July 18, 2022

VIA EMAIL

Zoning Board of Appeals (the "Board")
Town of Marshfield
870 Moraine Street
Marshfield, MA 02050

RE: Mill Creek Marshfield (the "Project") located at Lot 6R in Enterprise Park, Marshfield, MA (the "Project Site")

Dear Members of the Board,

In response to Board comments and public comments received during the past few hearings; and in response to the Davis Square Architect comment letter dated June 13, 2022, Mill Creek Residential, on behalf of Marshfield Commerce Way LLC (the "Applicant"), is providing this update on the Project and comment responses.

We have made several significant changes to the Project in an effort to reduce perceived impacts and respond to concerns raised by the Board, the public, and the Board's peer reviewers. These changes are outlined below. We appreciate the Board's effort in coordinating and providing this commentary over the past several hearings and look forward to discussing further on July 26th.

1. **Density Reduction**

   MassHousing's Project Eligibility Letter for the Project dated January 25, 2022 noted that the Project "is acceptable given the proposed housing type." In the context of a 40B, the impacts of density and their associated mitigations are important, not the unit or bedroom count. We have and will continue to work the Board and its peer reviewers to appropriately mitigate the impacts from the Project as proposed—for example, through improvements to traffic signal timing/phasing to help mitigate traffic impacts—or through permit conditions that mitigate other impacts.

   Nevertheless, in response to the Town's initial comment letter, public comments, and Board member comments, we are proposing a significant density reduction in both unit and bedroom count, removing eighteen (18) residential units and forty (40) bedrooms from the original proposal.

   This reduction is accomplished by removing two entire townhome structures (totaling ten units) and a partial floor of a flats building (totaling eight units). The updated unit matrix is provided below. See ***Attachments C and D*** for updated architectural and civil plans, respectively, reflecting this change.

Unit Type	Comprehensive Permit Submission	July 2022 Revision	Change
1BR	117	110	-7
2BR	116	116	0
3BR	27	26	-1
TH 3BR	40	30	-10
Total Units	**300**	**282**	**-18**
Total Bedrooms	**550**	**510**	**-40**

Combined with the site plan adjustment as outlined below, this significant reduction in density results in meaningful additional open space throughout the project for the enjoyment of residents and their guests.

2. Elevators

Elevators are not required by code for the project as proposed. However, in response to the Town's initial comment letter, public commenters, Board members, and Davis Square's comment letter, we have incorporated elevators into the garden flats buildings. This is a significant and costly change, but we believe it will improve accessibility throughout the Project and we are pleased to provide this amenity. Revised architectural plans are provided in ***Attachment B***.

3. Secondary Access

In response to the Town's initial comment letter and a Marshfield Fire Department request, we have incorporated a secondary access road to Commerce Way into the site layout. The Marshfield Fire Department has reviewed and approved the revised plan from an access and safety perspective. Civil plans are provided in ***Attachment C***.

4. Fire Road Access

In response to the Town's initial comment letter and a Marshfield Fire Department request, we have incorporated a punch-through access to the fire trail on the eastern side of the site suitable for the Marshfield Fire Department's off-road vehicles.

5. **<u>Increased Open Space</u>**

   Davis Square's comment letter suggested a number of adjustments to help improve open space across the project, including increasing the amount of space between the flats buildings, realigning the western road, and eliminating one townhome building. We have taken this suggestion even further with the elimination of two townhome buildings and an additional density reduction (see updated site plan in ***Attachment C***). With the increased spacing between the flats buildings, we are pleased to provide significant additional open space for residents and their guests. Open space has been landscaped appropriately as shown in ***Attachment D***.

In addition to the above, we are providing the following items which have been requested as part of the peer reviews:

- Draft Trash Management Plan (***Attachment E***). A trash truck turning analysis is included as an overlay to the emergency vehicle turning analysis presented in ***Attachment C***.
- Draft Stormwater Operations and Maintenance Plan (***Attachment F***)
- Cut and fill analysis and proposed truck routing (***Attachment G***)

We believe these changes are responsive to commentary provided by the Board, its peer reviewers, and the public. We look forward to discussing further at the July 26, 2022 hearing.

Thank you for your time in reviewing these items. Please feel free to contact me if I can be helpful in any manner.

Respectfully submitted,



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Boston, MA 02109

CC: Ed Pesce, Pesce Engineering
Cliff Boehmer, Davis Square Architects
Tim Alexander, MCRT
Debbie Horwitz, Goulston & Storrs
Paul Momnie, Goulston & Storrs
Anthony Donato, Hancock-HW Moore
Jeff Dirk, Vanasse & Associates
Ben LaFrance, Hawk Design
Andrew Stebbins, TAT

Attachment A

Response to Davis Square Associates Comments

Comment Number	DSA Comment 6/13/22 Letter	Applicant Response
1	**a. Orientation of building in relation to parking areas, open space and on-site amenities** The perimeter of the parking lots would benefit from increased planting to cut down on the heat island effect…additional buffering would be beneficial along the western borderer with the adjacent development (although this is difficult to determine without 3D imagery or a Landscape Plan)	There is an approximately 50' existing vegetated buffer between Mill Creek Marshfield and the adjacent project.
2	However, the overall site plan would benefit from more breathing room between the buildings, as well as additional programmable outdoor space. Of particular concern is the spacing between the larger structures.	Revised design provides more space between the larger buildings. Additional outdoor space has been provided, including a tot lot and dog run.
3	Increase the size of the tot lot (it appears to be approximately the same size as the lot provided for the adjacent development which has considerably fewer units).	Tot lot size has been increased.
4	Consider active programming for a new open space to the west of building 9.	Tot lot moved to this area.
5	While not an open space issue, consider the creation of a double separated entry drive in and out of Commerce Way (may be preferred by fire department), or perhaps better, an independent second drive at the northwest corner of the site.	Secondary (fire access) entrance provided in accordance with feedback from Marshfield Fire.
6	The applicant should diagrammatically confirm that access to all on site common amenities are on accessible paths for all residents.	See accessible route plan (***Attachment C***).
7	**b. Function, use and adequacy of open space and landscaped areas.** Particularly because it appears that virtually all of the site will be clear cut (with the possible exception of some of the existing landscaping along Commerce), a Landscape Plan should be provided that includes all proposed new plantings as well as existing landscaping that is proposed to be preserved.	Landscape plan provided.
8	How are mail and packages distributed to the residents?	Mail is delivered to each flats building. Townhouse buildings will be served by an exterior mail kiosk. Packages will be delivered to the Clubhouse.

Comment Number	DSA Comment 6/13/22 Letter	Applicant Response
9	An area should be developed for school children to gather and wait for buses.	An accessible sidewalk that leads to Commerce Way where the bus stops has been provided.
10	There appears to be only one area designated on the civil plans for trash collection. Is this actually the case?	The townhomes have individual trash cans for pickup. The flats buildings utilize the singular trash area. See trash plan in ***Attachment G***.
11	Where are the snow storage areas on the site?	Snow will be stored on site as necessary in spaces between buildings, parking islands, at the end of parking rows and elsewhere as required. A snow storage plan will be provided in a subsequent submittal.
12	How wide are the proposed walkways and what are they constructed of?	The walkways are five feet wide; there will be combination of concrete and bituminous.
13	Is there any ground-mounted mechanical equipment, and if so, where is it?	There are ground-mounted condensing units located at grade. There are also gas meters provided at grade on hitching posts.
14	Is there an area on the site designated for outdoor grilling/picknicking (this could be part of the program for an expanded open space to the west of building 9)?	A grilling area is contemplated between the clubhouse and the pool.
15	The rendered site plan indicates what may be patios behind each of the townhouse units. Is that what is intended, and are they fenced in?	There are patios at the townhouses; they do not have fencing.
	c. Use and treatment of natural resources	No items to address
16	**d. Building design, setbacks, massing and scale in relationship to the surrounding context and topography** ...the decision to forego elevators is highly questionable. At a minimum, the applicant should request an Advisory Opinion from the MAAB to see if a variance from 9.4.2 would be required to construct the development with no elevators. A better solution, for numerous reasons, would be to include elevators in all of the large buildings.	Elevators will be provided at the flats buildings.

Comment Number	DSA Comment 6/13/22 Letter	Applicant Response
17	**e. Viewsheds of the project visible from the public street, public areas and from the vantage point of nearby residential neighborhoods.** Views from within the development that include the four-story facades would be useful. Those sections could be continued towards the west to include the closest buildings on the neighboring site, as well at to the north to understand the site and new buildings' relationship to the street.	Renderings will be provided in a subsequent submittal.
18	Shadow studies do not appear to have been included in the submitted materials. This is an important exhibit to assess if there is any impact to the neighbors on the west (which may be minimal), as well as within the development itself (which may be more significant).	There is a tree buffer at the West edge so the townhouse buildings will not have an effect on the neighbors.
19	**f. Pedestrian and vehicular access and circulation, adequacy of accessibility provisions. Of particular interest are the implication of access and egress in terms of pedestrians, bicyclists and motorists. Adequacy of parking facilities.** The applicant should provide evidence that all of the walkways are MAAB "accessible".	Accessible walkways are provided.
20	None of the site plans in the submitted materials include crosswalks, sidewalk ramps, etc. that will be necessary (particularly because of the large number of walkways that are interrupted by drives and parking spaces).	Refer to revised civil drawings.
21	There do not appear to be any accommodations made for bicycles in the drawings, including no reference to exterior bike racks at the clubhouse or any of the individual buildings. Nor do the schematic building plans indicate any secure interior bicycle storage for residents. This could be particularly challenging for upper floor residents with bicycles if the buildings remain un-elevatored.	Bicycle racks have been added, refer to revised landscaping plans (***Attachment D***). The flats buildings will have elevators.
22	Given the scale of the proposed development, a significant number of EV parking stations should be provided. There is no information provided as to locations and quantities	EV and EV-ready spaces will be provided. Refer to the revised site plans (***Attachment C***).

Comment Number	DSA Comment 6/13/22 Letter	Applicant Response
23	In addition to what may be proposed for current (EV) spaces, infrastructure for expansion of the number of spaces should be built into the project, including the capacity of the project's transformer(s).	EV ready spaces will be provided (***Attachment C***). Refer to the revised site plans. The transformer shall be sized to accommodate the EV ready spaces.
24	**g. Integration of building and site, including but not limited to preservation of existing tree cover, if any:** The best case for integration of the project into the nearby existing neighborhood is through successful preservation of existing bordering vegetation, the provision of new screening vegetation at the western and northern borders, and generous landscaping within the development.	Refer to the landscaping plan (***Attachment D***). Existing vegetation will be preserved as much as practicable during construction.
25	However, because there are not individual building elevations provided, it is not possible to determine compliance with this goal (all submitted elevations depict a townhouse structure sitting on flat site).	Refer to additional townhouse elevations for stepped buildings.
26	**h. Exterior materials** Building elevations have not been annotated to indicate material selections. This must be provided by the applicant.	Elevations have been updated to reflect materiality.
27	**i. Energy Efficiency** Its not clear what mechanical systems are intended..More information should be provided by the applicant, particularly if there is ground-mounted equipment	There will be ground-mounted equipment, as stated above.
28	**j. Exterior lighting** The application materials do not include a site lighting plan. This should be provided.	Refer to revised civil drawings and landscape plans (***Attachment D***) for site lighting locations.
30	**k. Proposed landscape elements, planting materials, and planting design.** There is no Landscape Plan…this reviewer believes that it would be beneficial to provide more large scale landscaping within the parking lots. This could be accomplished by introducing some compact spaces.	Refer to landscape plan (***Attachment D***).
31	**l. Feasibility of incorporating environmental and energy performance standards in the design, construction and operation of the buildings.**	No comments to address

Comment Number	DSA Comment 6/13/22 Letter	Applicant Response
	m. Any other design-related comments/questions/considerations identified by this peer reviewer, ZBA, or town staff. Car sharing spaces (ZIP Car, etc.) should be considered	The Applicant will explore car sharing opportunities (e.g. ZipCar).
32	Site plans should be improved to include drive aisle, and parking space dimensions, proposed curbing, pavement markings, accessible parking and ramps at sidewalks	Refer to revised civil plans (***Attachment C***).
33	…provide a preliminary construction management plan that minimizes impact to the community	This will be provided at building permit stage as part of the civil/construction review.
34	what is the status of review of the project by the Fire and Police Departments?	The team has met with the Marshfield Fire Department on two occasions to date (5/24/2022 and 7/11/2022). MFD has reviewed and approved the secondary access and provided input on the fire-road punch-through on the eastern side of the site.
35	Universal Design features should be integrated into the project plans	The project shall meet all applicable accessibility codes.
36	Provide drawings of the clubhouse building, including detail related to the programming of the interior common spaces	Refer to preliminary plans and elevations submitted.
37	Landscape Plan (when submitted) should include any proposed fencing within or on the perimeter of the site	Refer to landscape plan.
38	Applicant should provide a cut and fill analysis.	See ***Attachment G***.
39	Provide a trash management plan. Vehicle Movement Plans should include the maneuvering of trash trucks at pick-up locations	Trash management plan is provided as Attachment E. The trash truck turning analysis is provided as an overlay to the emergency vehicle turning analysis presented in ***Attachment C***.
40	Are the sidewalks within the development proposed to be asphaltic or cement concrete?	As noted above, there will be a combination of bituminous and concrete sidewalks.

Comment Number	DSA Comment 6/13/22 Letter	Applicant Response
41	Where are the proposed transformer locations?	The electric company will provide locations during drawing development.
42	Has a geotechnical report been completed?	A geotechnical report will be completed during drawing development.
43	Is a radon mitigation system included in the design/pricing of the buildings?	Radon systems will be included as drawings are developed as necessary.
44	Has the Applicant considered the option of an improved connection to the existing fire protection trail running along the eastern and southern property line of the site?	A fire road connection will be provided on the eastern side of the site per the request of Marshfield Fire Department. Refer to civil plans.
45	**m. Techniques to mitigate visual and other impacts.**	No items to address

Attachment B

Architectural Plans

MILL CREEK MARSHFIELD

COMMERCE WAY
MARSHFIELD, MA





SHEET NUMBER	SHEET NAME	07/12/22 - COMP PERMIT SUBMISSION
001 - TITLE SHEETS		
T0.01	COVER SHEET	X
008 - ARCHITECTURAL - 1.00 OVERALL PLANS		
A1.01	FLOOR PLANS - STACKED FLAT- TYPE A	X
A1.02	FLOOR PLANS - STACKED FLAT - TYPE B	X
A1.03	FLOOR PLANS - STACKED FLAT - TYPE C	X
A1.04	FLOOR PLANS - STACKED FLAT - TYPE D	X
A1.05	FLOOR PLANS - TOWNHOME - TYPE E	X
A1.06	FLOOR PLANS - CLUBHOUSE - TYPE G	X
008 - ARCHITECTURAL - 2.00 ENLARGED PLANS		
A2.50	TYPICAL UNIT TYPES	X
008 - ARCHITECTURAL - 4.00 ELEVATIONS		
A4.01	EXT ELEVATIONS - STACKED FLAT - TYPE A	X
A4.02	EXT ELEVATIONS - STACKED FLAT - TYPE B	X
A4.03	EXT ELEVATIONS - STACKED FLAT - TYPE C	X
A4.04	EXT ELEVATIONS - STACKED FLAT - TYPE D	X
A4.05	EXT ELEVATIONS - TOWNHOME - TYPE E	X
A4.06	EXT ELEVATIONS - CLUBHOUSE - TYPE G	X
008 - ARCHITECTURAL - 5.00 SECTIONS & DETAILS		
A5.01	SITE SECTION	X

FLOOR AREA & HEIGHT TABULATION

BLDG	BLDG TYPE	QUANTITY	BLDG HEIGHT STORIES	BLDG HEIGHT FEET	BLDG FOOTPRINT	TOTAL GSF OF BLDG	UNIT COUNT	BED COUNT
CLUB	CLUBHOUSE	1	1	35	8,170 SF	8,170 SF	N/A	N/A
A1	STACKED FLAT	1	3 W/ BASEMENT	45	13,860 SF	49,520 SF	41	65
A2	STACKED FLAT	1	3 W/ BASEMENT	45	13,860 SF	49,520 SF	41	65
B1	STACKED FLAT	1	3	45	12,134 SF	36,402 SF	29	50
B2	STACKED FLAT	1	3	45	12,134 SF	36,402 SF	29	50
C1	STACKED FLAT	1	3	45	15,165 SF	45,427 SF	37	57
C2	STACKED FLAT	1	3	45	15,165 SF	45,427 SF	37	57
D	STACKED FLAT	1	3 W/ BASEMENT	45	14,537 SF	51,728 SF	38	76
TOTAL		8			96,855 SF	314,426 SF	252	420
E1	TOWNHOUSE	1	2	34	5,845 SF	11,437 SF	6	18
E2	TOWNHOUSE	1	2	34	5,845 SF	11,437 SF	6	18
E3	TOWNHOUSE	1	2	34	5,845 SF	11,437 SF	6	18
E4	TOWNHOUSE	1	2	34	5,845 SF	11,437 SF	6	18
E5	TOWNHOUSE	1	2	34	5,845 SF	11,437 SF	6	18
TOTAL		5			29,225 SF	57,185 SF	30	90
GRAND TOTAL		13			126,080 SF	371,611 SF	282 UNITS	510 BEDS

GROSS BUILDING AREA BY FLOOR

BLDG	QUANTITY	BASEMENT FL AREA	FIRST FL AREA	SECOND FL AREA	THIRD FL AREA
CLUB	1	N/A	8,170 SF	N/A	N/A
A1 & A2	2	7,940 SF	13,860 SF	13,860 SF	13,860 SF
B1 & B2	2	N/A	12,134 SF	12,134 SF	12,134 SF
C1 & C2	2	N/A	15,165 SF	15,131 SF	15,131 SF
D	1	8,303 SF	14,475 SF	14,475 SF	14,475 SF
E1 - E5	5	N/A	5,845 SF	5,592 SF	N/A

UNIT DISTRIBUTION

TYPE	DESCRIPTION	AVG. SF	UNIT COUNT	% TOTAL	TOTAL SF
A	1BR / 1BA	800	110	39.0	88,000
B	2BR / 2BA	1,097	116	41.0	127,252
C	3BR / 2BA	1,237	26	9.0	32,162
TOTAL		981	252	89.0	247,414
TH	3BR / 2BA TH	1,622	30	11.0	48,660
TOTAL		1,050	282		296,074

SUBMISSIONS :

AUGUST 13, 2021	PEL SUBMISSION
JANUARY 28, 2022	COMPREHENSIVE PERMIT SUBMISSION
JULY 12, 2022	COMPREHENSIVE PERMIT SUBMISSION

PROJECT CONTACT INFORMATION :

OWNER	MILL CREEK RESIDENTIAL TRUST, LLC 84 STATE STREET, SUITE 920 BOSTON, MA 02109 PHONE #: 617.681.8034 FAX #:
GENERAL CONTRACTOR	MCRT NORTHEAST CONSTRUCTION, LLC 84 STATE STREET, SUITE 920 BOSTON, MA 02109 PHONE #: 617.681.8034 FAX #:
ARCHITECT	THE ARCHITECTURAL TEAM 50 COMMANDANTS WAY AT ADMIRALS HILL CHELSEA, MA 02150 PHONE #: 617.889.4402 FAX #: 617.884.4329
CIVIL ENGINEER	HANCOCK ASSOCIATES 121 EAST BERKLEY STREET, 4th FLOOR BOSTON, MA 02118 PHONE #: 617.357.8145 FAX #:

LOCUS MAP :



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Revision:

Architect of Record:

Drawn: SFM

Checked: AS

Scale:

Key Plan:

Project Name:
MILL CREEK MARSHFIELD

COMMERCE WAY
MARSHFIELD, MA

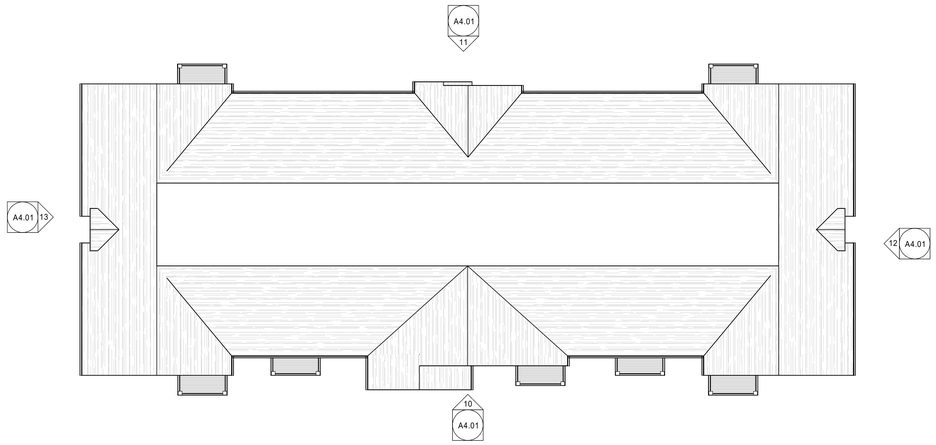
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Project Number:
21065

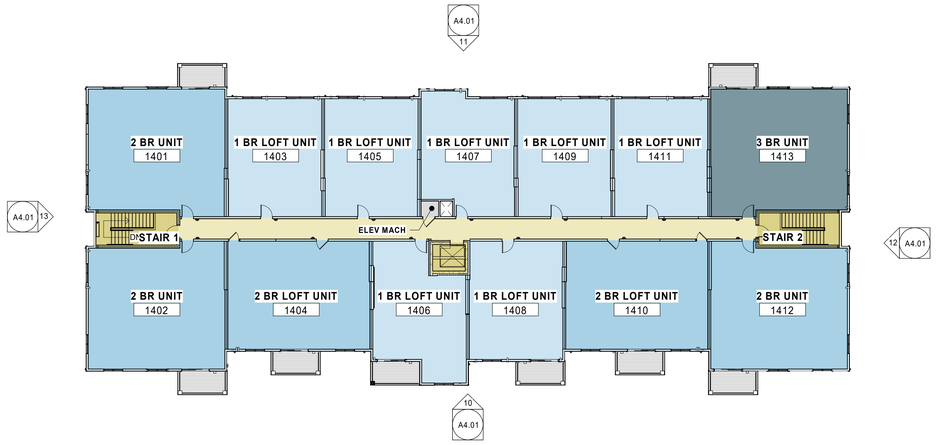
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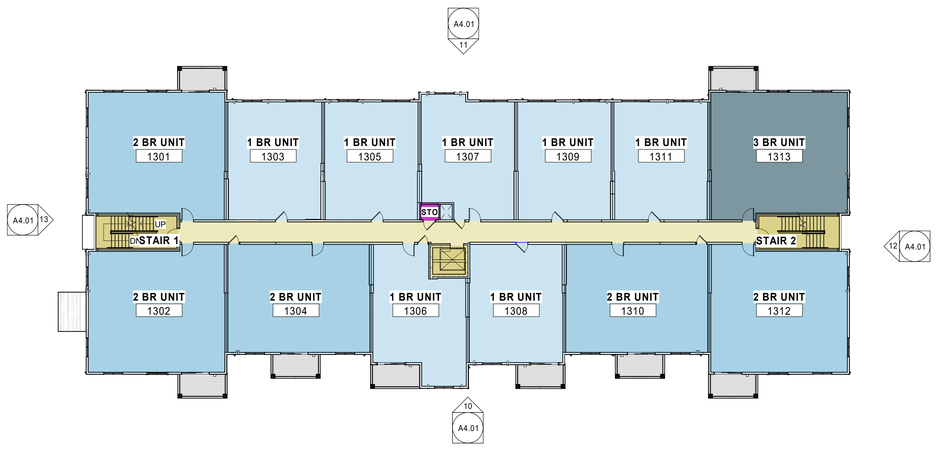
14 OVERALL PLAN - STACKED FLAT - TYPE A - ROOF
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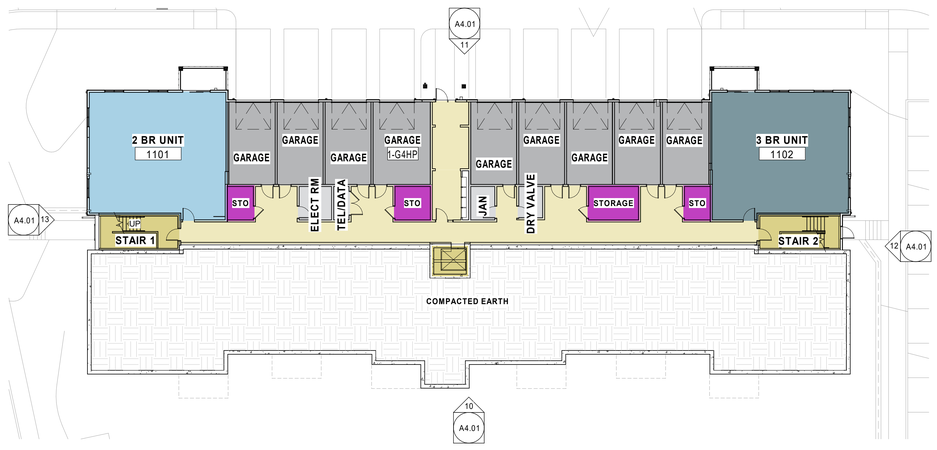
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11 OVERALL PLAN - STACKED FLAT - TYPE A - LEVEL 1
Scale: 1/16" = 1'-0"



12 OVERALL PLAN - STACKED FLAT - TYPE A - LEVEL 2
Scale: 1/16" = 1'-0"



10 OVERALL PLAN - STACKED FLAT - TYPE A - BSMNT
Scale: 1/16" = 1'-0"

UNIT MIX - STACKED FLAT - TYPE A

UNIT TYPE	DESCRIPTION	UNIT COUNT
SF	1 BR UNIT	21
SF	2 BR UNIT	16
SF	3 BR UNIT	4
TOTAL UNIT COUNT :		41

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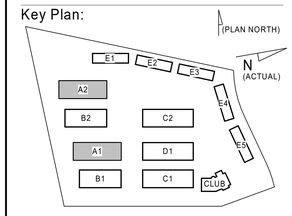
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Key Plan:



Project Name:
MILL CREEK
MARSHFIELD

COMMERCE WAY
MARSHFIELD, MA

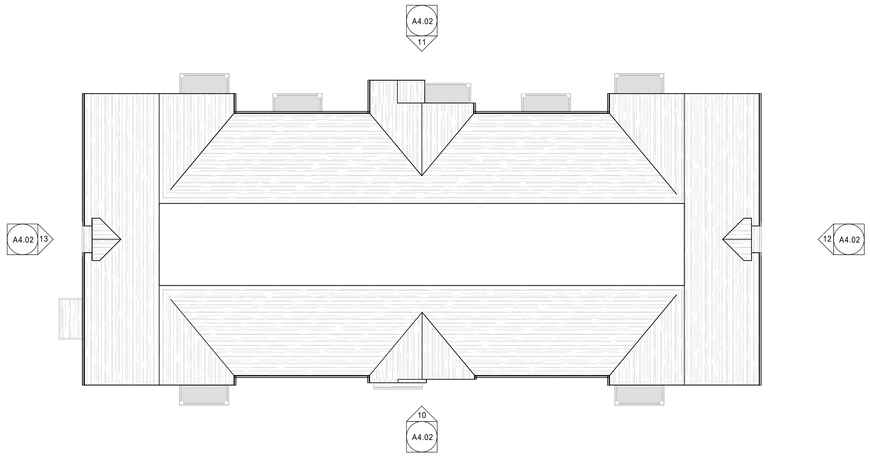
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FLOOR PLANS -
STACKED FLAT- TYPE A

