent.

14) Any changes to plant species, plant size, or plant quantity necessary at the time of selection due to availability must be approved by the Owner's Representative.

15) All areas of the site which have been disturbed and not otherwise developed shall be loamed with a minimum depth of 6" topsoil and seeded.

16) contractor shall begin maintenance immediately after planting and continue until final written acceptance of plant material.

17) The landscape contractor shall guarantee all plant materials for one (1) full year from date of acceptance.

ISSUE	DATE	DESCRIPTION
1	07.16.2026	PERMIT SET
2	10.19.2026	PLANTING PLAN
3		
4		
5		
6		
7		
8		
9		
10		

SCALE: 1/16" = 1'-0"

0 8 16 24 40 FT

PLANTING PLAN

SFLA

STUDIO FARM LANDSCAPE ARCHITECTS, LLC
65 NORTHWEST ROAD, WESTFIELD, MA 01085
T. 413 378 2370
WWW.STUDIOFARMLA.COM

MASSACHUSETTS CHRISTOPHER D. RAMSAY NO. 4492 REGISTERED LANDSCAPE ARCHITECT

DATE: 10.19.2026

DRAWN BY: CH RA

REVIEWED BY: CH RA

L-0.1

PERMITTING, NOT FOR CONSTRUCTION

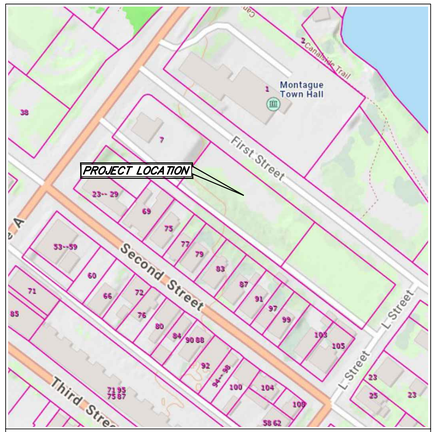
Proposed Development Plan

Great Falls, First Street Project
First Street, Turners Falls, MA

PREPARED FOR

Franklin Hampshire Habitat for Humanity

221 Pine Street
Florence, MA 01062



SOURCE: MassMapper

July 2026

BY

T Reynolds Engineering

Civil Engineers
Planning, Design, and Permitting Services

ph: 413 387-8078
email: terry@treynoldsengineering.com
www.treynoldsengineering.com

152 Maplewood Terrace
Florence, MA 01062

DRAWING INDEX

SHEET NO.	SHEET NAME	ISSUE DATE	REVISION DATE
1	TITLE SHEET	10/15/26	
2	EXISTING CONDITIONS	10/15/26	
3	CONSTRUCTION NOTES	10/15/26	
4	LAYOUT AND MATERIALS PLAN	10/15/26	
5	GRADING AND UTILITIES PLAN	10/15/26	
6	CONSTRUCTION DETAILS	10/15/26	
7	CONSTRUCTION DETAILS	10/15/26	

Dial Before You Dig

Gas, electric, telephone and cable television companies have underground pipes and cables in places you'd least expect.

So it's a good idea for anyone who does any excavating to check beforehand to make sure there is no danger of damaging these facilities.

In fact, state laws in Massachusetts, New Hampshire, Rhode Island and Vermont make it mandatory for anyone doing excavating work to notify utility companies well ahead of time. (Rhode Island and Vermont require 48 hours prior notice and the other two states require 72 hours.)

The utility companies have simplified this notification process by providing a toll-free number. One call to this "Dig Safe" line satisfies the law and enables all of the utilities to receive the information.

In Massachusetts, the number is 811

In Maine, New Hampshire, Vermont and Rhode Island, the number is 811

If there are underground facilities in your area, the utility company will identify their location for you. This will eliminate the possibility of damage and save you the expense of costly repairs.

So be on the safe side and dial before you start to dig.

DIG SAFE

Permitting, Not for Construction

NOTES:
1. THE PREMISES AND EXISTING CONDITIONS SHOWN HEREON ARE COMPILED FROM A LAND SURVEY FOR PIONEER VALLEY HABITAT FOR HUMANITY BY HOLMBERG AND HOWE LAND SURVEYORS DURING THE SPRING OF 2023.

UTILITY NOTE

LOCATIONS OF UTILITIES SHOWN HEREON ARE THE RESULT OF SURFACE EVIDENCE AS LOCATED BY FIELD SURVEY, PLANS OF RECORD, INFORMATION FURNISHED BY THE RESPECTIVE UTILITY COMPANIES. AND OTHER AVAILABLE SOURCES. THIS PLAN DOES NOT NECESSARILY DEPICT THE EXACT LOCATIONS OF ALL UTILITIES WHICH MAY EXIST AT THIS TIME WITHIN THE PREMISES SURVEYED. CONTRACTORS SHOULD CONTACT DIG SAFE (811) PRIOR TO ANY DIGGING.

DISCREPANIES WERE FOUND BETWEEN WHAT WE OBSERVED IN THE FIELD FOR THIS SURVEY AND A PLAN ENTITLED "TOWN OF MONTAGUE FY19 COMPLETE STREETS GRANT PROJECT SITE 3 CONSTRUCTION PLANS SHEET 1 OF 1" WHICH HAVE NOT BEEN RESOLVED.

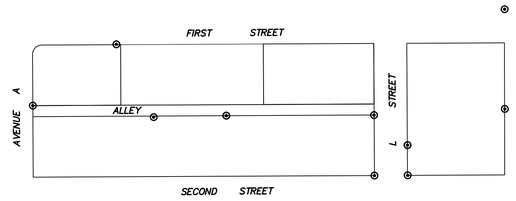
MERIDIAN OF PLAN BOOK 34 PAGE 24

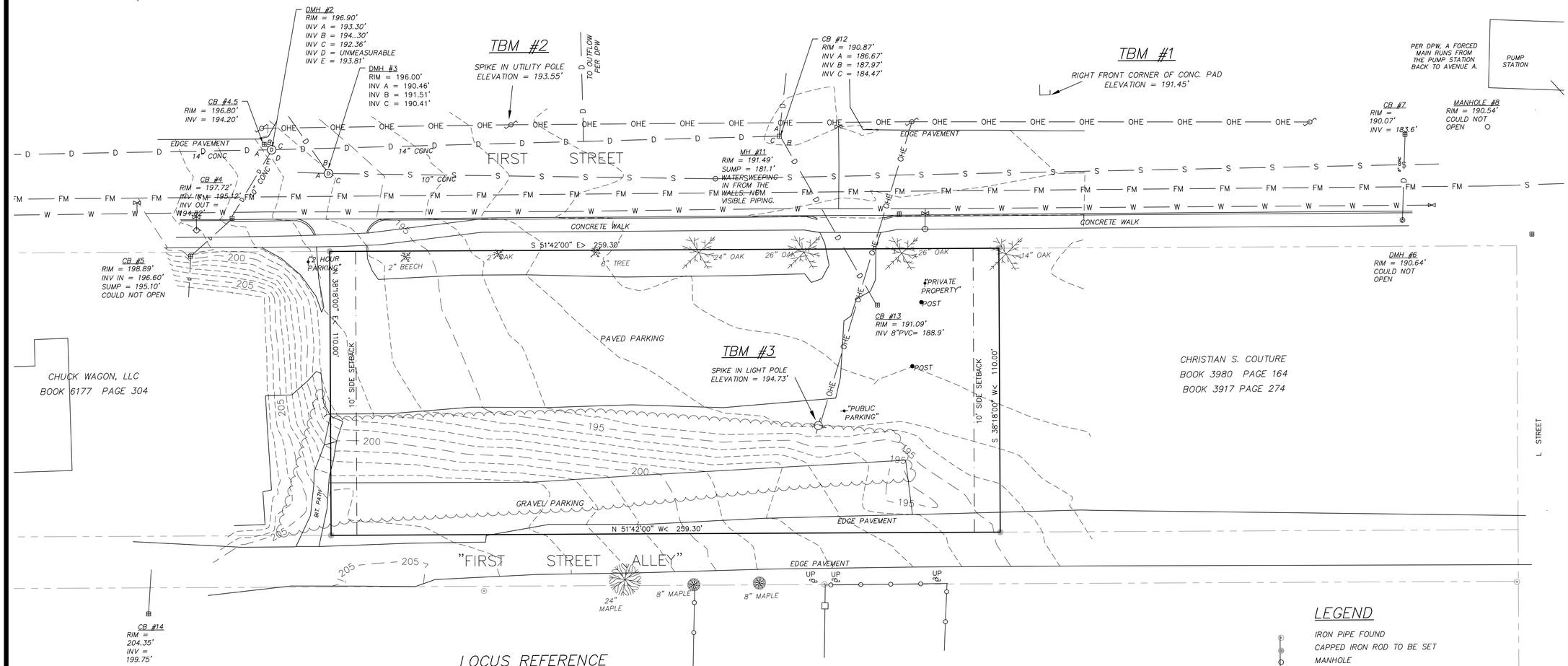
PROJECT BENCHMARK

MASS DOT ID: 11100
ELEVATION = 186.40' NAVD 1988

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

VICINITY MAP





LOCUS REFERENCE

TOWN OF MONTAGUE
BOOK 1165 PAGE 584

SEE BOOK 863 PAGE 399 FOR COMPLETE DESCRIPTION.
EXCEPTING A 50'x110' STRIP CONVEYED TO SAMUEL I. COUTURE IN BOOK 1465 PAGE 9.

