

Burlington Development Review Board

Department of Permitting & Inspections
645 Pine Street
Burlington, VT 05401
www.burlingtonvt.gov/DPI/DRB
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Development Review Board

Tuesday, February 4, 2025, 5:00 PM

645 Pine Street, Front Conference Room or Remote on Zoom:

Please click the link below to join the webinar:

Zoom: <https://us02web.zoom.us/j/83225696227?pwd=SGQ0bTdnS000Wkc3c2J4WWw1dzMxUT09>

Webinar ID: 832 2569 6227

Passcode: 969186

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1. Agenda

2. Communications

3. Minutes

4. Public Hearing

4.1.

ZP-24-507; 50 Mansfield Avenue (I, Ward 1) Mater Christi Elementary School / Taryn Barrett

Proposed school renovation including construction of an addition and associated site improvements. (Project Manager, Garret King)

4.2.

**ZP-24-148; 49-55 Chase Street (RL, Ward 1) Chase Street 49, LLC / Missa Aloisi
Time extension request for proposed subdivision of existing lot into four separate parcels. Development plan includes residential unit expansions to existing structures and construction of one new four-unit apartment building. (Project Manager, Garret King)**

5. Certificate of Appropriateness

5.1.

ZP-25-13; 28 Sunset Cliff Road (RL, Ward 4) Samantha Garrison / Maxx Garrison

Proposed reapplication of ZP-21-450 to construct a new single-family home with associated site and landscape changes. (Project Manager, Mary O'Neil)

6. Adjournment

7. Informational and Non-Discrimination Statements

7.1.

Plans may be viewed upon request by contacting the Department of Permitting & Inspections between the hours of 8:00 a.m. and 4:30 p.m. Participation in the DRB proceeding is a prerequisite to the right to take any subsequent appeal. Please note that ANYTHING submitted to the Zoning office is considered public and cannot be kept confidential. This may not be the final order in which items will be heard. Please view final Agenda, at www.burlingtonvt.gov/dpi/drb/agendas or the office notice board, one week before the hearing for the order in which items will be heard.

The City of Burlington will not tolerate unlawful harassment or discrimination on the basis of political or religious affiliation, race, color, national origin, place of birth, ancestry, age, sex, sexual orientation, gender identity, marital status, veteran status, disability, HIV positive status, crime victim status or genetic information. The City is also committed to providing proper access to services, facilities, and employment opportunities. For accessibility information or alternative formats, please contact Human Resources Department at (802) 540-2505.

Department of Permitting & Inspections

Zoning Division
645 Pine Street
Burlington, VT 05401
Telephone: (802) 865-7188

William Ward, Director
Scott Gustin, AICP, CFM, Principal Planner
Mary O'Neil, AICP, Principal Planner
Garret King, Associate Planner
Joseph Cava, Permit Technician
Steve Cormier, Code Compliance Officer
Ted Boylan, DPI Administrator



TO: Development Review Board
FROM: Garret King
DATE: February 4, 2025
RE: ZP-24-507; 50 Mansfield Avenue

=====

Note: These are staff comments only; decisions on projects are made by the Development Review Board, which may approve, deny, table or modify any project. THE APPLICANT OR REPRESENTATIVE MUST ATTEND THE MEETING.

Zone: I Ward: 1

Owner/Applicant: MATER CHRISTI SCHOOL / Taryn Barrett

Request: Proposed renovation and construction of an addition, new entrance, and rear patio. Site improvements include updated parking layout, pedestrian walkways, and concrete pads for ice rink and trash enclosure, stormwater retention, and water/sewer lines.

Applicable Regulations:

Article 3 (Applications, Permits, & Project Reviews), Article 4 (Zoning Maps & Districts), Article 5 (Citywide General Regulations), Article 6 (Development Review Standards), Article 8 (Parking)

Background Information:

The applicant is seeking approval to construct an addition to the existing gymnasium building that will become an early education center. Site work is also proposed to alter the driveway/parking area to add pedestrian walkways and stormwater/utility features. A new concrete pad will be used to fortify the existing ice rink area.

A school is a conditional use within the Institutional zone, wherein the subject property is located. Schools are subject to limited zoning review per VSA 24, Sec. 4413.

Sec. 4413. Limitations on municipal bylaws

- (a) (1) *The following uses may be regulated only with respect to location, size, height, building bulk, yards, courts, setbacks, density of buildings, off-street parking, loading facilities, traffic, noise, lighting, landscaping, and screening requirements, and only to the extent that regulations do not have the effect of interfering with the intended functional use:*
- (B) *public and private schools and other educational institutions certified by the Agency of Education;*

While conditional use approval is required, the applicable criteria are limited by these statutory provisions.

Previous zoning actions for this property are noted below.

- Zoning permit: ZP-12-234 Installation of one freestanding wooden non illuminated sign for Mater Christi School.
- Zoning permit: ZP-02-124 Parking and driveway improvements to correct traffic flow and to maximize off-Street pickup and drop-off space for Mater Christi school.
- Zoning permit: ZP-00-315 Installation of chain link fencing, To match existing at the Mater Christi school, Along the side (Southern) Property line, Extending for approximately 360'
- Zoning permit: ZP-1999-136 Change of use from residential to classroom space for Mater Christi school.
- Zoning permit: ZP-1997-350 installation of a 10' High chain link style fence along the top of the ravine at the rear of the game fields for Mater Christi school. Length of fence to be 450'.
- Zoning permit: ZP-1993-328 Drop-Off and driveway improvements with landscaping to front of existing Mater Christi school.
- Zoning permit: ZP-1991-324 Removal of existing playground equipment with regrading of yard and installation of approx. 8,000sf 'Structure' Built as an on-Going project by parents and children in the Robert Leather's style. No fill to be brought in to the site.

Recommendation: Conditional Use & Certificate of Appropriateness Approval subject to the following findings and conditions.

I. Findings

Article 3: Applications and Reviews

Part 3, Impact Fees

Sec. 3.3.2, Applicability & Sec. 3.3.3, Exemptions & Waivers

The proposed renovation and addition does not contain any new dwelling units, but will add new nonresidential building square footage that is subject to Sec. 3.3.5. **(Affirmative finding)**

Sec. 3.3.5, Calculation of Impact Fee

The impact fee based off of the proposed the new gross square footage of 5,170sf and will be required to pay 10,386.53\$ based off of the FYS2025 impact fee calculator.

SF of Project	5,170	FY 25: July 1, 2024 - June 30, 2025						
	<u>Residential</u>		<u>Industrial</u>		<u>Offices & Other</u>		<u>Retail</u>	
Department	Rate	Fee	Rate	Fee	Rate	Fee	Rate	Fee
Traffic	0.240	1,240.80	0.320	1,654.40	0.826	4,270.42	0.899	4,647.83
Fire	0.271	1,401.07	0.240	1,240.80	0.243	1,256.31	0.243	1,256.31
Police	0.055	284.35	0.428	2,212.76	0.428	2,212.76	0.412	2,132.11
Parks	0.908	4,694.36	0.515	2,662.55	0.512	2,647.04	0.512	2,647.04
Library	0.562	2,905.54	0.000	0.00	0.000	0.00	0.000	0.00
Schools	1.173	6,064.41	0.000	0.00	0.000	0.00	0.000	0.00
Total	3.209	\$ 16,590.53	1.503	\$ 7,770.51	2.009	\$ 10,386.53	2.066	\$ 10,683.29

(Affirmative Finding)

Part 5, Conditional Use & Major Impact Review:

Section 3.5.6 (a) Conditional Use Review Standards

Approval shall be granted only if the DRB, after public notice and public hearing, determines that the proposed conditional use and associated development shall not result in an undue adverse effect on each of the following general standards:

1. *Existing or planned public utilities, facilities or services are capable of supporting the proposed use in addition to the existing uses in the area;*

The proposed school expansion will be served by municipal utilities. The size of the proposed expansion is limited to 4 new classrooms. A State of Vermont wastewater permit will be required. A capacity letter has been issued by the Dept. of Public Works. **(Affirmative finding)**

2. *The character of the area affected as defined by the purpose or purposes of the zoning district(s) within which the project is located, and specifically stated policies and standards of the municipal development plan;*

Not applicable per VSA 24, Sec. 4413.

3. *The proposed use will not have nuisance impacts from noise, odor, dust, heat, and vibrations greater than typically generated by other permitted uses in the same zoning district;*

The proposed addition and conversion of space will be located behind the existing facilities and buildings on the property. School and educational programs in the Institutional district are commonplace. The new expansion will be similar to the existing uses and therefore is not likely to cause any increases in nuisance impacts. **(Affirmative finding)**

4. *The transportation system is capable of supporting the proposed use in addition to the existing uses in the area. Evaluation factors include street designations and capacity; level of service and other performance measures; access to arterial roadways; connectivity; transit availability; parking and access; impacts on pedestrian, bicycle and transit circulation; safety for all modes; and adequate transportation demand management strategies;*

Traffic information has been provided. The expected 35 Peak VTEs does not meet the threshold 75 VTE for requiring a traffic study. The schools the current transportation options will support the increase of classrooms and additional students. **(Affirmative Finding)**

and,

5. *The utilization of renewable energy resources;*

Not applicable per VSA 24, Sec. 4413.

and,

6. *Any standards or factors set forth in existing City bylaws and city and state ordinances;*

VSA 24, Sec. 4413 limits only zoning review. Building and life safety codes continue to apply as usual.

(b) Major Impact Review Standards

Not applicable.

(c) Conditions of Approval:

In addition to imposing conditions of approval necessary to satisfy the General Standards specified in (a) or (b) above, the DRB may also impose additional conditions of approval relative to any of the following:

1. Mitigation measures, including but not limited to screening, landscaping, where necessary to reduce noise and glare and to maintain the property in a character in keeping with the surrounding area.

As noted above, noise impacts are anticipated to be similar to current conditions. No site changes requiring screening or landscaping are proposed or are required. **(Affirmative finding)**

2. Time limits for construction.

No additional time is requested with the current application, nor is a phasing plan included. The standard 3-year timeframe for zoning permits will apply. **(Affirmative finding)**

3. Hours of operation and/or construction to reduce the impacts on surrounding properties.

Typical hours of construction are proposed. Limitations on construction hours beyond those in the city's noise ordinance are not warranted. **(Affirmative finding)**

Days and hours of operation will be similar to the existing hours of approximately 7:30am. to 3:00pm. with some time intermittently for after-school-programs. After-school-programs are typical for the proposed use and are not expected to significantly increase impacts on surrounding properties. **(Affirmative finding)**

4. That any future enlargement or alteration of the use return for review to the DRB to permit the specifying of new conditions; and,

Any future enlargement or alteration will be reviewed under the zoning regulations in effect at that time. **(Affirmative finding)**

5. Such additional reasonable performance standards, conditions and safeguards, as it may deem necessary to implement the purposes of this chapter and the zoning regulations.

See the recommended conditions.

Article 4: Maps & Districts

Sec. 4.4.4, Institutional District:

(a) Purpose

The Institutional district is intended to allow for increased development for major public and higher education and health care institutions while remaining in close proximity to our residential districts. Sites should have large open spaces as well as be designed to be pedestrian friendly with parking hidden behind, to the side, or under structures.

The proposed development will be expanding on the existing educational institution, Mater Christi School, and will build off of an existing structure. The new site changes will be similar to the layout of the existing structures and keep all parking on the interior of the development. While the proposal increases the size of existing structures the site will retain significant open space on the periphery of the lot. The proposed project will reflect the goals and purpose of the district.

(Affirmative finding)

(b) Dimensional Standards

Lot coverage will increase from 15.5% to 17.1% as calculated by the applicant. The increase of lot coverage will remain under the 40% maximum within the Institutional district.

Setbacks will change with the proposed development but will remain compliant with the minimum 15ft front, 5ft side, and 20ft rear yard setback.

Building height for the new addition will be 25ft tall at the highest point and will remain under the maximum height permitted and will be shorter than the existing structure. **(Affirmative finding)**

(c) Permitted & Conditional Uses

As noted above, the proposed primary school is a conditional use in the Institutional zone. **(Affirmative finding)**

Article 5: Citywide General Regulations

Sec. 5.2.3, Lot Coverage Requirements

See Sec. 4.4.4 above

Sec. 5.2.4, Buildable Area Calculation

(a) Buildable Area Calculation

This property is not subject to buildable area provisions. **(Not Applicable)**

(b) Steep Slopes Overlay District

This property has areas that are steep slopes as well as land that is part of the steep slopes buffer area. VSA 24, Sec. 4413 precludes this proposal from the regulations of this section. Building permit review will address slope stability issues prior to construction in any event. **(Affirmative finding)**

Sec. 5.2.5, Setbacks

See Sec. 4.4.4 above.

Sec. 5.2.6, Building Height Limits

See Sec. 4.4.4 above.

Sec. 5.2.7, Density and Intensity of Development Calculations

See Sec 4.4.4 above.

Part 5, Performance Standards

Sec. 5.5.2, Outdoor Lighting

No new outdoor lighting is proposed at this time. New lighting will required for the proposed new entryways per Sec. 6.3.2 (i). **(Affirmative finding as Conditioned)**

Sec. 5.5.3 Stormwater and erosion Control

All new development and redevelopment projects that require a zoning permit shall be required to demonstrate compliance with the standards in Article 3, Stormwater & Erosion Control of Chapter 26 of the City Code of Ordinances: Wastewater, Stormwater, and Pollution Control.

Over 400sf of land disturbance will occur, a stormwater plan is proposed, the applicant will need to apply and submit an Erosion Prevention and Sediment Control plan to water resource for review. A post-construction stormwater management plan has been submitted for review by water resources. **(Affirmative Finding as Conditioned)**

Article 6: Development Review Standards

Part 1, Land Division Design Standards

Not applicable.

Part 2, Site Plan Design Standards

Sec. 6.2.2, Review Standards

(a) Protection of important natural features

Much of the new building space will be constructed on what is existing grass yard and green space. Some green space will be lost but none of the areas affected are important natural features as identified in the Open Space Protection Plan. **(Affirmative finding)**

(b) Topographical alterations

Not applicable per 24 VSA, Sec. 4413.

(c) Protection of important public views

Not applicable per 24 VSA, Sec. 4413.

(d) Protection of important cultural resources

Not applicable per 24 VSA, Sec. 4413.

(e) Supporting the use of alternative energy

Not applicable per 24 VSA, Sec. 4413.

(f) Brownfield sites

Not applicable per 24 VSA, Sec. 4413.

(g) Provide for nature's events

See Sec. 5.5.3.

(h) Building location and orientation

Not applicable per 24 VSA, Sec. 4413.

(i) Vehicular access

Not applicable per 24 VSA, Sec. 4413.

(j) Pedestrian access

Not applicable per 24 VSA, Sec. 4413.

(k) Accessibility for the handicapped

Not applicable per 24 VSA, Sec. 4413. Applicable accessibility requirements under the City's building code continue to apply. **(Affirmative finding)**

(l) Parking and circulation

The existing parking lot and circulation pattern will remain largely unchanged. A total of 6 new parking spaces are proposed, with 4 designated as ADA accessible. The new parking and circulation changes are limited to the interior of the lot, and overall site circulation will not change. No traffic analysis has been provided or is required for this application. For bicycle parking see Sec. 8.2.4. **(Affirmative finding)**

(m) Landscaping, fences, and retaining walls

No new landscaping is included in the project design. New fencing will be constructed for the proposed stormwater infrastructure and playground area for safety. Fencing is also proposed as screening for the new dumpster area. A small retaining wall measuring approximately 3ft tall is proposed off of the rear of the existing gymnasium structure. The new retaining wall and fencing is incorporated into the design of the proposed use of the addition and conforms to all height and setback requirements. A landscaping plan to add interest to the entrance of the new addition is recommended. **(Affirmative finding as Conditioned)**

(n) Public plazas and open space

No new public plaza or open space is included or required in this proposal. **(Not applicable)**

(o) Outdoor lighting

See Sec. 5.5.2.

(p) Integrate infrastructure into the design

All new utility lines serving the proposed facility must be buried. A proposed dumpster area is proposed at the south east corner of the parking area and will be screened on all sides.

(Affirmative finding as Conditioned)

Part 3, Architectural Design Standards

Sec. 6.3.2, Review Standards

(a) Relate development to its environment

1. Massing, Height, and Scale

The proposed addition to create 4 new classrooms is 5,170sf and almost double the size of the existing structure. The additions larger size will be mitigated due to the location behind the significantly larger main building on the lot. The new addition, while larger than the existing structure, reads as two parts, one the new entrance and the other the new classrooms. The new entrance area is one story with a flat roof that acts as the new primary entrance as well as the connector between the new classrooms and old gymnasium. The new classroom section of the addition is slightly larger than the existing structure but is similar in height, one story with a pitched roof and dormers. Proposed classroom and entrance segments have more complex detailing and greater glazing but do not overshadow the existing structure. Overall, the existing building and addition are smaller and shorter than the other main building on the site.

(Affirmative finding)

2. Roofs and Rooflines

Not applicable per 24 VSA, Sec. 4413.

3. Building Openings

Not applicable per 24 VSA, Sec. 4413.

(b) Protection of important architectural resources

Not applicable per 24 VSA, Sec. 4413.

(c) Protection of important public views

Not applicable per 24 VSA, Sec. 4413.

(d) Provide an active and inviting street edge

Not applicable per 24 VSA, Sec. 4413.

(e) Quality of materials

Not applicable per 24 VSA, Sec. 4413.

(f) Reduce energy utilization

Not applicable per 24 VSA, Sec. 4413.

(g) Make advertising features complimentary to the site

No exterior signage or plans for signage have been confirmed at this time any future signs or advertising will be addressed in future permits. **(Affirmative finding)**

(h) Integrate infrastructure into the building design

The application elevation plans do not depict any rooftop equipment. The site plan notes many infrastructure changes but none are attached to the exterior of the addition beyond gutters for managing stormwater. **(Affirmative finding)**

(i) Make spaces safe and secure

The proposed building must comply with the city's current egress requirements. Building entries are required to be illuminated. **(Affirmative finding as conditioned)**

Article 8: Parking

Sec. 8.1.3, Parking District:

(b) Shared Use Parking District

The property is in the shared use parking district that is intended to share transport demand over a variety of uses. With the proposal of 5 classrooms, additional parking will be added to the property to accommodate the increased capacity of the school. **(Affirmative finding)**

Sec. 8.1.9, Maximum On-Site Parking Spaces

The applicant proposes 6 additional parking spaces, with 4 of those new spaces reserved to allow for ADA accessibility. With 4 new classrooms proposed the number of new parking spaces is under the additional 8 parking space maximum permitted for the scope of this project.

(Affirmative finding)

Sec. 8.1.10, Off-Street Loading Requirements

The off-street loading and unloading of vehicles will remain in the same or similar locations. The school has an existing circulation layout and is not significantly changing the circulation of traffic pattern. The new proposed loading and unloading areas are on the interior of the lot and away from other traffic and pedestrians. **(Affirmative finding)**

Sec. 8.1.13, Parking for Disabled Persons

Four new ADA parking spaces are proposed and shall comply with current the Americans with Disabilities Act guidelines. **(Affirmative finding as Conditioned)**

Sec. 8.1.16, Transportation Demand Management

(b) Applicability

The proposed classroom additions does not trigger the requirement for a transportation demand management plan. **(Affirmative finding)**

Part 2, Bicycle Parking

Sec. 8.2.2, Applicability

Bicycle parking requirements as set forth in this subpart shall apply to new development, changes in land use, and changes to a structure that cause an increase or decrease of 25% or greater in gross floor area, seating capacity, or number of dwelling units.

The existing gymnasium has a gross floor area of 5,112sf. with a planned additional 5,170sf. The structure will have a gross floor area change greater than 25% and will be required to provide bicycle parking. With 40 new students anticipated and 4 additional classrooms the applicant is proposing 4 long-term and 8 short-term parking spaces as well as the required shower and changing facility to meet the minimum amount of bike parking. **(Affirmative finding as Conditioned)**

Sec. 8.2.4 Bicycle Parking Requirements

Bicycle parking for all uses and structures in all Parking Districts shall be provided in accordance with Table 8.2.4-1.

- (a) *Where no requirement is designated, and the use is not comparable to any of the listed uses, bicycle parking requirements shall be determined by the DRB upon recommendation of the city's bicycle and pedestrian planner based upon the capacity of the facility and its associated uses.*

The proposed classrooms for grades pre-K and kindergarten most closely matches the Schools grades 2-5 and will require both Long Term and Short Term parking spaces. **(Affirmative finding)**

- (b) *When the calculation yields a fractional number of required spaces, the number of spaces shall be rounded to the nearest whole number.*

The new addition will require the creation of 4 Long Term and 8 Short Term parking spaces. The applicant is proposing the short term bike parking near the new entrance and the new long term bike parking in a designated parking room. **(Affirmative finding as Conditioned)**

- (c) *Where bicycle parking is required, the minimum number of bicycle parking spaces provided at each site shall be two (2), not including long term parking.*

The new addition will require all 12 bike parking spaces to be provided on-site. **(Affirmative finding)**

- (d) *Bicycle parking that meets the requirements for both long term and short term bicycle parking may contribute to the minimum requirement of one type or the other but not both.*

The applicant is proposing separate short-term and long-term bike parking to meet the minimum requires standards independently of each other. **(Affirmative finding)**

II. Conditions of Approval

1. **Prior to the Release of the Zoning Permit:**

- a. An EPSC plan shall be submitted to Water Resources for review.
- b. The applicant shall submit an updated site plan and related materials detailing the location and materials of the following, subject to staff review and approval:
 - i. Required bike parking infrastructure locations
 - ii. Entryway lighting
 - iii. Landscaping plan
2. A state wastewater permit may be required. It is the applicant's responsibility to contact VT DEC and obtain a wastewater permit or confirmation that one is not needed.
3. All new utility lines shall be buried.
4. It is the applicant's responsibility to comply with all applicable ADA requirements.
5. *Vermont Commercial Building Energy Standards apply to this project. Compliance with the standards is the Owner's responsibility. For more information, see http://publicservice.vermont.gov/energy_efficiency.*
6. Standard Conditions 1-15.

NOTES:

- ASPECTS OF PLAN ARE APPROXIMATE AND DERIVED FROM AERIAL PHOTOGRAPHY. ASPECTS OF THE PLAN ARE ALSO FROM A BOUNDARY PLAN TITLED 'SISTERS OF MERCY NORTHEAST COMMUNITY' BY CIVIL ENGINEERING ASSOCIATES, INC DATED 08/09/22.
- THE HORIZONTAL COORDINATE SYSTEM IS BASED ON NAD83 VERMONT STATE PLANE 4400 (US SURVEY FEET). ELEVATIONS ARE BASED ON THE NAVD88 (US SURVEY FEET).
- EXISTING GROUND CONTOUR ELEVATIONS ARE BASED 2014 STATE OF VERMONT LIDAR AND FIELD SURVEY BY KREBS AND LANSING IN THE FALL OF 2024. KREBS AND LANSING SURVEYED ONLY AREA AROUND THE PROPOSED PROJECT.
- UTILITIES ARE NOT WARRANTED TO BE COMPLETE OR ACCURATE, CONTRACTOR SHALL CONTACT DIG SAFE BEFORE BEGINNING ANY EXCAVATION.
- THIS IS IN NO WAY A BOUNDARY SURVEY. PROPERTY LINES SHOWN ON THIS PLAN ARE FROM TAX MAP INFORMATION PROVIDED BY THE CITY. PROJECT PROPERTY LINES ARE SHOWN BASED ON 'A BOUNDARY PLAN TITLED 'SISTERS OF MERCY NORTHEAST COMMUNITY' BY CIVIL ENGINEERING ASSOCIATES, INC DATED 08/09/22. ADDITIONALLY, SURROUNDING PROPERTY LINES HAVE BEEN ADJUSTED BASE ON MONUMENTATION FOUND IN THE FIELD AND EVIDENCE IN AERIAL PHOTOGRAPHY.



LEGEND

- pp / man
- EXISTING VEGETATION LIMIT
- EXISTING GRADE CONTOUR LINES (5 FOOT INTERVALS)
- EXISTING GRADE CONTOUR LINES (1 FOOT INTERVALS)
- APPROXIMATE PROPERTY LINES
- EXISTING FENCE
- EXISTING CHAIN LINK
- EXISTING SEWER LINE/MANHOLE
- EXISTING STORM LINE/MANHOLE/BASIN
- EXISTING OVERHEAD ELECTRIC LINE/ POWER POLE
- EXISTING UNDERGROUND POWER
- EXISTING WATER LINE/HYDRANT/VALVE /SHUTOFF
- EXISTING UNDERGROUND GAS SYSTEMS
- VERMONT STATE PLANE 4400 NORTH (HORIZONTAL)

MATER CHRISTI SCHOOL

Mansfield Avenue
Burlington, Vermont



KREBS & LANSING
CONSULTING ENGINEERS

164 Main Street, Suite 201
Colchester, Vermont 05446

P: (802) 878-0375
www.krebsandlansing.com

**ISSUED FOR PERMIT REVIEW
NOT FOR CONSTRUCTION**

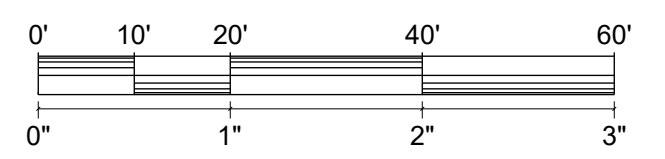
OWNER/APPLICANT:

Mater Christi School
40 Main Street Suite 450
Burlington, Vermont 05401

PROPERTY INFORMATION:

Address: 50 Mansfield Avenue
Parcel ID: 045-3-112-000
SPAN: 114-035-16320
Area: 19.86 Acres (±865,200 s.f.)
Zoning: Institutional

STAMP:



VALID WHEN PLOTTED ON 24" BY 36" MEDIA

REV. NO.	REVISIONS/COMMENTS	DATE

DRAWING TITLE:

**DETAILED EXISTING
CONDITIONS PLAN
NORTHERN PORTION OF SITE**

DATE ISSUED: 11/14/24

DRAWN BY: GTD

CHECKED BY:

PROJECT NO.: 24145

SCALE: 1" = 20'

DRAWING NO.:

REV. NO.:

C-0.01

DWG NAME: Mater-Christi_Base-Plan.dwg

Mansfield Avenue
Burlington, Vermont



ISSUED FOR PERMIT REVIEW
NOT FOR CONSTRUCTION

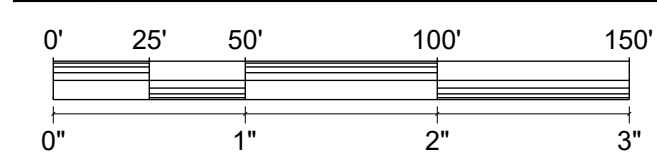
OWNER/APPLICANT: _____

Mater Christi School
40 Main Street Suite 450
Burlington, Vermont 05401

PROPERTY INFORMATION:

Address: 50 Mansfield Avenue
Parcel ID: 045-3-112-000
SPAN: 114-035-16320
Area: 19.86 Acres (±865,200 s.f.)
Zoning: Institutional

STAMP



STANDARD GRAPHIC SCALE (1" = 50')
VALID WHEN PLOTTED ON 24" BY 36" MEDIA

[illegible]

DRAWING TITLE

OVERALL PROPOSED SITE PLAN

DATE ISSUED: 11/14/24

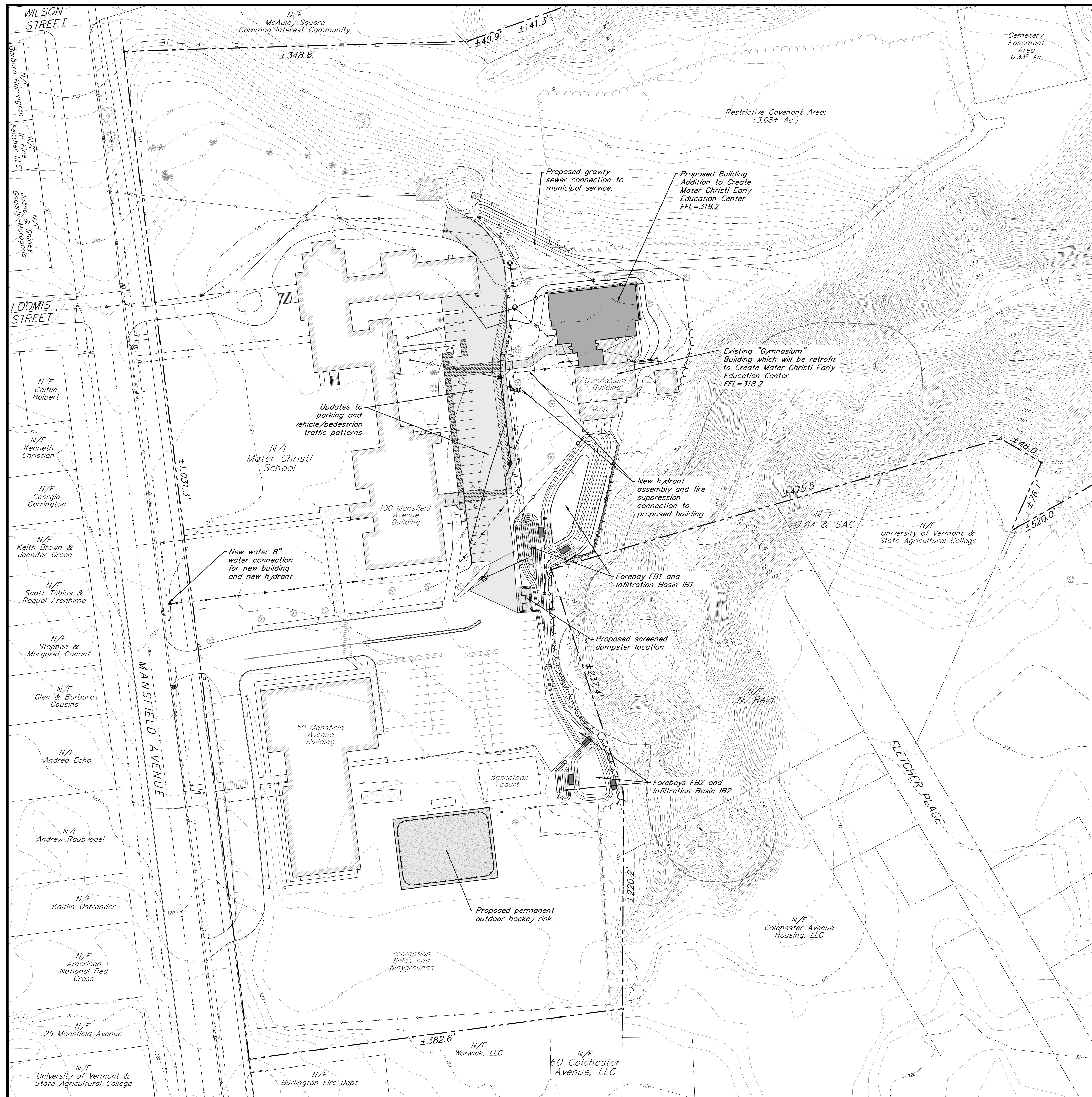
DRAWN BY: GTD CHECKED BY: GTD

PROJECT NO: 24145 SCALE: 1" = 50'

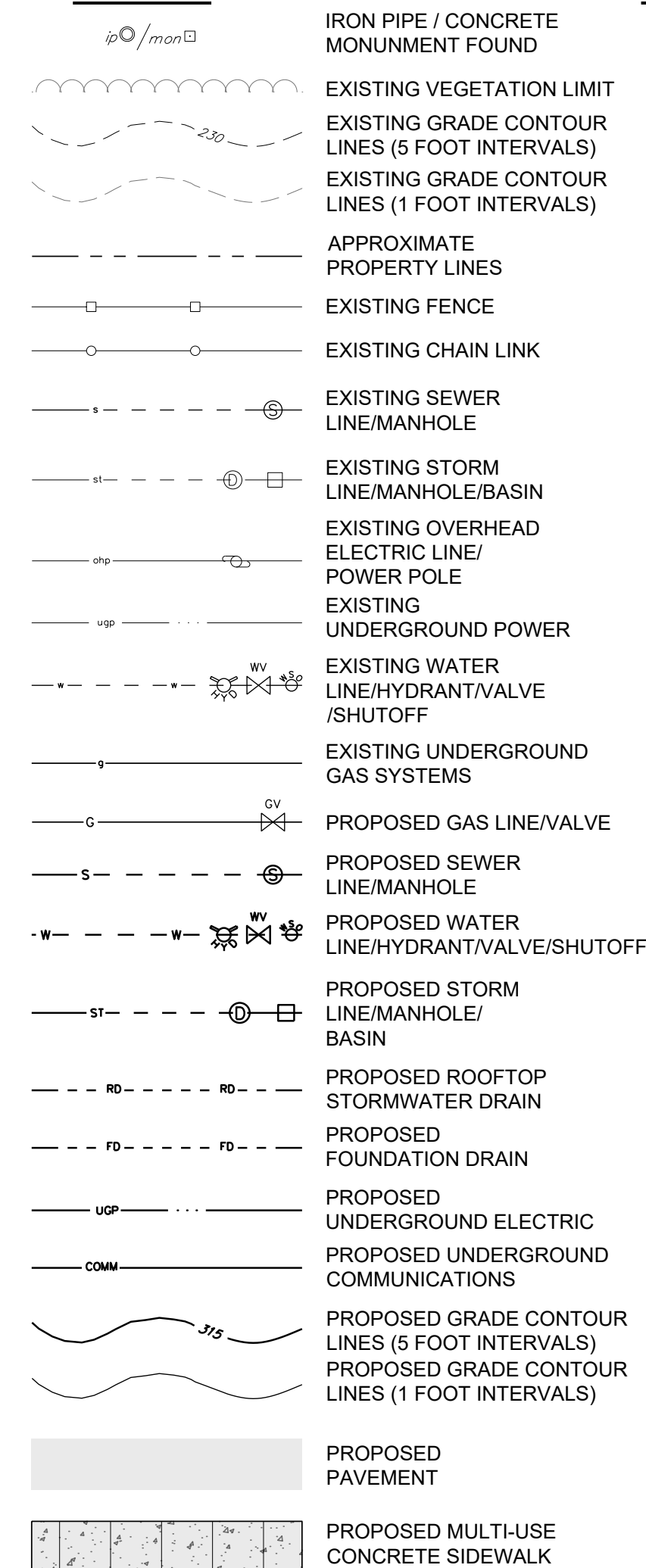
DRAWING NO.:	REV. NO.:
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C-1.00

DWG NAME: Mater-Christi_Bose-Plan.dwg



LEGEND



NOTES:

1. ASPECTS OF PLAN ARE APPROXIMATE AND DERIVED FROM AERIAL PHOTOGRAPHY. ASPECTS OF THE PLAN ARE ALSO FROM A BOUNDARY PLAN TITLED 'SISTERS OF MERCY NORTHEAST COMMUNITY' BY CIVIL ENGINEERING ASSOCIATES, INC DATED 08/09/22.
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3. EXISTING GROUND CONTOUR ELEVATIONS ARE BASED 2014 STATE OF VERMONT LIDAR AND FIELD SURVEY BY KREBS AND LANSING IN THE FALL OF 2014. KREBS AND LANSING SURVEYED ONLY AREA AROUND THE PROPOSED PROJECT.
4. UTILITIES ARE NOT WARRANTED TO BE COMPLETE OR ACCURATE. CONTRACTOR SHALL CONTACT DIG SAFE BEFORE BEGINNING ANY EXCAVATION.
5. THIS IS IN NO WAY A BOUNDARY SURVEY. PROPERTY LINES SHOWN ON THIS PLAN ARE FROM TAX MAP INFORMATION PROVIDED BY THE CITY. PROJECT PROPERTY LINES ARE SHOWN BASED ON A BOUNDARY PLAN TITLED 'SISTERS OF MERCY NORTHEAST COMMUNITY' BY CIVIL ENGINEERING ASSOCIATES, INC DATED 08/09/22. ADDITIONALLY, SURROUNDING PROPERTY LINES HAVE BEEN ADJUSTED BASED ON MONUMENTATION FOUND IN THE FIELD AND EVIDENCE IN AERIAL PHOTOGRAPHY.