Project Number:
21065

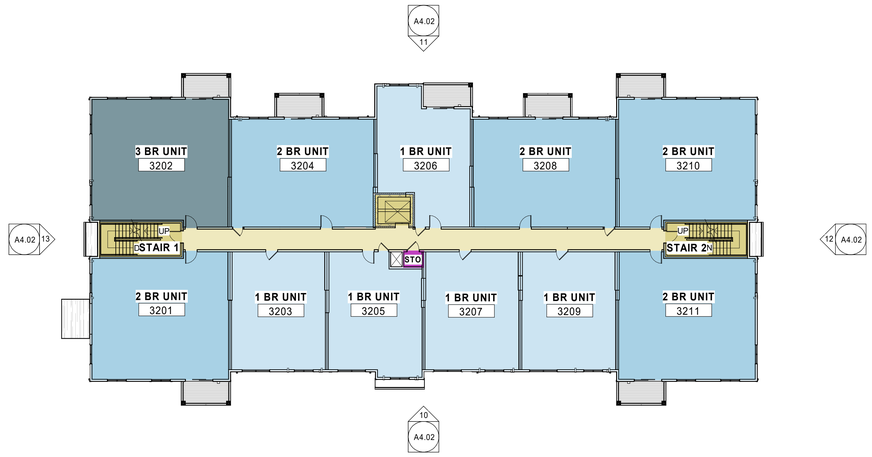
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14 OVERALL PLAN - STACKED FLAT - TYPE B - ROOF
Scale: 1/16" = 1'-0"



12 OVERALL PLAN - STACKED FLAT - TYPE B - LEVEL 2
Scale: 1/16" = 1'-0"



13 OVERALL PLAN - STACKED FLAT - TYPE B - LEVEL 3
Scale: 1/16" = 1'-0"



11 OVERALL PLAN - STACKED FLAT - TYPE B - LEVEL 1
Scale: 1/16" = 1'-0"

UNIT MIX - STACKED FLAT - TYPE B		
UNIT TYPE	DESCRIPTION	UNIT COUNT
SF	1 BR UNIT	11
SF	2 BR UNIT	15
SF	3 BR UNIT	3
TOTAL UNIT COUNT :		29

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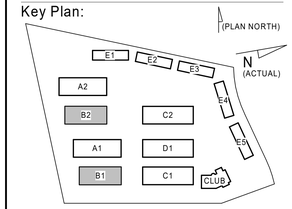
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Key Plan:



Project Name:
MILL CREEK
MARSHFIELD

COMMERCE WAY
MARSHFIELD, MA

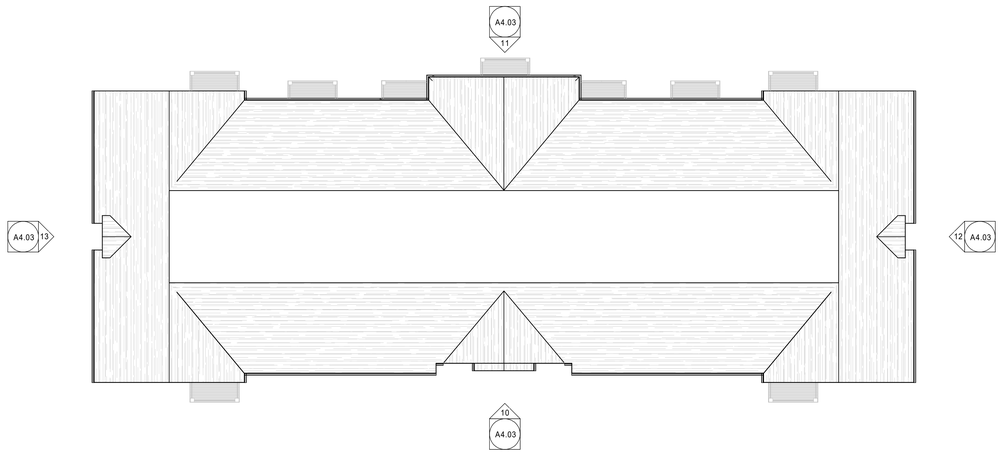
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STACKED FLAT - TYPE B

Project Number:
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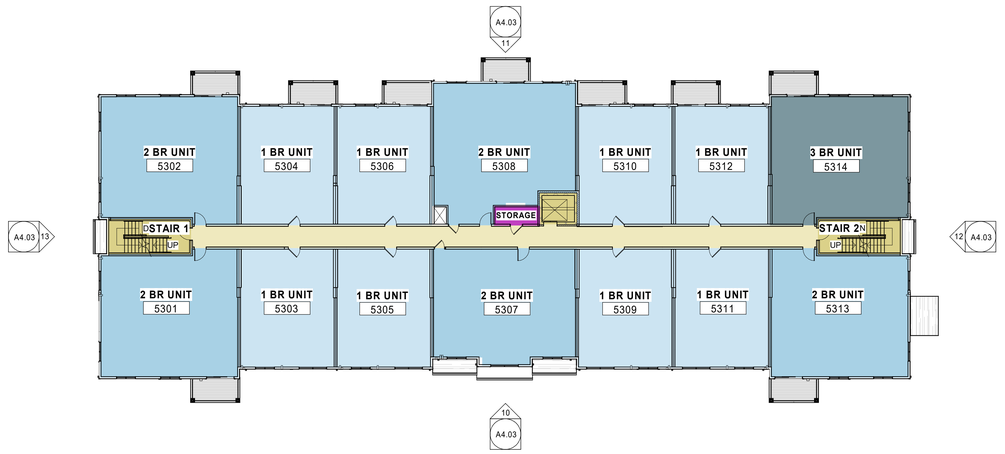
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Sheet Number:
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13 OVERALL PLAN - STACKED FLAT - TYPE C - ROOF
Scale: 1/16" = 1'-0"



11 OVERALL PLAN - STACKED FLAT - TYPE C - LEVEL 2
Scale: 1/16" = 1'-0"



12 OVERALL PLAN - STACKED FLAT - TYPE C - LEVEL 3
Scale: 1/16" = 1'-0"



10 OVERALL PLAN - STACKED FLAT - TYPE C - LEVEL 1
Scale: 1/16" = 1'-0"

UNIT MIX - STACKED FLAT - TYPE C

UNIT TYPE	DESCRIPTION	UNIT COUNT
SF	1 BR UNIT	20
SF	2 BR UNIT	14
SF	3 BR UNIT	3
TOTAL UNIT COUNT :		37

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Consultant:

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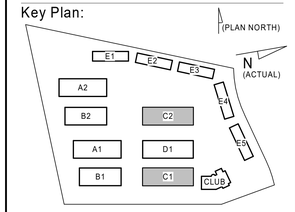
Architect of Record:

Drawn: SFM

Checked: AS

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

Key Plan:



Project Name:
MILL CREEK MARSHFIELD

COMMERCE WAY
MARSHFIELD, MA

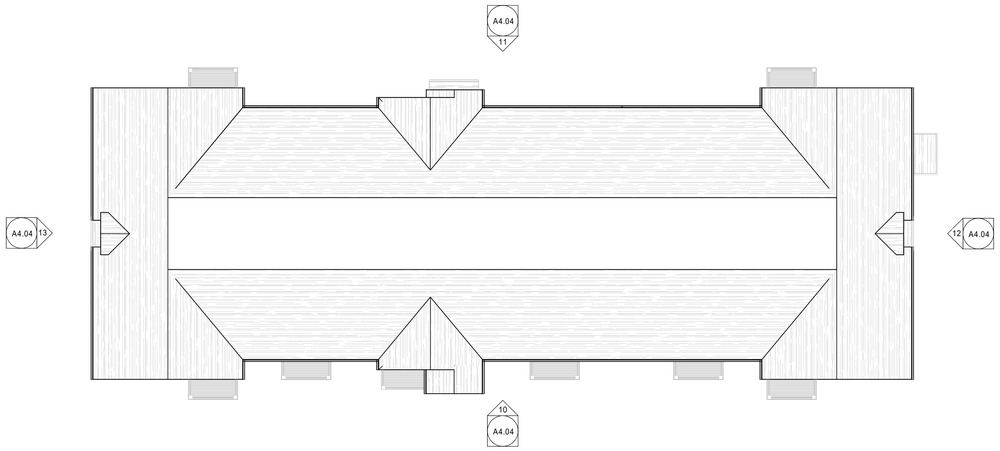
Sheet Name:
FLOOR PLANS - STACKED FLAT - TYPE C

Project Number:
21065

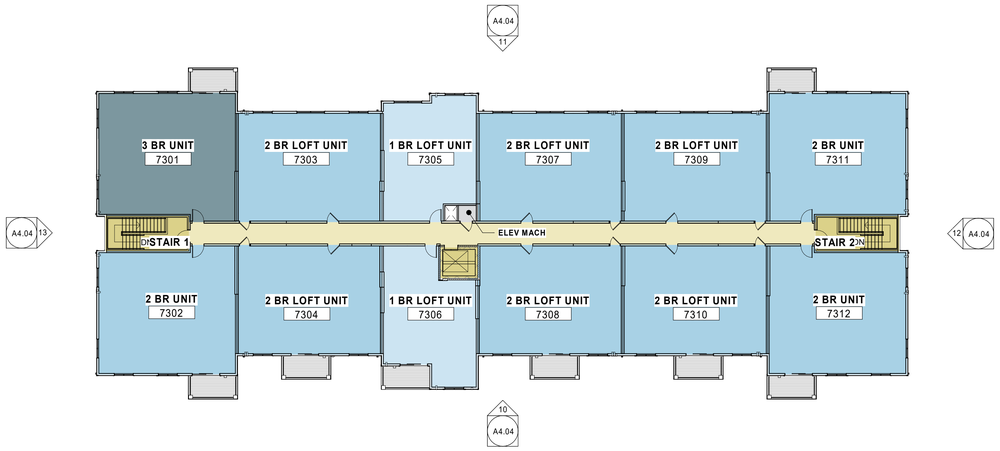
Issue Date:
07/12/22

Sheet Number:
A1.03

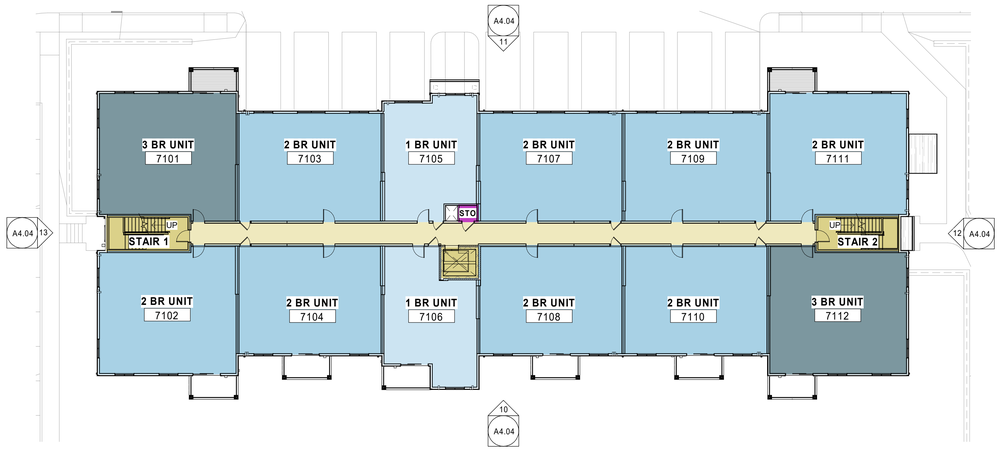
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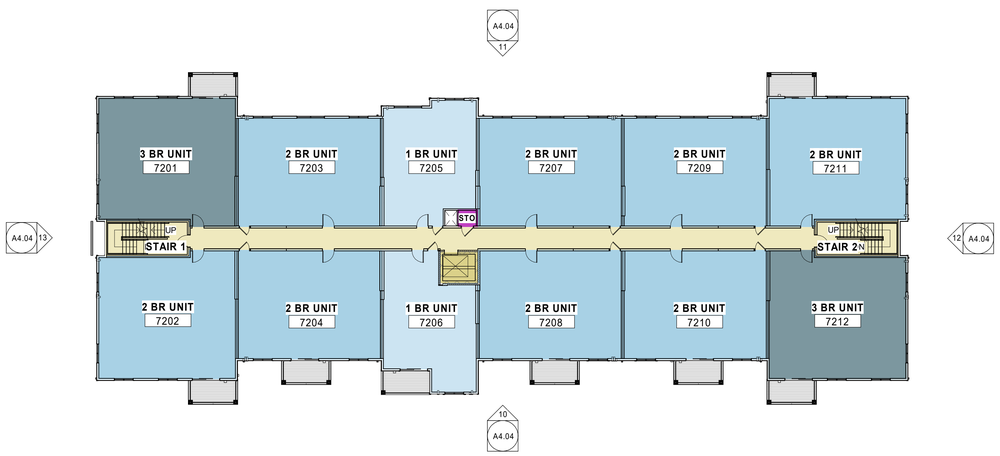
14 OVERALL PLAN - STACKED FLAT - TYPE D - ROOF
Scale: 1/16" = 1'-0"



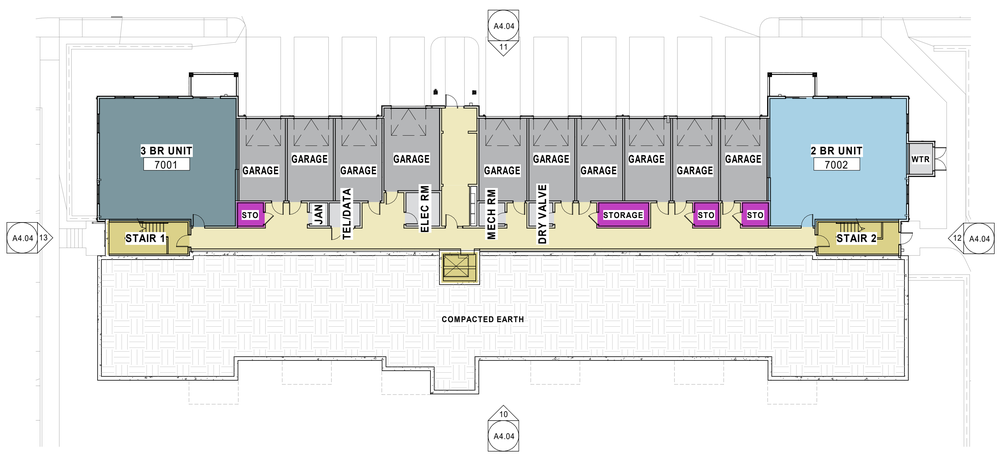
13 OVERALL PLAN - STACKED FLAT - TYPE D - LEVEL 3
Scale: 1/16" = 1'-0"



11 OVERALL PLAN - STACKED FLAT - TYPE D - LEVEL 1
Scale: 1/16" = 1'-0"



12 OVERALL PLAN - STACKED FLAT - TYPE D - LEVEL 2
Scale: 1/16" = 1'-0"



10 OVERALL PLAN - STACKED FLAT - TYPE D - BASEMENT
Scale: 1/16" = 1'-0"

UNIT MIX - STACKED FLAT - TYPE D

UNIT TYPE	DESCRIPTION	UNIT COUNT
SF	1 BR UNIT	6
SF	2 BR UNIT	26
SF	3 BR UNIT	6
TOTAL UNIT COUNT :		38

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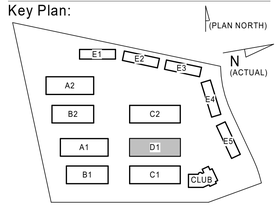
Consultant:

Revision:

Architect of Record:

Drawn: SFM
Checked: AS
Scale: 1/16" = 1'-0"

Key Plan:



Project Name:
MILL CREEK
MARSHFIELD

COMMERCE WAY
MARSHFIELD, MA

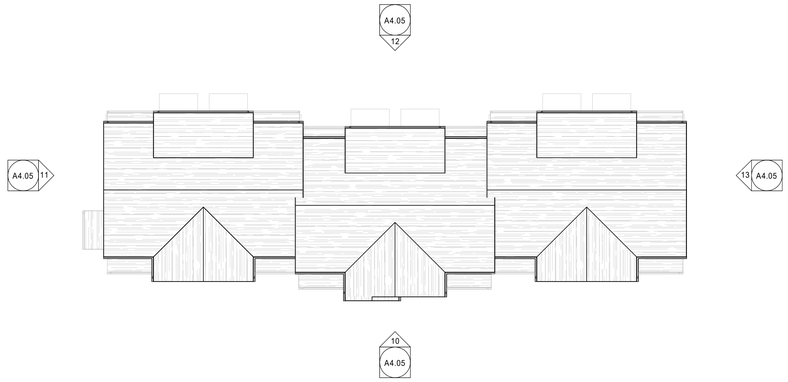
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FLOOR PLANS -
STACKED FLAT - TYPE D

Project Number:
21065

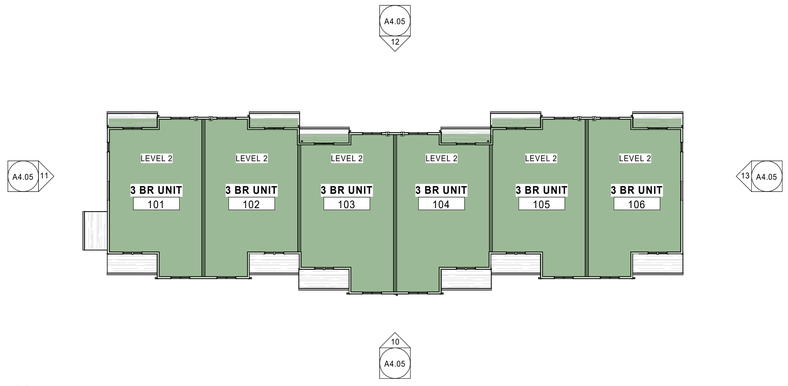
Issue Date:
07/12/22

Sheet Number:
A1.04

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13 OVERALL PLAN - TOWNHOME - TYPE E - ROOF
Scale: 1/16" = 1'-0"



12 OVERALL PLAN - TOWNHOME - TYPE E - LEVEL 2
Scale: 1/16" = 1'-0"



11 OVERALL PLAN - TOWNHOME - TYPE E - LEVEL 1
Scale: 1/16" = 1'-0"

UNIT MIX - TOWNHOME - TYPE E		
UNIT TYPE	DESCRIPTION	UNIT COUNT
TH	3 BR UNIT	6
TOTAL UNIT COUNT :		6

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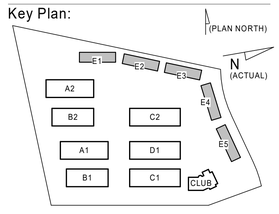
Architect of Record:

Drawn: SFM

Checked: AS

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

Key Plan:



Project Name:

MILL CREEK
MARSHFIELD

COMMERCE WAY
MARSHFIELD, MA

Sheet Name:

FLOOR PLANS -
TOWNHOME - TYPE E

Project Number:

21065

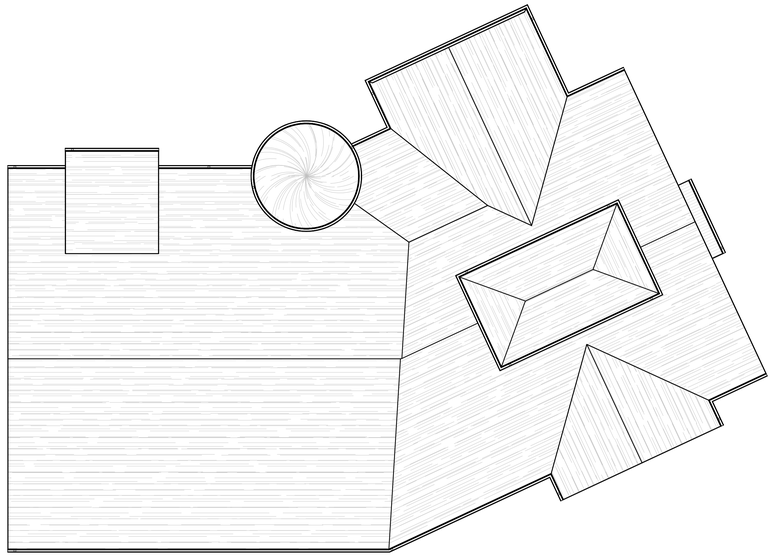
Issue Date:

07/12/22

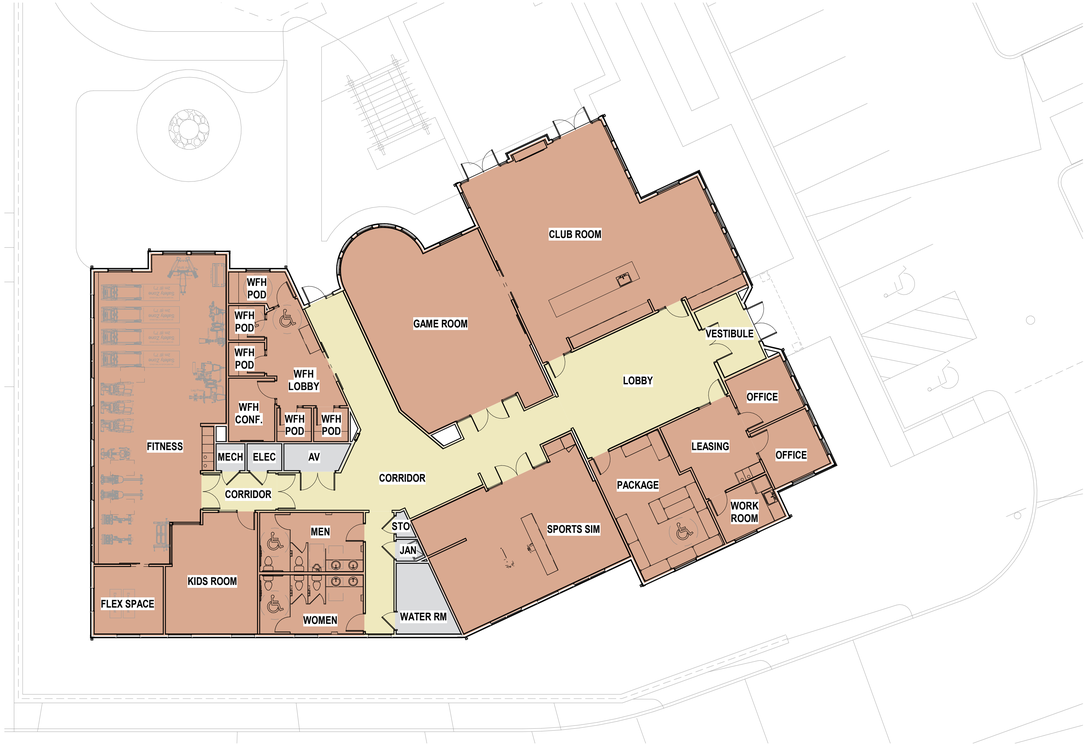
Sheet Number:

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11 OVERALL PLAN - CLUBHOUSE ROOF
Scale: 3/32" = 1'-0"



10 OVERALL PLAN - CLUBHOUSE
Scale: 3/32" = 1'-0"

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Revision:

Architect of Record:

Drawn: PP

Checked: AS

Scale: 3/32" = 1'-0"

Key Plan:

Project Name:
MILL CREEK
MARSHFIELD

COMMERCE WAY
MARSHFIELD, MA

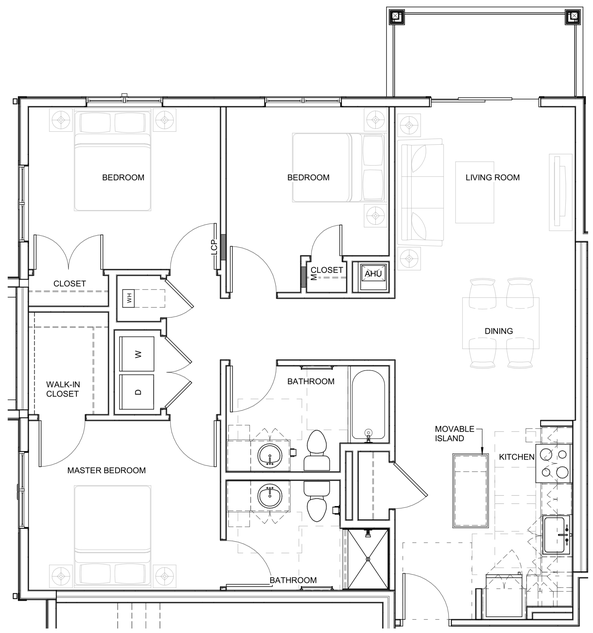
Sheet Name:
FLOOR PLANS - CLUBHOUSE - TYPE G

Project Number:
21065

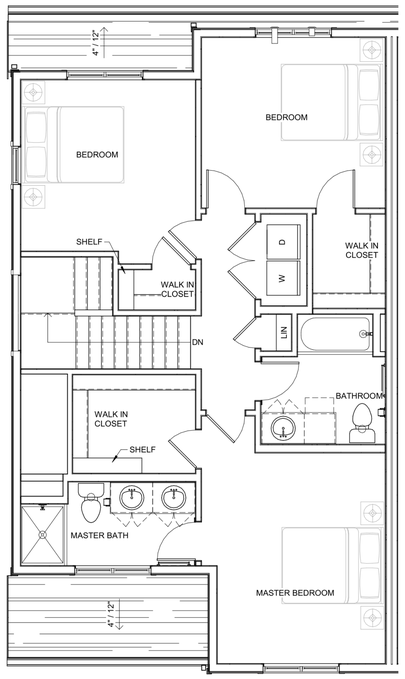
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07/12/22

Sheet Number:
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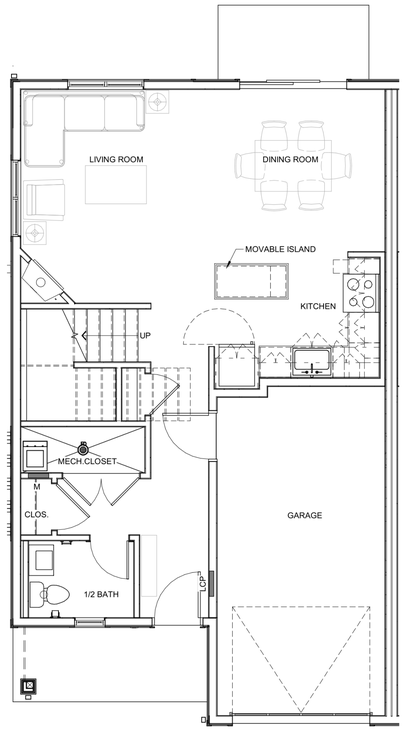
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C TYPICAL UNIT - TYPE C - 3 BR FLAT
Scale: 1/4" = 1'-0"