28,523 SF±

LEGEND

- IRON PIPE FOUND
- CAPPED IRON ROD TO BE SET
- MANHOLE
- SEWER MANHOLE
- DRAIN MAN HOLE
- CATCH BASIN
- WATER GATE
- HYDRANT
- UTILITY POLE
- LIGHT POLE
- SIGN
- OHE — OVERHEAD WIRES
- S — S — SEWER LINE
- D — D — DRAIN LINE
- W — W — WATER LINE
- CHAIN LINK FENCE
- TREE LINE

Permitting, Not for Construction

T Reynolds Engineering
Civil Engineers
Planning, Design, and Permitting Services
ph: 413 387-8078 fax: 413 727-3477
email: terry@treynoldsengineering.com
www.treynoldsengineering.com
152 Maplewood Terrace
Florence, MA 01062

Existing Conditions Plan

Great Falls, First Street Project
First Street
Turners Falls, MA

COMMONWEALTH OF MASSACHUSETTS
TERRENCE R. REYNOLDS
NO. 46286
CIVIL
REGISTERED PROFESSIONAL ENGINEER

PREPARED FOR:
Franklin Hampshire Habitat for Humanity
221 Pine Street
Florence, MA 01062

REVISIONS:	DATE:

UNAUTHORIZED ALTERATION OF THIS DOCUMENT IS A VIOLATION OF MASSACHUSETTS STATE LAW

PROJECT NO: 25-1101
DRAWING: Eng Plan 10-15-26
ISSUE DATE: 10/15/26
SCALE: 1" = 20'
SHEET NO.
2 OF 7

EROSION & SEDIMENT CONTROL NOTES

MANAGEMENT STRATEGIES

1. CONSTRUCTION TRAFFIC SHALL BE LIMITED TO THE CONSTRUCTION ENTRANCE.
2. CONSTRUCTION SEQUENCE SHALL BE PHASED TO AVOID LEAVING LARGE AREAS EXPOSED FOR LONG PERIODS OF TIME.
3. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES ARE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. EXCEPTIONS TO THE STABILIZATION SCHEDULE ARE:

   1. WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASES IS PRECLUDED BY SNOW COVER, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE.

   2. WHERE CONSTRUCTION ACTIVITY WILL RESUME ON A PORTION OF THE SITE WITHIN 21 DAYS FROM WHEN ACTIVITIES CEASED, (E.G., THE TOTAL TIME PERIOD THAT CONSTRUCTION ACTIVITY IS TEMPORARILY CEASED IS LESS THAN 21 DAYS).

   TEMPORARY STABILIZATION MEASURES SHALL INCLUDE SEEDING WITH A MIX OF WINTER AND PERENNIAL RYE GRASS AND MULCHING WITH HAY OR STRAW. THESE MEASURES INCLUDE STABILIZATION OF SOIL STOCKPILES WITH GRASS.

   PERMANENT STABILIZATION MEASURES SHALL INCLUDE SEEDING AND MULCHING ACCORDING TO PLAN SPECIFICATIONS WITHIN 14 DAYS OF STOP OF CONSTRUCTION ACTIVITY AT ANY PORTION OF THE SITE.

4. SEDIMENTATION CONTROL MEASURES SHALL BE INSPECTED CONTINUOUSLY, ESPECIALLY FOLLOWING STORM EVENTS TO LOCATE FAILING CONTROL MEASURES AND CONDUCT ROUTINE MAINTENANCE OPERATIONS.
5. THE CONSTRUCTION SUPERINTENDENT SHALL INFORM ALL ON-SITE WORKERS OF THE SEDIMENTATION CONTROL PROGRAM.

VEGETATIVE CONTROL PRACTICES

1. TOPSOIL STOCKPILING: TOPSOIL SHALL BE STRIPPED FROM AREAS TO BE DISTURBED AND STOCKPILED FOR LATER USE. STOCKPILE LOCATION SHALL BE APPROVED BY THE OWNER AND ENGINEER/LANDSCAPE ARCHITECT AND BE WITHIN LIMIT OF WORK.
2. TEMPORARY SEEDING: THE TEMPORARY SEDIMENT BASIN, TOPSOIL STOCKPILE AND ROUGH GRADED AREAS SHALL BE SEEDED WITH WINTER RYE AT A RATE OF 30 LBS. PER ACRE. ANY SOILS THAT ARE LEFT EXPOSED AND UNDISTURBED FOR MORE THAN 30 DAYS SHALL BE TEMPORARILY SEEDED.

A. SITE PREPARATION
   - COMPLETE ALL ROUGH GRADING ACTIVITIES
   - REMOVE ALL ROCKS AND DEBRIS LARGER THAN 3" IN DIAMETER FROM AREAS TO BE TEMPORARILY SEEDED. -EVENLY APPLY LIME TO ACHIEVE A PH VALUE OF 6.0.
   - EVENLY APPLY 14 LBS. OF 5-10-10 ANALYSIS FERTILIZER TO A DEPTH OF 4" USING SUITABLE EQUIPMENT.
   - SEEDBED IS TO BE LEFT IN FIRM AND SMOOTH CONDITION.
   - THE LAST TILLAGE OPERATION SHALL BE PERFORMED ACROSS THE SLOPE.

B. ESTABLISHMENT
   - EVENLY APPLY SEED IN ACCORDANCE WITH THE SPECIES AND RATE INDICATED ABOVE BY MEANS OF BROADCASTING OR HYDROSEEDING.
   - UNLESS HYDROSEEDED, COVER SEED WITH 1/4" TO 1/2" OF TOPSOIL
   - APPLY MULCH OR EROSION CONTROL BLANKET IMMEDIATELY FOLLOWING SEEDING.
   - VERIFY SEEDING DATES WITH ENGINEER/LANDSCAPE ARCHITECT. IF ENGINEER/LANDSCAPE ARCHITECT DETERMINES THAT SEED CANNOT BE APPLIED DUE TO CLIMATE, TOPSOIL SHALL NOT BE SPREAD AND MULCHING SHALL BE APPLIED TO THE EXPOSED SURFACE TO STABILIZE SOILS UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
   - PERMANENT SEEDING SHALL BE APPLIED BETWEEN APRIL 15 AND SEPTEMBER 30. TEMPORARY SEEDING SHALL BE APPLIED TO ALL DISTURBED AREAS OUTSIDE THIS TIME FRAME, UPON APPROVAL BY THE ENGINEER/LANDSCAPE ARCHITECT.

C. MAINTENANCE
   - ALL SEEDED/MULCHED AREAS SHALL BE INSPECTED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHALL BE REPAIRED AS NECESSARY.

NONSTRUCTURAL CONTROL PRACTICES

1. SCARIFICATION: EXPOSED SLOPES EXCEEDING 4:1 SHALL BE SCARIFIED AT RIGHT ANGLES TO THE SLOPE. PROVIDE PERIODIC UPGRADING OF SERRATIONS DURING EXPOSED PERIOD UNTIL VEGETATION IS ESTABLISHED. PROVIDE VEGETATIVE COVER AS SOON AS POSSIBLE.
2. STRAW MULCH: STRAW MULCH SHALL BE APPLIED IN CONJUNCTION WITH TEMPORARY/PERMANENT SEEDING AND TO GRADED AREAS WHICH REMAIN EXPOSED OUTSIDE OF RECOMMENDED SEEDING DATES. MULCH SHALL BE APPLIED AT 90 LBS. PER 1000 S.F. CONTRACTOR SHALL PERIODICALLY INSPECT AND REAPPLY AS NECESSARY, PARTICULARLY FOLLOWING SIGNIFICANT STORM EVENTS.
3. TOPSOIL: DISTURBED AREAS SHALL BE TOPSOILED PRIOR TO SEED APPLICATION. APPLICATION STANDARDS:
   - REMOVE ALL ROCKS AND DEBRIS OVER 1"-1 1/2" IN DIAMETER.
   - SCARIFY SURFACE PRIOR TO SEED APPLICATION.
   - APPLY 6" DEPTH OF TOPSOIL.
4. SILT FENCE: SILT FENCE SHALL BE INSTALLED AROUND THE PERIMETER OF THE SITE, AT CULVERT OUTLET LOCATIONS, OR AS INDICATED ON THE DRAWINGS. SILT FENCE SHALL BE INSPECTED AND REPAIRED ROUTINELY, ESPECIALLY FOLLOWING STORM EVENTS UNTIL THE SITE HAS BEEN STABILIZED (COVER > 70%) BY VEGETATION.

STRUCTURAL CONTROL PRACTICES

1. RIP-RAP OUTLET PROTECTION: RIP-RAP SHALL BE PROVIDED AT ALL PIPE OUTLETS TO THE WETLAND. MATERIAL SHALL BE HARD, DURABLE FIELD OR QUARRY STONE WHICH IS ANGULAR AND RESISTS BREAKING DOWN WHEN EXPOSED TO WATER OR WEATHERING.
2. CONSTRUCTION ENTRANCE: CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DRAWINGS.
3. SEDIMENT CONTROLS: MAINTENANCE SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED WEEKLY AND AFTER EACH SIGNIFICANT RAINFALL EVENT (0.5-INCH OR MORE). THE FOLLOWING ITEMS SHALL BE CHECKED IN PARTICULAR:

   A. RIP-RAP OUTLET PROTECTION SHALL BE CHECKED REGULARLY FOR SEDIMENT ACCUMULATION. IF SIGNIFICANT AMOUNTS OF SEDIMENT ACCUMULATE, RIP-RAP SHALL BE REMOVED AND REPLACED.
   B. SILT FENCING SHALL BE INSPECTED REGULARLY FOR UNDERMINING AND DETERIORATION. REMOVE SEDIMENT FROM BEHIND FENCE WHEN IT BECOMES 6 INCHES DEEP.
   C. SEEDED/MULCHED AREAS SHALL BE INSPECTED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHALL BE REPAIRED AS NECESSARY.

