

Site Plan Approval Documents

October 6, 2023 (Revised December 08, 2023)

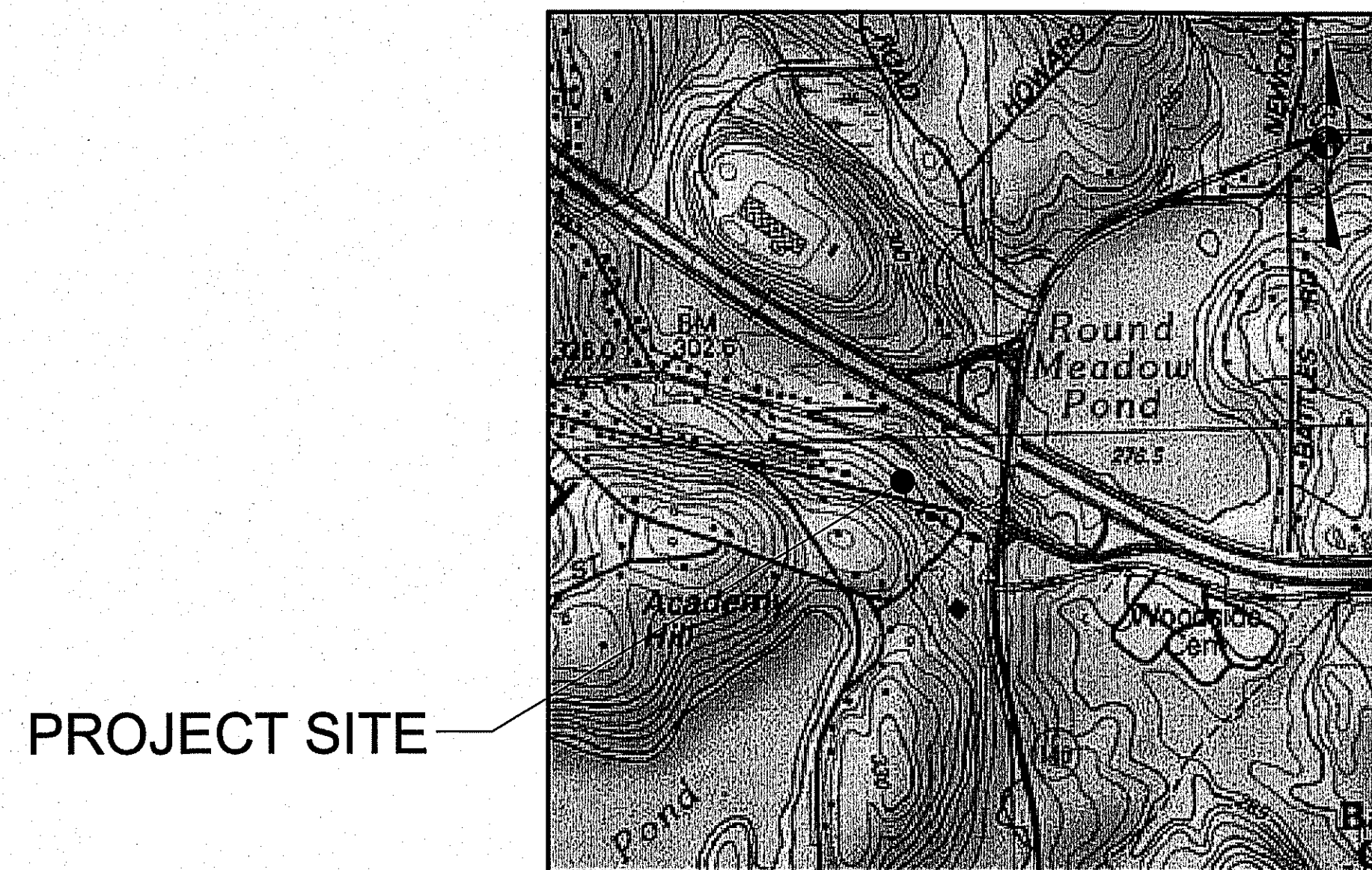
Proposed Commercial Development 5 East Main Street

Westminster, Massachusetts 01473

Applicant:
Eric Callahan
8 East Gardner Road
Westminster, MA 01473
(978) 668-5396

Civil Engineer:
McCarty Engineering, Inc.
42 Tucker Drive
Leominster, MA 01453
(978) 534-1318

Surveyor:
Haley Ward, Inc.
510 Mechanic Street
Leominster, MA 01453
(978) 537-5296

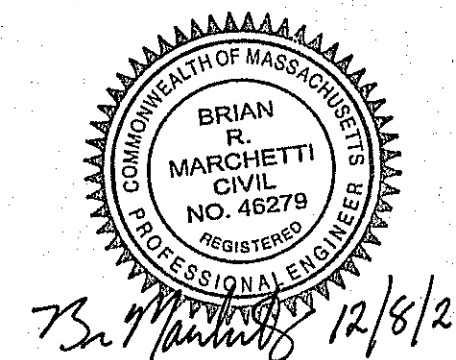


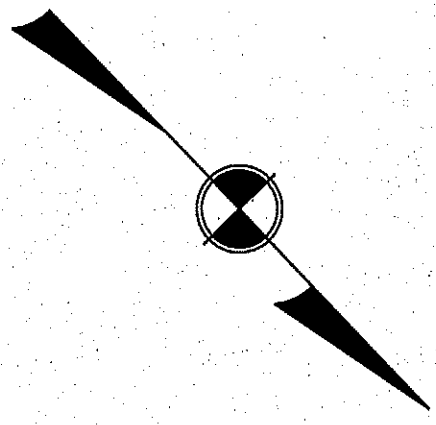
SCALE: 1"=1000' ±

APPROVED BY THE TOWN OF
WESTMINSTER PLANNING BOARD
DATE: _____

Sheet No. Sheet Title

	Cover Sheet		
1	Existing Conditions Plan	8	Truck Turning Plan
2	Erosion Control Plan	9	Construction Detail Plan
3	Erosion Control Notes	10	Construction Detail Plan
4	Layout and Materials Plan	11	Construction Detail Plan
5	Grading, Drainage and Utility Plan	12	Construction Detail Plan
6	Landscaping Plan	13	Construction Detail Plan
7	Lighting Plan	ACP 2.1	Proposed Exterior Elevations





n/f
TOWN OF WESTMINSTER
DEED 1184 PAGE 17
#62 LEONMINSTER STREET
MAP III PARCEL 22

n/f
TOWN OF WESTMINSTER
DEED 1184 PAGE 17
#62 LEONMINSTER STREET
MAP III PARCEL 22

EXISTING GRAVEL ACCESS
(TO BE ABANDONED)

n/f
ERIC CALLAHAN
DEED 9160 PAGE 15
#9 EAST MAIN STREET
MAP III PARCEL 25

EXISTING CONTOUR
(TYP.)

PROPERTY LINE
(TYP.)

n/f
JUDITH MORSE
DEED 6987 PAGE 67
#92 LEONMINSTER STREET
MAP 110 PARCEL 71

n/f
COMMONWEALTH OF MASSACHUSETTS

EXISTING 8" WATER MAIN

EDGE OF EXISTING
PAVEMENT
(TYP.)

EXISTING 6" GAS MAIN

PROPOSED CONSTRUCTION
ENTRANCE (TYP.)

EAST MAIN STREET

EXISTING SEWER
STUB
(TYP.)

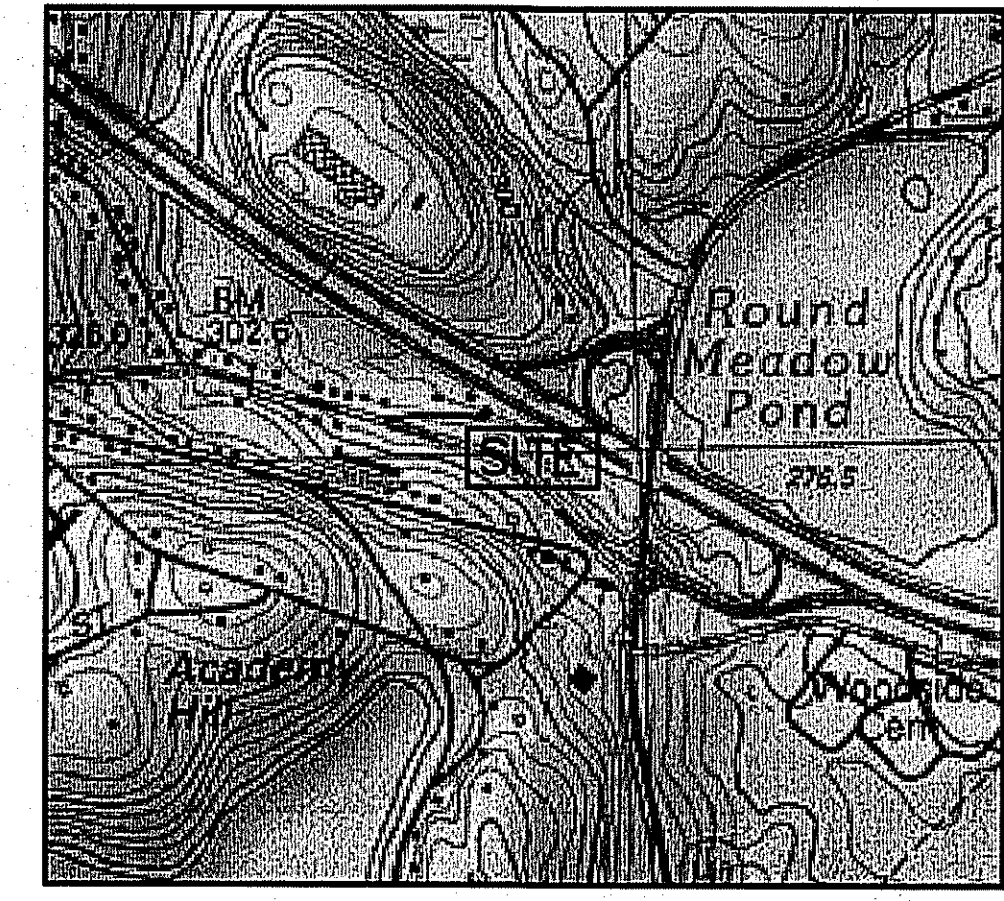
EXISTING UTILITY
POLE

EXISTING DRAINAGE
MANHOLE

EXISTING 10" CULVERT
INV=965.36

PROPOSED SAW-CUT LINE
FOR WATER SERVICE
INSTALLATION
(TYP.)

EXISTING 10" CULVERT
INV=966.54
(TYP.)



LOCUS PLAN
1"=1,000 FT.±

NOTES:
1. EXISTING CONDITIONS INFORMATION SHOWN HEREON IS A RESULT OF AN ON THE GROUND SURVEY PREPARED BY HALEY WARD INC. IN MARCH OF 2023.

NOT FOR CONSTRUCTION
THESE PLANS WERE PREPARED FOR THE PURPOSE OF OBTAINING STATE AND LOCAL PERMITS AND ARE NOT INTENDED TO BE USED AS CONSTRUCTION DOCUMENTS.

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DATE: _____

No.	Date	Revision
1.	12/08/2023	Response to Comments



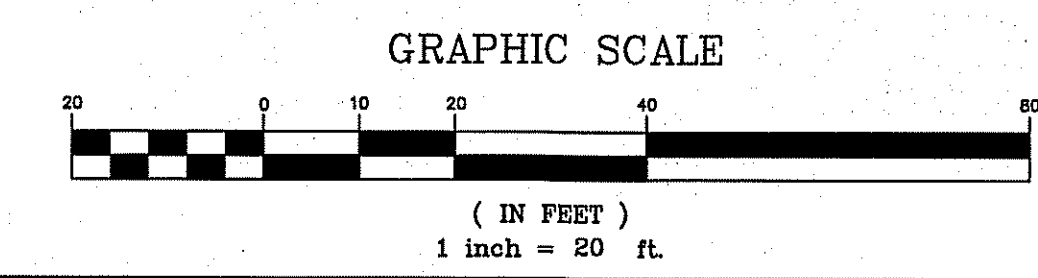
Brian R. Marchetti 12/8/23

Drawn By: JLL
Designed By: JLL
Checked By: *JLL*

McCarty Engineering, Inc.
Civil Engineers
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Project Name
**5 East Main Street
Westminster, MA**

Sheet Title
**Existing Conditions &
Demo Plan**



Job No: 220.03
File Name: 202.03P-CEC01
Date: October 6, 2023
Scale: 1"=20'
Sheet No. **1**

C:\Users\John.Pilla\OneDrive\Documents\202-03P-CEC01.dwg 12/08/2023 11:13 AM 1 by: John Pilla

NOTE: DURING AND AFTER THE CONSTRUCTION PERIOD, THE RESPONSIBLE PARTY FOR THE OPERATION AND MAINTENANCE OF THE SITE WILL BE THE PROPERTY OWNER / APPLICANT.

Project Description

The Site contains approximately 1 acres of land. The proposed building construction is approximately 6,500 Square Foot (footprint) along with associated parking, landscaping and utilities.

Construction Process

A sign for all job notices must be posted conspicuously near the main construction entrance to the Site.

Before construction begins, siltation control barriers consisting of silt fencing attached to wood posts and backed by staked straw wattles will be placed between the work areas and resource areas or as shown on plan. Additional siltation control barriers will be installed around the proposed drainage and at other critical locations.

The Contractor will record:

- 1) Dates when major grading activities occur;
- 2) Dates when construction activities temporarily or permanently cease on a portion of the site; and
- 3) Dates when stabilization measures are initiated.

The time of construction requiring the most attention and care occurs between the stripping of natural overburden and the stabilization of construction areas. Cut and fill areas create additional risk by increasing the possibility of stormwater runoff causing erosion.

The Contractor will, as much as possible, leave natural cover untouched. The Contractor will limit to the shortest time possible the time that slopes are exposed. The slope stabilization will be completed as early as construction activities will allow. During the times between clearing and landscaping, slopes will be stabilized with a combination of rip-rap, straw mulch, temporary grass seeding and other measures as necessary to prevent any significant erosion of soils.

When necessary, the Contractor shall implement structural practices to divert flows from exposed soils, retain/detain flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Placement of structural practices in flood plains must be avoided to the degree practicable. Structural measures should be placed on upland soils to the degree practicable. Such measures must be designed and installed in compliance with applicable federal, state or local requirements. All solid materials such as washings from concrete trucks, building materials, or surplus concrete, shall not be directed to any drainage system or wetland resource area.

In conjunction with the site grading process, a number of sedimentation control procedures will be followed. The object of the procedures is to prevent the erosion of soils and the transport of sediments to the resource areas and off the site.

The Proponent shall meet the US EPA Construction General Permit requirements.

Stabilization

Temporary and permanent stabilization of disturbed surfaces is the most reliable method of preventing the erosion and transport of site soils. Toward that end, the areas that are disturbed will be provided temporary stabilization within two weeks after the last disturbance when:

- 1) Work is not complete in that area;
- 2) Work will remain incomplete for a period of two weeks or more, and
- 3) The planting season has not been reached in areas which will be re-vegetated.

Permanent stabilization will take place when:

- 4) Work is complete in that area and
- 5) The planting season has been reached and areas can be revegetated.

Best Management Practices Employed

To guard against the transport of soils to resource areas, several Best Management Practices (BMPs), will be employed. Siltation control barriers, sediment sumps, straw check dikes, swales, temporary settling basins, vegetative filter strips, site entrance mat, rip-rap outlet protection, flocculants with jute mesh or other biomedica, will or may be used on this site as appropriate to the needs of erosion control. Some of these items, such as sediment sumps, are temporary. Other features, such as catch basins and area drains are permanent.

Sediment from sediment traps or sedimentation ponds must be removed when design capacity has been reduced by 50 percent.

Soils

According to the Natural Resources Conservation Service Soil Survey, the soils onsite are categorized as Peru Marlow Association.

INSPECTION AND MAINTENANCE OF EROSION CONTROLS

- 1) At all times, siltation fabric fencing, stakes and straw wattles sufficient to construct an erosion control barrier a minimum 300 feet long will be stockpiled on the Site in order to repair established barriers that may have been damaged or breached.
- 2) The Applicant will designate as Inspector, a person or entity other than the Site Contractor. The Inspector must be accessible seven days a week and be responsible for inspecting and coordinating the maintenance and repair of all erosion control systems on the site.
- 3) An inspection of all erosion control measures shall be conducted by the Inspector at least once each week until the completion of construction of the project. The Contractor shall inspect all erosion control systems daily and shall notify the Inspector of any breaches or failures. In case of any noted breach or failure, the Contractor shall immediately make appropriate repairs.
- 4) The Inspector shall inspect all erosion control systems on the Site before, during and after any storm event reaching one of the following thresholds:
 - a) Any storm event in which rain is predicted to last for 12 consecutive hours or more;
 - b) Any storm event for which a flash flood watch or warning is issued;
 - c) Any single storm event predicted to have a cumulative rainfall greater than 1/2 inch; or
 - d) Any storm event not meeting the previous three thresholds but which would mark the third consecutive day of measurable rainfall.
- 5) The Inspector shall inspect erosion control measures at times of significant increase in surface water runoff due to rapid thawing when the risk of failure of those measures is significant.
- 6) In such instances as remedial action is necessary, the Inspector shall cause to be repaired within three days, any and all significant deficiencies in erosion control measures.

EROSION CONTROL DEVICES

- 1) Site Entrance Mat
A Site Entrance Mat will be installed at the construction entrance to the site. It will consist of a 50-foot long, 6-inch thick layer of 1-1/2" to 3" crushed stone overlying a 6-inch thick layer of 3" to 6" crushed stone. The site entrance mat will be installed over a compacted base. The crushed stone will be refreshed as necessary. If earthen products are transported onto Otis Street during any of the construction phases, than the site contractor is responsible for removing these earthen products.
- 2) Erosion Control Barriers
The Erosion Control Barriers will consist of an approved siltation fabric fencing installed on posts according to the manufacturer's instructions and backed by staked straw wattles where appropriate. The filter fabric and straw wattles will be placed in a manner that prevents the passage of soil materials under, around or over the fencing. Any Sediment that has been captured against the barrier will be removed promptly and the area that has areas of erosion will be stabilized promptly.

EROSION CONTROL DEVICES (CONTINUED)

- 3) Straw wattle Diversion Dikes
Straw wattles will be placed in other locations on the site in order to further prevent the flow of sediment from the site or reduce the velocity of runoff crossing open land or turning off of stockpile or fill areas. Straw wattle diversion dikes will also be placed within developing fills to reduce surface runoff velocities and to shift the path of the water flow. The locations where straw wattle diversion dikes are installed will be determined in the field at the Inspector's discretion.
- 4) Slope Stabilization
Slopes or surfaces that are created due to excavation or filling of the site will be stabilized with one or more of the following:
 - Straw mulch,
 - Softwood and hardwood chips, or
 - In areas that will be steeper than 2.5:1 after construction, the slope will be stabilized by the placement of erosion control blanket or heavy rip-rap. The rip-rap slope to be placed will be formed by placing heavy stone on a one foot thick layer of gravel.

Permanent stabilization of slopes and surfaces will employ one or more of the following:

- Loam and grass,
- Sod,
- Rip-Rap, or
- A combination of grasses, rip-rap and/or plants and shrubbery.

5) Runoff Diversion Swales

Runoff Diversion Swales will be provided in order to intercept sheet and concentrated flows above areas of cut, above abutting properties and above resource areas. The swales will direct runoff to sediment sumps or temporary settling basins or to detention basins.

6) Sediment Sumps

Sediment Sumps are excavated depressions 10-foot in diameter and 2-feet deep. The sumps will collect runoff from the unfinished drive and slopes and will allow sediment to settle out before flow continues to a detention area or siltation control barrier. Sediment sumps will be cleaned whenever the accumulated sediment has reached one-half of the original depth of the sump.

7) Stone-Lined Sediment Sumps

A 10-foot diameter, 2-foot deep, Stone-Lined Sediment Sump will be installed at all points where storm water is discharged from the piped collection system. These sumps will serve to collect sediment which may erode from the Site during the construction period. Sediment will be removed from a Stone-Lined Sediment Sump when it has reached one-half of the original capacity. Stone-Lined Sediment Sumps will be cleaned and remain in place after permanent stabilization of the Site has been achieved.

8) Temporary Settling Basins

A Temporary Settling Basin is a large, excavated sediment sump that has a stone face overflow leading to a swale or to a drainage inlet structure. The size varies with the area draining to it. Temporary settling basins will be cleaned whenever the accumulated sediment has reached one half of their original depth.

9) Rip-Rip Outlet Protection

Rip-rap outlet protection is a stone apron beginning at a drainage system discharge point and extending down the slope. The rip-rap will serve to reduce the velocity of the discharge, thereby preventing erosion.

CONSTRUCTION/WASTE MATERIAL

Construction/Waste material to be stored on site shall include the following:

- Fill Material
- Drainage Structures/Piping
- Sewer Structures/Piping
- Utility Conduit/Piping
- Building Material

See below for Waste Disposal procedure.

WASTE DISPOSAL

All waste materials will be collected and stored securely in metal dumpsters. The dumpster will meet local and state solid waste management regulations. All trash and construction debris will be deposited in the dumpster and emptied as necessary. A licensed company in accordance with applicable Federal, State, and local regulations will transport the trash. No trash or construction debris will be buried on site. The disposal of liquid waste is not allowed. Individuals working on the site will be informed of the appropriate procedure for the disposal of construction debris. The site contractor shall be responsible for ensuring that the project site is free of litter and refuse.

HAZARDOUS WASTE

All hazardous waste materials will be disposed of in accordance with applicable Federal, State and local regulations and in accordance with the manufacturer's recommendations. Individuals working on the site will be informed of the appropriate procedures for waste disposal. The construction supervisor will be responsible for overseeing that the proper procedures are followed.

SANITARY WASTE

All sanitary waste will be collected in a timely manner by a licensed contractor and disposed of in accordance with Federal, State, and local regulations.

EQUIPMENT & VEHICLE FUELING AND MAINTENANCE PRACTICES

Large equipment will be fueled by an over the road fuel truck and small equipment will be fueled by pickup truck fuel tanks. All equipment will be fueled at a minimum 100 feet from any wetland and/or water body. Fueling areas will be inspected for signs of leaks or spills.

EQUIPMENT & VEHICLE WASHING

No heavy equipment and vehicle washing will be allowed on the site. All construction equipment will be parked in the designated staging area at least 100-feet from any wetland or water body.

SPILL PREVENTION AND CONTROL

All construction personnel will be instructed regarding the following measures. The site construction supervisor will be responsible for overseeing that all spill prevention procedures will be adhered to. No storage, stockpiling, or staging of equipment or construction material will occur within 100-feet of any wetland or waterbody.

All materials stored onsite will be maintained in an orderly manner and in their appropriate containers. Materials will be kept in their original containers with their original labels. Substances will not be mixed with one another unless recommended by the manufacturer. The manufacturers guidelines for the proper use and disposal will be implemented.

The construction supervisor will inspect the premises regularly to ensure proper use and disposal of materials.

PETROLEUM PRODUCTS

All onsite construction machinery and vehicles will be monitored for leaks and will receive regular preventive maintenance to reduce the likelihood of leakage. No vehicle maintenance or handling of petroleum products will occur within 100-feet of any wetland or waterbody. No petroleum products will be stored onsite.

FERTILIZERS

Fertilizers will be applied at the minimum amount recommended by the manufacturer. The storage of fertilizer products will not be allowed onsite.

SOLVENTS & PAINTS

All containers will be sealed and stored when not used. Excess material will not be discharged to the storm and/or sewer systems and will be properly disposed of according to the manufacturers specifications including all Federal, State, and local regulations. No storage will occur within 100' of a wetland or waterbody.

CONCRETE TRUCK WASHOUT

Concrete trucks will discharge into temporary basins, where the concrete will be allowed to cure. Once the concrete is cured, the concrete will be broken up and used as common fill or hauled off site.

SPILL CONTROL PRACTICES

All of the manufacturers recommended methods for spill cleanup will be clearly posted and site personnel will be informed of the necessary procedures and the location of the cleanup supplies. Materials and the equipment necessary for cleanup of a spill will be kept on site in a designated area. Examples of cleaning equipment are: shovels, rakes, wheel barrows, brooms, dust pans, mops, rags, safety gloves and eye wear, absorbent foams, sand, sawdust, and plastic or metal bins designated specifically for spill cleanup. After discovery, all spills will be removed as soon as possible.

REPORTING

Reportable Spills, toxic or hazardous (10 gallons or more for petroleum), material will be reported to the Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup Central Regional Office, 627 Main Street, Worcester, MA 01608-ph-508-792-7653

The construction superintendent will be responsible for spill prevention and cleanup coordinator and supervisor. The construction supervisor is responsible for educating the construction personnel of the protocol in the event of a spill.

NON STORAGE DISCHARGES

The following non-stormwater discharges are expected as part of the proposed project during the construction phase:

Water from utility flushing and dust control, pavement wash water, where no spills or leaks of toxic or hazardous materials have occurred, uncontaminated groundwater during the dewatering excavations.

Non-stormwater discharges will be directed to vegetated surfaces and or temporary setting basins prior to discharge to wetlands and/or waterways.

SEQUENCE OF INSTALLATION AND CONSTRUCTION

Prior to the start of earth-moving activities, the sediment control barriers shall be installed along the limit of work as shown on the site plans.

CONSTRUCTION ACCESS

At each construction entrance, a stone entrance mat shall be installed to remove soil material from the equipment tires. Any other bare construction routes or equipment staging areas shall be stabilized with gravel, wood chips, or temporary vegetation.

LAND CLEARING AND GRADING

To the extent practicable, clearing, grubbing and stripping shall be limited. Whenever practical, existing strips of vegetative cover will be preserved between cleared areas and resource areas to provide runoff filtration. All slopes shall be brought to finish grade and stabilized as soon as possible. Slopes between 1:1 and 2:1 steepness shall be stabilized with erosion control fabric, and/or rip-rap armoring. Slopes between 2:1 and 3:1 shall be stabilized with a bonded fiber matrix, hydroseeding or seed and erosion control blanketing. Slopes which are 3:1 and flatter shall be stabilized with hydroseeding and/or hand seeding. Additional run-off control measures shall be installed as grading progresses, to include temporary basins, dikes, and swales.

TEMPORARY SEDIMENT BASINS AND SUMPS

As needed within construction phases temporary sediment basins and sumps will be excavated prior to further soil disturbance on the site. The basins shall include stone and filter fabric. The basin slopes and bottom shall be stabilized with loam, seed, and/or an erosion control product, and a stabilized exit spillway shall be constructed with a filter fabric and stone apron. Temporary riser pipes may be utilized to allow retention and treatment with controlled release of stormwater runoff during construction. The basins may be over excavated as needed to provide storage for, at a minimum, 1,800cf per disturbed acre of run-off. Additional temporary sediment basins or sediment sumps, may be constructed as necessary to store and infiltrate run off. Sediment sumps are excavated depressions of a minimum 10-foot diameter and a 2-foot depth and strategically installed to reduce velocities and to provide sediment trapping. Basins and sumps will be inspected weekly, before and after significant storm events.

RUN OFF CONTROL AND CONVEYANCE SYSTEMS

As needed, diversion swales and /or dikes leading into the basins shall be constructed and stabilized utilizing earth, crushed stone, or haywattles. Additional swales or dikes shall be constructed as necessary to divert runoff into temporary sediment basins. Stone check dams shall be installed at appropriate intervals.

STOCKPILING

Soil stockpiling shall take place in designated areas, outside of the Wetland Buffer Zones. Any stockpiling that will remain inactive for more than 2 weeks shall be hydroseeded or covered with plastic covers.

SURFACE STABILIZATION

Apply temporary or permanent stabilization measures immediately on all disturbed areas where work is completed or delayed greater than 2 weeks.

PARKING LOT & UTILITY CONNECTIONS

After the parking lot, temporary swales with check dams or dikes and settling basins will be utilized to control runoff until the closed drainage system is functional. After the utilities, including the catch basins have been installed, the parking lot will be finish graded and stabilized with a binder coat of pavement.

STORM WATER INFILTRATION SYSTEM

The infiltration area shall be brought to finish grade, stabilized, and the outlet structures shall be installed before the proposed building addition is erected.

INLET PROTECTION

Following the installation of the closed drainage system, driveway paving, catch basin inlets will be protected with catch basin filters.

BUILDING SITE PREPARATION

The proposed building construction area will be cleared and grubbed and stabilization shall be provided between construction increments.

LANDSCAPING AND FINAL STABILIZATION

After construction is complete in a given area any exposed soils will be stabilized by hydroseeding and or landscaping.

CONSTRUCTION SCHEDULE

The following is a general construction sequence for the construction of the Site. The actual schedule may vary somewhat from that stated if site or weather conditions require a different schedule and if such change does not negatively affect the prevention of pollution. An example of a logical change to the schedule would be deviating from the sequence below to allow the laying of driveway berm prior to a winter freeze in order to better control the site drainage.