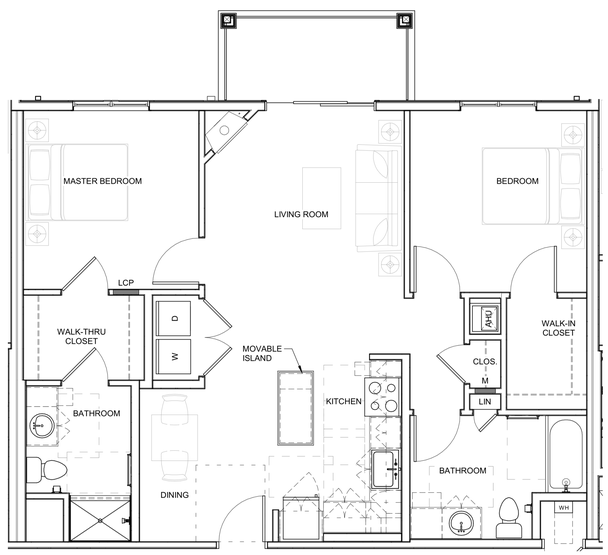


LEVEL 2

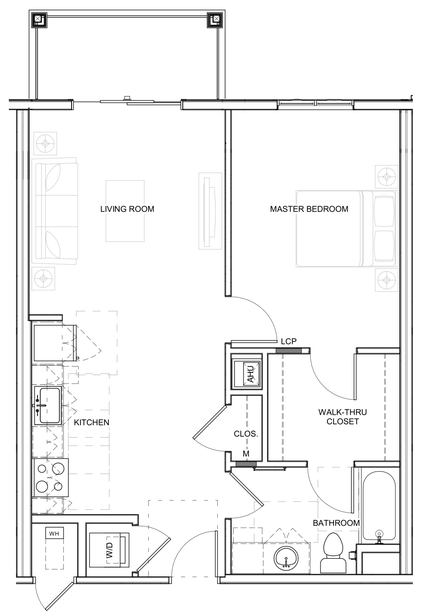


LEVEL 1

TH TYPICAL UNIT - TYPE TH - 3 BR TOWNHOME
Scale: 1/4" = 1'-0"



B TYPICAL UNIT - TYPE B - 2 BR FLAT
Scale: 1/4" = 1'-0"



A TYPICAL UNIT - TYPE A - 1 BR FLAT
Scale: 1/4" = 1'-0"

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Architect of Record:

Drawn: SFM

Checked: AS

Scale: 1/4" = 1'-0"

Key Plan:

Project Name:
MILL CREEK
MARSHFIELD

COMMERCE ROAD
MARSHFIELD, MA

Sheet Name:
TYPICAL UNIT TYPES

Project Number:
21065

Issue Date:
07/12/22

Sheet Number:
A2.50

2/1/2022 10:22:27 AM
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13 STACKED FLAT - TYPE A - WEST ELEVATION
Scale: 1/8" = 1'-0"



12 STACKED FLAT - TYPE A - EAST ELEVATION
Scale: 1/8" = 1'-0"



11 STACKED FLAT - TYPE A - NORTH ELEVATION
Scale: 1/8" = 1'-0"



10 STACKED FLAT - TYPE A - SOUTH ELEVATION
Scale: 1/8" = 1'-0"

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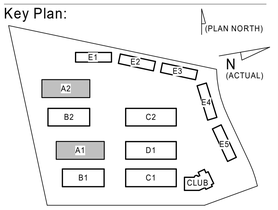
Architect of Record:

Drawn: SFM

Checked: AS

Scale: 1/8" = 1'-0"

Key Plan:



Project Name:

MILL CREEK
MARSHFIELD

COMMERCE WAY
MARSHFIELD, MA

Sheet Name:

EXT ELEVATIONS -
STACKED FLAT - TYPE A

Project Number:

21065

Issue Date:

07/12/22

Sheet Number:

A4.01

7/8/2022 5:28:31 PM
C:_Revit Local 2021\21065.00_R21_Modera Marshfield II_Main Model_PPauo.rvt



13 STACKED FLAT - TYPE B - WEST ELEVATION
Scale: 1/8" = 1'-0"



12 STACKED FLAT - TYPE B - EAST ELEVATION
Scale: 1/8" = 1'-0"



11 STACKED FLAT - TYPE B - NORTH ELEVATION
Scale: 1/8" = 1'-0"



10 STACKED FLAT - TYPE B - SOUTH ELEVATION (STREET SIDE)
Scale: 1/8" = 1'-0"

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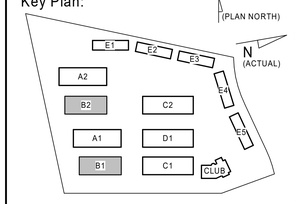
Architect of Record:

Drawn: SFM

Checked: AS

Scale: 1/8" = 1'-0"

Key Plan:



Project Name:
MILL CREEK
MARSHFIELD

COMMERCE WAY
MARSHFIELD, MA

Sheet Name:
EXT ELEVATIONS -
STACKED FLAT - TYPE B

Project Number:
21065

Issue Date:
07/12/22

Sheet Number:
A4.02

7/8/2022 4:38:19 PM
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13 STACKED FLAT - TYPE C - WEST ELEVATION
Scale: 1/8" = 1'-0"



12 STACKED FLAT - TYPE C - EAST ELEVATION
Scale: 1/8" = 1'-0"



11 STACKED FLAT - TYPE C - NORTH ELEVATION
Scale: 1/8" = 1'-0"



10 STACKED FLAT - TYPE C - SOUTH ELEVATION
Scale: 1/8" = 1'-0"

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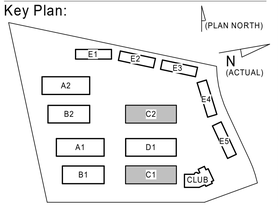
Architect of Record:

Drawn: SFM

Checked: AS

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Key Plan:



Project Name:
MILL CREEK
MARSHFIELD

COMMERCE WAY
MARSHFIELD, MA

Sheet Name:
EXT ELEVATIONS -
STACKED FLAT - TYPE C

Project Number:
21065

Issue Date:
07/12/22

Sheet Number:
A4.03

7/8/2022 5:34:16 PM
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13 STACKED FLAT - TYPE D - WEST ELEVATION
Scale: 1/8" = 1'-0"



12 STACKED FLAT - TYPE D - EAST ELEVATION
Scale: 1/8" = 1'-0"



11 STACKED FLAT - TYPE D - NORTH ELEVATION (STREET SIDE)
Scale: 1/8" = 1'-0"



10 STACKED FLAT - TYPE D - SOUTH ELEVATION
Scale: 1/8" = 1'-0"

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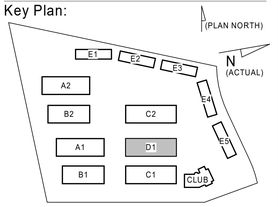
Architect of Record:

Drawn: SFM

Checked: AS

Scale: 1/8" = 1'-0"

Key Plan:



Project Name:
MILL CREEK
MARSHFIELD

COMMERCE WAY
MARSHFIELD, MA

Sheet Name:
EXT ELEVATIONS - STACKED FLAT - TYPE D

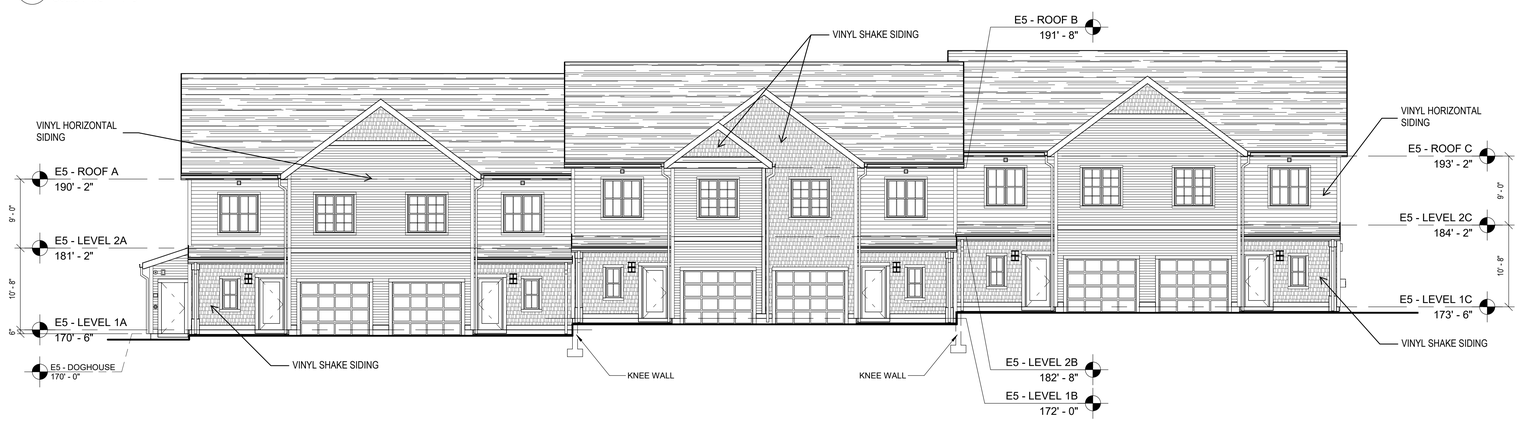
Project Number:
21065

Issue Date:
07/12/22

Sheet Number:
A4.04



21 TOWNHOME - TYPE E5 (BLDGS E2, E3, E4 SIMILAR, STEPPING VARIES) - NORTH ELEVATION (REAR SIDE)
Scale : 1/8" = 1'-0"



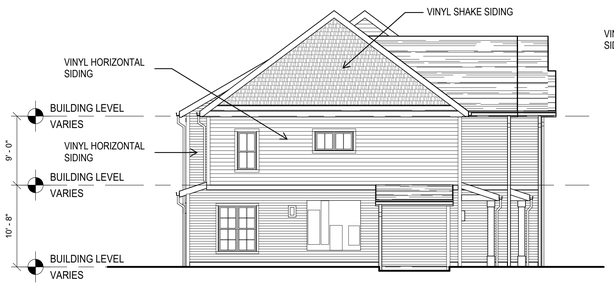
20 TOWNHOME - TYPE E5 (BLDGS E2, E3, E4 SIMILAR, STEPPING VARIES) - SOUTH ELEVATION (STREET SIDE)
Scale : 1/8" = 1'-0"



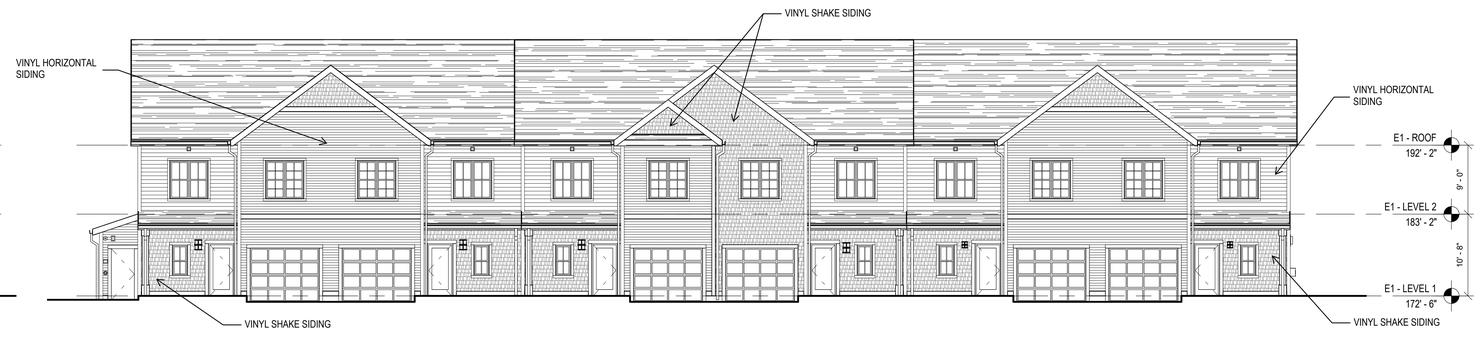
31 TOWNHOME - TYPICAL EAST ELEVATION
Scale: 1/8" = 1'-0"



11 TOWNHOME - TYPE E1 - NORTH ELEVATION (BACKSIDE)
Scale: 1/8" = 1'-0"



30 TOWNHOME - TYPICAL WEST ELEVATION
Scale: 1/8" = 1'-0"



10 TOWNHOME - TYPE E1 - SOUTH ELEVATION (STREET SIDE)
Scale: 1/8" = 1'-0"

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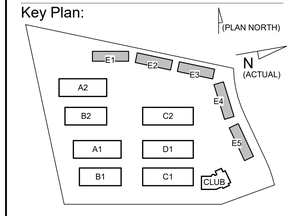
Architect of Record:

Drawn: SFM

Checked: AS

Scale: 1/8" = 1'-0"

Key Plan:



Project Name:
MILL CREEK
MARSHFIELD

COMMERCE WAY
MARSHFIELD, MA

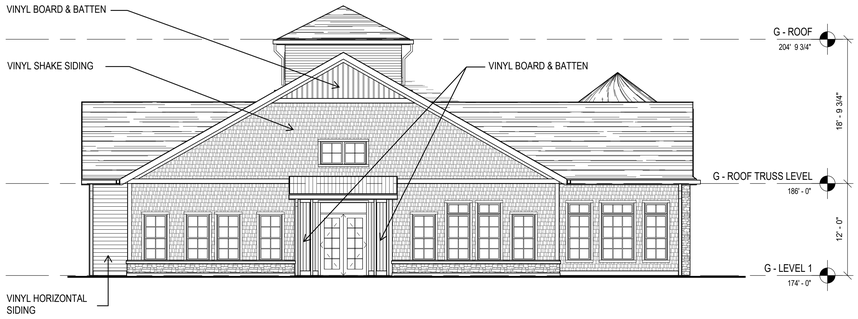
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EXT ELEVATIONS - TOWNHOME - TYPE E

Project Number:
21065

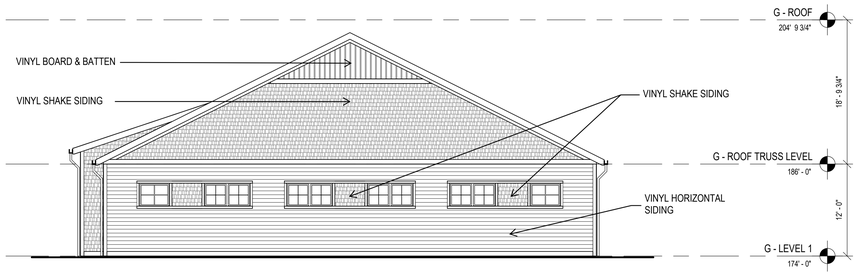
Issue Date:
07/12/22

Sheet Number:
A4.05

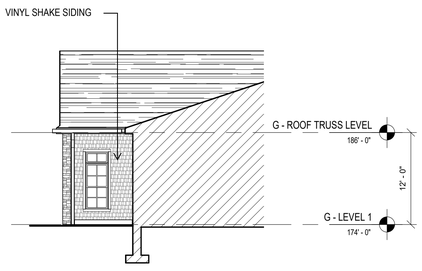
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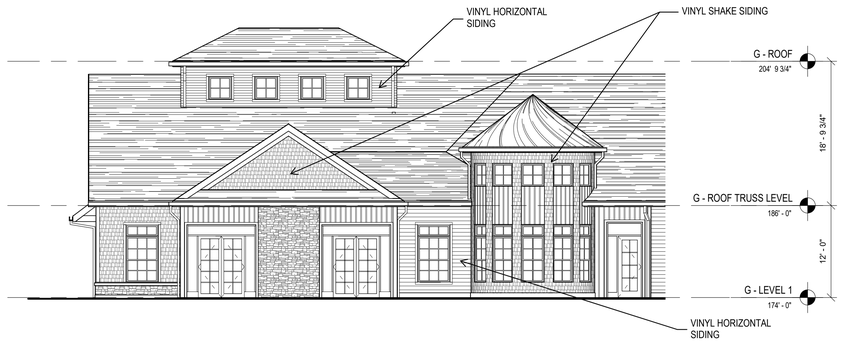
70 EXTERIOR BUILDING ELEVATION - CLUBHOUSE - NORTH ELEVATION
Scale : 1/8" = 1'-0"



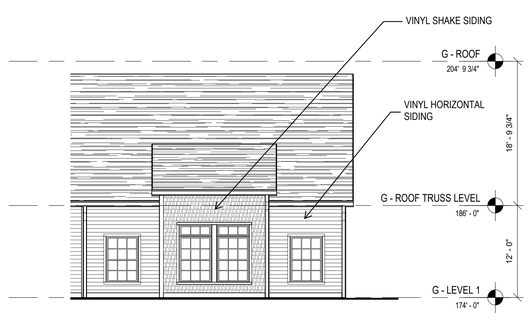
60 EXTERIOR BUILDING ELEVATION - CLUBHOUSE - SOUTH ELEVATION A
Scale : 1/8" = 1'-0"



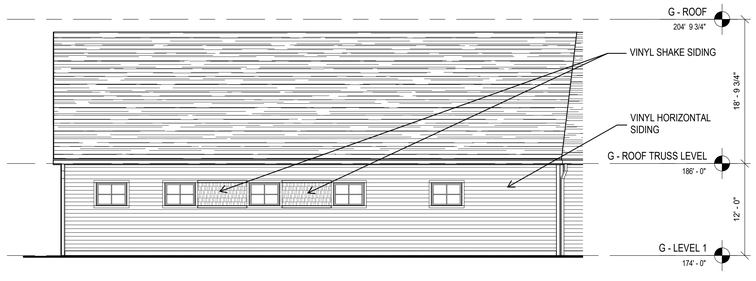
50 EXTERIOR BUILDING ELEVATION - CLUBHOUSE - SOUTH ELEVATION B
Scale : 1/8" = 1'-0"



40 EXTERIOR BUILDING ELEVATION - CLUBHOUSE - WEST ELEVATION A
Scale : 1/8" = 1'-0"



30 EXTERIOR BUILDING ELEVATION - CLUBHOUSE - WEST ELEVATION B
Scale : 1/8" = 1'-0"



20 EXTERIOR BUILDING ELEVATION - CLUBHOUSE - EAST ELEVATION A
Scale : 1/8" = 1'-0"



10 EXTERIOR BUILDING ELEVATION - CLUBHOUSE - EAST ELEVATION B
Scale : 1/8" = 1'-0"

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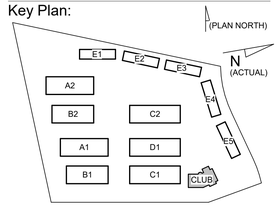
Architect of Record:

Drawn: PP

Checked: AS

Scale: 1/8" = 1'-0"

Key Plan:



Project Name:

MILL CREEK MARSHFIELD

COMMERCE WAY
MARSHFIELD, MA

Sheet Name:

EXT ELEVATIONS - CLUBHOUSE -TYPE G

Project Number:

21065

Issue Date:

07/11/22

Sheet Number:

A4.06

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Revision:

Architect of Record:

Drawn: DH

Checked: AS

Scale: 1" = 20'-0"

Key Plan:

Project Name:

MILL CREEK
MARSHFIELD

COMMERCE ROAD
MARSHFIELD, MA

Sheet Name:

SITE SECTION

Project Number:

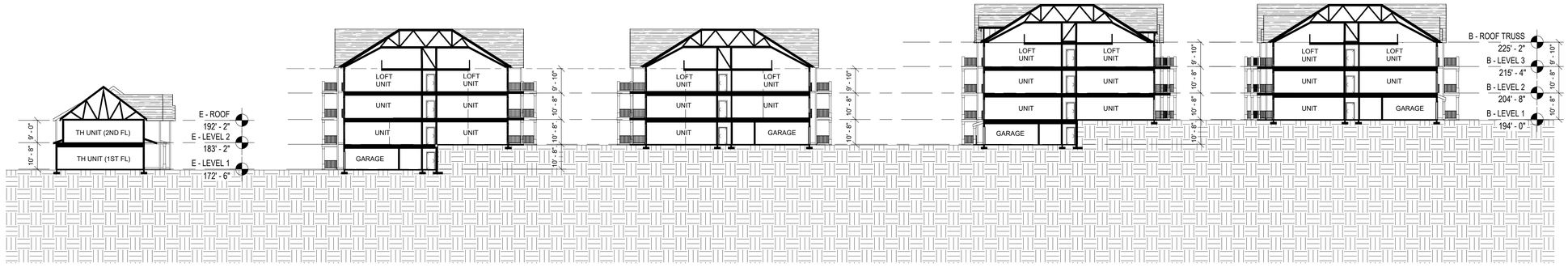
21065

Issue Date:

07/12/22

Sheet Number:

A5.01



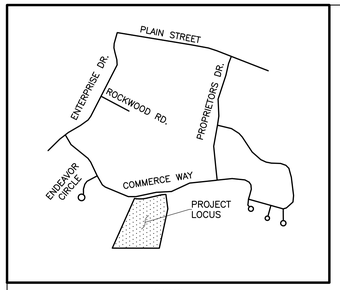
TOWNHOUSE BUILDING E | **STACKED FLAT BUILDING A (STEPPED)** | **STACKED FLAT BUILDING B** | **STACKED FLAT BUILDING A (STEPPED)** | **STACKED FLAT BUILDING B**

10 SITE SECTION
Scale: 1" = 20'-0"

2/1/2022 10:22:43 AM
C:_Revit Local 20211021065.00_R21_Modera Marshfield II_dharell@architecturalteam.com.rvt

Attachment C

Civil Plans



LOCUS
1" = 1000'



LEGEND

12"D	STORM DRAIN
8"S	SEWER
4"W	DOMESTIC WATER
6"F	FIRE PROTECTION
	HYDRANT
	CATCH BASIN
	DRAIN MANHOLE
	SEWER MANHOLE
	FLOW ARROW
184	PROP. CONTOUR
190.0	SPOT GRADE
TW/BW	TOP OF WALL/BOTTOM OF WALL
TC/BC	TOP OF CURB/BOTTOM OF CURB
CC	CEMENT CONCRETE CURB
VGC	VERTICAL GRANITE CURB
BB	BITUMINOUS BERM
WWTP	WASTEWATER TREATMENT PLANT
EVE	ELECTRIC VEHICLE CHARGING EQUIPPED
EVR	ELECTRIC VEHICLE CHARGING READY
	RETAINING WALL
	ACCESSIBLE PATH
	CROSSWALK

LOT 6R

552,620± S.F.
12.6864± Ac.

ZONING SETBACKS (I-1 & R-1)

FRONT: 40'
SIDE: 20'
REAR: 40'

PARKING SIZE

9'x18' - REGULAR
8'x18' - COMPACT

NOTES:

1. ALL SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)-LATEST EDITION.

50 0 25 50 100
HORIZONTAL GRAPHIC SCALE IN FEET

tat

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Consultant:

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WWW.HANCOCKASSOCIATES.COM

Revision:

Architect of Record:

Drawn: EJR
Checked: AD/FAK
Scale: 1" = 50'
Key Plan:

Project Name:
MILL CREEK
MARSHFIELD

COMMERCE WAY
MARSHFIELD, MA

Sheet Name:
SITE LAYOUT PLAN

Project Number:
21065

Issue Date:
07/12/22

Sheet Number:
C-1

File Name: j:\4arc-docdc01\civil-2\Civil 3D Projects\24693 - Mill Creek - Marshfield Pro\Eng\24693sp7.dwg Saved: 7/14/2022 4:34 PM Plotted: Jul 14, 2022 4:40:00pm
Tab: C-1 Plot Style: 1050C.ctb Plotted By: Anthony Donato



LEGEND

Symbol	Description
12"D	STORM DRAIN
8"S	SEWER
4"W	DOMESTIC WATER
6"F	FIRE PROTECTION
	HYDRANT
	CATCH BASIN
	DRAIN MANHOLE
	SEWER MANHOLE
	FLOW ARROW
184	PROP. CONTOUR
190.0	SPOT GRADE
TW/BW	TOP OF WALL/BOTTOM OF WALL
TC/BC	TOP OF CURB/BOTTOM OF CURB
CC	CEMENT CONCRETE CURB
VGC	VERTICAL GRANITE CURB
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EVR	ELECTRIC VEHICLE CHARGING READY
	RETAINING WALL
	ACCESSIBLE PATH
	CROSSWALK

50 0 25 50 100
HORIZONTAL GRAPHIC SCALE IN FEET

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Revision:

Architect of Record:

Drawn: EJR

Checked: AD/FAK

Scale: 1" = 50'

Key Plan:

Project Name:

MILL CREEK MARSHFIELD

COMMERCE WAY
MARSHFIELD, MA

Sheet Name:

SITE UTILITY PLAN

Project Number:

21065

Issue Date:

07/12/22

Sheet Number:

C-2

CONNECT TO MASTER PLANNED DRAINAGE SYSTEM/ DETENTION POND FOR ENTERPRISE PARK SUBDIVISION

COMMERCE WAY
(PRIVATE - 60' WIDE)

LOT 6R
552,620± S.F.
12.6864± Ac

PROP. STORM DRAIN (TYP.)

TOWNHOUSE TYPE E4 FFE:167.0 FFE:167.5 FFE:168.0

TOWNHOUSE TYPE E5 FFE:170.5 FFE:172.0 FFE:173.5

TOWNHOUSE TYPE E3 FFE:167.0 FFE:168.0 FFE:169.0

TOWNHOUSE TYPE E2 FFE:170.0 FFE:171.5 FFE:172.5

TOWNHOUSE TYPE E1 FFE:172.5 FFE:172.5 FFE:172.5

BUILDING TYPE C2 FFE:178.0 FFE:178.0

BUILDING TYPE D1 FFE:178.0 FFE:188.67

BUILDING TYPE C1 FFE:190.0 FFE:190.0

BUILDING TYPE A2 FFE:172.5 FFE:183.17

BUILDING TYPE B2 FFE:183.5 FFE:183.5

BUILDING TYPE A1 FFE:183.5 FFE:194.17

BUILDING TYPE B1 FFE:194.0 FFE:194.0

CLUBHOUSE FFE:174.0

POOL

POOL HOUSE

TOT LOT

DOG RUN

MAINT. BLDG FFE:173.25

WWTP

RECHARGE

LEGEND

12"D	STORM DRAIN
8"S	SEWER
4"W	DOMESTIC WATER
6"F	FIRE PROTECTION
	HYDRANT
	CATCH BASIN
	DRAIN MANHOLE
	SEWER MANHOLE
	FLOW ARROW
184	PROP. CONTOUR
190.0	SPOT GRADE
TW/BW	TOP OF WALL/BOTTOM OF WALL
TC/BC	TOP OF CURB/BOTTOM OF CURB
CC	CEMENT CONCRETE CURB
VGC	VERTICAL GRANITE CURB
BB	BITUMINOUS BERM
WWTP	WASTEWATER TREATMENT PLANT
EVE	ELECTRIC VEHICLE CHARGING EQUIPPED
EVR	ELECTRIC VEHICLE CHARGING READY
	RETAINING WALL
	ACCESSIBLE PATH
	CROSSWALK

50 0 25 50 100
HORIZONTAL GRAPHIC SCALE IN FEET

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Revision:

Architect of Record:

Drawn: EJR

Checked: AD/FAK

Scale: 1" = 50'

Key Plan:

Project Name:
MILL CREEK
MARSHFIELD

COMMERCE WAY
MARSHFIELD, MA

Sheet Name:
SITE GRADING & DRAINAGE PLAN

Project Number:
21065

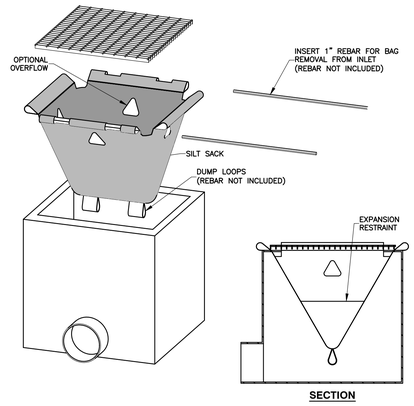
Issue Date:
07/12/22

Sheet Number:
C-3

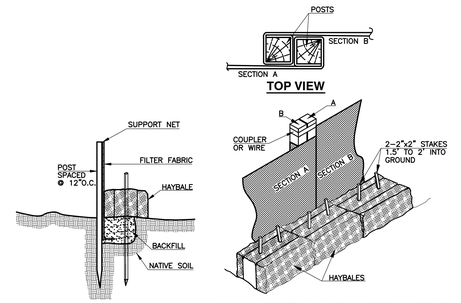
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Tab: C-3 Plot Style: 1050C.ctb Plotted By: Anthony Donato

EROSION & SEDIMENT CONTROL NOTES

1. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE AS SET FORTH IN THE MOST CURRENT STATE SEDIMENT AND EROSION CONTROL MANUAL.
2. THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE LEFT IN AN UNTREATED OR UNVEGETATED CONDITION FOR A MINIMUM TIME. AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 15 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF THE SOIL. IF THE DISTURBANCE IS WITHIN 100 FEET OF A STREAM OR POND, THE AREA SHALL BE STABILIZED WITHIN 7 DAYS OR PRIOR TO ANY STORM EVENT (THIS WOULD INCLUDE WETLANDS).
3. SEDIMENT BARRIERS (SILT FENCE, STRAW BARRIERS, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15% AFTER OCTOBER 1ST THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.
4. INSTALL SILTATION BARRIER AT TOE OF SLOPE TO FILTER SILT FROM RUNOFF. SEE SILTATION BARRIER DETAILS FOR PROPER INSTALLATION. SILTATION BARRIER WILL REMAIN IN PLACE PER NOTE #5.
5. ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSITION. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE STABILIZED BY TURF.
6. NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN TWO TO ONE (2:1).
7. TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINAL GRADED SHALL BE COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST TO PROTECT FROM SPRING RUNOFF PROBLEMS.
8. DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO THE SITE AND REGRADED ONTO OPEN AREAS.