4. EXISTING OUTFALL INSPECTIONS AND MAINTENANCE ARE THE RESPONSIBILITY OF THE CONTRACTOR. NO SEDIMENT MATERIAL IS TO GET TO EXISTING OUTLET. CONTRACTOR SHALL DOCUMENT EXISTING CONDITION AT EXISTING OUTLET PRIOR TO CONSTRUCTION.

GENERAL CONSTRUCTION NOTES

1. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR OR HIS AUTHORIZED REPRESENTATIVE SHALL CONVENE A PRE-CONSTRUCTION CONFERENCE BETWEEN THE CITY/TOWN REPRESENTATIVES, CONSULTING ENGINEER/LANDSCAPE ARCHITECT, UTILITY COMPANY REPRESENTATIVES, AND ANY OTHER AFFECTED PARTIES.
2. THE OWNER AND T REYNOLDS ENGINEERING AND/OR THEIR REPRESENTATIVES, IN PREPARING THESE PLANS HAVE ATTEMPTED TO LOCATE ALL EXISTING UTILITIES IN THE PROJECT AREA. HOWEVER, THERE MAY BE UTILITIES THAT WERE NOT OR COULD NOT BE LOCATED. UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL CONTACT ALL APPROPRIATE UTILITY COMPANIES, THE TOWN/CITY FOR LOCATIONS OF THEIR UTILITIES AT LEAST 48 HOURS BEFORE COMMENCING EXCAVATION. CONTRACTOR SHALL ALSO OBTAIN A VALID DIGSAFE NUMBER PRIOR TO ANY EXCAVATION WORK. IN THE EVENT THAT A UTILITY IS SITUATED SUCH THAT CONSTRUCTION CANNOT PROCEED AS SHOWN ON THE PLANS, THE PROJECT ENGINEER/LANDSCAPE ARCHITECT AND OWNER SHALL BE NOTIFIED IMMEDIATELY.
3. THE SITE CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH OCCUR DUE TO HIS FAILURE TO LOCATE AND PRESERVE ANY AND ALL UTILITIES.
4. CONTRACTOR SHALL PROVIDE TWO SETS OF AS-BUILT DRAWINGS. AS-BUILT DRAWINGS BY A REGISTERED LAND SURVEYOR SHALL INCLUDE ALL INSTALLED UTILITIES WITH VERTICAL AND HORIZONTAL LOCATIONS AND BE SATISFACTORY TO THE BUILDING OFFICIAL FOR ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
5. ALL FILL WORK REQUIRED TO BRING THE PROPOSED ROADWAY UP TO SUB-GRADE LEVEL SHALL CONFORM TO MHD SPECIFICATIONS SECTION 150.
6. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME. NOTE THAT THE CONTRACCTOR IS RERESPONSIBLE FOR ONTAIINING A TRENCHING PERMIT PRIOR TO MAKING CONNECTIONS FOR DRAINAGE, WATER AND FIRE SERVICES IN THE ROW.
7. ALL WORK IN THE CITY/TOWN RIGHT-OF-WAY AND EASEMENTS SHALL BE IN ACCORDANCE WITH THE CITY/TOWN SPECIFICATIONS AND MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
8. THE CONTRACTOR SHALL GIVE THE CITY/TOWN A MINIMUM OF 48 HOURS NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION.
9. CONTRACTOR IS RESPONSIBLE FOR REPAIRS OF DAMAGE TO ANY EXISTING IMPROVEMENTS DURING CONSTRUCTION, SUCH AS, BUT NOT LIMITED TO, DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. REPAIRS SHALL BE EQUAL TO OR BETTER THAN EXISTING CONDITIONS.
10. ALL WORK SHALL BE PERFORMED IN CONFORMANCE WITH THE CONDITIONS OF APPROVAL OUTLINED IN ALL STATE AND LOCAL PERMITS. COPIES OF THE CONDITIONS ARE INCLUDED WITHIN THE PROJECTS TECHNICAL SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVEWING THIS INFORMATION PRIOR TO CONSTRUCTION AND CONFORMING TO THE CONDITIONS AS REQUIRED DURING CONSTRUCTION.
11. THE GENERAL CONTRACTOR SHALL MAINTAIN THE JOB CLEAR OF TRASH AND DEBRIS. THE WORK AREAS ARE TO BE PICKED UP AT THE END OF EACH WORK DAY.
12. ANY TEMPORARY FACILITIES FOR THE STORAGE OR PROTECTION OF TOOLS, EQUIPMENT OR MATERIALS SHALL CONFORM TO LOCAL REGULATIONS AND SHALL BE THE GENERAL CONTRACTORS RESPONSIBILITY. THESE DOCUMENTS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. SAFETY, CARE OF ADJACENT PROPERTIES DURING CONSTRUCTION, AND COMPLIANCE WITH STATE AND FEDERAL REGULATIONS REGARDING SAFETY SHALL BE THE GENERAL CONTRACTORS RESPONSIBILITY.
13. THE GENERAL CONTRACTOR AND HIS SUBCONTRACTORS SHALL VISIT THE SITE AND BECOME FAMILIAR WITH ALL CONDITIONS PRIOR TO SUBMITTING HIS PROPOSAL. NO EXTRAS DUE TO UNFAMILIARITY WITH THE EXISTING SITE OR WORKING CONDITIONS WILL BE ALLOWED.
14. CONTRACTOR SHALL BE REQUIRED TO PERFORM FINAL CLEANUP CONSISTING OF CLEANING THE PROPOSED DRAINAGE AND SEWER SYSTEMS OF ALL DEBRIS PRIOR TO THE ACCEPTANCE BY THE OWNER. ADDITIONALLY, THE PROPOSED ROADWAY SHALL BE CLEANED AND SWEPT BY THE CONTRACTOR PRIOR TO ACCEPTANCE.
15. ALL EXCAVATION SHALL COMPLY WITH OSHA'S LATEST STANDARDS. ALL REQUIREMENTS OF OSHA'S EXCAVATION STANDARDS SHALL BE PROVIDED BY THE CONTRACTOR INCLUDING, BUT NOT LIMITED TO, THE PROVISION FOR A COMPETENT PERSON ON SITE MANAGER AND ANY REQUIRED DOCUMENTATION THAT MAY REQUIRE CERTIFICATION BY A PROFESSIONAL ENGINEER. THE OWNER, THROUGH ITS ENGINEER, SHALL EXPRESSLY NOT PROVIDE ANY OF THE ABOVE REQUIREMENTS DESIGNATED BY OSHA'S EXCAVATION STANDARD.
16. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE COST OF LAYING OUT ALL ITEMS OF THE WORK BASED ON CERTAIN HORIZONTAL CONTROL AND BENCHMARK SUPPLIED BY THE SURVEYOR OF RECORD. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER AND SURVEYOR.
17. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR, EQUIPMENT, PERMITS AND APPURTENANCES NECESSARY TO PROVIDE A COMPLETE PROJECT AS INDICATED ON THE PLANS AND IN THESE SPECIFICATIONS.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR A THOROUGH SITE EXAMINATION IN ORDER TO PREPARE SITE FOR CONSTRUCTION.
19. ANY AND ALL DEMOLISHED TREES, STRUCTURES AND OTHER RUBBLE MATERIAL PERTAINING TO THIS PROJECT SHALL BE DISPOSED OF BY THE CONTRACTOR OFF-SITE AT HIS EXPENSE IN ACCORDANCE WITH ALL OF THE CITY/TOWN ORDINANCES AND ALL APPLICABLE STATE AND FEDERAL ENVIRONMENTAL REGULATIONS.
20. ALL PAVEMENT DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED IN ACCORDANCE WITH THE SPECIFICATIONS AND AS SHOWN ON THE DRAWINGS.
21. ALL STREET EXCAVATIONS SHALL BE COMPLETELY CLOSED AT THE END OF EACH WORKING DAY BY BACKFILLING OR COVERING WITH STEEL PLATES.
22. ALL MATERIALS AND METHODS ARE TO COMPLY WITH THE CITY/TOWN DPW STANDARDS OR MASSACHUSETTS HIGHWAY (WHERE APPLICABLE), UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
23. PERMITS WILL BE REQUIRED BY CONTRACTOR WHEN WORKING WITHIN OR OCCUPYING PUBLIC WAY. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED WORK PERMITS AND MAINTAINING A COPY OF ALL PERMITS IN A THREE RING BINDER OR PROJECT BOOK AND ON-SITE AT ALL TIMES.
24. BACKFILL WILL BE PLACED IN SUCCESSIVE LAYERS NOT MORE THAN TWELVE INCHES IN THICKNESS AND SHALL BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY DETERMINED BY STANDARD PROCTOR TEST (ASTM 698) FOR ALL APPLICABLE TYPES OF BACKFILL MATERIAL. NO FROZEN MATERIAL SHALL BE USED AS BACKFILL. IF, IN THE OPINION OF THE ENGINEER OR THE DPW, THE EXCAVATED MATERIAL IS UNSUITABLE, THE ENTIRE MATERIAL FOR BACKFILLING SHALL CONSIST OF APPROVED GRAVEL OR APPROVED BORROW, AS DIRECTED. AFTER THOROUGH TAMPING AROUND AND BENEATH THE UTILITY, A SIX-INCH LAYER OF BACKFILL WILL BE THOROUGHLY COMPACTED AS FOLLOWS: IF DRY, SHALL BE MOISTENED AND THEN COMPACTED WITH MECHANICAL TAMPERS OR BY HAND TAMPERS HAVING A TAMPING FACE NOT EXCEEDING 25 SQUARE INCHES IN AREA. THE FINAL TWELVE INCHES OF FILLING WILL, IN ALL CASES, CONSIST OF APPROVED GRAVEL THOROUGHLY TAMPED.
25. CONTRACTOR SHALL PROVIDE FIELD COMPACTION VERIFICATION UTILIZING ASTM D5195-02, STANDARD TEST METHOD FOR DENSITY OF SOIL & ROCK IN-PLACE AT SITE DEPTHS BELOW THE SURFACE BY NUCLEAR METHODS AS REQUESTED BY THE ENGINEER.
26. CONTRACTOR SHALL PROVIDE FIELD COMPACTION RESULTS TO ENGINEER WITHIN 24-HOURS PRIOR TO PLACEMENT OF INFRASTRUCTURE OR BITUMINOUS BINDER.
27. ALL FILL TO BRING PROPOSED ROADWAY UP TO THE SUB-GRADE LEVEL SHALL EXTEND PAST THE EDGE OF THE RIGHT-OF-WAY AT A 2:1 SLOPE. THIS IS TO PROVIDE ADEQUATE SUPPORT FOR THE RIGHT-OF-WAY.