CALCULATIONS:

EXISTING CONDITIONS:

- PARCEL AREA = +865,200 S.F. (19.86 ACRES)
- BUILDING COVERAGE: +45,170 S.F. (5.2%)
- CONCRETE STAIRS: +500 S.F.
- CONCRETE/PAVED SIDEWALK: +9,271 S.F.
- MISC. EQUIPMENT PADS: +624 S.F.
- GRAVEL WALKS: +4,877 S.F.
- PAVED BASKETBALL COURT: ±2,308 S.F.
- PAVED DRIVEWAY: ±67,890 S.F.
- OVERALL IMPERVIOUS: ±130,640 S.F. (±3.00 ACRES)
- PERCENT COVERAGE: 15.1%

PROPOSED CONDITIONS:

- PARCEL AREA = +8665,200 S.F. (19.86 ACRES)
- BUILDING COVERAGE: +50,340 S.F. (5.8%)
- CONCRETE STAIRS: +490 S.F.
- CONCRETE/PAVED SIDEWALK: +12,036 S.F.
- MISC. EQUIPMENT PADS: +1,050 S.F.
- GRAVEL WALKS: +5,400 S.F.
- PAVED BASKETBALL COURT: +2,308 S.F.
- CONCRETE HOCKEY RINK: +7,128 S.F.
- PAVED DRIVEWAY: +69,010 S.F.
- OVERALL IMPERVIOUS: +147,402 S.F. (+3.38 ACRES)
- PERCENT COVERAGE: 17.1%

Mansfield Avenue
Burlington, Vermont



Mater Christi School
40 Main Street Suite 450
Burlington, Vermont 05401

Address: 50 Mansfield Avenue
Parcel ID: 045-3-112-000
SPAN: 114-035-16320
Area: 19.86 Acres (±865,200 s.f.)
Zoning: Institutional

0' 10' 20' 40' 60'

0" 1" 2" 3"

STANDARD GRAPHIC SCALE (1" = 20')

VALID WHEN PLOTTED ON 24" BY 36" MEDIA

DRAWING TITLE:

DRAWN BY: GTC

CHECKED BY:

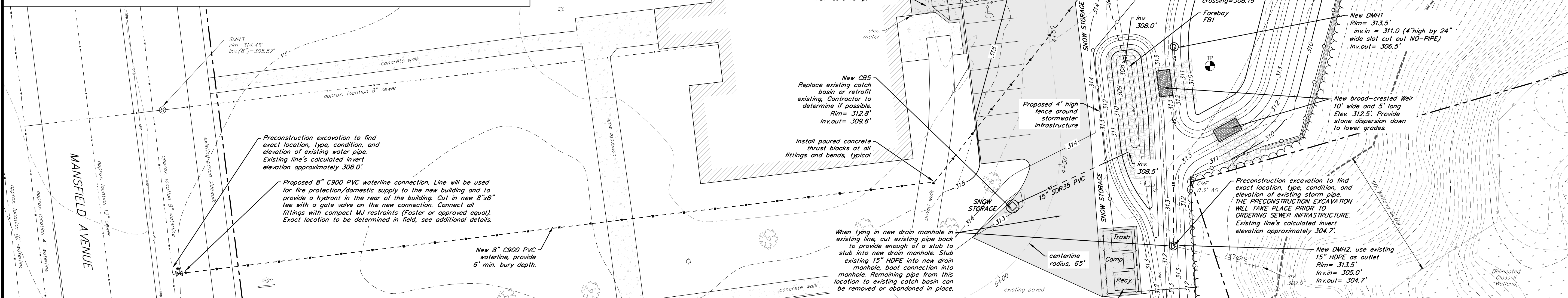
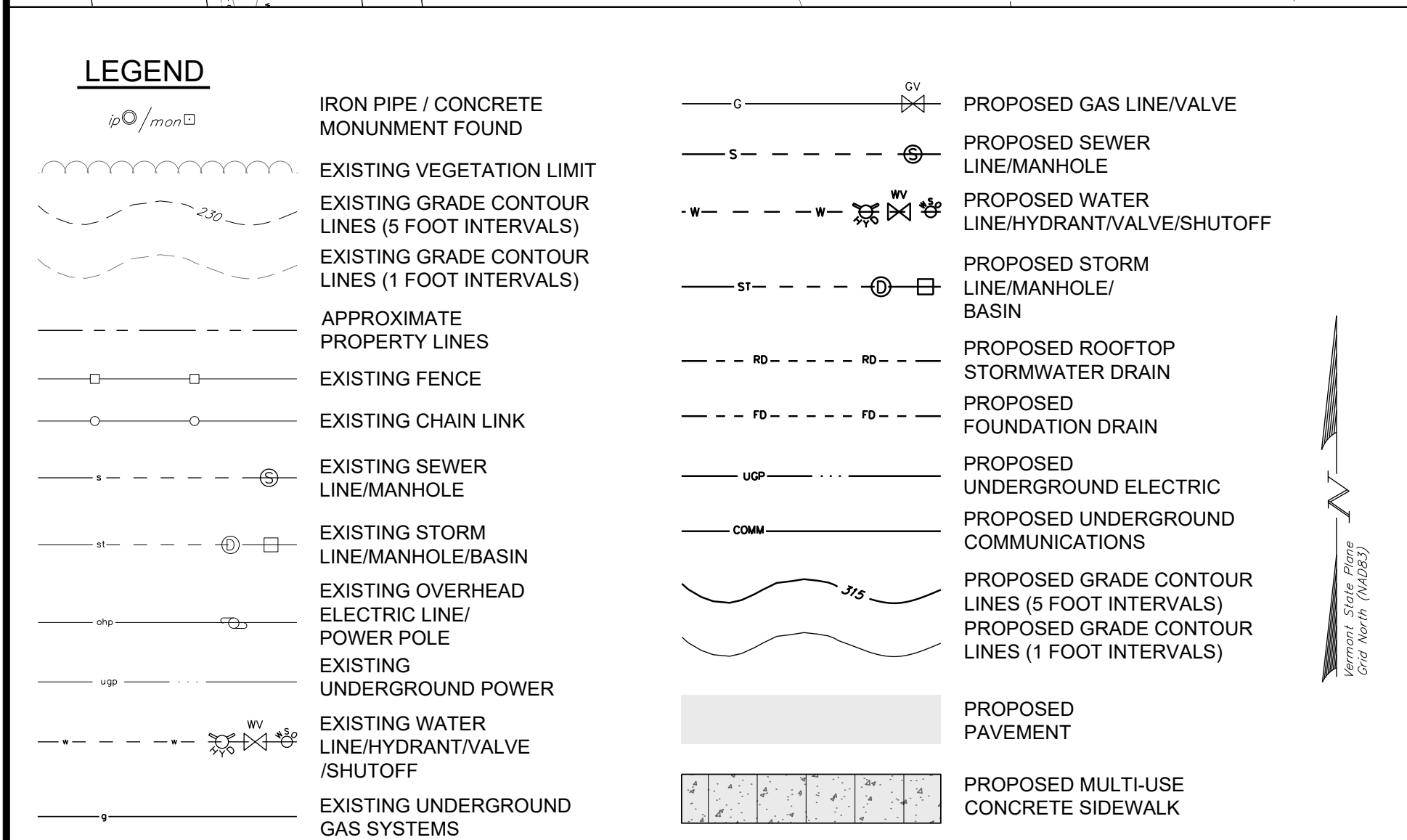
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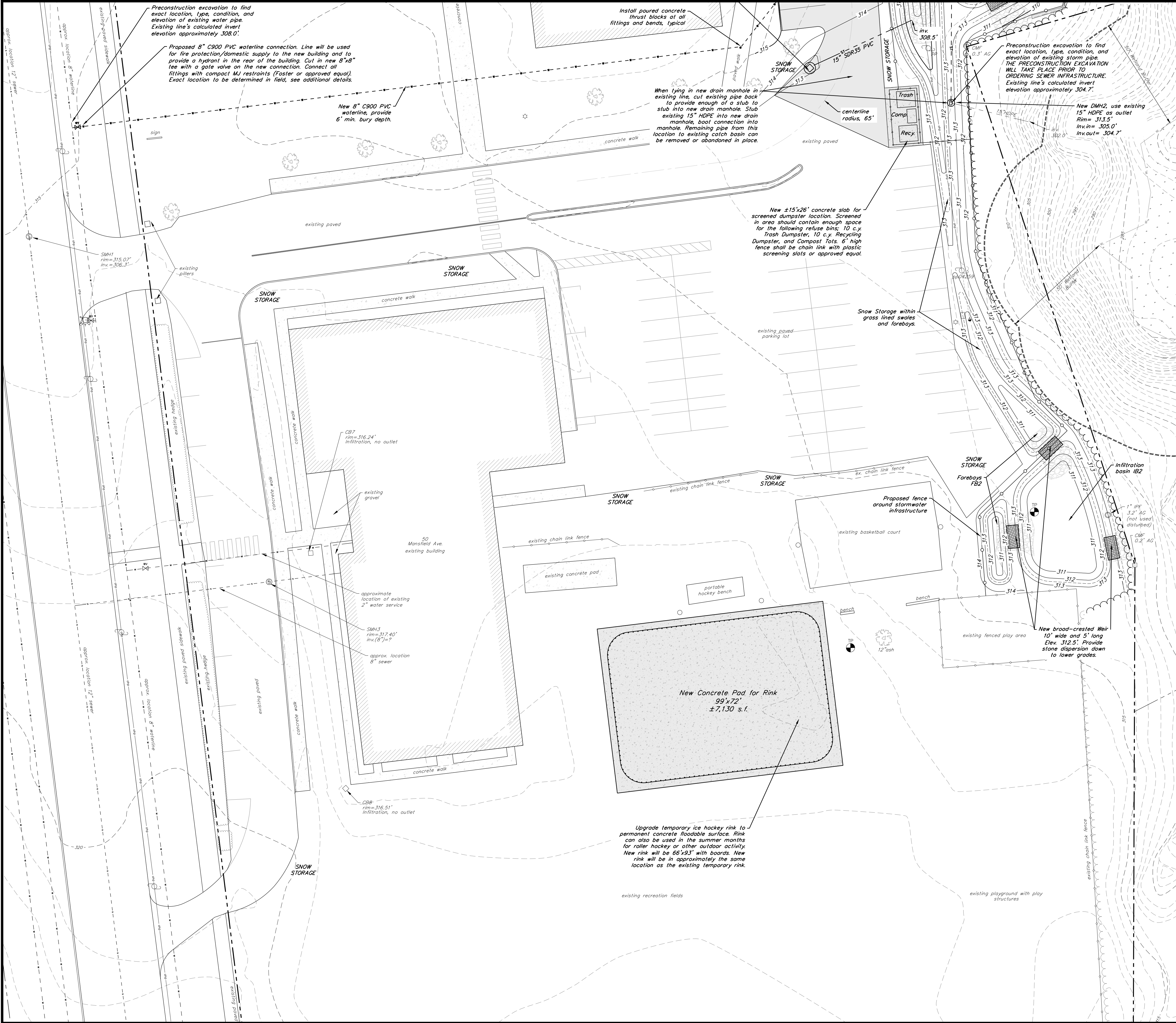
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DWG NAME: Mater-Christi_Base-Plan.dwg

Page 17 of 116

1. ASPECTS OF PLAN ARE APPROXIMATE AND DERIVED FROM AERIAL PHOTOGRAPHY. ASPECTS OF THE PLAN ARE ALSO FROM A BOUNDARY PLAN TITLED "SISTERS OF MERCY NORTHEAST COMMUNITY" BY CIVIL ENGINEERING ASSOCIATES, INC DATED 08/09/22.
2. THE HORIZONTAL COORDINATE SYSTEM IS BASED ON NAD83 VERMONT STATE PLANE 4400 (US SURVEY FEET). ELEVATIONS ARE BASED ON THE NAVD88 (US SURVEY FEET).
3. EXISTING GROUND CONTOUR ELEVATIONS ARE BASED 2014 STATE OF VERMONT LIDAR AND FIELD SURVEY BY KREBS AND LANSING IN THE FALL OF 2024. KREBS AND LANSING SURVEYED ONLY AREA AROUND THE PROPOSED PROJECT.
4. UTILITIES ARE NOT WARRANTED TO BE COMPLETE OR ACCURATE, CONTRACTOR SHALL CONTACT DIG SAFE BEFORE BEGINNING ANY EXCAVATION.
5. THIS IS IN NO WAY A BOUNDARY SURVEY. PROPERTY LINES SHOWN ON THIS PLAN ARE FROM TAX MAP INFORMATION PROVIDED BY THE CITY. PROJECT PROPERTY LINES ARE SHOWN BASED ON A BOUNDARY PLAN TITLED "SISTERS OF MERCY NORTHEAST COMMUNITY" BY CIVIL ENGINEERING ASSOCIATES, INC DATED 08/09/22. ADDITIONALLY, SURROUNDING PROPERTY LINES HAVE BEEN ADJUSTED BASE ON MONUMENTATION FOUND IN THE FIELD AND EVIDENCE IN AERIAL PHOTOGRAPHY.





NOTES:

- ASPECTS OF PLAN ARE APPROXIMATE AND DERIVED FROM AERIAL PHOTOGRAPHY. ASPECTS OF THE PLAN ARE ALSO FROM A BOUNDARY PLAN TITLED 'SISTERS OF MERCY NORTHEAST COMMUNITY" BY CIVIL ENGINEERING ASSOCIATES, INC DATED 08/09/22.
- THE HORIZONTAL COORDINATE SYSTEM IS BASED ON NAD83 VERMONT STATE PLANE 4400 (US SURVEY FEET). ELEVATIONS ARE BASED ON THE NAVD88 (US SURVEY FEET).
- EXISTING GROUND CONTOUR ELEVATIONS ARE BASED 2014 STATE OF VERMONT LIDAR AND FIELD SURVEY BY KREBS AND LANSING IN THE FALL OF 2024. KREBS AND LANSING SURVEYED ONLY AREA AROUND THE PROPOSED PROJECT.
- UTILITIES ARE NOT WARRANTED TO BE COMPLETE OR ACCURATE, CONTRACTOR SHALL CONTACT DIG SAFE BEFORE BEGINNING ANY EXCAVATION.
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LEGEND

- IRON PIPE / CONCRETE MONUMENT FOUND
- EXISTING VEGETATION LIMIT
- EXISTING GRADE CONTOUR LINES (5 FOOT INTERVALS)
- EXISTING GRADE CONTOUR LINES (1 FOOT INTERVALS)
- APPROXIMATE PROPERTY LINES
- EXISTING FENCE
- EXISTING CHAIN LINK
- EXISTING SEWER LINE/MANHOLE
- EXISTING STORM LINE/MANHOLE/BASIN
- EXISTING OVERHEAD ELECTRIC LINE/ POWER POLE
- EXISTING UNDERGROUND POWER
- EXISTING WATER LINE/HYDRANT/VALVE /SHUTOFF
- EXISTING UNDERGROUND GAS SYSTEMS
- PROPOSED GAS LINE/VALVE
- PROPOSED SEWER LINE/MANHOLE
- PROPOSED WATER LINE/HYDRANT/VALVE/ SHUTOFF
- PROPOSED STORM LINE/MANHOLE/ BASIN
- PROPOSED ROOFTOP STORMWATER DRAIN
- PROPOSED FOUNDATION DRAIN
- PROPOSED UNDERGROUND ELECTRIC
- PROPOSED UNDERGROUND COMMUNICATIONS
- PROPOSED GRADE CONTOUR LINES (5 FOOT INTERVALS)
- PROPOSED GRADE CONTOUR LINES (1 FOOT INTERVALS)
- PROPOSED PAVEMENT
- PROPOSED MULTI-USE CONCRETE SIDEWALK

MATER CHRISTI SCHOOL

Mansfield Avenue
Burlington, Vermont



164 Main Street, Suite 201
Colchester, Vermont 05446

P: (802) 878-0375
www.krebsandlansing.com

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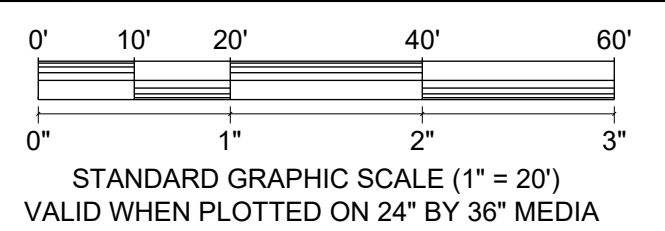
OWNER/APPLICANT:

Mater Christi School
40 Main Street Suite 450
Burlington, Vermont 05401

PROPERTY INFORMATION:

Address: 50 Mansfield Avenue
Parcel ID: 045-3-112-000
SPAN: 114-035-16320
Area: 19.86 Acres (±865,200 s.f.)
Zoning: Institutional

STAMP:



REV. NO.	REVISIONS/COMMENTS	DATE

DRAWING TITLE:

DETAILED
PROPOSED PLAN
SOUTHERN PORTION OF SITE

DATE ISSUED: 11/14/24

DRAWN BY: GTD

CHECKED BY:

PROJECT NO.: 24145

SCALE: 1" = 20'

DRAWING NO.:

REV. NO.:

C-1.02

DWG NAME: Mater-Christi_Base-Plan.dwg

MATER CHRISTI SCHOOL

Mansfield Avenue
Burlington, Vermont



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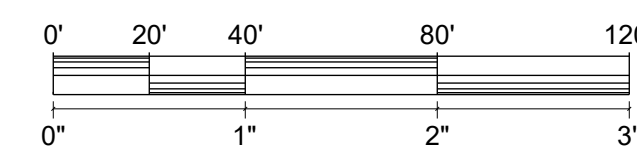
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Area: 19.86 Acres (±865,200 s.f.)
Zoning: Institutional

STAMP:



STANDARD GRAPHIC SCALE (1" = 40')
VALID WHEN PLOTTED ON 24" BY 36" MEDIA

REV. NO.	REVISIONS/COMMENTS	DATE

DRAWING TITLE:

STORMWATER COVERAGE
AND WATERSHED PLAN

DATE ISSUED: 11/14/24

DRAWN BY: GTD

CHECKED BY:

PROJECT NO.: 24145

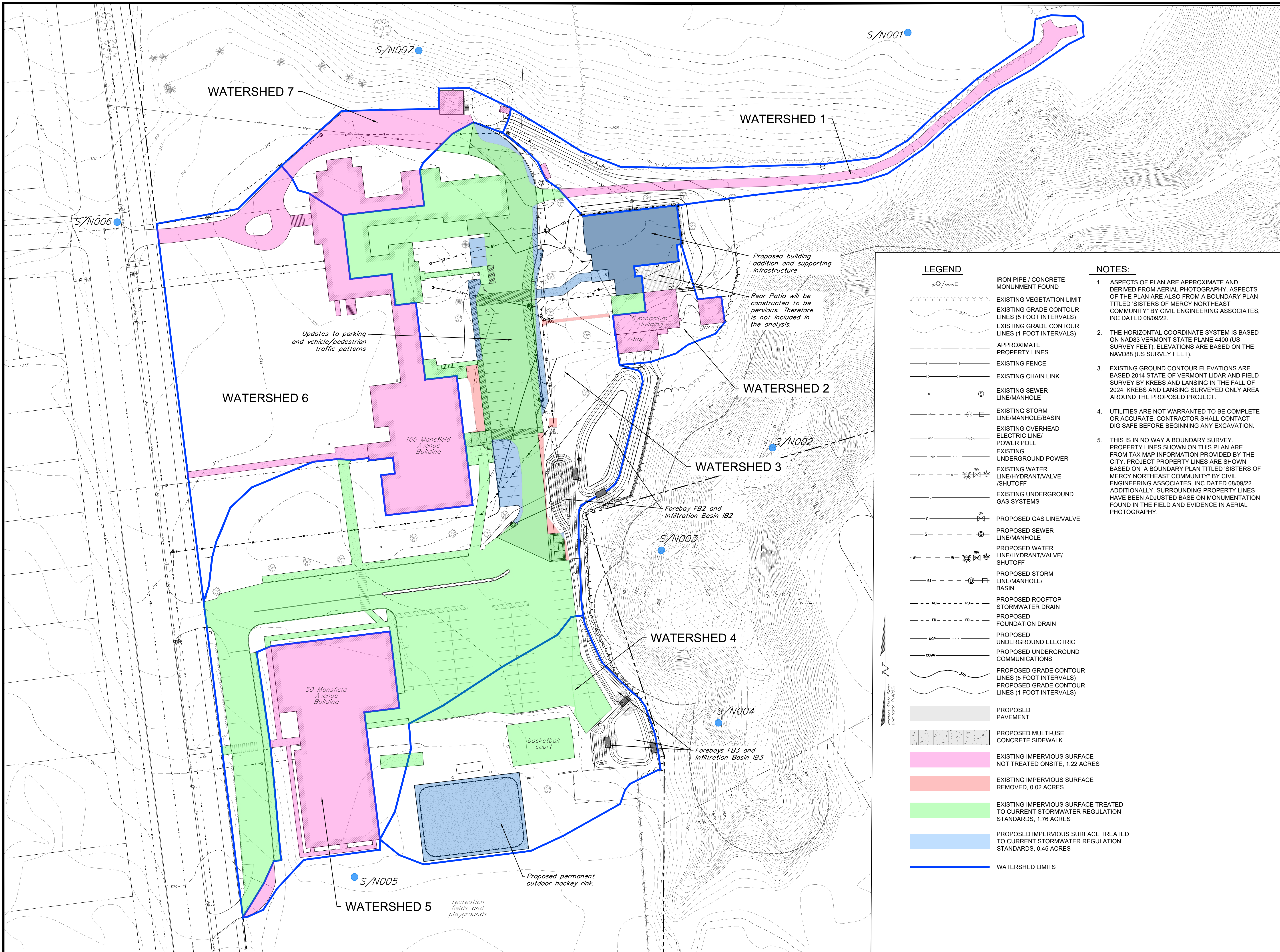
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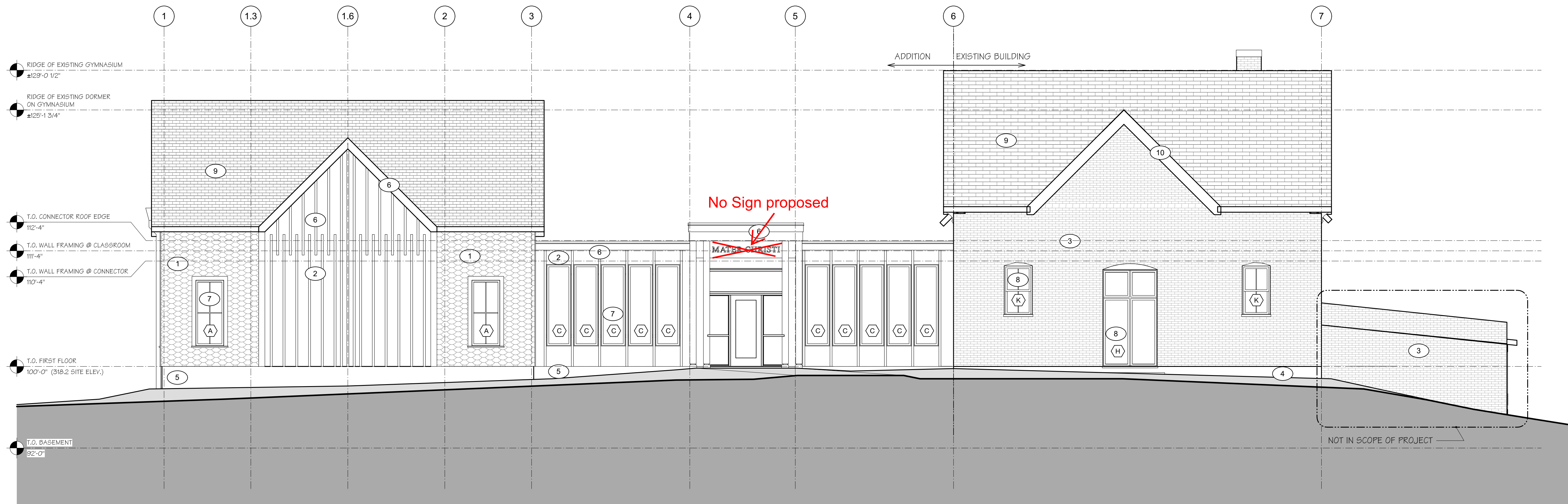
DRAWING NO.:

REV. NO.:

C-1.03

DWG NAME: Mater-Christi_Base-Plan.dwg





1 WEST ELEVATION
Scale: 3/16" = 1'-0"



2 SOUTH ELEVATION
Scale: 3/16" = 1'-0"

ELEVATION NOTES:	
1	SHINGLE SIDING
2	PANEL SIDING
3	EXISTING BRICK
4	EXISTING STONE FOUNDATION
5	CONCRETE FOUNDATION
6	COMPOSITE TRIM
7	NEW WINDOW IN NEW CONSTRUCTION
8	NEW WINDOW IN EXISTING MASONRY OPENING
9	NEW SHINGLE ROOF
10	WOOD TRIM
11	(NOT USED)
12	(NOT USED)

MATER CHRISTI • EARLY EDUCATION CENTER

BURLINGTON, VERMONT

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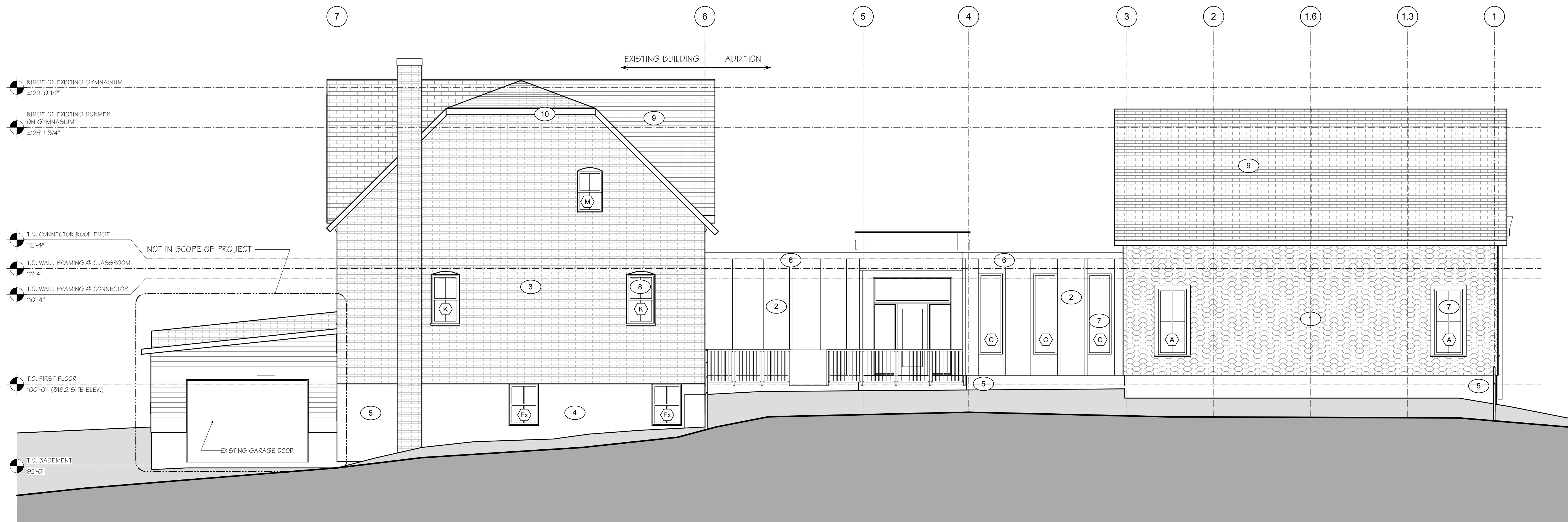
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T: 802.864.6693

DATE: 11.15.24
DRAWN BY: CH/TB

A2-1.0



3 EAST ELEVATION
Scale: 3/16" = 1'-0"



4 NORTH ELEVATION
Scale: 3/16" = 1'-0"

ELEVATION NOTES:

- 1 SHINGLE SIDING
- 2 PANEL SIDING
- 3 EXISTING BRICK
- 4 EXISTING STONE FOUNDATION
- 5 CONCRETE FOUNDATION
- 6 COMPOSITE TRIM
- 7 NEW WINDOW IN NEW CONSTRUCTION
- 8 NEW WINDOW IN EXISTING MASONRY OPENING
- 9 NEW SHINGLE ROOF
- 10 WOOD TRIM
- 11 (NOT USED)
- 12 (NOT USED)

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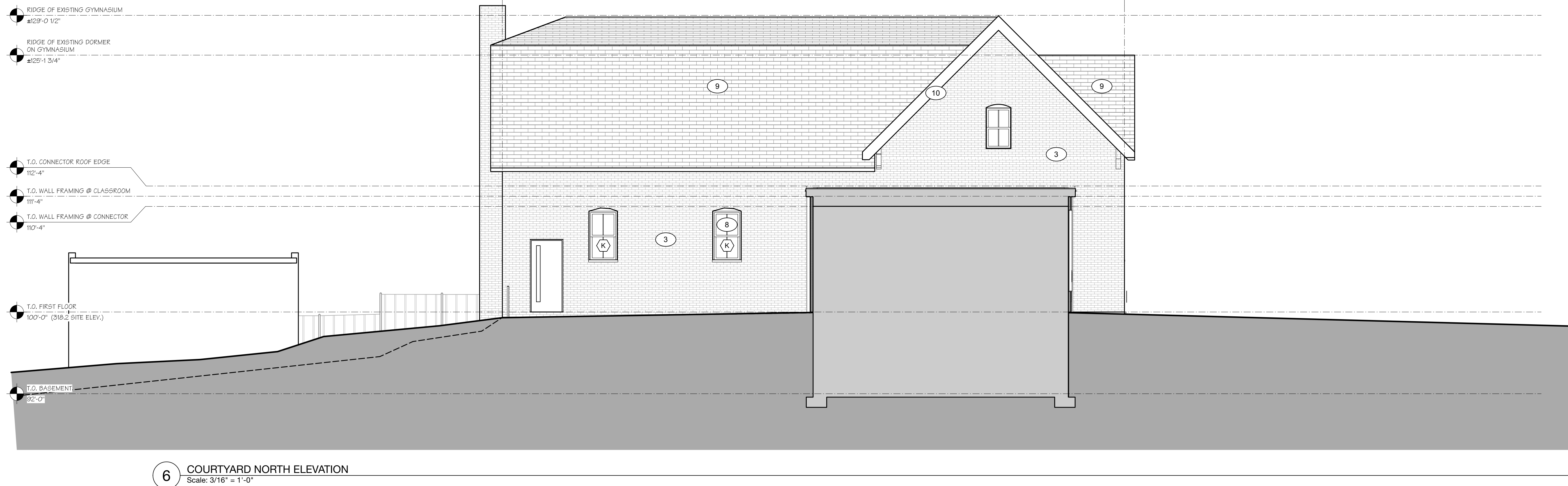
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T: 802.864.6693