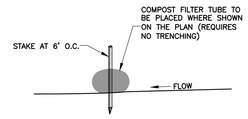


SILK SACK DETAIL
(NOT TO SCALE)

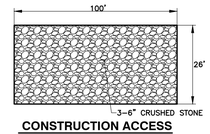


JOINING SECTIONS OF SILTATION FENCE

HAYBALES & SILTATION FENCE
(NOT TO SCALE)



COMPOST FILTER TUBE
(NOT TO SCALE)



CONSTRUCTION ACCESS CRUSHED STONE APRON
(NOT TO SCALE)



LEGEND

12"D	STORM DRAIN
8"S	SEWER
4"W	DOMESTIC WATER
6"F	FIRE PROTECTION
	HYDRANT
	CATCH BASIN
	DRAIN MANHOLE
	SEWER MANHOLE
	FLOW ARROW
184	PROP. CONTOUR
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TW/BW	TOP OF WALL/BOTTOM OF WALL
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EVR	ELECTRIC VEHICLE CHARGING READY
	RETAINING WALL
	ACCESSIBLE PATH
	CROSSWALK

50 0 25 50 100
HORIZONTAL GRAPHIC SCALE IN FEET

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Revision:

Architect of Record:

Drawn: EJR

Checked: AD/FAK

Scale: 1" = 50'

Key Plan:

Project Name:
MILL CREEK
MARSHFIELD

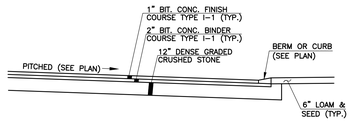
COMMERCE WAY
MARSHFIELD, MA

Sheet Name:
EROSION & SEDIMENTATION CONTROL PLAN

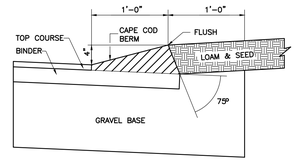
Project Number:
21065

Issue Date:
7/12/22

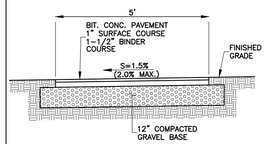
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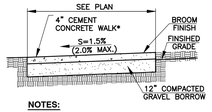
FULL DEPTH PARKING PAVEMENT SECTION
(NOT TO SCALE)



CAPE COD BERM
(NOT TO SCALE)



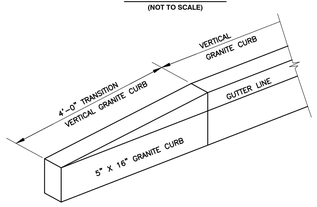
BITUMINOUS CONCRETE WALK
(NOT TO SCALE)



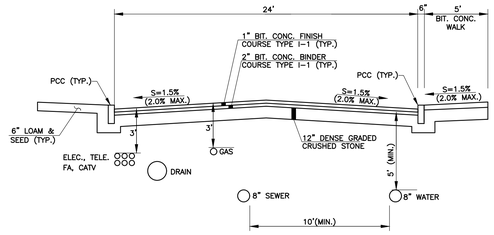
NOTES:
1.) CONTROL JOINTS EVERY 5' MIN.
2.) PREMOLDED JOINT FILLER EVERY 30'
3.) CROSS SLOPE NOT TO EXCEED 2%

*6" CEMENT CONCRETE WHERE VEHICLES DRIVE OVER WALK

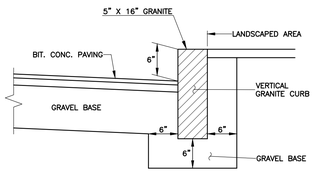
CEMENT CONCRETE SIDEWALK
(NOT TO SCALE)



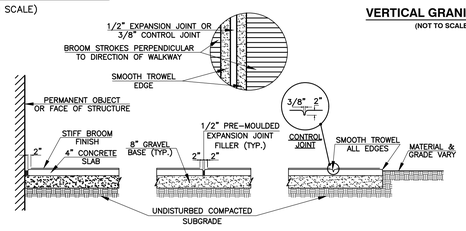
CURB TRANSITION DETAIL
(NOT TO SCALE)



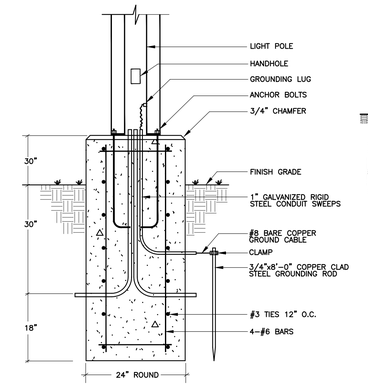
TYPICAL ROADWAY SECTION
(NOT TO SCALE)



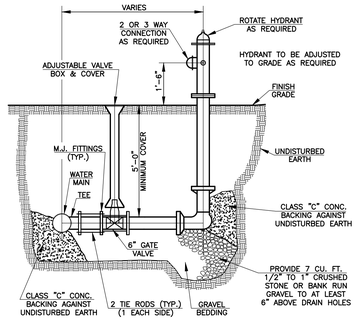
VERTICAL GRANITE CURB
(NOT TO SCALE)



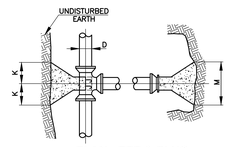
CONCRETE PAVEMENT DETAIL
(NOT TO SCALE)



LIGHT FIXTURE POLE BASE DETAIL AT PARKING
(NOT TO SCALE)

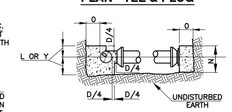


TYPICAL HYDRANT & VALVE
NOT TO SCALE



SIZE OF BRANCH	J	K	L	M	N	O
4" THRU 8"	10"	10"	1'-0"	2'-0"	1'-6"	10"
10" THRU 16"	1'-0"	1'-6"	1'-8"	3'-0"	2'-10"	1'-6"
24"	1'-4"	2'-0"	2'-6"	5'-0"	3'-6"	1'-8"

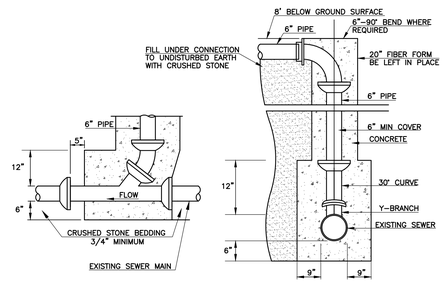
TEES & PLUGS



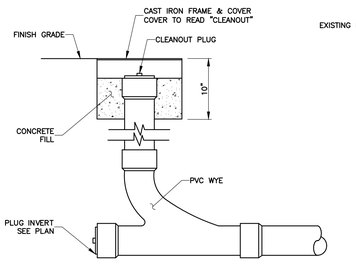
	90° & 45° BENDS			22-1/2 & 11-1/4		
D	4" TO 8"	10" TO 16"	24"	4" TO 8"	10" TO 16"	24"
X	1'-8"	3'-4"	5'-6"	1'-4"	2'-0"	3'-6"
Y	1'-2"	1'-8"	2'-4"	1'-0"	1'-2"	2'-4"

BENDS

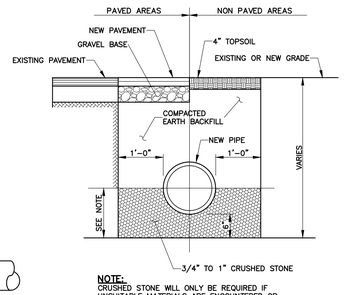
THRUST BLOCK DETAILS
(NOT TO SCALE)



TYPICAL SEWER CHIMNEY DETAIL
NOT TO SCALE

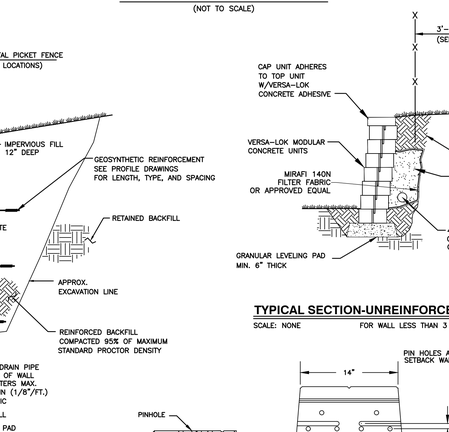


DRAIN CLEANOUT
(NOT TO SCALE)



NOTE:
CRUSHED STONE WILL ONLY BE REQUIRED IF UNSUITABLE MATERIALS ARE ENCOUNTERED OR IF PIPE IS BEING LAID WITHIN GROUND WATER TABLE. OTHERWISE, PIPE MAY BE PLACED ON BOTTOM OF TRENCH AND EARTH BACKFILLED.

EXCAVATION & BACKFILL DETAIL FOR DRAIN AND WATER PIPES
(NOT TO SCALE)



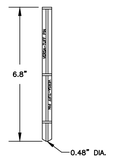
GENERAL NOTES

1. STRIP VEGETATION AND ORGANIC SOIL FROM WALL AND GEOSYNTHETIC ALIGNMENT.
2. BENCH CUT ALL EXCAVATED SLOPES.
3. DO NOT OVER EXCAVATE UNLESS DIRECTED BY SITE SOIL ENGINEER TO REMOVE UNSUITABLE SOIL.
4. SITE SOILS ENGINEER SHALL VERIFY FOUNDATION SOILS AS BEING COMPETENT PER THE DESIGN STANDARDS AND PARAMETERS.
5. LEVELING PAD SHALL CONSIST OF COMPACTED COARSE SAND OR CRUSHED GRAVEL, 6" THICK MIN.
6. CONTRACTOR MAY OPT FOR A LEAN CONCRETE PAD. CONCRETE PAD SHALL BE UNREINFORCED, 3" THICK MAXIMUM.
7. MINIMUM EMBEDMENT OF WALL BELOW FINISH GRADE SHALL BE 6" FOR WALL HEIGHTS UNDER 4 FT. AND 12" FOR WALLS OVER 4 FT. UNLESS SHOWN DIFFERENTLY.
8. FOR UNITS TO BE EMBEDDED, COMPACT FILL IN FRONT OF UNITS AT THE SAME TIME FILL BEHIND UNITS IS COMPACTED.
9. DRAINAGE AGGREGATE SHALL BE INSTALLED DIRECTLY BEHIND THE WALL WITHIN 12" OF THE TOP OF THE WALL. DRAINAGE AGGREGATE SHALL NOT EXTEND BELOW FINAL GRADE IN FRONT OF WALL.
10. COMPACTION SHALL BE TO 95% OF MAXIMUM STANDARD PROCTOR DENSITY.(ASTM D-698)
11. COMPACTION TESTS SHALL BE TAKEN AS THE WALL IS INSTALLED. THE MINIMUM NUMBER OF TESTS SHALL BE DETERMINED BY THE SITE SOILS ENGINEER.
12. COMPACTION WITHIN 3 FT. OF WALL SHALL BE LIMITED TO HAND OPERATED EQUIPMENT.
13. SEE ELEVATION DRAWINGS FOR GEOSYNTHETIC TYPE, LENGTH AND LOCATION REQUIRED.
14. GEOSYNTHETIC SHALL BE PLACED WITH STRONGEST DIRECTION PERPENDICULAR TO WALL. FOLLOW GEOSYNTHETIC MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS.
15. CONTRACTOR SHALL DIRECT SURFACE RUNOFF TO AVOID DAMAGING WALL WHILE UNDER CONSTRUCTION.
16. ANY SURFACE DRAINAGE FEATURES, FINISH GRADING, PAVEMENT, OR TURF SHALL BE INSTALLED IMMEDIATELY AFTER WALL IS COMPLETED.
17. FOLLOW APPLICABLE PROVISIONS OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS.

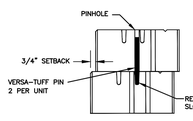
IF CONDITIONS ARE DIFFERENT THAN THOSE STATED IN THESE DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR MUST CONTACT ENGINEER PRIOR TO PROCEEDING WITH THE CONSTRUCTION OF THE WALL.

TYPICAL SECTION-REINFORCED RETAINING WALL
MODULAR CONCRETE UNIT
SCALE: NONE

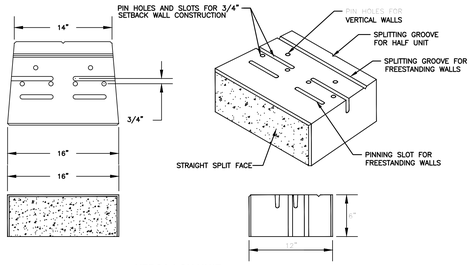
TYPICAL SECTION-UNREINFORCED RETAINING WALL
SCALE: NONE FOR WALL LESS THAN 3 FT. HIGH



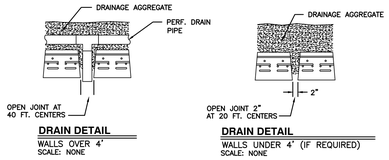
VERSA-TUFF PIN
PIN DIMENSIONS
SCALE: NONE



PINNING DETAIL
CROSS SECTION
SCALE:NONE



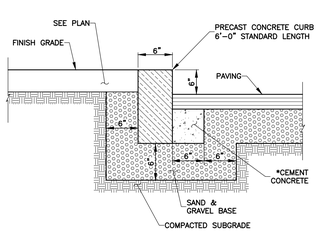
VERSA-LOK UNIT
UNIT DIMENSIONS
SCALE: NONE



DRAIN DETAIL
WALLS OVER 4'
SCALE: NONE

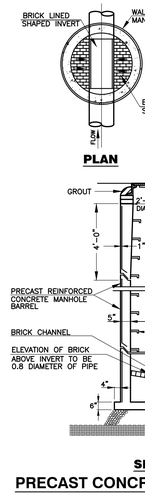
DRAIN DETAIL
WALLS UNDER 4' (IF REQUIRED)
SCALE: NONE

VERSA-LOK RETAINING WALL DETAILS
(NOT TO SCALE)



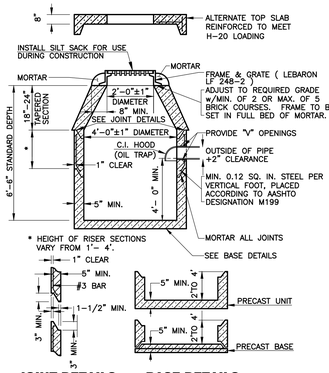
*PROCEDURE DESCRIBED HEREIN IS APPLICABLE ONLY IF CURB IS TO BE SET AFTER BASE AND/OR BINDER COURSES ARE IN PLACE. OTHERWISE CEMENT CONCRETE WILL BE ELIMINATED AND GRAVEL BROUGHT UP TO BOTTOM OF BASE COURSE. FOR DESCRIPTION, MATERIALS AND CONSTRUCTION METHODS, SEE SPECIFICATIONS.

PRECAST CONCRETE CURB SETTING
(NOT TO SCALE)

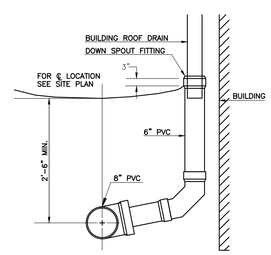


GENERAL NOTES:
1. REINFORCED STEEL CONFORMS TO LATEST ASTM SPEC. 0.12 SQ.IN./ LINEAR FT. AND 0.12 SQ.IN. (BOTH WAYS) BASE BOTTOM.
2. CONCRETE COMPRESSIVE STRENGTH-4000 PSI MIN.
3. MANHOLE DESIGN SPECS CONFORM TO LATEST ASTM C-478 SPEC FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS."

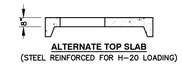
PRECAST CONCRETE SEWER MANHOLE
NOT TO SCALE

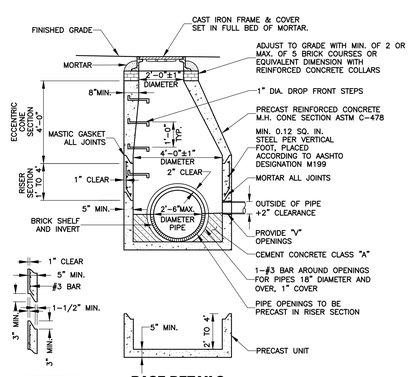


PRECAST CONCRETE CATCH BASIN
(NOT TO SCALE)



ROOF DRAIN CONNECTION DETAIL
(NOT TO SCALE)





DRAIN MANHOLE
(NOT TO SCALE)

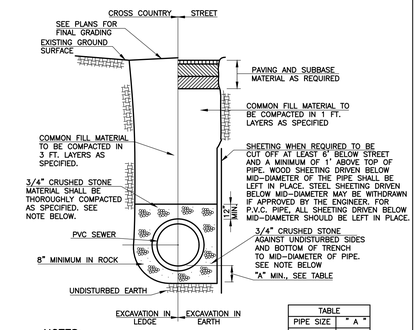


TABLE	
PIPE SIZE	" A "
8" – 15"	8"
18" – 24"	10"
30" – 36"	12"

NOTES:
1.) FOR P.V.C. PIPE, SCREENED GRAVEL TO EXTEND 12" ABOVE TOP OF PIPE.
2.) PROVIDE AT LEAST ONE DAM IN GRAVEL BEDDING BETWEEN EACH MANHOLE WHERE DIRECTED.
3.) TRENCHES LOCATED ON THE ROAD SHOULDER SHALL BE TREATED THE SAME AS STREET EXCEPT FOR PAVING.

TYPICAL TRENCH DETAIL FOR SEWER
(NOT TO SCALE)

tat

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Revision:

Architect of Record:

Drawn: EJR
Checked: AD/FAK
Scale: As noted
Key Plan:

Project Name:
MILL CREEK MARSHFIELD

COMMERCE WAY
MARSHFIELD, MA

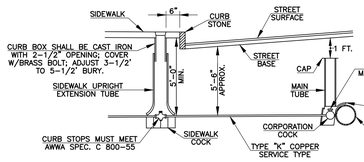
Sheet Name:
DETAILS

Project Number:
21065

Issue Date:
07/12/22

Sheet Number:
DETAIL -1

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Tab: DETAIL-1 Plot Style: 100GC.ctb Plotted By: Erik Rolser

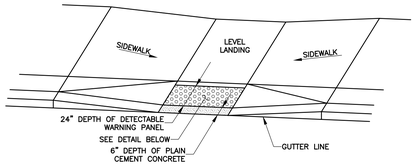


NOTES:

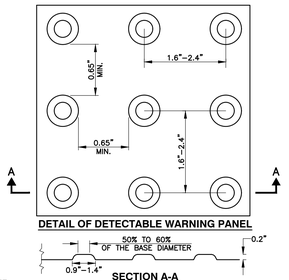
1. COPPER TUBING SHALL MEET AWWA SPEC. TYPE K OR FEDERAL SPEC. WWT-799 TYPE K.
2. 1 1/2" AND LARGER SERVICE ARE REQUIRED TO HAVE A SADDLE.
3. 1-1/2" SERVICE REQUIRES A CORPORATION COCK ONLY AT THE MAIN AND SHALL BE PROVIDED WITH A ROADWAY BOX TO GRADE. IT SHALL NOT REQUIRE A SEPARATE CURB STOP.

WATER SERVICE CONNECTION

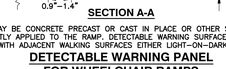
NOT TO SCALE



TYPICAL INSTALLATION



DETAIL OF DETECTABLE WARNING PANEL



SECTION A-A

NOTE:
PANELS MAY BE CONCRETE PRECAST OR CAST IN PLACE OR OTHER SUITABLE MATERIAL PERMANENTLY APPLIED TO THE RAMP. DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT WALKING SURFACES EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT.

DETECTABLE WARNING PANEL FOR WHEELCHAIR RAMPS

NOT TO SCALE

DETECTABLE WARNING APPLICATION NOTES

TRUNCATED DOMES (SEE CMR SECTION 18.4.2(e) SHALL BE PLACED ACROSS THE ENTIRE WIDTH OF THE SIDEWALK FOR A DISTANCE OF NOT LESS THAN 2 FEET ALONG THE SIDEWALK, WHENEVER A PUBLIC SIDEWALK CROSSES A RAIL SYSTEM AT GRADE.

A: AT GRADE CROSSINGS WITH A PEDESTRIAN CONTROL GATE, THE EDGE OF THE 2 FOOT LENGTH OF DETECTABLE WARNING CLOSEST TO THE CONTROL GATE, SHALL BE PLACED PARALLEL TO THE CONTROL GATE AT A DISTANCE OF BETWEEN 4 FEET AND 5 FEET FROM THE GATE IN A DOWN POSITION.

B: AT GRADE CROSSINGS WITHOUT A CONTROL GATE, THE EDGE OF THE 2 FOOT LENGTH OF DETECTABLE WARNING CLOSEST TO THE FIRST RAIL SHALL BE PLACED AT A DISTANCE OF 21 FEET IN ADVANCE OF THE FIRST RAIL CROSSING THE PATH OF TRAVEL.

C: MHD MATERIAL SPECIFICATION (TO BE WRITTEN).

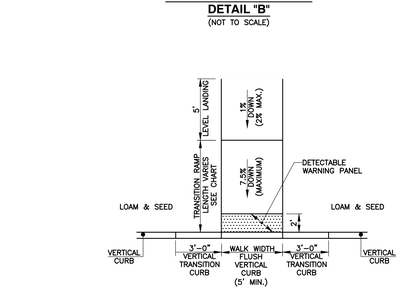
ROADWAY PROFILE GRADE	*HIGH SIDE TRANSITION LENGTH ROUNDED TO THE NEAREST 4"
%	LENGTH
0	6'-6"
>0 to 1	7'-8"
>1 to 2	9'-0"
>2 to 3	11'-0"
>3 to 4	14'-0"
>4	15'-0" Max.

NOTE:
*BASED ON A DESIGN SLOPE OF 7.5% AND A REVEAL OF 6"

LEGEND

HSL = HIGH SIDE TRANSITION LENGTH (SEE M/E 107.9.0)
W = SIDEWALK WIDTH
W_1 = PERPENDICULAR RAMP LENGTH
Wc = CURB WIDTH
* = TOLERANCE FOR CONSTRUCTION ±0.5%
USABLE SIDEWALK WIDTH PER AAB = W-Wc
RAMP LENGTH, W1 = W-4.0' MIN.

CURB TRANSITION LENGTHS FOR WHEELCHAIR CURB CUT RAMPS

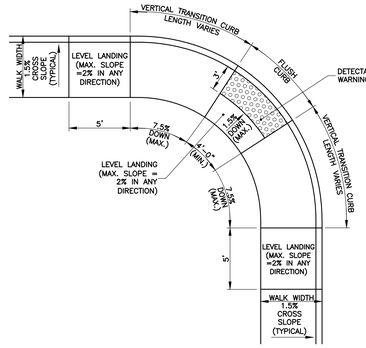


* 8'-0" ACCESS AISLE ADJACENT TO VAN SPACE
** SIGN FOR VAN SPACE TO READ "VAN ACCESSIBLE" BELOW DOUBLE ARROW AT BOTTOM.
NOTE : R7-8 SIGNS SHALL BE MOUNTED AT A HEIGHT OF NO LESS THAN 5 FEET AND NOT MORE THAN 8 FEET TO THE TOP OF THE SIGN.

ADA REQUIREMENTS:
1. WALKS SHALL NOT EXCEED 5% SLOPE.
2. WALKS CROSS SLOPE SHALL NOT EXCEED 2%.
3. SLOPE AT HANDICAP PARKING SPACES SHALL NOT EXCEED 2% IN ANY DIRECTION.