LAYOUT NOTES

1. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, SLOPE PAVING, SIDEWALKS, EXIT PORCHES, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
2. ALL CONSTRUCTION IN CITY RIGHT-OF-WAYS AND/OR EASEMENTS SHALL BE IN ACCORDANCE WITH THE CITY/TOWN STANDARD SPECIFICATIONS.
3. IN THE EVENT OF DISCREPANCIES BETWEEN LOCAL SPECIFICATIONS AND SITE SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.
4. SITE CONTRACTOR SHALL REFER TO ARCHITECTURAL DETAILS AND SPECIFICATIONS FOR REQUIREMENTS OF CONSTRUCTION AND JOINT SPACING OF SIDEWALKS, RAMPS, AND CURBING ADJACENT TO BUILDING.
5. SITE CONTRACTOR SHALL PROTECT ALL BENCHMARKS AND PROPERTY MONUMENTATION AND SHALL REPLACE OR REPAIR, AT HIS OWN EXPENSE, BENCHMARKS AND MONUMENTATION DISTURBED DURING CONSTRUCTION.
6. SITE CONTRACTOR SHALL PAINT ALL LIGHT POLE BASES, CURBS, FIRE HYDRANTS, PIPE BOLLARDS SIGN BASES, AND OTHER SITE AND UTILITY APPURTENANCES. CONTRACTOR SHALL PAINT OR REPAINT FIRE LANES WHERE REQUIRED BY LOCAL CODE.
7. ALL STRIPING, PAVEMENT MARKINGS, AND TRAFFIC SIGNAGE SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, UNLESS OTHERWISE NOTED ON THE PLANS.
8. ALL WORK SHALL COMPLY WITH FEDERAL, STATE AND LOCAL CODES AND ORDINANCES INCLUDING BUT NOT LIMITED TO: AASHTO, OSHA, EPA, DEP, AND MASS HIGHWAY. THE GENERAL CONTRACTOR SHALL APPLY FOR ALL PERMITS AND SHALL PAY ALL PERMIT RELATED FEES. ALL NECESSARY PERMITS SHALL BE OBTAINED PRIOR TO THE START OF WORK.
9. ALL DIMENSIONS AND CONDITIONS SHOWN ON THE DRAWINGS ARE TO BE VERIFIED BY THE CONTRACTOR. IF FIELD CONDITIONS VARY SIGNIFICANTLY ENOUGH TO REQUIRE A CHANGE TO THE CONTRACT DOCUMENTS, THE PROJECT PROPONENT AND LANDSCAPE ARCHITECT/ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
10. THE SITE/GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL CONTACT THE OWNER AND LANDSCAPE ARCHITECT/ENGINEER SHOULD HE FIND ANY CONFLICT OR INCONSISTENCY BETWEEN THE WORK SHOWN ON THE DRAWINGS AND NORMAL ACCEPTED CONSTRUCTION PRACTICES, OR HE SHALL ASSUME RESPONSIBILITY FOR ALL CORRECTIONS.
11. ANY CORRECTIONS REQUIRED FOR REVISIONS TO THE CONTRACT DRAWINGS INITIATED BY THE GENERAL CONTRACTOR OR SUBCONTRACTORS WITHOUT PRIOR APPROVAL OF THE OWNER AND OR THE LANDSCAPE ARCHITECT/ENGINEER SHALL BE ACCOMPLISHED AT THE CONTRACTORS RISK.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL & LEGAL DISPOSAL OF ALL MATERIAL NECESSARY TO PREPARE THE SITE FOR THE NEW CONSTRUCTION AS SHOWN ON THE SITE DRAWINGS.
13. REPAIR DAMAGED CITY/TOWN ROADS AND CURBS IN ACCORDANCE WITH MASS HIGHWAY AND/OR THE CITY/TOWN REGULATIONS.
14. CONTRACTOR SHALL SAWCUT PAVEMENT EDGE WHERE PAVEMENT TO REMAIN IS ADJACENT TO PAVEMENT TO BE REMOVED.
15. CONTRACTOR SHALL PREPARE SITE AS NECESSARY FOR CONSTRUCTION SHOWN ON THE PLANS.

EARTHWORK NOTES

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
2. ALL CUT OR FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.
3. STORM PIPE SHALL BE AS NOTED ON PLANS.
4. EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
5. EXISTING GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT INTERVALS.
6. PROPOSED GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT INTERVALS.
7. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
8. ALL STORM PIPE ENTERING STRUCTURES SHALL BE SEALED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT.
9. ALL STORM SEWER MANHOLES FRAMES AND GRATES ARE TO BE SET EQUAL TO FINISH GRADES, AND SHALL HAVE TRAFFIC BEARING RING & COVERS (H20). LIDS SHALL BE LABELED "STORM SEWER".
11. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
12. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
13. TOPOGRAPHIC INFORMATION WAS OBTAINED BY HOLMBERG AND HOWE IN THE SUMMER OF 2023. IF CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, HE SHALL HAVE MADE, AT HIS EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR AND SUBMIT IT TO THE OWNER FOR REVIEW.
14. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER. CONTRACTOR SHALL GRASS DISTURBED AREAS IN ACCORDANCE WITH THE SPECIFICATIONS UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.
15. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME.
16. EARTHWORK FOR ALL BUILDING FOUNDATIONS AND SLABS SHALL BE IN ACCORDANCE WITH ARCHITECTURAL BUILDING PLANS AND SPECIFICATIONS.
17. IF CONTRACTOR RELOCATES OR SETS NEW BENCHMARKS, THE VERTICAL ELEVATIONS OF THE BENCHMARKS SHALL BE SET WITHIN A TOLERANCE OF 0.010 FT. ALL FOOTINGS AND FOUNDATIONS FOR PROPOSED STRUCTURES SHALL BE EXCAVATED TO NATIVE SUBGRADE AND COMPACTED PER ARCHITECTURAL SPECIFICATIONS.
18. CONTRACTOR SHALL LEAVE GRADE BEHIND CURB IN ALL PLANTER AREAS A MINIMUM OF 4" LOW FOR THE PLACEMENT OF SUITABLE TOPSOIL OR PLANTING MIX.
19. CONTRACTOR TO SPREAD ON-SITE STOCKPILE TO A 4" DEPTH ON ALL AREAS TO BE SODED/SEEDED AS SHOWN ON DRAWINGS. SITE CONTRACTOR FINE GRADE OF INSTALLED TOPSOIL PRIOR TO HYDROMULCHING BY LANDSCAPE SUB-CONTRACTOR.