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ELEVATION NOTES:	
1	SHINGLE SIDING
2	PANEL SIDING
3	EXISTING BRICK
4	EXISTING STONE FOUNDATION
5	CONCRETE FOUNDATION
6	COMPOSITE TRIM
7	NEW WINDOW IN NEW CONSTRUCTION
8	NEW WINDOW IN EXISTING MASONRY OPENING
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10	WOOD TRIM
11	(NOT USED)
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DATE: 11.15.24
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1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ALL DISTURBED AREAS BACK TO ORIGINAL CONDITION, INCLUDING BUT NOT LIMITED TO CURBING, SIDEWALKS, ROAD, PARKING AREAS, LANDSCAPING, SITE LIGHTING, ELECTRICAL, AND ETC. ALL ASPHALT SHALL BE SAW-CUT PRIOR TO PAVING.
2. THE METHODS AND MATERIALS OF CONSTRUCTION SHALL CONFORM TO THE LATEST STANDARDS OF THE STATE OF VERMONT AND CITY OF BURLINGTON. ALL WORK SHALL BE IN CONFORMANCE WITH ALL PERMITS AND APPROVALS ISSUED FOR THE PROJECT. IN CASE OF CONFLICT, THE MORE STRINGENT SPECIFICATION SHALL APPLY AS DIRECTED BY ENGINEER. ALL WORK SHALL BE DONE IN A WORKMANLIKE MANNER AND COMPLETED IN THE TIME SPECIFIED BY OWNER.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK AND MATERIALS SHOWN AND REQUIRED TO MAKE THE JOB COMPLETE. THESE DRAWINGS DO NOT SHOW EVERY FITTING OR APPURTENANCE. MATERIALS SHALL BE AS SPECIFIED ON THE DRAWINGS. MANUFACTURER'S PRODUCT SPECIFICATIONS SHALL BE SUBMITTED FOR ALL MATERIALS TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
4. THE LOCATION AND SIZE OF EXISTING UNDERGROUND UTILITIES IS NOT WARRANTED TO BE EXACT OR COMPLETE. THE CONTRACTOR SHALL FIELD LOCATE ALL UTILITIES AND SHALL CONTACT THE AFFECTED UTILITY COMPANY, THE ENGINEER AND THE MUNICIPALITY PRIOR TO MAKING ANY HOOK UPS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EXISTING UTILITIES AND THEIR UNINTERRUPTED SERVICES. ALL OFF-SITE BACKFILL, SHEETING, SHORING, DOWATERING, CLEARING AND GRUBBING, EROSION CONTROL, DUST CONTROL, TRAFFIC CONTROL, GRADING, AND ALL INCIDENTALS SHALL BE INCLUDED AS PART OF THE REQUIRED WORK.
5. THE CONTRACTOR SHALL VERIFY ALL TEMPORARY BENCH MARKS BEFORE USE.
6. THE WORKMEN AND PUBLIC SHALL BE PROTECTED BY THE CONTRACTOR FROM ANY AND ALL HAZARDS CONNECTED WITH THE CONSTRUCTION WORK. OPEN TRENCHES, MATERIALS, OR EQUIPMENT WITHIN THE WORKING LIMITS ARE TO BE GUARDED BY THE USE OF ADEQUATE BARRICADES OR FLAGMEN. ALL BARRICADES LEFT IN POSITION OVERNIGHT ARE TO BE PROPERLY LIGHTED. KEROSENE POTS ARE NOT ACCEPTABLE. WHEN WORK NARROWS THE USABLE PAVEMENT, FLAGMEN SHALL BE EMPLOYED TO AID THE FLOW OF TRAFFIC SO THAT THERE WILL BE NO UNDUE DELAYS. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE SAFETY OF ALL WORKMEN, THE GENERAL PUBLIC AND ALL DAMAGES TO PROPERTY OCCURRING FROM OR UPON THE WORK OCCASIONED BY NEGLIGENCE OR OTHERWISE GROWING OUT OF A FAILURE ON THE PART OF THE CONTRACTOR TO PROTECT PERSONS OR PROPERTY FROM HAZARDS OF OPEN TRENCHES, MATERIALS, OR EQUIPMENT AT ANY TIME OF THE DAY OR NIGHT WITHIN THE WORKING AREA. ALL WORK SHALL BE IN CONFORMANCE TO OSHA REGULATIONS, TITLE 19, PARTS 1926.651 AND 1926.652, AND APPLICABLE TO VOSHA REGULATIONS.
7. THE CONTRACTOR SHALL VERIFY ALL UTILITY INTERSECTIONS AND CONTACT ENGINEER AND OWNER WITH CONFLICTS.
8. THE CONTRACTOR SHALL CALL, DIG SAFE PRIOR TO ANY EXCAVATION.
9. THE CONTRACTOR SHALL COORDINATE FINAL LOCATION AND INVERTS FOR WATER, SEWER, AND STORM BUILDING CONNECTIONS WITH THE ARCHITECT, STRUCTURAL ENGINEER, AND MECHANICAL ENGINEER.
10. ALL STUMPS, ROCK, AND OTHER NON-APPROVED TRENCH BACKFILL MATERIAL DISCOVERED DURING CONSTRUCTION IS THE EXCLUSIVE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE PROPERTY AND DISPOSED OF IN A STATE APPROVED DISPOSAL LOCATION. ALL EXISTING SOILS REUSED FOR FILL SHALL CONFORM TO ALL APPLICABLE SECTIONS OF VTTRANS SPECIFICATIONS SECTION 203-EXCAVATION & EMBANKMENTS. CONTRACTOR SHALL REVIEW SOIL INVESTIGATION REPORT AND SOILS LOGS PRIOR TO BID. ANY SOIL REUSED AS FILL UNDER ROADS AND APPLICABLE CONCRETE SIDEWALKS SHALL PASS A SUBGRADE PROOF ROLL WITH A LOADED TANDEM. FILL SOILS THAT DO NOT PASS A SUBGRADE PROOF ROLL SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
11. ALL PASSING SIEVE, PROCTOR, AND COMPACTION TESTING EXPENSES SHALL BE PAID BY OWNER. TESTING COORDINATION, ALL OTHER REQUIRED TESTING, AND EXPENSES FOR FAILED TESTS SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
12. THE CONTRACTOR SHALL CONTACT BURLINGTON ELECTRIC PRIOR TO ANY WORK IN THE VICINITY OF THE EXISTING ELECTRIC CONDUITS.
13. THIS PROJECT DOES WILL REQUIRE COVERAGE UNDER AN STATE OF VERMONT GENERAL CONSTRUCTION STORMWATER DISCHARGE PERMIT. THE PROJECT DOES REQUIRE AND HAS RECEIVED A PERMIT WITH THE CITY OF BURLINGTON BASED ON THEIR EROSION PREVENTION AND SEDIMENT CONTROL REGULATIONS. THAT PERMIT IS NUMBER " " ALL CONDITIONS OF THAT PERMIT AND THE REGULATIONS OUTLINED IN THE CITY OF BURLINGTON'S EPSC REGULATIONS SHOULD BE FOLLOWED ON THIS JOB SITE. FURTHER, THE CONTRACTOR WILL FOLLOW THE RULES, REGULATIONS, AND DIRECTION OUTLINED IN THE STATE OF VERMONT "LOW RISK HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL" FROM FEBRUARY 2020. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING, MAINTAINING AND REMOVING ALL EROSION AND SEDIMENT CONTROL DEVICES SHOWN ON THE PLANS OR DETAILS AND, TO THE MAXIMUM EXTENT PRACTICAL, TO MINIMIZE POTENTIAL CONTAMINATION OF STORMWATER RUNOFF FROM THE CONSTRUCTION ACTIVITIES.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL "AS-BUILT" MEASUREMENT AND DRAFTING REQUIREMENTS AS OUTLINED ON THE DETAIL SHEETS. ALL TRENCH EXCAVATIONS SHALL REMAIN OPEN UNTIL ALL AS-BUILT SURVEY SHOTS HAVE BEEN TAKEN. PROGRESS RECORD DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER AS INDICATED IN THE RECORD DRAWING SPECIFICATIONS.
15. SEE EROSION CONTROL AND LOGISTICS PLANS FOR LOCATIONS OF STAGING / STORAGE AREAS.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SIGNAGE AND CONSTRUCTION BARRIER/SAFETY FENCING NECESSARY FOR PROVIDING SAFE VEHICULAR AND PEDESTRIAN ACCESS THROUGH OR AROUND THE SITE DURING CONSTRUCTION. CONTRACTOR SHALL COORDINATE THIS WITH THE CITY OF BURLINGTON AND THE CITY OF BURLINGTON DEPARTMENT OF PUBLIC WORKS.
17. DEFINITION OF "PRECONSTRUCTION EXCAVATION" FOR THESE CONTRACT DOCUMENTS SHALL BE: THE SITE CONTRACTOR SHALL EXPOSE UTILITIES AND OBTAIN ALL NECESSARY INFORMATION, INCLUDING BUT NOT LIMITED TO, INVERT ELEVATION, SIZE, DEPTH, PIPE TYPE, JOINT LOCATION, ETC. CONTRACTOR SHALL TRANSIT SURVEY THE LOCATION AND ELEVATIONS OF THE UTILITY. CONTRACTOR SHALL PROVIDE THE ENGINEER WITH SKETCHES INDICATING HORIZONTAL AND VERTICAL INFORMATION OF PIPE OR CONDUIT TYPE AND SIZE, CROSS-SECTION INFORMATION, CONCRETE ENCASEMENT INFORMATION (TOP AND BOTTOM ELEVATIONS, WIDTH, ETC.), JOINT LOCATION, ETC. OF EACH REQUIRED EXISTING UNDERGROUND UTILITY. ACCURACY OF HORIZONTAL LOCATION IS WITHIN 1 FOOT, AND ACCURACY OF VERTICAL ELEVATION IS WITHIN 0.02 FT. (1/4"). COORDINATE ALL EXCAVATION WITH CITY, OWNER, AND ENGINEER. PRECONSTRUCTION EXCAVATIONS SHALL OCCUR PRIOR TO ORDERING STRUCTURES AND PRIOR TO UTILITY CONSTRUCTION TO FACILITATE REDESIGN AND/OR DESIGN CONFIRMATION.
18. THE LOCATION OF THE PRECONSTRUCTION EXCAVATION SYMBOLS DOES NOT NECESSARILY INDICATE THE LOCATION OF THE BURIED UTILITY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIND AND EXPOSE THE UTILITY.
19. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS OF IMPORTING AND PLACING TOPSOIL AND/OR COMPOST NECESSARY TO COMPLETE THE PROJECT. CONTRACTOR SHALL TEST TOPSOIL FOR APPROVAL BY THE OWNER AND ENGINEER.
20. ALL SEWER AND STORM PIPES SHALL BE PVC SDR 35 UNLESS OTHERWISE NOTED. ALL NEW SANITARY AND STORM PIPES SHALL BE LAID WITH A LASER TO ELEVATION AND SLOPE AS SHOWN ON THE PLANS.
21. CORE AND BOOT ALL EXISTING STRUCTURES UNLESS OTHERWISE NOTED.
22. ALL NEW CATCH BASINS AND SANITARY SEWER MANHOLE MUST HAVE ONE 6" PRECAST CONCRETE GRADE RING.
23. ALL WATERLINE PIPE SHALL BE DUCTILE IRON CLASS 52. ALL BENDS AND FITTINGS SHALL HAVE RED-MIX CAST IN PLACE THRUST BLOCKS.
24. TEMPORARY GROUNDWATER, STORMWATER, AND SEWER BY-PASS PUMPING AND/OR DIVERSION IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY PUMPS AND EQUIPMENT TO PERFORM THE WORK. OVERNIGHT PUMPING IS NOT ALLOWED.
25. ALL SIDEWALKS SHALL HAVE 2% MAXIMUM CROSS SLOPE. ALL RAMPS AND STAIRS SHALL HAVE A LANDING AT THE BOTTOM WITH A MAXIMUM SLOPE OF 2% FOR 5 FEET.
26. CONTRACTOR TO PIN CONCRETE SIDEWALK/SLABS TO ALL CONTACT POINTS WITH STAIRS, BUILDING, BIKE SLAB, RETAINING WALLS, ETC.
27. CONTRACTOR SHALL MAINTAIN FULL OCCUPANCY AND FIRE DEPARTMENT ACCESS TO ALL SURROUNDING BUILDINGS. COORDINATE ALL TEMPORARY ACCESS WITH THE MUNICIPALITY.
28. BURIED NATURAL GAS IS SHOWN FOR ALIGNMENT PURPOSES ONLY. CONTACT VERMONT GAS SYSTEMS FOR DESIGN AND DETAILS OF NEW GAS LINE. CONTRACTOR SHALL BE RESPONSIBLE FOR THE EXCAVATION, BACKFILL, AND RESTORATION FOR THE CONSTRUCTION OF THE NATURAL GAS LINES. VERMONT GAS SYSTEMS WILL PROVIDE THE PIPING, LABOR TO INSTALL, AND TESTING FOR THE NEW GAS MAIN. COORDINATE WORK AND ALL GAS SHUT DOWN PROCEDURES WITH THE OWNER.
29. REMOVAL OF ALL EROSION CONTROL IS THE RESPONSIBILITY OF THE CONTRACTOR.
30. AT THE END OF THE PROJECT, CLEAN THE SUMPS OF ALL NEW AND EXISTING CATCH BASINS AND STORM MANHOLES WITHIN THE PROJECT LIMITS AND THOSE THAT HAVE COLLECTED PROJECT RELATED RUNOFF.
31. ELECTRICAL AND LIGHTING ARE SHOWN FOR ILLUSTRATIVE/COORDINATION PURPOSES ONLY. REFER TO ELECTRICAL PLANS AND SPECIFICATIONS FOR DESIGN.
32. SEE LANDSCAPE AND/OR STRUCTURAL PLANS FOR ALL RETAINING WALLS, UTILITY PADS, STAIRS, AND EXTERIOR CONCRETE AT DOORS.
33. REFER TO PLUMBING, MECHANICAL AND/OR FIRE PROTECTION PLANS FOR WATER, SEWER AND STORM DESIGN WITHIN FIVE FEET OF THE BUILDING.

EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) PRACTICES SHALL BE IMPLEMENTED IN ALL AREAS WHERE THERE IS AN INCREASED RISK OF EROSION, AND WHERE THERE IS POTENTIAL FOR DISCHARGE OF STORMWATER RUNOFF (EITHER DIRECT OR INDIRECT) TO A WATER BODY.

EPSC MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH DISTURBING ACTIVITIES WITHIN A GIVEN DRAINAGE AREA WITH THE EXCEPTION OF LAND DISTURBANCE THAT MAY RESULT FROM ACCESSING THE AREA(S) WITH EQUIPMENT IN WHICH EPSC MEASURES ARE TO BE INSTALLED. THIS EXCEPTION INCLUDES LAND DISTURBANCE THAT MAY RESULT FROM ACCESS OF EQUIPMENT THAT IS NEEDED FOR: EXPLORATION AND/OR EPSC MEASURE INSTALLATION PHASES OF THE PROJECT. TEMPORARY SEDIMENT BASINS, TEMPORARY SEDIMENT TRAPS, PERIMETER DIKES, TEMPORARY SEDIMENT BARRIERS, AND OTHER TEMPORARY MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE WITH THE EXCEPTION OF THOSE ACTIVITIES STATED ABOVE. EARTH DISTURBANCE INCLUDES STUMPING AND GRUBBING OF CLEARED AREAS.

EPSC MEASURES SHALL BE INSTALLED PURSUANT TO THE EPSC PLAN, THE 2020 STATE OF VERMONT LOW RISK SITE HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL, THE 2020 VERMONT EROSION PREVENTION AND SEDIMENT CONTROL STANDARDS AND SPECIFICATIONS, AND/OR ANY OTHER RELEVANT PROJECT PERMITS.

ALL PROPOSED CHANGES SHALL BE APPROVED BY THE ON-SITE PLAN COORDINATOR (OSPC) OR HIS/HER DESIGNEE PRIOR TO IMPLEMENTATION.

LOGGING ACTIVITIES SHALL BE CONDUCTED IN ACCORDANCE WITH ACCEPTABLE MANAGEMENT PRACTICES FOR MAINTAINING WATER QUALITY ON LOGGING JOBS IN VERMONT (AMPS, 2006).

PERMISSION MUST BE GRANTED BY VT DEC PRIOR TO USE OF ANY SUPPORT ACTIVITIES OCCURRING OUTSIDE OF THE APPROVED PROJECT BOUNDARIES.

ALL PARTIES ASSOCIATED WITH CONSTRUCTION ACTIVITIES WHO MEET EITHER OF THE FOLLOWING TWO CRITERIA OF "PRINCIPAL OPERATOR" MUST OBTAIN COVERAGE UNDER THE CONSTRUCTION STORMWATER DISCHARGE PERMIT FOR THE PROJECT PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES BY THAT OPERATOR:

- A. THE PARTY HAS OPERATIONAL CONTROL OVER CONSTRUCTION PLANS AND SPECIFICATION, INCLUDING BUT NOT LIMITED TO THE ABILITY TO MAKE MODIFICATIONS TO THOSE PLANS AND SPECIFICATIONS; OR
- B. THE PARTY HAS CONTINUOUS DAY-TO-DAY OPERATIONAL CONTROL OF THOSE ACTIVITIES AT THE PROJECT THAT ARE NECESSARY TO ENSURE COMPLIANCE WITH AN EPSC PLAN FOR THE SITE OR OTHER PERMIT CONDITIONS (E.G., THEY ARE AUTHORIZED TO DIRECT WORKERS AT A SITE TO CARRY OUT ACTIVITIES REQUIRED BY THE EPSC PLAN OR COMPLY WITH OTHER PERMIT CONDITIONS).

CITY OF BURLINGTON'S AND THE STATE OF VERMONT'S EROSION PREVENTION AND SEDIMENT CONTROL PLAN PERMITS SHALL BE POSTED IN A VISIBLE LOCATION AT THE CONSTRUCTION ENTRANCE THROUGHOUT CONSTRUCTION.

EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED TO THE EXTENT PRACTICABLE. EXISTING PAVEMENT SHALL BE PRESERVED UNTIL REMOVAL IS REQUIRED FOR CONSTRUCTION, TO THE EXTENT PRACTICAL.

A VEGETATED BUFFER SHALL BE MAINTAINED FOR WATER BODIES WHERE FEASIBLE (E.G., WETLANDS AND STREAMS).

TO THE EXTENT PRACTICABLE, SURFACE FLOW SHALL BE DIVERTED AWAY FROM EXPOSED SOILS VIA DIVERSION BERMS, EARTH DIKES, PERIMETER DIKES/SWALES, TEMPORARY SWALES, WATER BARS, AND/OR CHECK DAMS.

RESOURCE AREAS (E.G., WETLANDS, STREAMS, RTE PLANT SPECIES) SHALL BE FLAGGED PRIOR TO ANY CONSTRUCTION RELATED ACTIVITIES OCCURRING WITHIN CLOSE PROXIMITY TO THOSE AREAS.

EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT VIOLATE WATER QUALITY STANDARDS OR CONTRIBUTE TO EROSION. DEWATERING DETAILS SHALL BE REVIEWED AND APPROVED BY OSPC PRIOR TO USE.

CONCENTRATED RUNOFF SHALL NOT FLOW DOWN STEEP SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL (SEE DETAILS), FLUME, OR SLOPE DRAIN STRUCTURE.

UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:

- A. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
- B. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES, WHERE FEASIBLE, BUT NOT IN RESOURCE AREAS.

WHERE FEASIBLE, ALL SEDIMENT REMOVED FROM SEDIMENT CONTROL PRACTICES AS PART OF MAINTENANCE SHALL BE DISPOSED OF IN AN AREA THAT IS AT LEAST ONE OF THE FOLLOWING, WITH IMMEDIATE STABILIZATION FOLLOWING DISPOSAL OF MATERIAL:

- A. LESS THAN 6% SLOPE
- B. AT LEAST 100 FEET FROM ANY DOWNSLOPE WATER BODY OR CONVEYANCE TO A WATER

ALL AREA DISTURBED AND ALL AREAS WITHIN THE CLEARING LIMITS SHALL BE GRADED AND COVERED WITH A MINIMUM OF 6" OF LOAM TOPSOIL. ADDITIONAL TOPSOIL DEPTHS AND SPECIFICATIONS MAY BE OUTLINED BY THE LANDSCAPE ARCHITECT FOR SPECIFIC AREAS. THE AREAS TO BE LOAMED SHALL BE FREE AND CLEAR OF ROOTS, WASTE MATERIAL AND OTHER DELETERIOUS MATERIAL. TOPSOIL SHALL BE SPREAD AND LIGHTLY COMPACTED TO A DEPTH OF 6". TOPSOIL SHALL BE APPROVED BY THE ENGINEER AND/OR LANDSCAPE ARCHITECT. ALL SLOPE AREAS ARE TO BE LOAMED.

ALL TURF ESTABLISHMENT SHALL BE IN ACCORDANCE WITH SECTION 651 OF THE VT STANDARD SPECIFICATIONS 2018 AND THE MUNICIPALITY SPECIFICATIONS. MULCHING SHALL FOLLOW SEEDING BY NO MORE THAN 24 HOURS.

ALL CUT SLOPES SHALL BE NO STEEPER THAN 2.0H ON 1.0V. ALL FILL SLOPES SHALL BE NO STEEPER THAN 2.0H ON 1.0V.

THE CONTRACTOR SHALL NOT DISTURB ANY GROUND BETWEEN OCTOBER 15TH BETWEEN APRIL 15TH WINTER MONTHS, UNLESS APPROVED BY THE ENGINEER.

TEMPORARY SILT FENCE SHALL BE ERECTED PRIOR TO ANY CLEARING OR CONSTRUCTION. FENCING MAY BE ERECTED IN PHASES, BUT IN NO CASE SHALL GROUND DISTURBANCE PROCEED FENCING. SPECIAL AREAS MAY BE DESIGNATED BY THE OWNER FOR PRESERVATION OF EXISTING TREES. THESE AREAS SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSURE NO DAMAGE IS DONE TO DESIGNATED TREES.

EXISTING PLANTINGS ARE LOCATED IN GENERAL AREAS AS SHOWN ON THIS PLAN. CONTRACTOR SHALL PROTECT PLANTINGS SO AS NOT TO DAMAGE THESE OR THEIR ROOT SYSTEMS.

SLOPE STABILITY BASED UPON UNSATURATED SOIL CONDITIONS. IF DURING CONSTRUCTION SATURATED SOILS ARE ENCOUNTERED, CONTACT THE ENGINEER IMMEDIATELY.

[illegible]

APPLIES TO NEW DOMESTIC WATER MAINS AND SERVICES.

2. THE PIPE FOR WATER MAIN SHALL BE CL52 DOUBLE CEMENT LINED DUCTILE IRON OR C900 PVC. DUCTILE IRON FITTINGS SHALL CONFORM TO AWWA C110, 300 POUNDS WORKING PRESSURE. VALVES SHALL BE MANUFACTURED TO MEET ALL REQUIREMENTS OF AWWA SPECIFICATION C509 OR C515. FOUR-INCH AND SIX-INCH PIPE SHALL HAVE NO LESS THAN 2 BRASS WEDGES INSTALLED AT EACH JOINT. EIGHT-INCH AND TEN-INCH PIPE SHALL HAVE NO LESS THAN 3 WEDGES INSTALLED AT EACH JOINT.

3. ALL PIPE SHALL BE INSTALLED IN ACCORDANCE WITH AWWA C600. THE PIPE SHALL BE KEPT FREE OF FOREIGN MATTER AND DEBRIS DURING INSTALLATION. WHEN THE PROCESS OF PIPE LAYING HAS STOPPED, ANY OPEN ENDS OF PIPE SHALL BE PLUGGED THERE. SHALL BE A MINIMUM OF 6'-0" COVER OVER ALL PIPE AND SERVICE LINES. ANY PIPE DEFLECTION SHALL NOT EXCEED FIFTY (50%) PERCENT OF RECOMMENDED MANUFACTURER'S MAXIMUM DEFLECTION. BACKFILL MATERIALS AND PROCEDURES SHALL BE AS DETAILED ON THE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL SHEETING AND/OR SHORING NECESSARY TO COMPLY WITH OSHA - VOSH REGULATIONS.

4. THE TESTING OF THE WATER MAIN SHALL CONSIST OF THE TESTING OF ALL INSTALLED PIPE, SERVICES AND HYDRANTS IN ACCORDANCE WITH AWWA C600. THE TESTING SHALL CONSIST OF A PRESSURE TEST AND LEAKAGE TEST. ALL TESTING SHALL BE DONE WITH POTABLE WATER AND IN THE PRESENCE OF THE ENGINEER, REPRESENTATIVES FROM THE MUNICIPALITY AND THE MUNICIPALITY PUBLIC WORKS. THE PRESSURE TEST CONSISTS OF MAINTAINING A MINIMUM INTERNAL PIPE PRESSURE OF 200 PSI FOR TWO (2) HOURS. THE TESTING ALLOWANCE SHALL BE DEFINED AS THE MAXIMUM QUANTITY OF MAKEUP WATER THAT IS ADDED INTO A PIPELINE UNDERGOING HYDROSTATIC PRESSURE TESTING, OR ANY VALVED SECTION THEREOF, IN ORDER TO MAINTAIN PRESSURE WITHIN +/- 5 PSI OF THE SPECIFIED TEST PRESSURE (AFTER THE PIPELINE HAS BEEN FILLED WITH WATER AND THE AIR HAS BEEN EXPELLED). NO PIPE INSTALLATION WILL BE ACCEPTED IF THE QUANTITY OF MAKEUP WATER IS GREATER THAN THAT DETERMINED BY THE FOLLOWING FORMULA:

$$L = \frac{SD\sqrt{P}}{148,000}$$

L = TESTING ALLOWANCE (MAKEUP WATER), IN GALLONS PER HOUR
S = LENGTH OF PIPE TESTED, IN FEET
D = NOMINAL PIPE DIAMETER, IN INCHES
P = AVERAGE TEST PRESSURE DURING THE HYDROSTATIC TEST, IN POUNDS PER SQUARE INCH (GAUGE)

5. CHLORINATING OF THE SYSTEM SHALL BE ACCOMPLISHED AFTER THE WATER MAIN HAS BEEN SUCCESSFULLY PRESSURE TESTED AND THOROUGHLY FLUSHED. DISINFECTING SHALL BE IN ACCORDANCE WITH AWWA C-651. THE DISINFECTING PROCESS SHALL BE DEEMED ACCEPTABLE ONLY AFTER TWO CONSECUTIVE SETS OF ACCEPTABLE SAMPLES, TAKEN FROM THE FLUSHED AND DISINFECTED MAIN 24 HOURS APART, SHOWS NO EVIDENCE OF BACTERIOLOGICAL CONTAMINATION. FOR PROPER DISINFECTION USE MINIMUM 25 MG/L CHLORINE CONCENTRATION FOR 24 HOURS. THE CONCENTRATION MUST REMAIN ABOVE 10 MG/L. TABLET DISINFECTING IS NOT ACCEPTABLE. DECHLORINATION SHALL BE REQUIRED WHILE FLUSHING THE ORIGINAL CHLORINE FROM THE NEW LINE. COORDINATE WITH THE MUNICIPALITY AND THE MUNICIPALITY PUBLIC WORKS REGARDING THE DISPOSAL OF THE HIGHLY CHLORINATED WATER FLUSHED FROM THE NEW WATERLINE.

6. THE WATER MAIN SHALL BE THOROUGHLY FLUSHED WITH A MINIMUM FLOW VELOCITY OF 2.5 FT/S TO FLUSH FOREIGN MATERIALS OUT OF THE VALVES AND HYDRANTS. AT LEAST 48 HOURS PRIOR TO WATERLINE FLUSHING, THE CONTRACTOR SHALL CONTACT THE OWNER, MUNICIPALITY FIRE DEPARTMENT, THE DISTRICT WATER SUPPLY COMPANY, AND THE ENGINEER. REFER TO FLUSHING REQUIREMENTS ON C-2.01 FOR FIRE SERVICE MAINS.

1. ALL SEWER LINES AND MANHOLES SHALL BE THOROUGHLY TESTED BY THE CONTRACTOR IN ACCORDANCE WITH THE ENVIRONMENTAL PROTECTION AGENCY RULES (11/06/2023).
2. ALL SANITARY MANHOLES SHALL BE VACUUM TESTED IN THE PRESENCE OF THE ENGINEER. THE STRUCTURE SHALL BE TESTED PRIOR TO BACKFILL WITH THE LOWEST SEAM EXPOSED. TEST PROCEDURES AND PRESSURE SHALL BE DETERMINED JOINTLY BY THE LOCAL APPROVAL AGENCY AND THE ENGINEER. FAILURE OF ANY VACUUM TEST SHALL NECESSITATE REPAIR AND/OR REPLACEMENT OF THE STRUCTURE AND RETEST. WATER TESTING MANHOLES IS NOT ACCEPTABLE.
3. ALL SANITARY MAINS SHALL BE AIR TESTED IN THE PRESENCE OF THE ENGINEER. AT A MINIMUM, THE TEST PRESSURE SHALL BE 4 POUNDS PER SQUARE INCH AT THE HIGHEST POINT ALONG THE TEST FOR 4 MINUTES.
4. UTILITY TESTING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING SANITARY TESTING AT A MINIMUM OF 24 HOURS PRIOR TO THE TEST. BASED ON AVAILABILITY OF ENGINEER'S STAFF, THE ENGINEER SHALL ACCOMMODATE THE TESTING SCHEDULE WITHIN 24 HOURS OF THE CONTRACTOR REQUESTED TEST DATE/TIME.
5. THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE ENGINEER IF PRE-SCHEDULED TESTING AND/OR WATER/SEWER CONSTRUCTION IS CANCELED. IF CONTRACTOR DOES NOT CONTACT ENGINEER AND ENGINEER VISITS THE SITE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENGINEER'S FEES/MILEAGE FOR SITE VISIT.

1. IN ADDITION TO THE ABOVE REQUIREMENTS AND APPLIES TO WATER AND SANITARY SEWER.
2. ALL WATER LINES AND SEWER LINES SHALL BE THOROUGHLY TESTED BY THE CONTRACTOR IN ACCORDANCE WITH THE ENVIRONMENTAL PROTECTION RULES (11/06/2023) AND THE CHAPTER 21 WATER SUPPLY RULES (02/24/2024) (THE MORE STRINGENT RULE SHALL APPLY).
3. ALL PRIVATE OR MUNICIPAL WATERLINES SHALL BE TESTED BY THE CONTRACTOR IN ACCORDANCE WITH THE PROCEDURES OUTLINED IN AWWA C600 AND/OR NFPA 24.
4. NO WATER MAIN SHALL BE CLOSER THAN TEN (10) FEET TO ANY SANITARY SEWER OR SANITARY MANHOLE AND FIVE (5) FEET TO ANY CATCH BASIN OR STORM SEWER LINE. PROVIDE MINIMUM OF 18" VERTICAL SEPARATION BETWEEN WATER MAIN AND STORM/SANITARY SEWER CROSSING.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION AS-BUILTS TO SERVICE LOCATIONS, AND ANY WATER MAIN FITTINGS. AS-BUILTS SHALL BE RECORDED IN ACCORDANCE WITH THE OUTLINED PROCEDURES.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ENGINEER AT LEAST 24 HOURS PRIOR TO STARTING CONSTRUCTION ON ANY PORTION OF THE EXTERIOR WATER OR SANITARY SYSTEMS. THIS NOTIFICATION REQUIREMENT SHALL CONTINUE TO THE COMPLETION OF THE WATER AND SANITARY SYSTEMS.
7. UTILITY TESTING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING WATER AND SANITARY TESTING, WITH THE ENGINEER AND MUNICIPALITY PUBLIC WORKS, AT A MINIMUM OF 24 HOURS PRIOR TO THE TEST. BASED ON AVAILABILITY OF ENGINEER'S STAFF, THE ENGINEER SHALL ACCOMMODATE THE TESTING SCHEDULE WITHIN 24 HOURS OF THE CONTRACTOR REQUESTED TEST DATE/TIME.
8. THE CONTRACTOR SHALL PRE-TEST WATER FOR 2 HOURS. THE CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF PRE-TEST FAILED.
9. THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE ENGINEER IF PRE-SCHEDULED TESTING AND/OR WATER/SEWER CONSTRUCTION IS CANCELED. IF CONTRACTOR DOES NOT CONTACT ENGINEER AND ENGINEER VISITS THE SITE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENGINEER'S FEES/MILEAGE FOR SITE VISIT.
10. THE CONTRACTOR SHALL COORDINATE WATER/SEWER CONSTRUCTION WITH THE MUNICIPALITY. THE CONTRACTOR SHALL LEAVE THRUST BLOCKS AND OTHER REQUIRED SECTIONS OF NEW LINE EXPOSED UNTIL MUNICIPALITY HAS INSPECTED AND APPROVED IT.