LAYOUT PLAN TYPICAL HANDICAP PARKING

(NOT TO SCALE)

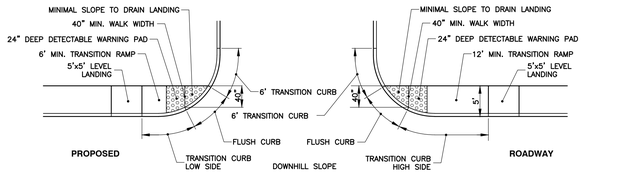


WHEELCHAIR CURB CUT DETAIL "B"

(NOT TO SCALE)

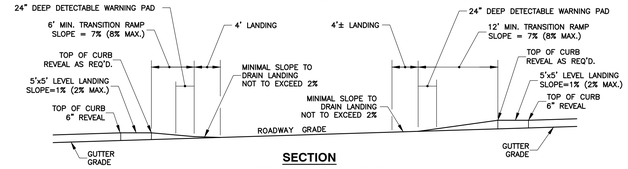
WHEELCHAIR CURB CUT TYPE "C"

(NOT TO SCALE)

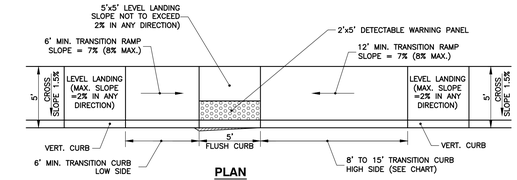


PLAN

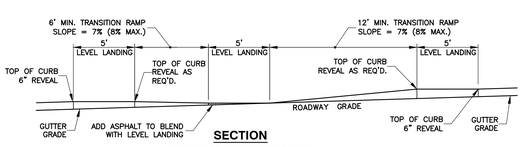
(NOT TO SCALE)



SECTION WHEELCHAIR CURB CUT TYPE "E"

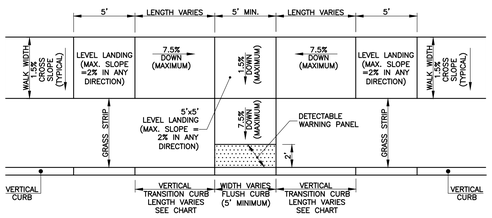


PLAN



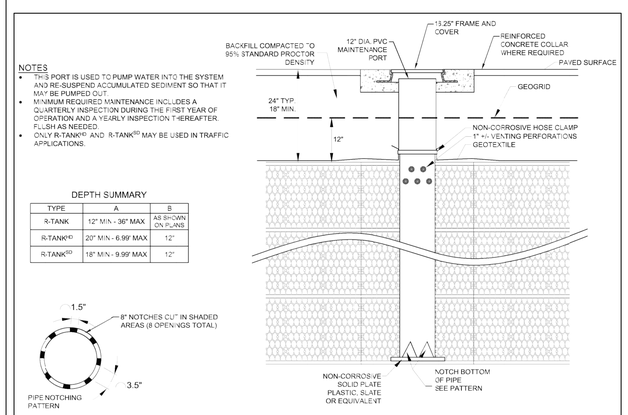
SECTION WHEELCHAIR CURB CUT DETAIL "A"

(NOT TO SCALE)



WHEELCHAIR CURB CUT TYPE "D"

(NOT TO SCALE)



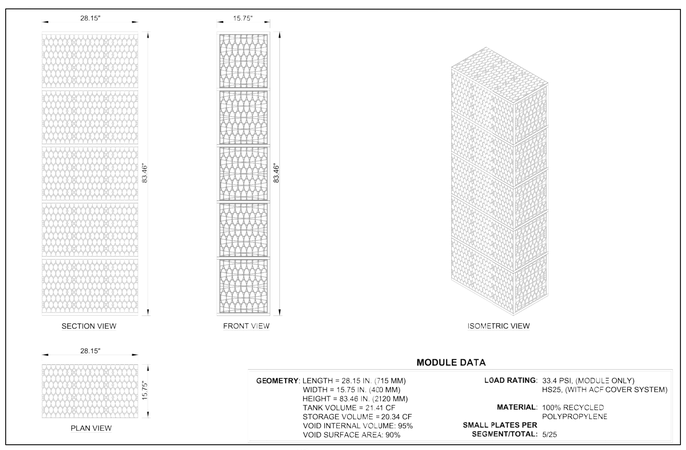
NOTES
- THIS PORT IS USED TO PUMP WATER INTO THE SYSTEM AND RE-SUSPEND ACCUMULATED SEDIMENT SO THAT IT MAY BE PUMPED OUT.
- MINIMUM REQUIRED MAINTENANCE INCLUDES A QUARTERLY INSPECTION DURING THE FIRST YEAR OF OPERATION AND A YEARLY INSPECTION THEREAFTER. FLUSH AS NEEDED.
- ONLY R-TANK^{HD} AND R-TANK^{6D} MAY BE USED IN TRAFFIC APPLICATIONS.

DEPTH SUMMARY

TYPE	A	B
R-TANK	12" MIN - 36" MAX	AS SHOWN ON PLANS
R-TANK^{HD}	20" MIN - 6.99' MAX	12"
R-TANK^{6D}	18" MIN - 9.99' MAX	12"

R-TANK^{HD} - TYPICAL MAINTENANCE PORT

(NOT TO SCALE)



MODULE DATA

GEOMETRY: LENGTH = 28.15 IN. (715 MM)
WIDTH = 15.75 IN. (400 MM)
HEIGHT = 83.46 IN. (2120 MM)
TANK VOLUME = 21.41 CF
STORAGE VOLUME = 20.34 CF
VOID INTERNAL VOLUME: 95%
VOID SURFACE AREA: 90%

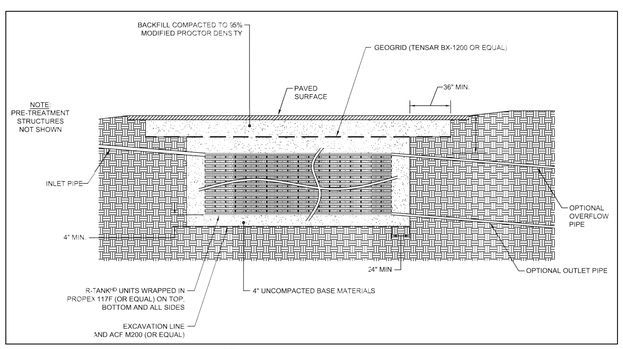
LOAD RATING: 33.4 PSI, (MODULE ONLY) HS25, (WITH ACF COVER SYSTEM)

MATERIAL: 100% RECYCLED POLYPROPYLENE

SMALL PLATES PER SEGMENT/TOTAL: 5/25

R-TANK^{HD} - PENT MODULE DETAIL

(NOT TO SCALE)



R-TANK^{HD} - INFILTRATION SYSTEM DETAIL

(NOT TO SCALE)

ACCESSIBILITY NOTES

GENERAL NOTES:

1. SPECIAL ATTENTION SHALL BE GIVEN TO COMPLIANCE WITH THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (AAB) RULES AND REGULATIONS AND THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN.

2. IT IS ESSENTIAL THAT CONTRACTORS BE AWARE OF THE SITE ACCESSIBILITY REQUIREMENTS. THESE NOTES AND DETAILS ARE INTENDED TO ASSURE THAT CONTRACTORS ARE AWARE OF THE REQUIREMENTS AT THE TIME WHEN THEY ARE BIDDING THE PROJECT. IF SLOPES / GRADES AND DIMENSIONS ARE NOT ACHIEVABLE, THE CONTRACTOR IS REQUIRED TO CONTACT THE OWNER IMMEDIATELY, BEFORE MOVING FORWARD WITH THE WORK.

3. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND CIVIL ENGINEER IMMEDIATELY OF ANY CONFLICT BETWEEN THESE NOTES AND DETAILS AND OTHER PROJECT DRAWINGS, WHETHER BY H.W. MOORE ASSOCIATES OR OTHERS. THE CONTRACTOR SHALL NOT PROCEED WITH THE WORK FOR WHICH THE ALLEGED CONFLICT HAS BEEN DISCOVERED UNTIL SUCH ALLEGED CONFLICT HAS BEEN RESOLVED. NO CLAIM SHALL BE MADE BY THE CONTRACTOR FOR DELAY DAMAGES AS A RESULT OF RESOLUTION OF ANY SUCH CONFLICT(S).

4. AAB REGULATIONS DO NOT ALLOW ANY TOLERANCE ON SLOPE REQUIREMENTS AND THE MAXIMUM SLOPES LISTED BELOW CAN NOT BE EXCEEDED.

5. IT IS RECOMMENDED THAT THE CONTRACTOR USE A 2-FOOT DIGITAL LEVEL TO VERIFY SLOPES PRIOR TO PLACING THE FINISHED SURFACE. IT IS FURTHER RECOMMENDED THAT FORMS BE CHECKED PRIOR TO PLACING CONCRETE OR ASPHALT.

6. THESE ACCESSIBILITY NOTES AND DETAILS ARE INTENDED TO DEPICT SLOPE AND DIMENSIONAL REQUIREMENTS ONLY. REFER TO SIDEWALK, CURBING, AND PAVEMENT DETAILS FOR ADDITIONAL INFORMATION.

ACCESSIBLE ROUTE NOTES:

1. AT LEAST ONE ACCESSIBLE ROUTE SHALL BE PROVIDED WITHIN THE SITE FROM ACCESSIBLE PARKING SPACES AND ACCESSIBLE PASSENGER LOADING ZONES; PUBLIC STREETS OR SIDEWALKS; AND PUBLIC TRANSPORTATION STOPS TO THE ACCESSIBLE BUILDING OR FACILITY THEY SERVE.

2. AT LEAST ONE ACCESSIBLE ROUTE SHALL CONNECT ACCESSIBLE BUILDINGS, ACCESSIBLE FACILITIES, ACCESSIBLE ELEMENTS, AND ACCESSIBLE SPACES THAT ARE ON THE SAME SITE.

3. DIRECTIONAL SIGNAGE INDICATING THE ROUTE TO THE NEAREST ACCESSIBLE BUILDING ENTRANCE SHALL BE PROVIDED AT INACCESSIBLE BUILDING ENTRANCES.

4. TRANSITIONS BETWEEN RAMPS, WALKS, LANDINGS, GUTTERS OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT VERTICAL CHANGES (1/4 INCH MAXIMUM VERTICAL CHANGE).

5. SLOPES OF THE MANEUVERING CLEARANCE AT DOORS ON ACCESSIBLE ROUTES CANNOT EXCEED 2% IN ANY DIRECTION FOR A DEPTH OF SIXTY (60) INCHES FROM THE FACE OF THE DOOR.

WALKWAYS:

1. WIDTH OF WALKWAYS SHALL NOT BE LESS THAN 48 INCHES, EXCLUDING CURB STONES.

2. WALKWAYS SHALL PROVIDE A MINIMUM OF 36 INCHES CLEAR, UNOBSTRUCTED PATH OF TRAVEL PAST ALL OBSTRUCTIONS. (I.E. UTILITY POLES, SIGNS, FIRE HYDRANTS, ETC.)

3. WALKING SURFACES SHALL HAVE A MAXIMUM RUNNING SLOPE OF 5.0% AND A MAXIMUM CROSS SLOPE OF 2.0%.

4. AT THE INTERSECTION OF TWO SIDEWALKS, THERE SHALL BE A LEVEL LANDING WITH NO SLOPE GREATER THAN 2% IN ANY DIRECTION.

5. ANY WALKING SURFACE WITH A RUNNING SLOPE GREATER THAN 5.0% IS CONSIDERED A RAMP AND SHALL COMPLY WITH THE GUIDELINES FOR RAMPS OR CURB CUT RAMPS.

6. ACCESSIBLE ROUTE SURFACES SHALL BE STABLE, FIRM AND SLIP RESISTANT.

7. IF CATCH BASINS OR OTHER GRATINGS ARE LOCATED WITHIN A ACCESSIBLE ROUTE, THEN AN ADA GRATE SHALL BE USED WITH SPACES NO GREATER THAN ½ INCH WIDE IN THE DIRECTION OF TRAVEL.

RAMPS:

1. ANY PART OF AN ACCESSIBLE ROUTE WITH A RUNNING SLOPE GREATER THAN 5% SHALL BE CONSIDERED A RAMP OR A CURB CUT RAMP.

2. THE MAXIMUM RUNNING SLOPE FOR A RAMP SHALL BE 8.33% AND THE MAXIMUM CROSS SLOPE SHALL BE 2.0%.

3. THE CLEAR WIDTH OF A RAMP SHALL BE 48 INCHES MINIMUM AS MEASURED BETWEEN THE HANDRAILS.

4. THE MAXIMUM RISE FOR ANY RAMP RUN SHALL BE 30 INCHES.

5. LANDINGS SHALL BE PROVIDED AT THE TOP AND BOTTOM OF RAMPS. LANDINGS SHALL HAVE A SLOPE NOT STEEPER THAN 2.0% IN ANY DIRECTION. THE LANDING CLEAR WIDTH SHALL BE AT LEAST AS WIDE AS THE WIDEST RAMP RUN LEADING TO THE LANDING. THE LANDING CLEAR LENGTH SHALL BE SIXTY (60) INCHES LONG MINIMUM. RAMPS THAT CHANGE DIRECTION BETWEEN RUNS AT LANDINGS SHALL HAVE A CLEAR LANDING OF SIXTY(60) INCHES BY SIXTY (60) INCHES MINIMUM.

6. EDGE PROTECTION COMPLYING WITH AAB REQUIREMENTS SHALL BE PROVIDED ON EACH SIDE OF RAMP RUNS AND ON EACH SIDE OF RAMP LANDINGS.

7. WHERE DOORWAYS ARE LOCATED ADJACENT TO A RAMP LANDING, MANEUVERING CLEARANCES REQUIRED BY 521 CMR FIGURES 26d AND 26e SHALL BE COMPLIED WITH.

8. HANDRAILS COMPLYING WITH 521 CMR 24.5 MUST BE PROVIDED ALONG BOTH SIDES OF RAMP.

CURB CUT RAMPS:

1. CURB CUT RAMPS ARE REQUIRED AT THE CORNER OF EACH INTERSECTION AND WHERE A PEDESTRIAN PATH OF TRAVEL CROSSES A ROAD, DRIVEWAY OR OTHER VEHICULAR WAY.

2. THE MAXIMUM RUNNING SLOPE OF A CURB CUT RAMP SHALL BE 8.33% AND THE MAXIMUM CROSS SLOPE SHALL BE 2.0%.

3. CURB CUT RAMPS MAY EXTEND UP TO 15 FEET IN LENGTH.

4. MAXIMUM SLOPES OF ADJOINING GUTTERS AND ROAD SURFACES IMMEDIATELY ADJACENT TO THE CURB CUT RAMP SHALL NOT BE STEEPER THAN 5%. THE ADJACENT SURFACES AT TRANSITIONS AT CURB CUT RAMPS TO WALKS, GUTTERS AND STREETS SHALL BE AT THE SAME LEVEL.

5. THE MINIMUM CLEAR WIDTH OF A CURB CUT RAMP SHALL BE 36 INCHES, EXCLUSIVE OF FLARED SIDES, IF PROVIDED.

6. LANDINGS SHALL BE PROVIDED AT THE TOP OF CURB CUT RAMPS. THE CLEAR LENGTH OF THE LANDING SHALL BE 48 INCHES MINIMUM. THE CLEAR WIDTH OF THE LANDING SHALL BE AT LEAST AS WIDE AS THE CURB CUT RAMP, EXCLUDING FLARED SIDES, LEADING TO THE LANDING. LANDINGS SHALL HAVE A SLOPE NOT STEEPER THAN 2% IN ANY DIRECTION.

ACCESSIBILITY NOTES (CONT.)

CURB CUT RAMPS (CONT.):

7. IF A CURB CUT RAMP IS LOCATED WHERE PEDESTRIANS MUST WALK ACROSS THE RAMP, OR WHERE IT IS NOT PROTECTED BY HANDRAILS OR GUARDRAILS, IT SHALL HAVE FLARED SIDES.

8. WHERE PROVIDED, CURB CUT RAMP FLARES SHALL NOT EXCEED 10%. IF THE CLEAR LENGTH OF THE LANDING IS LESS THAN FORTY-EIGHT (48) INCHES THAN THE SLOPE OF THE FLARED SIDES SHALL NOT EXCEED 8.33%.

9. CURB CUT RAMPS AND THE FLARED SIDES OF CURB CUT RAMPS SHALL BE LOCATED SO THAT THEY DO NOT PROJECT INTO VEHICULAR TRAFFIC LANES, PARKING SPACES OR PARKING ACCESS AISLES. CURBS AT MARKED CROSSINGS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARED SIDES.

10. CURB CUT RAMPS SHALL BE LOCATED OR PROTECTED TO PREVENT THEIR OBSTRUCTION BY PARKED VEHICLES.

11. CURB CUT RAMPS SHALL HAVE A TWENTY-FOUR (24) INCH DEEP DETECTABLE WARNING PANEL COMPLYING WITH ADA, EXTENDING THE FULL WIDTH OF THE RAMP. REFER TO DETECTABLE WARNING DETAILS AND NOTES FOR PLACEMENT.

12. WHERE PROVIDED, STOP LINES SHALL BE LOCATED IN ADVANCE OF CURB CUT RAMP.

13. WHERE PROVIDED, DRAINAGE INLETS SHALL BE LOCATED UPSTREAM OF CURB RAMPS AND NOT IN THE RAMP AREA.

14. CURB CUT RAMP TYPE AND LOCATION ARE SHOWN ON PLAN.

ACCESSIBLE PARKING SPACES:

1. ACCESSIBLE PARKING SPACES SHALL BE LOCATED ON THE SHORTEST ACCESSIBLE ROUTES OF TRAVEL FROM ADJACENT PARKING TO AN ACCESSIBLE BUILDING ENTRANCE.

2. ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL BE AT LEAST 8 FEET WIDE. WHERE PARKING SPACES AND ACCESS AISLES ARE MARKED WITH LINES, THE WIDTH MEASUREMENTS SHALL BE MADE FROM CENTERLINE OF THE MARKINGS.

3. PARKING ACCESS AISLES SHALL BE PART OF AN ACCESSIBLE ROUTE TO THE BUILDING OR FACILITY ENTRANCE AND SHALL COMPLY WITH PROVISIONS FOR ACCESSIBLE ROUTES.

4. TWO (2) ACCESSIBLE PARKING SPACES MAY SHARE A COMMON ACCESS AISLE.

5. ACCESS AISLES SHALL EXTEND THE FULL LENGTH OF THE PARKING SPACE THEY SERVE.

6. ACCESS AISLES SHALL NOT OVERLAP THE VEHICULAR WAY. ACCESS AISLES SHALL BE PERMITTED TO BE PLACED ON EITHER SIDE OF THE PARKING SPACE EXCEPT FOR ANGLED VAN PARKING SPACES WHICH SHALL HAVE ACCESS AISLES LOCATED ON THE PASSENGER SIDE OF THE PARKING SPACES.

7. SURFACES OF PARKING SPACES AND ACCESS AISLES SERVING THEM SHALL BE STABLE, FIRM AND SLIP RESISTANT. ACCESS AISLES SHALL BE AT THE SAME LEVEL AS THE PARKING SPACES THEY SERVE.

8. PARKING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 2.0% IN ANY DIRECTIONS.

9. PARKED VEHICLE OVERHANGS SHALL NOT REDUCE THE REQUIRED CLEAR WIDTH OF AN ACCESSIBLE ROUTE.

10. PARKING SPACES FOR VANS AND ACCESS AISLES AND VEHICULAR ROUTES SERVING THEM SHALL PROVIDE A VERTICAL CLEARANCE OF 8 FEET 2 INCHES (8'-2") MINIMUM. SIGNS SHALL BE PROVIDED AT ENTRANCES TO PARKING FACILITIES INFORMING DRIVERS OF CLEARANCES AND THE LOCATION OF VAN ACCESSIBLE PARKING SPACES.

11. EACH ACCESSIBLE PARKING SPACE SHALL BE PROVIDED WITH SIGNAGE DISPLAYING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY. EACH ACCESS AISLE SHALL BE CLEARLY MARKED BY MEANS OF DIAGONAL STRIPES. SIGNS SHALL BE INSTALLED AT A CLEAR HEIGHT OF BETWEEN 5 FEET TO THE BOTTOM OF THE SIGN AND 8 FEET TO THE TOP OF THE SIGN AND SHALL NOT INTERFERE WITH AN ACCESSIBLE ROUTE FROM AN ACCESS AISLE. SIGNS LOCATED WHERE THEY MAY BE HIT BY VEHICLES BEING PARKED SHALL BE INSTALLED WITH BOLLARD PROTECTION.

12. ACCESSIBLE PARKING SPACE, ACCESS AISLE STRIPING, AND INTERNATIONAL SYMBOL OF ACCESSIBILITY SHALL BE PAINTED BLUE.

PASSENGER LOADING ZONES:

1. PASSENGER LOADING ZONES SHALL PROVIDE VEHICULAR PULL-UP SPACE 8 FEET WIDE MINIMUM AND 20 FEET LONG MINIMUM.

2. PASSENGER LOADING ZONES SHALL PROVIDE A CLEARLY MARKED ACCESS AISLE THAT IS 5 FEET WIDE MINIMUM AND EXTENDS THE FULL LENGTH OF THE VEHICLE PULL-UP SPACE THEY SERVE.

3. ACCESS AISLE SHALL ADJOIN AN ACCESSIBLE ROUTE AND NOT OVERLAP THE VEHICULAR WAY.

4. VEHICLE PULL-UP SPACES AND ACCESS AISLES SERVING THEM SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 2.0% IN ANY DIRECTION. ACCESS AISLES SHALL BE AT THE SAME LEVEL AS THE VEHICLE PULL-UP SPACE THEY SERVE.

5. SURFACES OF VEHICLE PULL-UP SPACES AND ACCESS AISLES SERVING THEM SHALL BE STABLE, FIRM AND SLIP RESISTANT.

6. VEHICLE PULL-UP SPACES, ACCESS AISLES SERVING THEM AND A VEHICULAR ROUTE FROM AN ENTRANCE TO THE PASSENGER LOADING ZONE, AND FROM THE PASSENGER LOADING ZONE TO A VEHICULAR EXIT SERVING THEM, SHALL PROVIDE A VERTICAL CLEARANCE OF 9 FEET 6 INCHES (9'-6") MINIMUM.

BUILDING ENTRANCES:

1. ALL PUBLIC ENTRANCES SHALL BE ACCESSIBLE.

2. THE APPROACH TO AN ACCESSIBLE ENTRANCE SHALL BE A PAVED WALK OR RAMP WITH A SLIP RESISTANT SURFACE, UNINTERRUPTED BY STEPS.

3. THE EXTERIOR LANDING AT THE ENTRANCE DOOR SHALL HAVE A LEVEL LANDING MEASURING AT LEAST 5 FEET BY 5 FEET AND SHALL NOT SLOPE MORE THAN 2% IN ANY DIRECTION.

4. THE LEVEL LANDING SHALL EXTEND A MINIMUM OF 18 INCHES WIDER THAN THE LATCH ON THE PULL SIDE OF THE DOOR.

SIGNAGE:

1. SIGNS TO CONFORM WITH AAB RULES & REGULATIONS.

2. NON-ACCESSIBLE BUILDING ENTRANCES TO HAVE SIGNAGE DIRECTING PEOPLE TO THE NEAREST ENTRANCE. DIRECTIONAL SIGNAGE SHALL HAVE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY.

CROSS WALKS:

1. CROSS WALKS ARE PART OF THE ACCESSIBLE ROUTE.

2. CROSS WALKS SHALL HAVE A MAXIMUM RUNNING SLOPE OF 5% AND A MAXIMUM CROSS SLOPE OF 2%.

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Revision:

Architect of Record:

Drawn: EJR
Checked: AD/FAK
Scale: As noted
Key Plan:

Project Name:
MILL CREEK MARSHFIELD

COMMERCE WAY
MARSHFIELD, MA

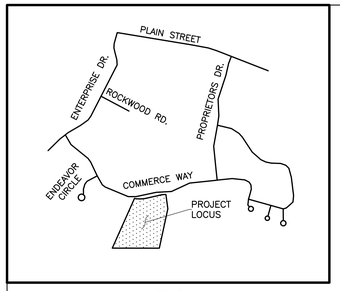
Sheet Name:
DETAILS

Project Number:
21065

Issue Date:
07/12/22

Sheet Number:
DETAIL-2

File Name: O:\Civil 3D Projects\24693 - Mill Creek - Marshfield Ph2\Eng\24693-DET-1.dwg Saved 6/14/2022 4:06 PM Plotted: Jun 24, 2022 8:53:30am
Tab: DETAIL-2 Plot Style: 100GC.ctb Plotted By: Erik Rolser



LOCUS
1" = 1000'

MARSHFIELD LADDER 1

GARBAGE TRUCK

COMMERCE WAY
(PUBLIC - 50' WIDE)

COMMERCE WAY
(PRIVATE - 60' WIDE)

TOWNHOUSE TYPE E4
FFE:167.0
FFE:167.5
FFE:168.0

TOWNHOUSE TYPE E5
FFE:170.5
FFE:172.0
FFE:173.5

TOWNHOUSE TYPE E3
FFE:168.0
FFE:169.0
FFE:167.0

TOWNHOUSE TYPE D2
FFE:171.5
FFE:172.5
FFE:170.5

TOWNHOUSE TYPE E1
FFE:172.5
FFE:173.5
FFE:172.5

POOL
POOL HOUSE
FFE:174.0
CLUBHOUSE

TOT LOT

BUILDING TYPE C2
FFE:178.0
FFE:178.0

BUILDING TYPE D1
FFE:178.0
FFE:188.67

BUILDING TYPE C1
FFE:190.0
FFE:190.0

BUILDING TYPE A2
FFE:172.5
FFE:183.17

BUILDING TYPE B2
FFE:183.5
FFE:183.5

BUILDING TYPE A1
FFE:183.5
FFE:194.17

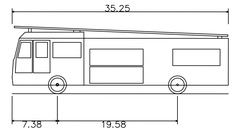
BUILDING TYPE B1
FFE:194.0
FFE:194.0

DOG RUN

MAINT. BLDG.
FFE:173.25

WWTP

LOT 6R
552,620± S.F.
12.6864± Ac



Marshfield Ladder 1	
Overall Length	35.250ft
Overall Width	8.333ft
Overall Body Height	11.000ft
Min Body Ground Clearance	1.393ft
Track Width	8.333ft
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	37.800ft

50 0 25 50 100
HORIZONTAL GRAPHIC SCALE IN FEET

tat

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Revision:

Architect of Record:

Drawn: EJR
Checked: AD/FAK
Scale: 1" = 50'
Key Plan:

Project Name:
MILL CREEK
MARSHFIELD

COMMERCE WAY
MARSHFIELD, MA

Sheet Name:
EMERGENCY VEHICLE TURNING MOVEMENTS

Project Number:
21065

Issue Date:
0712/22

Sheet Number:
TM

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Tab: TM Plot Style: 1050C.ctb Plotted By: Anthony Donato

Attachment D

Landscape Plans

Mill Creek Marshfield

Commerce Way
Marshfield, Massachusetts

Landscape Plans
Town Submission Set

LIST OF DRAWINGS:		Set Date
L1.1	Site Planting Plan	7/12/22
L1.2	Site Lighting Plan	7/12/22
L1.3	Site Lighting Specifications	7/12/22
L2.1	Flats Building Typical Planting Plan	7/12/22
L2.2	Townhouse Typical Planting Plan	7/12/22
L3.1	Amenity Area Landscape Plan	7/12/22
D1	Planting Specifications	
D2	Planting Details	

Prepared By:

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PLANT SCHEDULE SITE

TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	PLANT SIZE
AR-B	8	Acer rubrum `Bowhall Red`	Red Maple	B & B	3-3.5" CAL.	
AR-OG	9	Acer rubrum `October Glory`	October Glory Maple	B & B	3-3.5" CAL.	
AS-L	11	Acer saccharum `Legacy`	Legacy Sugar Maple	B & B	3-3.5" CAL.	
BN	13	Betula nigra	Multi-Trunk River Birch	B & B		10-12` HT.
GT-H	12	Gleditsia triacanthos inermis `Halka`	Halka Honeylocust	B & B	3-3.5" CAL.	
LT	6	Liriodendron tulipifera	Tulip Tree	B & B	3-3.5" CAL.	
QR	4	Quercus rubra	Red Oak	B & B	3-3.5" CAL.	
UA-P	15	Ulmus americana `Princeton`	Princeton American Elm	B & B	3-3.5" CAL.	
ZS-GV	8	Zelkova serrata `Green Vase`	Green Vase Zelkova	B & B	3-3.5" CAL.	
EVERGREEN TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	PLANT SIZE
PG8	19	Picea glauca	White Spruce	B & B		8-10` HT.
PS8	20	Pinus strobus	White Pine	B & B		8-10` HT.
TP-G	11	Thuja plicata `Green Giant`	Green Giant Arborvitae	B & B		8-10` HT.
FLOWERING TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	PLANT SIZE
AC-G	14	Amelanchier canadensis `Glennform`	Rainbow Pillar Serviceberry	B & B	2.5-3" CAL.	
CR-SP	7	Cornus x rutgersensis `Stellar Pink`	Pink Flowering Stellar Dogwood	B & B	3-3.5" CAL.	
M-SS	4	Malus `Spring Snow`	Spring Snow Crabapple	B & B	3-3.5" CAL.	
PC-C	19	Pyrus calleryana `Chanticleer`	Chanticleer Pear	B & B	3-3.5" CAL.	
PS-K	4	Prunus serrulata `Kwanzan`	Kwanzan Cherry	B & B	3-3.5" CAL.	