SITE UTILITY NOTES

GENERAL:
1. ALL FILL MATERIAL IS TO BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
2. TOPS OF EXISTING MANHOLES SHALL BE SET EQUAL TO FINISH GRADE. IN GRASSED LANDSCAPED AREAS WITH WATER TIGHT LIDS.
3. ALL CONCRETE FOR ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH AT 3000 P.S.I.
4. DRAWINGS DO NOT PURPORT TO SHOW ALL EXISTING UTILITIES.
5. EXISTING UTILITIES SHALL BE VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES.
6. PRIOR TO CONSTRUCTION OF UTILITIES REFER TO ARCHITECTURAL INTERIOR PLUMBING DRAWINGS FOR ALL TIE-INS.
7. SITE/GENERAL CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE SPECIFICATIONS OF THE LOCAL AUTHORITIES AT THE CITY WITH REGARD TO MATERIALS AND INSTALLATION OF THE WATER AND SEWER LINES.
8. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
9. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICE.
10. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.
11. CONTRACTOR SHALL COORDINATE INSPECTION OF UTILITY LINES WITH APPROPRIATE AUTHORITIES PRIOR TO BACKFILLING TRENCHES.
12. CONTRACTOR SHALL COMPLY WITH THE LATEST OSHA STANDARDS OR DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND MAINTENANCE OF ALL SUPPORT SYSTEMS, SLOPING, BENCHING, AND OTHER MEANS OF PROTECTION.
13. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES WITH LOCAL COMPANIES TO AVOID CONFLICTS AND TO ASSURE THAT PROPER DEPTHS ARE ACHIEVED. CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY COMPANIES FOR EXACT LOCATION AND SCHEDULING OF CONNECTIONS TO THEIR FACILITIES.
14. THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY, DUE TO THE LACK OF AVAILABLE DOCUMENTATION. ALL UTILITIES, INCLUDING CURB BOXES, MAY NOT BE SHOWN ON THESE DRAWINGS. THE CONTRACTOR SHALL CALL THE "DIG SAFE CENTER" TO HAVE ALL UTILITIES MARKED ON THE GROUND PRIOR TO THE START OF CONSTRUCTION.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH OCCUR DUE TO HIS FAILURE TO LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
16. DO NOT INTERRUPT EXISTING UTILITIES WITHOUT AUTHORIZATION FROM THE OWNER, OWNERS OF ADJACENT PROPERTIES, AND THE CORRESPONDING UTILITY OWNER. CONTRACTOR SHALL ARRANGE TO SHUT OFF UTILITIES, AS REQUIRED, WITH THE UTILITY OWNERS.
17. COORDINATE UTILITY TERMINATION WITH UTILITY OWNERS.

SEWER:
1. SEWER LATERALS SHALL BE INSTALLED IN FIRST-CLASS BEDDING AND IN ACCORDANCE WITH THE DEPARTMENT OF PUBLIC WORKS SPECIFICATIONS. SEWERS SHALL BE INSTALLED TO THE LINE AND GRADE INDICATED ON THE PLANS.
2. ONLY PRECAST CONCRETE MANHOLES OF A DESIGN APPROVED BY THE ENGINEER SHALL BE INSTALLED.
3. NO GROUNDWATER OR SURFACE WATER SHALL BE DISCHARGED INTO THE SANITARY SEWER.
4. WHERE ROCK IS ENCOUNTERED, IT SHALL BE REMOVED TO A DEPTH OF ONE FOOT BELOW THE FLOWLINE OF THE SEWER AND THE PIPE LAID IN A PROPERLY COMPACTED GRANULAR MATERIAL APPROVED BY THE ENGINEER.
5. ONLY GRANULAR MATERIAL APPROVED BY THE ENGINEER SHALL BE USED AS BACKFILL IN ANY TRENCH EXCAVATION.

WATER:
1. CONTRACTOR SHALL CONTACT THE CITY WATER RESOURCE DEPARTMENT FOR SPECIFICATIONS AND MAKE OF VALVES, VALVE BOXES, FIRE HYDRANTS AND ALL OTHER WATER LINE APPURTENANCES.
2. WATER LINE TESTING AND STERILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH LOCAL DPW SPECIFICATIONS AND WATER DISTRIBUTION SYSTEM. CONTRACTOR SHALL COORDINATE TESTING WITH THE CITY/TOWN WATER DEPARTMENT.
3. ALL WATER LINES, UNLESS OTHERWISE NOTED, SHALL BE INSTALLED WITH A MINIMUM FIVE FEET OF COVER. WHEN CROSSING ABOVE OR BELOW WATER PIPELINES, A MINIMUM VERTICAL SEPARATION OF SIX INCHES SHALL BE PROVIDED. WHEN CROSSING SANITARY SEWERS, A MINIMUM OF

SIGNAGE AND PAVEMENT MARKING NOTES:

1. STRIPE ALL PARKING AREAS AS SHOWN, INCLUDING PARKING SPACES, STOP BARS, CROSSWALKS, AND ACCESSIBLE ROUTE MARKINGS AND SYMBOLS USING WHITE TRAFFIC PAINT. PAINTED ISLANDS, FIRE LANES, AND TRAVEL WAY CENTERLINES SHALL BE PAINTED USING YELLOW TRAFFIC PAINT. ALL TRAFFIC PAINT SHALL CONFORM TO AASHTO M248 TYPE "N".
2. STOP BARS SHALL BE 12" WIDE (WHITE).
3. PAINTED ISLANDS SHALL BE 4" WIDE DIAGONAL LINES @ 3'-0" O.C. BORDERED BY 4" WIDE LINES (YELLOW).
4. ALL PARKING STALL LINES SHALL BE 4" WIDE (WHITE).
5. ALL PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS", MASSDOT, STATE BUILDING CODE AND ADA REQUIREMENTS, AND AS SHOWN ON THE PLANS & DETAILS

LAYOUT NOTES:

1. SITE CONTRACTOR SHALL REFER TO SHEET 3, DETAIL SHEETS AND REMAINING PLAN SET FOR INFORMATION REGARDING SITE LAYOUT.
2. IT SHALL BE THE SITE CONTRACTOR'S RESPONSIBILITY TO CROSS REFERENCE INFORMATION CONTAINED IN OTHER SHEETS WITH SITE INFORMATION SHOWN HEREON.
3. PRIOR TO SUBMITTING THEIR BID FOR CONSTRUCTION, THE SITE CONTRACTOR SHALL COMMUNICATE ANY DISCREPANCIES BETWEEN THE PROPOSED DESIGN AND THE SAID SPECIFICATIONS WITH THE PROJECT PROPONENT AND LANDSCAPE ARCHITECT/ENGINEER. SHOULD THE SITE CONTRACTOR FAIL TO COMMUNICATE ANY DISCREPANCIES, HE/SHE SHALL BE RESPONSIBLE FOR ANY COSTS RESULTING FROM SAID DISCREPANCY.

NOTES:

1. THE PREMISES AND EXISTING CONDITIONS SHOWN HEREON ARE COMPILED FROM A LAND SURVEY FOR PIONEER VALLEY HABITAT FOR HUMANITY BY HOLMBERG AND HOWE LAND SURVEYORS DURING THE SPRING OF 2023.

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

SITE INFORMATION, Map/Lot 04-0-00.31

LOT INFORMATION			
ZONE	NEIGBORHOOD BUSINESS (NB), SECTION 10.		
SEWER	TOWN		
WATER	TOWN		
SITE PLAN INFORMATION			
ITEM	REQUIRED	EXISTING	PROPOSED
MINIMUM LOT AREA	4,000 S.F.	28,523 S.F.	28,000 S.F.
MINIMUM ROAD FRONTAGE	30'	259'	39'
MINIMUM LOT DEPTH	–	–	–
MINIMUM FRONT YARD SETBACK	NONE	–	–
MINIMUM SIDE YARD SETBACK	10'*	–	10'
MINIMUM REAR YARD SETBACK	10'*	–	–
MAXIMUM BUILDING HEIGHT/STORIES	40'	<40'	<40'
OPEN SPACE	20%	45%	62%

*NO SETBACK REQUIRED EXCEPT 10 feet between any project building and the boundary of the applicable sub-district.

FIRST STREET

CLOSED DRIVEWAY OPENING AND INSTALL GRANITE CURBING TO MATCH EXISTING SEE DETAIL

TRANSITION NEW SIDEWALK TO MEET EXISTING.

NEW 5' WIDE SIDEWALK SET TO EDGE OF NEW CURB. SEE DETAIL

PROPOSED 4' BITUMINOUS SIDEWALK TYP.

PROPOSED 4' BITUMINOUS SIDEWALK TYP.

CONCRETE WALK

S 51°42'00" E< 259.30'

"2 HOUR PARKING"

2" BEECH

2" OAK

6" TREE

24" OAK

26" OAK

26" OAK

RAIN GARDEN

RAIN GARDEN

RAIN GARDEN

RAIN GARDEN

RAIN GARDEN

RAIN GARDEN

BITUMINOUS PAVEMENT

"PRIVATE PROPERTY"

SAWCUT AND REMOVE PAVEMENT WITHIN BERM AREA. EXCAVATE AREA TO ALLOW FOR A 1-FOOT STONE DEPTH.

6-FOOT WIDE STONE BERM SEE DETAIL

FRONT PORCH

FRONT PORCH

FRONT PORCH

FRONT PORCH

FRONT PORCH

FRONT PORCH

RAMP

PROPOSED 16'X18' ACCESSIBLE VAN PARKING SPACE

FFE=192.5

POST

PROPOSED 40'X18' TWO STORY BUILDING

FFE 1st=196.5 2nd=205.5

PROPOSED 40'X18' TWO STORY BUILDING

FFE 1st=195.5 2nd=204.5

PROPOSED 40'X18' TWO STORY BUILDING

FFE 1st=194.0 2nd=203.0

PROPOSED 40'X18' TWO STORY BUILDING

FFE 1st=193.5 2nd=202.5

PROPOSED 40'X18' TWO STORY BUILDING

FFE 1st=193.0 2nd=202.0

SHED

PROPOSED ONE STORY BUILDING 960 SF

10' SIDE SETBACK

10' SIDE SETBACK

S 38°18'00" W< 110.00'

"PUBLIC PARKING"

PROPOSED CONCRETE BARRIER WITH REFLECTIVE MARKINGS ON SOUTH SIDE.