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OWNER/APPLICANT:

Mater Christi School
40 Main Street Suite 450
Burlington, Vermont 05401

PROPERTY INFORMATION:

Address: 50 Mansfield Avenue
Parcel ID: 045-3-112-000
SPAN: 114-035-16320
Area: 19.86 Acres (±865,200 s.f.)
Zoning: Institutional

STAMP:

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DRAWING TITLE:

DETAILS

DATE ISSUED: 11/14/24

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PROJECT NO.: 24145

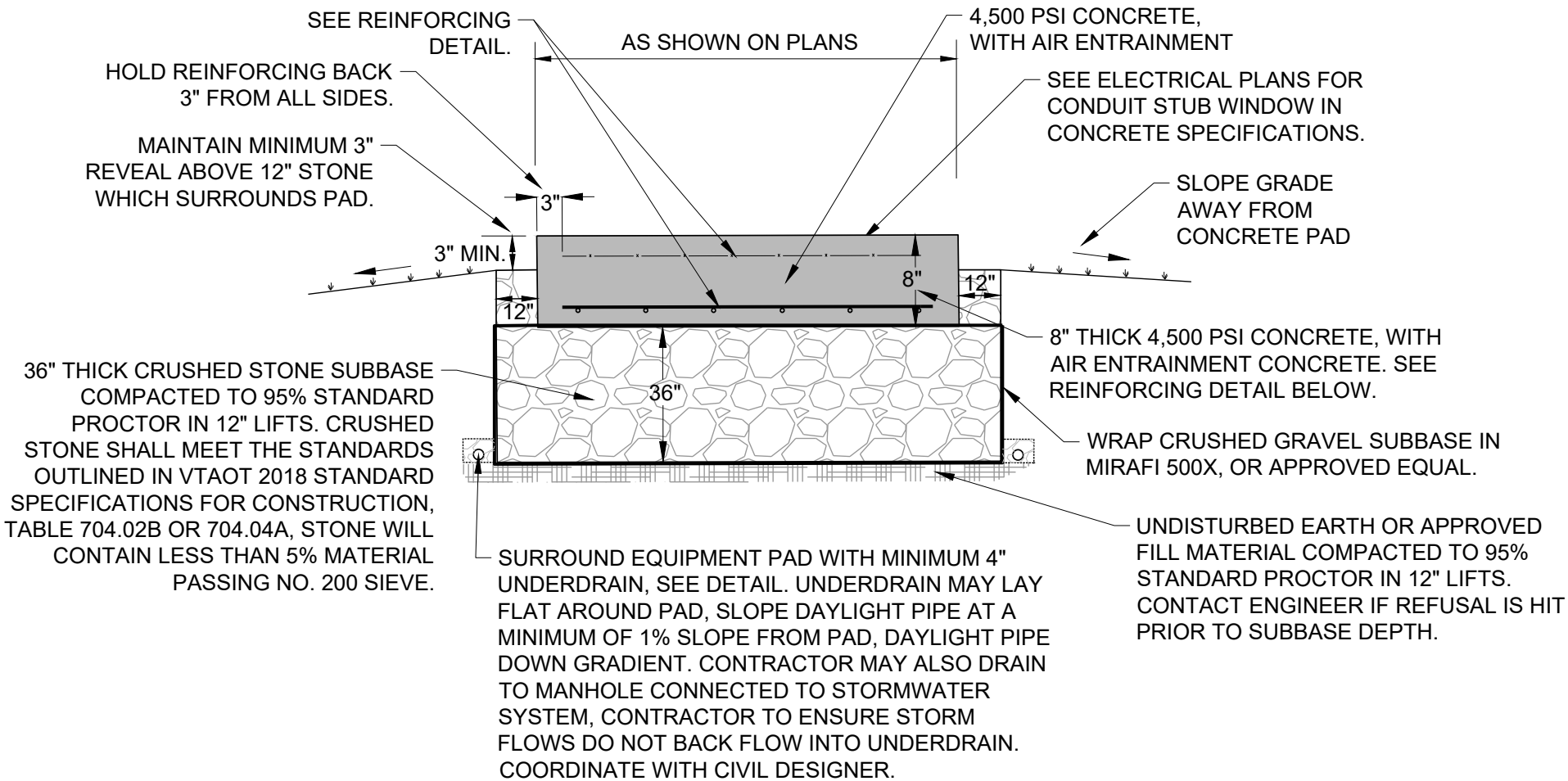
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DRAWING NO.: C-2.00

REV. NO.:

NOTE: STRUCTURES, FENCING, AND/OR BOLLARDS ARE **PROHIBITED** FROM BEING MOUNTED DIRECTLY TO THE CONCRETE PAD. STRUCTURES, FENCING, AND BOLLARDS SHOULD BE DESIGNED TO STUB THROUGH CONCRETE SLAB WITH THEIR SUPPORTS EXTENDING BELOW THE PAD.

CONTRACTOR SHALL NOT LOAD SLAB WITH EQUIPMENT UNTIL AFTER 7 DAYS AND AFTER A CERTIFIED 7-DAY TEST HAS BEEN PERFORMED ON THE SLAB. 7-DAY TESTING SHALL BE PROVIDED TO THE OWNER BEFORE SLAB IS LOADED WITH EQUIPMENT. SEE 7-DAY TESTING NOTES BELOW.

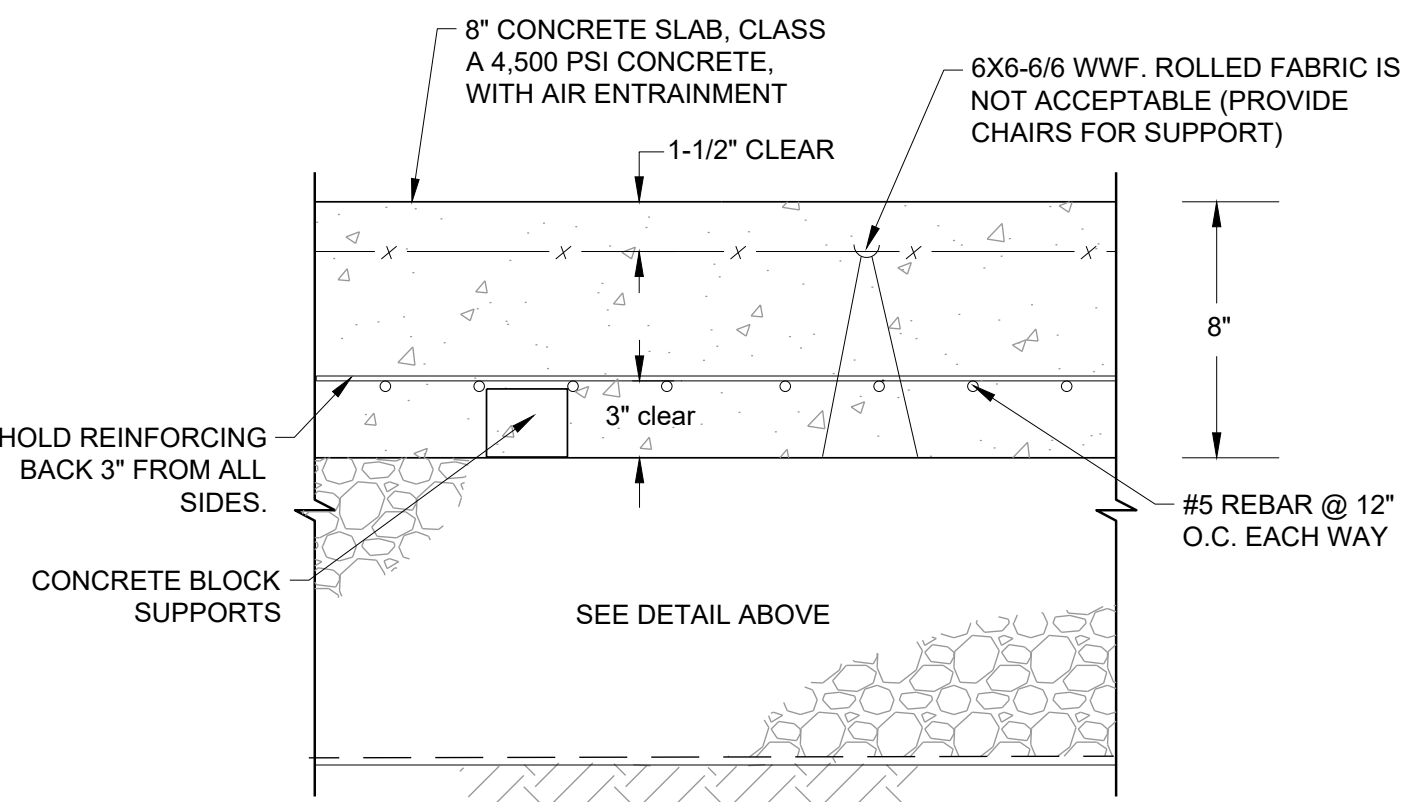


NOTES

- COLD WEATHER CONSTRUCTION PROCEDURES:
 - IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTINUOUSLY PROTECT SOILS, CONCRETE, MASONRY AND OTHER BUILDING MATERIALS FROM DAMAGE DUE TO COLD TEMPERATURES UNTIL THE SLAB HAS BEEN TURNED OVER TO THE OWNER.
 - THIS SHALL INCLUDE TEMPORARY ENCLOSURES, INSULATED BLANKETS AND TEMPORARY HEATING. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE ANY DAMAGED OR DEFECTIVE WORK, IN A MANNER APPROVED BY THE ARCHITECT/ENGINEER.
 - ALL PROTECTIVE AND CORRECTIVE WORK SHALL BE AT THE EXPENSE OF THE CONTRACTOR.
 - PERFORM WORK IN ACCORDANCE WITH ACI 301 STANDARDS AND RECOMMENDED PRACTICES.
 - THE CONTRACTOR SHALL HIRE A CERTIFIED CONCRETE TESTING CONSULTANT TO PERFORM THE TESTS FOR COMPRESSIVE STRENGTH BASE ON THE ACI 301 STANDARDS. TESTER SHALL TAKE FOUR (4) SAMPLES FROM THE CONCRETE, ONE FOR THE 7-DAY TEST, ONE FOR THE 28-DAY TEST, AND TWO ADDITIONAL FOR FURTHER TESTING AS NEEDED.
 - ACQUIRE CEMENT AND AGGREGATE FROM SAME SOURCE FOR ALL WORK.
 - CONFORM TO ACI 305R WHEN CONCRETING DURING HOT WEATHER.
 - CONFORM TO ACI 306R WHEN CONCRETING DURING COLD WEATHER.
 - CEMENT ASTM C150, TYPE I, GRAY - NORMAL; DO NOT CHANGE SOURCE OF MANUFACTURER OF CEMENT DURING THE COURSE OF THE WORK.
 - FINE AND COARSE AGGREGATES ASTM C33.
 - WATER CLEAN, POTABLE AND NOT DETRIMENTAL TO CONCRETE.
 - AIR ENTRAINMENT ASTM C260.
 - CHEMICAL ASTM C494 TYPE A - WATER REDUCING.
 - BONDING AGENT SIK A ARMATEC 110 EPOCEM BONDING AGENT, NO - SOLVENT THREE COMPONENT EPOXY AS MANUFACTURED BY SIK A OR EQUIVALENT.
 - NON -SHRINK GROUT PREMIXED COMPOUND CONSISTING OF NON -METALLIC AGGREGATE, CEMENT, WATER REDUCING AND PLASTICIZING AGENTS; CAPABLE OF DEVELOPING MINIMUM COMPRESSIVE STRENGTH OF 2,400 PSI IN 48 HOURS AND 7,000 PSI IN 28 DAYS; MANUFACTURED BY FIVE STAR PRODUCTS, INC. OR APPROVED EQUIVALENT.
 - FORM RELEASE AGENT WATER BASED, NON TOXIC, ENVIRONMENTALLY FRIENDLY PRODUCT WHICH WILL NOT STAIN CONCRETE, OR ABSORB MOISTURE , OR IMPAIR NATURAL BONDING OR COLOR CHARACTERISTICS OF COATING INTENDED FOR USE ON CONCRETE.
 - MIX CONCRETE IN ACCORDANCE WITH ACI 304. DELIVER CONCRETE IN ACCORDANCE WITH ASTM C94.
 - THE MIX DESIGN SHALL MEET THE REQUIREMENTS OF ACI 318, CHAPTER 19, INCLUDE THE WATER -CEMENT RATIO, AIR CONTENT, SLUMP, ADMIXTURES, AND THE PLAN TO BE USED.
 - CONCRETE MIXTURES SHALL CONSIST OF THE APPROPRIATE PROPORTIONS OF PORTLAND CEMENT, WATER, COARSE AND FINE AGGREGATE, AIR ENTRAINING AGENT AND WATER REDUCING AGENT FOR THE INTENDED APPLICATION.
- PROVIDE CONCRETE TO THE FOLLOWING CRITERIA
 - COMPRESSIVE STRENGTH AT 7-DAYS FOR THE SLAB ON GRADE SHOULD MEET A MINIMUM 70% OF THE 28-DAY STRENGTH = $(4,500 \times 70\%) = 3,150$ PSI
 - IF THE 7-DAY THRESHOLD OUTLINED ABOVE IS NOT MET, CONTRACTOR SHALL REACH OUT TO THE OWNER TO DISCUSS NEXT STEPS IMMEDIATELY. FURTHER, IF THIS THRESHOLD IS NOT MET, THE CONTRACTOR SHALL USE ONE OF THE ADDITIONAL SAMPLES TO RETEST AT 10-DAYS TO DETERMINE NEXT STEPS FORWARD.
 - COMPRESSIVE STRENGTH AT 28-DAYS FOR THE SLABS ON GRADE = 4,500 PSI
 - SLUMP 2 -4 INCHES BEFORE ADDITION OF WATER REDUCER, 6 -8 INCHES AFTER THE ADDITION OF WATER REDUCER.
 - MAXIMUM WATER TO CEMENT RATIO= 0.5
 - USE ACCELERATING ADMIXTURES IN COLD WEATHER ONLY WHEN APPROVED BY ARCHITECT/ENGINEER. USE OF ADMIXTURES WILL NOT RELAX COLD WEATHER PLACEMENT REQUIREMENTS.
 - USE CALCIUM CHLORIDE SHALL NOT BE PERMITTED.
 - USE SET RETARDING ADMIXTURES DURING HOT WEATHER ONLY WHEN APPROVED BY ARCHITECT/ENGINEER.
 - ADD AIR ENTRAINING AGENT TO NORMAL WEIGHT CONCRETE MIX FOR WORK EXPOSED TO EXTERIOR. DO NOT ADD AIR ENTRAINMENT TO INTERIOR SLABS.
 - PLACE CONCRETE IN ACCORDANCE WITH ACI 301, ACI 318, AND ACI 304.
 - ENSURE REINFORCEMENT, INSERTS, EMBEDDED PARTS, FORMED EXPANSION AND CONTRACTION JOINTS, ARE NOT DISTURBED DURING CONCRETE PLACEMENT.
 - DO NOT INTERRUPT SUCCESSIVE PLACEMENT; DO NOT PERMIT COLD JOINTS TO OCCUR.
 - SCREED SLABS ON GRADE LEVEL, MAINTAINING SURFACE FLATNESS OF MAXIMUM 1/4 INCH IN 10 FT.
 - FLOOR SLABS SHALL BE FINISHED AS FOLLOWS IN ACCORDANCE WITH ACI 301 AS FOLLOWS: EXTERIOR SURFACES = BROOM FINISH PERPENDICULAR TO PEDESTRIAN TRAFFIC. SAWCUT CONTROL JOINTS 4" DEPTH AT INTERVALS OF 20'.
 - IMMEDIATELY AFTER PLACEMENT, PROTECT CONCRETE FROM PREMATURE DRYING, EXCESSIVELY HOT OR COLD TEMPERATURES, AND MECHANICAL INJURY.
 - MAINTAIN CONCRETE WITH MINIMAL MOISTURE LOSS AT RELATIVELY CONSTANT TEMPERATURE FOR PERIOD NECESSARY FOR HYDRATION OF CEMENT AND HARDENING OF CONCRETE.
 - CURE FLOOR SURFACES IN ACCORDANCE WITH ACI 305, ACI 306, AND ACI 308.
 - OWNER AND/OR CONTRACTOR IS NOT ALLOWED TO PLACE DEICING MATERIAL ON NEWLY PORED CONCRETE FOR A PERIOD OF 6 MONTHS.
 - APPLY 2 COATS OF EUCLID EVERCLEAR VOX CURE SEAL COMPOUNT TO ALL CONCRETE SURFACES, PER MANUFACTURER'S SPECIFICATIONS.

CONCRETE SLAB DETAIL FOR DUMPSTER LOCATION

N.T.S.



NOTES

- PRECAST CONCRETE MAY BE USED FOR EQUIPMENT PAD. SHOP DRAWINGS FOR ALL PRECAST CONCRETE SHALL BE PROVIDED FOR REVIEW AND APPROVAL PRIOR TO PRODUCTION OF CONCRETE.

TYPICAL CONCRETE SLAB REINFORCING DETAIL

N.T.S.

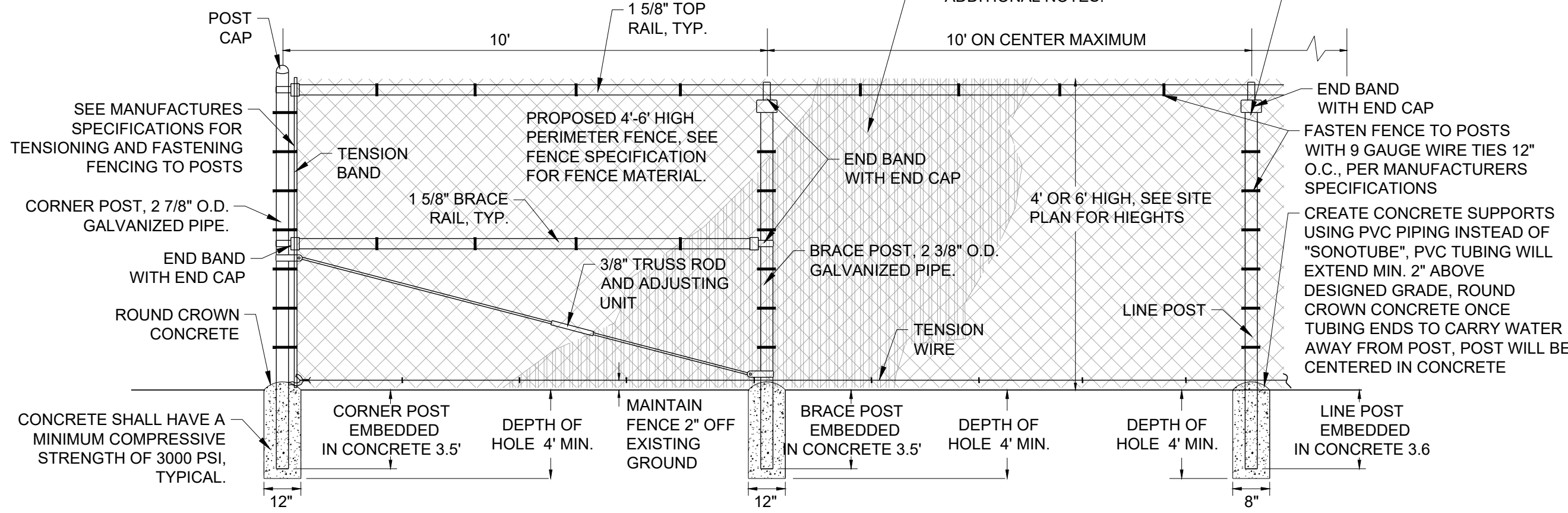
PHOTOS FROM THE INTERNET WHICH SHOWS AND EXAMPLE OF FENCE FOR HIDING THE DUMPSTER AND CHILLER LOCATIONS, PROJECT WILL HAVE A GATE ON TOWARDS THE PARKING LOT



CLOSE UP OF FENCE MATERIAL

* FENCE MATERIAL FOR DUMPSTER SURROUND ONLY SHALL BE THIS OR APPROVED EQUAL. SEE MANUFACTURERS SPECIFICATION FOR INSTALLATION AND DESIGN

FENCE MATERIAL SPECIFICATION:
FENCE MATERIAL SHALL BE 0.192 INCH DIAMETER MESH WIRE SIZE GALVANIZED WIRE WOVEN IN 2" MESH. BOTTOM AND TOP SELVAGES KNUCKLED, TYP. FENCE CAN BE GALVANIZED METAL OR COLORED VVNL WRAPPED GALVANIZED METAL. FOR FENCES WHICH SURROUND SCREENED DUMPSTER LOCATIONS, ADD VINYL SLATS INSERTED AND SECURED TO THE CHAIN LINK FABRIC, SEE MANUFACTURERS SPECIFICATIONS FOR SECURING DETAILS. COLOR TO BE APPROVED BY OWNER. SLATS ARE NOT SPECIFIED FOR OTHER FENCE USES.



TYPICAL CHAIN LINK FENCE

N.T.S.

NOTE:

- ADDITIONAL BRACING MAY BE REQUIRED ON LONGER FENCE RUNS. CONTRACTOR TO ADD ADDITIONAL BRACING WHEN CONTRACTOR OBSERVES CORNER POST DEFLECTION DURING FENCE TENSIONING/FASTENING.
- ALL PIPES TO BE SS40
- ALL FITTINGS TO BE GALVANIZED
- FABRIC TO BE TIED WITH ALUMINUM PAGE CLIPS
- CORNER POSTS WITH CAMERAS SHALL BE 10' HIGH

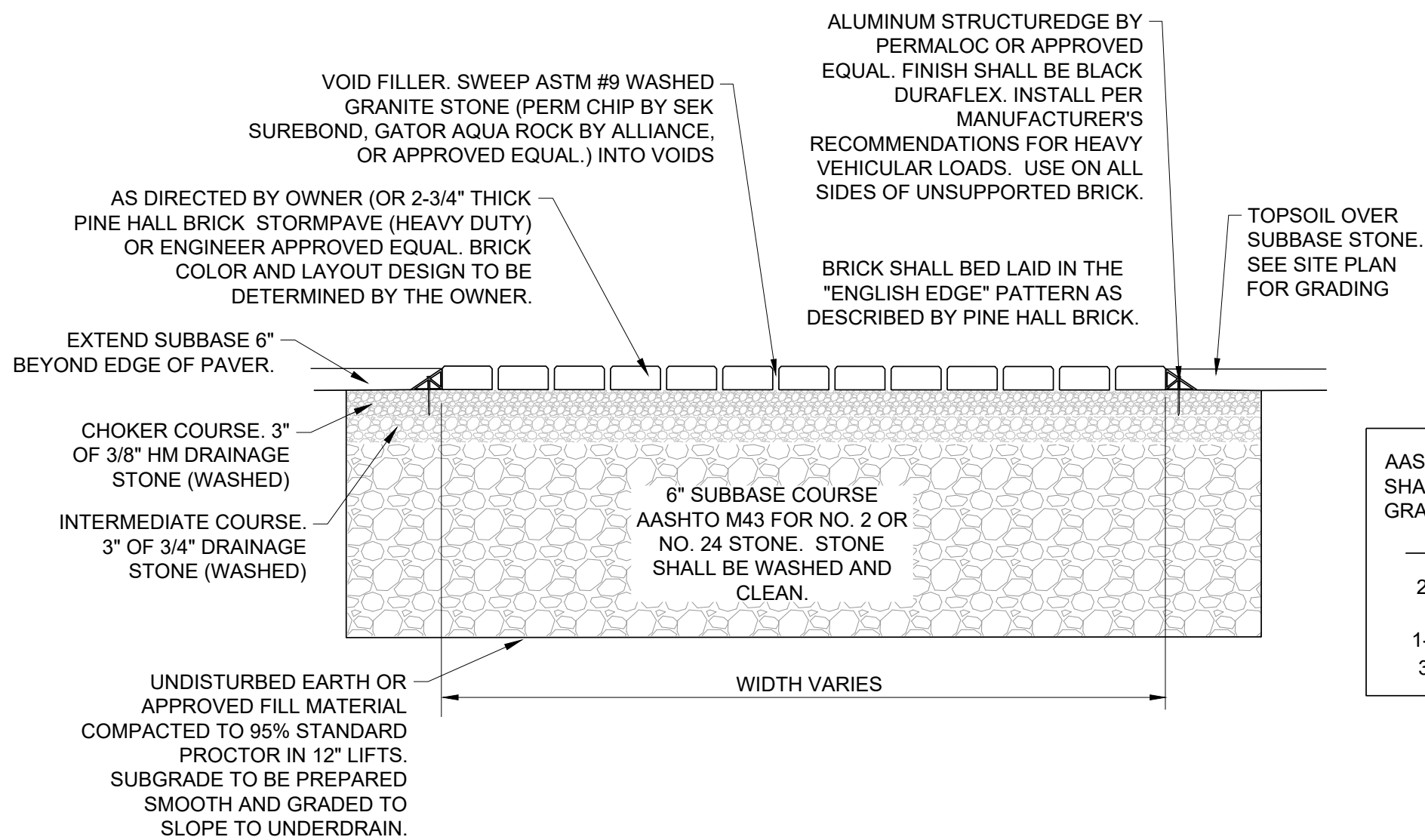
NOTE: FIELD WELDED BRACING POSTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS. ALL WELDS SHALL BE CLEANED AND COATED WITH CORROSION INHIBITING PAINT OR EPOXY AS SOON AS POSSIBLE AFTER FABRICATION. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ANY FIELD APPLIED PAINTS OR COATING TO THE OWNER PRIOR TO THE WORK. INSTALL ALL FENCE COMPONENTS IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.

PERVIOUS SYSTEM MAINTENANCE NOTES

- ALL PERMEABLE SURFACES SHALL BE ANNUALLY INSPECTED IN THE SPRING. REVIEW AND NOTE ANY CLOGGING OF PERMEABLE MATERIALS, ANY DEGRADATION OF PERMEABLE PAVERS/CONCRETE, ANY TRACKING OF MATERIALS ON PERVIOUS SURFACE, AND ANY ADJACENT EXPOSED SOIL THAT WOULD TRACKED OR ERODED ON TO PERVIOUS SURFACE.
- ALL PERMEABLE SURFACES CANNOT BE SANDED.
- DO NOT OVER SALT PERMEABLE SURFACES.
- DEPENDING ON SALT APPLICATION AND HEAVY DUTY USE, STORMCRETE PANELS MAY HAVE TO BE REPLACED AS SOON AS 5 YEARS.
- STORMCRETE PANELS SHOULD BE CLEANED WITH HIGH EFFICIENCY VACUUM WHEN EVER NEEDED BUT AT LEAST ONCE A YEAR.
- THE PERMEABLE STONE BETWEEN THE BRICK PAVERS SHOULD BE CLEANED (SHOP VACUUMED) AND REPLACED WITH NEW FILLER STONE (3/8" HM) OR
- SURFACES SHOULD BE KEPT CLEAN OF ORGANIC MATERIAL IE.. LEAVES AND GRASS CLIPPINGS.

PREVIOUS BRICK PAVERS WALK DETAIL

N.T.S.



Sieve	% Finer
3"	100
2-1/2"	90-100
2"	35-70
1-1/2"	0-15
3/4"	0-5

MATER CHRISTI SCHOOL

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Burlington, Vermont



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Burlington, Vermont 05401

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PROJECT NO.: 24145

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C-2.02

DWG NAME: Mater-Christi_Base-Plan.dwg

MATER CHRISTI SCHOOL

Mansfield Avenue
Burlington, Vermont



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REV. NO.	REVISIONS/COMMENTS	DATE

DRAWING TITLE:

DETAILS

DATE ISSUED: 11/14/24

DRAWN BY: GTD CHECKED BY:

PROJECT NO.: 24145

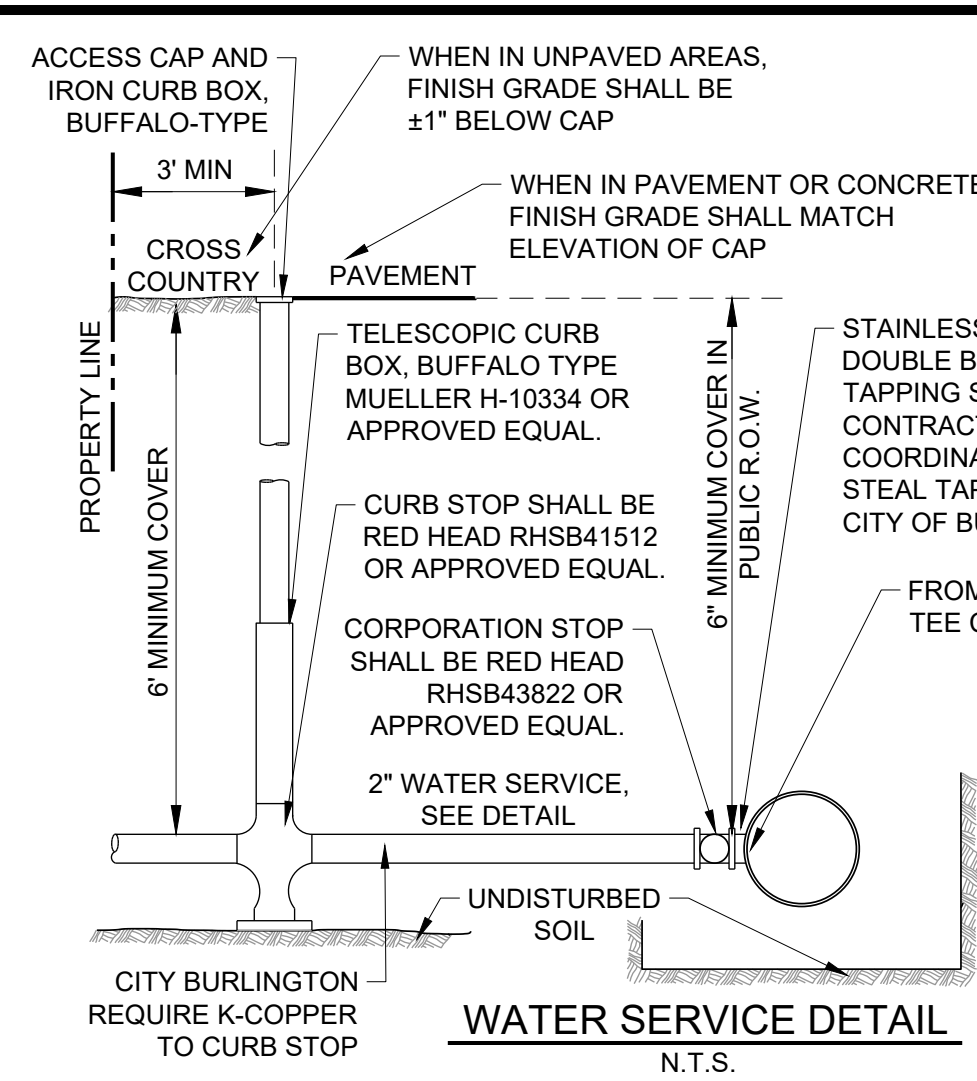
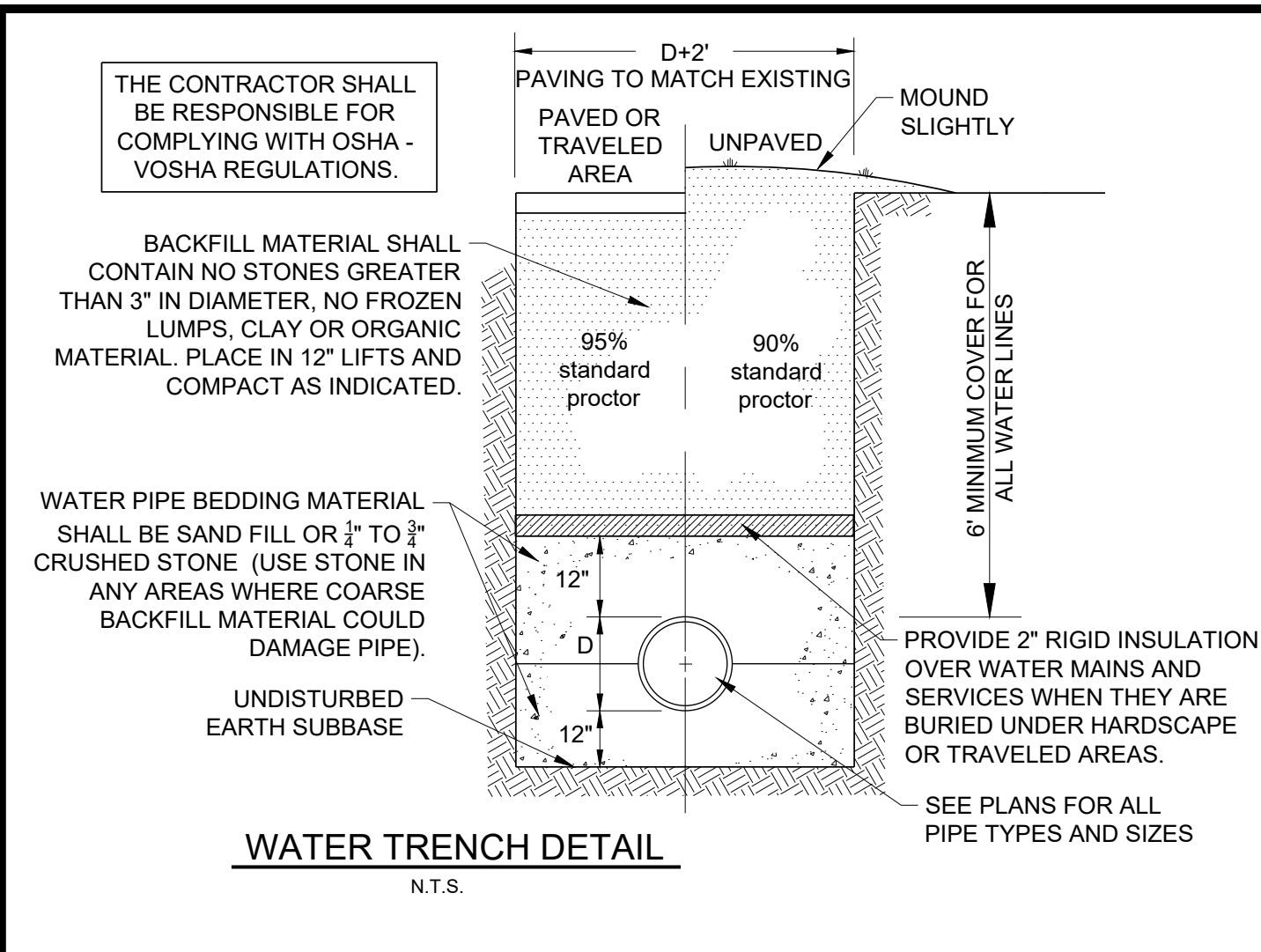
SCALE: N/A

DRAWING NO.:

REV. NO.:

C-2.03

DWG NAME: Mater-Christi_Base-Plan.dwg



NOTES

- NO VALVES, HYDRANTS, CURB STOPS ETC. SHALL BE OPERATED WITHOUT PRIOR APPROVAL BY THE MUNICIPAL WATER DEPARTMENT.
- ALL TAPS LARGER THAN 1" REQUIRE THE USE OF BRONZE SADDLES. ALL BRASS UNIONS AND ADAPTERS SHALL BE MUELLER.
- TAP MAY BE MADE DIRECTLY TO DUCTILE IRON PIPE. WITH ALL OTHER PIPES USE EITHER A COUPLING CONTAINING A FACTORY-TAPPED BRASS BUSHING OR USE A STAINLESS STEEL DOUBLE BAND SERVICE TAPPING SADDLE.

ALL CONNECTIONS TO MUNICIPAL WATER UTILITIES INSTALLED ON THE PROJECT TO BE OBSERVED BY THE ENGINEER AND THE AUTHORIZED REPRESENTATIVE OF THE UTILITY: CITY OF BURLINGTON AND BURLINGTON WATER DEPARTMENT PRIOR TO BACKFILLING THE UTILITY BEING INSTALLED. THE ENGINEER SHALL BE NOTIFIED 48 HOURS BEFORE THE WORK IS PLANNED TO BEGIN. ALL DETAILS ARE SUBJECT TO THE MOST RECENT REVISIONS OF THE BURLINGTON WATER DEPARTMENT SPECIFICATIONS AND DETAILS FOR THE INSTALLATION OF WATER LINES AND APPURTENANCES. PROJECT SHALL FOLLOW ALL DETAILS IN THIS PLAN SET, BURLINGTON DPW SPECIFICATIONS, AND THE BURLINGTON WATER DEPARTMENT SPECIFICATIONS. THE MOST STRINGENT DETAILS WILL APPLY.