0 40 80 120 feet

SCALE: 1" = 40'

Base information provided electronically by Hancock Associates of Boston, Massachusetts

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Date: 7/12/22

Revisions:
Num. Date Description

COMMONWEALTH OF MASSACHUSETTS — BRIAN N. LABBE — No. 918 — REGISTERED LANDSCAPE ARCHITECT — 7/12/22

Mill Creek Marshfield

Commerce Way Marshfield, Massachusetts

Prepared for: Mill Creek Residential Trust, Boston, MA

Drawn By: BNL | Checked By: TEM

Site Planting Plan

Scale: 1" = 40'-0"

Sheet: L1.1

Site Lighting Legend

SYMBOL	QUANTITY	DESCRIPTION	MANUFACTURER	SPECIFICATION
	6	POST LIGHT WITH LED FIXTURE MOUNTED ON 12' HEIGHT POST	PROGRESS LIGHTING	PCPTS SERIES PCPTS-80-5-BL
HSS	30	POST LIGHT WITH LED FIXTURE MOUNTED ON 12' HEIGHT POST WITH HOUSE SIDE SHIELD	PROGRESS LIGHTING	PCPTS SERIES PCPTS-80-5-BL W/ HOUSE SIDE SHIELD
PL	2	PARKING AREA LED FIXTURE MOUNTED ON 18' HEIGHT POST WITH HOUSE SIDE SHIELD	PROGRESS LIGHTING	PCPA SERIES PCPAS-135LED-5-BL-BC
BOL	18	BOLLARD LIGHT	PROGRESS LIGHTING	PCBO SERIES PCBOR-ASY-BL
	2	SIGNAGE UP LIGHT	TBD	TBD



0 40 80 120 feet

SCALE: 1" = 40'

Base information provided electronically by Hancock Associates of Boston, Massachusetts

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Date: 7/12/22

Revisions:
Num. Date Description

MASSACHUSETTS LICENSED LANDSCAPE ARCHITECT NO. 919 REGISTERED 7/12/22

Mill Creek Marshfield

Commerce Way Marshfield, Massachusetts

Prepared for: Mill Creek Residential Trust, Boston, MA

Drawn By: BNL | Checked By: TEM

Site Lighting Plan

Scale: 1" = 40'-0"

Sheet: L1.2

PROGRESS LIGHTING™ | COMMERCIAL

Project:
Fixture Type:
Location:
Contact:

PCPAS/PCPAL SERIES

Specifications:

Construction:

Die-cast aluminum with vertical fins for maximum thermal management. Flow through openings to prevent buildup of moisture and debris. Electrical and optical compartments separated to provide increased thermal management. All external hardware is corrosion resistant. All external fasteners are stainless steel.

Mounting:

Tool-less entry into electrical/wiring compartment; door is removable. Slotted mounting block allows for mounting to various drill patterns, making retrofit simple. Easy slide installation of fixture to mounting block.

Optics:

One piece optical system that is field replaceable. Specially designed TIR acrylic LED lenses over each LED. Optical system gasket to ensure weatherproof seal around each LED. Optics held in place without use of adhesives. LEDs are 4000K/70 CRI and optical assembly is IP65 rated. PC board held in place to heat sink using screws with no use of thermal grease or adhesive.

Electrical:

Driver contained in separate electrical compartment installed on removable door and is field replaceable using quick connects. Electrical compartment includes push-button terminal block for AC power connections. 120–277V universal voltage, 50/60Hz with 0-10V dimming capability. Power factor is 0.92 at full load. All electrical components rated at 50,000 hours at full load and 25ºC ambient conditions. Thermal feedback between PCB and driver to protect luminaire from excessive temperature by reducing drive current as necessary. Surge protection standard with device providing surge current rating of 20KA using 8/20 µSec wave, LSP clamping voltage of 825V and surge rating of 540J.

Finish:

TGIC thermoset polyester powder paint finish applied at nominal 2.5 mil thickness. Finish is corrosion resistant.

Listing/Certification:

The luminaire is UL/cUL wet location listed. 3G vibration rated.

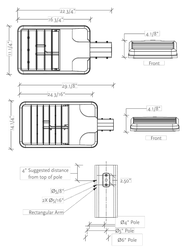
Warranty:

5 year limited warranty covering LED array and LED driver(s).

Images:



Dimensions & Mounting



Engine/ Wattage	Delivered Lumens (varies by optics)	Delivered LPW
90	7900-8100	85-97
135	13740-14950	93-97
180	17150-18670	93-100

Catalog number:

Series	Engine/Wattage	Distribution	Finish	Options
PCPAS - Parking/Area Small	**90** - 30LEDS @ 90W	**3** - Type 3	**BZ** - Bronze	Blank
PCPAL - Parking/Area Large	**135** - 64LEDS @ 135W	**5** - Type 5 Square	**BL** - Black	**P** - Photocell
	180 - 80LEDS @ 180W		**GN** - Green	

PROGRESS LIGHTING™ | COMMERCIAL

Project:
Fixture Type:
Location:
Contact:

PCPTS SERIES

LED Post Top Designer

Specifications:

Construction:

Traditional style post top luminaire with decorative cast aluminum cap mechanically attached to optical chamber. Cast aluminum multi-sided cage with UV stabilized acrylic lenses sealed for weather tight operation. Aluminum lower electrical chamber with bottom fitter to mount to 3"OD x 4"H tenon.

Optics:

One piece optical system with internal brass standoffs soldered to the board which can be field replaced. Two-piece die cut silicone and polycarbonate foam gasket ensures weather-proof seal around each individual LED and allows luminaire to be rated for high-pressure hose down applications. The optical cartridge is secured to extruded housing with fasteners and heat pad to ensure thermal conductivity. Optics held into place without use of adhesives and complete assembly is gasketed for high pressure hose down cleaning.

Electrical:

Luminaire equipped with LED driver that operates with 120–277V universal voltage, 50/60Hz and includes 0-10V dimming capability. Power factor is 0.92 at full load. All electrical components rated at 50,000 hours at full load and 25ºC ambient conditions. Thermal feedback between PCB and driver to protect luminaire from excessive temperature by reducing drive current as necessary. Surge protection standard with device providing surge current rating of 20KA using 8/20 µSec wave, LSP clamping voltage of 825V and surge rating of 540J.

Finish:

Polyester powder paint finish that is corrosion resistant and resists surface impacts up to 160 inch-pound.

Listing/Certification:

The luminaire bears an NRTL label and is marked suitable for wet locations.

Warranty:

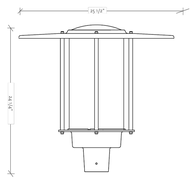
5 year limited warranty covering LED array and LED driver(s).

Images:

Wattage	Lumens
55W	5610 - 6170
80W	8410 - 9250
110W	11220 - 12340



Dimensions & Mounting



Series	Wattage	Distribution	Finish	Options
PCPTS	**55** - 55W	**3** - Type 3	**BZ** - Bronze	Blank
	80 - 80W	**4** - Type 4	**BL** - Black	**P** - Photocell
	110 - 110W	**4B** - Type 4 Backlight Control	**GN** - Green	
		5 - Type 5 Square		
		5R - Type 5 Round		

PROGRESS LIGHTING™ | COMMERCIAL

Project:
Fixture Type:
Location:
Contact:

PCBO SERIES

Walkway Lighting

Specifications:

Construction:

- Extruded aluminum square or round housing, with tamper resistant hardware; Flat top, for round. Single screw access for top relamping.
- Sealed one-piece, clear acrylic lens; Specular anodized aluminum optical systems; dual reflector or tube optics
- Concealed, galvanized steel anchor base; Four ¾" x 10" anchor bolts
- Durable Lektrocote® TCJC thermoset polyester powder coat paint finish assures long life and maintenance-free service

Electrical:

- Universal voltage (120-277V) drivers with +/- 10% tolerance, starting temperature rated at -20ºC
- Rotatable LED assembly adjustment for ideal placement and aiming of symmetric light pattern
- 24 high brightness LEDs at 500 mA deliver symmetric distribution at 46 Watts
- 12 high brightness LEDs at 700 mA deliver asymmetric distribution at 31 Watts
- 4000K color temperature

Warranty:

5 year limited warranty for LED system.

Listing/Certification:

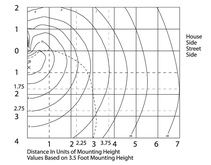
The luminaire is listed to UL 1598 for use in wet locations.

Catalog number:

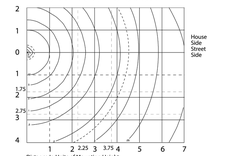
Series	Distribution	Finish
PCBOR - Bollard Round	**ASY** - 12 LEDS@ 31W	**BZ** - Bronze
PCBOS - Bollard Square	**SYM** - 24LEDS@ 46W	**BL** - Black

Photometry:

ASYMMETRIC DISTRIBUTION, 3500K



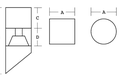
SYMMETRIC DISTRIBUTION, 3500K



Images:



Dimensions & Mounting



	A	B	C	D	Weight
Square	6.75" sq.	42.0"	6.0"	4.0"	41 lbs
	171 mm	1067 mm	152 mm	102 mm	19 kg
Round	7.0" dia	42.0"	6.0"	4.0"	41 lbs
	178 mm	1067 mm	152 mm	102 mm	19 kg

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Revisions:
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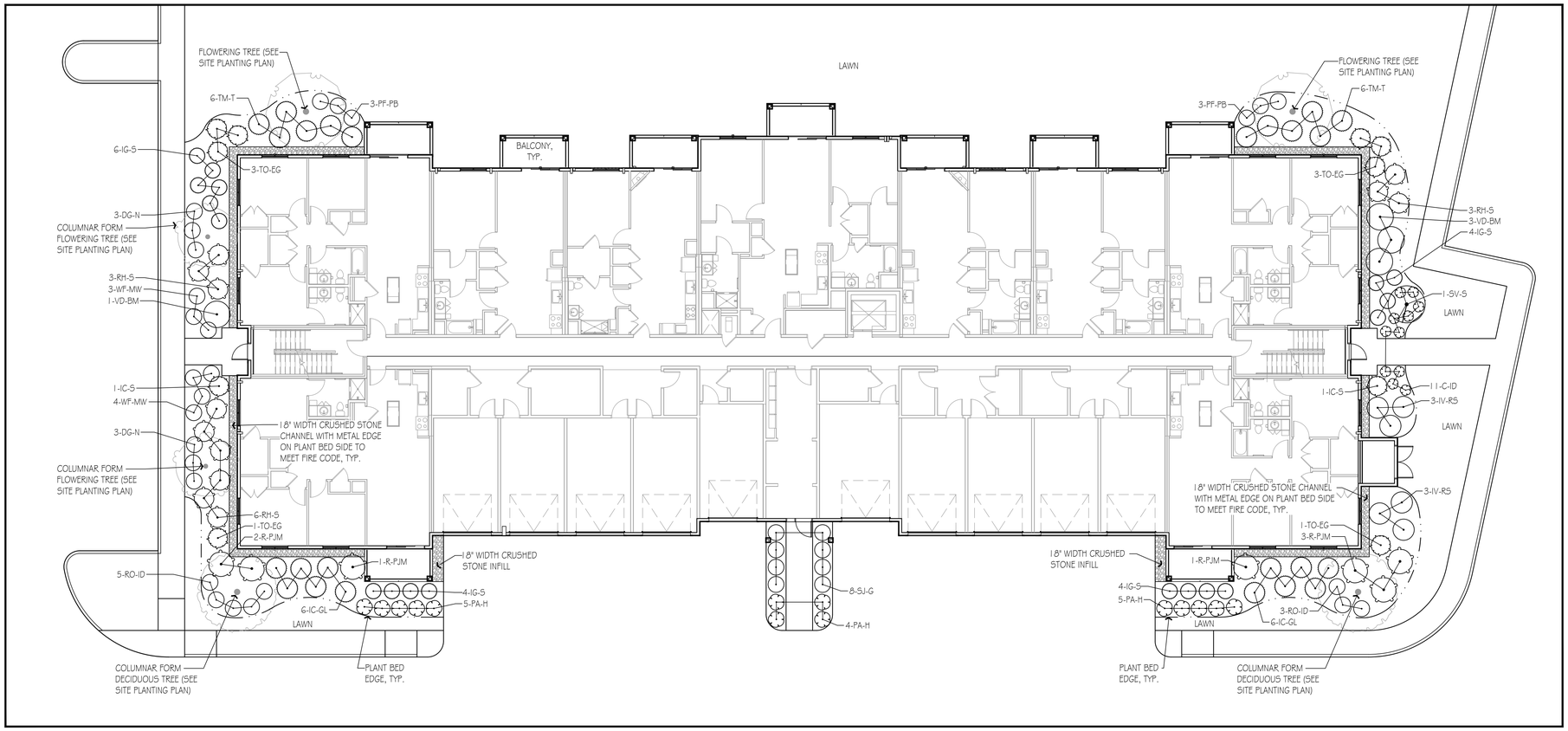
Mill Creek Marshfield
Commerce Way Marshfield, Massachusetts
Prepared for: Mill Creek Residential Trust, Boston, MA

Drawn By: BNL | Checked By: TEM

Site Lighting Specifications

Scale: N/A

Sheet: **L1.3**



PLANT SCHEDULE FLATS BUILDING TYPICAL

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE
C-ID	11	Carex x `Ice Dance`	Ice Dance Sedge	1 GAL	
DG-N	6	Deutzia gracilis 'Nikko'	Slender Nikko Deutzia	Cont.	15-18" SPD.
IC-GL	12	Ilex crenata `Green Lustre`	Green Luster Japanese Holly	B & B	2` HT.
IC-S	2	Ilex crenata `Steeds`	Steeds Japanese Holly	B & B	3-3.5` HT.
IG-S	18	Ilex glabra `Shamrock`	Shamrock Inkberry	B & B	2` HT.
IV-RS	6	Ilex verticillata `Red Sprite`	Red Sprite Winterberry	B & B	2-2.5` HT.
PA-H	14	Pennisetum alopecuroides 'Hameln'	Hameln Fountain Grass	2 GAL	
PF-PB	6	Potentilla fruticosa `Pink Beauty`	Pink Beauty Potentilla	B & B	15-18" HT.
R-PJM	7	Rhododendron `PJM`	PJM Rhododendron	B & B	2-2.5` HT.
RH-S	12	Rhododendron `Scintillation`	Scintillation Rhododendron	B & B	2-2.5` HT.
RO-ID	8	Rosa drift 'Icy'	White Drift Rose	3 GAL	
SJ-G	8	Spiraea japonica `Goldflame`	Goldflame Spirea	Cont.	18-24" HT.
SV-S	1	Syringa vulgaris `Sensation`	Sensation Lilac	B & B	4-4.5` HT
TM-T	12	Taxus x media `Tauntoni`	Tauton Yew	B & B	2` HT.
TO-EG	8	Thuja occidentalis `Emerald Green`	Emerald Green Arborvitae	B & B	6-7` HT.
VD-BM	4	Viburnum dentatum `Blue Muffin`	Blue Muffin Viburnum	B & B	3-3.5` HT.
WF-MW	7	Weigela florida 'Midnight Wine'	Midnight Wine Weigela	Cont.	15-18" SPD.

0 10 20 30 feet

SCALE: 1" = 10'

Base information provided electronically by Hancock Associates of Boston, Massachusetts

Hawk Design, Inc.
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HAWK DESIGN, INC. 2022

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Date: 7/12/22

Revisions:
Num. Date Description

COMMONWEALTH OF MASSACHUSETTS
BRIAN N. LANG
No. 51R
REGISTERED LANDSCAPE ARCHITECT
7/12/22

Mill Creek Marshfield

Commerce Way Marshfield, Massachusetts

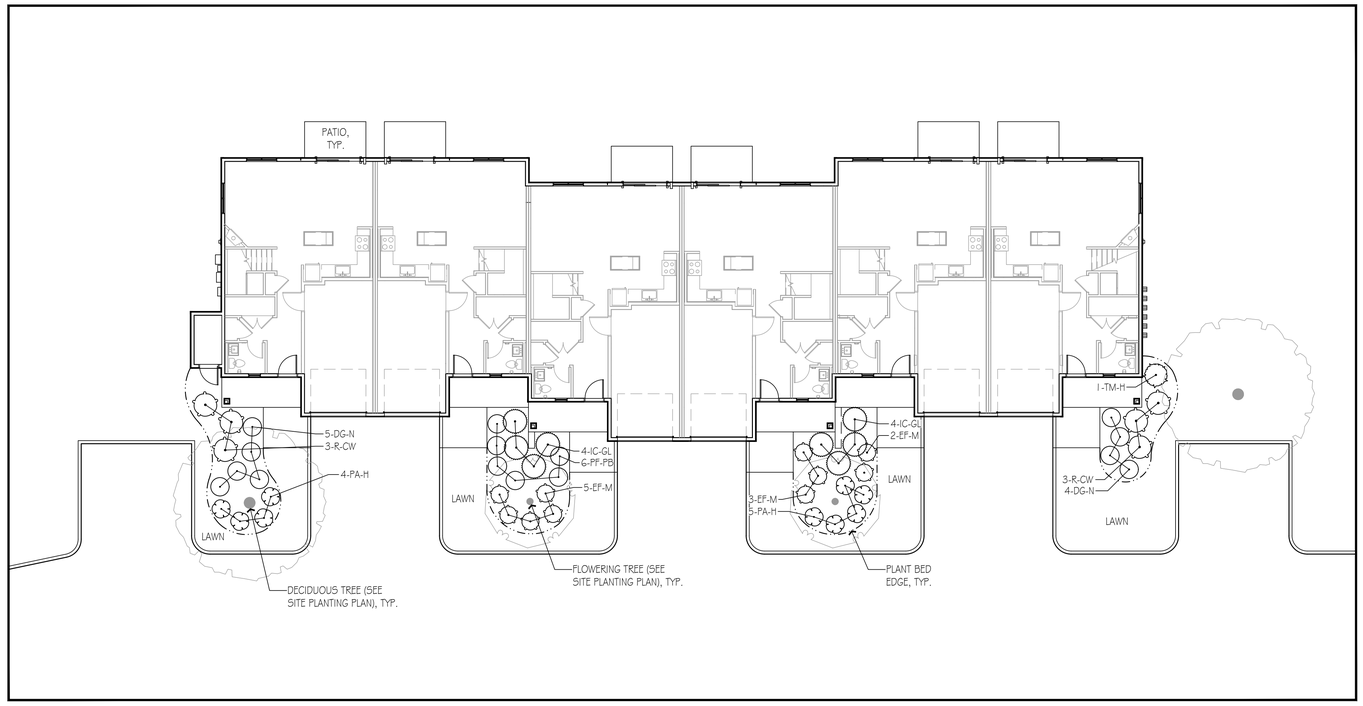
Prepared for: Mill Creek Residential Trust, Boston, MA

Drawn By: BNL | Checked By: TEM

Flats Building Typical Planting Plan

Scale: 1" = 10'-0"

Sheet: L2.1



PLANT SCHEDULE TOWNHOUSE TYPICAL

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE
DG-N	9	Deutzia gracilis 'Nikko'	Slender Nikko Deutzia	Cont.	15-18" HT.
EF-M	10	Euonymus fortunei `Moonshadow`	Moonshadow Euonymus	Cont.	15-18" SPD.
IC-GL	8	Ilex crenata `Green Lustre`	Green Luster Japanese Holly	B & B	2` HT.
PA-H	9	Pennisetum alopecuroides 'Hameln'	Hameln Fountain Grass	2 GAL	
PF-PB	6	Potentilla fruticosa `Pink Beauty`	Pink Beauty Potentilla	B & B	15-18" HT.
R-CW	6	Rhododendron `Cunningham`s White`	Cunningham White Rhododendron	B & B	2-2.5` HT.
TM-H	1	Taxus x media `Hicksii`	Hicks Yew	B & B	3-3.5` HT.

0 10 20 30 feet

SCALE: 1" = 10'

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Date: 7/12/22

Revisions:
Num. Date Description

MASSACHUSETTS LICENSED LANDSCAPE ARCHITECT NO. 918 REGISTERED LANDSCAPE ARCHITECT
7/12/22

Mill Creek Marshfield

Commerce Way Marshfield, Massachusetts

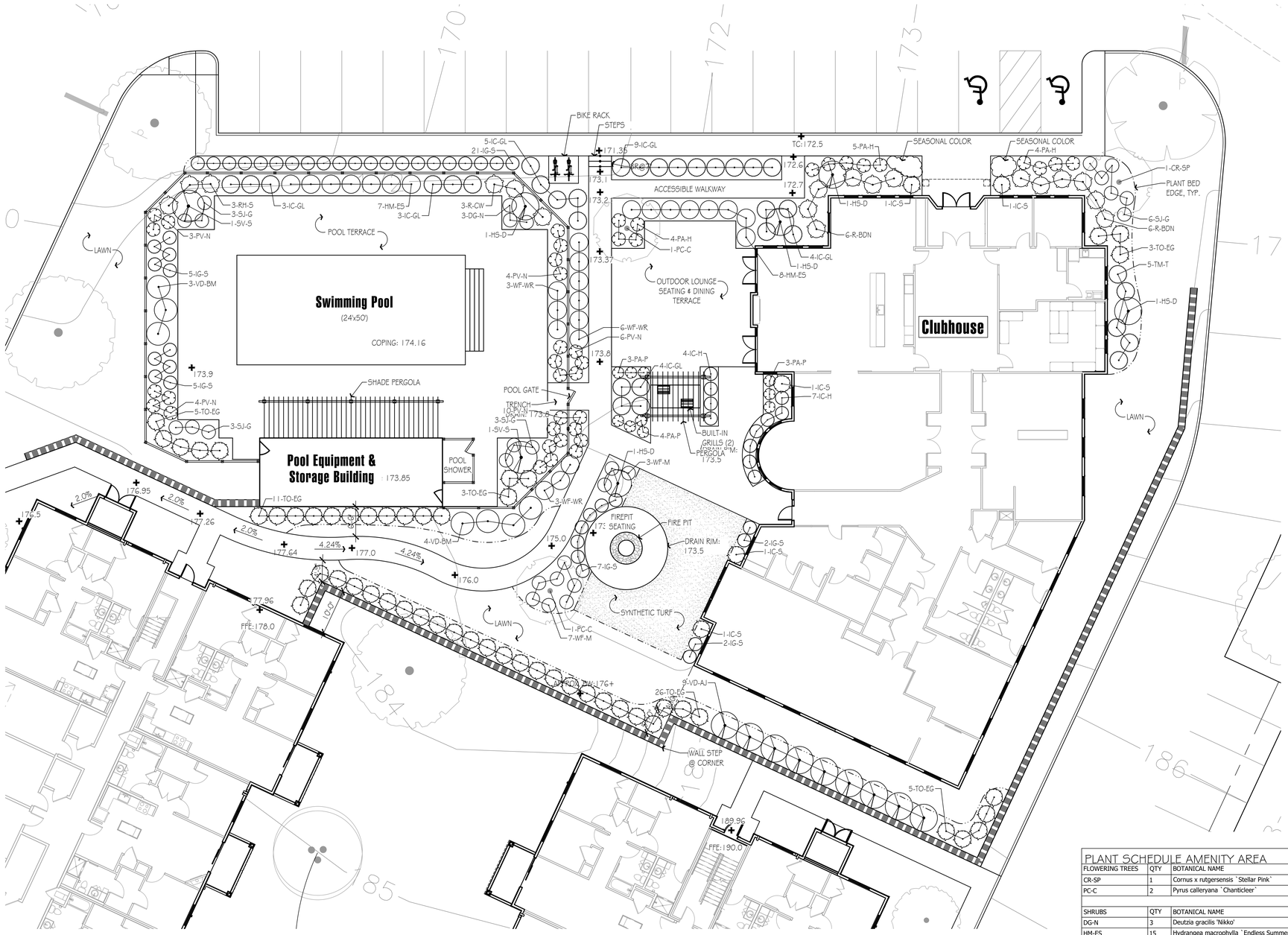
Prepared for: Mill Creek Residential Trust, Boston, MA

Drawn By: BNL | Checked By: TEM

Townhouse Typical Planting Plan

Scale: 1" = 10'-0"

Sheet: L2.2



PLANT SCHEDULE AMENITY AREA

FLOWERING TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	PLANT SIZE
CR-SP	1	Cornus x rutgersensis `Stellar Pink`	Pink Flowering Stellar Dogwood	B & B	3-3.5" CAL.	
PC-C	2	Pyrus calleryana `Chanticleer`	Chanticleer Pear	B & B	3-3.5" CAL.	
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE
DG-N	3	Deutzia gracilis 'Nikko'	Slender Nikko Deutzia	Cont.		15-18" SPD.
HM-ES	15	Hydrangea macrophylla `Endless Summer`	Endless Summer Hydrangea	B & B		2-2.5` HT.
HS-D	5	Hibiscus syriacus `Diana`	Diana Rose of Sharon	B & B		4-5` HT.
IC-GL	28	Ilex crenata `Green Lustre`	Green Luster Japanese Holly	B & B		2` HT.
IC-H	11	Ilex crenata `Helleri`	Heller Japanese Holly	Cont.		18-24" HT.
IC-S	5	Ilex crenata `Steeds`	Steeds Japanese Holly	B & B		3-3.5` HT.
IG-S	42	Ilex glabra `Shamrock`	Shamrock Inkberry	B & B		2` HT.
PA-H	13	Pennisetum alopecuroides 'Hameln'	Hameln Fountain Grass	2 GAL		
PA-P	10	Pennisetum alopecuroides `Piglet`	Piglet Dwarf Fountain Grass	1 GAL		
PV-N	27	Panicum virgatum 'Northwind'	Northwind Switch Grass	2 GAL		
R-BDN	12	Rhododendron `Boule de Neige`	Boule de Neige Rhododendron	B & B		2-2.5` HT.
R-CW	3	Rhododendron `Cunningham`s White`	Cunningham White Rhododendron	B & B		2-2.5` HT.
RH-S	3	Rhododendron `Scintillation`	Scintillation Rhododendron	B & B		2-2.5` HT.
SJ-G	15	Spiraea japonica `Goldflame`	Goldflame Spirea	Cont.		18-24" HT.
SV-S	2	Syringa vulgaris `Sensation`	Sensation Lilac	B & B		4-4.5` HT
TM-T	5	Taxus x media `Tauntoni`	Tauton Yew	B & B		2` HT.
TO-EG	53	Thuja occidentalis `Emerald Green`	Emerald Green Arborvitae	B & B		6-7` HT.
VD-AJ	9	Viburnum dentatum `Autumn Jazz`	Autumn Jazz Viburnum	B & B		4-4.5` HT
VD-BM	7	Viburnum dentatum `Blue Muffin`	Blue Muffin Viburnum	B & B		3-3.5` HT.
WF-M	10	Weigela florida 'Minuet'	Minuet Weigela	Cont.		15-18" SPD.
WF-WR	12	Weigela florida 'Wine & Roses'	Wine & Roses Weigela	B & B		3-3.5` HT.