BIT. PATH

GRAVEL PARKING

SHED

SHED

SHED

SHED

SHED

EDGE PAVEMENT

N 51°42'00" W< 259.30'

TRANSITION ROADWAY TO MEET EXISTING.

9'X18' BITUMINOUS PARKING SPACES TYP.

PROPOSED 6"x6" WOOD PARKING SPACE BOLLARD (TYP.)

PROPOSED 4' BITUMINOUS SIDEWALK TYP.

9'X18' BITUMINOUS PARKING SPACES TYP.

PROPOSED 6"x6" WOOD PARKING SPACE BOLLARD (TYP.)

PROPOSED 4' BITUMINOUS SIDEWALK TYP.

PROPOSED VEGETATIVE SCREENING

PROPOSED WOOD GUARDRAIL

9'X18' BITUMINOUS PARKING SPACES TYP.

"FIRST STREET ALLEY"

EDGE PAVEMENT

24" MAPLE

8" MAPLE

8" MAPLE

UP

UP

UP

Permitting, Not for Construction

T Reynolds Engineering

Civil Engineers
Planning, Design, and Permitting Services

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email: terry@treynoldsengineering.com
www.treynoldsengineering.com

152 Maplewood Terrace
Florence, MA 01062

Layout and Materials Plan

Great Falls, First Street Project
First Street
Turners Falls, MA

COMMONWEALTH OF MASSACHUSETTS
TERRENCE R. REYNOLDS
NO. 49586
CIVIL
REGISTERED PROFESSIONAL ENGINEER

PREPARED FOR:
Franklin Hampshire Habitat for Humanity
221 Pine Street
Florence, MA 01062

REVISIONS:	DATE:

UNAUTHORIZED ALTERATION OF THIS DOCUMENT IS A VIOLATION OF MASSACHUSETTS STATE LAW

PROJECT NO: 25-1101
DRAWING: Eng Plan 10-15-26
ISSUE DATE: 10/15/26
SCALE: 1" = 10'
SHEET NO.
4 OF 7

NOTES:
1. THE PREMISES AND EXISTING CONDITIONS SHOWN HEREON ARE COMPILED FROM A LAND SURVEY FOR PIONEER VALLEY HABITAT FOR HUMANITY BY HOLMBERG AND HOWE LAND SURVEYORS DURING THE SPRING OF 2023.

GRADING, AND DRAINAGE NOTES:
1. SITE CONTRACTOR SHALL REFER TO SHEETS 3, AND REMAINING PLAN SET FOR INFORMATION REGARDING GRADING & DRAINAGE.
2. IT SHALL BE THE SITE CONTRACTORS RESPONSIBILITY TO CROSS REFERENCE INFORMATION CONTAINED IN OTHER SHEETS WITH GRADING & DRAINAGE INFORMATION SHOWN HEREON.
3. PRIOR TO SUBMITTING A BID FOR CONSTRUCTION, THE SITE CONTRACTOR SHALL COMMUNICATE ANY DISCREPANCIES BETWEEN THE PROPOSED DESIGN AND THE SAID SPECIFICATIONS WITH THE PROJECT PROPONENT, ENGINEER. SHOULD THE THE SITE CONTRACTOR FAIL TO COMMUNICATE ANY DISCREPANCIES, HE/SHE SHALL BE RESPONSIBLE FOR ANY COSTS RESULTING FROM SAID DISCREPANCY.
4. CONTRACTOR TO VERIFY ALL UTILITY CONNECTIONS AND INVERTS FROM EXISTING/PROPOSED BUILDING TO SERVICES IN STREET. IF ANY DISCREPANCIES EXISTS BETWEEN PLAN AND INFORMATION FOUND IN THE FIELD, CONTACT ENGINEER AND LANDSCAPE ARCHITECT IMMEDIATELY.
5. SEE ARCHITECTURAL PLANS FOR BUILDING CONNECTIONS OF ALL UTILITIES.
6. THE NATURAL GAS, ELECTRICAL, AND TELECOMMUNICATIONS SERVICES SHOWN HEREON ARE SCHEMATIC IN NATURE TO DEPICT CONNECTION OF SAID UTILITIES TO THE SUBJECT BUILDING(S). THE RESPECTIVE UTILITY PROVIDER SHALL BE RESPONSIBLE FOR THE FINAL DESIGN OF THE RELEVANT UTILITY.
7. CONTRACTOR SHALL NOTIFY DESIGNER/ENGINEER OF ANY UNEXPECTED CONDITIONS THAT ARE ENCOUNTERED DURING CONSTRUCTION.
8. THE CONTRACTOR SHALL COORDINATE WITH T.REYNOLDS ENGINEERING. (TRE) TO OBSERVE THE INSTALLATION OF ALL ASPECTS OF THE STORMWATER SYSTEMS. ONCE DRAINAGE SYSTEM IS INSTALLED AND FUNCTIONING, THE OWNER/SITE CONTRACTOR SHALL COORDINATE WITH TRE TO CONDUCT A POST-CONSTRUCTION ANALYSIS OF THE DRAINAGE SYSTEM DURING ACTUAL STORM EVENTS TO DETERMINE THE FUNCTIONALITY OF THE INSTALLED DRAINAGE SYSTEM DURING SAID EVENTS. SHOULD THE DRAINAGE SYSTEM NOT FUNCTION AS DESIGNED UNDER REAL-WORLD CONDITIONS, TRE WILL RECOMMEND ADJUSTMENTS TO THE DRAINAGE SYSTEM TO BE APPROVED BY DPW AND IMPLEMENTED BY THE OWNER/SITE CONTRACTOR.
9. ALL SIDEWALKS SHALL HAVE A MAXIMUM X-SLOPE OF 2%.
10. ALL SIDEWALKS SHALL BE GRADED AWAY FROM PROPOSED BUILDINGS AND LAWN AREAS UNLESS OTHERWISE NOTED.

DMH #2
RIM = 196.90'
INV A = 193.30'
INV B = 194..30'
INV C = 192.36'
INV D = UNMEASURABLE
INV E = 193.81'

DMH #3
RIM = 196.00'
INV A = 190.46'
INV B = 191.51'
INV C = 190.41'

PROPOSED DMH
RIM=195.1
INV IN 12"HDPE=192.34
INV IN 14"CONC=192.30
INV OUT 14"CONC=192.25
ACTUAL TO BE CONFIRMED PRIOR TO OBTAINING NEW STRUCTURE

PROPOSED SEWER CHIMNEY
SEE DETAIL, TYPICAL OF 6

MH #11
RIM = 191.49'
SUMP = 181.1'
WATER WEEPING IN FROM THE WALLS. NO VISIBLE PIPING.

CB #12
RIM = 190.
INV A = 186.
INV B = 187.
INV C =

FIRST STREET

PROPOSED EROSION CONTROL BARRIER (TYP)

12" YARD DRAIN WITH DOMED GRATE
RIM 12"HDPE=196.1
INV OUT 12"HDPE=192.74

PROPOSED STABILIZED CONSTRUCTION ENTRANCE LOCATION

RAIN GARDEN
TOP OF MEDIA=194.2
TOP OF BANK=194.7
SEE DETAIL EXCLUDING UNDERDRAIN ASSEMBLY

RAIN GARDEN
TOP OF MEDIA=192.6
TOP OF BANK=193.1

RAIN GARDEN
TOP OF MEDIA=191.7
TOP OF BANK=192.2
SEE DETAIL

RAIN GARDEN
TOP OF MEDIA=191.3
TOP OF BANK=191.8

PROPOSED CB
RIM=191.5
INV IN 6"PVC=188.8
INV OUT 8"PVC=188.7

RAIN GARDEN
TOP OF MEDIA=195.6
TOP OF BANK=196.6
SEE DETAIL EXCLUDING UNDERDRAIN ASSEMBLY

PROPOSED RAIN GARDEN SUB-DRAIN TRUNK LINE
6"-PVC AT 1% MIN. SLOPE.

PROPOSED CURB STOP
TYPICAL OF 6

RAIN GARDEN
TOP OF MEDIA=191.2
TOP OF BANK=191.7
SEE DETAIL EXCLUDING UNDERDRAIN ASSEMBLY

PROPOSED EROSION CONTROL BARRIER (TYP)

PROPOSED 2" PE DOMESTIC WATER SERVICE
MINIMUM BURY DEPTH 5'
TYPICAL OF 6

PROPOSED 4" SDR 35 SEWER SERVICE
2'-FOOT MIN. BURY DEPTH
1% MIN. SLOPE (TYPICAL OF 6)

FFE
1st=196.5
2nd=205.5

FFE
1st=195.5
2nd=204.5

FFE
1st=194.0
2nd=203.0

FFE
1st=193.5
2nd=202.5

FFE
1st=193.0
2nd=202.0

PROPOSED SEWER CLEANOUT
TYPICAL OF 6

FFE=192.5

"2 HOUR PARKING"

PAVED PARKING

GRAVEL PARKING

"FIRST STREET ALLEY"

BIT. PATH

EDGE PAVEMENT

GRAPHIC SCALE
(IN FEET)
1 inch = 10 ft.