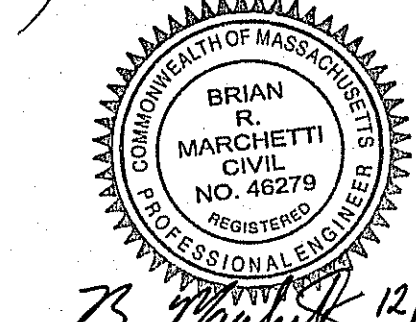
- The Applicant will hold a pre-construction meeting with representatives of the Town, the Engineer, Contractor's employees and the Inspector in order to review permits, procedures and construction methods.
- Establish the Site Entrance Mat at the construction entrance to the site.
- Establish a construction staging and equipment storage area protected against erosion by lines of staked straw wattles and siltation fencing.
- Install the siltation control barriers between the work areas and in other locations as shown within the plan set.
- Tree and Brush clearing
- Strip and Stockpile Topsoil
- Place the straw wattles or fencing at least five feet from the base of the loam pile, if applicable
- Cut and fill to subgrade
- Form and pour concrete foundation
- Excavate for interior plumbing, electrical, and sewer services
- Excavate for water
- Backfill foundation
- Commence building shell construction
- Establish and build the drainage discharge points, and various additional erosion control measures.
- Install perimeter retaining walls.
- Install drainage system, including pipes, drain manholes and catch basins.
- Apply temporary or permanent stabilization measures immediately on all disturbed areas where work is completed or delayed greater than 2 weeks
- Form and pour foundation walls
- Pour interior slab
- Install site utilities including underground electrical
- Complete site grading to match the site design
- Lay the binder course of pavement.
- Complete the permanent stabilization of slopes, repair areas that have been damaged, and install additional erosion control devices as required.
- Lay sidewalk binder and driveway berm.
- Install concrete flatwork
- Install landscape material and site improvements
- Lay finish course of pavement, signage, fencing
- Remove accumulated sediment and temporary erosion control measures after all slopes have been permanently stabilized and the risk of erosion has passed.
- Equipment moving, project punchlist and closeout

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APPROVED BY THE TOWN OF WESTMINSTER PLANNING BOARD DATE:

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1.	12/08/2023	Response to Comments


12/8/23

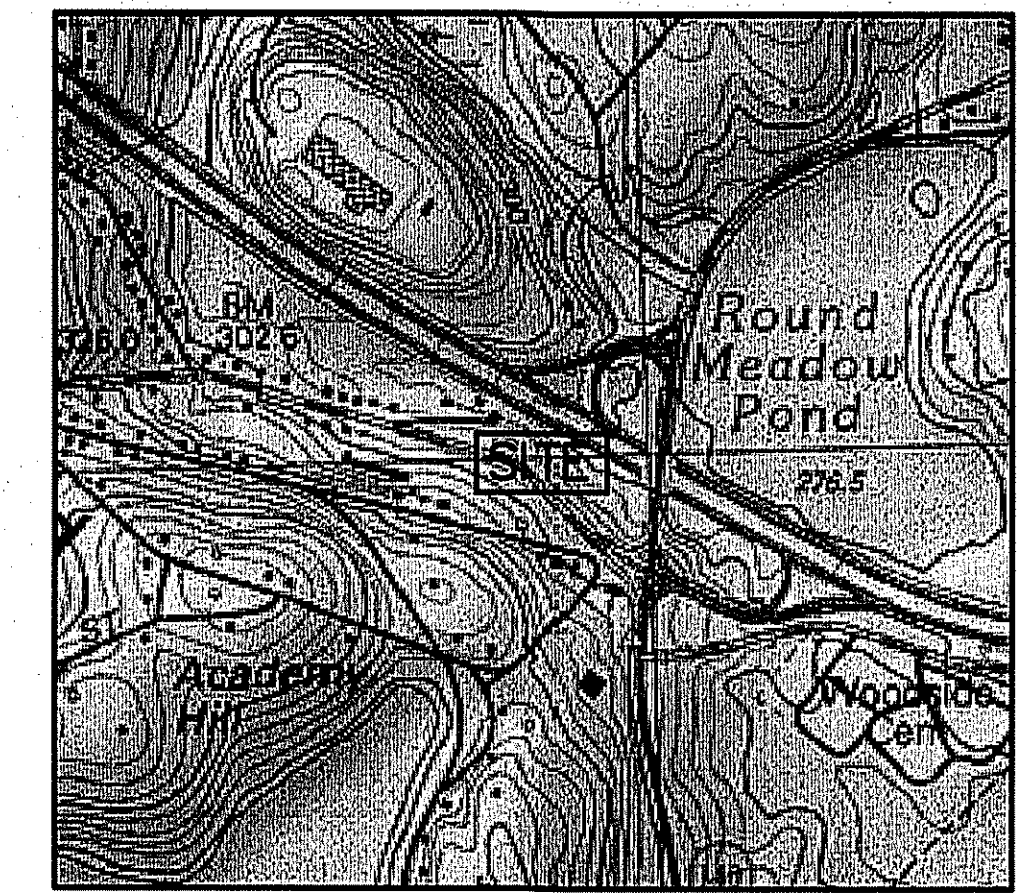
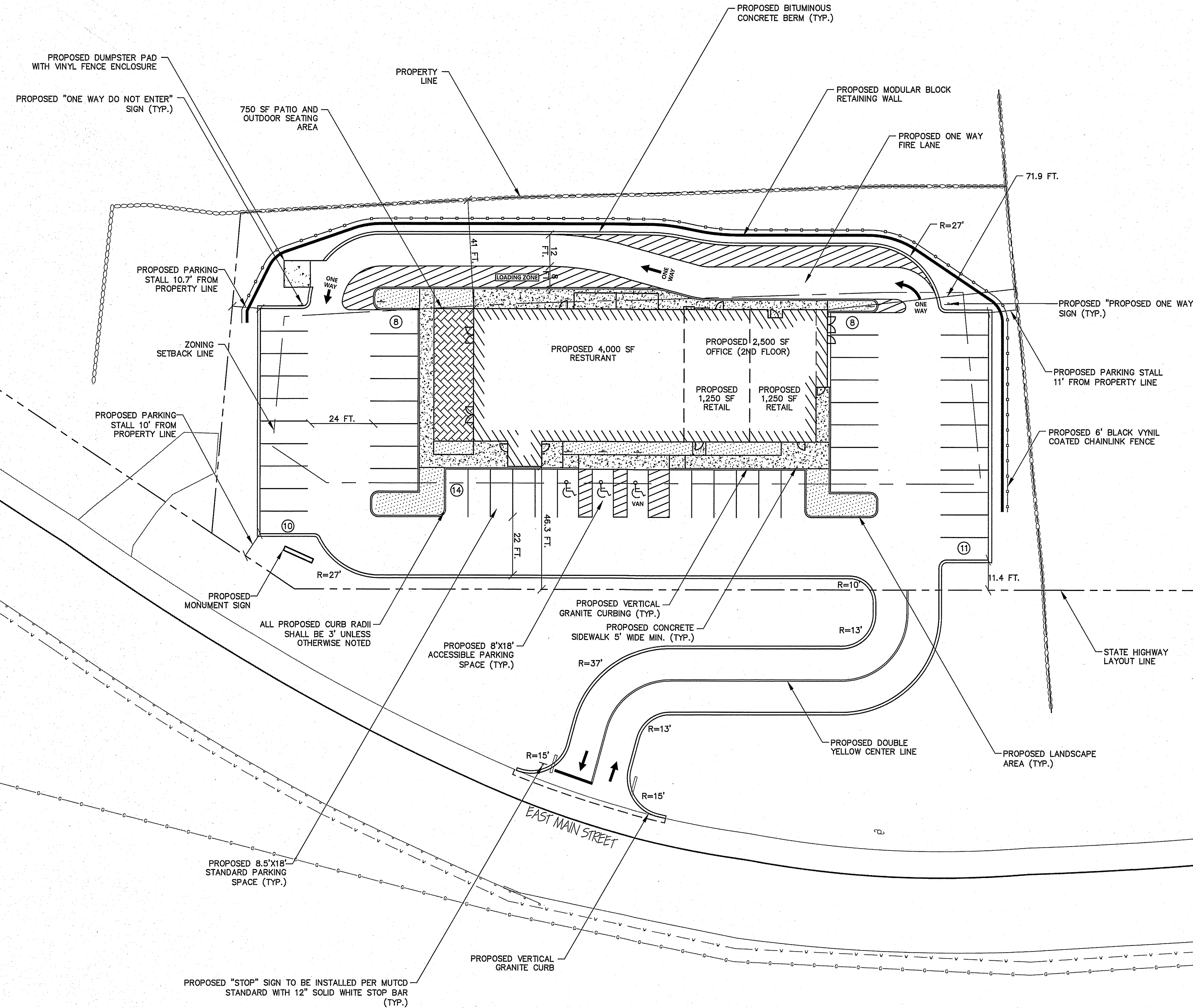
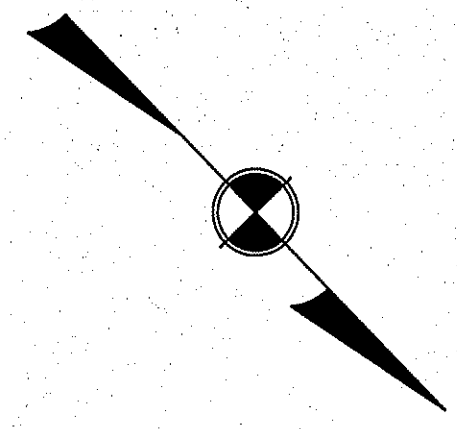
Drawn By: JRP Designed By: JRP Checked By: JRP

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Project Name
5 East Main Street
Westminster, MA

Sheet Title
Erosion Control
Notes

Job No: 220.03 Sheet No.
File Name: 220.03P-CER-Notes
Date: October 6, 2023
Scale: N.T.S. 3



LOCUS PLAN
1"=1,000 FT.±

NOTES:
1. EXISTING CONDITIONS INFORMATION SHOWN HEREON IS A RESULT OF AN ON THE GROUND SURVEY PREPARED BY HALEY WARD INC. IN MARCH OF 2023.

ZONING SUMMARY:

DISTRICT:	COMMERCIAL I
MIN. LOT AREA:	40,000
MIN. FRONTAGE:	150
MIN. FRONT YARD:	40 FT.
MIN. SIDE YARD:	20 FT.
MIN. REAR YARD:	40 FT.
BUILDING HEIGHT:	30 FT.
LOT COVERAGE:	NA
REQUIRED:	PROVIDED:
44,867.7 SF	44,867.7 SF
322.4 FT.	46.3 FT.
Y	Y
Y	Y
Y	Y
Y	Y
Y	Y
Y	Y
Y	Y

PARKING SUMMARY:

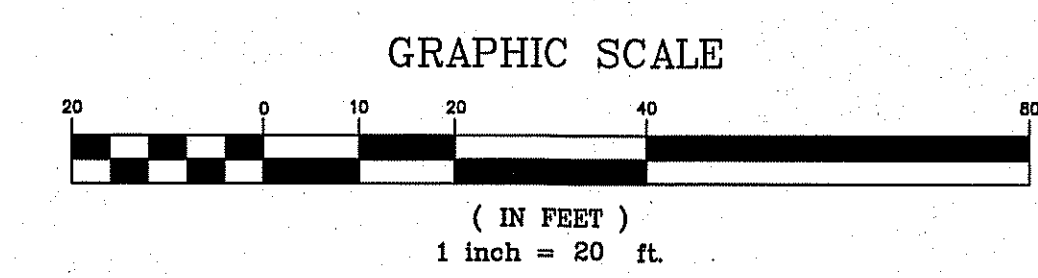
REQUIREMENTS:
 RESTAURANTS: 1SPACE/4 SEATS
 RETAIL STORES AND SERVICES: 1 SPACE/250 SF
 OFFICES: 1 SPACE/500 SF

PROPOSED:
 RESTAURANTS: 148 SEATS
 RETAIL STORES AND SERVICES: 2,500 SF
 OFFICES: 2,500 SF

PARKING REQUIRED:
 RESTAURANTS: 148 SEATS X 1 SPACE/4 SEATS=37 SPACES
 RETAIL STORES & SERVICES: 2,500 SF X 1 SPACE/250 SF=10 SPACES
 OFFICES: 2,500 SF X 1 SPACE/500 SF=5 SPACES

TOTAL PARKING REQUIRED: 52 SPACES
TOTAL ACCESSIBLE PARKING REQUIRED: 3 SPACES
PARKING PROVIDED: 52 SPACES

Drawn By: JLL
 Designed By: BRM
 Checked By: [Signature]



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12/8/23 [Signature]

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 www.mccartydb.com

Project Name
5 East Main Street
 Westminster, MA

Sheet Title
Layout & Materials
 Plan

Job No: 220.03
 File Name: 220.03P-CPB01
 Date: October 6, 2023
 Scale: 1"=20'

Sheet No.
4

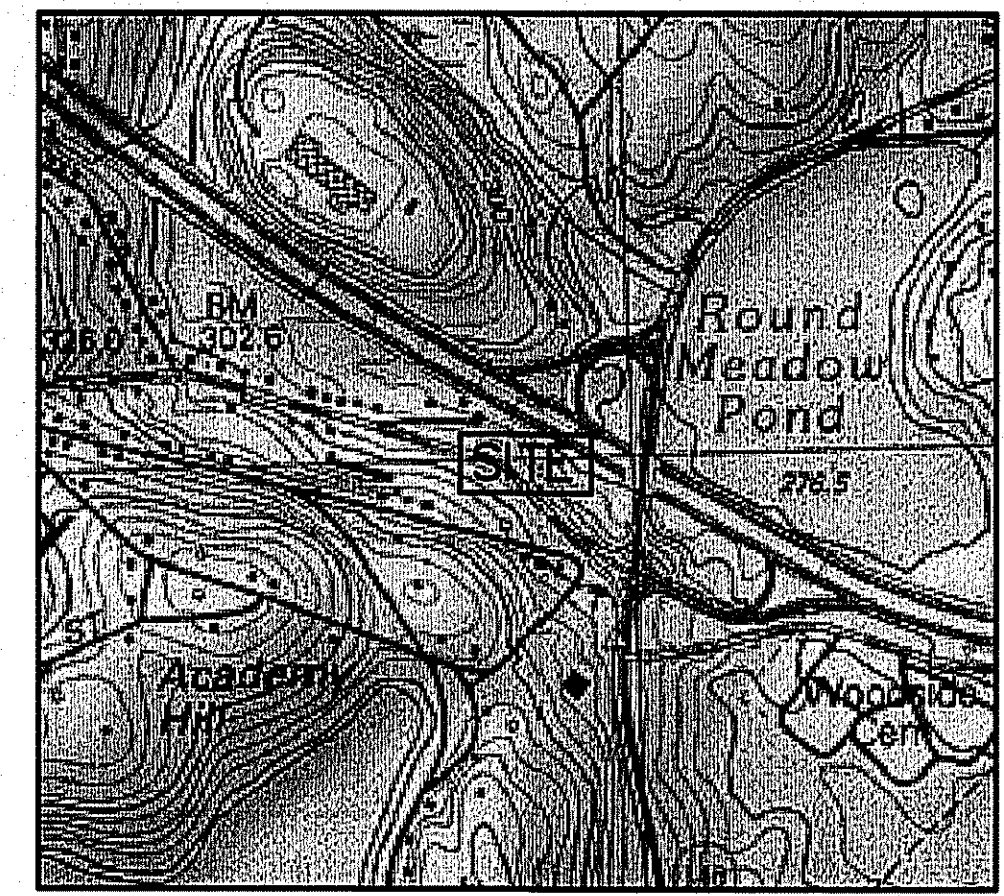
C:\Users\JohnPillita\Documents\Projects\220-03 East Main\220-03P-CPB01.dwg 12/08/2023 8:08 AM by: John Pillita

PIPE SUMMARY:

P1: CB 1-DMH 1 12" RCP L=7.0 FT S=0.01 FT/FT	P6: CB4-DMH 3 12" RCP L=20.5 FT S=0.01 FT/FT	P11: CB6-DMH4 12" RCP L=118.5 FT S=0.01 FT/FT	P16: DMH4-POND2 12" RCP L=5 FT S=0.01 FT/FT
P2: CB 2-DMH 1 12" RCP L=89.6 FT S=0.01 FT/FT	P7: CB5-DMH3 12" RCP L=15 FT S=0.01 FT/FT	P12: CB7-DMH4 12" RCP L=15.3 FT S=0.01 FT/FT	P17: POND2-OCS2 12" RCP L=17 FT S=0.01 FT/FT
P3: DMH1-DMH2 12" RCP L=13.8 FT S=0.01 FT/FT	P8: DMH3-POND1 12" RCP L=5 FT S=0.01 FT/FT	P13: CB8-DMH4 12" RCP L=20.7 FT S=0.01 FT/FT	P18: OCS2-FES1 12" RCP L=66.8 FT S=0.01 FT/FT
P4: CB3-DMH2 12" RCP L=31.2 FT S=0.01 FT/FT	P9: POND1-OCS1 12" RCP L=17 FT S=0.01 FT/FT	P14: DMH4-POND2 12" RCP L=5 FT S=0.01 FT/FT	P19: POND2-OCS 12" RCP L=5 FT S=0.01 FT/FT
P5: DMH2-POND1 12" RCP L=5 FT S=0.01 FT/FT	P10: OCS1-OCS2 12" RCP L=209.1 FT S=0.01 FT/FT	P15: CB9-DMH5 12" RCP L=20 FT S=0.01 FT/FT	P20: CB10 to Existing DMH 12" RCP L=130.6 FT S=0.01 FT/FT

DRAINAGE STRUCTURE SUMMARY:

OCS 1: RIM=980.3 INVERT IN=973.0(POND1) INVERT OUT=973.0(OCS2) RIM=980.4 INVERT IN=973.0(POND2) INVERT IN=970.9(OCS1) INVERT OUT=970.9(FES)	DMH 3(WQU 2): RIM=980.8 INVERT IN=976.70 (CB4) INVERT IN=976.74 (CB5) INVERT OUT=975.55(POND1)	FES 1: INVERT=970.1	CB 5: RIM=980.4 INVERT=976.9	CB 10(WQU5): RIM=967.6 INVERT=964.1
DMH 1: RIM=980.5 INVERT IN=976.94 (CB 1) INVERT IN=976.10 (CB 2) INVERT OUT=976.03 (DMH 2)	DMH 4(WQU 3): RIM=980.77 INVERT IN=975.51 (CB6) INVERT IN=976.95 (CB7) INVERT IN=976.30 (CB8) INVERT OUT=976.2(POND2)	CB 1: RIM=980.5 INVERT=977.0	CB 6: RIM=980.2 INVERT=976.7	CB 7: RIM=980.6 INVERT=977.1
DMH 2(WQU 1): RIM=980.83 INVERT IN=975.40 (CB 3) INVERT IN= 975.89 (DMH1) INVERT OUT=975.30 (POND1)	DMH 5(WQU 4): RIM=980.65 INVERT IN=976.3 (CB 9) INVERT OUT=976.1(POND2)	CB 2: RIM=980.43 INVERT=977.0	CB 8: RIM=980.25 INVERT=976.7	CB 9: RIM=980.0 INVERT=976.5
		CB 3: RIM=980.2 INVERT=976.7	CB 4: RIM=980.4 INVERT=976.9	



LOCUS PLAN

1"=1,000 FT.±

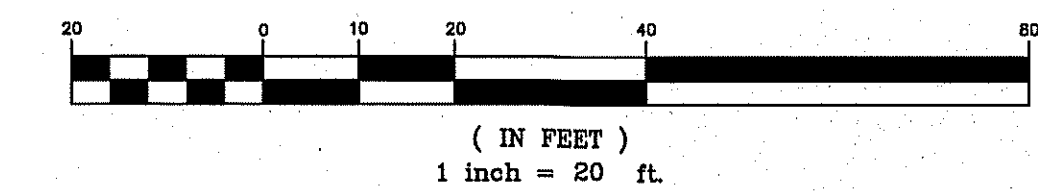
NOTES:

1. EXISTING CONDITIONS INFORMATION SHOWN HERON IS A RESULT OF AN ON THE GROUND SURVEY PREPARED BY HALEY WARD INC. IN MARCH OF 2023.

GENERAL NOTES

- THE CONSTRUCTION OF ALL PROPOSED UTILITIES SHALL CONFORM TO THE TOWN OF WESTMINSTER STANDARDS AND SPECIFICATIONS, LATEST EDITION, AS WELL AS THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS STANDARDS AND SPECIFICATIONS, LATEST EDITION. CONTRACTOR SHALL CONFORM TO ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES AND REQUIREMENTS DURING CONSTRUCTION.
- THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES SHALL BE CONSIDERED APPROXIMATE AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION. ANY DISCREPANCIES IN THE LOCATION OF ANY UTILITIES SHOWN OR ENCOUNTERED DURING CONSTRUCTION SHALL BE REPORTED TO MCCARTY ENGINEERING, INC. AT 978-534-1318.
- THE CONTRACTOR SHALL CALL "DIG-SAFE" AT 1-888-DIG-SAFE (344-7233) 72 HOURS PRIOR TO CONSTRUCTION TO INFORM THE UTILITY COMPANIES OF ANY EXCAVATION ADJACENT TO EXISTING UTILITIES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF ALL WASTE MATERIAL AT AN APPROVED SITE. BURIAL OF WASTE MATERIAL ON-SITE IS NOT PERMITTED.
- CONTRACTOR SHALL STRIP TOP SOIL AND STOCKPILE ON-SITE FOR REUSE. SOIL STOCKPILES SHALL BE NO HIGHER THAN 6'. STOCKPILES SHALL BE ENCLOSED BY TEMPORARY SILT FENCES TO PREVENT TRAVEL OF SEDIMENT TO ADJACENT DRAINAGE WAYS.
- EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL SURFACE RESTORATION IS COMPLETE AND SHALL BE MAINTAINED IN GOOD CONDITION AT ALL TIMES.
- CONTRACTOR SHALL PROTECT ADJACENT PROPERTIES FROM ON-SITE CONSTRUCTION ACTIVITIES AND REMOVE ANY SEDIMENT OR DEBRIS DEPOSITED THEREON IMMEDIATELY.
- DRAINAGE GENERATED AS A RESULT OF TRENCH DEWATERING SHALL BE DISCHARGED TO EXISTING DRAINAGE COURSES WITH PROPER EROSION CONTROL MEASURES. DISCHARGE ONTO PAVEMENT OR PRIVATE PROPERTY SHALL NOT BE ALLOWED.
- WHEN TAPPING EXISTING PRECAST MANHOLES OR SEWER PIPE, DRILL HOLES AT 4" CENTER TO CENTER WITH A STARDRILL AROUND THE PERIPHERY OF THE OPENING TO CREATE A PLANE OF WEAKNESS BEFORE BREAKING THE SECTION OUT.
- SANITARY SEWER AND WATER MAIN SHALL BE SEPARATED BY 10 FEET MINIMUM HORIZONTALLY. WHEN SEWER AND WATER CROSS, THE WATER MAIN SHALL BE A MINIMUM OF 18" ABOVE THE SEWER PIPE CROWN.
- UNLESS OTHERWISE SPECIFIED ON THE PLANS, TOP OF ALL WATER MAINS SHALL BE 5.0 FEET BELOW FINISH GRADE.
- VERIFY LOCATION OF BUILDING UTILITY CONNECTIONS WITH ARCHITECTURAL, MECHANICAL AND PLUMBING PLANS.
- ALL CLEARING, GRADING, DRAINAGE, CONSTRUCTION AND DEVELOPMENT SHALL BE CONDUCTED WITH STRICT ACCORDANCE WITH THESE PLANS.
- CONTRACTOR SHALL REFER TO THE STORMWATER POLLUTION PREVENTION PLAN PREPARED FOR THIS PROJECT SITE FOR ALL CONSTRUCTION PERIOD INSPECTIONS, CONTROLS, AND MANAGEMENT PRACTICES REQUIRED.
- ANY UNSUITABLE FILL MATERIAL SHALL BE REMOVED WITHIN THE LIMITS OF THE INFILTRATION BASIN AND REPLACED WITH CLEAN SAND/STONE.
- BENTONITE CHECK DAMS ARE TO BE INSTALLED AT 20' INCREMENTS WITHIN THE UTILITY TRENCHES.

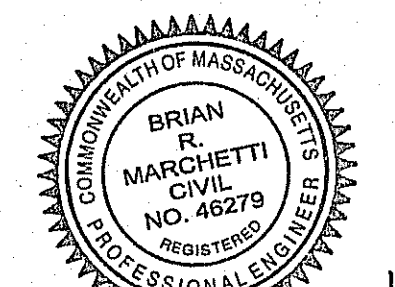
GRAPHIC SCALE



NOT FOR CONSTRUCTION
THESE PLANS WERE PREPARED FOR THE PURPOSE OF OBTAINING STATE AND LOCAL PERMITS AND ARE NOT INTENDED TO BE USED AS CONSTRUCTION DOCUMENTS.

APPROVED BY THE TOWN OF WESTMINSTER PLANNING BOARD
DATE:

No.	Date	Revision
1.	12/08/2023	Response to Comments



12/8/23

Drawn By: JLL
Designed By: JLL
Checked By: JSM

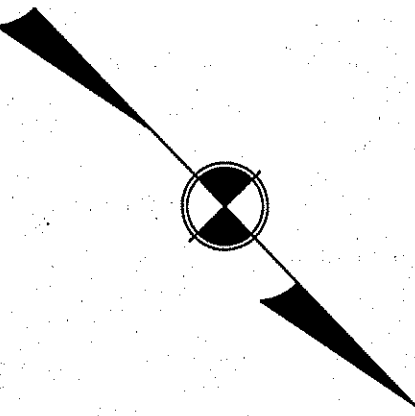
McCarty Engineering, Inc.
Civil Engineers
42 Tucker Drive, Leominster, MA 01453
phone:(978) 534-1318 fax: (978) 840-6907
www.mccartyeb.com

Project Name
**5 East Main Street
Westminster, MA**

Sheet Title
**Grading, Drainage &
Utility Plan**

Job No: 220.03
File Name: 220.03P-CPG01
Date: October 6, 2023
Scale: 1"=20'
Sheet No. **5**

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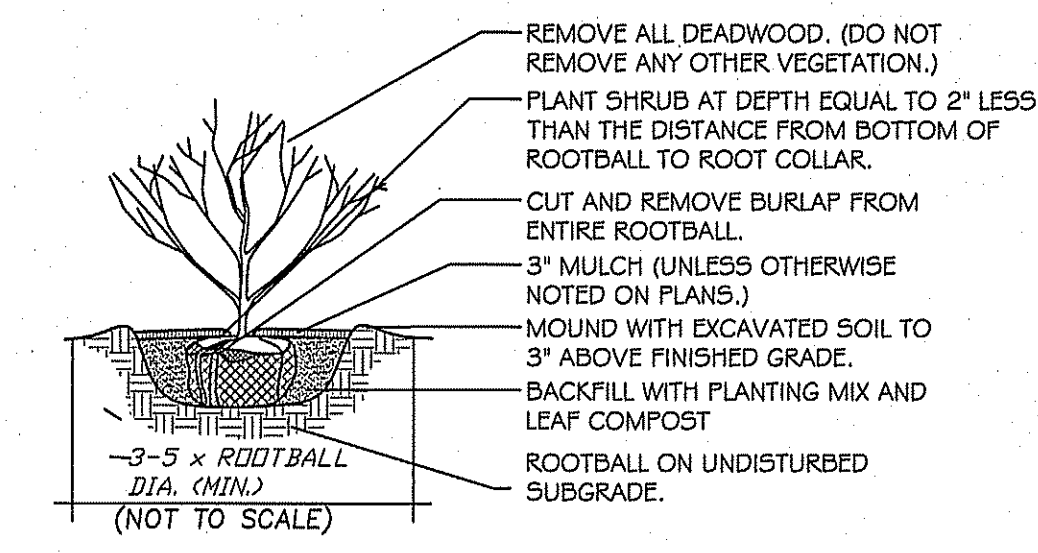
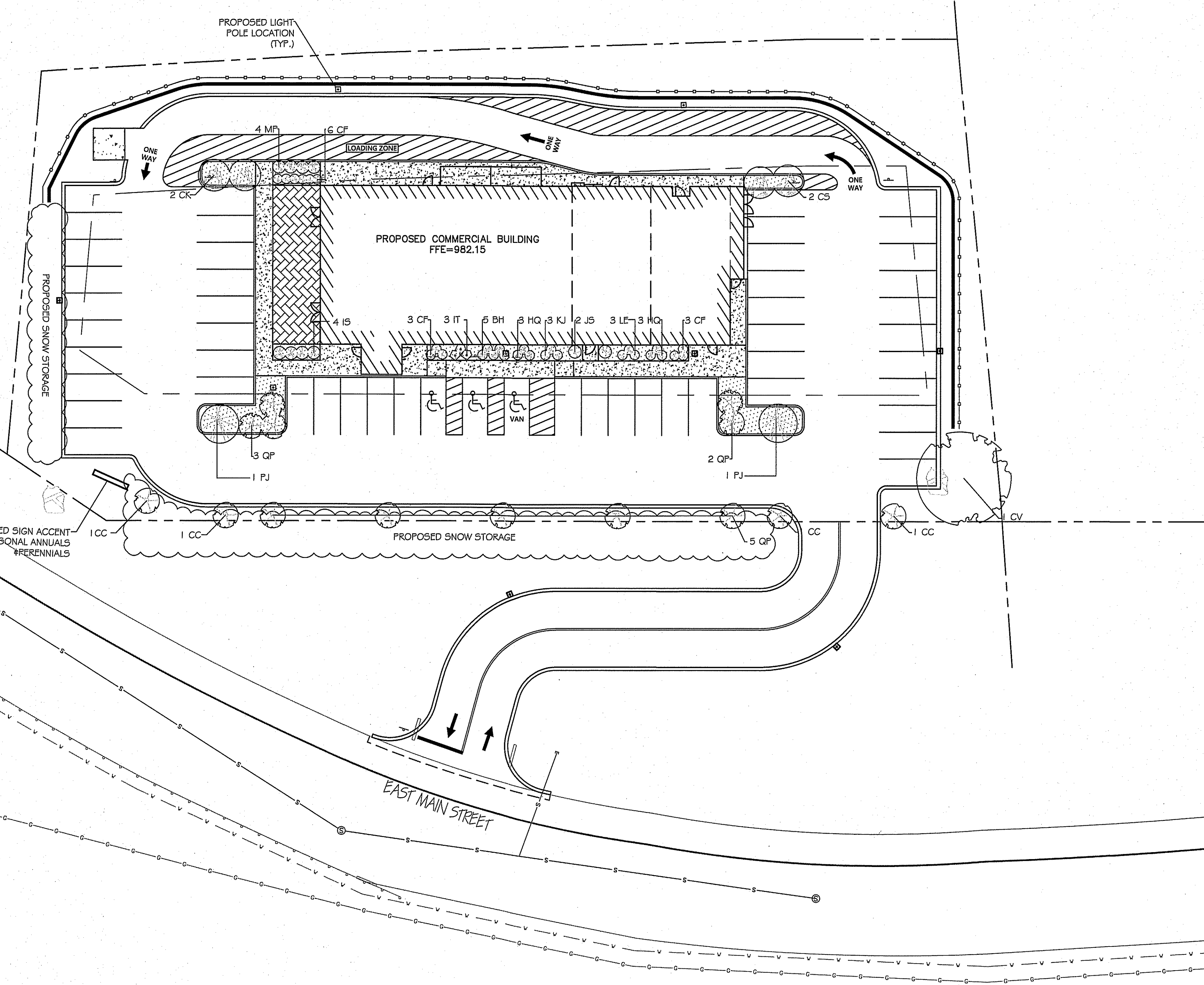