NOTE: CONTRACTOR SHALL PAINT HYDRANTS IN ACCORDANCE WITH MUNICIPAL STANDARDS AFTER FLOW TEST BY MUNICIPALITY.

PROVIDE REFLECTOR IN ACCORDANCE WITH MUNICIPAL STANDARD.

USE 3 MIL. POLYETHYLENE BETWEEN CONCRETE AND FITTING (TYPICAL)

CONCRETE THRUST BLOCK ON UNDISTURBED MATERIAL. (SEE THRUST BLOCK DETAIL)

3/4" STONE

6" MIN.

ADJUSTABLE CAST IRON VALVE BOX WITH COVER MARKED 'WATER', TYPICAL ALL VALVES

ROD HYDRANT TO VALVE

6" WATER LINE

COMPACTED GRAVEL OR 3/4" CRUSHED STONE

CONCRETE THRUST BLOCK ON UNDISTURBED MATERIAL. (SEE THRUST BLOCK DETAIL)

THE CONTRACTOR SHALL PROVIDE A HYDRANT DRAINAGE PIT, 3'-0" DIAMETER AND 3'-0" DEEP, IF GROUNDWATER ELEVATION IS BELOW 6'-0" OF GROUND SURFACE. IF GROUNDWATER ELEVATIONS ARE HIGH, ALL HYDRANT DRAINS SHALL BE PERMANENTLY PLUGGED.

4'-0" MIN.

SEE SITE PLAN

NOTE: ALL VALVES SHALL BE AWWA APPROVED MANUFACTURED BY MUELLER, CLOW OR APPROVED EQUAL. ALL VALVES SHALL BE OPEN COUNTERCLOCKWISE.

24" ± 2"

6'-0" MIN. COVER THROUGHOUT

TEE AT WATER MAIN

UNDISTURBED EARTH, TYPICAL

CONCRETE THRUST BLOCK ON UNDISTURBED MATERIAL. (SEE THRUST BLOCK DETAIL)

6'-0" MIN. COVER THROUGHOUT

CONCRETE THRUST BLOCK ON UNDISTURBED MATERIAL. (SEE THRUST BLOCK DETAIL)

6'-0" MIN. COVER THROUGHOUT

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6'-0" MIN. COVER THROUGHOUT

CONCRETE THRUST BLOCK ON UNDISTURBED MATERIAL. (SEE THRUST BLOCK DETAIL)

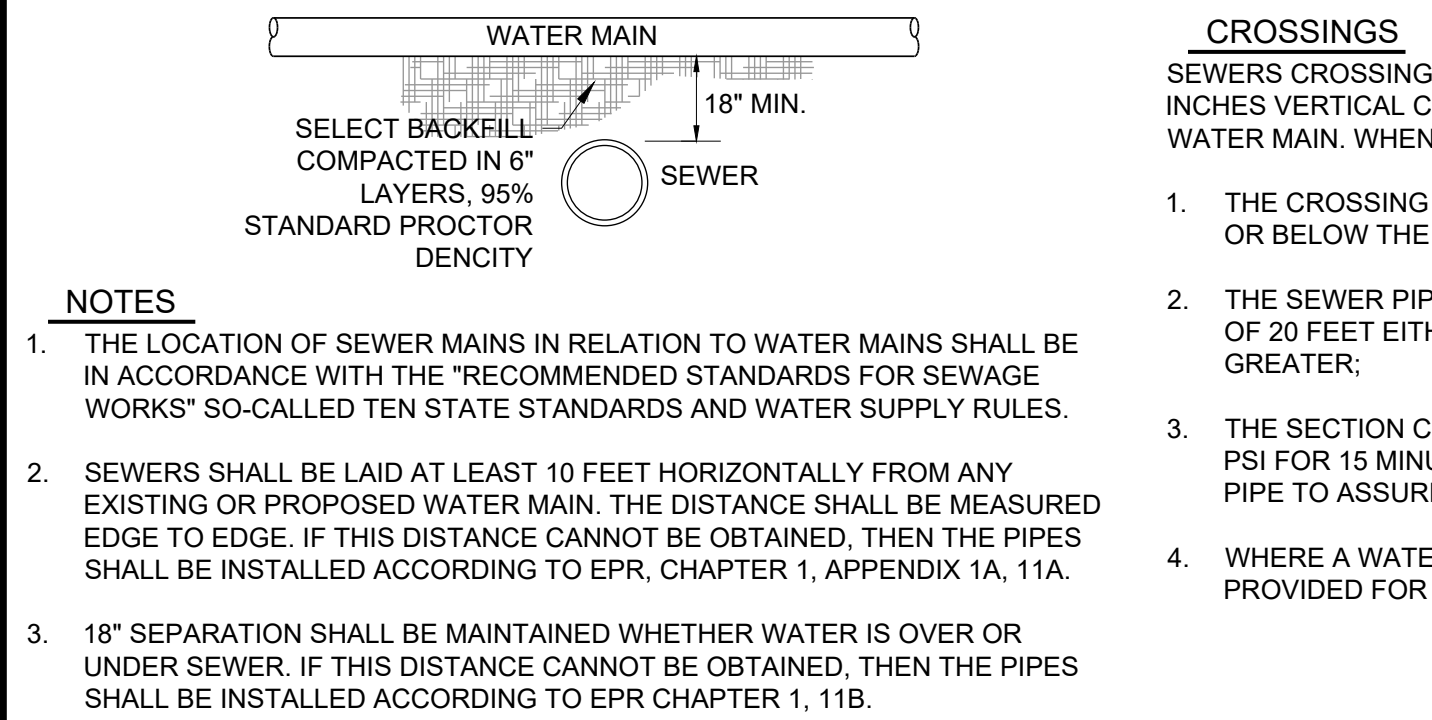
6'-0" MIN. COVER THROUGHOUT

CONCRETE THRUST BLOCK ON UNDISTURBED MATERIAL. (SEE THRUST BLOCK DETAIL)

6'-0" MIN. COVER THROUGHOUT

CONCRETE THRUST BLOCK ON UNDISTURBED MATERIAL. (SEE THRUST BLOCK DETAIL)

6'-0" MIN. COVER THROUGHOUT



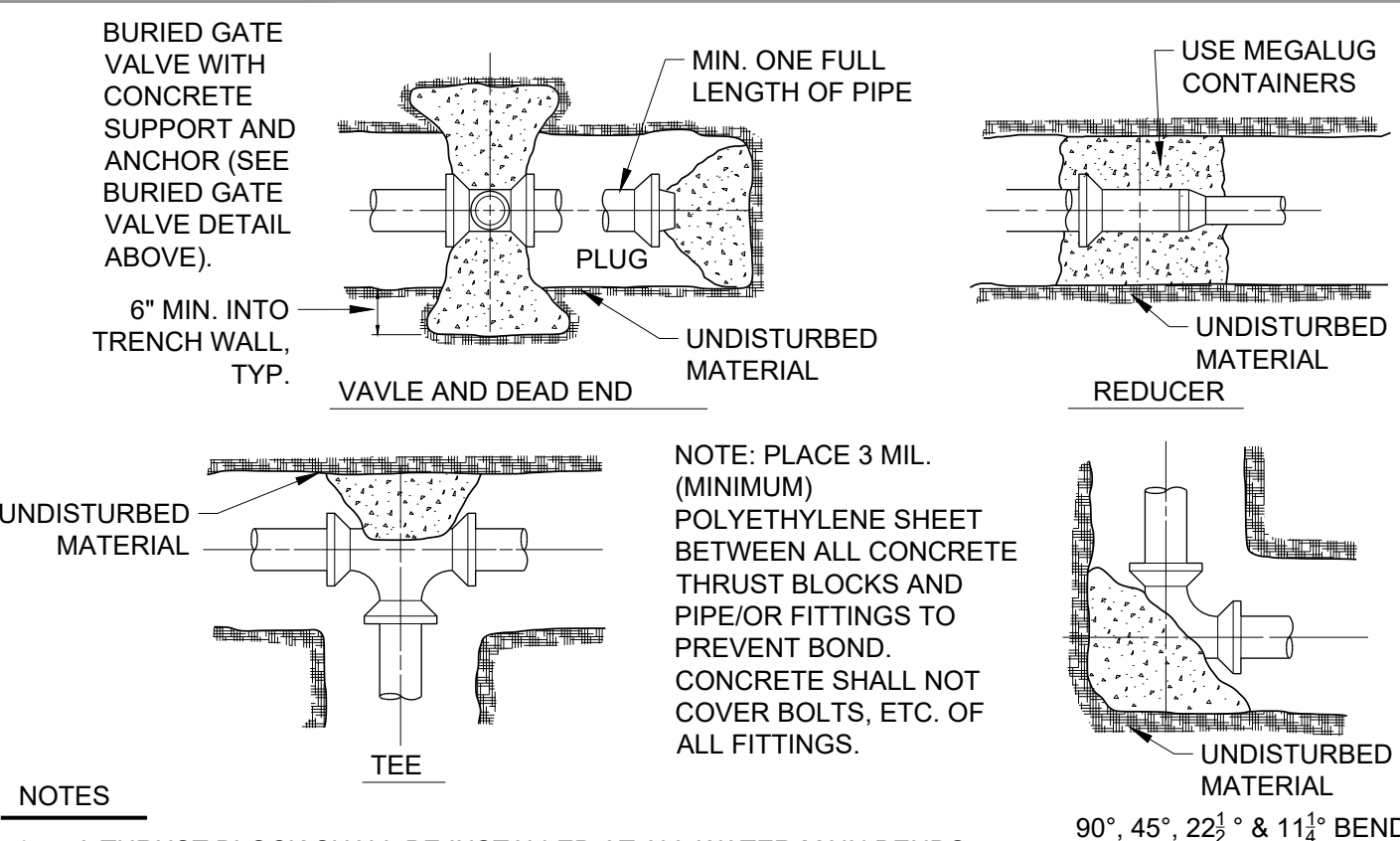
CROSSINGS

SEWERS CROSSING WATER MAINS SHALL BE LAID BENEATH THE WATER MAIN WITH AT LEAST 18 INCHES VERTICAL CLEARANCE BETWEEN THE OUTSIDE OF THE SEWER AND THE OUTSIDE OF THE WATER MAIN. WHEN IT IS POSSIBLE TO MAINTAIN THE 18" VERTICAL SEPARATION:

- THE CROSSING SHALL BE ARRANGED SO THAT ONE FULL LENGTH OF SEWER IS CENTERED ABOVE OR BELOW THE WATER LINE WITH SEWER JOINTS AS FAR AS POSSIBLE FROM WATER JOINTS;
- THE SEWER PIPE MUST BE CONSTRUCTED TO WATER MAIN STANDARDS FOR A MINIMUM DISTANCE OF 20 FEET EITHER SIDE OF THE CROSSING OR A TOTAL OF THREE PIPE LENGTHS, WHICHEVER IS GREATER;
- THE SECTION CONSTRUCTED TO WATER STANDARDS MUST BE PRESSURE TESTED TO MAINTAIN 50 PSI FOR 15 MINUTES WITHOUT LEAKAGE PRIOR TO BACKFILLING BEYOND ONE FOOT ABOVE THE PIPE TO ASSURE WATER TIGHTNESS;
- WHERE A WATER MAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO PREVENT DAMAGE TO THE WATER MAIN.

WATER AND SEWER CROSSINGS DETAIL

N.T.S.



NOTES

- A THRUST BLOCK SHALL BE INSTALLED AT ALL WATER MAIN BENDS, REDUCERS, END CAPS AND TEES.
- PRECAST THRUST BLOCKS ARE NOT ACCEPTABLE UNLESS AUTHORIZED BY THE WATER DEPARTMENT WHICH SUPPLIES THE WATER TO THE PROJECT.
- REDI-MIX CONCRETE (2,500 PSI MIN) MUST BE USED FOR THRUST BLOCKS. SACRETE IS NOT ACCEPTABLE.
- USE EBAA MEGA-LUG, SIGMA, OR EQUAL, WEDGE-ACTION MECHANICAL JOINT RESTRAINTS WITH TWIST OFF NUTS AT ALL FITTINGS.

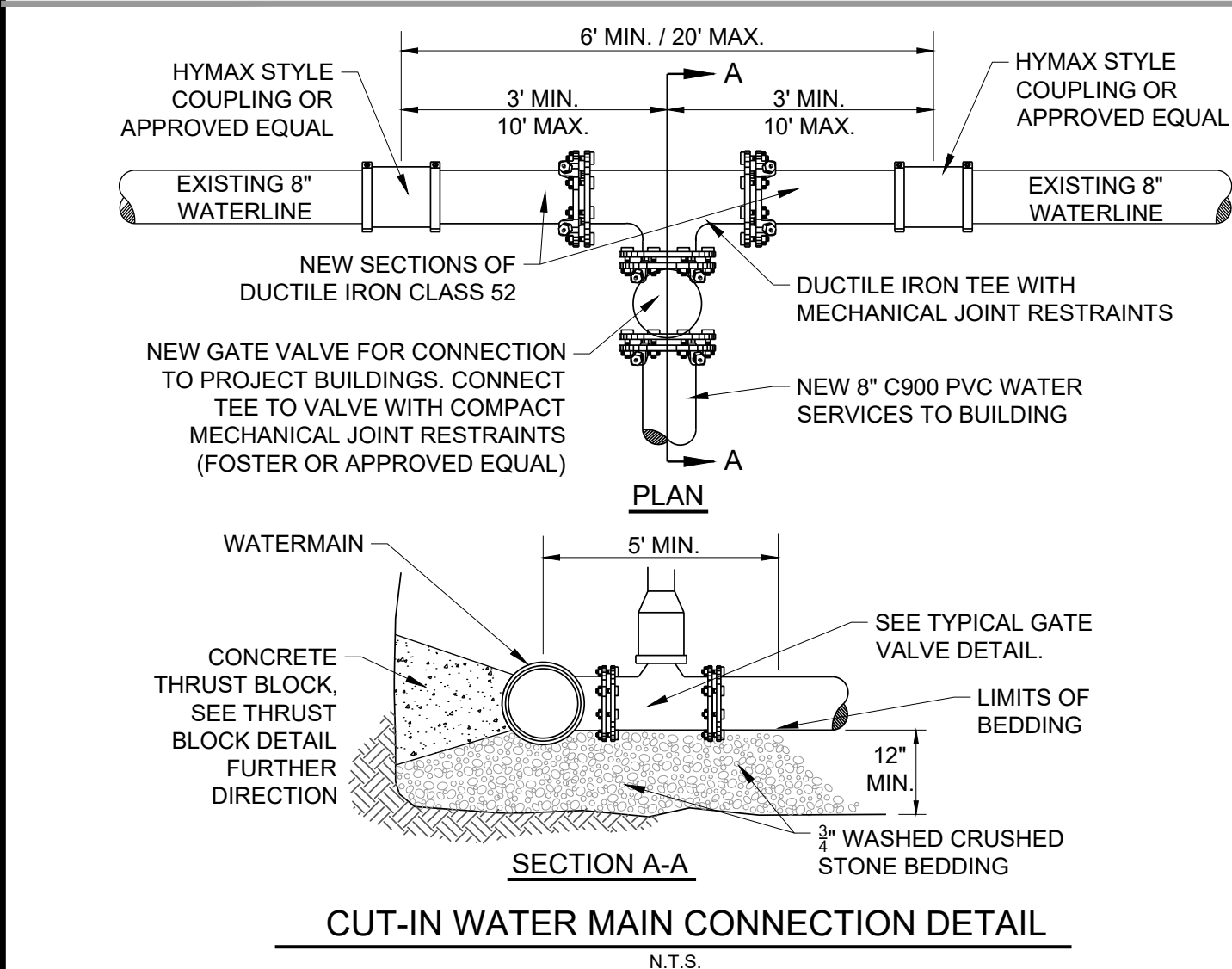
MINIMUM AREA OF BEARING SURFACE OF CONCRETE THRUST BLOCK (IN SQUARE FEET)

3"	4"	6"	8"	12"	SOIL CONDITION	SAFE BEARING LOAD(P/SF)
ENDS & VALV. 45° ELB. 22.5° ELB.	ENDS & VALV. 45° ELB. 22.5° ELB.	ENDS & VALV. 45° ELB. 22.5° ELB.	ENDS & VALV. 45° ELB. 22.5° ELB.	ENDS & VALV. 45° ELB. 22.5° ELB.		
0.5	0.5	0.5	0.5	0.5	Sound shale	10,000
1.0	1.0	1.0	1.0	1.0	Cemented gravel & sand	4,000
1.0	1.0	1.0	1.0	1.0	Coarse & fine compact sand	3,000
1.5	2.5	1.5	1.0	2.5	Medium clay (can be spaded)	2,000
3.0	4.5	2.5	1.5	5.0	Soft clay	1,000

MAXIMUM WATER PRESSURE = 200 PSI (140,620 KG/M²)

THRUST BLOCK DETAIL

N.T.S.

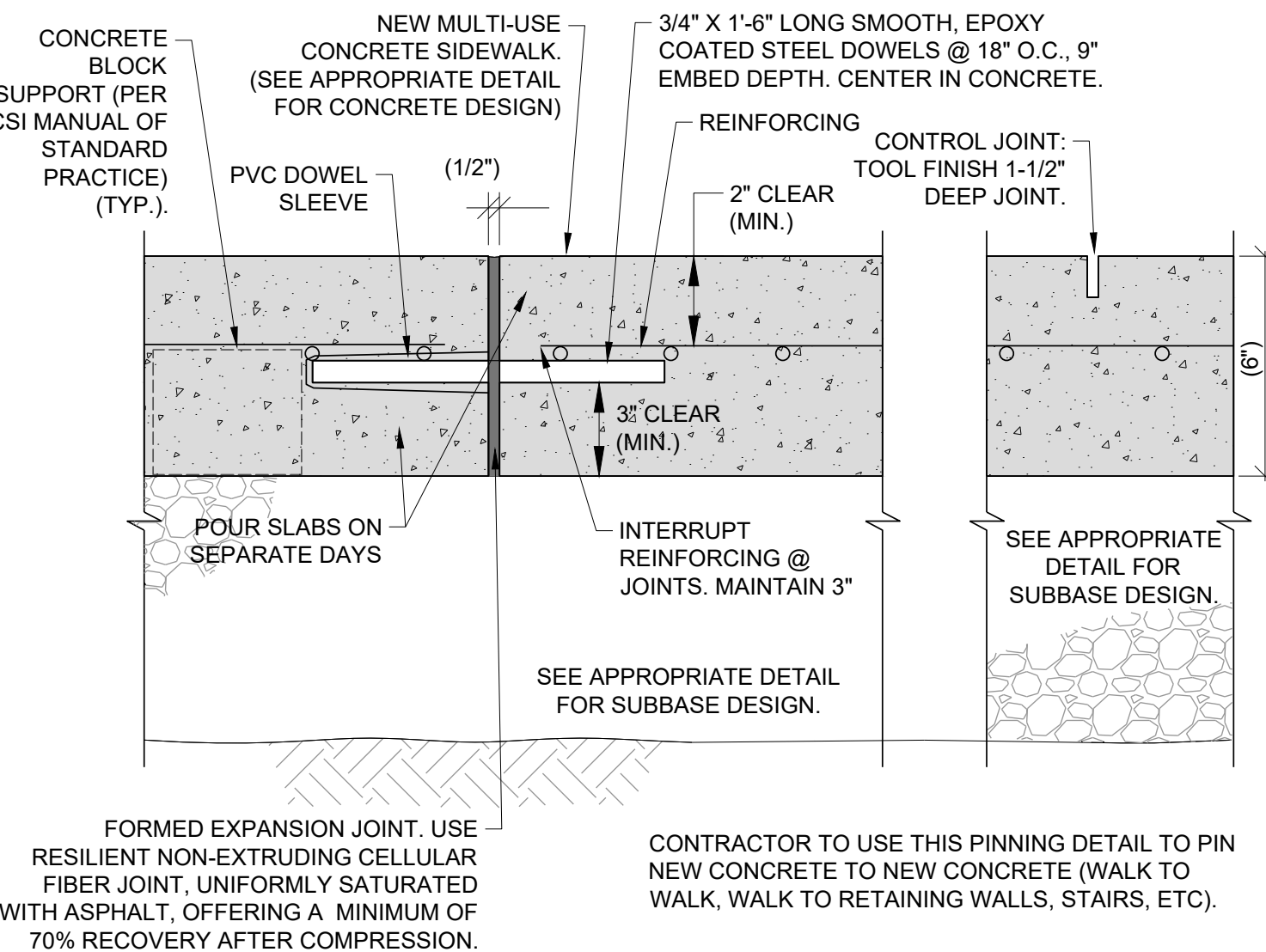
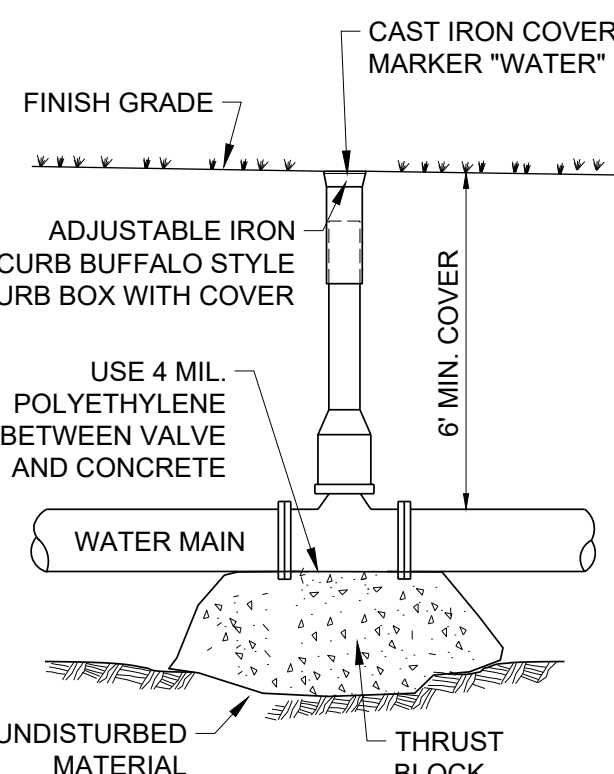


NOTES

- THE CONTRACTOR SHALL CONFIRM ALL VALVE SPECIFICATIONS WITH THE MUNICIPALITY PUBLIC WORKS BEFORE ORDERING.
- GATE VALVES SHALL BE MEET ALL REQUIREMENTS OF A.W.W.A. C509 AND C515 STANDARDS (LATEST EDITION). VALVES WITH MECHANICAL JOINTS OF SIZES AS REQUIRED ON THE PLANS.
- ALL VALVES SHALL BE OF CAST OR DUCTILE IRON BODY AND SHALL BE COATED WITH FUSION BONDED EPOXY COMPLYING WITH AWWA C-550 AND BE NSF 61 APPROVED. VALVE SHALL HAVE MANUFACTURER'S NAME, PRESSURE RATING, AND MANUFACTURE DATE CAST ON THE BODY.
- ALL VALVES SHALL INCLUDE NON-RISING STEM, HIGH STRENGTH BRONZE STEM AND NUT, 100% COATED WEDGE, "O" RING STEM SEALS ABOVE AND BELOW THE THRUST COLLAR, A 2" SQUARE OPERATING NUT, MECHANICAL JOINT ENDS, AND CORROSION RESISTANT STAINLESS STEEL BODY BOLTS AND NUTS.
- CHECK WITH THE MUNICIPALITY FOR OPENING AND CLOSING ROTATIONS AND MINIMUM WORKING PRESSURE.
- VALVES SHALL BE EQUIPPED WITH A TWO PIECE, SLIDING TYPE CAST IRON VALVE BOX FOR A MINIMUM 6 FT. OF COVER MATERIAL.

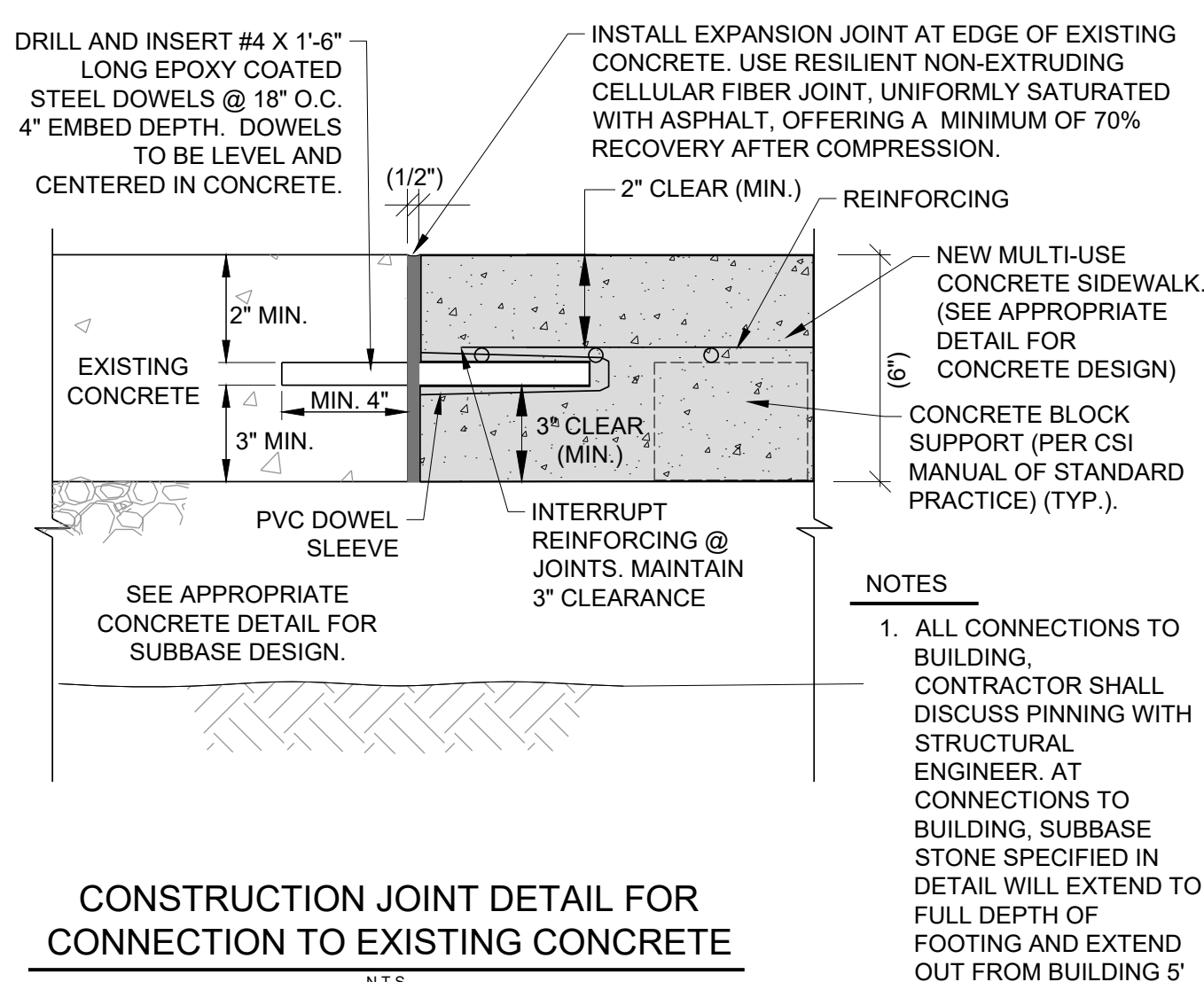
TYPICAL GATE VALVE

N.T.S.



NEW CONCRETE CONSTRUCTION JOINT/CONTROL JOINT DETAIL

N.T.S.



CONSTRUCTION JOINT DETAIL FOR CONNECTION TO EXISTING CONCRETE

N.T.S.

CONTRACTOR TO USE THIS PINNING DETAIL TO PIN NEW CONCRETE TO EXISTING CONCRETE (WALK TO WALK, WALK TO BUILDINGS, ETC.).

NOTES FOR CONCRETE

- BROOM FINISH CONCRETE. ALL CONSTRUCTION JOINTS SHALL BE SPACED MAXIMUM 24' IN ALL DIRECTIONS. TOOL FINISH JOINTS TO 1/2" DEPTH AT INTERVALS EQUAL TO WIDTH OF SIDEWALK. SIDEWALK FINISH WILL BE "PICTURE FRAME" OR ALTERNATIVE APPROVED BY OWNER OR THEIR REPRESENTATIVE.
- APPLY SPECHECM CURE SHIELD, CURE & SEAL AGENT TO ALL CONCRETE SURFACES IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
- CONCRETE CONSTRUCTION AND CURING SHALL CONFORM TO SECTION 618.03 OF THE CURRENT VAOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- CONCRETE MAY NOT BE POURED IF FROST IS PRESENT OR THAWING IN THE SUBGRADE, IF THE TEMPERATURE IS 40° F OR LESS, OR DURING UNSEASONABLE WEATHER CONDITIONS.
- ALL CONCRETE USED IN THE CONSTRUCTION OF MULTI-USE CONCRETE SHALL BE MADE WITH PORTLAND CEMENT. THE CONCRETE SHALL MEET SECTION 541 OF THE STATE OF VERMONT STANDARD SPECIFICATIONS FOR CONSTRUCTION, HAVE 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI, AND MEET THE FOLLOWING MIX DESIGN.

MAX. WATER-CEMENT RATIO (LB./LB.)	0.44
MIN. CEMENT FACTOR (LBS/C.Y.)	660
ENTRAINED AIR CONTENT (%)	5 - 7
SLUMP (INCHES, BEFORE ADDING HRWR)	2 - 4

USE AIR ENTRAINED AGENT CONFORMING TO ASTM C260 WITH 5-7% TOTAL AIR. USE HIGH RANGE WATER REDUCING AGENT CONFORMING TO ASTM C494 IN ALL CONCRETE.
- CONTRACTOR SHALL POUR AND FINISH ONE SAMPLE PANEL FOR APPROVAL BY OWNER AND ENGINEER. ALL CONCRETE SHALL MATCH THE QUALITY AND APPEARANCE OF THE SAMPLE PANEL. ANY CONCRETE THAT DOES NOT MEET THE STANDARD SHALL BE REMOVED AND REPLACED AT NO COST TO THE OWNER.
- CONCRETE SHALL BE INSTALLED IN ALTERNATING POURS AT CONSTRUCTION JOINTS. REFER TO CONCRETE CONSTRUCTION JOINT/CONTROL JOINT DETAIL
- OWNER AND/OR CONTRACTOR IS NOT ALLOWED TO PLACE DEICING MATERIAL ON NEWLY POURED CONCRETE SIDEWALK FOR A PERIOD OF 6 MONTHS.

NEW MULTI-USE CONCRETE SIDEWALK DETAIL

N.T.S.