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Grading, Erosion Control and Utilities Plan

Great Falls, First Street Project
First Street
Turners Falls, MA

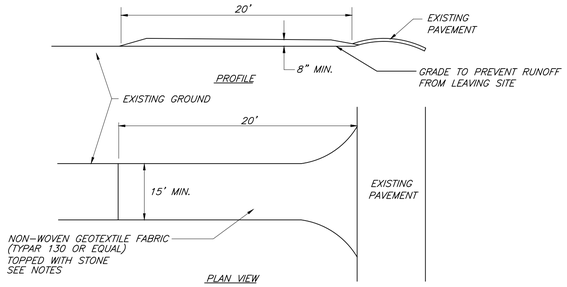
COMMONWEALTH OF MASSACHUSETTS
TERRENCE R. REYNOLDS
NO. 46285
CIVIL
REGISTERED PROFESSIONAL ENGINEER

PREPARED FOR:
Franklin Hampshire Habitat for Humanity
221 Pine Street
Florence, MA 01062

REVISIONS:	DATE:
S&W Connections	8/31/26

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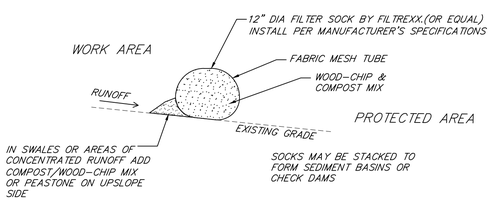
PROJECT NO: 25-1101
DRAWING: Eng Plan 10-15-26
ISSUE DATE: 10/15/26
SCALE: 1" = 10'
SHEET NO.
5 OF 7



1. STONE SIZE–USE 2–4" RIP RAP, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH–AS REQUIRED.
3. THICKNESS–NOT LESS THAN 8".
4. WIDTH–NO LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. PLACE GEOTEXTILE OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. MAINTENANCE–THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHT–OF–WAY MUST BE REMOVED IMMEDIATELY.
7. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

1 STABILIZED CONSTRUCTION ENTRANCE DETAIL

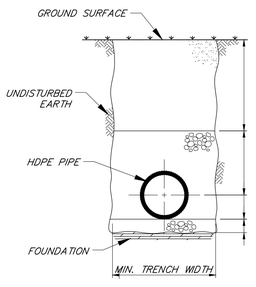
NO SCALE



TYPICAL FILTER SOCK INSTALLATION

2 SEDIMENT BARRIER ALTERNATIVE

NO SCALE (CONTRACTOR'S OPTION)



TYPICAL HDPE TRENCH CROSS–SECTION

3 HDPE TRENCH INSTALLATION DETAIL

NO SCALE

HDPE TRENCH INSTALLATION DETAIL

NOTES:

1. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH A FOUNDATION OF CLASS I OR II MATERIAL AS DEFINED IN ASTM D2321, "STANDARD PRACTICE FOR INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY–FLOW APPLICATIONS," LATEST EDITION; AS AN ALTERNATIVE AND AT THE DISCRETION OF THE ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A WOVEN GEOTEXTILE FABRIC.
2. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

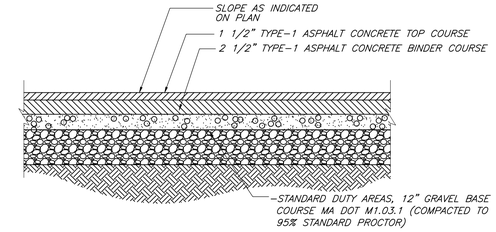
   UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"–24" (100–600mm) AND 42"–48"(1050–1200mm) CORRUGATED POLYETHYLENE PIPE (CPEP); 6" (150mm) FOR 30"–36" (750–900mm) CPEP.
3. HAUNCHING AND INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
4. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM TRENCH WIDTHS SHALL BE AS FOLLOWS:

NOMINAL ø in (mm)	MIN. RECOMMENDED TRENCH WIDTH, in (mm)
12 (300)	31 (790)

5. MINIMUM COVER: MINIMUM RECOMMENDED DEPTHS OF COVER FOR VARIOUS LIVE LOADING CONDITIONS ARE SUMMARIZED IN THE FOLLOWING TABLE. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TAKEN FROM THE TOP OF PIPE TO THE GROUND SURFACE.

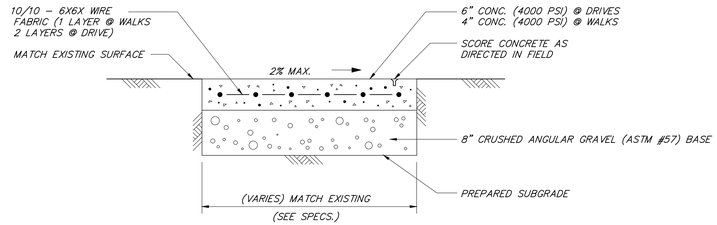
SURFACE LIVE LOADING CONDITION	MINIMUM RECOMMENDED COVER, in (mm)
H25 (FLEXIBLE PAVEMENT)	12 (300) *
H25 (RIGID PAVEMENT)	12 (300)
E80 RAILWAY	24 (610)
HEAVY CONSTRUCTION	48 (1220)

*TOP OF PIPE TO BOTTOM OF BITUMINOUS PAVEMENT SECTION



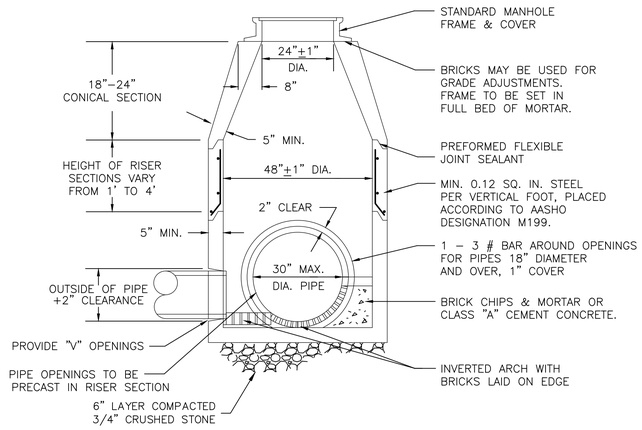
4 PARKING BITUMINOUS PAVEMENT DETAIL

NO SCALE



5 TYPICAL CONCRETE WALK SECTION

NO SCALE



3 PRECAST CONCRETE STORM MANHOLE

NO SCALE

NOTES:

1. WHERE ULTIMATE DISCHARGE FROM THE RAIN GARDEN AREA IS BY INFILTRATION INTO THE SUBSOIL, THE PRESERVATION OF INFILTRATION FUNCTION OF UNDERLYING SOILS REQUIRES CAREFUL CONSIDERATION DURING CONSTRUCTION TO PREVENT DEGRADATION OF INFILTRATION FUNCTION:
   - DO NOT DISCHARGE SEDIMENT–LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUNOFF, WATER FROM EXCAVATIONS) TO FULLY EXCAVATED RAIN GARDEN AREA DURING ANY STAGE OF CONSTRUCTION. RAIN GARDEN AREA MAY BE USED FOR TEMPORARY SEDIMENTATION BY EXCATING THE BASIN ONLY ENOUGH TO MAINTAIN A MINIMUM 1–FOOT SEPARATION TO FINAL EXCAVATED GRADE.
   - DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION COMPONENTS OF THE SYSTEM.
2. ALL DRAINAGE AREAS TO A RAIN GARDEN FACILITY ARE TO BE STABILIZED PRIOR TO INSTALLATION OF AMENDED SOILS, MULCH OR PLANTINGS.
3. AMENDED SOIL WILL ONLY BE PERMITTED WITH A VALID SOIL ANALYSIS REPORT.
4. INSTALL WIRE SCREENING AROUND ALL OUTLET OPENINGS TO PREVENT LOSS OF MULCH.
5. PLANT MATERIAL SHALL BE TOLERANT OF INUNDATION AND DROUGHT CONDITIONS. NATIVE PLANT MATERIALS ARE RECOMMENDED.
6. FILTER MEDIA SHALL BE AS FOLLOWS:

   THE SOIL MIX FOR RAIN GARDEN AREAS SHOULD BE A MIXTURE OF SAND COMPOST AND SOIL.
   –40 % SAND,
   –20–30% TOPSOIL, AND
   –30–40% COMPOST.
   THE SOIL MIX MUST BE UNIFORM, FREE OF STONES, STUMPS, ROOTS OR SIMILAR OBJECTS LARGER THAN 2 INCHES. CLAY CONTENT SHOULD NOT EXCEED 5%

   SOIL PH SHOULD GENERALLY BE BETWEEN 5.5–6.5, ARANGE THAT IS OPTIMAL FOR MICROBIAL ACTIVITY AND ADSORPTION OF NITROGEN, PHOSPHORUS, AND OTHER POLLUTANTS.

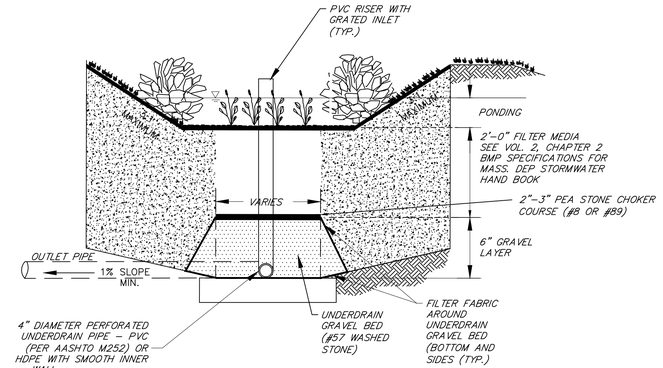
   USE SOILS WITH 1.5% TO 3% ORGANIC CONTENT AND MAXIMUM 500–PPM SOLUBLE SALTS.