Planting Schedule

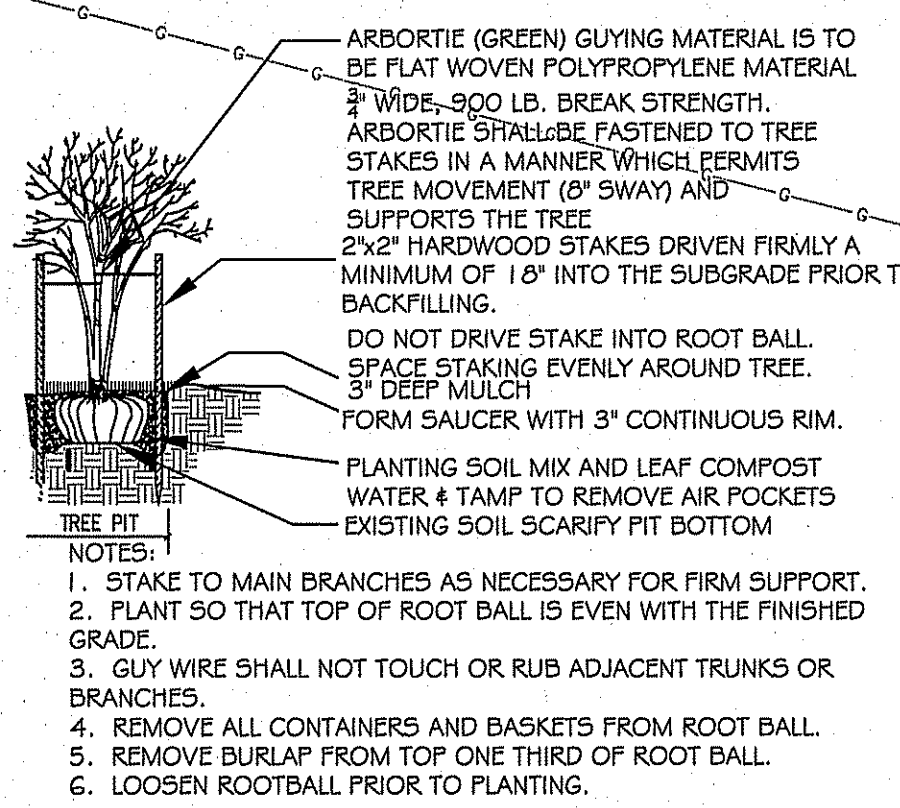
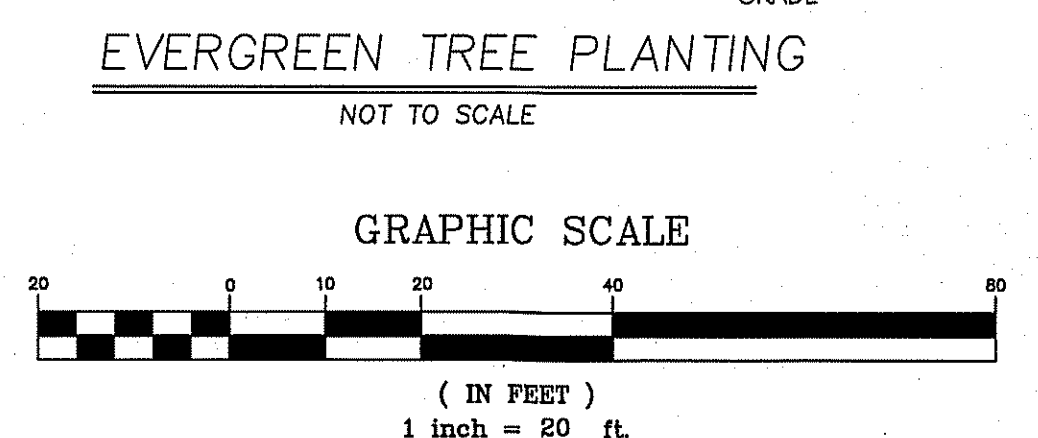
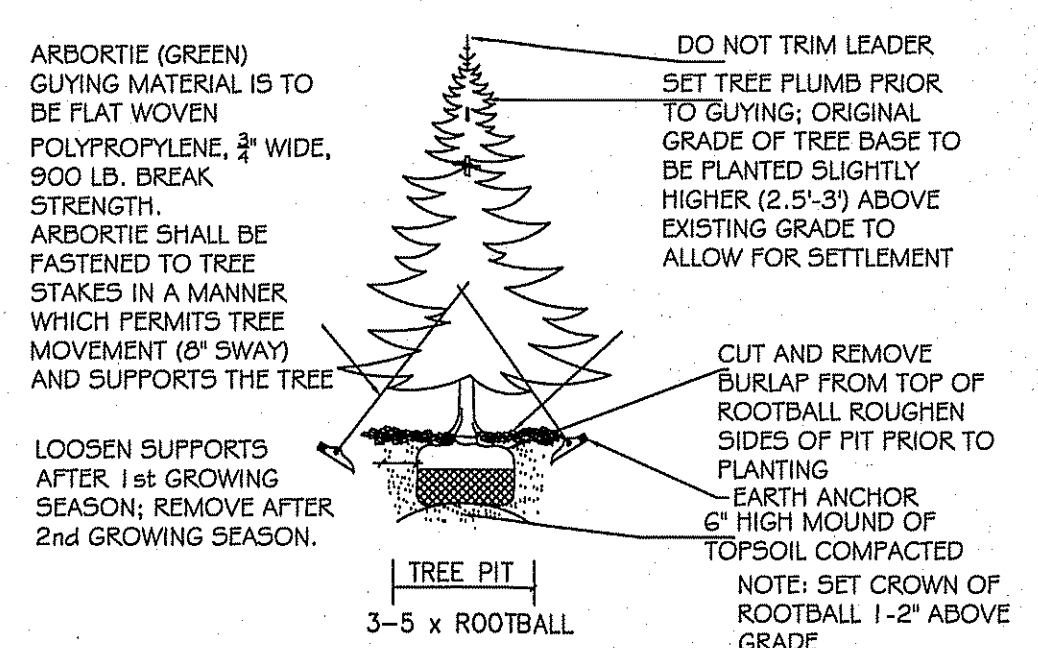
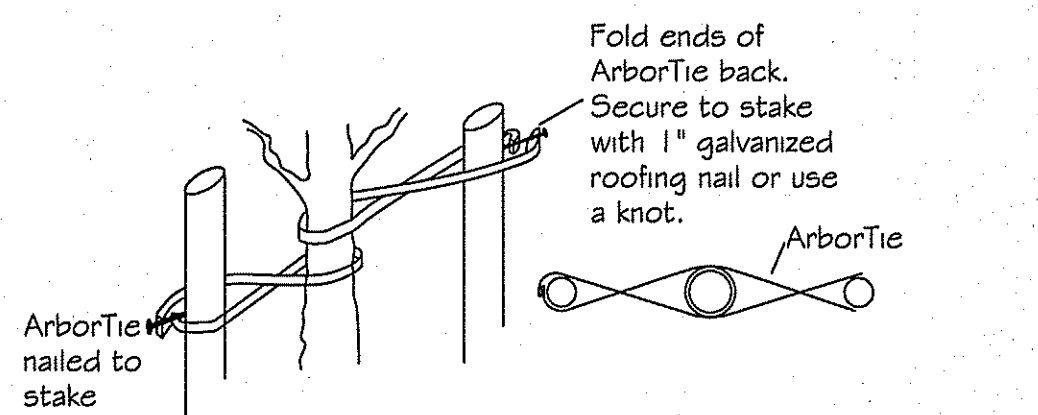
Qty	Key	Common Name	Botanical Name	Size	Remarks
TREES					
4	CC	Columnar Cherry	<i>Prunus Sargentii 'Columnaris'</i>	3" Cal.	B&B
2	CK	Chinese Dogwood	<i>Cornus kousa chinensis</i>	3" Cal.	B&B
2	CS	'Satomi' Dogwood	<i>Cornus kousa 'Satomi'</i>	3" Cal.	B&B
1	CV	'Winter King' Hawthorn	<i>Crataegus viridis 'Winter King'</i>	3" Cal.	B&B
2	PJ	White Spruce	<i>Picea glauca</i>	8 Ht.	B&B
10	QP	'Green Pillar' Oak	<i>Quercus palustris 'Green Pillar'</i>	3" Cal.	B&B
SHRUBS					
6	HQ	'Pee Wee' Hydrangea	<i>Hydrangea quercifolia 'Pee Wee'</i>	#3 Pot	Container Grown
4	IS	'Sky Pencil' Holly	<i>Ilex crenata 'Sky Pencil'</i>	#15 Pot	Container Grown
3	IT	'Little Henry' Sweetspire	<i>Itea virginica 'Sprich'</i>	#3 Pot	Container Grown
2	JS	'Steads' Holly	<i>Ilex crenata 'Steads'</i>	#15 Pot	Container Grown
3	KJ	'Golden Guinea' Kerria	<i>Kerria japonica 'Golden Guinea'</i>	24" Ht.	B&B
3	LE	'Coast' Leucothoe	<i>Leucothoe axillaris</i>	#3 Pot	Container Grown
4	MP	Northern Bayberry	<i>Myrica pensylvanica</i>	#7 Pot	Container Grown
PERENNIALS					
5	BH	'Beni Kaze' Hakone Grass	<i>Hakonechloa macra 'Beni Kaze'</i>	#3 Pot	Container Grown
12	CF	'Foerster's' Feather Reed Grass	<i>Calamagrostis x acutl. 'Karl Foerster'</i>	#3 Pot	Container Grown

LANDSCAPING NOTES

- NOTIFY DIG-SAFE AT 1-888-DIG-SAFE AND LOCAL AUTHORITIES PRIOR TO ANY TYPE OF SITE PREPARATION OR CONSTRUCTION.
- THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIAL AND MULCH IN SUFFICIENT QUANTITIES TO COMPLETE PLANTING AS SHOWN ON THE DRAWINGS.
- DRAWING QUANTITIES TAKE PRECEDENCE OVER PLANT LIST QUANTITIES.
- ALL PLANT MATERIAL SHALL CONFORM TO THE GUIDELINES SET FORTH BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION.
- ALL TREES AND SHRUBS SHALL BE PLANTED WITH THE 'BEST FACT' SHOWING. ALL PLANTS SHALL BE BALLED AND BURLAPPED OR CONTAINER GROWN, UNLESS OTHERWISE APPROVED BY THE LANDSCAPE ARCHITECT.
- ALL CONTAINER GROWN STOCK SHALL BE HEALTHY, VIGOROUS, WELL ROOTED AND ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE GROWING. THEY SHALL HAVE TOPS OF GOOD QUALITY, NO APPARENT INJURY AND BE IN A HEALTHY GROWING CONDITION. A CONTAINER GROWN PLANT SHALL HAVE A WELL ESTABLISHED ROOT SYSTEM REACHING THE SIDES OF THE CONTAINER TO MAINTAIN A FIRM BALL.
- THE QUALITY OF ALL TREES & SHRUBS IS TO BE NORMAL FOR THE SPECIES. ALL PLANTS ARE TO HAVE DEVELOPED ROOT SYSTEMS, TO BE FREE OF INSECTS AND DISEASES AS WELL AS MECHANICAL INJURIES, AND IN ALL RESPECTS BE SUITABLE FOR PLANTINGS.
- ALL CONIFERS SHALL HAVE DORMANT BUDDS AND SECONDARY NEEDLES.
- WHERE SPECIFIED, CALIPER SIZE IS TO BE THE OVERRIDING FACTOR IN TREE SELECTION. CALIPER SIZE SHALL BE MEASURED 12" ABOVE THE ROOTBALL.
- PLANT SUBSTITUTIONS ARE NOT ALLOWED UNLESS APPROVED BY THE PROJECT LANDSCAPE ARCHITECT.
- ALL DISTURBED AREAS NOT SHOWN OTHERWISE SHALL BE LOAMED AND SEEDED AND BLENDED INTO EXISTING GRADE AND CONDITIONS.
- PRIOR TO INSTALLING ANY PLANT MATERIAL, THE CONTRACTOR SHALL SUBMIT A LOAM SOIL SAMPLE FOR A ROUTINE, ORGANIC, SALTS, AND NITRATE SOIL TEST. UPON THE RESULTS OF THIS TEST, THE SITE CONTRACTOR SHALL AMEND THE LOAM AS RECOMMENDED. SEND THE SOIL SAMPLE TO THE UNIVERSITY OF MASSACHUSETTS SOIL AND PLANT TISSUE TESTING LABORATORY, WEST EXPERIMENT STATION, 652 NORTH PLEASANT ST., UNIVERSITY OF MASSACHUSETTS, AMHERST, MA 01003.
- LAWN SEED MIX SHALL BE THE PREVIOUS YEARS CROP: 35% JEFFERSON KENTUCKY BLUEGRASS, 35% CARMEN CHEWING FESCUE AND 30% STALLION PERENNIAL RYEGRASS, OR APPROVED EQUAL. PLANT AT A RATE OF 1 LB. PER 150 SQUARE FEET.
- SLOPE SEED MIX SHALL BE THE PREVIOUS YEARS CROP. PLANT AT A RATE OF 1 LB. PER 150 SQUARE FEET. SEED MIX SHALL BE STALLION PERENNIAL RYE 10%, CREEPING RED FESCUE 50%, ANNUAL RYE GRASS 15%, JEFFERSON KENTUCKY BLUE GRASS 10%, RED TOP CLOVER 5%, AND LADINO CLOVER 5%, OR APPROVED EQUAL. PLANT AT A RATE OF 1 LB. PER 150 SQ.
- LAWN SEED AREAS SHALL BE NOT BE DEEMED ACCEPTABLE UNTIL IN EXCESS OF 90% OF EACH AREA, INDEPENDENTLY, IS GERMINATED, GROWING AND DISPLAYING HEALTHY, UNIFORM GROWTH AND HAS BEEN CUT TWICE. THE SITE CONTRACTOR IS RESPONSIBLE FOR APPLYING AT A MINIMUM 1" OF WATER A WEEK UNTIL THE SEEDED AREAS HAVE BEEN ACCEPTED. THE WATERING SHALL OCCUR IN SMALL DOSES. THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY WEEDS (CRAB GRASS) WITHIN THE SEEDED AREAS UNTIL THE SEEDED AREAS HAVE BEEN ACCEPTED.
- THE HYDRO SEED SLURRY SHALL BE A WOOD BASED BONDED FIBER MATRIX. THE APPLICATION RATE SHALL BE 2,500-3,000 LB. PER ACRE SPRAYED IN AT LEAST TWO DIRECTIONS. DO NOT APPLY HYDRO SEED SLURRY IF RAIN IS EXPECTED WITHIN 12 HOURS, AND WHEN TEMPERATURES ARE BELOW 50 DEGREES.
- PRIOR TO PLANTING, THE LANDSCAPER SHALL REVIEW AND COORDINATE WITH THE SITE UTILITY PLAN AND GRADING PLAN.
- THE ROOTS OF NEWLY PLANTED TREES AND SHRUBS MUST BE KEPT STEADILY MOIST, AS THE DEVELOPING ROOTS ESTABLISH IN THE NEW SOIL. AT PLANTING, WATER THOROUGHLY TO SOAK THE ROOTS AND TO SETTLE THE NEW SOIL AROUND THE ROOT BALL. THE AMOUNT OF SUPPLEMENTAL WATER DURING EACH WEEK DURING THE FIRST GROWING SEASON AFTER PLANTING DEPENDS ON RECENT RAINFALL, TEMPERATURE, AND WIND. IF LESS THAN ONE-INCH OF RAIN HAS FALLEN OVER THE PAST FIVE TO SEVEN DAYS, THE NEW PLANTINGS MUST BE WATERED. LAWNS, TREES, AND SHRUBS WATERING SHALL OCCUR AT A MINIMUM OF TWO (2) TIMES A DAY FOR THE FIRST TWO (2) MONTHS, ONCE IN THE EARLY MORNING AND THEN THE OTHER IN THE LATE AFTERNOON. IN GENERAL TEN GALLONS OF WATER APPLIED TWICE A WEEK WILL WET A 20'-24" ROOT BALL AND PROVIDE THE EQUIVALENT OF ONE INCH OF RAIN FALL. NEW LAWNS SHALL BE WATERED SO THAT IT RECEIVES AT A MINIMUM ONE INCH (1") OF WATER EVERY WEEK.
- WITHIN THE LANDSCAPE BEDS ADJACENT TO THE BUILDING FOUNDATIONS, NO (HEMLOCK, PINE, SPRUCE, OR CEDAR) MULCH OR OTHER COMBUSTIBLE LANDSCAPE MATERIALS SHALL BE INSTALLED WITHIN 18" OF THE FOUNDATION.
- ALL LANDSCAPE BEDS SHALL RECEIVE THREE-INCHES OF BARK MULCH.
- LANDSCAPE AREAS SHALL BE DEEP TILLED TO A DEPTH OF TWELVE INCHES TO FACILITATE DEEP WATER PENETRATION.
- ALL TREE AND VEGETATION REMOVAL SHALL BE IN COORDINATION WITH THE PROJECT LANDSCAPE ARCHITECT.



SHRUB PLANTING



DECIDUOUS TREE PLANTING
 NOT TO SCALE

NOT FOR CONSTRUCTION
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APPROVED BY THE TOWN OF WESTMINSTER PLANNING BOARD DATE:

No.	Date	Revision
1.	12/08/2023	Response to Comments

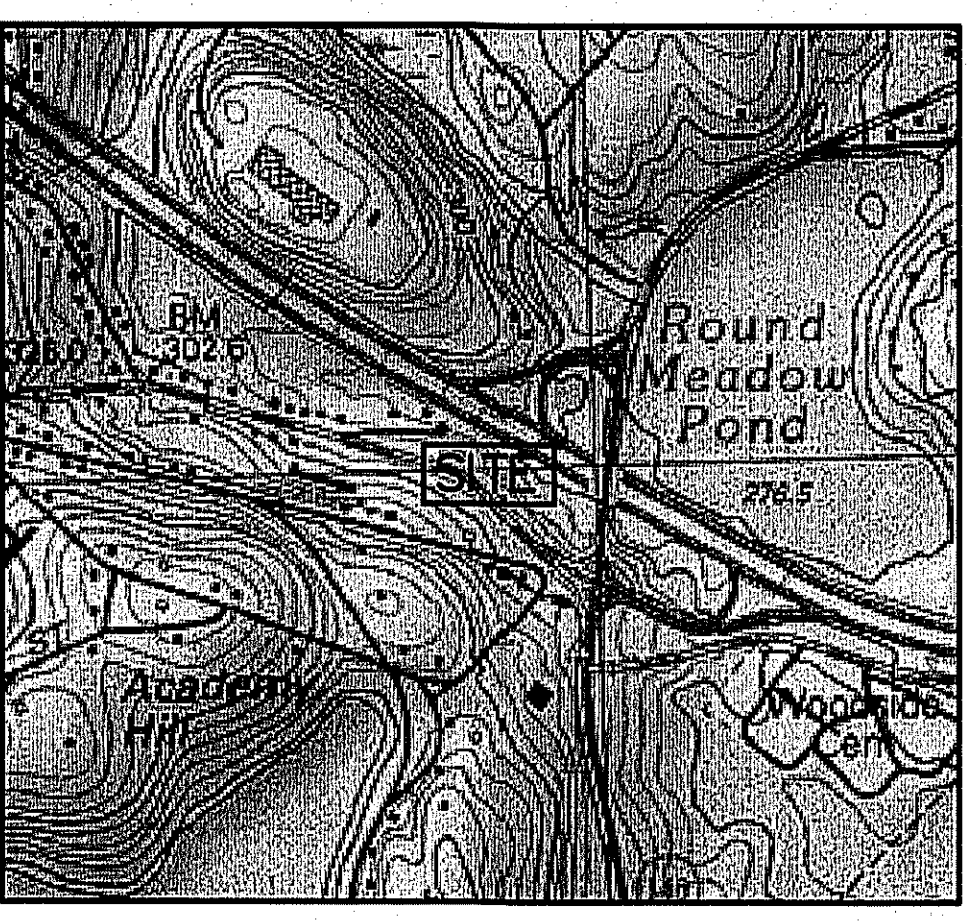
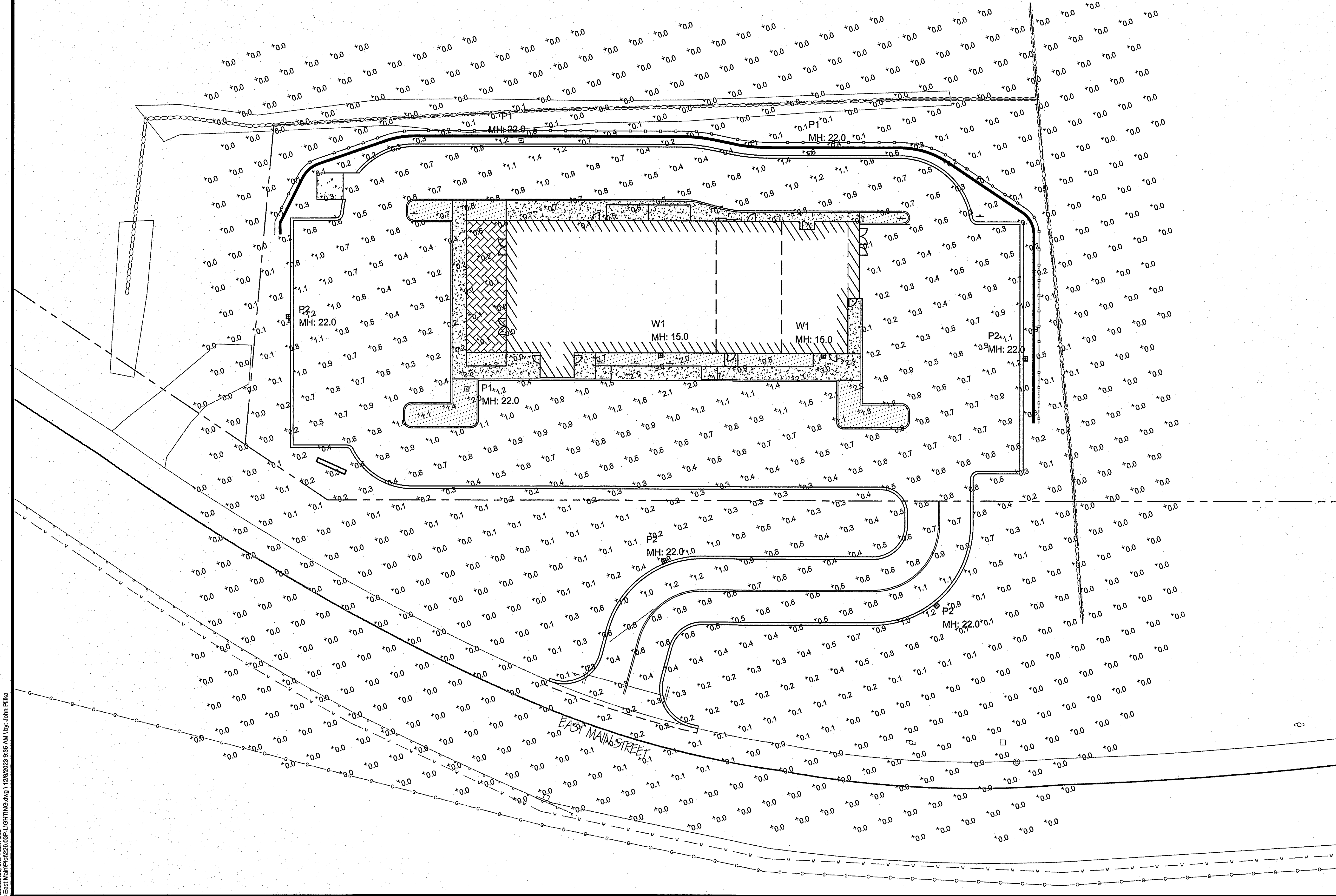
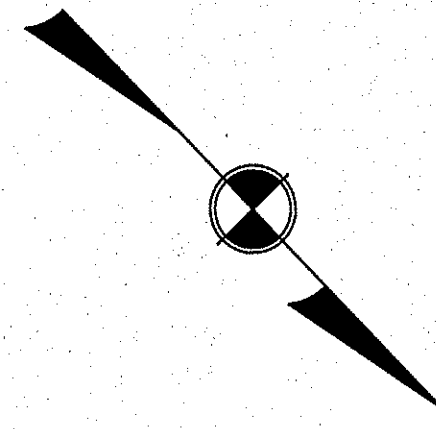
Drawn By: LCG
 Designed By: LCG
 Checked By: LCG

McCarty Engineering, Inc.
 Civil Engineers
 42 Tucker Drive, Leominster, MA 01453
 phone:(978) 534-1318 fax: (978) 840-6907
 www.mccartyeb.com

Project Name
5 East Main Street
 Westminster, MA
 Sheet Title
Landscape Plan

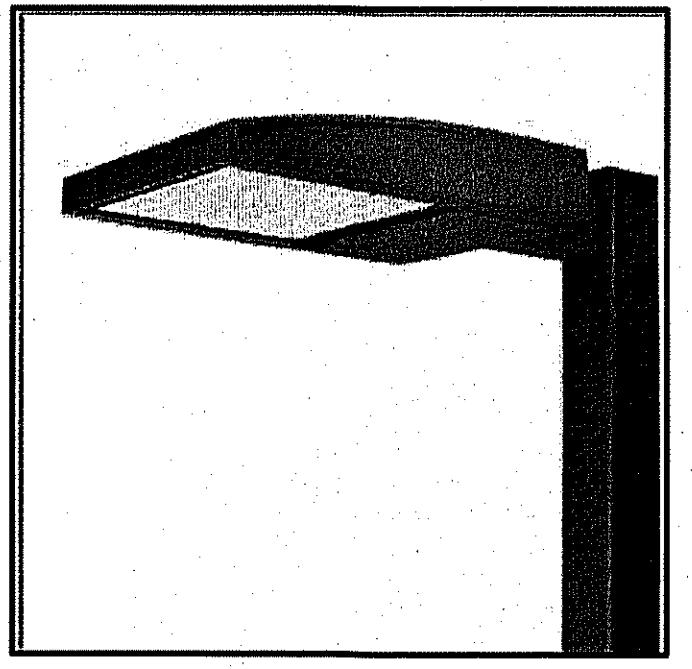
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 File Name: 220.03P-LA01
 Date: October 6, 2023
 Scale: 1"=20'
 Sheet No.
6

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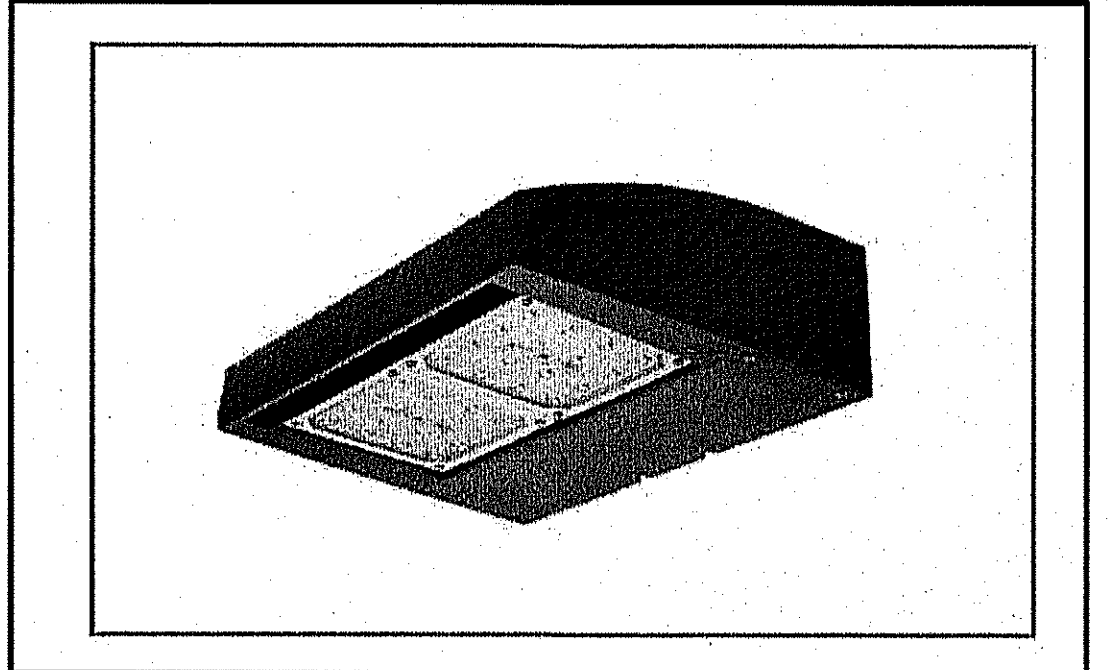


LOCUS PLAN

NOTES:
 1. EXISTING CONDITIONS INFORMATION SHOWN HEREON IS A RESULT OF AN ON THE GROUND SURVEY PREPARED BY HALEY WARD INC. IN MARCH OF 2023.