MATER CHRISTI SCHOOL

Mansfield Avenue
Burlington, Vermont



ISSUED FOR PERMIT REVIEW
NOT FOR CONSTRUCTION

OWNER/APPLICANT:

Mater Christi School
40 Main Street Suite 450
Burlington, Vermont 05401

PROPERTY INFORMATION:

Address: 50 Mansfield Avenue
Parcel ID: 045-3-112-000
SPAN: 114-035-16320
Area: 19.86 Acres (±865,200 s.f.)
Zoning: Institutional

STAMP:

REV. NO.	REVISIONS/COMMENTS	DATE

DRAWING TITLE:

DETAILS

DATE ISSUED: 11/14/24

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PROJECT NO.: 24145 SCALE: N/A

DRAWING NO.:

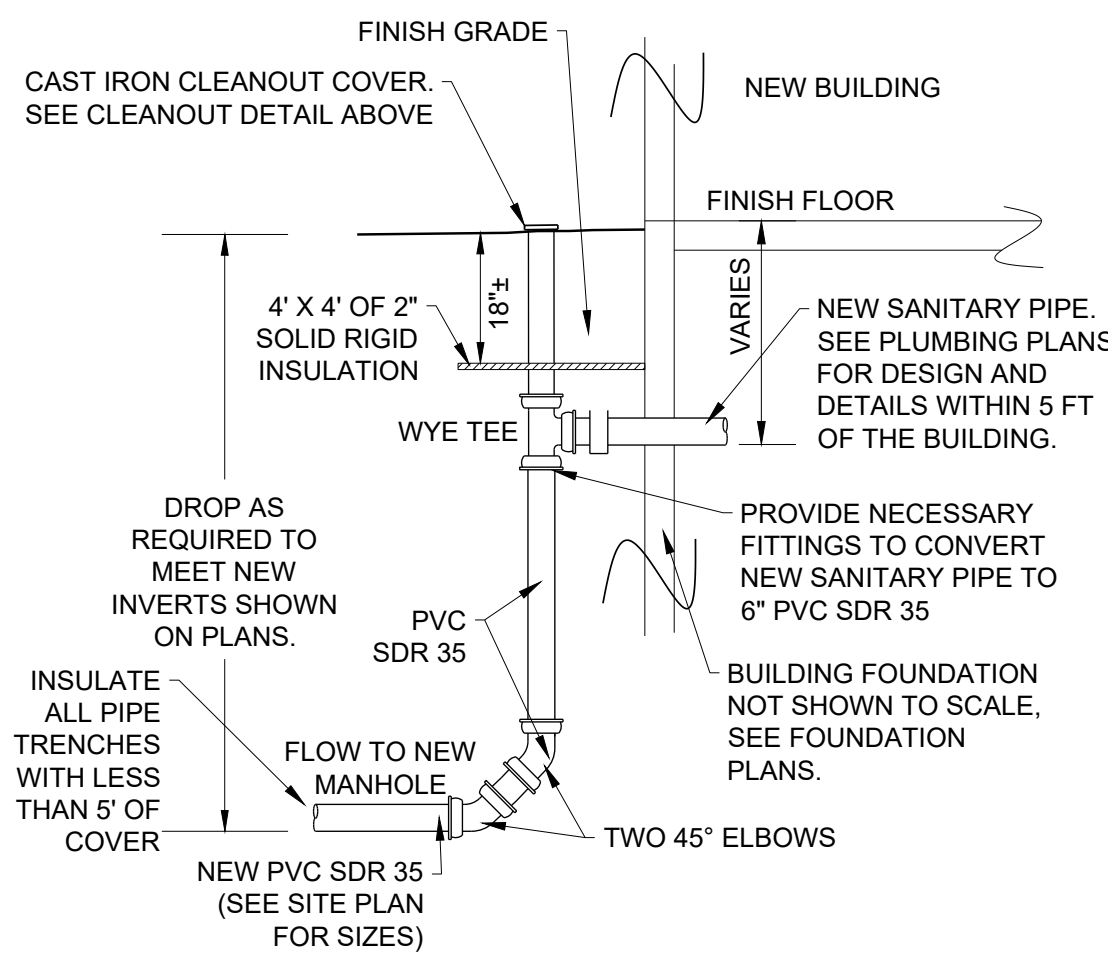
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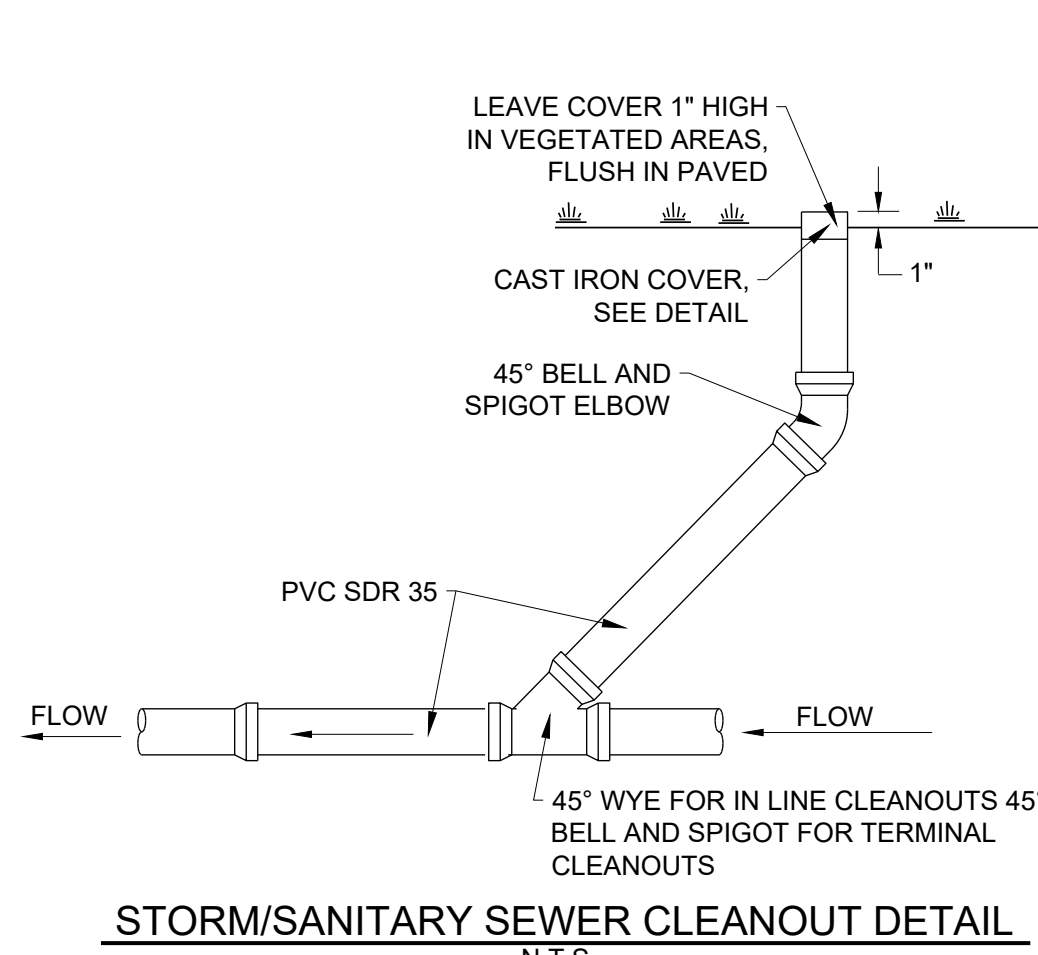
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SANITARY MAINS NOTES

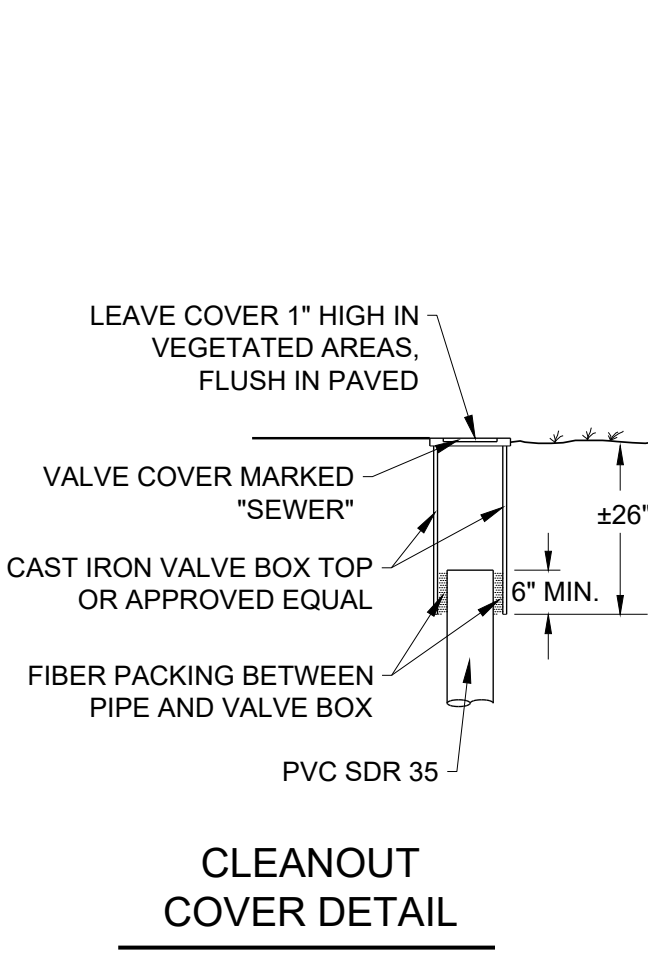
- THE PIPE AND FITTINGS FOR SANITARY SEWER SHALL MEET THE REQUIREMENTS OF ASTM SPECIFICATION D3034 FOR 4" - 15" SDR 35 AND F679 FOR 18" - 27". ALL PIPE SHALL BE LAID TO THE LINE AND GRADE SHOWN ON THE PLANS.
- THE PIPE FOR GRAVITY SANITARY SEWER SHALL BE AS SHOWN ON THE PLANS AND DETAILED BELOW:
 - ALL PIPE SHALL BE LAID TO THE LINE AND GRADE AS SHOWN ON THE PLANS
 - PVC SDR 35 - POLYVINYL CHLORIDE PIPE - PIPE SHALL CONFORM TO ASTM SPECIFICATION D-3034 OR F679, (PVC) SEWER PIPE AND FITTINGS, SDR35.
 - PIPE WITH RECYCLED CONTENT IS NOT ACCEPTABLE.
- PVC SDR 35 SANITARY AND STORM PIPES SHALL BE INSTALLED SO THAT THE INITIAL DEFLECTION SHALL BE LESS THAN 5%.
- PVC SDR 35 PIPE SHALL NOT BE INSTALLED WHEN THE TEMPERATURE DROPS BELOW 32° F OR GOES ABOVE 100° F UNLESS PRIOR APPROVAL IS OBTAINED FROM THE ENGINEER. EXTRA CARE IS REQUIRED WHEN HANDLING PVC PIPE DURING COLD WEATHER. PVC PIPE SHALL NOT BE STORED OUTSIDE AND EXPOSED TO PROLONGED PERIODS OF SUNLIGHT AS PIPE DISCOLORATION AND REDUCTION IN PIPE IMPACT STRENGTH WILL OCCUR. IF PVC PIPE IS TO BE STORED ON SITE FOR 1 MONTH OR LONGER IT SHALL BE COVERED WITH CANVAS OR OTHER OPAQUE MATERIAL.
- THE INSTALLED GRAVITY SANITARY SEWER PIPE SHALL BE LOW PRESSURE AIR TESTED IN THE PRESENCE OF THE ENGINEER. AFTER CLEANING THE PIPE, THE PIPE SECTION (MANHOLE TO MANHOLE) SHALL BE TESTED ACCORDING TO THE PROCEDURES OUTLINED IN THE STATE OF VERMONT WASTEWATER SYSTEM AND POTABLE WATER SUPPLY RULES, EFFECTIVE NOVEMBER 6, 2023.



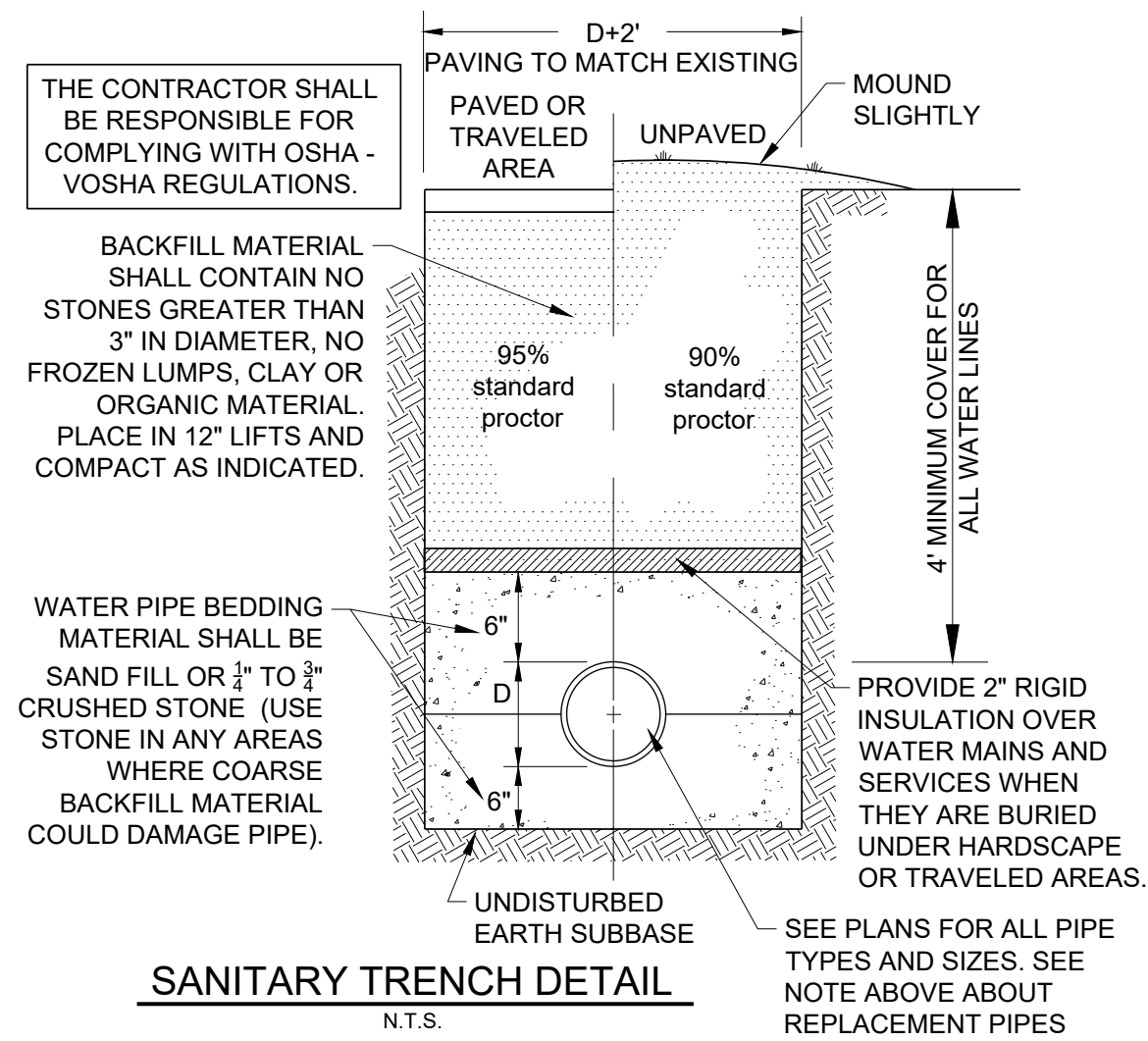
DROP OUTLET PLUMBING CONNECTION DETAIL
N.T.S.



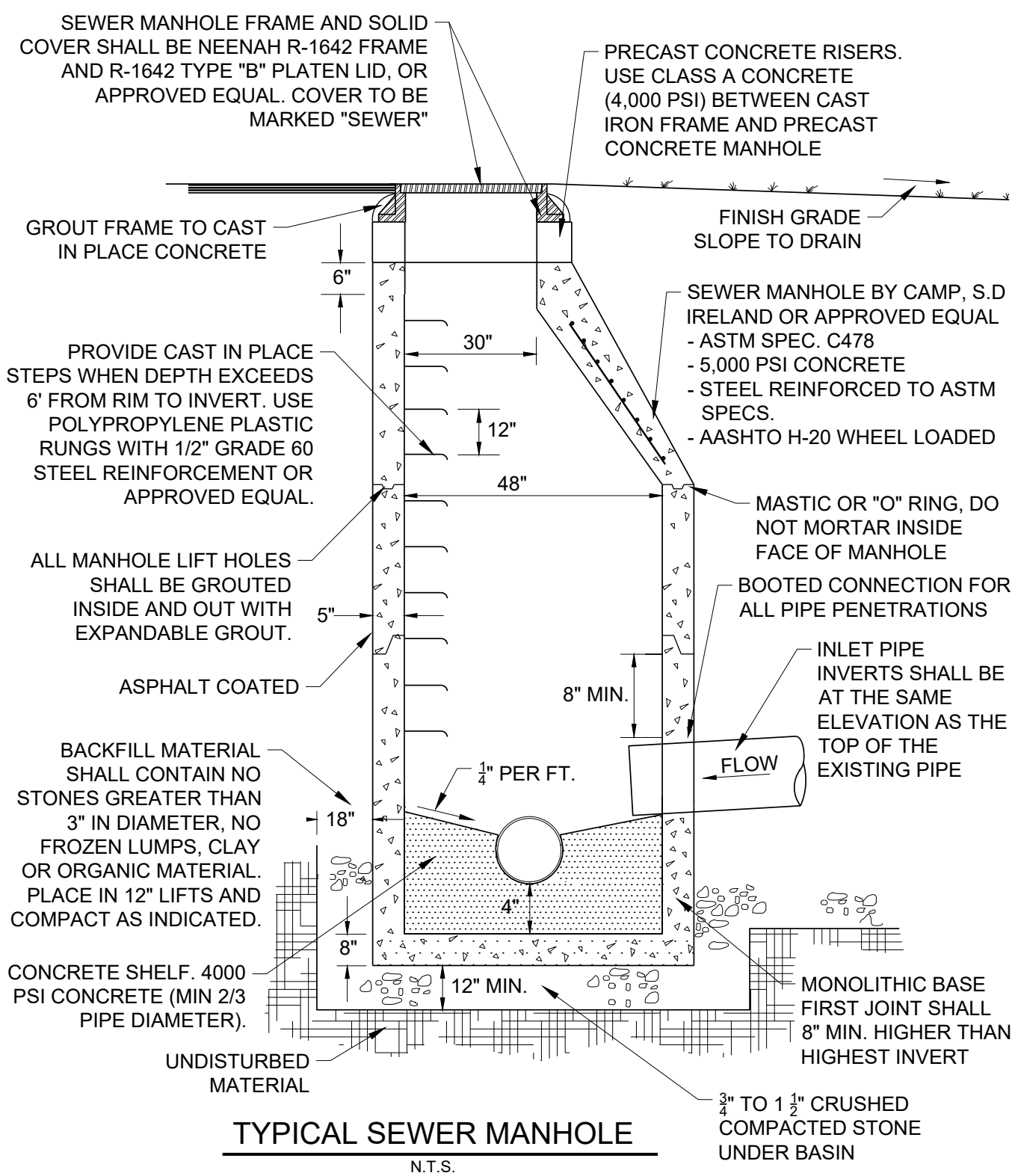
STORM/SANITARY SEWER CLEANOUT DETAIL
N.T.S.



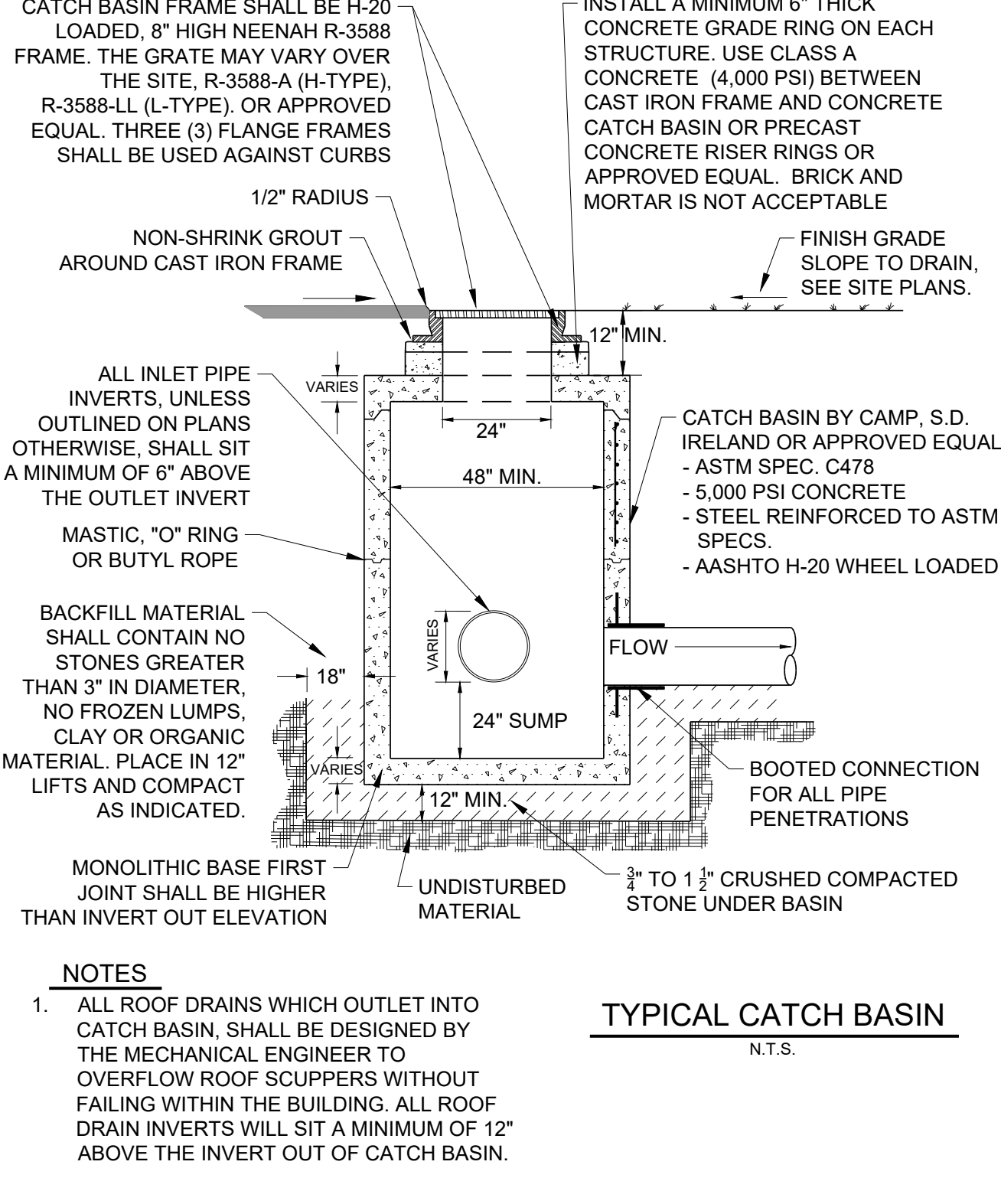
CLEANOUT COVER DETAIL
N.T.S.



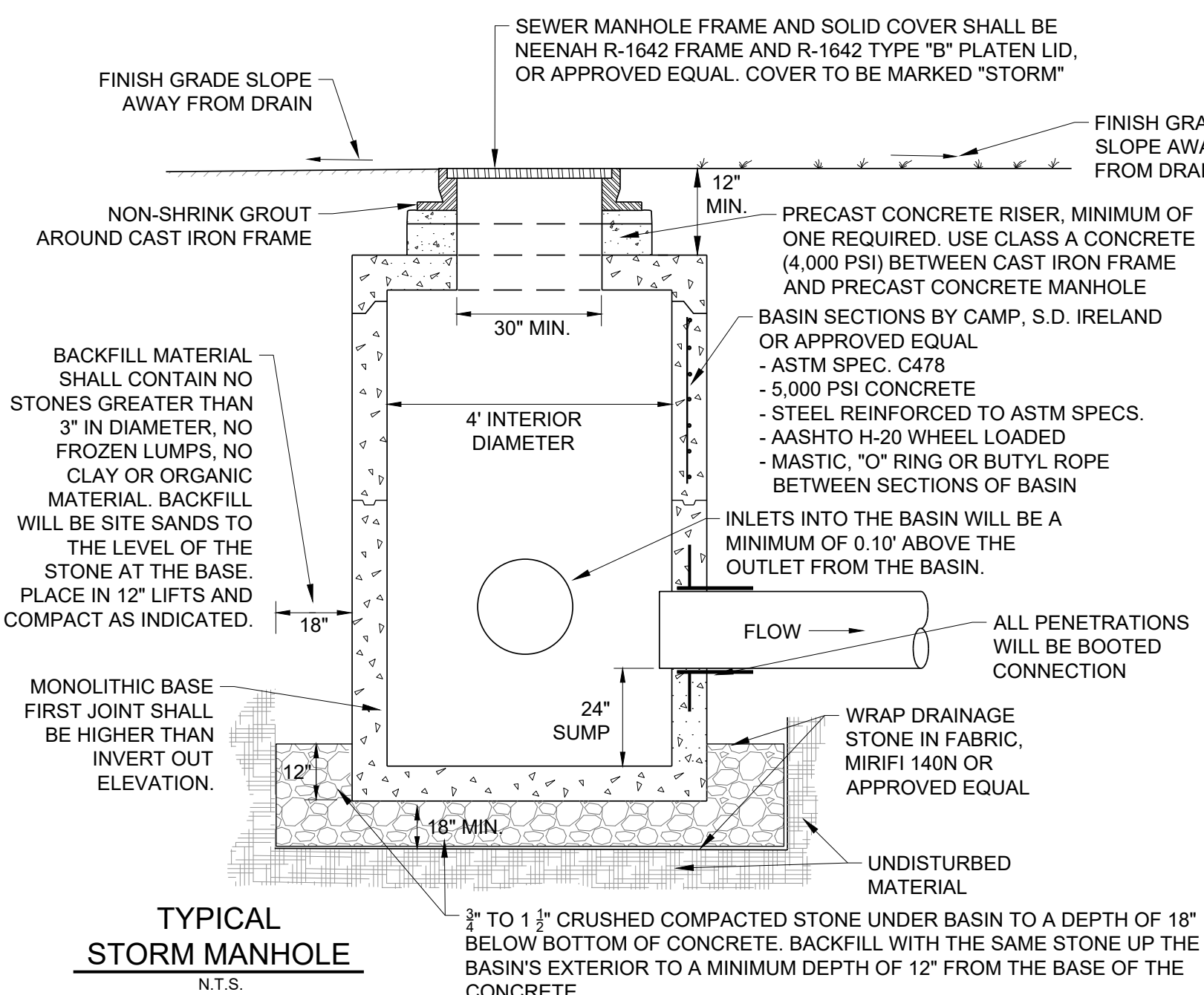
SANITARY TRENCH DETAIL
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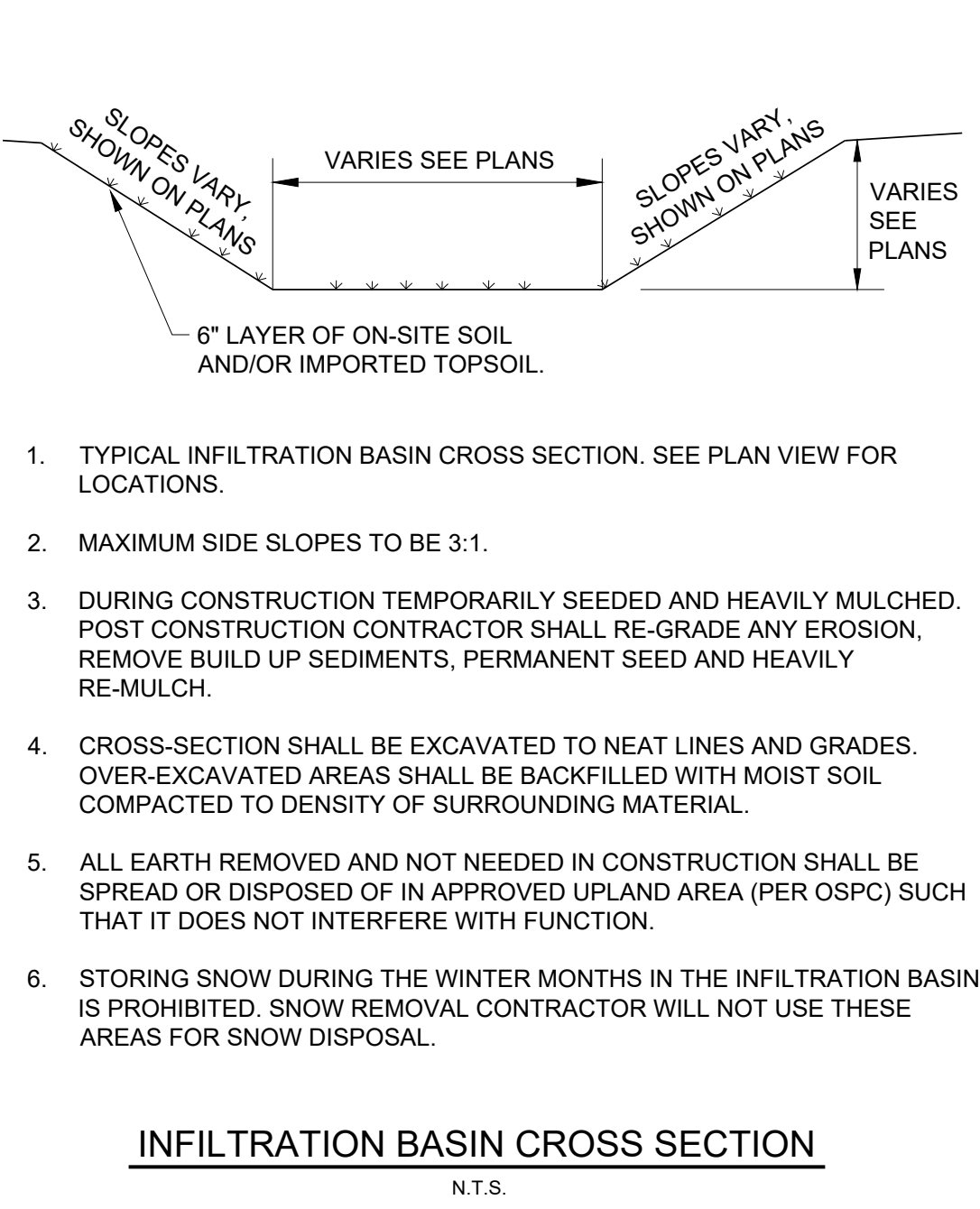
TYPICAL SEWER MANHOLE
N.T.S.



TYPICAL CATCH BASIN
N.T.S.



TYPICAL STORM MANHOLE
N.T.S.



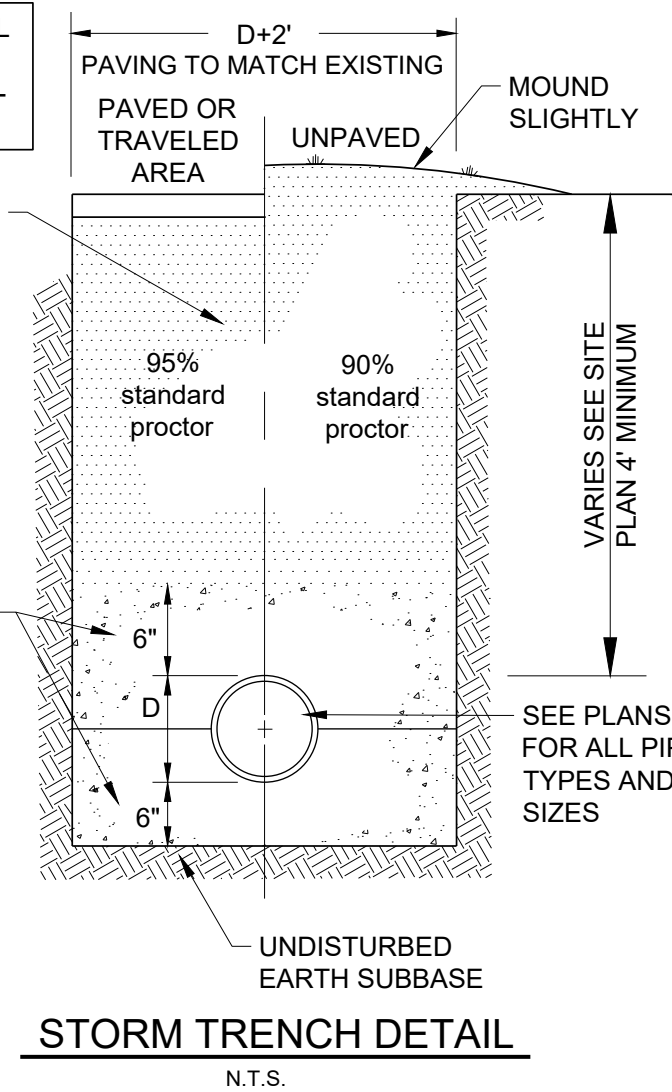
INFILTRATION BASIN CROSS SECTION
N.T.S.

ALL CONNECTIONS TO MUNICIPAL WATER UTILITIES INSTALLED ON THE PROJECT TO BE OBSERVED BY THE ENGINEER AND THE AUTHORIZED REPRESENTATIVE OF THE UTILITY, CITY OF BURLINGTON AND BURLINGTON WATER DEPARTMENT PRIOR TO BACKFILLING THE UTILITY BEING INSTALLED. THE ENGINEER SHALL BE NOTIFIED 48 HOURS BEFORE THE WORK IS PLANNED TO BEGIN. ALL DETAILS ARE SUBJECT TO THE MOST RECENT REVISIONS OF THE BURLINGTON WATER DEPARTMENT SPECIFICATIONS AND DETAILS FOR THE INSTALLATION OF WATER LINES AND APPURTENANCES. PROJECT SHALL FOLLOW ALL DETAILS IN THIS PLAN SET, BURLINGTON DPW SPECIFICATIONS, AND THE BURLINGTON WATER DEPARTMENT SPECIFICATIONS. THE MOST STRINGENT DETAILS WILL APPLY.

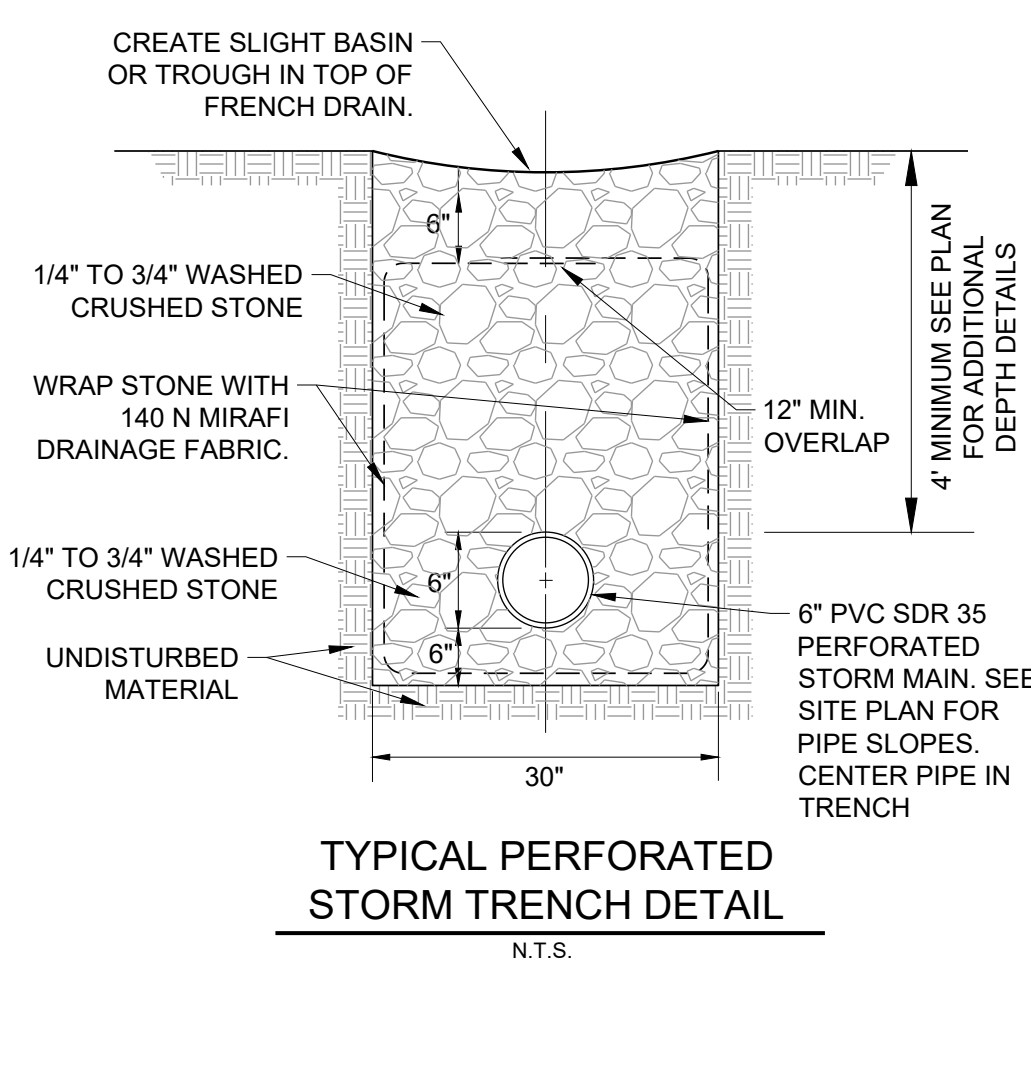
THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH OSHA - VOSH REGULATIONS.