   THE SAND COMPONENT SHOULD BE GRAVELLY SAND THAT MEETS ASTM D 422. SIEVE SIZE PERCENT PASSING:

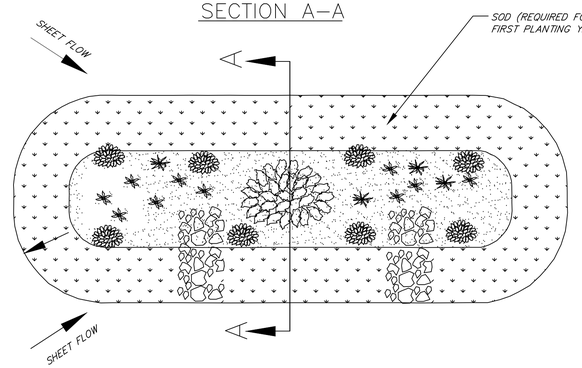
SIEVE NO.	PERCENT BY WEIGHT PASSING STANDARD SIEVE INDICATED
2–INCH	100
3/4–INCH	70–100
1/4–INCH	50–80
40	15–40
200	0–3

   THE TOPSOIL COMPONENT SHALL BE A SANDY LOAM, LOAMY SAND OR LOAM TEXTURE.

   THE COMPOST COMPONENT MUST BE PROCESSED FROM YARD WASTE IN ACCORDANCE WITH MASSDEP GUIDELINES (SEE HTTP://WWW.MASS.GOV/DEP/RECYCLE/REDUCE/LEAFGUID.DOC). THE COMPOST SHALL NOT CONTAIN BIOSOLIDS.



SECTION A–A



PLAN

7 RAIN GARDEN "III" DETAIL

NO SCALE

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152 Maplewood Terrace
Florence, MA 01062

Construction Details

Great Falls, First Street Project
First Street
Turners Falls, MA

COMMONWEALTH OF MASSACHUSETTS
TERRENCE R. REYNOLDS
NO. 46286
CIVIL
REGISTERED PROFESSIONAL ENGINEER

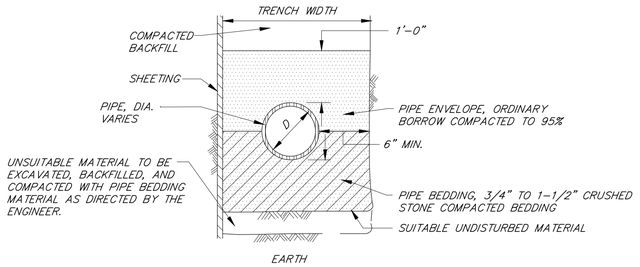
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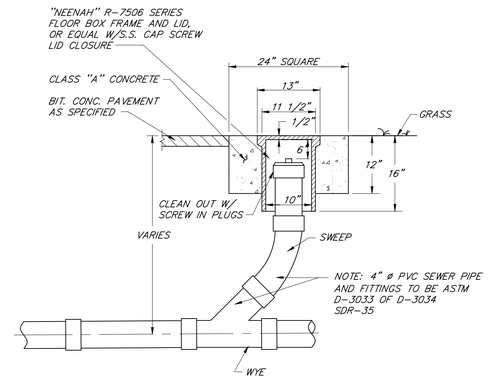
PROJECT NO: 25-1101
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SCALE########

SHEET NO.
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OF



1 — TYPICAL UTILITY PIPE TRENCH SECTION

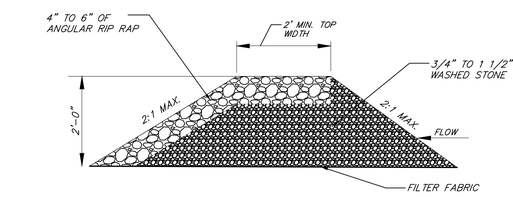
N.T.S.



CLEANOUT REQUIRED EVERY 100' OF LATERAL (SANITARY)

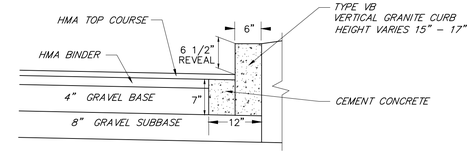
2 — TYPICAL SANITARY CLEANOUT DETAIL

NO SCALE



9 — STONE BERM

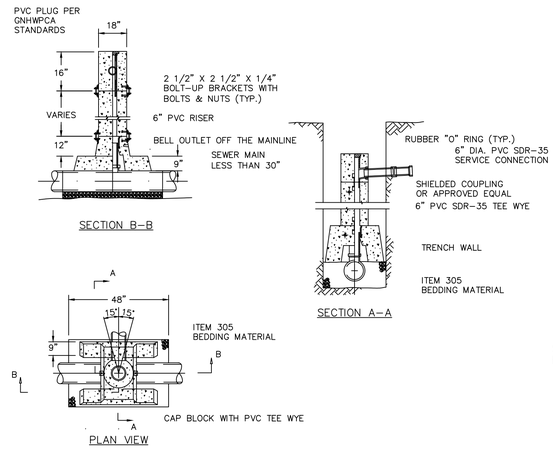
NO SCALE



NOTES:
1. CUT NEAT LINE 6" FROM CURB LINE AND REMOVE BINDER, BASE AND STONE, AND REPLACE WITH CEMENT CONCRETE.
2. ACCEPTABLE CEMENT CONCRETE IS ANY CLASS UNDER SECTION M4 OF THE 1988 MHD STANDARD SPECIFICATIONS; ALL TEST REQUIREMENTS ARE WAIVED. HMA IS NOT AN ACCEPTABLE SUBSTITUTE
3. WHEN SET ON RADII, THE CURBING SHALL BE CUT WITH THE REQUIRED RADIUS OF CURVATURE.

6 — VERTICAL GRANITE CURB DETAIL (H-4)

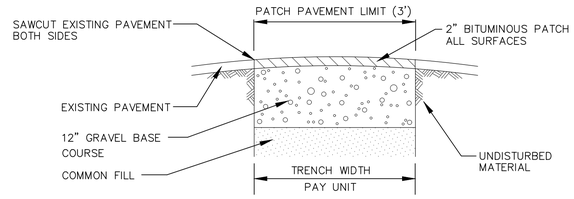
NO SCALE



NOTES:
1. THE CONTRACTOR SHALL SUBMIT 5 (FIVE) COPIES OF SHOP DRAWINGS OR CATALOG CUTS FOR APPROVAL BY THE TOWN ENGINEER AND/OR THEIR REPRESENTATIVES. CHIMNEY TO BE PRECAST SEWER CHIMNEY DISTRIBUTED BY ARROW CONCRETE PRODUCTS, OR APPROVED EQUAL.

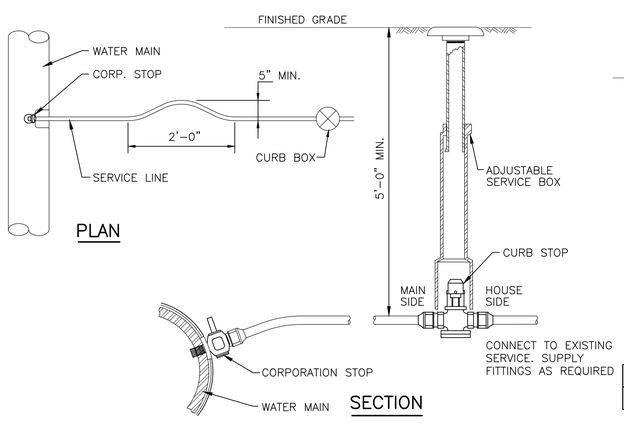
5 — PRECAST CHIMNEY FOR SEWER PIPE LESS THAN 30"

NO SCALE



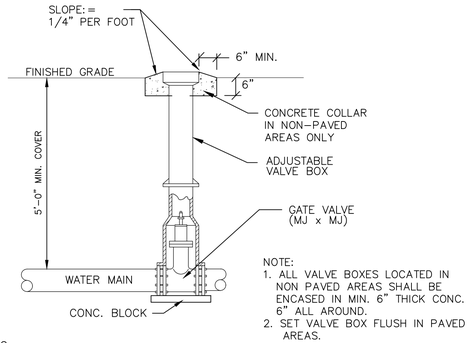
7 — TEMPORARY PAVEMENT PATCH

N.T.S.



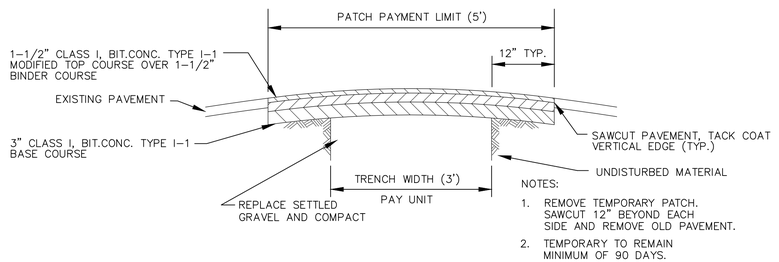
3 — TYPICAL SERVICE CONNECTION

N.T.S.



4 — TYPICAL BURIED VALVE

N.T.S.



8 — PERMANENT PATCH

N.T.S.

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COMMONWEALTH OF MASSACHUSETTS — TERRENCE R. REYNOLDS — NO. 49586 — CIVIL — REGISTERED PROFESSIONAL ENGINEER

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