GALN-SA1A-740-U-SL3-HSS

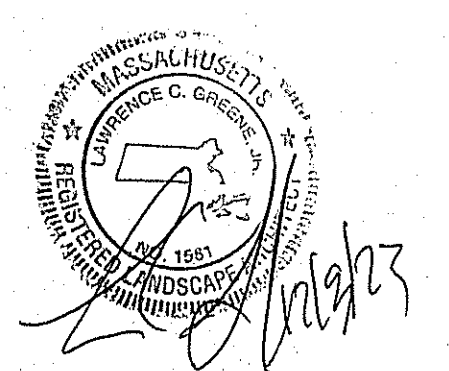


GWC-SA1A-740-U-SL4-HSS

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 DATE: _____

No.	Date	Revision
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Drawn By: JLL Designed By: BRM Checked By: _____

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 Civil Engineers
 42 Tucker Drive, Leominster, MA 01453
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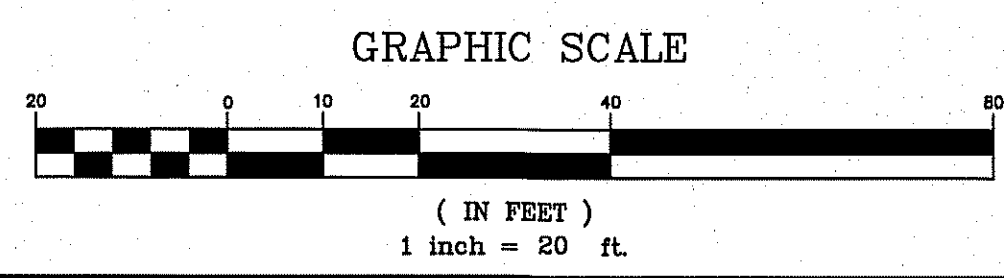
Project Name
**5 East Main Street
 Westminister, MA**

Sheet Title
**Lighting
 Plan**

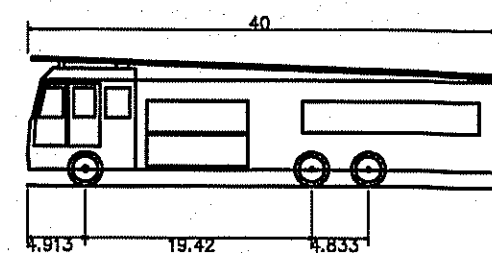
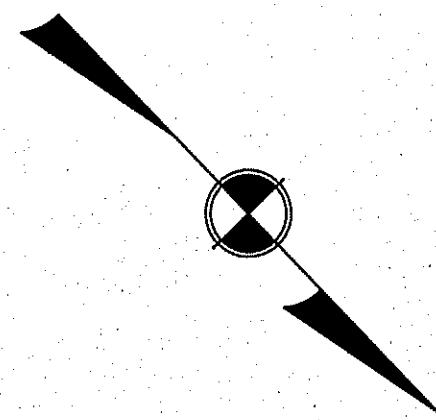
Job No: 220.03 Sheet No. **7**
 File Name: 220.03P-LA01
 Date: October 6, 2023
 Scale: 1"=20'

Symbol	Qty	Label	Description	LLF	Luminaire Lumens	Luminaire Watts	Mounting Height
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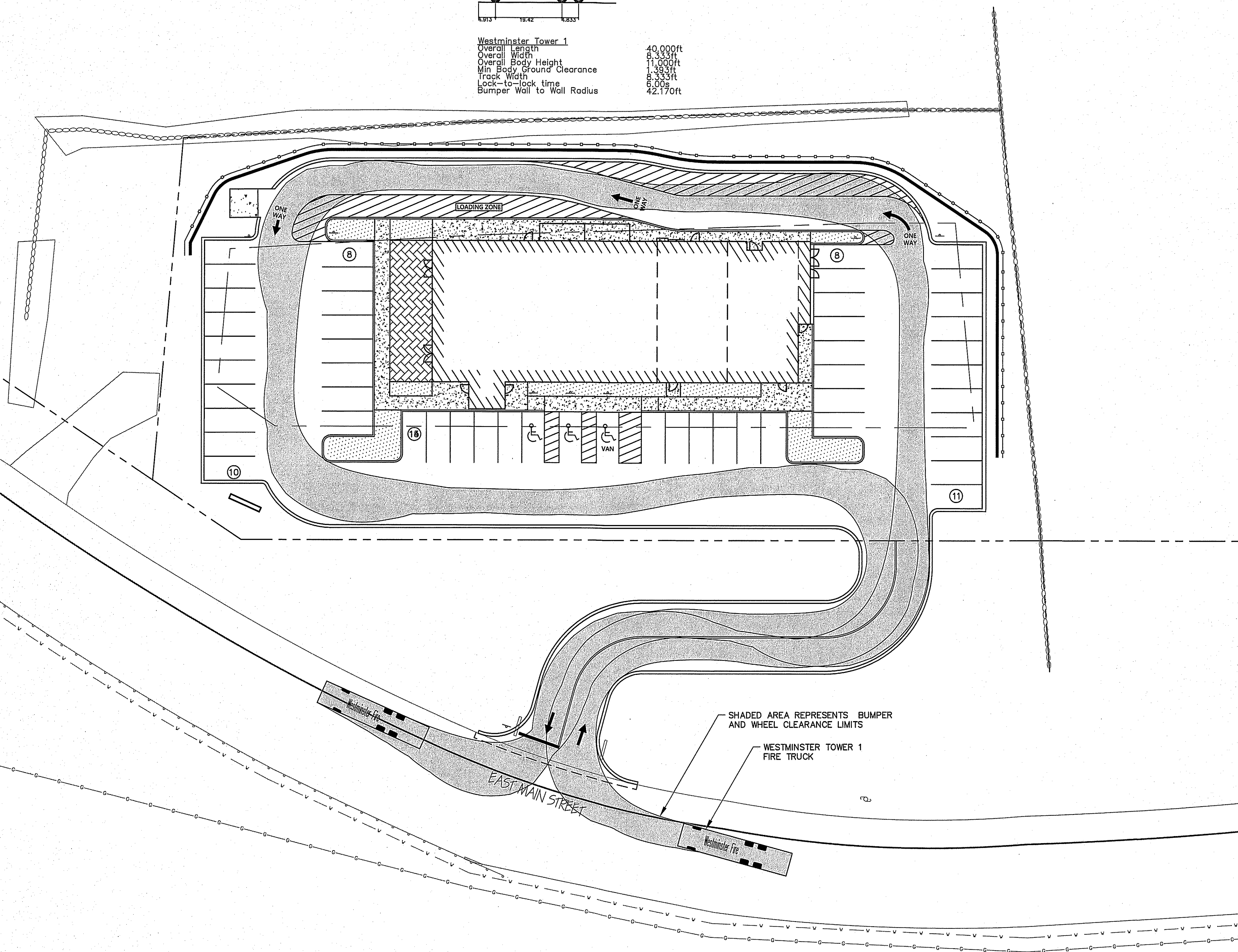
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DRIVE	Fc	0.69	2.2	0.1	6.90	22.00



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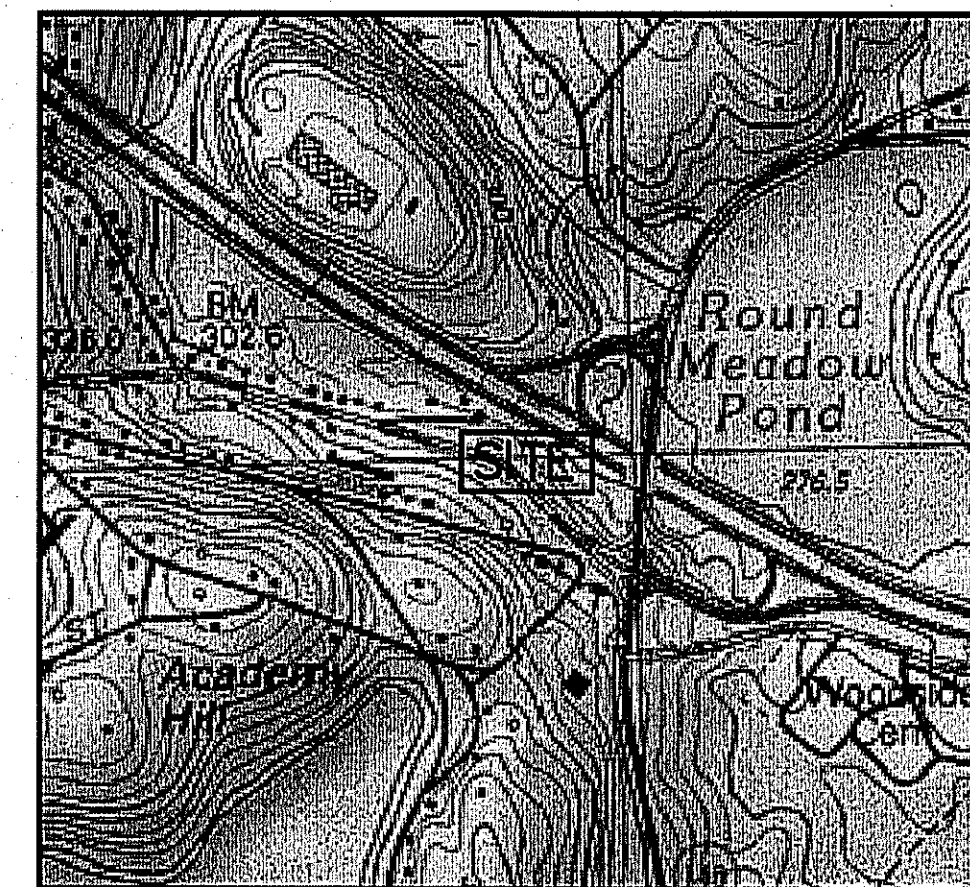
Westminister Tower 1
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 Overall Width 8.333ft
 Overall Body Height 11.000ft
 Min Body Ground Clearance 8.333ft
 Track Width 8.333ft
 Lock-to-lock time 6.005
 Bumper Wall to Wall Radius 42.170ft



SHADED AREA REPRESENTS BUMPER AND WHEEL CLEARANCE LIMITS

WESTMINSTER TOWER 1 FIRE TRUCK

EAST MAIN STREET



LOCUS PLAN

1"=1,000 FT.±

NOTES:

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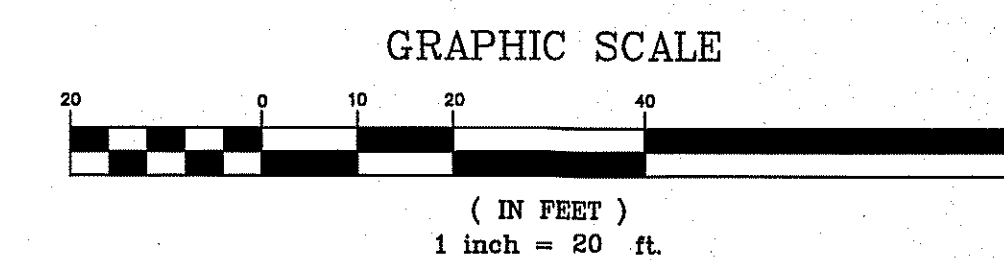
Brian R. Marchetti 12/8/23

Drawn By: JLL Designed By: BRM Checked By: *7512M*

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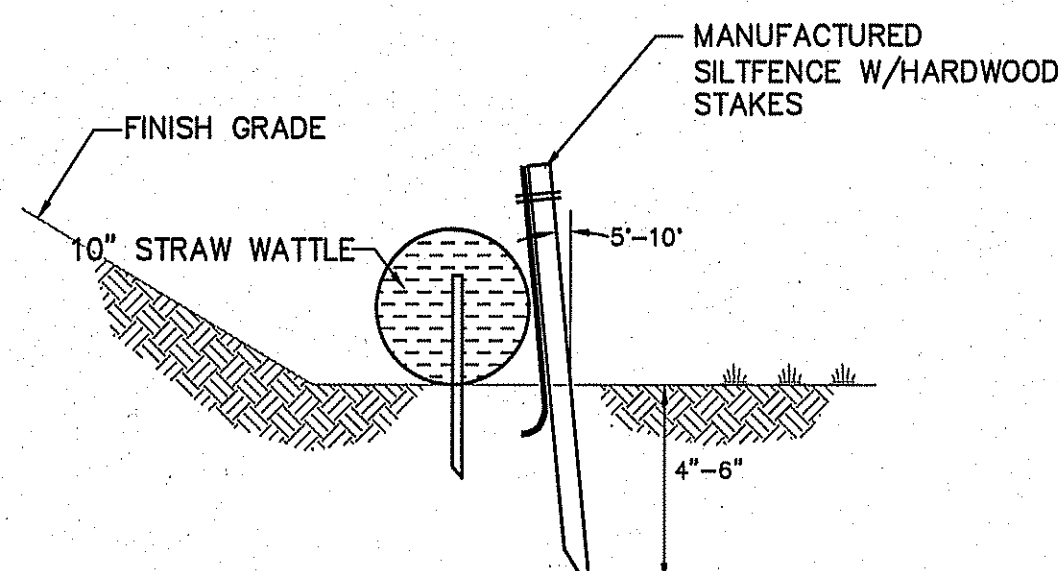
Project Name
**5 East Main Street
 Westminister, MA**

Sheet Title
**Fire Truck
 Turn Plan**



Job No: 220.03 Sheet No.
 File Name: 220.03P-Turn01
 Date: October 6, 2023
 Scale: 1"=20'
8

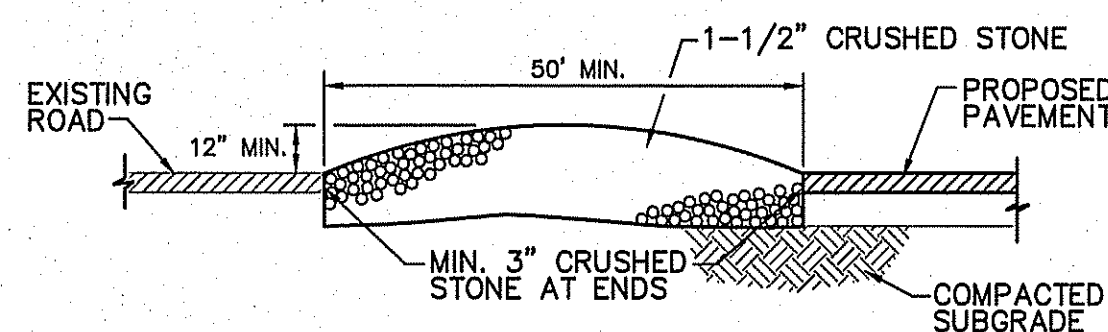
C:\Users\JohnPilla\My Documents\Projects\220.03P-Turn01.dwg 12/08/2023 8:38 AM 1 by: John Pilla



- NOTE: 1. STRAW WATTLES SHALL BE INSTALLED ON CONTOUR AND STAKED WITH 18 OR 24 INCH WOOD STAKES AT FOUR FEET ON CENTER
2. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 OF ROLL HEIGHT

EROSION CONTROL BARRIER DETAIL

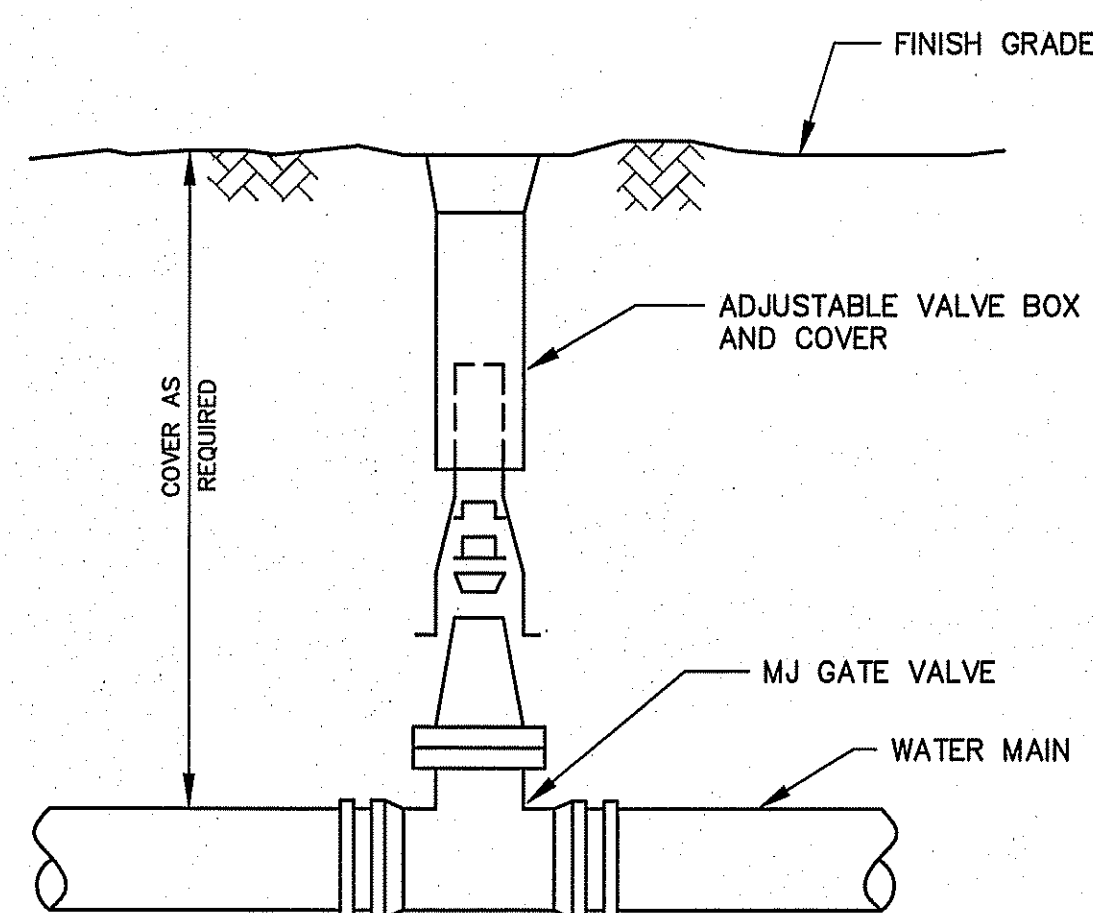
N.T.S.



- NOTE: THE PURPOSE OF THIS TEMPORARY BERM IS TO REMOVE MUD FROM THE TIRES OF VEHICLES LEAVING THE SITE DURING CONSTRUCTION. PROVIDE LEVEL AREA OF CRUSHED STONE 50 FEET IN FROM EDGE OF EXISTING ROAD.

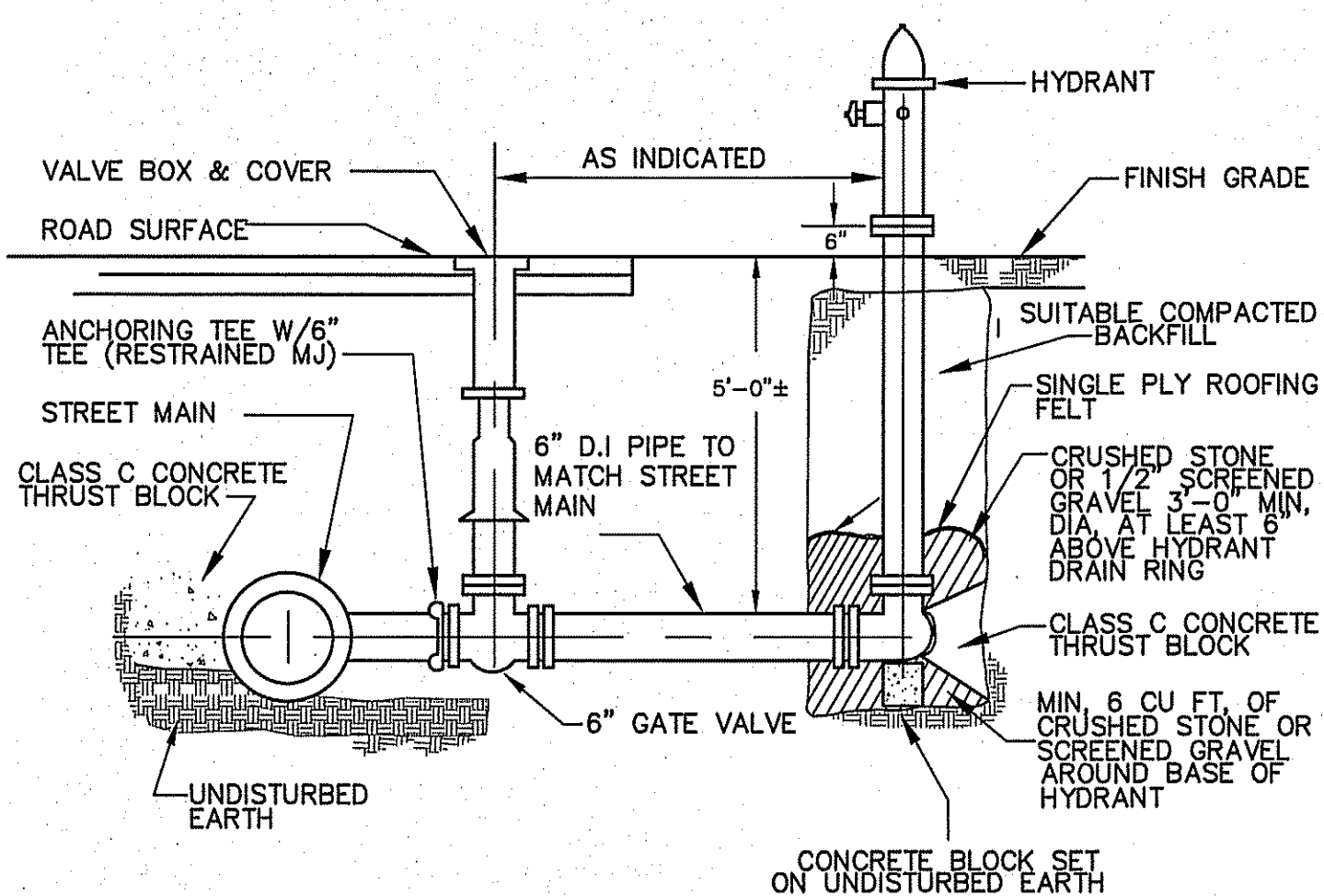
TEMPORARY ENTRANCE BERM

N.T.S.



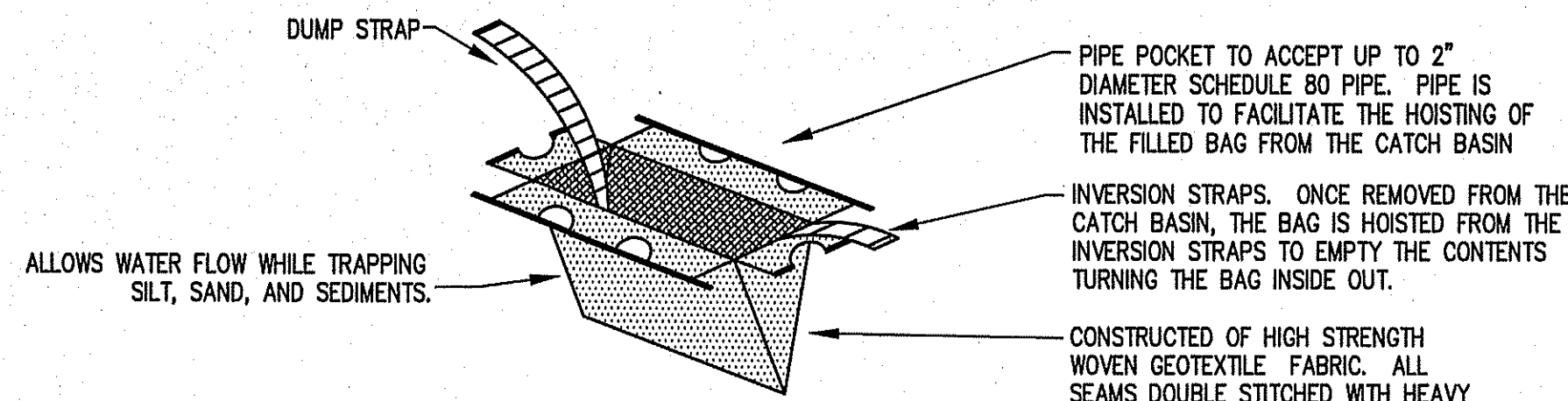
BURIED GATE VALVE DETAIL

N.T.S.



HYDRANT CONNECTION DETAIL

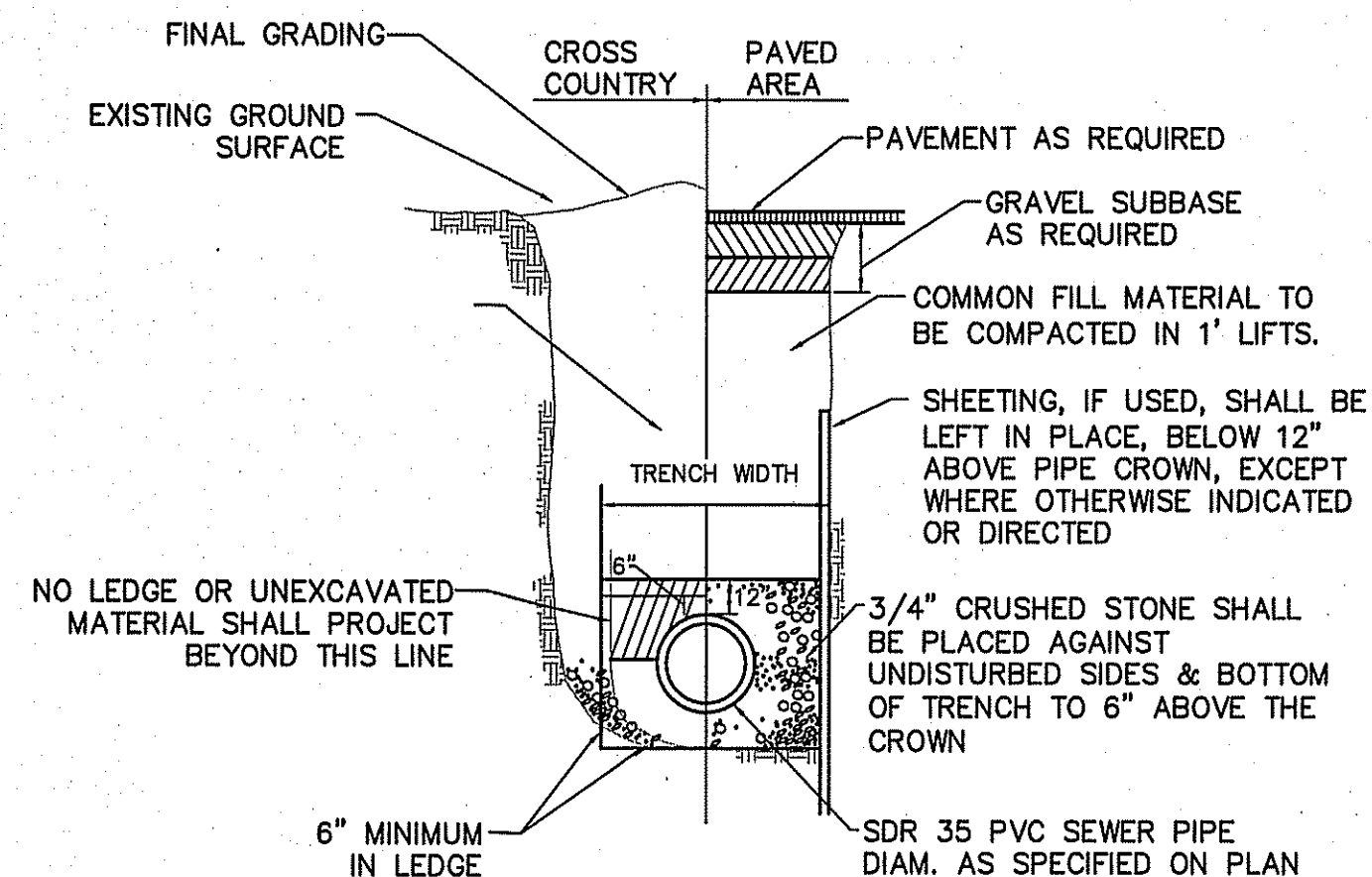
N.T.S.



- NOTE: 1. PRODUCT TO BE "SILT SACK" MANUFACTURED BY REED AND GRAHM, INC. SACRAMENTO, CA, OR APPROVED EQUAL.

CATCH BASIN INLET PROTECTOR

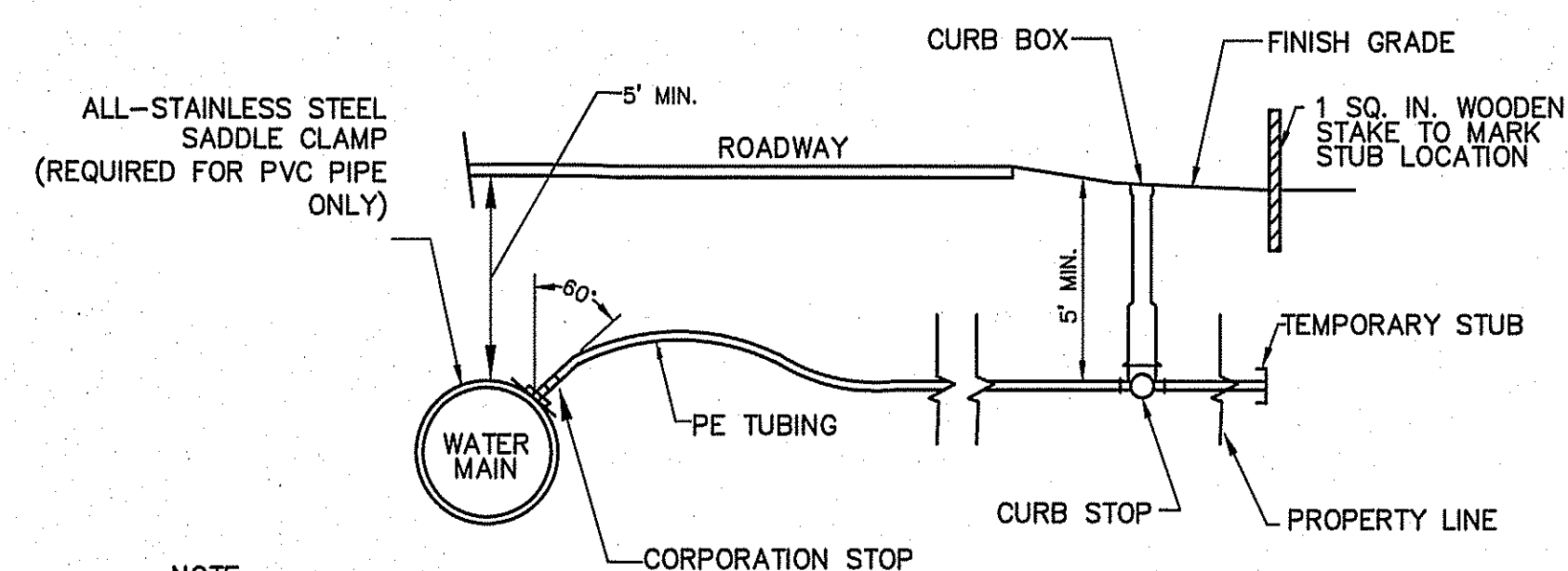
N.T.S.



- NOTE: 1. BENTONITE CHECK DAMS ARE TO BE INSTALLED AT 20' INCREMENTS WITHIN THE UTILITY TRENCHES.

SEWER TRENCH SECTION

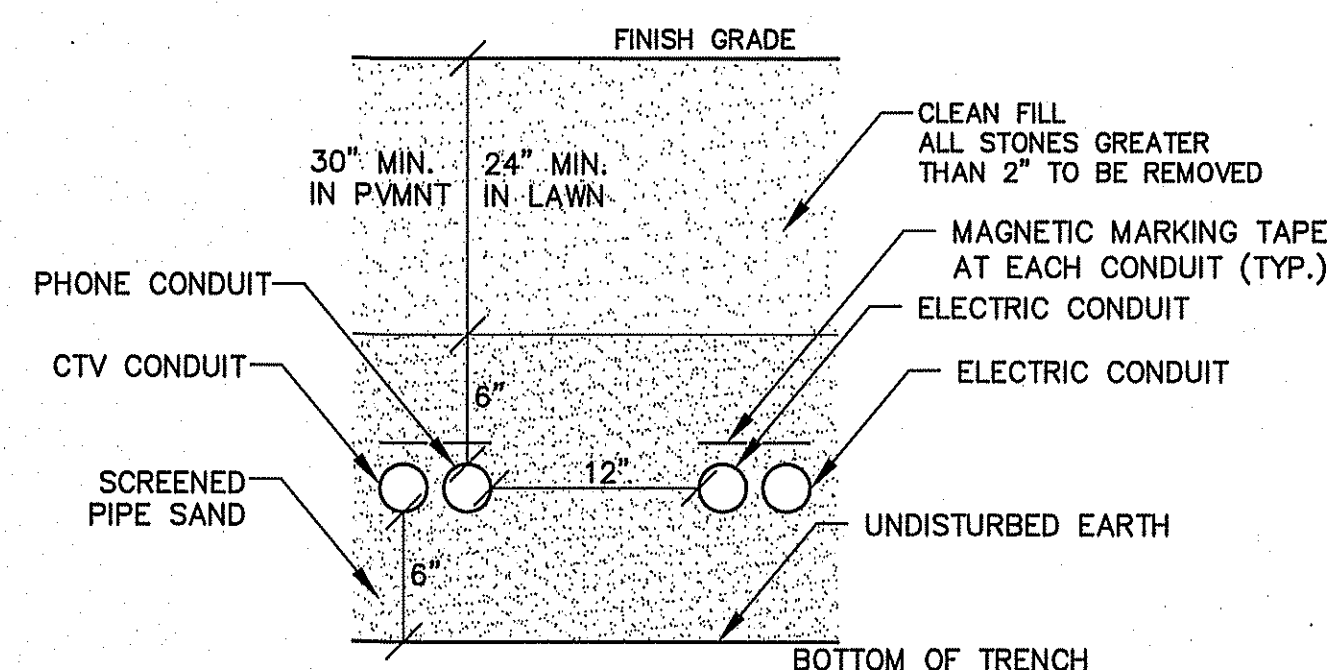
N.T.S.