BACKFILL MATERIAL SHALL CONTAIN NO STONES GREATER THAN 3" IN DIAMETER, NO FROZEN LUMPS, CLAY OR ORGANIC MATERIAL. PLACE IN 12" LIFTS AND COMPACT AS INDICATED.

WATER PIPE BEDDING MATERIAL SHALL BE SAND FILL OR 1/2" TO 3/4" CRUSHED STONE (USE STONE IN ANY AREAS WHERE COARSE BACKFILL MATERIAL COULD DAMAGE PIPE).



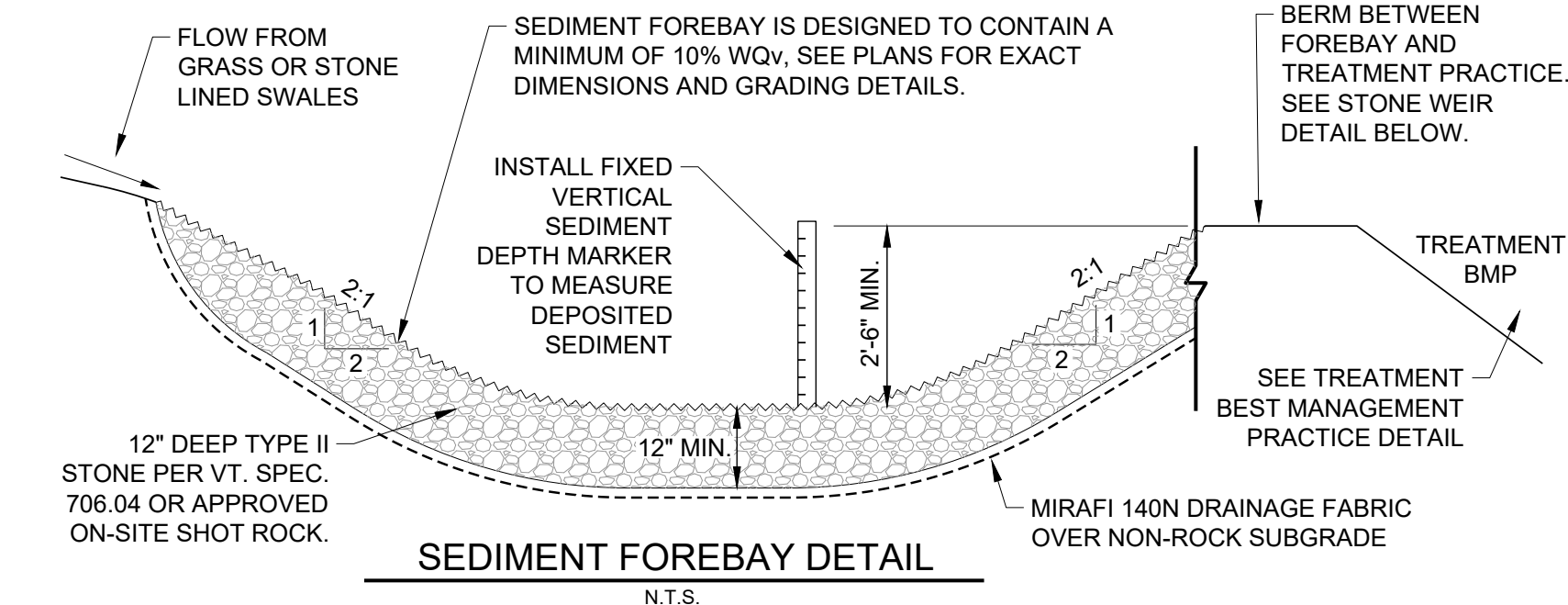
STORM TRENCH DETAIL
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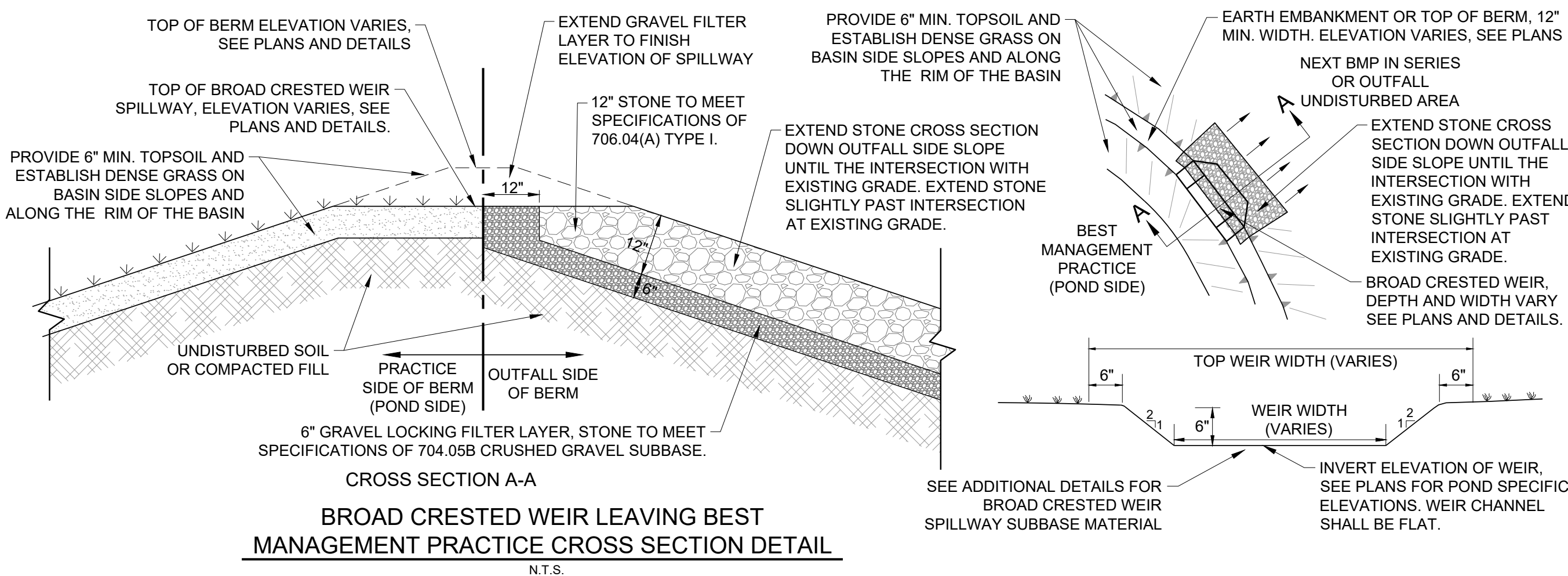
TYPICAL PERFORATED STORM TRENCH DETAIL
N.T.S.

STORMWATER MAINTANCE NOTES

- FOREBAY PRE-TREATMENT AREAS:**
 - MONITOR FOR ACCUMULATION OF SEDIMENT. CLEAN WHEN 50% FULL OR AS NEEDED.
 - INSPECT AND REPAIR ANY NOTED EROSION.
- INFILTRATION BASIN**
 - INSPECT FOR PROLONGED STANDING WATER AFTER RAIN EVENTS.
 - INSPECT FOR EROSION. ACCUMULATED SEDIMENT AND ENSURE PLANTS ARE HEALTHY. REMOVE SEDIMENT AND REPLACE PLANTS AS NECESSARY.
- STONE SPLASH PADS/WEIRS:** LOCATED AT POND PIPE OUTLETS AND FOREBAY OVERFLOWS INTO GRAVEL WETLANDS.
 - INSPECT REGULARLY FOR SIGNS OF EROSION OR DISPLACEMENT OF STONE. REPAIR AS NEEDED.
 - INSPECT FOR DEBRIS/TRASH ACCUMULATION AND REMOVE AS NEEDED.
 - MONITOR FOR EVIDENCE OF CONCENTRATED FLOW CHANNELS OR EROSION AT OUTLET. LEVEL STONE IF NEEDED TO RESTORE EVEN FLOW DISTRIBUTION.



SEDIMENT FOREBAY DETAIL
N.T.S.



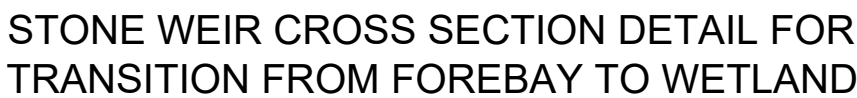
BROAD CRESTED WEIR LEAVING BEST MANAGEMENT PRACTICE CROSS SECTION DETAIL
N.T.S.

Mansfield Avenue
Burlington, Vermont

ISSUED FOR PERMIT REVIEW
NOT FOR CONSTRUCTION

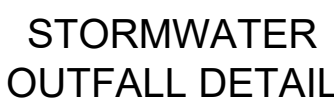
Mater Christi School
40 Main Street Suite 450
Burlington, Vermont 0540

Address: 50 Mansfield Avenue
Parcel ID: 045-3-112-000
SPAN: 114-035-16320
Area: 19.86 Acres (±865,200 s.f.)
Zoning: Institutional



1. END SECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS INSTALLATION SPECIFICATIONS.

PIPE DIA.	DIMENSIONS			
	A ±1"	B MAX.	C ±1"	D ±1- $\frac{1}{2}$ "
10	42	14.5	33	6
12	42	14.5	33	6
15	41	19	34	6
18	49	22	43	6
24	59.5	28	48	6
30	88	36	63.5	6
36	88	43	66.5	6



1. THE AREA WITHIN THE EMBANKMENT AND 15 FEET BEYOND SHALL BE CLEARED AND GRUBBED (EXCEPT IN THE WETLAND BUFFER). ORGANICS AND MATERIALS DEEMED UNSUITABLE BY THE ENGINEER (SUCH AS LOOSE FROZEN, DISTURBED SOILS, DEBRIS, VEGETATION, TREE STUMPS, OVER SATURATED AND UNSTABLE SOILS) SHALL BE REMOVED AND A FIRM STABLE SUBGRADE SHALL BE PREPARED ON UNDISTURBED SOILS. ALL SUBGRADE SOILS SHALL BE OBSERVED BY THE ENGINEER. EXCAVATION SHALL BE PERFORMED IN A MANNER TO LIMIT DISTURBANCE AND LOOSENING OF THE SUBGRADE.
2. SCHEDULE AND COORDINATE EXCAVATION AND BACKFILL WORK WITH A DRY WEATHER FORECAST TO PREVENT OPEN EXCAVATIONS AND ACCUMULATION OF STORMWATER RUNOFF.
3. THE ENGINEER SHALL BE PRESENT TO OBSERVE THE SUBGRADE SOILS PRIOR TO PLACING THE SELECT EMBANKMENT FILL SOILS. PRIOR TO BACKFILL THE SUBGRADE SHALL BE PROOF-ROLL COMPACTED, IN THE PRESENCE OF THE ENGINEER, USING A SMOOTH DRUM ROLLER IN STATIC MODE AND/OR WITH BUCKET DOWN PRESSURE AS DIRECTED BY THE ENGINEER. THE ENGINEER SHALL BE CONTACTED WITH AT LEAST 48 HOURS NOTICE TO SCHEDULE SUBGRADE PREPARATION AND PROOF COMPACTION.
4. SELECT SOIL SHALL BE USED FOR CONSTRUCTION OF THE CUT-OFF TRENCH AND EARTH EMBANKMENT. THE SOIL SHALL MEET THE UNIFIED SOIL CLASSIFICATION SYSTEM DESIGNATION FOR EITHER CLAYEY SAND (SC) OR SILTY CLAYS (CL) WITH A LOW TO MEDIUM PLASTICITY. A MINIMUM OF TWO UNIFIED SOIL CLASSIFICATION TESTS SHALL BE PERFORMED ON STOCKPILE SOIL SAMPLES FOR APPROVAL. THE SOIL SHALL HAVE NO ROCKS LARGER THAN 2", FROZEN LUMPS, ORGANICS, OR OTHER DELETERIOUS MATERIALS.
5. ALL SELECT EMBANKMENT SOILS SHALL BE PLACED IN 6" LIFTS. SOIL SHALL BE COMPACTED TO 95% OF THE STANDARD PROCTOR.
6. IT IS IMPORTANT THAT THE EXISTING SUBGRADE AND SELECT SOILS BE PROTECTED DURING CONSTRUCTION IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:
 - 6.1. TO THE MAXIMUM EXTENT POSSIBLE WORK SHALL BE PLANNED SO SUBGRADE SOILS AND THE EMBANKMENT SOILS ARE NOT EXPOSED TO PRECIPITATION.
 - 6.2. PRIOR TO EXCAVATING, POTENTIAL SOURCES OF SURFACE WATER SHALL BE DIRECTED AWAY FROM THE EXCAVATIONS.
 - 6.3. PLACEMENT OF SELECT EMBANKMENT FILL SOILS SHALL NOT BE PLACED DURING A RAIN EVENT.
 - 6.4. PRIOR TO PERIODS OF FORECASTED RAIN, THE SELECT SOILS SHALL BE GRADED TO DRAIN AND ROLLED SMOOTH WITH A DRUM ROLL COMPACTOR.
 - 6.5. SOIL THAT IS NOT PROTECTED AND BECOMES WEAKENED BY PRECIPITATION SHALL BE REMOVED AND DISPOSED OF AT NO COST TO THE OWNER.
7. THE GRAVEL FILTER LAYER FOR THE EMERGENCY SPILLWAY SHALL BE PLACED WITH THE FOLLOWING REQUIREMENTS:
 - 7.1. MINIMUM 6" SEPARATION BETWEEN PREPARED/ACCEPTED SUBGRADE AND IN PLACE STONE FILL. SEE BELOW FOR MATERIAL SPECIFICATION. THIS LAYER WILL BE PLACED IN A SINGLE 6" LIFT COMPACTED TO 90% STANDARD PROCTOR. THE GRAVEL FILTER MATERIAL SHALL NOT BE FROZEN AND SHALL NOT BE PLACED ON FROZEN SUBGRADE.
 - 7.2. PLACEMENT OF STONE FILL SHALL NOT OCCUR UNTIL FULL COMPACTED THICKNESS OF GRANULAR FILTER HAS BEEN PLACED.
8. THE STONE FILL FOR THE EMERGENCY SPILLWAY SHALL BE PLACED BY METHODS THAT AVOID SEGREGATION AND SHALL BE PLACED TO THE REQUIRED THICKNESS, IN LIFTS RESULTING IN A WELL GRADED HOMOGENEOUS MASS WITH A RELATIVELY LOW VOID RATIO AND TIGHTLY INTEGROGEN WITH PRIOR LIFTS. GRAVEL FILTER MATERIAL SHALL BE PLACED AND "WASHED IN" WITH WATER TO MINIMIZE VOIDS IN THE STONE FILL. STONE FILL SHALL NOT BE PLACED ON FROZEN MATERIAL.

SOIL RETENTION: RETAIN, IN AN UNDISTURBED STATE, THE DUFF LAYER AND NATIVE TOPSOIL TO THE MAXIMUM EXTENT PRACTICABLE.

SOIL QUALITY: ALL AREAS SUBJECT TO THE STANDARD SHALL DEMONSTRATE THE FOLLOWING:

A TOPSOIL LAYER WITH A MINIMUM ORGANIC MATTER CONTENT OF 4% DRY WEIGHT IN PLANTING BEDS AND TURF AREAS. THE TOPSOIL LAYER SHALL HAVE A MINIMUM DEPTH OF 4 INCHES, EXCEPT WHERE TREE ROOTS LIMIT THE DEPTH OF INCORPORATION OF AMENDMENTS NEEDED TO MEET THE CRITERIA.

COMPOST AND OTHER MATERIALS SHALL BE USED THAT MEET THE FOLLOWING REQUIREMENTS:

- THE COMPOST OR OTHER MATERIALS SHALL HAVE A CARBON TO NITROGEN RATIO BELOW 25:1.
- COMPOST SHALL MEET THE DEFINITION OF "COMPOST" IN THE AGENCY'S SOLID WASTE MANAGEMENT RULES OR SHALL MEET THE CONTAMINANT STANDARDS IN THE VERMONT SOLID WASTE MANAGEMENT RULES §§6-1104(G)(6)-7, §6-1105(E)(8-9), §6-1106(I)(E)(7-9). COMPOST OR OTHER ORGANIC MATERIALS MAY BE AMENDED TO MEET THE FOREGOING REQUIREMENTS.
- EXISTING OR FUTURE COMPOST OR OTHER MATERIALS MAY BE USED AS A SOIL AMENDMENT, AT A MAXIMUM PROPORTION OF 35% OF THE TOTAL SOLID VOLUME, AND SHALL BE WELL MIXED WITH EXISTING SOIL BEFORE OR DURING APPLICATION.
- THE RESULTING SOIL SHALL BE CONDUCTIVE TO THE TYPE OF VEGETATION TO BE ESTABLISHED.

THE SOIL QUALITY REQUIREMENTS SHALL BE MET BY USING ONE OR A COMBINATION OF THE FOLLOWING METHODS:

- OPTION 1: LEAVE UNDISTURBED NATIVE VEGETATION AND SOIL, AND PROTECT FROM COMPACTION DURING CONSTRUCTION. FAILURE TO ESTABLISH AND MAINTAIN EXCLUSIONARY CONTROLS AROUND THESE AREAS DURING THE CONSTRUCTION PHASE MAY TRIGGER THE REQUIREMENT TO RESTORE SOILS PER ONE OF THE FOLLOWING OPTIONS.
- OPTION 2: AMEND EXISTING SITE TOPSOIL OR SUBSOIL IN PLACE.
 - a. SCARIFY OR TILL SUBSOILS TO 4 INCHES OF DEPTH OR TO DEPTH NEEDED TO ACHIEVE A TOTAL DEPTH OF 8 INCHES OF UNCOMPACTED SOIL AFTER CALCULATED AMOUNT OF AMENDMENT IS ADDED. EXCEPT FOR WITHIN THE DRIP LINE OF EXISTING TREES, THE ENTIRE SURFACE SHALL BE DISTURBED BY SCARIFICATION;
 - b. AMEND SOIL TO MEET ORGANIC CONTENT REQUIREMENTS:
 - 1. PRE-APPROVED RATE: PLACE 1 INCH OF COMPOSTED MATERIAL WITH AN ORGANIC MATTER CONTENT BETWEEN 40 AND 65% AND ROTOTILL INTO 3 INCHES OF SOIL, OR
 - 2. CALCULATED RATE: INCORPORATE AMOUNT OF COMPOSTED MATERIAL OR APPROVED ORGANIC MATERIAL AND ROTOTILL INTO DEPTH OF SOIL NEEDED TO ACHIEVE 4 INCHES OF SETTLED SOIL AT 4% ORGANIC CONTENT. *CONTRACTOR TO PROVIDE CALCULATION AND SITE SKETCH INDICATING AREAS USED FOR CALCULATIONS.
 - c. RAKE BEDS TO SMOOTH AND REMOVE SURFACE ROCKS LARGER THAN 2 INCHES IN DIAMETER; AND
 - d. WATER OR ROLL TO COMPACT SOIL IN TURF AREAS TO 85% OF MAXIMUM DRY DENSITY.
- OPTION 3: REMOVE AND STOCKPILE EXISTING TOPSOIL DURING GRADING.
 - a. STOCKPILE SOIL ON SITE IN A DESIGNATED CONTROLLED AREA, AT LEAST 50 FEET FROM SURFACE WATERS, WETLANDS, FLOODPLAINS, OR OTHER CRITICAL RESOURCE AREAS;
 - b. SCARIFY OR TILL SUBGRADE TO A DEPTH OF 4 INCHES. EXCEPT FOR WITHIN THE DRIP LINE OF EXISTING TREES, THE ENTIRE SURFACE SHALL BE DISTURBED BY SCARIFICATION;
 - c. STOCKPILED TOPSOIL SHALL ALSO BE AMENDED, IF NEEDED, TO MEET THE ORGANIC CONTENT REQUIREMENTS:
 - 1. PRE-APPROVED RATE: COMPOST SHALL BE INCORPORATED WITH AN ORGANIC MATTER CONTENT BETWEEN 40 AND 65% INTO THE TOPSOIL AT A RATIO 1:3. OR
 - 2. CALCULATED RATE: INCORPORATE COMPOSTED MATERIAL OR APPROVED ORGANIC MATERIAL AT A CALCULATED RATE TO ACHIEVE 4 INCHES OF SETTLED SOIL AT 4% ORGANIC CONTENT.*
 - d. REPLACE STOCKPILED TOPSOIL PRIOR TO PLANTING, SCREEN TOPSOIL, AND;
 - e. RAKE TO LEVEL, AND REMOVE SURFACE ROCKS LARGER THAN 2 INCHES IN DIAMETER.
- OPTION 4: IMPORT TOPSOIL MIX, OR OTHER MATERIALS FOR MIXING, INCLUDING COMPOST, OF SUFFICIENT ORGANIC CONTENT AND DEPTH.
 - a. SCARIFY OR TILL SUBGRADE TO A DEPTH OF 4 INCHES. EXCEPT FOR WITHIN THE DRIP LINE OF EXISTING TREES, THE ENTIRE SURFACE SHALL BE DISTURBED BY SCARIFICATION;
 - b. PLACE 4 INCHES OF IMPORTED TOPSOIL MIX ON SURFACE. THE IMPORTED TOPSOIL MIX SHALL CONTAIN 4% ORGANIC MATERIAL. SOILS USED IN THE MIX SHALL BE SAND OR SANDY LOAM AS DEFINED BY THE USDA; SHOP DRAWING SUBMITTAL IS REQUIRED. FIND USDA SIEVE FOR SAND AND SANDY LOAM.
 - i. RAKE BEDS TO SMOOTH AND REMOVE SURFACE ROCKS LARGER THAN 2 INCHES IN DIAMETER;
 - j. WATER OR ROLL TO COMPACT SOIL IN TURF AREAS TO 85% OF MAXIMUM DRY DENSITY.

SOIL MANAGEMENT

- IDENTIFIES AREAS ON THE SITE SUBJECT TO THE STANDARD;
- SOIL DEPTH AND QUALITY SHALL BE ESTABLISHED TOWARDS THE END OF CONSTRUCTION AND ONCE ESTABLISHED, PROTECTED FROM COMPACTION, SUCH AS FROM LARGE MACHINERY, VEHICLE TRAFFIC, AND FROM EROSION;
- AFTER SOIL AMENDMENTS AND PLACEMENT IS COMPLETE, AND PRIOR TO SEEDING AND MULCHING, CONTRACTOR SHALL PERFORM VERIFICATION SAMPLING IN LOCATIONS INDICATED ON SAMPLING PLAN. VERIFICATION SAMPLING SHALL INCLUDE NINE, 8 INCH DEEP (MIN) TEST HOLES PER ACRE OF AREA SUBJECT TO STANDARD. TEST HOLES SHALL BE EXCAVATED USING ONLY A SHOVEL DRIVEN SOLELY BY INSPECTOR'S WEIGHT AND SHALL BE AT LEAST 50 FEET APART FROM EACH OTHER.
- A DENSE AND VIGOROUS VEGETATIVE COVER SHALL BE ESTABLISHED OVER TURF AREAS.

1. SOIL DEPTH AND QUALITY SHALL BE ESTABLISHED TOWARDS THE END OF CONSTRUCTION, AND ONCE ESTABLISHED, BE PROTECTED FROM COMPACTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF THE POST CONSTRUCTION SOIL DEPTH AND QUALITY.
3. VERIFICATION SHALL BE VIA A SAMPLING SCHEME THAT INCLUDES NINE 8" DEEP TEST HOLES PER ACRE OF AREA SUBJECT TO THE STANDARD.
4. TEST HOLES SHALL BE EXCAVATED USING ONLY A SHOVEL DRIVEN SOLELY BY THE INSPECTOR'S WEIGHT AND SHALL BE AT LEAST 50 FEET APART FROM EACH OTHER.
5. ALL DISTURBED AREAS WITHIN THE PROJECT LIMITS (LOD) ARE SUBJECT TO THE POST-CONSTRUCTION SOIL DEPTH AND QUALITY STANDARD
6. THERE IS NO PROPOSED EXCAVATION OR RE-GRADING ANTICIPATED WITHIN THE SOLAR ARRAY BEYOND WHAT IS NECESSARY FOR SETTING POSTS AND INSTALLING CONDUIT. IT IS ANTICIPATED THAT SOME GROUND DISTURBANCE WILL OCCUR WITHIN THE ARRAY FROM FREQUENT TRACKING OF EQUIPMENT. THE CONTRACTOR AND ENGINEER SHALL EVALUATE GROUND DISTURBANCE WITHIN THE SOLAR ARRAY AND EITHER:
 - CONFIRM THAT SOILS HAVE NOT BEEN EXCESSIVELY COMPACTED VIA TEST PITS AND PHOTODOCUMENTATION
 - IMPLEMENT THE MEASURES OUTLINED IN THE "POST CONSTRUCTION SOIL DEPTH & QUALITY STANDARD" IF EXCESSIVE COMPACTION HAS OCCURRED.

1. THIS PROJECT PROPOSES GREATER THAN 1 ACRE OF SOIL DISTURBANCE ON SITE. THE PROJECT WILL FOLLOW THIS CONSTRUCTION GENERAL PERMIT 3-9020.
2. THE PROPOSED PROJECT HAS BEEN SCORED USING THE STATE OF VERMONT APPENDIX-A RISK EVALUATION. THE PROJECT IS SCORED "LOW RISK" BASED ON THE EVALUATIONS CRITERIA.
3. THE MAXIMUM AREA OF EARTH DISTURBANCE AT ANY ONE TIME SHALL NOT EXCEED 2 ACRES.
4. ALL AREAS OF EARTH DISTURBANCE ASSOCIATED WITH THIS PROJECT MUST BE STABILIZED WITHIN 14-DAYS OF INITIAL DISTURBANCE. AFTER THIS INITIAL 14-DAY PERIOD, ALL EARTH DISTURBANCE AREAS ASSOCIATED MUST BE STABILIZED ON A DAILY BASIS, WITH THE FOLLOWING EXCEPTIONS:
 - I. STABILIZATION IS NOT REQUIRED IF WORK IS TO CONTINUE WITHIN THE AREA WITHIN THE NEXT 24 HOURS AND THERE IS NO PRECIPITATION FORECAST FOR THE NEXT 24 HOURS.
 - II. STABILIZATION IS NOT REQUIRED IF THE WORK IS OCCURRING IN A SELF-CONTAINED EXCAVATION (I.E., NO OUTLET FOR STORMWATER) WITH A DEPTH OF 2 FEET OR GREATER (E.G., UNDERGROUND LINE INSTALLATION).
5. PROJECT DOES PROPOSE WINTER CONSTRUCTION.
6. ALL TEMPORARY EPSC MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY EPSC MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED AND APPROVED IN WRITING BY THE OWNER.
7. SOIL STABILIZATION SHALL BE ACHIEVED BY SEED AND MULCH, HYDROSEEDING WITH MULCH TACKIFIER, SOD, STONE, AND/OR ROLLED EROSION CONTROL PRODUCTS (E.G., EROSION CONTROL BLANKET). MULCH SHALL BE COMPRISED OF STRAW, HAY, COMPOST, WOODCHIPS, WOOD STUMP GRINDINGS, AND/OR EROSION CONTROL MIX.
8. APPROPRIATE SEED MIX SHALL BE APPLIED TO DESIGNATED AREAS PER THIS EPSC PLAN AND SEED SPECIFICATIONS. FOR AN AREA TO BE STABILIZED FOR WINTER BY VEGETATED COVER, SEEDING MUST BE COMPLETED BY SEPTEMBER 15.
9. AREAS TO BE STABILIZED FOR WINTER THAT DO NOT HAVE ESTABLISHED VEGETATION BY OCTOBER 15 SHALL BE STABILIZED BY ANCHORED MULCH AT THE WINTER APPLICATION RATE, OR OTHER APPROVED STABILIZATION MEASURES (E.G., ROLLED EROSION CONTROL PRODUCT; SEE DETAIL). DORMANT SEEDING WITH WINTER RYE IS RECOMMENDED (SEE DETAIL).

(FOR ANY EARTH WORK PERFORMED BETWEEN OCTOBER 15TH AND APRIL 15TH)

WINTER EROSION CONTROL NARRATIVE:
OBJECTIVE - ANY SITE WORK PERFORMED LATER THAN OCTOBER 15TH WILL RESULT IN EXPOSED SOIL THROUGH THE WINTER. THIS PRESENTS A POTENTIAL FOR EROSION THROUGH THE WINTER. THE WINTER EROSION CONTROL MEASURES ARE INTENDED TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION ZONE DURING THAWS AND RAINSTORMS.

WINTER EROSION CONTROL SEQUENCE:
ON-SITE COORDINATOR - THE ON-SITE COORDINATOR SHALL BE SURE ALL EROSION CONTROL MEASURES REQUIRED FOR WINTER CONSTRUCTION ARE INSTALLED BY OCTOBER 15TH AND PRIOR TO GROUND FREEZING. IF A PERMITTED AREA CAN BE LEFT UNDISTURBED UNTIL THE SPRING THE CONTRACTOR SHALL MAKE EVERY EFFORT TO LIMIT THESE AREAS OF DISTURBANCE.

THE CONTRACTOR SHALL STABILIZE ANY PORTION OF THE SITE THAT IS BEING WORKED AND DISTURBED PRIOR TO BEGINNING CONSTRUCTION AT ANOTHER AREA OF THE SITE. AT NO TIME DURING WINTER CONSTRUCTION SHALL THERE BE MORE THAN 1 ACRE OF EXPOSED SOIL ON SITE.

ANTICIPATED WINTER CONSTRUCTION ACTIVITIES WILL INCLUDE ALL ASPECTS OF THE PROJECT PROPOSED DURING SUMMER CONSTRUCTION. THIS IS A CONTINUATION OF WORK WHICH WAS NOT COMPLETED DURING THE SUMMER. MAJOR GRADING IS EXPECTED TO BE COMPLETE BEFORE OCTOBER 15TH.

LIMITS OF DISTURBANCE - LOD WILL BE MOVED AND/OR REPLACED TO REFLECT THE BOUNDARY OF WINTER WORK. CONTRACTOR WILL MAINTAIN A MINIMUM 25' BUFFER FROM PERIMETER CONTROLS TO ALLOW FOR SNOW CLEARING AND MAINTENANCE.

SNOW STORAGE ON SITE. CONTRACTOR WILL CREATE A SNOW MANAGEMENT PLAN. PLAN WILL IDENTIFY LOCATIONS FOR ADEQUATE SNOW STORAGE AND CONTROL SNOW MELT. SNOW STORAGE WILL BE DOWN GRADIENT OF ALL DISTURBED AREAS AND WILL NOT PROHIBIT THE FUNCTION OF ALL PERMANENT STORMWATER TREATMENT STRUCTURES. CONTRACTOR SHALL KEEP ALL DRAINAGE STRUCTURES OPEN AND FREE OF SNOW AND ICE DAMS.

INSTALL SILT FENCE - SILT FENCE SHALL BE INSTALLED ON THE DOWNHILL SIDE OF THE WINTER CONSTRUCTION AREAS AND SOIL STOCKPILE AREAS, AS SHOWN ON THE PLAN, BY OCTOBER 15TH. IF THE GROUND IS UNFROZEN THE SILT FENCE SHALL BE DUG IN AS NORMAL. IF THE GROUND IS FROZEN CONTACT THE ENGINEER FOR ALTERNATE OPTIONS (STONE BERM, FILTREXX SILT SOXX, STRAW WATTLES, ETC.).

STABILIZED CONSTRUCTION ENTRANCE - THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL STABILIZED CONSTRUCTION ENTRANCES TO PREVENT SEDIMENT TRACKING OFF SITE. CONTRACTOR SHALL ENLARGE THE WIDTH OF ACCESS TO PROVIDE ADDITIONAL ROOM FOR SNOW STOCKPILING, IF NEEDED. ADDITIONAL STONE SHALL BE ADDED OR THE LENGTH SHALL BE INCREASED, IF ICE AND SNOW LIMITS CONSTRUCTION ENTRANCE'S ABILITY TO HOLD SEDIMENTS ON SITE.

WINTER STABILIZATION - ALL DISTURBED AREAS NOT INVOLVED IN WINTER CONSTRUCTION SHALL BE AT LEAST TEMPORARILY STABILIZED BY OCTOBER 15. AFTER OCTOBER 15TH, ALL DISTURBED AREAS DURING WINTER CONSTRUCTION SHALL BE STABILIZED DAILY TO PREVENT EXPOSURE FROM RAIN EVENTS AND ACCUMULATION OF SNOWFALL. (SEE EXCEPTIONS BELOW).

CONTRACTOR SHALL ADD ADDITIONAL STONE, AS NECESSARY, TO PROVIDE STABILIZATION THROUGH WINTER CONSTRUCTION ON ALL AREAS WHERE CONSTRUCTION TRAFFIC IS ANTICIPATED.

EXCEPTIONS:

- HYDROSEEDING AFTER OCTOBER 15TH AND BEFORE APRIL 15TH MUST BE STABILIZED WITH STRAW MULCH OR EROSION CONTROL MATTING.*
- SNOW AND/OR ICE MUST BE REMOVED TO, AT MOST, ONE INCH PRIOR TO APPLYING MULCH OR EROSION CONTROL STABILIZATION MATTING.
- IF NO PRECIPITATION, WITHIN 24 HOURS, IS FORECASTED AND WORK WILL RESUME IN THE SAME DISTURBED AREA WITHIN 24 HOURS, DAILY STABILIZATION IS NOT NECESSARY.
- DISTURBED AREAS THAT COLLECT AND RETAIN RUNOFF, SUCH AS OPEN UTILITY TRENCHES REQUIRE STABILIZATION AT THE END OF EACH WORK WEEK.