0 10 20 30 feet

SCALE: 1" = 10'

Base information provided electronically by Hancock Associates of Boston, Massachusetts

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Date: 7/12/22

Revisions:
Num. Date Description

MASSACHUSETTS REGISTERED LANDSCAPE ARCHITECT BRIAN N. LAWS No. 918 7/12/22

Mill Creek Marshfield

Commerce Way Marshfield, Massachusetts

Prepared for: Mill Creek Residential Trust, Boston, MA

Drawn By: BNL | Checked By: TEM

Amenity Area Landscape Plan

Scale: 1" = 10'-0"

Sheet: L3.1

General Landscape Notes:

1.1) CONTRACTOR REQUIREMENTS:
A) ALL WORK SHALL COMPLY WITH APPLICABLE CODES AND REGULATIONS, FROM ALL FEDERAL, STATE AND LOCAL AUTHORITIES.

B) THE CONTRACTOR SHALL ARRANGE FOR AND OBTAIN ALL PERMITS AND LICENSES REQUIRED FOR THE COMPLETE WORK SPECIFIED HEREIN AND SHOWN ON ALL THE DRAWINGS. THE CONTRACTOR SHALL PAY FOR ANY FEES NOT WAIVED.

1.2) UTILITIES:
A) LANDSCAPE CONTRACTOR IS REQUIRED TO CONTACT THE RELEVANT UTILITY COMPANIES PRIOR TO DOING ANY EXCAVATION ON THE SITE. IF ANY WORK IS TO BE DONE AROUND UNDERGROUND UTILITIES, THE APPROPRIATE AUTHORITY OF THAT UTILITY MUST BE NOTIFIED OF THE IMPENDING WORK.

B) UTILITIES SHALL BE LOCATED AND MARKED PRIOR TO ANY INSTALLATION. ADJUSTMENTS MAY BE NECESSARY IN THE FIELD TO ACCOMMODATE UTILITY LOCATIONS. REPORT ANY CONFLICTS TO THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

C) THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES DONE TO EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF SATISFACTORY REPAIR OF ALL DAMAGE IN KIND RESULTING FROM THEIR FAILURE TO COMPLY.

1.3) PROTECTION OF EXISTING WORK: IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PERFORM ALL WORK IN A MANNER THAT PROTECTS WORK COMPLETED BY OTHERS, SUCH AS CURBS, UTILITIES, STORM DRAINAGE, FENCES, DRIVEWAY APRONS, DRIVES, VEGETATION, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF SATISFACTORY REPAIR OF ALL DAMAGE IN KIND RESULTING FROM THEIR FAILURE TO COMPLY.

1.4) QUANTITIES: A COMPLETE LIST OF PLANTS INCLUDING A SCHEDULE OF QUANTITIES, SIZES, TYPES, AND NAMES IS INCLUDED IN THIS SET OF DRAWINGS. IN THE EVENT OF DISCREPANCIES BETWEEN QUANTITIES OF PLANT IN THE PLANT LIST AND THE QUANTITIES SHOWN ON THE DRAWINGS, THE PLAN SHALL GOVERN. THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OF UNLABELED PLANTS IN PLAN FOR CLARIFICATION. THE LANDSCAPE ARCHITECT SHALL BE ALERTED BY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO FINAL BID NEGOTIATION.

1.5) APPLICABLE PLANT MATERIALS STANDARDS: ALL PLANT MATERIALS ARE TO COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN. PLANTING METHODS WILL BE IN ACCORDANCE WITH SITE-SPECIFIC REQUIREMENTS.

1.6) PLANT HARDINESS: ALL TREES AND SHRUBS SHALL BE NURSERY GROWN WITHIN A USDA PLANT HARDINESS ZONE, WHICH IS THE SAME AS, OR COLDER THAN, THE ZONE IN WHICH THE PROJECT IS LOCATED.

1.7) PLANTING SEASONS: PLANTING SHALL ONLY OCCUR DURING SPECIFIED SEASONS. SPRING SEASON SHALL BE FROM MARCH 1 TO JUNE 15. FALL PLANTING SEASON SHALL BE FROM SEPTEMBER 15 THROUGH NOVEMBER 15. NO PLANTING SHALL OCCUR WHEN THE GROUND IS FROZEN.

1.8) PLANT SUBSTITUTIONS: NO SUBSTITUTIONS OF PRODUCTS, PLANT TYPES OR SIZES SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE LANDSCAPE ARCHITECT. REQUESTS FOR SUBSTITUTION SHALL BE IN WRITING, AND SHALL STATE THE REASON FOR THE SUBSTITUTION REQUEST, THE SUGGESTED ALTERNATIVE AND THE CHANGES IN COST. REQUESTS FOR SUBSTITUTION IN PLANT MATERIALS SHALL STATE THE NAMES OF NURSERIES THAT HAVE BEEN UNABLE TO SUPPLY THE ORIGINALLY SPECIFIED MATERIAL.

1.9) THE LANDSCAPE ARCHITECT SHALL RESERVE THE RIGHT TO INSPECT ALL PLANT MATERIALS AT THE NURSERY, UPON SITE DELIVERY AND DURING INSTALLATION TO INSURE SPECIFICATIONS AND PROCEDURES ARE ADHERED TO.

1.10) MINIMUM SIZES: ALL PLANTS 3' OR GREATER IN HEIGHT OR SPREAD SHALL BE BALLED AND BURLAPPED. SIZES SPECIFIED IN THE PLANT LIST ARE MINIMUMS ON WHICH THE PLANTS ARE TO BE JUDGED.

1.11) DEAD PLANTS: DEAD PLANTS ARE TO BE REMOVED FROM THE SITE IMMEDIATELY, AND REPLACED WITH THE SAME PLANT & SIZE REGARDLESS OF SEASON, WEEKLY FROM THE JOB BY THE CONTRACTOR. THE CONTRACTOR SHALL MAINTAIN AN UPDATED COMPREHENSIVE LIST OF ALL DEAD MATERIALS REMOVED AND PRESENT A COPY OF THE LIST TO THE OWNER AND LANDSCAPE ARCHITECT AT THE END OF EVERY MONTH DURING THE CONTRACT PERIOD.

1.12) PLANT MATERIAL REMOVAL: NO EXISTING TREES SHALL BE REMOVED WITHOUT THE WRITTEN AUTHORIZATION FROM THE LANDSCAPE ARCHITECT EXCEPT WHERE NOTED ON THE PLANS. CONTRACTORS WHO REMOVE EXISTING TREES WITHOUT WRITTEN APPROVAL WILL BE REQUIRED TO MAKE REMEDIES DETERMINED BY THE GOVERNING URBAN FORESTER OR EQUIVALENT AUTHORITY. NO GRUBBING SHALL OCCUR WITHIN EXISTING TREE AREAS UNLESS SPECIFICALLY NOTED ON THE PLANS.

1.13) ALL DISTURBED AREAS NOT TO RECEIVE PLANT MATERIALS ARE TO BE LOAMED AND SEEDED AND BLENDED INTO EXISTING GRADE AND CONDITIONS. SEE SECTION 4.0.

1.14) LEDGE BOULDERS: IF DURING SITE EXCAVATION, LEDGE BOULDERS ARE AVAILABLE, THESE ARE TO BE STOCKPILED FOR USE IN EARTH BERMS IF APPLICABLE, WITH HAWK DESIGN, INC. PRIOR TO INSTALLATION. THIS ITEM WILL ONLY APPLY IF SO SPECIFIED ON DRAWINGS. BOULDERS SIZES TO BE STOCKPILED WILL RANGE FROM TWO TO FIVE FEET IN DIAMETER. SEE APPROPRIATE DETAIL FOR INSTALLATION COORDINATION.

1.15) SLEEVES: LANDSCAPE OR SITE CONTRACTOR SHALL PLACE INDIVIDUAL SLEEVES FOR LIGHTING AND IRRIGATION UNDER ANY PROPOSED WALKWAY OR VEHICULAR ROADWAY PRIOR TO INSTALLATION. COORDINATE SLEEVE LOCATIONS WITH IRRIGATION AND LIGHTING CONTRACTORS PRIOR TO INSTALLATION.

1.16) DO NOT CLOSE OR OBSTRUCT ANY STREET, SIDEWALK, ALLEY OR PASSAGEWAY WITHOUT PRIOR NOTIFICATION AND PERMISSION. CONDUCT OPERATIONS AS TO INTERFERE AS LITTLE AS POSSIBLE WITH THE USE ORDINARILY MADE OF ROADS, DRIVEWAYS, ALLEYS, SIDEWALKS OR OTHER FACILITIES NEAR ENOUGH TO THE WORK TO BE EFFECTED THEREBY.

Planting Materials:

2.1 PLANTING MATERIAL ITEMS IN SECTION 2.0 ARE TO BE INCORPORATED DURING PLANT INSTALLATION UNLESS OTHERWISE DEEMED UNNECESSARY IN ACCORDANCE WITH SOIL TEST RECOMMENDATIONS. SEE SECTION 3.1.

MULCH - MULCH WILL BE DOUBLE-SHREDDED PINE BARK MULCH.
- TREES AND SHRUBS SHALL RECEIVE AN EVEN 3" MULCH LAYER.
- GROUNDCOVERS, PERENNIALS AND ANNUALS SHALL RECEIVE AN EVEN 2" MULCH LAYER.

MANURE- TO BE WELL ROTTED, ODORLESS, UNLEACHED COW MANURE, CONTAINING NOT MORE THAN 15% BEDDED MATERIALS SUCH AS STRAW, WOOD CHIPS OR SHAVINGS, AGED NOT LESS THAN TWO YEARS OLD.

HERBICIDE- A PRE-EMERGENCE WEED KILLER IS TO BE USED ON ALL LAWN AND PLANTING AREAS PRIOR TO INSTALLATION AS PER MANUFACTURER'S SPECIFICATIONS. *HERBICIDES ARE NOT TO BE APPLIED IN RESTRICTED CONSERVATION AREAS.

FERTILIZER- ALL TREES AND SHRUBS TO HAVE SLOW RELEASE PACKET OR PELLET PLACED INTO THE PLANT PIT WITH A MINIMUM ANALYSIS OF 10-10-10. ALL GROUNDCOVERS, PERENNIALS AND ANNUALS ARE TO RECIEVE A BROADCAST APPLICATION OF A 14-14-14 FERTILIZER AT 3 LB PR 100 SQ. FT. APPLY AS PER MANUFACTURER'S INSTRUCTIONS. *FERTILIZERS ARE NOT TO BE APPLIED IN RESTRICTED CONSERVATION AREAS.

TOPSOIL- ACCEPTABLE TOPSOIL SHALL BE FERTILE, FRIABLE NATURAL LOAM, UNIFORM IN COMPOSITION, FREE OF STONES, LIMBS, PLANTS AND THIER ROOTS, DEBRIS AND OTHER EXTRANEOUS MATTER OVER ONE INCH IN DIAMETER. THE SOIL SHALL BE CAPABLE OF SUSTAINED PLANT GROWTH AND HAVE A 5% MINIMUM ORGANIC CONTENT. IN SITUATIONS WHICH REQUIRE A CUSTOM TOPSOIL OR STRUCTURAL SOIL, THE SOIL MIXTURE SPECIFICATION WILL BE PROVIDED BY THE LANDSCAPE ARCHITECT.

SOIL AMENDMENTS: APPLY AS NECESSARY ACCORDING TO SOIL TEST RESULTS, AS PER MANUFACTURES SPECIFICATIONS.

ANTI-DESICCANT- "WILT PRUF" NCF OR EQUAL APPLY AS PER MANUFACTURERS' SPECIFICATIONS.

Plant Installation:

3.1) SOIL TESTING: LANDSCAPE CONTRACTOR SHALL PROVIDE A CERTIFIED SOIL ANALYSIS PRIOR TO ANY PLANT INSTALLATION TO DETERMINE ANY NECESSARY AMENDMENTS TO THE EXISTING SOIL CONDITIONS FOR SEEDING AND PLANTING. THE ANALYSIS WILL ALSO BE REQUIRED FOR ESTABLISHING THE FERTILIZER PROGRAM REQUIRED. COORDINATE RESULTS AND PROVIDE WRITTEN RECOMMENDATIONS TO HAWK DESIGN, INC. 15 DAYS PRIOR TO INSTALLATION.

3.2) ALL PLANTS SHALL BE TRANSPORTED TO THE SITE IN COVERED TRUCKS, TARPAULIN COVERS SHALL BE UTILIZED TO PREVENT WIND DAMAGE OF LOAD.

3.3) DELIVER PLANT MATERIALS IMMEDIATELY PRIOR TO PLACEMENT. KEEP PLANT MATERIALS MOIST. DO NOT STORE PLANT MATERIAL ON PAVED AREAS. ROOTS OR BALLS SHALL BE PROTECTED FROM THE SUN OR DRYING WINDS. AS REQUIRED BY TEMPERATURE OR WIND CONDITIONS, APPLY ANTI-DESICCANT EMULSION TO PREVENT DRYING OUT OF PLANT MATERIALS.

3.4) CONDITIONS FOR PLANT REJECTION:
A) REJECT PLANTS WHEN BALL OF EARTH SURROUNDING ROOTS HAS BEEN CRACKED OR BROKEN PREPARATORY TO OR DURING THE PROCESS OF PLANTING.

B) WHEN BURLAP, STAVES AND ROPES REQUIRED IN CONNECTION WITH TRANSPLANTING HAVE BEEN DISPLACED PRIOR TO ACCEPTANCE.

C) WIND DAMAGED PLANT MATERIAL FROM POOR TARPAULIN COVER PROCEDURES ARE SUBJECT TO REJECTION.

3.5) ALL PLANT MATERIAL, WHICH CANNOT BE PLANTED IMMEDIATELY ON DELIVERY, SHALL BE SET ON THE GROUND IN A SHADED LOCATION AND SHALL BE TEMPORARILY PROTECTED WITH SOIL OR OTHER ACCEPTABLE MATERIAL. TEMPORARY WATERING OR IRRIGATION SHALL BE INCORPORATED AND REGULARLY CONDUCTED ON PLANTINGS IN HOLD AREAS.

3.6) IN CASE OF CONFLICTS DURING CONSTRUCTION WITH UTILITIES, ROCK MATERIALS, TREE ROOTS OR OTHER OBSTRUCTIONS FOR THE EXCAVATION OF SHRUB BEDS AND TREE PITS. CONTACT LANDSCAPE ARCHITECT FOR APPROVED ALTERNATE LOCATIONS.

3.7) SOIL PERMABILITY: TEST DRAINAGE OF PLANTING BEDS AND PITS BY FILLING WITH WATER TWICE IN SUCCESSION. CONDITIONS PERMITTING THE RETENTION OF WATER FOR MORE THAN 24 HOURS SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT.

3.8) SOIL EXCAVATIONS:
A) EXCAVATE TREE PITS AND SHRUB BEDS TO DEPTHS REQUIRED BY PLANTING DETAILS. ALL PITS SHALL BE CIRCULAR IN OUTLINE, EXCEPT FOR WHOLE BEDS. SEE APPROPRIATE PLANTING DETAILS.

B) SOIL EXCAVATIONS FOR BALLED & BURLAP AND CONTAINER PLANTINGS MUST BE NO LESS THAN 2X ROOT BALL DIAMETER, SEE PLANTING DETAILS. IF QUESTIONABLE SUBSURFACE SOIL CONDITIONS EXIST SUCH AS POOR DRAINAGE CONDITIONS, RUBBLE OR OBSTRUCTIONS, REPORT TO THE LANDSCAPE ARCHITECT AND CONSTRUCTION MANAGER BEFORE PLANTING.

3.9) GRADING:
A) VERIFY GRADES PRIOR TO PLANTING, THE CONTRACTOR SHALL VERIFY THAT CONSTRUCTED GRADES ARE AS INDICATED ON PLANS. THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IF ADJUSTMENTS TO PLANT PLACEMENT MAY BE REQUIRED DUE TO FIELD CONDITIONS AND FINAL GRADING.

B) POSITIVE DRAINAGE SHALL BE MAINTAINED AWAY FROM AND AROUND BUILDINGS (REFER TO ENGINEERS GRADING PLANS). REPORT ANY CONFLICTS TO HAWK DESIGN, INC. PRIOR TO INSTALLATION.

C) FINISH GRADE OF PLANTINGS SHALL BE EQUIVALENT TO FORMER EXISTING GRADE OF PLANT IN THE NURSERY.

3.10) BALLED AND BURLAPED (B&B) MATERIALS:
A) CUT WIRE BASKETS ONCE IN THE PLANT PIT AND PEEL WIRE BACK.

B) TAGS AND TWINE ARE TO BE REMOVED AND BURLAP IS TO BE ROLLED BACK ONE-THIRD ON ALL B&B PLANT MATERIAL. ANY SYNTHETIC BURLAP SHALL BE COMPLETELY REMOVED FROM ANY PLANT MATERIAL

Plant Installation Cont'd

3.11) CONTAINER GROWN STOCK: SHALL BE REMOVED FROM CONTAINER BY CUTTING CONTAINER AWAY TO AVOID ROOT DAMAGE TO PLANT ROOT SYSTEM. IF PLANT ROOT IS BOUND, SLICE ROOT BALLS APPROXIMATELY 2" DEEP WITH KNIFE OR SHARP SPADE.

3.12) DO NOT USE MUDDY OR FROZEN SOIL TO BACKFILL PLANTINGS.

3.13) WATERING: THOROUGHLY WATER UNTIL SOIL IS SATURATED AROUND ALL TREES AND SHRUBS AFTER PLANTING AND THROUGHOUT THE TIME PERIOD UNTIL FINAL ACCEPTANCE FROM CLIENT. DURING DRY CONDITIONS, WATER AS REQUIRED TO MAINTAIN PLANTS IN A WILT-FREE CONDITION.

3.14) PRUNING: TREES SHALL BE PRUNED TO BALANCE TOP GROWTH WITH ROOTS AND TO PRESERVE THEIR NATURAL CHARACTER AND TYPICAL GROWTH HABIT. PRUNING SHALL BE RESTRICTED IN GENERAL TO THE SECONDARY BRANCHES AND SUCKER GROWTH. ALL CUTS TO BE FLUSH WITH TRUNK. DO NOT CUT A LEADER. THE LANDSCAPE ARCHITECT WILL REJECT ALL PLANTS DISFIGURED BY POOR PRUNING PRACTICES. ALL PRUNING CUTS SHALL REMAIN UNPAINTED.

3.15) STAKING AND GUYING: ALL TREES TO BE STAKED AND GUYED WITHIN 48 HOURS OF PLANTING. METHODS AND MATERIALS FOR STAKING AND GUYING ARE ILLUSTRATED IN INDIVIDUAL PLANTING DETAILS. NEATLY FLAG ALL GUY WIRES WITH ROT RESISTANCE YELLOW TREE MARKING RIBBON.

3.16) STAKE OUT PLANT LOCATIONS: PRIOR TO PLANTING THE CONTRACTOR SHALL LAYOUT THE EXTENT OF THE PLANT BEDS AND PROPOSED LOCATIONS FOR B4B PLANTS FOR REVIEW BY THE OWNER AND LANDSCAPE ARCHITECT.

3.17) PLANTING FIELD ADJUSTMENTS:
A) THE CONTACTOR IS TO SLIGHTLY ADJUST PLANT LOCATIONS IN THE FIELD AS NECESSARY TO BE CLEAR OF DRAINAGE SWALES AND UTILITES.

B) LARGE GROWING PLANTS ARE NOT TO BE PLANTED IN FRONT OF WINDOWS OR UNDER BUILDING OVERHANGS. NOTIFY THE LANDSCAPE ARCHITECT OF DISCREPANCIES IN PLANTING PLAN VS. FIELD CONDITIONS.

C) SHRUBS PLANTED NEAR HVAC UNITS ARE TO BE LOCATED SO THAT SHRUBS AT MATURITY WILL MAINTAIN ONE FOOT (1) AIRSPACE BETWEEN THE UNIT AND THE PLANT. ANY PLANTING SHOWN ADJACENT TO CONDENSER UNITS SHALL BE PLANTED TO SCREEN THE UNITS. SHOULD THE CONDENSER UNITS BE INSTALLED IN LOCATIONS DIFFERENT FROM THOSE SHOWN ON THE PLAN, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE LANDSCAPE ARCHITECT AND INSTALL THE MATERIAL AROUND THE CONDENSERS AND ADJUST THE OTHER PLANTING ACCORDINGLY.

3.18) PLANT BED EDGES/LINES: GROUPS OF SHRUBS, PERENNIALS AND GROUNDCOVERS SHALL BE PLACED IN A CONTINUOUS MULCH BED WITH SMOOTH CONTINUOUS LINES. ALL MULCHED BED EDGES SHALL BE CURVILINEAR IN SHAPE, FOLLOWING THE CONTOUR OF THE PLANT MASS. TREES LOCATED WITHIN 4 FEET OF PLANT BEDS SHALL SHARE THE SAME MULCH BEDS.

3.19) A.D.A. - THE AMERICAN WITH DISABILITIES ACT STANDARDS REQUIRE THAT A 7 FOOT VERTICAL CLEARANCE BE MAINTAINED FROM TREE BRANCHES TO FINISHED GRADE WHERE PEDESTRIANS SIDEWALKS AND/OR TRAILS ARE LOCATED. THE CONTRACTOR IS TO ADJUST TREE PLANTINGS IN FIELD TO SLIGHTLY MINIMIZE BRANCH OVERHANG AND COMPLY WITH THE A.D.A. ACT.

3.20) TREE SPACING MINUMUMS: TREES SHALL BE LOCATED A MINIMUM OF 4 FEET FROM RETAINING WALLS AND WALKS WITHIN THE PROJECT. IF A CONFLICT ARISES BETWEEN ACTUAL SIZE OF AREA AND PLANS, THE CONTRACTOR SHALL CONTACT THE LANDSCAPE ARCHITECT FOR RESOLUTION. FAILURE TO MAKE SUCH CONFLICTS KNOWN TO LANDSCAPE ARCHITECT WILL RESULT IN CONTRACTOR'S LIABILITY TO RELOCATE MATERIALS.

Seeding and Sodding:

4.1) SEEDING OF LAWN AREAS: GRASS SEED APPLICATION SHALL BE SPREAD AT THE RATE OF 5 LBS. PER 1,000 SQUARE FEET. SEEDING SHALL BE ACCOMPLISHED BY MEANS OF A HYDRO-SEEDING PROCESS.

4.2) WATERING OF SEEDED AREAS: 24 HOURS AFTER HYDRO SEEDING, THE CONTRACTOR SHALL WATER THE SEEDED AREA LIGHTLY AND SUFFICIENTLY TO A DEPTH OF TWO INCHES (2") 2 TIMES A DAY (BETWEEN THE HOURS OF 7 PM AND 7 AM), UNTIL THE SEEDS ARE ESTABLISHED.

4.3) SEEDED AREA PROTECTION: THE CONTRACTOR SHALL ERECT SUITABLE SIGNS AND BARRICADES NOTIFYING THE PUBLIC TO KEEP OFF THE SEEDED AREAS UNTIL WELL ESTABLISHED. ANY TRAFFIC DAMAGE AND VANDALISM THAT MAY OCCUR PRIOR TO FINAL ACCEPTANCE OF THE WORK SHALL BE REPAIRED AND RESEEDED AT THE OWNER'S EXPENSE. ANY DISTURBED OR DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED IN ACCORDANCE WITH THE SPECIFICATIONS AT THE CONTRACTORS EXPENSE.

4.4) LAYING OF SOD: A KENTUCKY BLUEGRASS SOD MIX - BY LOCAL SOURCE AS SELECTED BY CONTRACTOR, SHALL BE FRESHLY CUT FROM THE SAME FIELD WITH 1/2 -3/4 INCHES OF SOIL. SOD SHALL BE LAID IMMEDIATELY WITH ANY STORED SOD BEING UNROLLED GRASS SIDE UP AND KEPT WATERED. LAY COURSES TIGHTLY TOGETHER WITHOUT OVERLAPPING WITH THE JOINTS STAGGERED. AFTER SODDING IS COMPLETE, ROLL LIGHTLY. THE CONTRACTOR SHALL WATER THE SODDED AREAS TO A DEPTH OF AT LEAST SIX INCHES AFTER THE SODDING PROCESS. OWNER SHALL THEN BE RESPONSIBLE FOR WATERING. THE FREQUENCY SHALL BE DETERMINED BY RAIN FALL AND WINDS WITH THE UPPER TWO OR THREE INCHES OF SOIL NOT DRYING OUT MARKEDLY.

4.5) SODDED AREA: INSPECTION AND ACCEPTANCE: FOUR WEEKS AFTER CONTRACTOR COMPLETES INSTALLATION, LANDSCAPE ARCHITECT SHALL INSPECT THE LAWN TO DETERMINE THE ACCEPTABILITY OF THE INSTALLATION. SODDED AREAS FAILING TO SHOW ADEQUATE ROOTING INTO THE SUBSOIL, OVERLAPPING, COURSE SEPARATION, UNEVENNESS OF THE SURFACE, UNEVEN COURSE COLOR AND EXCESSIVE BROADLEAF WEED CONTENT SHALL BE REPLACED. THE COST SHALL BE BORNE BY THE CONTRACTOR EXCEPT WHERE VANDALISM OR NEGLECT ON THE PART OF OTHERS NOT UNDER THE CONTRACTORS CONTROL HAS RESULTED IN DAMAGE.

4.6) FINAL APPROVAL: SEEDED AND SODDED AREAS WILL RECEIVE FINAL APPROVAL IF COVERAGE IS FULL AND CONSISTENT, FREE OF BARE SPOTS AND WEED FREE. WHEN GRASS IS CUT AT 2" HEIGHT NO SOIL SHOULD BE VISIBLE. SOD AREAS MUST HAVE RECEIVED A MINIMUM OF TWO MOWINGS. AREAS SODDED AFTER NOVEMBER 1ST WILL BE ACCEPTED THE FOLLOWING SPRING - ONE MONTH AFTER THE START OF THE GROWING SEASON, IF THE ABOVE CRITERIA HAS BEEN MET.

Maintenance:

5.1) MAINTENANCE DURING INSTALLATION: MAINTENANCE OPERATIONS SHALL BEGIN IMMEDIATELY AFTER EACH PLANT IS PLANTED AND SHALL CONTINUE AS REQUIRED UNTIL FINAL ACCEPTANCE AND THEN FOR THE GUARANTEE PERIOD. PLANTS SHALL BE KEPT IN A HEALTHY, GROWING CONDITION BY WATERING, PRUNING, SPRAYING, WEEDING AND ANY OTHER NECESSARY OPERATIONS OF MAINTENANCE. PLANT SAUCERS AND BEDS SHALL BE KEPT FREE OF WEEDS, GRASS AND OTHER UNDESIRED VEGETATION. PLANTS SHALL BE INSPECTED AT LEAST ONCE PER WEEK BY THE CONTRACTOR DURING THE INSTALLATION PERIOD AND ANY NEEDED MAINTENANCE IS TO BE PERFORMED PROMPTLY.