- NOTE: TUBING, CORPORATION COCK & CURB STOP SHALL BE AS REQUIRED BY LOCAL WATER DEPARTMENT

WATER SERVICE DETAIL

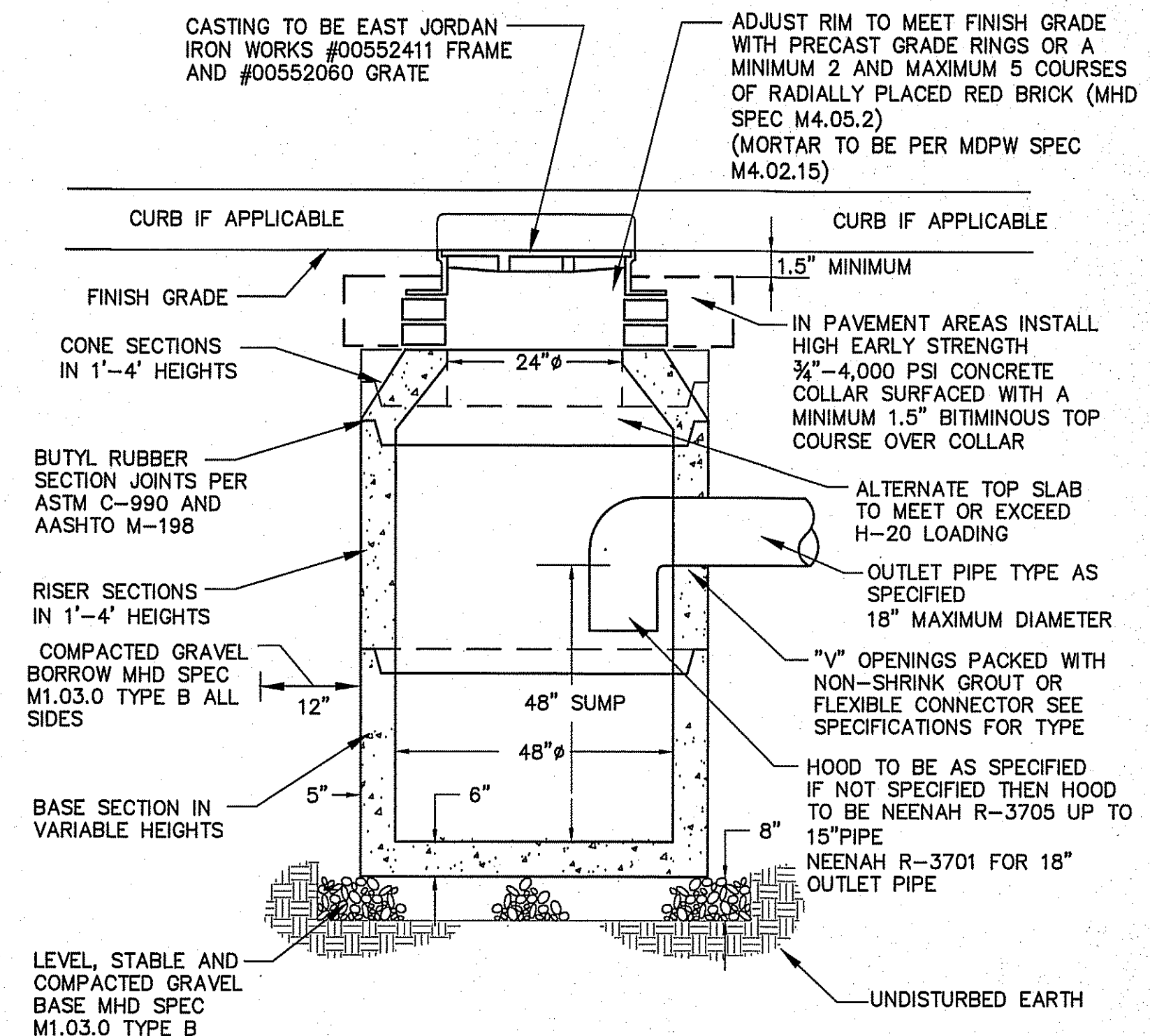
N.T.S.



- NOTE: 1. REFER TO UTILITY PROVIDER STANDARD CONSTRUCTION DETAIL FOR PRIMARY SERVICE TRENCH REQUIREMENTS
2. THIS DETAIL APPLIES TO SECONDARY SERVICE ONLY
3. BENTONITE CHECK DAMS ARE TO BE INSTALLED AT 20' INCREMENTS WITHIN THE UTILITY TRENCHES.

TYPICAL UTILITY TRENCH DETAIL

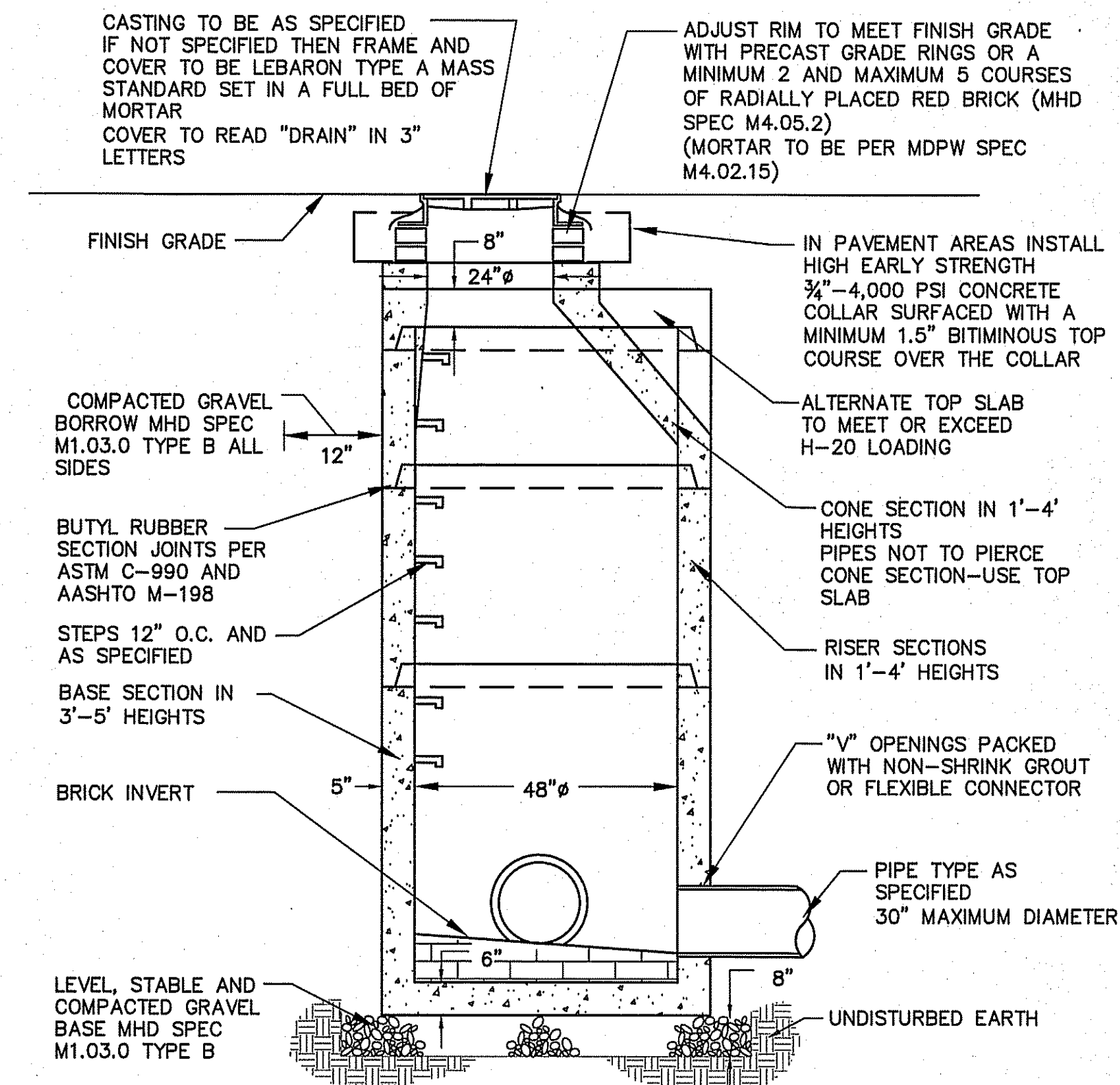
N.T.S.



- EXCAVATION TO ALLOW FOR FREE TRAVEL OF COMPACTION EQUIPMENT
- ALL COMPACTION TO A MINIMUM 95 PERCENT DRY DENSITY DETERMINED BY ASTM D1557 SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS
- ALL PRECAST TO MEET OR EXCEED ASTM C-478 AND AASHTO M 199 SPECIFICATIONS
- REINFORCED STEEL TO MEET OR EXCEED ASTM A185 AND H-20 LOADING REQUIREMENTS
- ALL PRECAST CONCRETE TO BE 4,000 PSI MINIMUM AND MEET ASTM C-478 (6.1)
- ALL INTERIOR HOLES TO BE SEALED WITH NON-SHRINK GROUT

PRECAST CONCRETE CATCH BASIN DETAIL

N.T.S.



- NOTE: 1. EXCAVATION TO ALLOW FOR FREE TRAVEL OF COMPACTION EQUIPMENT
2. ALL COMPACTION TO A MINIMUM 95 PERCENT DRY DENSITY DETERMINED BY ASTM D1557 SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS
3. ALL PRECAST TO MEET OR EXCEED ASTM C-478 AND AASHTO M 199 SPECIFICATIONS
4. REINFORCED STEEL TO MEET OR EXCEED ASTM A185 AND H-20 LOADING REQUIREMENTS
5. ALL PRECAST CONCRETE TO BE 4,000 PSI MINIMUM AND MEET ASTM C-478 (6.1)
6. IF NO STEPS ARE SPECIFIED THAN AS THE LOCAL MUNICIPALITY REQUIRES OR IF NO MUNICIPALITY REQUIREMENTS THEN COPOLYMER POLYPROPYLENE COATED REINFORCED PER ASTM C-478 AND OSHA (STD 1-1.9)
7. CONTRACTOR TO CONFIRM WITH CITY OR TOWN DPW THAT BRICK INVERTS ARE NOT A REQUIREMENT
8. FILL ALL INTERNAL AND EXTERNAL HOLES WITH NON-SHRINK GROUT

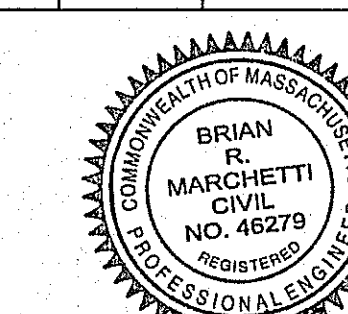
PRECAST CONCRETE DRAIN MANHOLE DETAIL

N.T.S.

NOT FOR CONSTRUCTION
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APPROVED BY THE TOWN OF WESTMINSTER PLANNING BOARD DATE:

1.	12/08/2023	Response to Comments
No.	Date	Revision



Drawn By: JLL
Designed By: JLL
Checked By: JLL

McCarty Engineering, Inc.
Civil Engineers
42 Tucker Drive, Leominster, MA 01453
phone: (978) 534-1318 fax: (978) 840-6907
www.mccartyeb.com

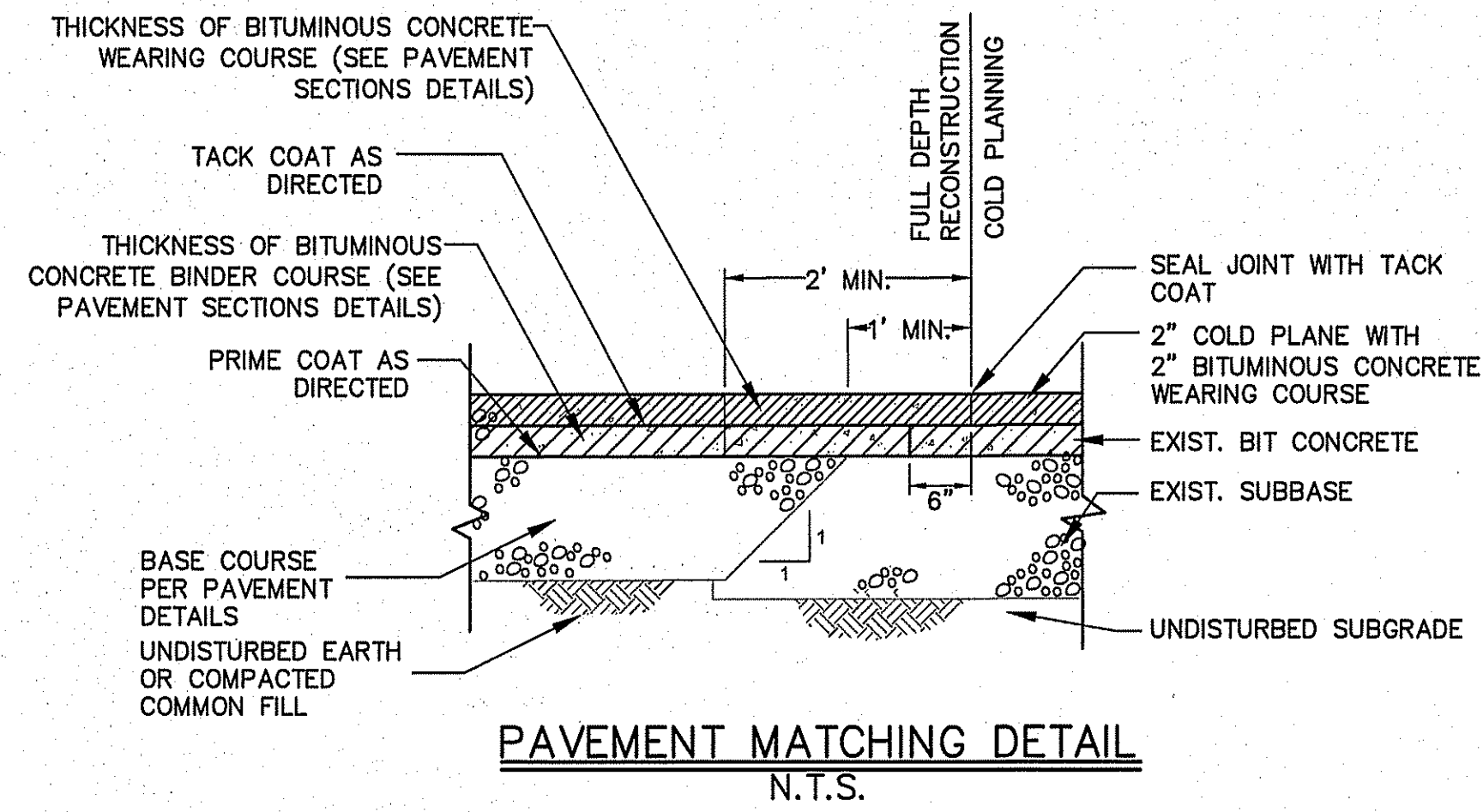
Project Name
**5 East Main Street
Westminster, MA**

Sheet Title
**Construction
Details**

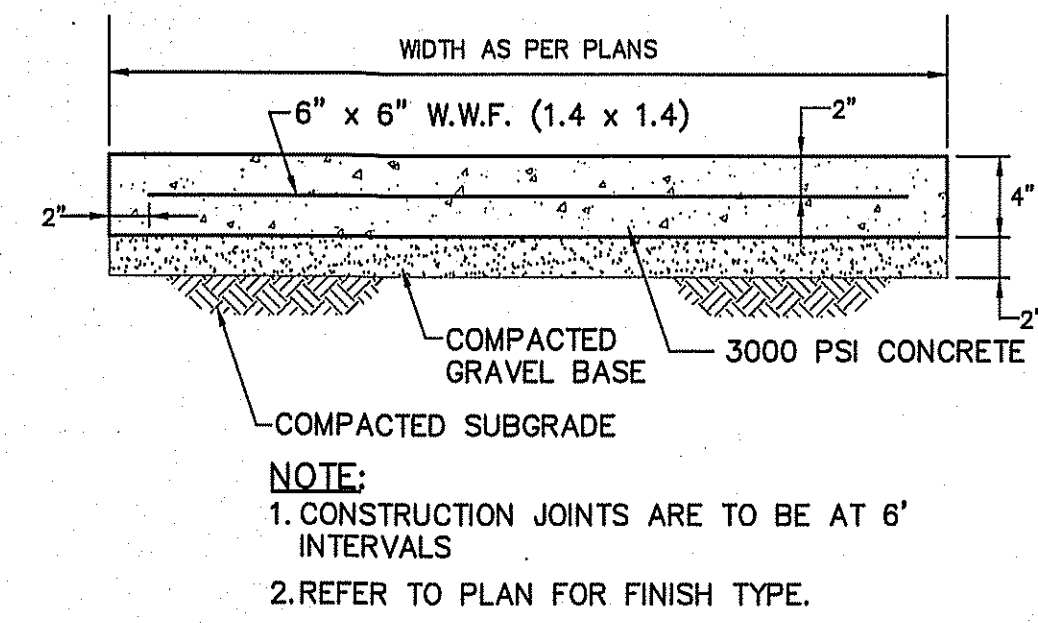
Job No: 220
File Name: 220.03P-DET01
Date: October 6, 2023
Scale: N.T.S.

Sheet No.
9

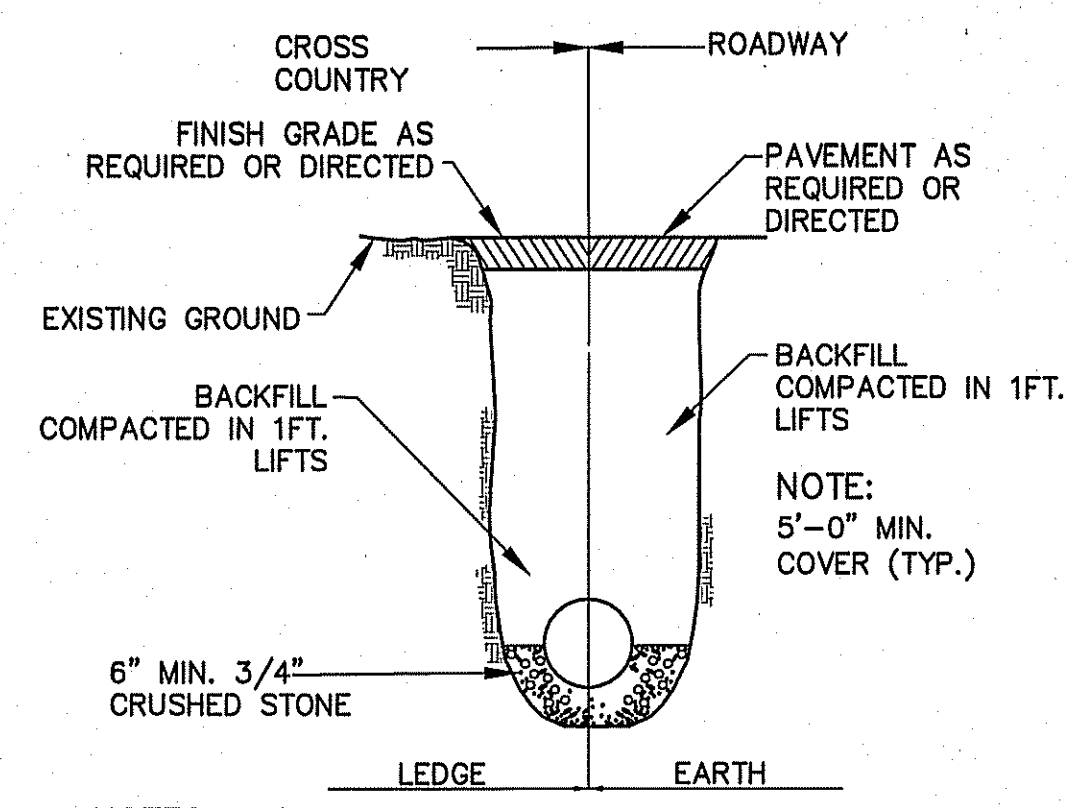
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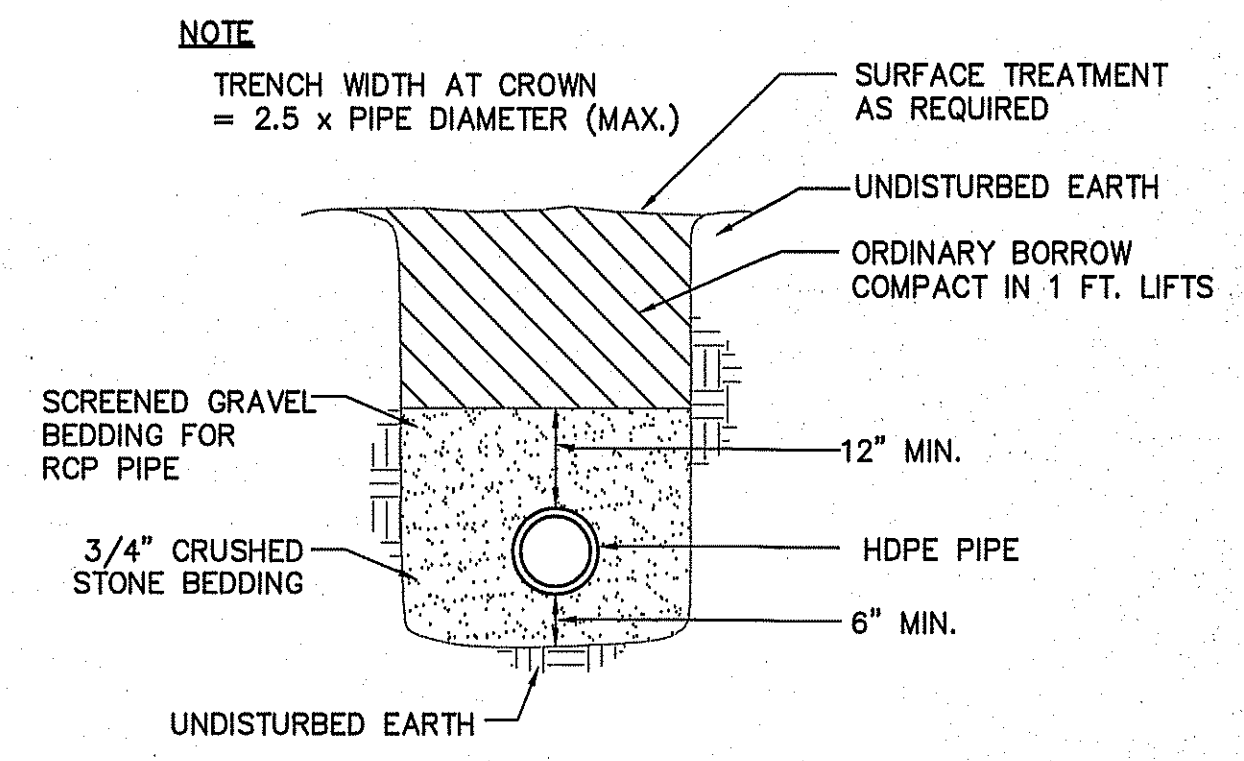
PAVEMENT MATCHING DETAIL
N.T.S.



CONCRETE SIDEWALK DETAIL
N.T.S.

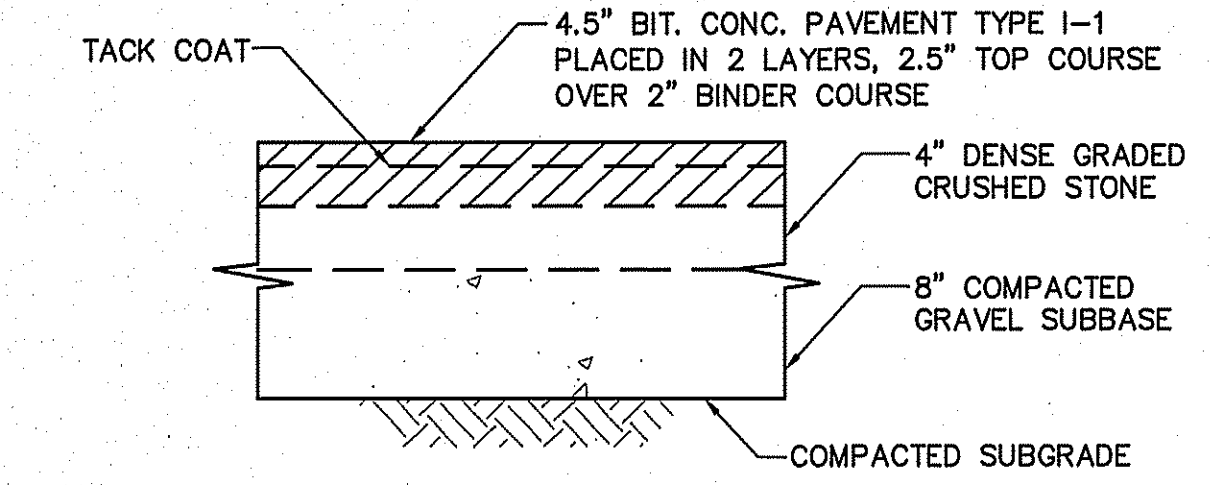


TYPICAL WATER MAIN TRENCH DETAIL
N.T.S.

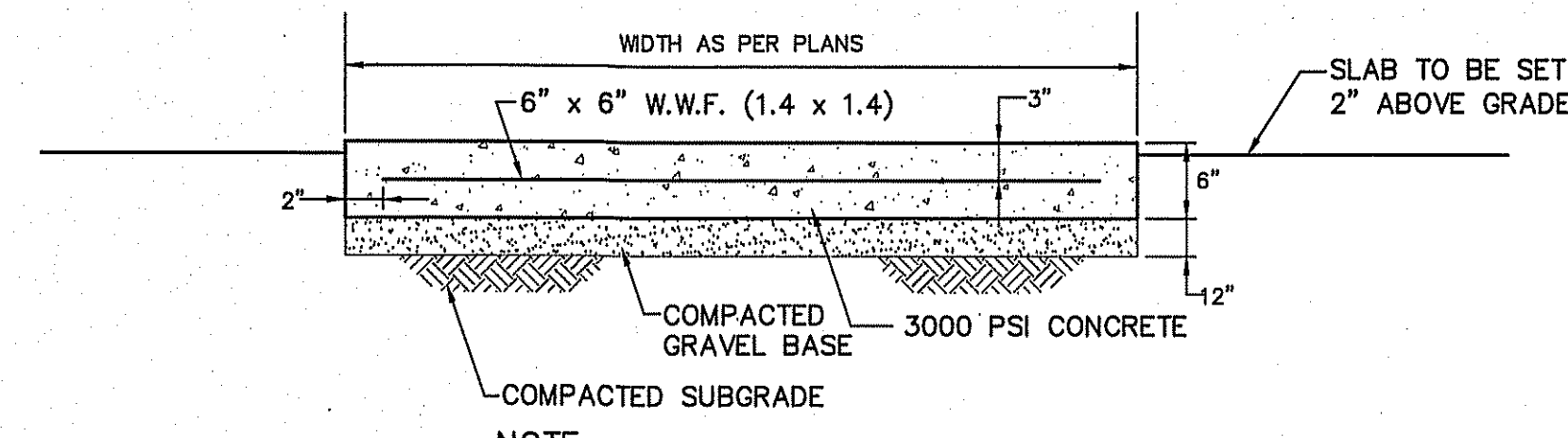


DRAIN PIPE TRENCH DETAIL
N.T.S.

NOTES:
1. TRENCH EXCAVATION WIDTH TO ALLOW FOR FREE TRAVEL OF COMPACTION EQUIPMENT
2. ALL COMPACTION TO A MINIMUM 95 PERCENT DRY DENSITY DETERMINED BY ASTM D1557.
3. SEE MANUFACTURERS SPECIFICATIONS FOR ADDITIONAL INSTALLATION REQUIREMENTS
4. AVOID HEAVY EQUIPMENT LOADS OVER PIPE DURING CONSTRUCTION
5. BENTONITE CHECK DAMS ARE TO BE INSTALLED 20' INCREMENTS WITHIN THE UTILITY TRENCHES.

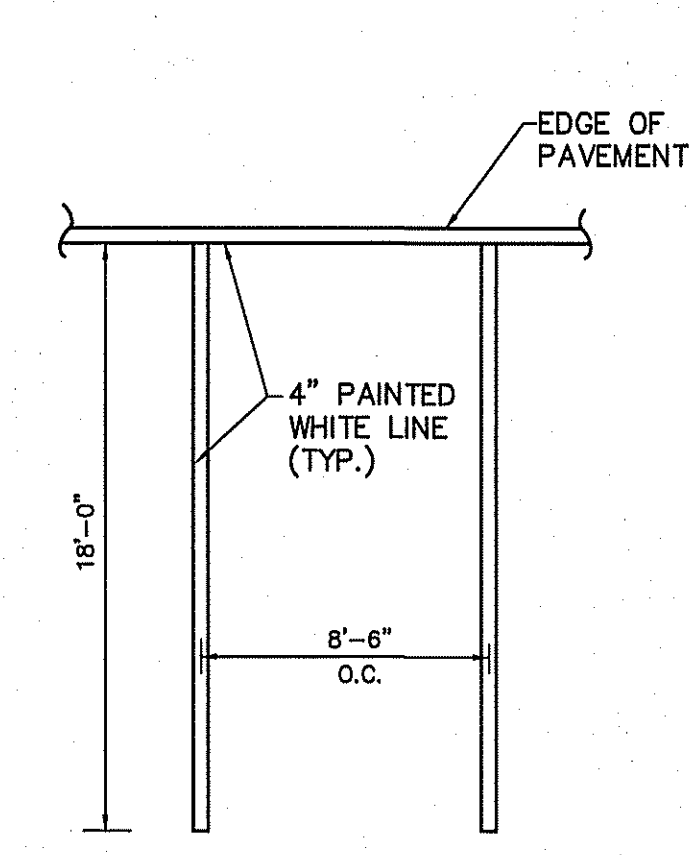


BITUMINOUS CONCRETE PAVEMENT DETAIL
N.T.S.

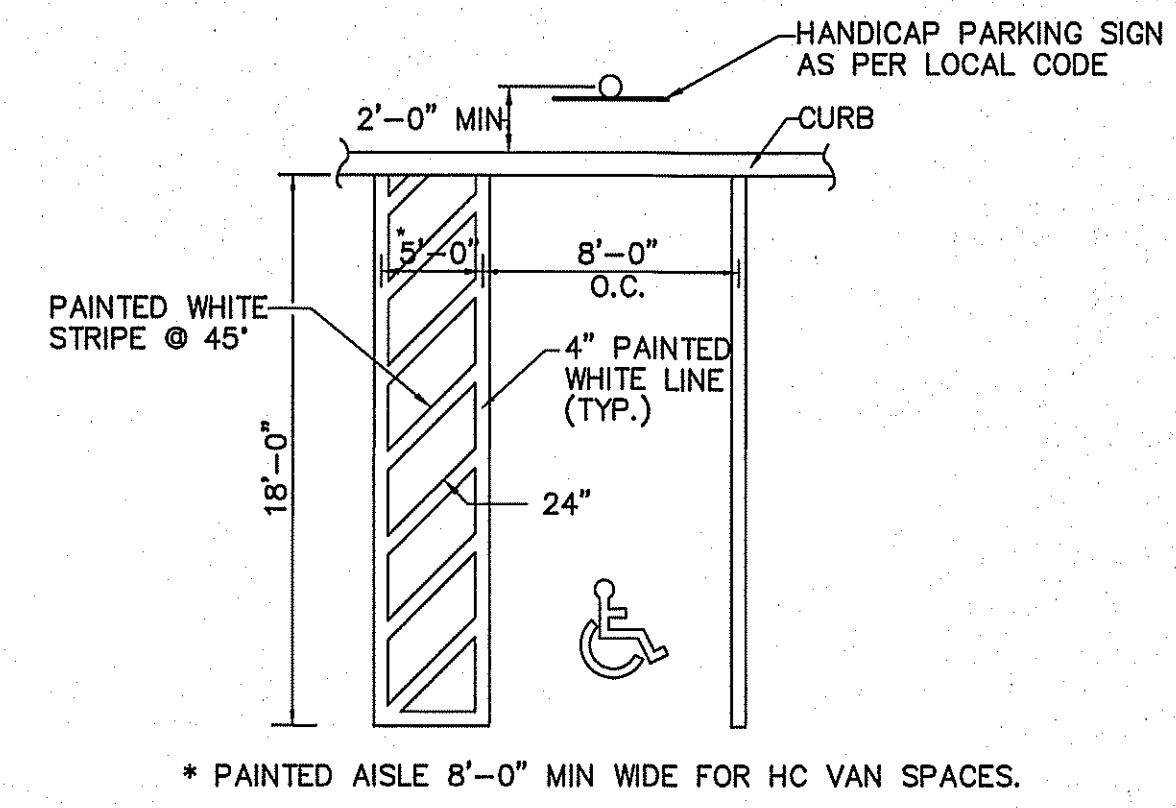


CONCRETE DUMPSTER PAD DETAIL
N.T.S.

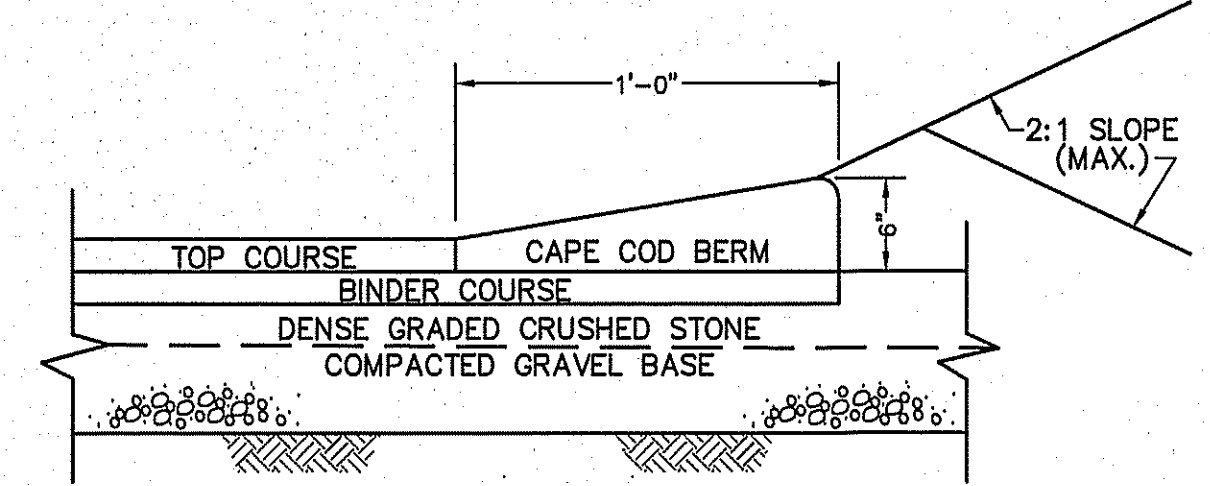
NOTE: CONSTRUCTION JOINTS ARE TO BE AT 6' INTERVALS



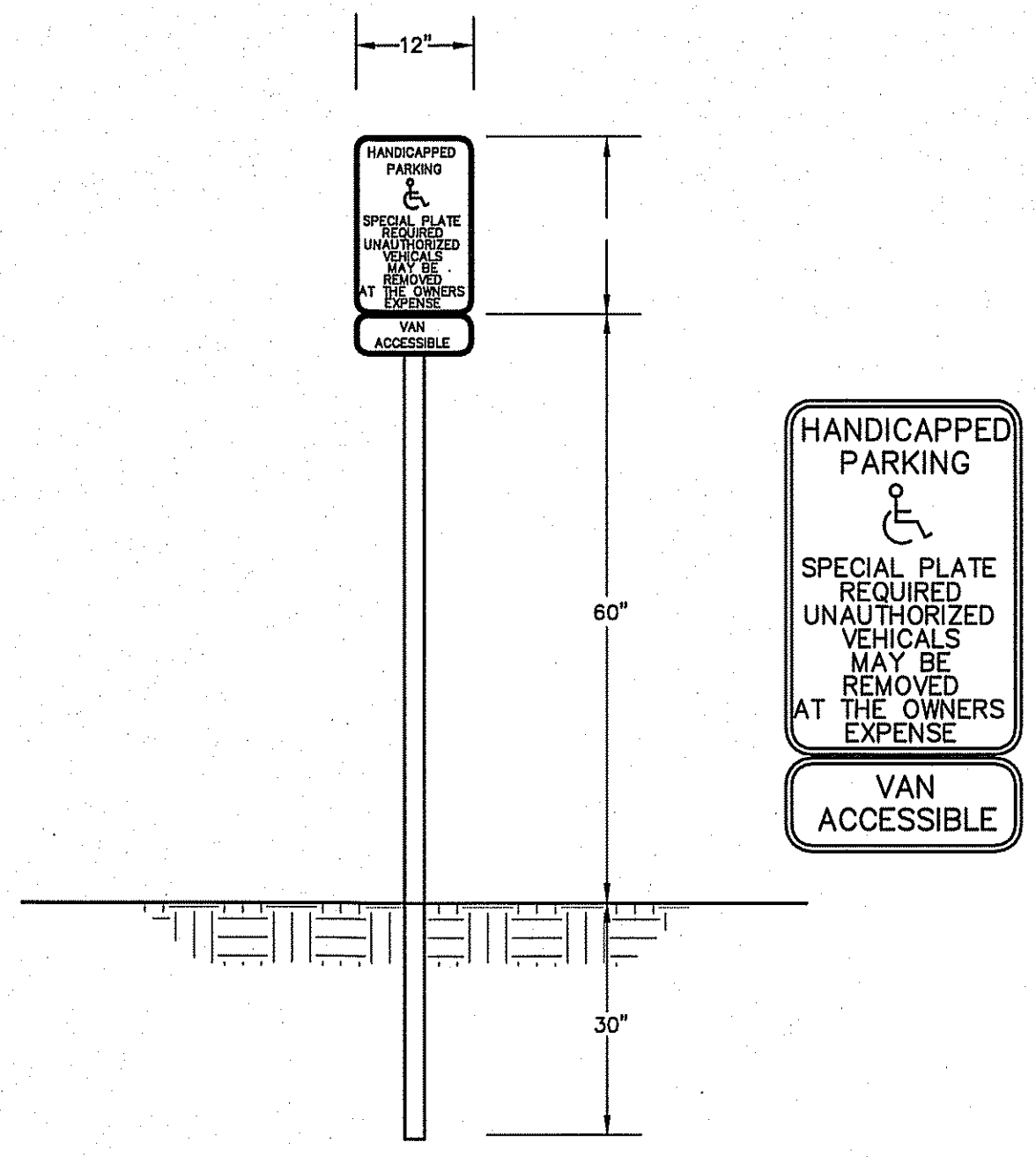
STANDARD SPACE DETAIL
N.T.S.



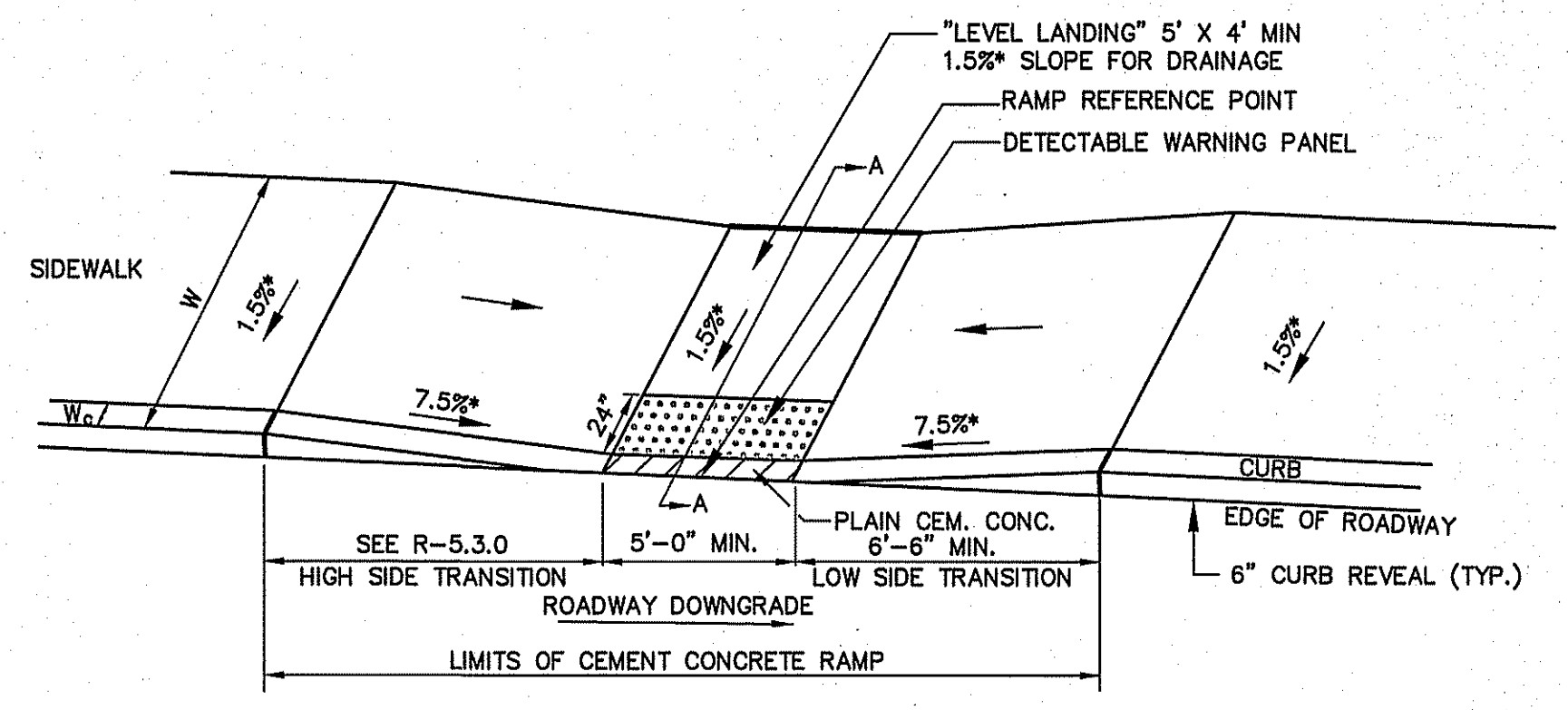
HANDICAP PARKING SPACE DETAIL
N.T.S.



BITUMINOUS CONCRETE BERM DETAIL
N.T.S.



HANDICAPPED PARKING SIGN DETAIL
N.T.S.

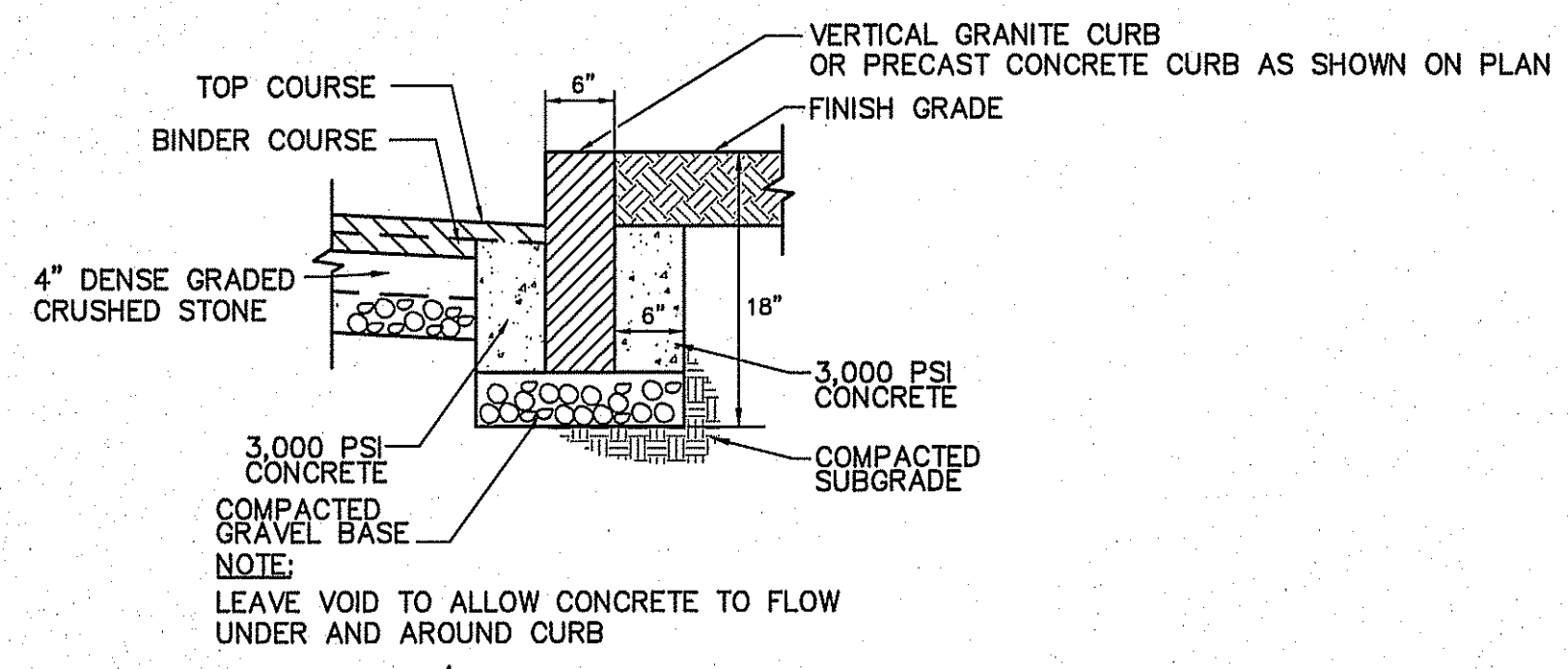


SECTION A-A

LEGEND:
W = SIDEWALK WIDTH
W = CURB WIDTH
* = TOLERANCE FOR CONSTRUCTION ±0.5%
USABLE SIDEWALK WIDTH PER AAB = W-W
USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"

WHEELCHAIR RAMPS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE CURRENT REGULATIONS OF THE ARCHITECTURAL ACCESS BOARD, THE AMERICANS WITH DISABILITIES ACT AND THE CURRENT MASSDOT CONSTRUCTION STANDARDS.

WHEELCHAIR RAMP TYPE A
N.T.S.



VERTICAL GRANITE/PRECAST CONCRETE CURB DETAIL
N.T.S.

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APPROVED BY THE TOWN OF WESTMINSTER PLANNING BOARD
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Designed By: JFM
Checked By: JFM

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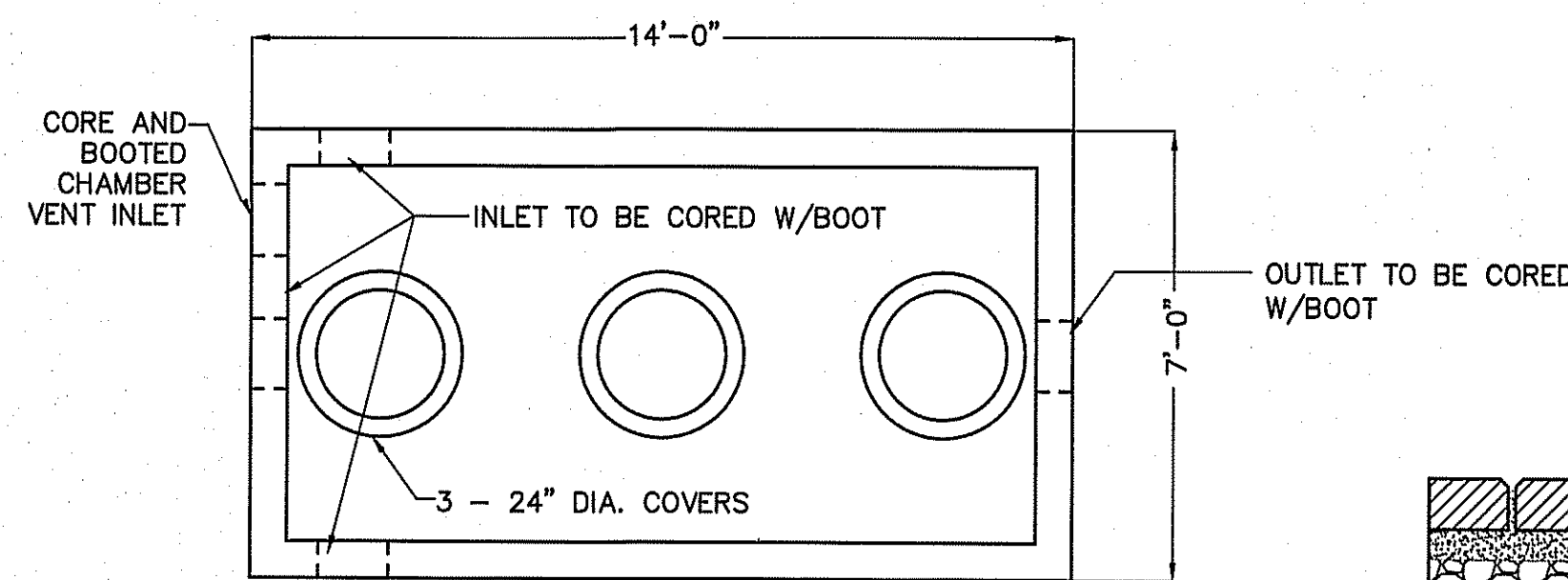
Project Name
**5 East Main Street
Westminster, MA**

Sheet Title
**Construction
Details**

Job No: 220.03
File Name: 220.03P-DET02
Date: October 6, 2023
Scale: N.T.S.

Sheet No.
10

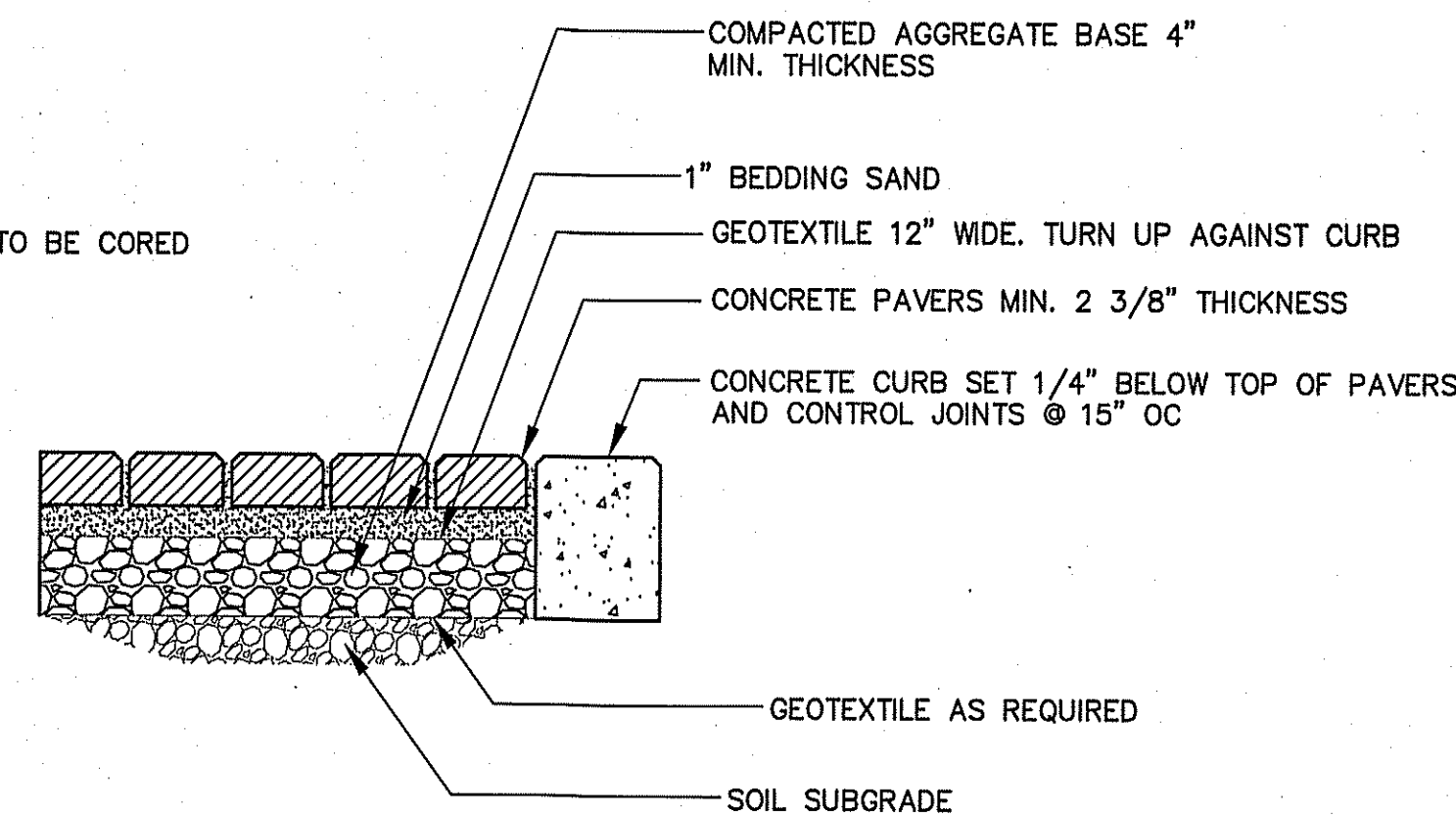
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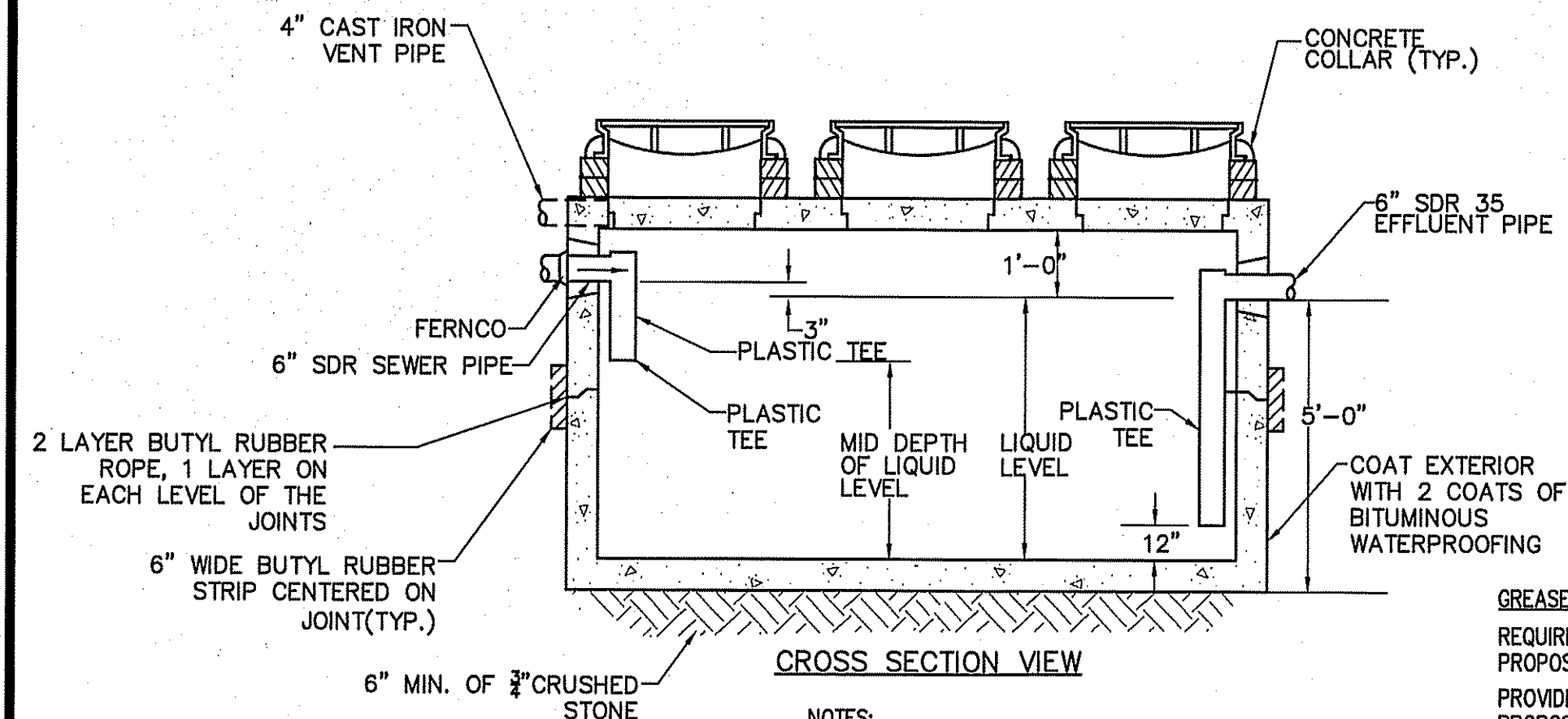
NOTES:

- 3-M.H. FRAMES & COVERS, EJ MODEL OR EQUAL, ADJUST TO GRADE WITH MAX. 12" RED SEWER BRICK, IF MORE THAN 12" BRICK REQUIRED, USE 4" DIA. PRE CAST CONE SECTION. IF THE PRE CAST CONE SECTION IS USED, PROVIDE BUTYL RUBBER SEALANT AT JOINT.
- WHEN THE INFLUENT PIPE IS ON A SIDE ENTRY, THE PIPE SHALL BE SUPPORTED DOWN INTO THE LIQUID OVER 30" LENGTH WILL BE SUPPORTED W/S.S. BRACKETS.

PLAN VIEW



PERMEABLE PAVER DETAIL
N.T.S.



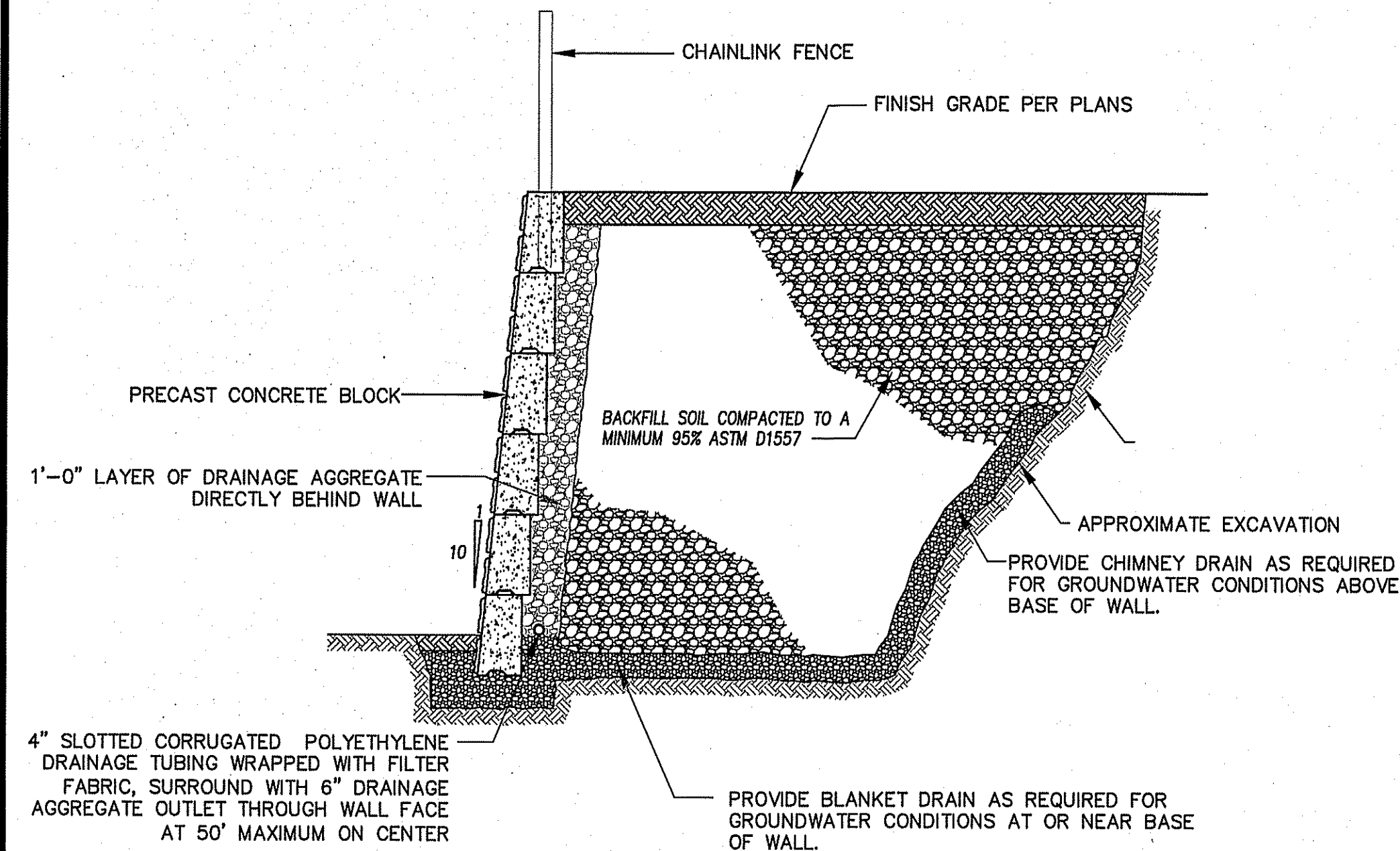
NOTES:

- GREASE TRAPS ARE TO BE H-20 LOADING
- INFLUENT AND EFFLUENT TEES ARE TO BE CONSTRUCTED OF PLASTIC AND LOCATED UNDER MANHOLE OPENINGS FOR ACCESS AND MAINTENANCE

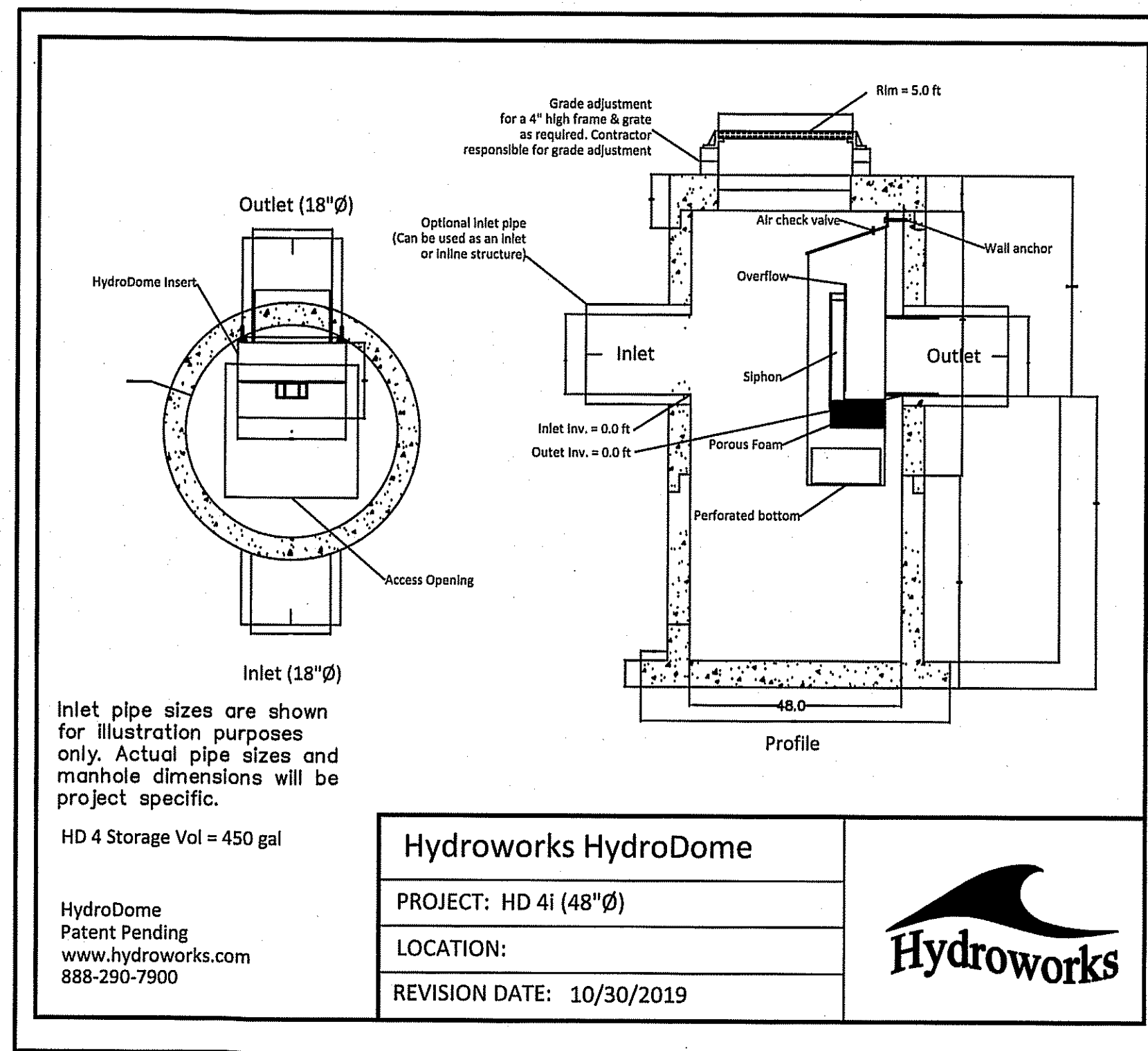
GREASE TRAP SIZING CALCULATION:

REQUIRED:
PROPOSED USE-RESTAURANT
PROVIDED:
PROPOSED RESTAURANT= 148 SEATS
INTERIOR SEATS=148 (USE ALL FOR SIZING)
PROPOSED FLOW= 15 GPD/SEAT X 148 SEATS = 2,220 GPD
PROPOSED GREASE TRAP= 2,500 GALLON

STANDARD GREASE TRAP- 2,500 GALLON
N.T.S.