5.2) GRASS AND WEED CONTROL: THE CONTRACTOR SHALL BE RESPONSIBLE FOR MOWING ALL GRASS AROUND LANDSCAPE BEDS AND INDIVIDUAL TREES AND SHRUBS UNTIL FINAL ACCEPTANCE. WEED CONTROL AREAS SHALL INCLUDE ALL LANDSCAPE BEDS AND THE AREA WITHIN 2 FEET OF THE OUTER EDGE OF THE MULCH AREA OR INDIVIDUAL TREE/SHRUBS.

5.3) THE CONTRACTOR SHALL WATER, FERTILIZE, WEED, CULTIVATE, REMULCH, SPRAY TO CONTROL INSECT INFESTATION AND DISEASE AND PERFORM ANY OTHER GOOD HORTICULTURAL PRACTICE NECESSARY TO MAINTAIN THE PLANTS IN A LIVING HEALTHY CONDITION UPON THE TIME FOR TERMINATION OF HIS RESPONSIBILITY FOR CARE AS SET OUT HEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PLANTS THROUGHOUT LIFE OF THE CONTRACT.

5.4) ALL PLANTS STOLEN, DAMAGED OR DESTROYED BY FIRE, AUTOMOBILES, VANDALISM OR ANY OTHER CAUSE, WITH THE EXCEPTION OF PLANTS DAMAGED OR DESTROYED BY THE OWNERS MAINTENANCE OPERATIONS, SHALL BE REPLACED BY THE OWNER PRIOR TO THE DATE OF FINAL ACCEPTANCE.

5.5) LANDSCAPE CONTRACTOR SHALL PREPARE MAINTENANCE SPECIFICATIONS AND SCHEDULE ANNUAL CARE OF ALL PLANTED AND LAWN AREAS INCLUDING FERTILIZING, WEEDING, MULCHING, BED EDGING, PRUNING AND PEST PREVENTION AND TREATMENT.

Plant Material Guarantee:

*CONTRACTOR SHALL GUARANTEE IN WRITING ALL PLANT MATERIAL AND LANDSCAPE IMPROVEMENTS FOR A PERIOD OF ONE YEAR. THE GUARANTEE IS TO INCLUDE THE FOLLOWING:

6.1) INSPECTIONS: PERFORM PERIODIC INSPECTIONS DURING GUARANTEE PERIOD WITH RESULTING WRITTEN REPORTS TO OWNER, PROJECT ADMINISTRATOR AND LANDSCAPE ARCHITECT STATING CONDITIONS AND RECOMMEND MAINTENANCE MODIFICATIONS. THE CONTRACTOR MUST CONTACT THE OWNER AND LANDSCAPE ARCHITECT AT LEAST 10 DAYS IN ADVANCE TO SCHEDULE ACCEPTANCE INSPECTION(S).

6.2) REMOVAL AND REPLACEMENT OF PLANTS PROVIDED BY CONTRACTOR TO BE DONE WITHIN THIRTY DAYS OF NOTIFICATION BY OWNER OF THEIR UNSATISFACTORY CONDITION DURING GROWING SEASONS. REPLACEMENT MATERIALS MUST BE EQUAL IN TYPE AND SIZE PER THE PROJECT'S PLANT LIST.

6.3) WHEN REPLACEMENT PLANT SPECIES IS EITHER NOT READILY AVAILABLE OR NO LONGER SUITABLE TO EXISTING SITE CONDITIONS WRITTEN NOTICE RECOMMENDATION OF SUBSTITUTION TO BE PROVIDED TO THE OWNER AND LANDSCAPE ARCHITECT WITHIN FIFTEEN DAYS FOR APPROVAL.

6.4) REMOVAL OF TREE'S SUPPORTS AND DEAD LIMBS PRIOR TO END OF GUARANTEE INSPECTION PERIOD.

6.5) CONTINUE WITH MAINTENANCE, SEE SECTION 5.0

6.6) GUARANTEE SHALL BEGIN UPON DATE OF FINAL ACCEPTANCE FROM OWNER AND WILL CONTINUE FOR ONE YEAR.

Site Cleanup:

7.1) SITE WORK CONDITIONS: EXCESS WASTE MATERIAL SHALL BE REMOVED DAILY WHEN PLANTING IN AN AREA HAS BEEN COMPLETED, THE AREA SHALL BE CLEARED OF ALL DEBRIS, SOIL PILES AND CONTAINERS DAILY. WHERE EXISTING GRASS AREAS HAVE BEEN DAMAGED OR SCARRED DURING PLANTING OPERATIONS, THE CONTRACTOR SHALL RESTORE DISTURBED AREAS TO THEIR ORIGINAL CONDITIONS AT HIS EXPENSE.

7.2) CLEAN PAVED AREAS UTILIZED FOR HAULING OR EQUIPMENT STORAGE AT END OF EACH WORKDAY.

7.3) MAINTAIN VEHICLES AND EQUIPMENT IN CLEAN CONDITION TO PREVENT SOILING OF ROADS, WALKS OR OTHER PAVED OR SURFACED AREAS.

7.4) REMOVE PROTECTIVE BARRIERS AND WARNING SIGNS AT TERMINATION OF LAWN ESTABLISHMENT.

Irrigation Notes:

8.1) ALL IRRIGATION SYSTEM COMPONENTS SHALL BE SUPPLIED BY REGIONALLY AUTHORIZED DISTRIBUTORS TO PROVIDE SINGLE SOURCE RESPONSIBILITY FOR WARRANTY SERVICE AND OPERATIONS TO CONFORM TO SPECIFICATIONS IN ALL RESPECTS.

8.2) THE CONTRACTOR IS TO SUBMIT PLANS PREPARED BY A IRRIGATION SPECIALIST TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION.

8.3) ALL LINE VOLTAGE TO CONTROLLER AND ASSOCIATED BREAKER, CONDUIT ETC TO BE PERFORMED BY A LICENSED ELECTRICIAN.

8.4) ALL WIRES FOR RAIN SENSOR TO BE RUN IN SCHEDULE 40 PVC CONDUIT FOR APPLICATIONS IN EXPOSED AREAS UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE ARCHITECT.

8.5) SLEEVES TO BE COORDINATED, LOCATED AND INSTALLED UNDER ALL HARDSCAPE FEATURES SUCH AS WALKS, WALLS AND DRIVEWAYS. THE CONTRACTOR IS TO IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT OF ALL CONFLICT AND DISCREPANCIES.

8.6) CONTRACTOR WILL REVIEW WITH CLIENT ALL IRRIGATION PROCEDURES AND PROCESSES (i.e. TIMERS, ZONES AND ALL OTHER ITEMS INVOLVED W/ THE IRRIGATION SYSTEM) AND PROVIDE NECESSARY DOCUMENTATION FOR OPERATION OF IRRIGATION SYSTEM.

8.7) THE CONTRACOR IS TO PROVIDE WIRES FOR FUTURE EXPANSION IN 16" DIAMETER VALVE BOX AS DIRECTED BY THE LANDSCAPE ARCHITECT OR CLIENT.

8.8) UNLESS INDICATED OTHERWISE, ALL PLANT BEDS ARE TO BE IRRIGATED WITH DRIP IRRIGATION, ALL LAWN AREAS TO BE IRRIGATED WITH SPRAY HEADS. MODELS/TYPES T..B.D. AND VERIFIED BY LANDSCAPE ARCHITECT AND IRRIGATION CONTRACTOR

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Land Planning
Sagamore, MA
508-833-8800
info@hawkdesigninc.com

HAWK DESIGN, INC. 2022

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Date: 7/12/22

Revisions:
Num. Date Description

MASSACHUSETTS
BRIAN NELSON
No. 51R
REGISTERED LANDSCAPE ARCHITECT
7/12/22

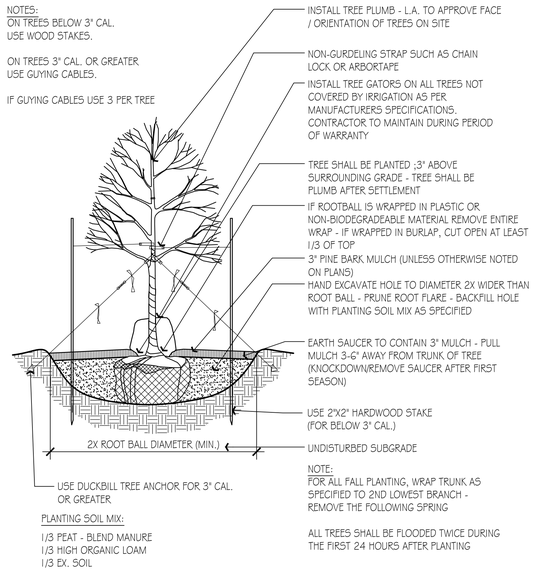
Mill Creek Marshfield
Commerce Way Marshfield, Massachusetts
Prepared for: Mill Creek Residential Trust, Boston, MA

Drawn By: BNL | Checked By: TEM

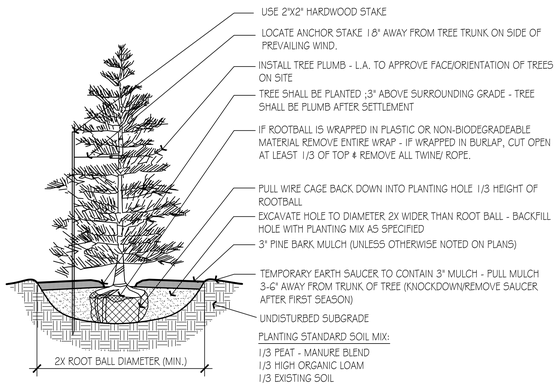
Planting Specifications

Scale: N/A

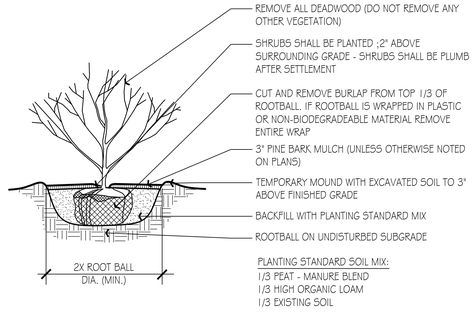
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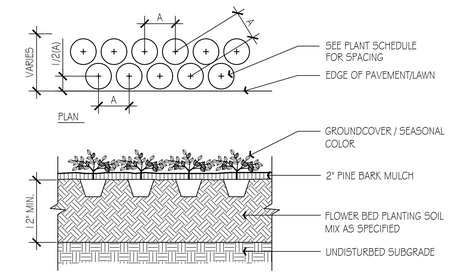
Deciduous Tree Planting
Not to Scale



Conifer Tree Planting
Not to Scale



Shrub Planting
Not to Scale



Groundcover / Annual / Perennial Planting
Not to Scale

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Date: 7/12/22

Revisions:
Num. Date Description



Mill Creek Marshfield
Commerce Way Marshfield, Massachusetts
Prepared for: Mill Creek Residential Trust, Boston, MA

Drawn By: BNL | Checked By: TEM

Planting Details

Scale: N/A

Sheet: D2

Attachment E

Trash Management Plan

Mill Creek Marshfield
Trash Management Plan

Mill Creek engages a national contractor to manage and actively provide services to remove all trash and recycling from its communities where applicable. Our third-party agent is bound by the contractual language below and must observe and practice all jurisdictional requirements to remove and discard all community waste and recycling.

Our contractor will provide management of its Conforming Waste and recycling services at the site, including the following: (a) assisting Mill Creek with establishing permanent, recurring Service for all Sites using the network of Service Providers ("Permanent Services)"; (b) assisting Mill Creek with establishing temporary services which shall include, but are not limited to, disposition of obsolete or damaged materials, compactor relocation, power washing, extra pick-ups requested by Mill Creek, dry runs (e.g., when a truck cannot pick up a compactor due to obstruction or inaccessibility to the compactor), emergency hauls, overweight hauls, container delivery, removal and relocation, and other temporary services of any kind ("Temporary Services"); (c) providing consolidated billing to each individual Site for all Services provided by Service Providers; and (d) analyzing Mill Creek's waste stream for other waste management and recycling opportunities.

Recycling Services. The following shall apply to the collection and recycling of fiber and non-fiber recyclables ("Recyclable Materials"). Special terms and conditions, if any, with respect to such Services shall be set forth on an exhibit to this Agreement and shall be incorporated herein .

Single stream Recyclable Materials ("Single Stream") will consist of Mill Creek's entire volume of uncoated office and writing paper, magazines, pamphlets, mail, newspaper; flattened, uncoated cardboard, paperboard boxes; aluminum food and beverage containers, tin or steel cans; glass, and rigid container plastics #1, #2 and #5, including narrow neck containers and tubs. Any material not specifically set forth above, including but not limited to foam, film plastics, plastic bags, napkins, tissue, paper towels, or paper that has been in contact with food, is unacceptable. Glass may not be accepted at all locations. All Single Stream must be clean, dry, un-shredded, empty, loose and un-bagged.

Source-separated wastepaper, cardboard, plastics and metals shall consist of Customer's entire volume of such materials and be provided in accordance with the most current ISRI Scrap Specifications Circular and any amendments thereto or replacements thereof. All other Recyclable Materials will be delivered in accordance with industry standards or such specifications communicated to Mill Creek by WMNS from time-to-time.

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Attachment F

Stormwater Operations & Maintenance Plan (O&M)

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OPERATION AND MAINTENANCE PLAN
MILL CREEK MARSHFIELD
MARSHFIELD, MA

INTRODUCTION

The proposed project includes the construction of seven 3-story apartment buildings, five townhouse buildings, a clubhouse, a maintenance building and a wastewater treatment facility. Drives, parking sidewalks, pool, utilities, stormwater management systems, and soil absorption systems are also a part of this project.

Parcels included in this project are located in the Enterprise Park Subdivision Masterplan (The Masterplan) which was approved in 2004. While not all parcels under this masterplan have been developed, all proposed stormwater structures in the masterplan are constructed and are working as intended as of this writing.

The purpose of the Operation and Maintenance Plan is to ensure that the stormwater management system functions as designed, to minimize the potential of siltation of the wetlands from overland flow, and to minimize the impact on the buffer zone adjacent to the wetlands. The following notes and details are intended to be a minimum set of guidelines, and the Contractor shall be responsible for their implementation. Should additional control be required, the contractor shall take whatever steps are necessary.

The project site includes Lot 6 of the Masterplan. The project is bounded by Commerce Way to the North, Lot 5 to the west, land owned by the Town of Marshfield DPW to the south, and lot 8 and land owned by the Town of Marshfield Conservation Commission to the east.

Topography of the project site is moderate, sloping in the northwesterly direction toward Commerce Way. The high elevation onsite is 197± on the southeast corner of the site, and the low elevation is 146± at the northwest corner of the site.

Presently there are no stormwater controls on the project site. Stormwater runoff flows overland unmitigated northwest offsite to Modera Marshfield and Commerce way. The sub-catchment system from Commerce Way discharges into a large detention basin and forebay northwest of the project site. This detention basin is the primary Best Stormwater Management Practice (BMP) for mitigation in the masterplan.

Land cover on the project site is entirely wooded. There are no natural water bodies on or near the project site. The FEMA Flood Map for the Town of Marshfield does not indicate a flood plain area within the project site.

Stormwater overflow from the offsite detention basin eventually discharges to Huldah Brook in Pembroke, which discharges to Sump Pond, and eventually discharges to North River and the Atlantic Ocean.

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SILTATION CONTROLS

The first phase of construction will consist of the placement of siltation controls in accordance with the details and at the locations indicated on the plans. No further construction activity will take place until the siltation controls are inspected and approved. No encroachment or alteration shall occur beyond the erosion control barriers. Erosion control barriers shall be maintained and replaced, if necessary, throughout the course of construction.

SITE CONSTRUCTION

Prior to construction the proposed location of earth stockpiles shall be shown on a plan and shall be approved by the Engineer. Stockpiles that are to be left for more than fourteen (14) days shall be shaped and secured by siltation controls around the downstream perimeter and shall be stabilized by temporary seeding or netting. After erosion and sedimentation controls are in place, the site grading operation will commence. Topsoil on the site will be stockpiled separately and the pile stabilized. The site will be graded to subgrade with the excess soil stockpiled in the designated areas and the utilities installed.

All unvegetated areas, including stockpiles, that will remain unvegetated for greater than 14 days should be mulched or seeded within 7 days of their grading. The perimeter sedimentation controls at the stockpiles should be in place at the end of each day and before rain events.

During the construction of the drainage system, care must be taken to prevent siltation from entering the system. Drainage pipes in open excavations shall not remain open overnight. Silt sacks shall be placed in the catch basins until the surrounding soils are stabilized and the binder course of pavement has been placed. The silt and sand, which may accumulate around the catch basins, shall be removed after every rainstorm. Catch basins shall be set to binder grade until immediately prior to placement of the top course, at which time they will be set at final grade. The drainage system shall be cleaned prior to acceptance.

Work shall commence as soon as practical on the perimeter disturbed areas not to be paved. A minimum of four inches (4") of topsoil is to be placed in these areas and the areas hydroseeded. All areas shall be stabilized within sixty (60) days of disturbance. When weather conditions do not permit stabilization by seeding, hay mulch, straw mats, jute netting or other approved means shall be used for temporary stabilization.

INSPECTION AND MAINTENANCE

Prior to construction, the Contractor shall formulate a schedule for inspection and maintenance of the erosion control measures. This schedule shall establish, at a minimum, the weekly inspections of the sedimentation controls, stockpiles, catch basins, unstabilized areas within the site and a report of any required maintenance. The schedule will also appoint an individual who will be responsible for performing the weekly inspections.

During the weekly inspection, and at any time during the course of construction, the Engineer, the Owner or the individual responsible for the erosion control measures may direct the Contractor to

take immediate action to correct a deficiency or to increase the erosion control measures.

ADDITIONAL REQUIREMENTS

The contractor shall employ measures to control dust during construction. All debris shall be properly contained and disposed of.

Commerce Way shall be swept clean of any soils tracked onto the pavement from vehicles exiting the site.

An extra supply of erosion control tubes and siltation fence shall be kept on site to provide for additional siltation control, as may be required. Any construction equipment observed leaking or dripping oil shall be removed from the site. Temporary grass stabilization shall be applied at rate of 4-pounds/1,000 sf. and conform to the following mix summarized in Table 1.

Table 1
Temporary Seed Mixture

SEED	% WEIGHT	
	Min.	Max.
Winter Rye	80	
Red Fescue (Creeping)	4	
Perennial Rye Grass	3	
Red Clover	3	
Other Crop Grass	0.5	
Noxious Weed Seed		0.5
Inert Matter		1

CONSTRUCTION SCHEDULE

A. Prior to construction, erosion control tubes and siltation fence will be placed at the limits of work, as indicated on the site drawings. The crushed stone access drive shall be constructed. The construction access drive shall be at least 20 feet wide and 50 feet long.

B. The area of the proposed work shall be cleared and grubbed with topsoil being stockpiled.

C. Top soil shall be stockpiled and screened for reuse.

D. The excavation work for the building construction will then commence.

E. The excavation work for the stormwater infiltration/detention systems would then commence, and the infiltration systems installed.

F. Storm drains, sewer, water and other utilities to be installed.

G. Additional siltation fence, erosion control tubes and other erosion controls will be added

to protect the storm drains and where required to control erosion as construction proceeds. Sedimentation controls shall be installed along the downhill side of all soil stockpiles.

H. Catch basins shall have either staked haybales placed around the grate and/or have a geotextile bag or silt sack installed until the parking area is paved.

I. The pavement subgrade will then be graded, and the gravel and the bituminous base course placed. This shall be completed as soon as practical after the site clearing.

J. All disturbed areas not already stabilized will then be covered with a minimum of 4-inches of topsoil and seeded.

K. The drainage system shall be completely operational prior to the building roof drains being installed.

L. The building roof drains will be in operation immediately after the roof is completed.

M. All drainage structures will be cleaned upon completion of construction.

N. The siltation controls shall be removed after the site has stabilized.

BMP MAINTENANCE SCHEDULE FOR CONSTRUCTED SITE

1. Inspect catch basins quarterly if all tributary areas are stabilized with vegetation or monthly if not. Clean out if more than 1/4 full of sediment (1 foot deep in a 4-foot sump). Inspect and clean as necessary after intense rainfall and as soon as practical after winter sanding.

2. The infiltration systems should be checked for sediment on a yearly basis. A log of the sediment depth should be maintained. Measure the sediment depth visually by opening the inspection port and the use of a flashlight and measuring rod. If sediment reaches a three-inch depth, the sediment is to be removed by vacuum or jet spray.

3. The CDS chambers shall be maintained in strict conformance with the Manufacturer's recommendations. Inspections should occur twice per year and the sediment should be removed when it reaches the 75% depth of the isolated sump. Sediment shall be removed on a clear day when there is no flow entering the system using a vacuum hose.

4. Keep all pervious site areas stabilized at all times. Keep any stockpiled earth covered. Remove leaves and trimmings from site.

5. Sweep parking areas at least twice per year, in the spring after winter sanding and in the late fall.

6. Minimize the use of sand and chemicals for winter de-icing of pavement areas.

7. It is anticipated that the **Mill Creek Residential** will be the owner and responsible for the operation and maintenance of the site. Their address is:

Mill Creek Residential Trust LLC
84 State Street, Suite 920
Boston, MA 02109

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Mill Creek Marshfield, Marshfield, Massachusetts
Stormwater Operation and Maintenance Plan

INSPECTION SCHEDULE AND EVALUATION CHECKLIST

Best Management practice	Inspection Frequency	Date Inspected	Contractor	Current Conditions and Minimum Maintenance / Repairs, If Necessary	Completed Maintenance / Repair (i.e. date, contractor, tasks complete, etc.)
Infiltration Systems	Quarterly				
Proprietary Separators	Biannual				
Catch Basins	Quarterly				
Overall Site Condition	Quarterly				

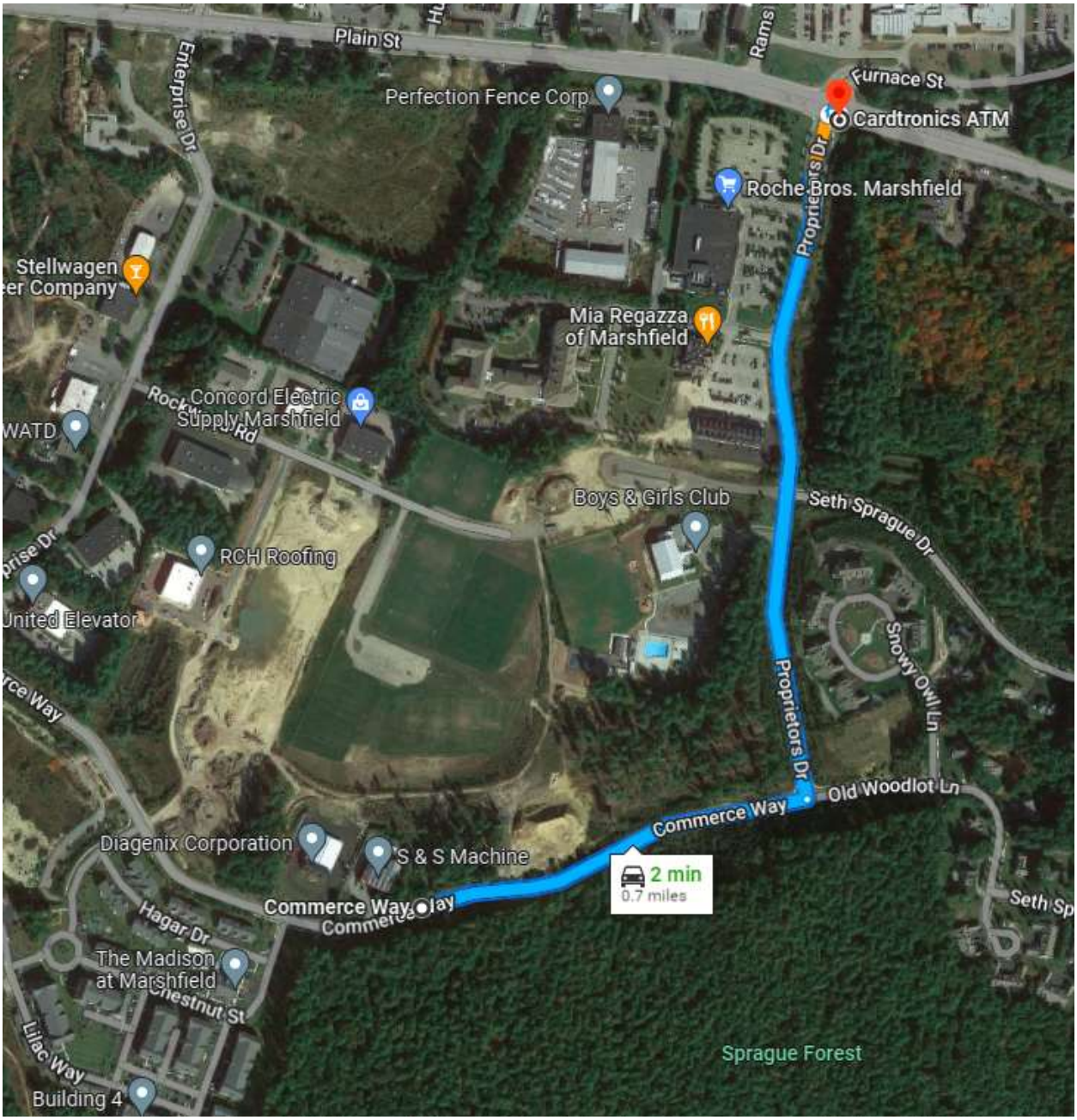
Property Manager: _____ Date: _____

DRAFT

Attachment G

Cut and Fill Analysis

PROPOSED TRUCK ROUTE FOR MATERIAL EXPORT



Net Export Amount: **26,500 CY**

Estimated Truck Trip Count: **2,500 – 3,500**



CUT-FILL ANALYSIS (PER AUTOCAD CIVIL-3D)

CUT (-)	= 56,878 C.Y.	
FILL (+)	= 30,430 C.Y.	
NET	= 26,448 C.Y.	26,500± C.Y.

NOTE: CUT/FILL ANALYSIS IS APPROXIMATE FROM EXISTING GRADE SURFACE TO PROPOSED GRADE SURFACE.

50 0 25 50 100
HORIZONTAL GRAPHIC SCALE IN FEET

tat

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Revision:

Architect of Record:

Drawn: EJR

Checked: AD/FAK

Scale: 1" = 50'

Key Plan:

Project Name:
MILL CREEK
MARSHFIELD

COMMERCE WAY
MARSHFIELD, MA

Sheet Name:
CUT-FILL ANALYSIS

Project Number:
21065

Issue Date:
06/06/22

Sheet Number:
CF

File Name: \\Hancock01\cad-2\Civil 3D Projects\24693 - Mill Creek - Marshfield Pro\Eng\Dwg\24693cp7.dwg Saved 7/12/2022 6:31 PM Plotted: Jul 12, 2022 6:40:10pm
Tab: CF Plot Style: 1050C.ctb Plotted By: Anthony Donato