PRECAST CONCRETE RETAINING WALL DETAIL
N.T.S.



Hydroworks HydroDome

PROJECT: HD 4i (48" dia)
LOCATION:
REVISION DATE: 10/30/2019



HYDROWORKS HYDRODOME HD4i DETAIL
N.T.S.

Specifications

A. The separator must be designed based on the following criteria:

Flow Criteria	
Water Quality Flow cfs (L/s)	
Peak Design Flow cfs (L/s)	

TSS Removal Criteria	
Annual TSS Removal (%)	
NIDEP/ETV Canada TSS	
OK110 Sand	
F85 Sand	
Other	

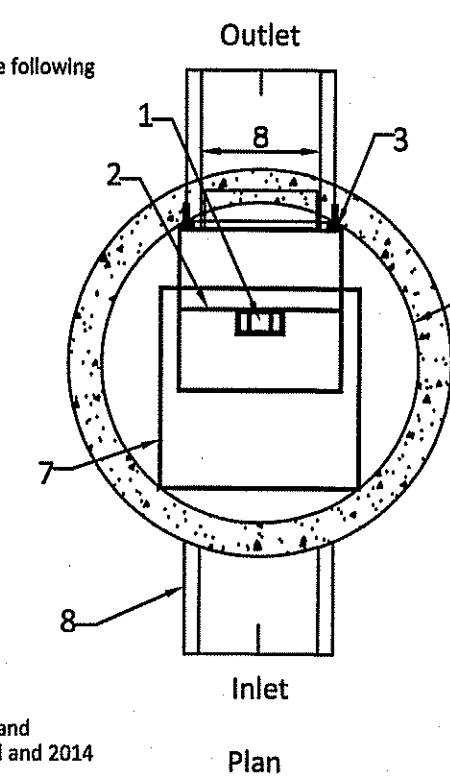
B. The separator must be independently tested and verified to the 2013 NIDEP separator protocol and 2014 ETV Canada Separator protocol

C. Vendor testing and/or field testing is not acceptable to determine an alternate equal due to the lack of repeatability.

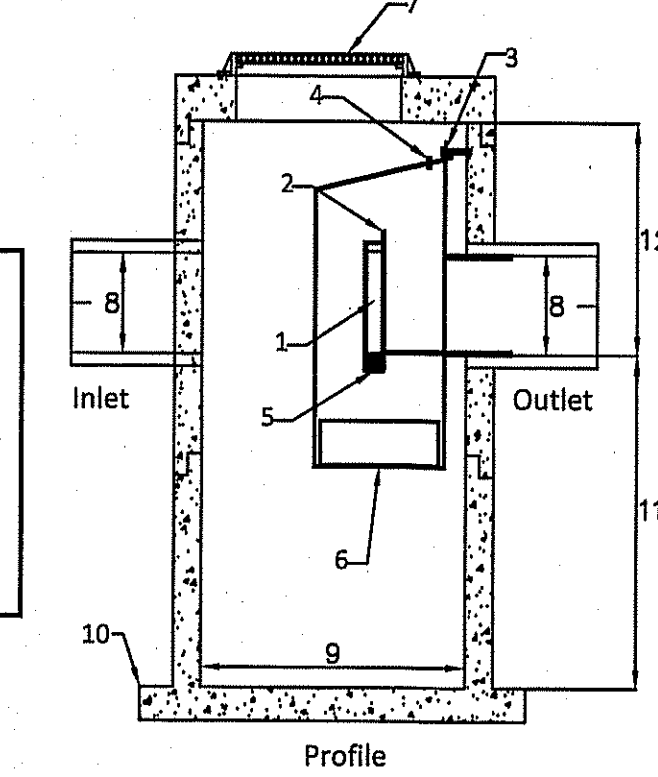
Notes:

- Sump depths shown are typical. Additional depth can be added as required.
- Single or multiple inlet pipes allowed.
- Drops allowed.
- Inlet Grate Shown. HydroDome can be designed with a closed cover if required.
- Oil capacities given are spill capacities.
- Sediment depths are maximum holding capacities and not recommended capacities for regular maintenance.
- Capacities are rounded down to nearest 5 gal or ft³ (5L or 0.1 m³ for metric units)
- Minimum invert to inside of cap (12) required may vary for HydroDome. Please call Hydroworks for site-specific design questions.
- Hydraulics vary with pipe size and model number. Please call Hydroworks for site-specific headloss calculations.

HydroDome by Hydroworks, LLC
U.S. Patent # 10,801,196
www.hydroworks.com
888-290-7900



- HydroDome Components**
- Siphon
 - High Flow Weir
 - Wall Anchor
 - Air Check Valve
 - Foam Debris Screen
 - Perforated Bottom
 - Grate or Cover
 - Inlet and Outlet Pipes
 - Structure Diameter
 - Base Extension
 - Sump Depth
 - Invert to inside of Cap



HydroDome Dimensions / Capacities *						
Model	9. Diameter ft (m)	11. Sump Depth ft (m)	8. Max. Pipe In (mm)	Total Volume gal (L)	Oil Spill Volume gal (L)	Sediment Volume ft ³ (m ³)
HD 3	3 (0.9)	4 (1.2)	18 (450)	210 (800)	30 (120)	16 (0.5)
HD 4	4 (1.2)	4.5 (1.4)	21 (525)	420 (1600)	70 (265)	30 (0.9)
HD 5	5 (1.5)	5.5 (1.7)	27 (675)	805 (3055)	125 (480)	60 (1.7)
HD 6	6 (1.8)	6.5 (2.0)	33 (825)	1375 (5200)	210 (800)	100 (2.9)
HD 7	7 (2.1)	7.5 (2.3)	39 (975)	2155 (8170)	320 (1225)	160 (4.6)
HD 8	8 (2.4)	8.5 (2.6)	42 (1050)	3195 (12095)	490 (1860)	235 (6.8)
HD 10	10 (3.0)	10.5 (3.2)	54 (1350)	5155 (23350)	955 (3615)	455 (13.0)
HD 12	12 (3.6)	12.5 (3.8)	66 (1650)	10575 (40030)	1840 (6920)	780 (22.2)

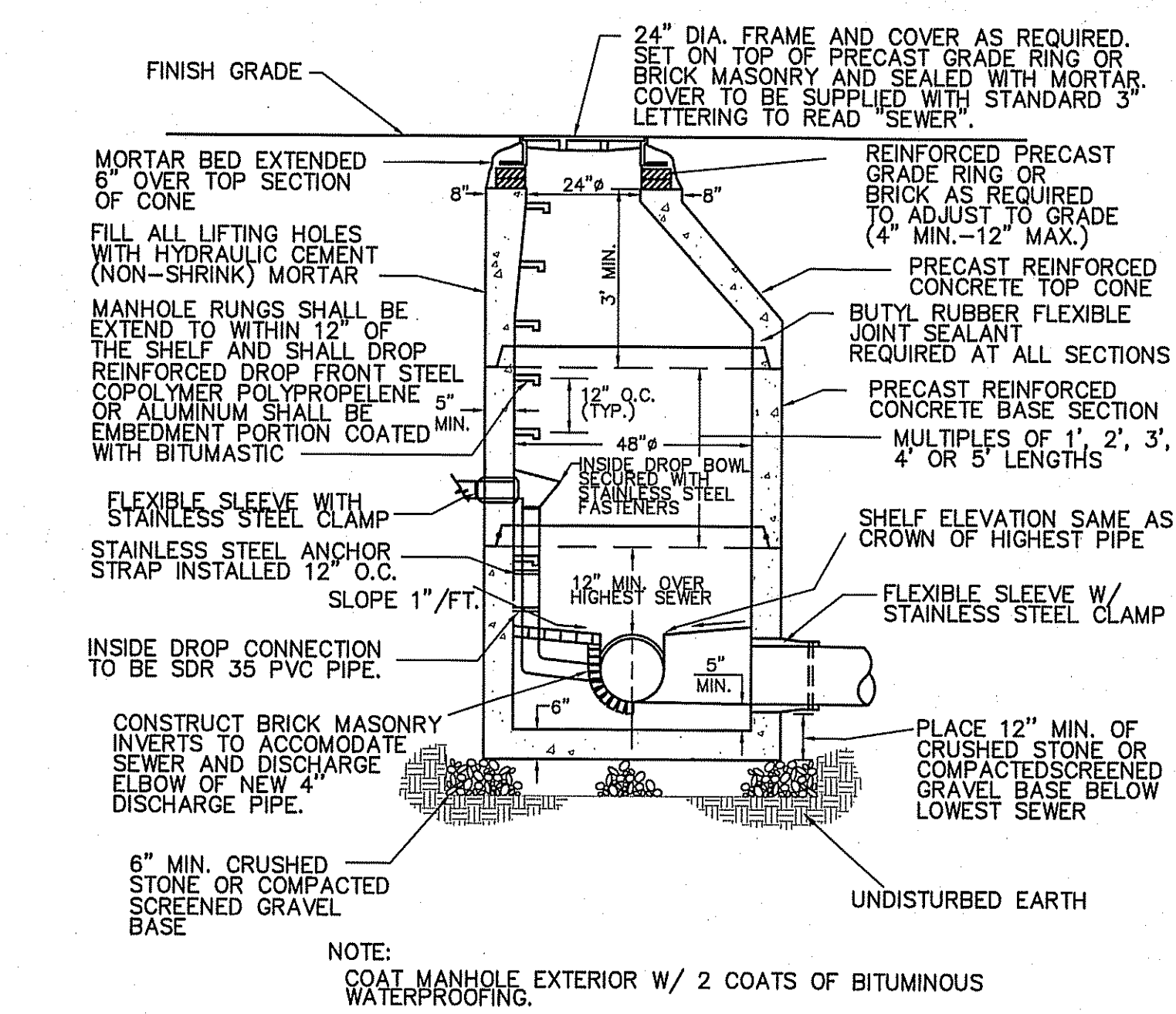
* HD dimensions can be customized to provide site specific oil or sediment volumes

Hydroworks HydroDome

PROJECT:
LOCATION:
REVISION DATE: 01/03/2023



HYDROWORKS HYDRODOME HD4 DETAIL
N.T.S.



PRECAST CONCRETE SEWER WITH INSIDE DROP MANHOLE
N.T.S.

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Drawn By: JLL
Designed By: JLL
Checked By: JRM
Date: 12/8/23

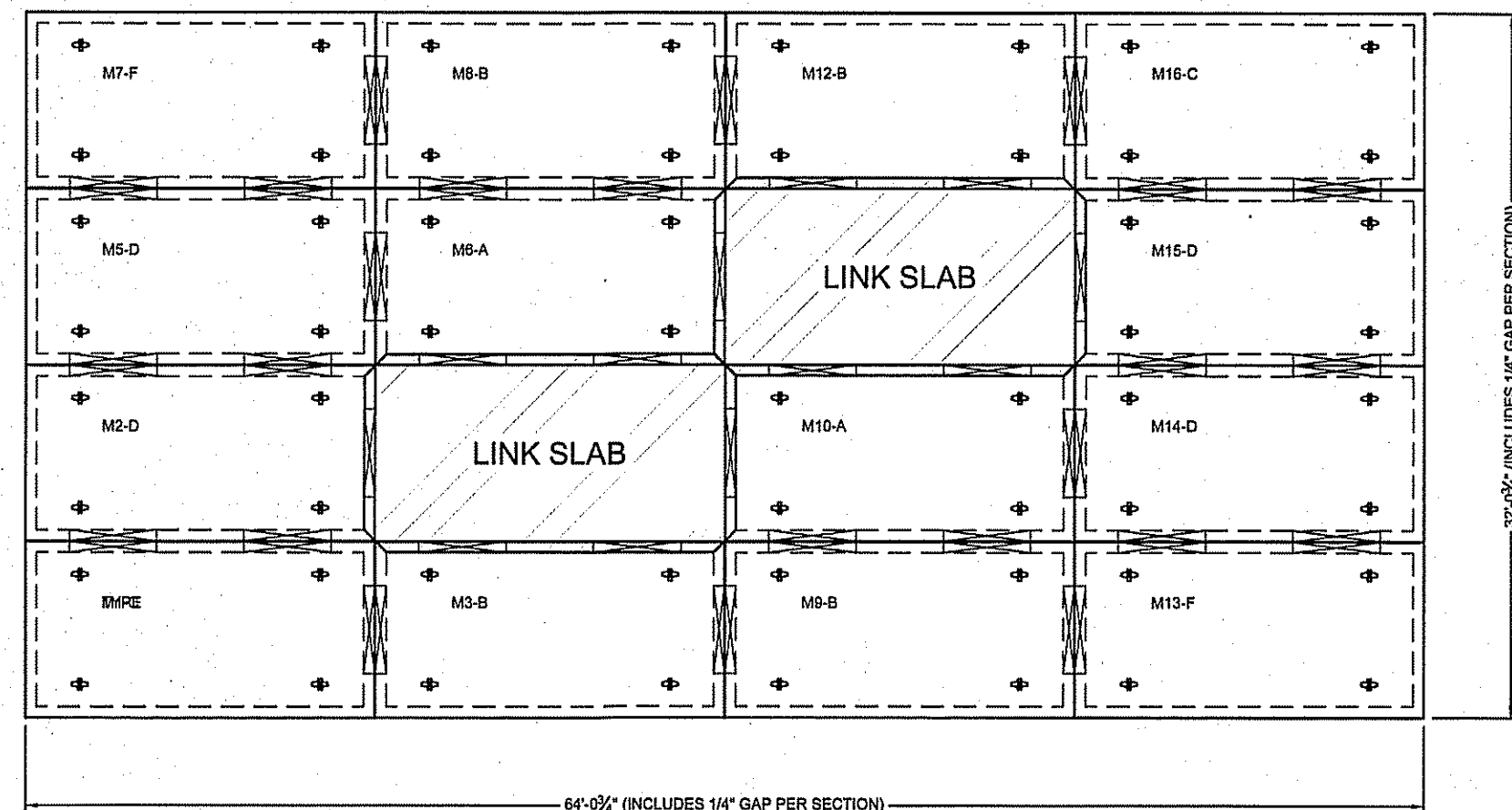
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www.mccartygb.com

Project Name
5 East Main Street
Westminster, MA

Sheet Title
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Job No: 220.03
File Name: 220.03P-DET03
Date: October 6, 2023
Scale: N.T.S.
Sheet No.
11

MODULE NOTES		
TYPE	QUANTITY	HEIGHT
A	4	3.00'
B	4	3.00'
C	4	3.00'
D	4	3.00'
E	4	3.00'
F	4	3.00'
LINK SLAB	2	-
TOTAL	30	-
VOLUME	5.591	CUBIC FEET



PLAN VIEW
SCALE: 1/8" = 1'-0"

DESIGN NOTES

- LIVE LOADING CRITERIA:
 - ASHTO HS-20-44 DESIGN TRUCK (WITH IMPACT AT 0.50FT MINIMUM COVER)
 - LATERAL LIVE LOAD SURCHARGE: 80 PSF (TO 8.00FT DEPTH)
 - NO LATERAL SURCHARGE(S) FROM ANY ADJACENT BUILDINGS, WALLS, FOUNDATIONS, OR ANY ADDITIONAL SITE ELEMENTS.
- SOIL LOADING CRITERIA:
 - SOIL COVER DEPTH: 0.50FT (MIN) - 5.00FT (MAX)
 - SOIL UNIT WEIGHT: 120 PCF
 - ASSUMED WATER TABLE ELEVATION: BELOW BOTTOM OF PRECAST
 - REQUIRED ALLOWABLE BEARING PRESSURE: 2,500 PSF
 - EQUIVALENT LATERAL FLUID PRESSURE, ACTIVE: 45 PCF (DRAINED)
 - EQUIVALENT LATERAL FLUID PRESSURE, AT-REST: 60 PCF (DRAINED)
 - EQUIVALENT LATERAL FLUID PRESSURE, PASSIVE: 150 PCF (DRAINED)
 - ASSUMED COEFFICIENT OF FRICTION: 0.40
 - SEISMIC LATERAL EARTH PRESSURES: NOT APPLICABLE
- STORMCAPTURE MODULE TYPE: RETENTION (WATERTIGHT)
- CONCRETE (NORMALWEIGHT):
 - MIN. 28-DAY COMPRESSIVE STRENGTH: 6,000 PSI
 - CEMENT: ASTM C150
- STEEL REINFORCEMENT: ASTM A615 / A706 (GRADE 60), ASTM A1064 (GRADE 80)
- REFERENCE STANDARDS: ASTM C913 & C860, ACI 318-14

REV	DESCRIPTION	DATE
1	ISSUED FOR PERMIT	12/08/2023

McCarthy Associates - Retention System

UQR-1

8/30/2023

SC1 3-0

1 OF 3

Description

The StormCapture® system is an underground, modular, structural precast concrete storage system for stormwater detention, retention, infiltration, harvesting and reuse, and water quality volume storage. The system's modular design utilizes multiple standard precast concrete units with inside dimensions of 7 feet by 15 feet (outside dimensions of 8 feet by 16 feet) to form an underground storage system. The inside height of the StormCapture system can range from 2 feet to 14 feet. This modular design provides limitless configuration options for site-specific layouts.

StormCapture components can be provided as either open-bottom modules to promote infiltration or closed-bottom modules for detention. In some cases, StormCapture modules can be placed in a checkerboard configuration for an even more efficient design. A Link Slab, with a footprint of 9 feet by 17 feet, is then used to bridge each space without a module.

The standard StormCapture design incorporates lateral and longitudinal passageways between modules to accommodate internal stormwater conveyance throughout the system. These passageways may be classified as either a "window configuration" with standard 12-inch tall sediment baffles extending up from the floor of the module to the bottom of the window, or a "doorway configuration" without the sediment baffles. The function and drainage rate of a StormCapture system depends on site-specific conditions and requirements.

Stormwater typically enters the StormCapture system through an inlet pipe. Grated inlets can also be used for direct discharge into the system. The StormCapture system is rated for H-20 traffic loading with limited cover. Higher load requirements can also be accommodated. In addition, StormCapture systems are typically equipped with a limited number of maintenance modules that provide access to the system for ongoing inspection and maintenance.

Function

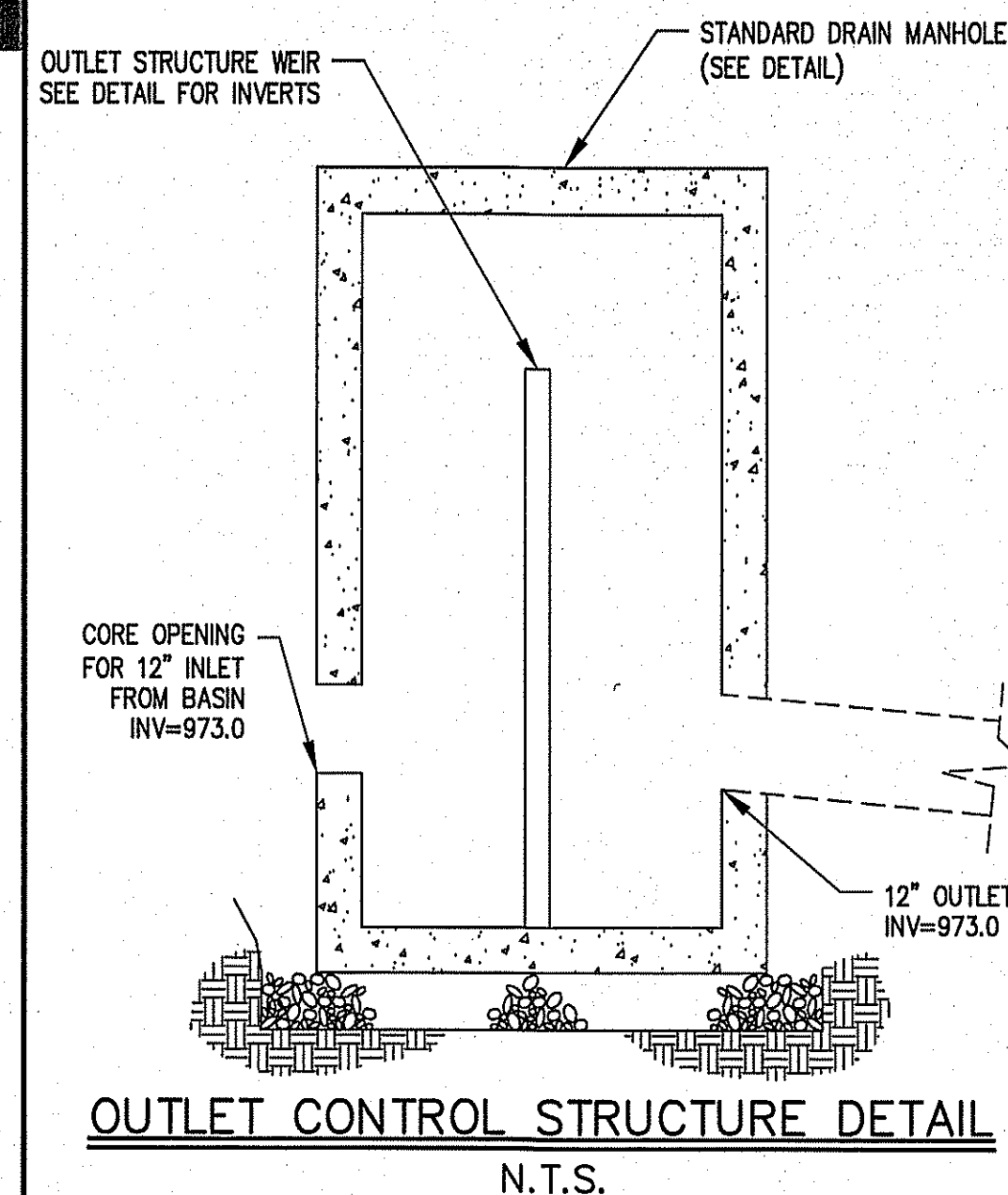
The StormCapture system is primarily used to manage water quantity by temporarily storing stormwater runoff from impervious surfaces to prevent flooding, slow down the rate at which stormwater leaves the site, and reduce receiving stream erosion. In addition, the StormCapture system can be used to capture stormwater runoff for water quality treatment. Regardless of how the StormCapture system is used, some sedimentation may occur in the modules during the time water is stored.

Configurations

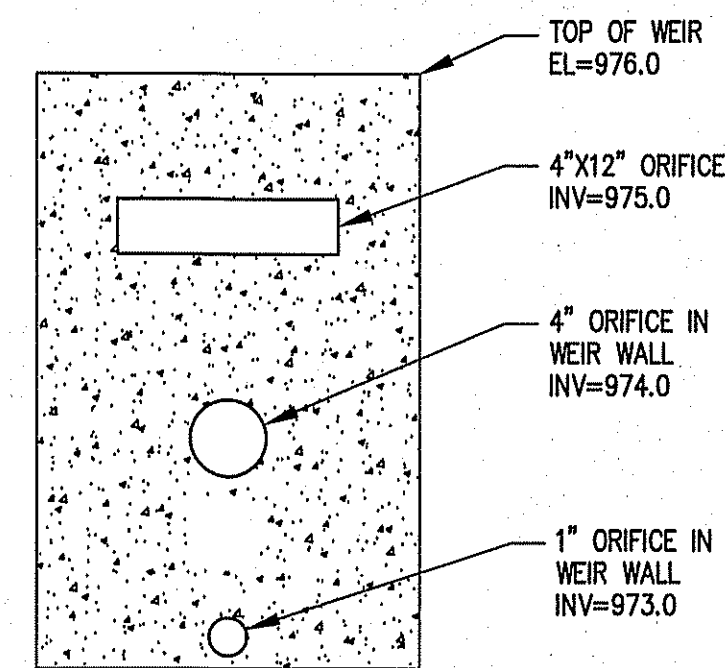
The configuration of the StormCapture systems may vary, depending on the water quality and/or quantity requirements of the site. StormCapture configurations for detention, retention/infiltration, and retention/harvesting are described below.

Detention

StormCapture Detention systems are designed with a closed bottom to detain stormwater runoff for controlled discharge from the site. This design may incorporate a dead storage sump and a permanent pool of water if the outlet pipe is higher than the floor elevation. Discharge from the system is typically controlled by an outlet orifice and/or outlet weir to regulate the rate of stormwater leaving the system. StormCapture Detention systems are typically designed with silt-tight joints, however when conditions exist that require a StormCapture system to be watertight, the system may be wrapped in a continuous, impermeable geomembrane liner. If the StormCapture Detention system includes Link Slabs, a liner must be used to detain water since the chambers under each Link Slab have no floor slab. In this case, care must be taken by maintenance personnel not to damage the exposed liner beneath each Link Slab.



OUTLET CONTROL STRUCTURE DETAIL
N.T.S.



OUTLET STRUCTURE WEIR DETAIL
N.T.S.

NOT FOR CONSTRUCTION
THESE PLANS WERE PREPARED FOR THE PURPOSE OF OBTAINING STATE AND LOCAL PERMITS AND ARE NOT INTENDED TO BE USED AS CONSTRUCTION DOCUMENTS.

APPROVED BY THE TOWN OF WESTMINSTER PLANNING BOARD
DATE:

No.	Date	Revision
1.	12/08/2023	No Change



Drawn By: JLL
Designed By: JLL
Checked By: JLL

- REVIEWING NOTES**
- THIS SYSTEM HAS BEEN DESIGNED PER THE DESIGN PARAMETERS SPECIFIED IN THE DESIGN NOTES. REVIEWING ENGINEER SHALL VERIFY THAT THESE PARAMETERS MEET OR EXCEED PROJECT SPECIFIC REQUIREMENTS. IF SITE CONDITIONS DIFFER FROM NOTED DESIGN PARAMETERS, REVIEWING ENGINEER SHALL NOTIFY OLDCASTLE FOR POTENTIAL REDESIGN AND/OR PRICING ADJUSTMENTS.
 - REVIEWING ENGINEER SHALL VERIFY ALL PIPE PENETRATION LOCATIONS, SIZES, AND INVERTS.
 - REVIEWING ENGINEER SHALL VERIFY ALL MANWAY ACCESS LOCATIONS AND RIM ELEVATIONS.
 - THIS SYSTEM IS DESIGNED FOR A GROUNDWATER TABLE ELEVATION PER NOTE 2C, SHEET 1. REVIEWING ENGINEER SHALL VERIFY THAT THE DESIGN GROUNDWATER ELEVATION MEETS OR EXCEEDS SITE CONDITION REQUIREMENTS. NOTIFY OLDCASTLE IF SITE CONDITIONS VARY FROM WHAT HAS BEEN SPECIFIED FOR POTENTIAL SYSTEM DESIGN CHANGES AND/OR PRICING ADJUSTMENTS.

- THIS SYSTEM HAS BEEN DESIGNED WITH A CONTAINMENT MEMBRANE. IF WATERTIGHT REQUIREMENTS ARE NOT MET, REVIEWING ENGINEERING SHALL NOTIFY OLDCASTLE FOR POTENTIAL DESIGN CHANGES AND/OR PRICING ADJUSTMENTS.
- DESIGN OF THE STORMCAPTURE PRECAST MODULE SYSTEM ASSUMES NO ADJACENT BUILDING(S), WALL(S), OR STRUCTURAL FOUNDATION(S) WITHIN A 1:1 INFLUENCE LINE FROM THE BOTTOM EDGE OF ANY SYSTEM MODULE. ANY SITE ELEMENTS BEYOND THIS ZONE OF INFLUENCE ARE ASSUMED TO HAVE NO IMPACT ON THE SYSTEM AND EXERT ZERO LATERAL SURCHARGE ONTO THE MODULES. THE CONTRACTOR SHALL VERIFY THAT ANY ADJACENT BUILDING(S), WALL(S), OR STRUCTURAL FOUNDATION(S) DO NOT LIE WITHIN THIS INFLUENCE ZONE OR DO NOT SURCHARGE THE PRECAST MODULES.
- WRITTEN APPROVAL OF SUBMITTAL DRAWINGS ALONG WITH SIGNED PURCHASE ORDER REQUIRED FOR BEGINNING OF PRODUCT FABRICATION. ANY SYSTEM MODIFICATION POST-APPROVAL MAY RESULT IN CHANGE ORDER(S) AND/OR POTENTIAL DELIVERY DELAYS.
- ALL SAND FILTER MEDIA, DRAIN ROCK AGGREGATE, PIPE, AND FITTINGS PROVIDED BY CONTRACTOR.

Retention/Infiltration

StormCapture Retention/Infiltration systems are designed with an open bottom to allow for the retention of stormwater onsite through infiltration into the base rock and surrounding soils. For infiltration systems, the configuration of the base of the StormCapture system may vary, depending on the needs of the site and the height of the system. Some systems may use modules that have fully open bottoms with no concrete floor, while other systems may use modules that incorporate floor openings in the base of each module. These are typically 24-inch by 24-inch openings. For open-bottom systems, concrete splash pads may be installed below inlet grate openings and pipe inlets to prevent erosion of base rock. A StormCapture Infiltration system may have an elevated discharge pipe for peak overflow.

Retention/Harvesting

StormCapture Retention/Harvesting systems are similar to detention systems using closed-bottom modules, but stormwater is typically retained onsite for an extended period of time and later reused for non-potable applications or irrigation. For rainwater harvesting systems, an impermeable geomembrane liner is typically installed around the modules to provide a water-tight system.

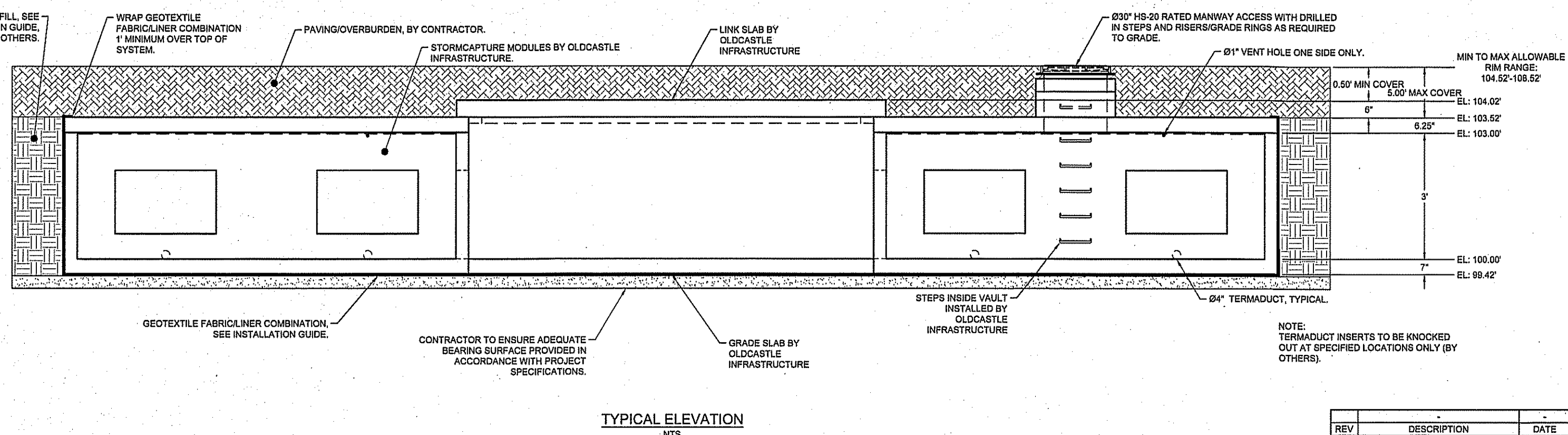
Inspection and Maintenance Overview

State and local regulations typically require all stormwater management systems to be inspected on a regular basis and maintained as necessary to ensure performance and protect downstream receiving waters. Inspections should be used to evaluate the conditions of the system. Based on these inspections, maintenance needs can be determined. Maintenance needs vary by site and system. Using this Inspection & Maintenance Guide, qualified maintenance personnel should be able to provide a recommendation for maintenance needs. Requirements may range from minor activities such as removing trash, debris or pipe blockages to more substantial activities such as vacuuming and removal of sediment and/or non-draining water. Long-term maintenance is important to the operation of the system since it prevents excessive pollutant buildup that may limit system performance by reducing the operating capacity and increasing the potential for scouring of pollutants during periods of high flow.

Only authorized personnel shall inspect and/or enter a StormCapture system. Personnel must be properly trained and equipped before entering any underground or confined space structure. Training includes familiarity with and adherence to any and all local, state and federal regulations governing confined space access and the operation, inspection, and maintenance of underground structures.

Inspection and Maintenance Frequency

The StormCapture system should be inspected on a regular basis, typically twice per year, and maintained as required. The maintenance frequency will be driven by the amount of runoff and pollutant loading encountered by a given system. Local jurisdictions may also dictate inspection and maintenance frequencies.



TYPICAL ELEVATION
N.T.S.

REV	DESCRIPTION	DATE
1	ISSUED FOR PERMIT	12/08/2023

McCarthy Associates - Retention System

UQR-1

8/30/2023

SC1 3-0

2 OF 3

McCarty Engineering, Inc.
Civil Engineers
42 Tucker Drive, Leominster, MA 01453
phone:(978) 534-1318 fax:(978) 840-6907
www.mccartydb.com

Project Name
**5 East Main Street
Westminster, MA**

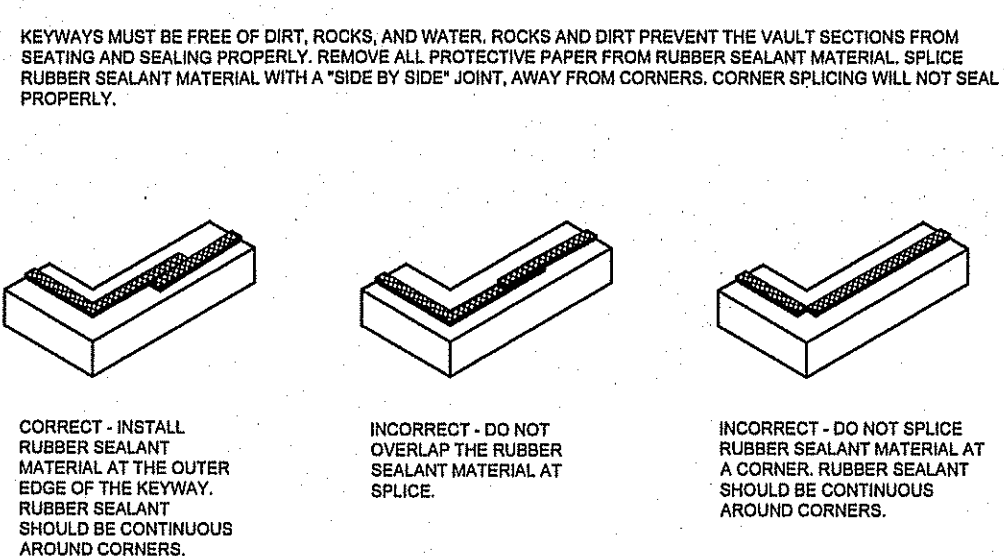
Sheet Title
**Construction
Details**

Job No: 220.03
File Name: 220.03P-DET04
Date: October 6, 2023
Scale: N.T.S.

Sheet No.
12

INSTALLATION NOTES

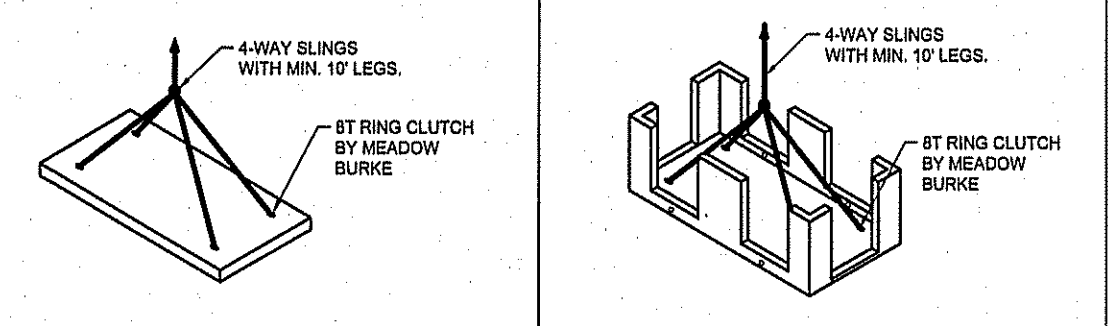
- UNDERGROUND PRECAST CONCRETE SYSTEM INSTALLATION SHALL BE PER ASTM C811, "STANDARD PRACTICE FOR INSTALLATION OF UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES" AND PER OLDCASTLE.
- MODULE SUBGRADE OR SUBGRADE SHALL BE LEVEL, SLOTTED AND COMPACTED ADEQUATELY FOR REQUIRED BEARING CAPACITY PER DESIGN NOTE 2D, SHEET 1. CONTRACTOR AND/OR INSTALLING SUB-CONTRACTOR SHALL VERIFY THAT SOIL BEARING CONDITIONS MEET OR EXCEED DESIGN REQUIRED MINIMUM PRIOR TO PLACEMENT AND INSTALLATION OF MODULES.
- ANY CONSTRUCTION EQUIPMENT EXCEEDING NOTED DESIGN LOADING IS NOT PERMITTED OVER OR ADJACENT TO ANY MODULE WITHOUT FORMAL REVIEW AND WRITTEN APPROVAL BY OLDCASTLE ENGINEERING. ELSE PRODUCT WARRANTY MAY BE VOIDED. ANY DESIGN CONSTRAINT EXCEEDING THE DESIGN PARAMETERS NOTED ABOVE MAY REQUIRE CUSTOM STRUCTURAL DESIGN, SUBGRADE REVISIONS, AND/OR PRICING ADJUSTMENTS.
- HEAVY VIBRATORY COMPACTION EQUIPMENT SHALL NOT BE OPERATED WITHIN 10 FEET OF MODULE EXTERIOR.
- MINIMUM OF 0.5 FT OF SOIL COVER REQUIRED FOR CONSTRUCTION EQUIPMENT OPERATION ON TOP OF SYSTEM. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND INSTALLING SUB-CONTRACTOR TO ENSURE THAT NO MODULES ARE DAMAGED DURING CONSTRUCTION.
- UNLESS NOTED OTHERWISE, ALL PIPE SUPPLIED AND INSTALLED BY OTHERS. CONTRACTOR MAY MODIFY AT RISK ANY OLDCASTLE PRODUCT(S) IN THE FIELD OR AFTER DELIVERY WITHOUT FORMAL REVIEW AND WRITTEN APPROVAL BY OLDCASTLE ENGINEERING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT ANY PRODUCT MODIFICATIONS DO NOT INVALIDATE THE PRODUCT WARRANTY.
- MODULE PLACEMENT FIELD TOLERANCES SHALL NOT EXCEED 3/4" BETWEEN ADJACENT MODULES. IF MODULE GAP EXCEEDS 3/4", CONTRACTOR SHALL MAKE NECESSARY ADJUSTMENTS AND RESET MODULE(S) TO BRING WITHIN NOTED TOLERANCES.
- CONTRACTOR IS RESPONSIBLE FOR PRODUCTS ONCE DELIVERED TO THE SITE. OLDCASTLE IS NOT RESPONSIBLE FOR OFFLOADING PRODUCTS, MAINTENANCE, AND INSTALLATION OF PRODUCTS ONCE THEY ARRIVE TO THE SITE.
- CONTRACTOR SHALL INSTALL SYSTEM PER PROJECT WATERPROOFING AND SOLLIGHTNESS REQUIREMENTS. WATERPROOFING AND SOLLIGHTNESS INSTALLATION IS NOT BY OLDCASTLE AND OLDCASTLE WILL PROVIDE NO GUARANTEE FOR THIS COMPONENT OF SYSTEM INSTALLATION.



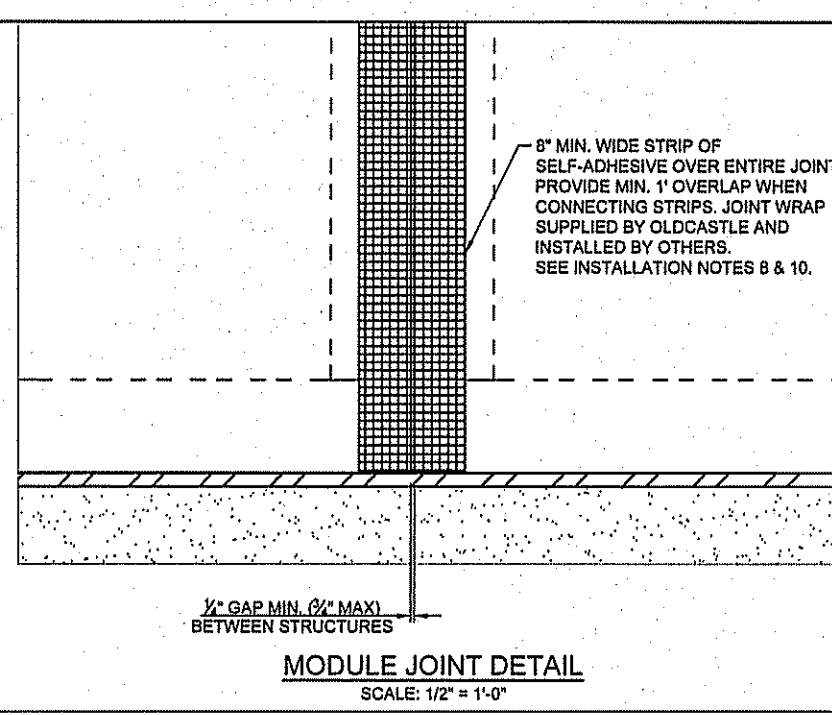
BUTYL RUBBER SEALANT (CONSEAL CS-102 OR EQUAL) PLACEMENT DETAIL
NTS

TRACK WIDTH	MAXIMUM EQUIPMENT OPERATING WEIGHT (OW) BY TRACK WIDTH			
	12"	18"	24"	30"
MIN TRACK LENGTH	8'-0"	10'-0"	12'-0"	14'-0"
FILL DEPTH (FT)	OW (LBS)	OW (LBS)	OW (LBS)	OW (LBS)
0.5	35,000	45,000	52,500	54,500
1	35,000	45,000	56,000	60,500
2	35,000	45,000	56,000	64,000
3	76,000	78,500	83,500	88,000
4	84,000	100,000	106,000	113,000
5	100,000	116,000	132,000	149,000

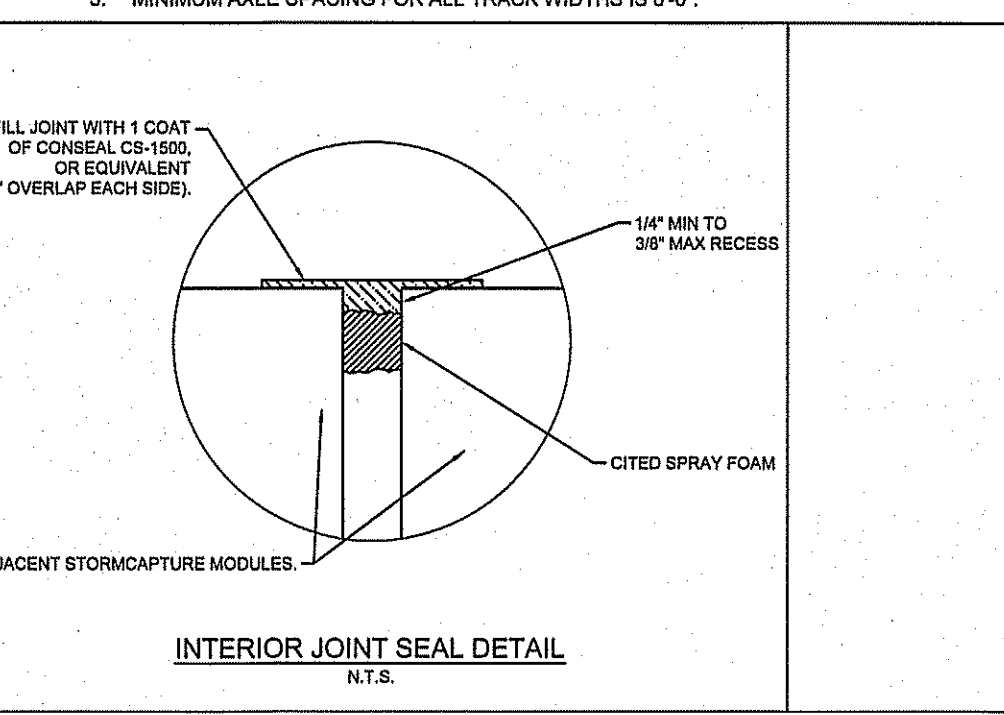
- NOTES:**
- IF CONSTRUCTION EQUIPMENT EXCEEDS THE ABOVE OPERATING WEIGHT LIMITS REFER TO INSTALLATION NOTE 3.
 - FOR WHEELED CONSTRUCTION EQUIPMENT LIMITS REFER TO INSTALLATION NOTE 3.
 - MINIMUM AXLE SPACING FOR ALL TRACK WIDTHS IS 8'-0".



LINK SLAB LIFTING DETAIL N.T.S.
BOTTOM MODULE LIFTING DETAIL N.T.S.
TOP MODULE LIFTING DETAIL N.T.S.



MODULE JOINT DETAIL
SCALE: 1/2" = 1'-0"



INTERIOR JOINT SEAL DETAIL
N.T.S.

REV	DESCRIPTION	DATE
1	ISSUED FOR PERMIT	12/08/2023

Oldcastle Infrastructure
A ONE COMPANY

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PROJECT: STORMCAPTURE & RETENTION SYSTEM SYSTEM ID: 1

DESIGNED BY: McCarty Associates
CHECKED BY: McCarty Associates - Retention System

DATE: 8/30/2023

SCALE: SC1 3-0

SHEET: 3 OF 3

Inspection Equipment

- The following equipment is helpful when conducting StormCapture inspections:
- Recording device (pen and paper form, voice recorder, iPad, etc.)
 - Suitable clothing (appropriate footwear, gloves, hardhat, safety glasses, etc.)
 - Traffic control equipment (cones, barricades, signage, flagging, etc.)
 - Manhole hook or pry bar
 - Confined space entry equipment, if needed
 - Flashlight
 - Tape measure
 - Measuring stick or sludge sampler
 - Long-handled net (optional)

Inspection Procedures

A typical StormCapture system provides strategically placed access points that may be used for inspection. StormCapture inspections are usually conducted visually from the ground surface, without entering the unit. This typically limits inspection to the assessment of sediment depth, water drain down, and general condition of the modules and components, but a more detailed assessment of structural condition may be conducted during a maintenance event.

To complete an inspection, safety measures including traffic control should be deployed before the access covers are removed. Once the covers have been removed, the following items should be inspected and recorded (see form provided at the end of this document) to determine whether maintenance is required:

- Observe inlet and outlet pipe penetrations for blockage or obstruction.
- If possible, observe internal components like baffles, flow control weirs or orifices, and steps or ladders to determine whether they are broken, missing, or possibly obstructed.
- Observe, quantify, and record the sediment depths within the modules.
- Retrieve as much floating trash as possible with a long-handled net. If a significant amount of trash remains, make a note in the Inspection & Maintenance Log.
- For infiltration systems, local regulations may require monitoring of the system to ensure drain down is occurring within the required permit time period (typically 24 to 72 hours). If this is the case, refer to local regulations for proper inspection procedure.

Maintenance Indicators

- Maintenance should be scheduled if any of the following conditions are identified during the inspection:
- Inlet or outlet piping is blocked or obstructed.
 - Internal components are broken, missing, or obstructed.
 - Accumulation of more than six inches of sediment on the system floor or in the sump, if applicable.
 - Significant accumulation of floating trash and debris that cannot be retrieved with a net.
 - The system has not drained completely after it hasn't rained for one to three days, or the drain down does not meet permit requirements.
 - Any hazardous material is observed or reported.

Maintenance Equipment

- The following equipment is helpful when conducting StormCapture maintenance:
- Suitable clothing (appropriate footwear, gloves, hardhat, safety glasses, etc.)
 - Traffic control equipment (cones, barricades, signage, flagging, etc.)
 - Manhole hook or pry bar
 - Confined space entry equipment, if needed
 - Flashlight
 - Tape measure
 - Vacuum truck

Maintenance Procedures

Maintenance should be conducted during dry weather when no flow is entering the system. Confined space entry is usually required to maintain the StormCapture. Only personnel that are OSHA Confined Space Entry trained and certified may enter underground structures. Once safety measures such as traffic control have been deployed, the access covers may be removed and the following activities may be conducted to complete maintenance:

- Remove trash and debris using an extension on the end of the boom hose of the vacuum truck. Continue using the vacuum truck to completely remove accumulated sediment. Some jetting may be necessary to fully evacuate sediment from the system floor or sump. Jetting is acceptable in systems with solid concrete floors or base slabs (referred to as closed-bottom systems). However, jetting is not recommended for open-bottom systems with a gravel foundation since it may cause bedding displacement, undermining of the foundation, or internal disturbance.
- All material removed from the system during maintenance must be disposed of in accordance with local regulations. In most cases, the material may be handled in the same manner as disposal of material removed from sumped catch basins or manholes.
- Inspect inlet and outlet pipe penetrations for cracking and other signs of movement that may cause leakage.
- Inspect the concrete splash pads (applicable for open-bottom systems only) for proper function and placement.
- Inspect the system for movement of modules. There should be less than 3/4-inch spacing between modules.
- Inspect the general interior condition of modules for concrete cracking or deterioration. If the system consists of horizontal joints as part of the modules, inspect those joints for leakage, displacement or deterioration.

Be sure to securely replace all access covers, as appropriate, following inspection and/or maintenance. If the StormCapture modules or any of the system components show significant signs of cracking, spalling, or deterioration or if there is evidence of excessive differential settlement between modules, contact Oldcastle Infrastructure at 800-579-8819.

StormCapture Inspection & Maintenance Log
Refer to as-built records for details about system size and location onsite

Location: _____
System Configuration: _____ Inspection Date: _____

Detention Infiltration Retention/Harvesting

Inlet or Outlet Blockage or Obstruction Notes: _____
 Yes No

Condition of Internal Components Notes: _____
 Good Damaged Missing

Sediment Depth Observed Notes: _____
 Inches of Sediment: _____

Trash and Debris Accumulation Notes: _____
 Significant Not Significant

Drain Down Observations Notes: _____
 Appropriate Time Frame Inappropriate Time Frame

Maintenance Requirements
 Yes - Schedule Maintenance No - Inspect Again in _____ Months

NOT FOR CONSTRUCTION
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APPROVED BY THE TOWN OF WESTMINSTER PLANNING BOARD
DATE: _____

No.	Date	Revision
1.	12/08/2023	No Change



Drawn By: JLL
Designed By: JLL
Checked By: JSM

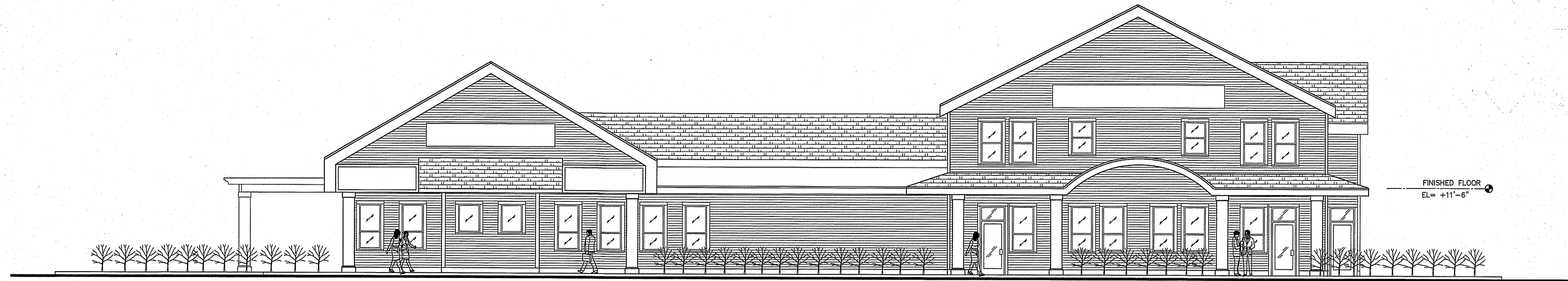
McCarty Engineering, Inc.
Civil Engineers
42 Tucker Drive, Leominster, MA 01453
phone: (978) 534-1318 fax: (978) 840-6907
www.mccartydb.com

Project Name
**5 East Main Street
Westminster, MA**

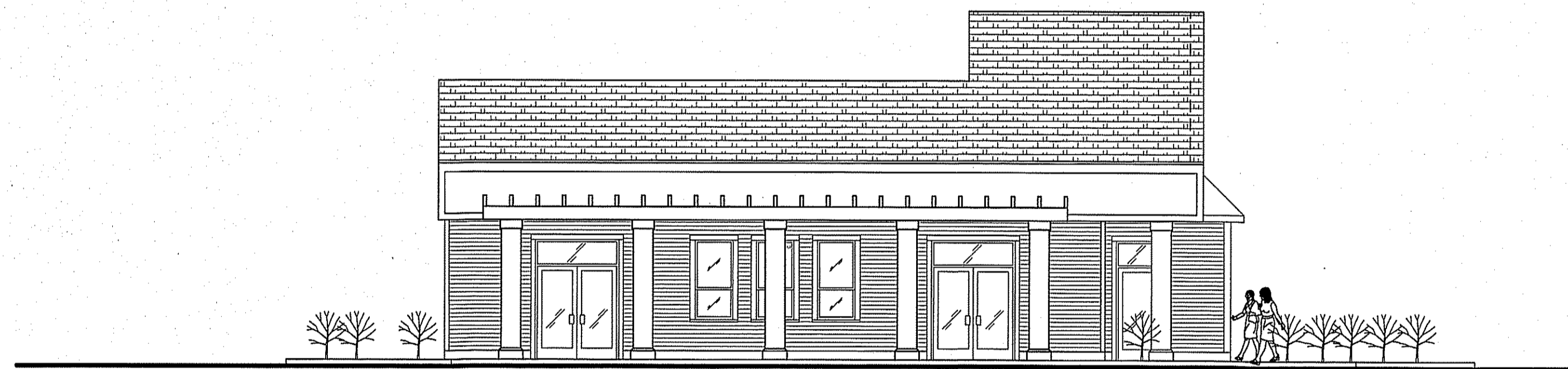
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Details**

Job No: 220.03
File Name: 220.03P-DET03
Date: October 6, 2023
Scale: N.T.S.

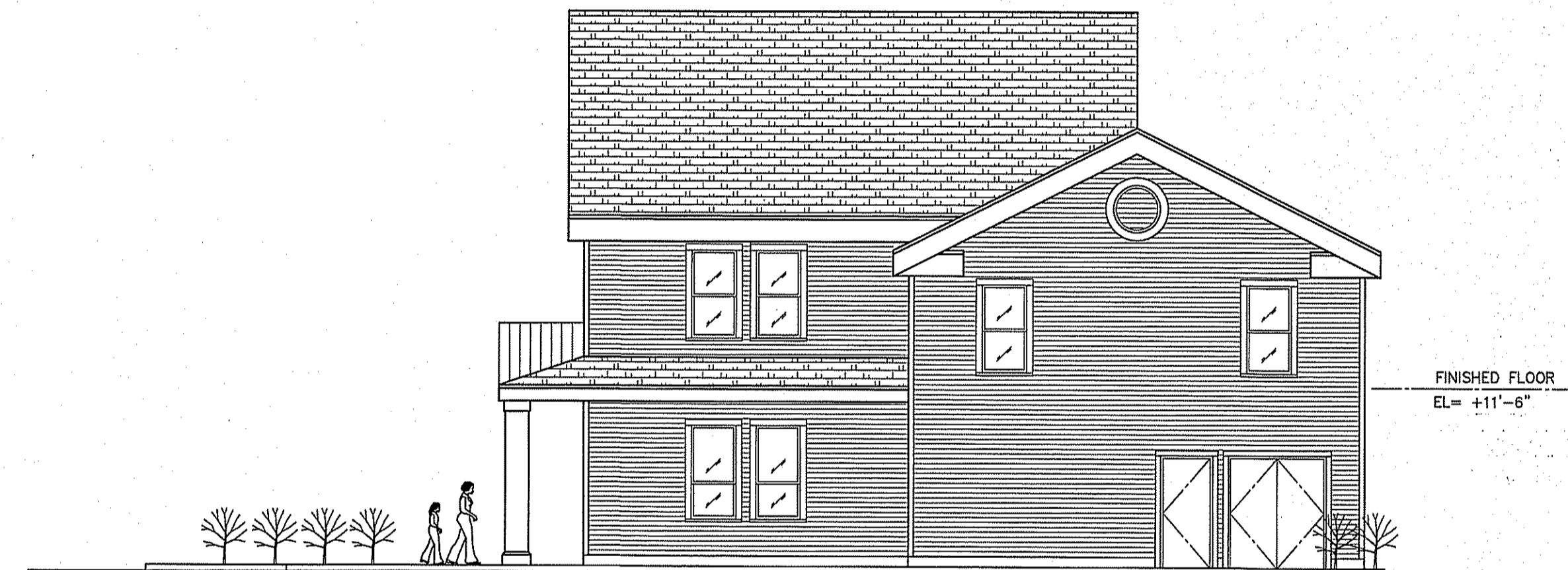
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13



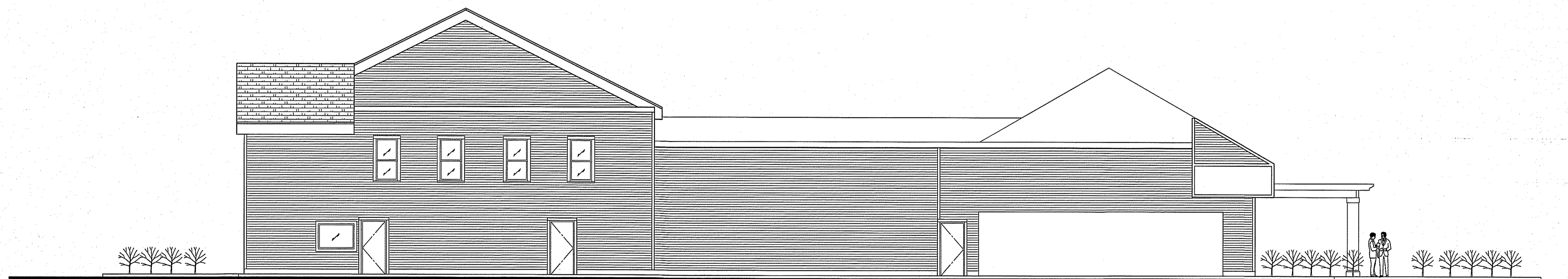
NORTH ELEVATION
1/4" = 1'-0"



EAST ELEVATION
1/4" = 1'-0"



WEST ELEVATION
1/4" = 1'-0"



SOUTH ELEVATION
1/4" = 1'-0"

NOT FOR CONSTRUCTION
OWNER'S REVIEW
JUNE 22, 2023

REVISIONS			
NO.	DATE	BY	DESCRIPTION
1	7-14-23	WAL	MIRRORED FLOOR PLANS & ELEVATIONS PER OWNER'S REQUEST
2	7-20-23	WAL	1ST FLOOR PLAN AND ADDED ELEVATION SHEET

PROJECT 23076
PROPOSED SHOPPING CENTER
FOR
ERIC CALLAHAN
AT
5 EAST MAIN STREET
WESTMINSTER, MA

DRAWN BY: WAL DATE 6-22-23

PROPOSED EXTERIOR ELEVATIONS

ACP 2.1