MAINTENANCE. ALL DISTURBED AREAS SHALL BE MONITORED BY THE CONTRACTOR AND THE ON-SITE PLAN COORDINATOR IN ACCORDANCE WITH THE INSPECTION REQUIREMENT OUTLINED IN THE INDIVIDUAL CONSTRUCTION STORMWATER PERMIT. THE CONTRACTOR AND ON-SITE PLAN COORDINATOR SHALL EVALUATE THE SITE AFTER A THAW OR RAINSTORM. THE CONTRACTOR OR ON-SITE PLAN COORDINATOR SHALL NOTIFY THE ENGINEER IF ANY EROSION CONTROL MEASURES APPEAR TO BE INADEQUATE. THE CONTRACTOR OR ON-SITE PLAN COORDINATOR SHALL IMMEDIATELY (WITHIN THE SAME BUSINESS DAY) IMPLEMENT ANY FURTHER EROSION CONTROL MEASURES SPECIFIED BY THE ENGINEER. THE CONTRACTOR OR ON-SITE PLAN COORDINATOR SHALL ADD MULCH, AS NECESSARY, THROUGHOUT THE WINTER AFTER THAWS OR RAINSTORMS. THE MULCH DEPTH SHALL BE BROUGHT UP TO 2". THE MULCH AND SILT FENCE SHALL BE MAINTAINED UNTIL A PERMANENT GROUND COVER 70% (SEVEN-TENTHS) OF THE DISTURBED AREA IS ESTABLISHED. THE SPRING SHALL BE RESEED, IN THE SPRING, AS REQUIRED TO ESTABLISH A VIGOROUS PERMANENT GROUND COVER.

INSPECTION - THE ON-SITE COORDINATOR SHALL BE RESPONSIBLE FOR, AT A MINIMUM, DAILY WRITTEN INSPECTIONS WHILE THE SITE IS DISTURBED OR WEEKLY IF EVERYTHING IS STABILIZED BUT CONSTRUCTION IS ON-GOING. IF, DURING WINTER CONSTRUCTION, EARTH DISTURBANCE ACTIVITIES TEMPORARILY CEASE AND THE SITE HAS BEEN FULLY STABILIZED, INSPECTION AND MONITORING REQUIREMENTS FOR THE ON-SITE COORDINATOR MAY BE REDUCED TO ONCE PER MONTH MINIMUM. ALL INSPECTION SHEETS SHALL BE KEPT ON SITE AND BE AVAILABLE UPON REQUEST.



- ### TYPICAL TEMPORARY REINFORCED SILT FENCE

NOTES

2. PERIMETER CONTROLS SHALL BE UTILIZED IN SMALL AREAS $\leq$ 1 ACRE. IN AREAS $>$ 1 ACRE, TEMPORARY SEDIMENT TRAPS OR TEMPORARY SEDIMENT BASINS ARE TO BE UTILIZED.

4. PERIMETER CONTROLS SHALL BE INSTALLED PRIOR TO ANY EARTH DISTURBING ACTIVITIES WITHIN UPSLOPE CONTRIBUTING AREA.
5. SILT FENCE SHALL NOT BE USED AS CONSTRUCTION DEMARCATION.

7. IF SILT FENCE IS INSTALLED WHEN GROUND IS FROZEN, A GRAVEL, SHOT ROCK, OR SAND BALLAST MUST BE USED.



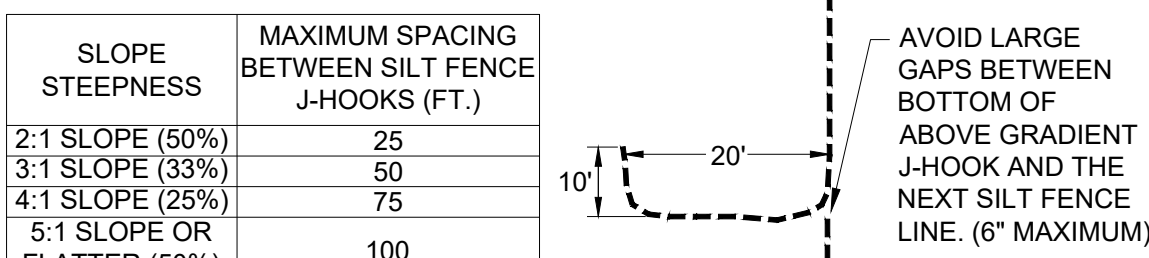
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TYPICAL CONSTRUCTION LIMIT BARRIER



- ## TYPICAL SILTSOXX CHECK DAM DETAIL

TYPICAL SILT FENCE "J-HOOK" CONSTRUCTION



TYPICAL SILT FENCE "J-HOOK" CONSTRUCTION



- ## STABILIZED CONSTRUCTION ENTRANCE

SEED	% WEIGHT	%GERMINATION
WINTER RYE	80% MIN.	85% MIN.
RED FESCUE (CREEPING)	4% MIN.	80% MIN.
PERENNIAL RYE GRASS	3% MIN.	90% MIN.
RED CLOVER	3% MIN.	90% MIN.
OTHER CROP GRASS	0.5% MAX.	
NOXIOUS WEED SEED	0.5% MAX.	
INERT MATTER	1% MAX.	

SEEDING SPECIFICATIONS



- ## TYPICAL SILTSOXX SEDIMENT CONTROL



- ## SILTSOXX INLET PROTECTION

DRAWING TITLE

DETAILS

DATE ISSUED: 11/14/24

DRAWN BY: G

PROJECT NO.: 24145

DRAWING NO.

CHECKED BY:

SCALE: N/A

REV. NO.:

C-2.06

Use Tables for Traffic Calculations - Based on ITE Trip Generation Manual 11th Edition

Generated by Greg Dixon, P.E. - Date 01-02-25

Proposed - By Student

Type	ITE Manuel Uses	Students	VTEs
Early Education Center - (Total Daily Ave-VTEs)	Day Care Center (Use #565)	40	190
Early Education Center - (7AM-9AM Peak -VTEs)	Day Care Center (Use #565)	40	35
Early Education Center- (4PM-6PM Peak -VTEs)	Day Care Center (Use #565)	40	0

Early Education Center Closes at 3PM



CITY OF BURLINGTON
DEPARTMENT OF PUBLIC WORKS

WATER RESOURCES DIVISION
234 PENNY LANE
BURLINGTON, VT 05401
802.863.4501 P
WWW.BURLINGTONVT.GOV/DPW

CHAPIN SPENCER
PUBLIC WORKS DEPARTMENT DIRECTOR

MEGAN MOIR
WATER RESOURCES DIVISION DIRECTOR

12/12/2024

Greg Dixon PE
Krebs and Lansing Consulting, Engineers Inc.
164 Main Street
Colchester, VT 05446
Greg.dixon@krebssandlansing.com

Re: Burlington Water and Sewer Capacity for Mater Christi School 50 Mansfield Avenue.

Dear Mr. Dixon,

This letter is to inform you, the Planning Department, the State of Vermont Environmental District and other interested parties that the City of Burlington's Water and Wastewater facilities have sufficient capacity to handle the demand associated with the change in use of and addition to the gymnasium located at the above address. The project is to include a gymnasium renovation into an assembly area/conference room/banquet hall with a building addition to house four new classrooms.

Using Vermont's latest Environmental Protection Rules, the calculated increase in flows (see flow table below) are 448 GPD (gals/day) for both drinking and sanitary sewer. Wastewater flow from this area is treated at our Main Plant located at 53 Lavalley Lane. It is important to note that this letter only addresses drinking water treatment plant as well as wastewater plant capacities and not distribution or collection system capacities.

This capacity allocation letter is conditional on your client to agreeing to all of the following conditions:

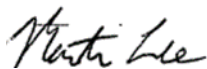
1. Owner shall coordinate with the Burlington's Stormwater Program Manager to finalize design and compliance with stormwater offset requirements. Stormwater design, construction and maintenance shall meet Water Resources stormwater standards.
2. Owner is responsible for managing to the satisfaction of Burlington Water Resources any adverse stormwater runoff onto adjacent properties should they arise at future dates.
3. Groundwater and/or foundation drain shall not connect to sanitary or combined sanitary sewer. Developments shall not introduce new groundwater to the sewer system and appropriate design measures shall be followed. Appropriate site inspection measures and design measures may include but are not limited to the following: test borings, test pits, groundwater pumping test, waterproofing foundations, structural designs adequate for high groundwater, and not constructing a finished space below ground level.
4. The plan shall include a directive for the contractor to comply with AWWA-C651 section 4.8.9. The directive shall include the requirement for completion of all water main and service testing prior to

connection of the main/service under test to the potable water system. A testable backflow prevention device that is acceptable to Water Resources shall be in place while filling and/or flushing mains/services under test while they are connected to the potable water system. Main/service under test is to remain disconnected from the potable system with an air gap when main/service under test is not being filled and/or flushed.

5. Water Resources requires peak instantaneous fire flows data.
6. Water services 2" diameter and smaller shall be CTS HDPE. When passing through foundations/floors services shall be sleeve in PVC twice the service diameter.
7. Tracer wire and metallic marking tape are required on water mains and service lines.
8. Mechanical thrust restraints and thrust blocks required at water main/service fittings. Thrust blocks shall be pre-cast.
9. Gate valves are to open right and to be provided with a Posi-Cap valve box aligner installed on gate valves over the valve stem and under the operating nut.
10. Compression fittings are required upstream of the water meter. Water service fittings (corporations, curb stops, unions) shall be Cambridge low lead brass with compression fittings and nitrile gaskets.
11. Nitrile rubber (NBR) gasket material is required in all drinking water infrastructure components including water main gaskets, MJ fittings, service saddles, tapping sleeves and brass water service components. Text on the plan shall specifically state that nitrile rubber gaskets are required.
12. Testable backflow preventers appropriate for the level of risk based on the proposed use of the buildings shall be installed on water services 1.5" diameter and larger.
13. Water main couplers shall be mechanical joint ductile iron solid sleeve with mechanical thrust restraint. Alternatives to ductile iron solid sleeve couplers (Hymax, Romac, Smith-Blair) may be used with prior Water Resources approval and typically only when ductile iron solid sleeve couplers will not work in their intended applications.
14. Fire hydrant shall be non-draining Kennedy 81AWC complete insert hydrant with (2) 2.5-inch hydrant nozzles and (1) 4.5-inch pumper nozzle. Nozzle thread type shall be double Roxbuy.
15. For information on Burlington's water resources standard please refer to the attached checklists and the following website: <https://www.burlingtonvt.gov/340/Connection-Requirements>

This capacity letter is good for three (3) years. Any changes in flow estimates or property usage also requires reapplication. Please feel free to email or call me at 802-497-7021 if you have any questions.

Sincerely,



Martin Lee, P.E.
Water Resources Engineer
Burlington Public Works

November 22, 2024

Ashley Walenty, P.E.
Water Resources Engineer
Burlington Department of Public Works
53 Lavalley Lane
Burlington, VT 05401

Re: Mater Christi - Water/Wastewater Allocation Request
50 Mansfield Avenue, Burlington, Vermont

Dear Ashley,

Mater Christi School is proposing a retrofit/building addition to the old "Gymnasium" building in the rear of their property. The proposed building will house the School's New Early Education Center. The building will have four new classrooms and the big open space in the old gymnasium will become the music hall which will occasionally host some children's recitals. The classrooms are planned to have 10 students in each classroom with one teacher. There will also be a roaming teacher and a teacher in the music room. I have calculated this will total to 10 students, 6 teachers, and some allocation for visitors to the music hall space.

On behalf of the Project, we are requesting a letter approving our additional water and wastewater allocation. There is no existing water and wastewater use in the current gymnasium building so all new flows will be additional. The calculation we performed is based on the above proposed capacity calculated in gallons per day using the "Wastewater System and Potable Water Supply Rules" dated November 6, 2023. The proposed design flow calculated based on the new building's use is **448 GPD**. The Water Supply Rules have slightly different calculations but with less uses described; we are assuming the flow above for both water and wastewater to be consistent. This allocation letter will be included with an application to the State of Vermont for a Wastewater System and Potable Water Supply Permit. A copy of the Site Plans and GPD calculation sheet are included with this letter for your use.

The wastewater flows from the Project will drain to a new sewer collection system the project will construct on the property. We will cut into the existing 8" sewer line before it enters the City's right of way. The flows will enter the City system via SMH-1540 on Mansfield Avenue. From my review of the City's online mapping this area ultimately connects to the City's combined wastewater/stormwater collection system served by the Main Wastewater Treatment Plant near Burlington's Waterfront.

The Project will also provide a new the water connection to the building. There is no water service to the current structure. The Project is proposing upgrading this to a 6" service to be used for proposed fire suppression system. The new 6" line to the building will be tapped with a 1"-2" domestic connection, that connection will have its own water shutoff outside the building and separate from the fire connection. There is no water in the rear of the property so the project also includes an 8" main be

installed to the front of the new building where the 6" will tee from, we will also provide a new hydrant in this location. Again, I have attached a set of civil site plans for your review.

For stormwater, existing property has 2.999 acres of total existing impervious surface that consists of buildings, circulation roads, parking areas, gravel roads, sidewalks and concrete pads. This project will result in an additional 0.45 acres but will also remove 0.02 acres. Therefore, post construction will have a total of 3.43 acres. The site has never been previously permitted for an Operational Stormwater Discharge Permit because of its age. Therefore, any increase in impervious surface required the site to receive a State of Vermont Operational Stormwater Permit and it will also need to meet the Vermont 3-acre stormwater requirements. We have already applied for this permit, the application was submitted on November 18, 2024.

The project will rely on two new infiltration basins to manage stormwater flows from all the new impervious surfaces and 1.76 acres of the existing impervious surfaces. The infiltration basins will have sediment forebays for the stormwater's pretreatment. We have spilt up the site in seven sub-watersheds with 5 of those watersheds being impervious areas which will not be treated. Watershed 3 and 4 will have the two basins. See site plan for Watershed locations. Runoff from the two new infiltration basins will be discharged via overland flow and infiltration. The overland flow follows the existing grade to an unnamed tributary of the Winooski River. Some of the untreated areas flow to the City of Burlington's combined stormwater/sewer system. We believe this is mostly the flat roof runoff.

The project will also require temporary disturbance of approximately 2.3 acres. This exceeds the 1 acre threshold, and the project will also apply to receive a State of Vermont Construction Stormwater Discharge Permit. This will likely be a general low risk permit because of the soils being disturbed and the shallow slopes where the project will be disturbing. We have not submitted this permit yet but hope to in early December.

The proposed plan set includes plans and details regarding the water, wastewater, and stormwater. This plan set will be released to the Zoning Administrator for zoning approval. Please feel free to contact us if you have any questions, comments or need additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Greg Dixon", with a stylized flourish at the end.

Greg Dixon

Wastewater and Domestic Water Design Flows Based on WW Supply Rules {11/06/2023}**Mater Christi School - Proposed Early Education Center**

Created By: Greg Dixon P.E.

Date: November 22, 2024

Type	Use per WW Standards	Participants	Rate (Gallons Per Day Per Participant)	Gallons Per Day
Teachers	Grades Pre-School through 8th Grade with Staff Breakroom without showers	6	8	48
Students	Grades Pre-School through 8th Grade without cafeteria and showers	40	5	200
"Old Gymnasium Space"	Assembly Area; Banquet Hall; Conference Room with no food service	50	4	200
	TOTALS:	96		448

Use Tables for Traffic Calculations - Based on ITE Trip Generation Manual 11th Edition

Generated by Greg Dixon, P.E. - Date 01-02-25

Proposed - By Student

Type	ITE Manuel Uses	Students	VTEs
Early Education Center - (Total Daily Ave-VTEs)	Day Care Center (Use #565)	40	190
Early Education Center - (7AM-9AM Peak -VTEs)	Day Care Center (Use #565)	40	35
Early Education Center- (4PM-6PM Peak -VTEs)	Day Care Center (Use #565)	40	0

Early Education Center Closes at 3PM

Department of Permitting & Inspections

Zoning Division
645 Pine Street
Burlington, VT 05401
Telephone: (802) 865-7188

William Ward, Director
Scott Gustin, AICP, CFM, Principal Planner
Mary O'Neil, AICP, Principal Planner
Garret King, Associate Planner
Joseph Cava, Permit Technician
Steve Cormier, Code Compliance Officer
Ted Boylan, DPI Administrator



TO: Development Review Board
FROM: Garret King
DATE: February 4th, 2025
RE: ZP-24-148; 49-55 Chase Street

Dear Members of the DRB

The application for 49-55 Chase Street received the first of two possible three month time extensions at the November 6th, 2024 DRB meeting and is now returning with the possibility of receiving the second time extension request.

Since the last meeting staff has received no communications or updates from the applicant. The application remains incomplete and still requires review by Conservation Board at this time. The DRB should not grant the second three month time extension as allowed in Sec. 3.2.5 *Completeness of Submission, Administrators' Action* as the applicant has lied dormant for the three month duration of the extension.

-Staff, Garret King

Department of Permitting and Inspections

Zoning Division

645 Pine Street

Burlington, VT 05401

<https://www.burlingtonvt.gov/439/Zoning-Division>

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Garret King, Associate Planner
Steven Cormier, Zoning Compliance Officer
Joseph Cava, Planning Technician
Ted Boylan, Permit Administrator



MEMORANDUM

To: Development Review Board
From: Mary O'Neil, AICP, Principal Planner
Date: February 4, 2025
RE: 28 Sunset Cliff Road, ZP-25-13

Note: These are staff comments only. Decisions on projects are made by the Development Review Board, which may approve, deny, table or modify any project. THE APPLICANT OR REPRESENTATIVE MUST ATTEND THE MEETING.

File: ZP-25-13

Location: 28 Sunset Cliff

Zone: RL **Ward:** 4N

Parking District: Neighborhood

Date application accepted: January 10, 2025

Applicant/ Owner: Maxx Garrison

Request: Proposed reapplication of ZP-21-450 for the demolition of existing single-family home to construct a new single-family home with associated site and landscape changes.



Background:

- **Zoning Permit ZP-21-450;** Demolish existing single family home; build new single family home with associated site improvements. A detached garage is proposed with an Accessory Dwelling Unit. July 2021; Permit has expired.
- **Zoning Permit 94-461;** lot line adjustment between two existing lots (16 and 17); one vacant and one with an existing single family merged into one lot. No construction or land development included with this proposal. May 31, 1994.

Overview:

The applicant is renewing a request, approved in July 2021 to demolish an existing single detached dwelling and to replace it with a new single detached dwelling at 28 Sunset Cliff Road. Construction is underway, but the project has not concluded. The foundation, building envelope and decks have been completed. Site work (new driveway, parking area, retaining walls, and paths) has not as yet been started. This application includes the following changes:

- ◆ The garage and ADU have been removed and replaced with a parking area.
- ◆ The fence along the street on the East side of the lot has been extended.

- ◆ The retaining wall along the West side of the lot has been changed; rotated 90 degrees and shortened; width and height are the same.
- ◆ The walkway along the West facing porch has been extended to the full length of the porch.
- ◆ An additional retaining wall was added on the North side of the property.
- ◆ Geothermal heating was installed in place of exterior heat pumps. (Underground wells have been added.)
- ◆ Overall lot coverage has been reduced.

The property is affected by the 250' wide lakeshore buffer. Provisions as to tree clearing and stormwater management apply.

The Conservation Board reviewed plans at their June 7, 2021 meeting, and voted unanimously to support the project as originally submitted.

The Design Advisory Board originally reviewed the application at their June 8, 2021 meeting and voted unanimously to recommend approval by the Development Review Board.

Recommendation: Certificate of Appropriateness Consent Approval, as per the following findings and conditions:

I. Findings

Article 3: Applications, Permits and Project Reviews

Part 3: Impact Fees

Section 3.3.2 Applicability

Any new development or additions to existing buildings which result in new dwelling units or in any new non-residential buildings square footage are subject to impact fees.

Impact fee credit is given for the existing residential gross floor area. The area of additional residential gross floor area will be subject to impact fees. Per the submitted plans, an estimate of the fees is:

Existing gross area (Per Assessor's Property Data: 3981 sf.

Proposed gross area: 5549 sf.

Difference: 1568 sf.

SF of Project 1,568

Department	<u>Residential</u>	
	Rate	Fee
Traffic	0.240	376.32
Fire	0.271	424.93
Police	0.055	86.24
Parks	0.908	1,423.74
Library	0.562	881.22
Schools	1.173	1,839.26
Total	3.209	\$ 5,031.71

Affirmative finding as conditioned.

Section 3.3.8 Time and Place of Payment

Impact fees must be paid to the city's chief administrative officer / city treasurer according to the following schedule:

- a) *New buildings: Impact fees must be paid at least seven days prior to occupancy of a new building or any portion thereof.*

Affirmative finding as conditioned.

Article 4: Zoning Maps and Districts

Section 4.4.5 Residential Districts

(a) Purpose:

The Residential Districts are intended to control development in residential districts in order to create a safe, livable, and pedestrian friendly environment, while enabling neighborhoods to evolve to meet the changing needs of households and the economy, and as a result of the climate emergency. They are also intended to create an inviting streetscape for residents and visitors. Development that places emphasis on architectural details and form is encouraged, where primary buildings and entrances are oriented to the sidewalk, and new buildings are interspersed within a wide range of historic development patterns across the city. Parking shall be placed either behind, within, or to the side of structures, and building facades designed for parking shall be secondary to the residential aspect of a structure.

There are no sidewalks along Sunset Cliff Road; however the proposed building will present an attractive addition to the streetscape. In this plan, the garage has been eliminated in favor of a parking area, with a small "T" allowing for backup and turnaround. **Affirmative finding.**

1. *The Residential Lower Intensity (Residential Low, RL) district is intended primarily for residential development that includes a mix of housing types such as single detached dwellings, with or without accessory dwelling units, duplexes, triplexes and quadplex organized in a compact neighborhood-scale that complements respective neighborhoods' development and open space patterns. Building heights typically vary from one to two and one half stories, and development generally results in lower lot coverage than in other residential districts. Limited commercial uses take the form of home-based businesses and the adaptive reuse of historic buildings as neighborhood-serving uses.*

A single detached dwelling with a parking area is proposed; consistent with the district. A Stormwater Plan was reviewed and approved in 2021; the Stormwater engineer has re-reviewed and found it acceptable. **Affirmative finding.**

(b) Dimensional Standards

The intensity of development, dimensions of building lots, the heights of buildings and their setbacks from property boundary lines, and the limits on lot coverage shall be governed by the following standards:

Table 4.4.5-1 Lot Size, Frontage, Setback and Lot Coverage Standards in Residential Districts

RL District	Min. Lot Frontage 2, 3, 4, 5 30'	Front setback 1, 6, 7, 8, 9 Min: Avg. of front setback 2 adjacent lots on both sides +/- 5 feet Max required: 25 ft* *change from 50' under previous ordinance.	Side Setback 1, 6, 7, 8, 9 Min: 10% of lot width or avg. of side setback of 2 adjacent lots on both sides Max required: 20 ft	Rear setback 20' Waterfront Setback: Average of adjacent lots per 4.4.5 (d) 2. B. ii.	Lot coverage 45%
28 Sunset Cliff	164'	$(149' + 193' + 82' + 89') / 4 = 128.25'$ (MAX required 25')	$(19' + 12') / 2 = 15.5'$ (rounded to 16')	$(23' + 59') / 2 = 41'$	14.7%
1. Details regarding the measurement of and exceptions to coverage and setback standards are found in Art 5. 2. The DRB may reduce the frontage requirements for lots fronting on cul-de-sacs, multiple streets, or corner lots to more closely reflect an existing neighborhood pattern. 3. Exceptions to frontage requirements for flag lots and small lot subdivisions are found in Sec. 5.2.2 4. For lots in RL or RM with more than two primary buildings, the minimum lot frontage shall be 45'. 5. Average setback for front and side setbacks are calculated based on 4 adjacent lots, two on each side within the same block and on lots with the same frontage requirements. For the purposes of determining the required front setback only, among the comparative sample of four neighboring properties, one may be removed from the averaging calculation. 6. Where there are fewer than 2 adjacent lots on both sides within the same block having the same street frontage, the average side yard setback shall be calculated from the fewer number of lots. Where there are no adjacent lots, the side setback shall be 10% of the lot width. Refer to Sec. 5.2.5 for additional details. 7. A 75 ft setback shall be required from the ordinary high water mark of Lake Champlain and the Winooski River. Additional setbacks from the lakeshore and other water features may be applicable per the requirements of Sec 4.5.3 Riparian and Littoral Conservation Overlay Zone. 8. For properties in the RL and RM zones with frontage along Lake Champlain or the Winooski River, the front yard setback shall not be required to exceed 50 feet. 9. An additional ten per cent (10%) lot coverage may be permitted for accessory residential features per (d) 2C below.					

The location and setbacks for the new structure were approved in 2021. The foundation and house, as has been completed, remain in the same location as was approved in July 2021. Lot coverage has been reduced.

Affirmative finding.

Table 4.4.5-2 Principal & Secondary Structures Massing and Placement Standards in Residential Districts

RL District	Max Height & Stories 1, 3, 5 35'; 3 stories	Max Dwelling Units per Structure, 2, 3 4 dwelling units	Max Principal Structure Footprint 3 1,800 sf.	Max Secondary Structure Footprint 3, 5 1,100 sf	Max Linear elevation before offset	Minimum distance between structures
28 Sunset Cliff Rd.	30' 2 3/8"	1	48' x 36' = 1728 sf.	N/A	N/A	N/A

Affirmative finding.

(c) Permitted and Conditional Uses

A single family detached dwelling is a permitted use in the RL zoning district. **Affirmative finding.**

(d) District Specific Regulations

1. *Additional Residential Development Permitted*

A. *Reserved*

B. *Residential Development Bonuses*
No bonuses are sought. Not applicable.

B. *Encroachment into the Waterfront Setback*

(ii) *Averaging of Setbacks of Existing Structures*

If the waterfront setback of existing principal structures within a distance of one hundred fifty (150) feet on either or both sides of a lot is less than the required setback, the setback may be reduced to the average alignment of such structures. The average waterfront setback of adjacent principal structures is 41 ft. The application proposes a waterfront setback a little more than 50'. See Plan C-3.0 as revised.

Affirmative finding.



2. *Exceptions to Dimensional Standards*

A. *Encroachment into Side Setback for Residential Driveways*
Not applicable.

B. *Encroachment into the Waterfront Setback*

The following exceptions to the required waterfront setback for Lake Champlain and the Winooski River established under Section 4.5.4:

i. *Replacement of Existing structure*

ii. *Averaging of Setbacks of Existing Structures*

If the setback from the waterfront of existing principal structures within one hundred fifty (150) feet on either or both sides of a subject lot is less than the minimum required setback, the setback for the subject lot may be reduced to the average setback of such neighboring structures.

The waterfront setback utilizes the averaging principal:

$$\frac{\text{WATERFRONT:}}{(23' + 59')/2} = 41'$$

Affirmative finding.

C. *Exceptions to Lot Coverage for Accessory Residential Features*

The proposed total lot coverage is far below the allowable limit defined by Table 4.4.5-1, above. **Affirmative finding.**

3. *Exception for Neighborhood Commercial Uses*

Not applicable.

4. *Miscellaneous Standards*

A. *Additions to Existing Residential Structures*

Not applicable.

B. *Accessory Residential Structures, Buildings and Uses*

There exists a deck within the waterfront setback that has been in place more than 15 years, and is therefore an unenforceable violation. The structure may remain but may not be altered, enlarged, replaced, or changed in any way unless brought into compliance with zoning review and approval.

Affirmative finding as conditioned.



C. *Residential Occupancy Limits*

The limitation on occupancy of any dwelling unit has been statutorily struck down by the State of Vermont. *Title 24, Chapter 117, Subchapter 007 §4412, 14.*

This provision is not longer applicable.

Part 5: Overlay Zoning District Regulations

Section 4.5.4 Natural Resource Protection Overlay (NR) District

(c) District Specific Regulations: Riparian and Littoral Conservation Zone

3. *Regulated Uses*

Except where otherwise noted herein, all uses permitted or conditionally permitted in the respective underlying zoning district, including any construction of buildings or other structures, and roads, parking areas or any other impervious surface, may be approved only within the Riparian and Littoral Conservation Zone and its associated buffer after review and approval pursuant to the requirements and limitations below under Subpart 4.

4. *Requirements*

1. *Any land disturbing activities (i.e., vegetation has been removed, or the landscape has been graded or filled resulting in bare soil surfaces) shall include a stormwater management, erosion prevention and sediment control plan pursuant to the requirements of Sec 5.5.3 to be reviewed by the conservation board and approved by the city engineer.*

A Stormwater Management and Erosion Prevention plan have been submitted for review by the Stormwater Engineering program, and were approved June 1, 2021. The Conservation Board has reviewed and supported the project as proposed. **Affirmative finding.**

For properties with frontage along Lake Champlain or the Winooski River, development that includes 400 square feet or more of new or redeveloped lot coverage shall establish a low-mow zone along the shoreline. A low-mow zone is a new or existing vegetated area that is not mowed more than once per year and allows vegetation to grow and mature.

*A low-mow zone shall be **at least 15 ft. wide** as measured inland from the 100 ft. elevation and shall be of a size equivalent to, or greater than, the new or redeveloped lot coverage, except that in no event shall a low-mow zone be required to extend more than **50 ft. wide** as measured inland from the 100 ft. elevation or extend along more than 80% of a property's shoreline frontage.*

The required low-mow zone has been identified on Plan C-4.0. (see "Planting Schedule.") and Plan C-4.0. **Affirmative finding.**

For properties with frontage along Lake Champlain or the Winooski River, development shall be located no closer to the shoreline than existing development wherever reasonably possible.

The replacement structure is not placed any closer to Lake Champlain than the existing structure proposed for demolition. **Affirmative finding.**

2. Agricultural and silvicultural activities shall follow Best Management Practices for the Protection of Water Quality;

Not applicable.

3. Installation of any seawalls, rip-rap or other shoreland retention structures shall be submitted for review by the conservation board who shall consult with the city engineer prior to issuance of a recommendation to the DRB;

The Conservation Board supported the proposal at their June 7, 2021 meeting.

Affirmative finding.

and,

4. No new stormwater outfall shall directly discharge into any surface water without approval and implementation of a stormwater management plan approved by the city engineer.

The Stormwater Plan was approved on June 1, 2021. There are no substantive changes in this reapplication. **Affirmative finding.**

(d) District Specific Regulations: Wetland Conservation Zone:

28 Sunset Cliff is within the NRP Wetland Overlay Zone.

As part of their application, applicants must submit a complete stormwater management, erosion prevention and sediment control plan pursuant to the requirements of Sec 5.5.3, and successfully demonstrate how the project will prevent adverse impacts to surface water and groundwater quality before, during, or after construction. At a minimum, an applicant should demonstrate how a project will meet the standards outlined in the latest edition of the Vermont Soil Erosion Handbook.

Stormwater and Erosion Prevention Plans have been submitted and approved by the Stormwater Engineering Division. There are no substantive changes in this reapplication.

Affirmative finding.

(e) District Specific Regulations: Natural Areas Zone

4. Regulated Uses:

Except where noted herein, all uses permitted or conditionally permitted in the respective underlying zoning district, including the list of activities below, may be approved after review and approval pursuant to the requirements and limitations set forth below under subpart 5.

- A. The construction of buildings or other structures, and roads, parking areas and any other impervious surfaces;*
- B. Land disturbing activities (i.e., vegetation has been removed, or the landscape has been graded or filled resulting in bare soil surfaces) not associated with a permitted or conditionally permitted use. Land disturbing activities which expose 5,000 or more square feet of soil (i.e., vegetation has been removed, or the landscape has been graded or filled resulting in bare soil surfaces) are prohibited except where a stormwater management, erosion prevention and sediment control plan has been reviewed by the Burlington Conservation Board and approved by the City Engineer.*

Project plans were reviewed and approved by the Conservation Board and the Stormwater Engineering Division. **Affirmative finding.**

(f) District Specific Regulations: Special Flood Hazard Area

The new structure sits substantially above the base flood level elevation and securely anchored to a foundation system. The foundation and building envelope are already complete.

All submission information had reviewed and recommended for approval by the Conservation Board and the Stormwater Engineering Division. **Affirmative finding.**

Article 5: Citywide General Standards

Section 5.2.3 Lot Coverage Requirements

Lot coverage has been minimally reduced since the 2021 approval, and remains compliant. See Table 4.4.5-1, above. **Affirmative finding.**

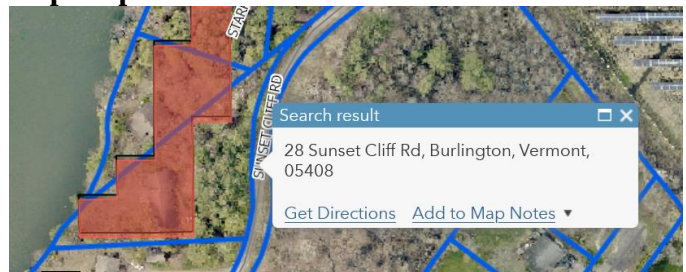
Section 5.2.4 Buildable Area Calculation and Steep Slopes

(a) Buildable Area: The parcel is not greater than 2 acres. Not applicable.

(b) Steep Slopes

The Steep Slopes overlay was adopted after the 2021 permit approval for this project (ZP-22-03, adoption 8.15.2022) but is now applicable to this project review.

28 Sunset Cliff Road falls within the Steep Slopes overlay.



The boundaries shown on the Steep Slopes Overlay Map may be supplemented or modified by examination of one or more of the following sources by the Development Review Board whenever an application is submitted for review.

- Contour maps prepared from the most current orthophotography.*
- On-site survey prepared by a registered professional engineer or surveyor.*

The Zoning Administrative Officer or Development Review Board shall determine whether or not the Steep Slope Overlay District has been shown accurately on the application plans. The applicant may be required to revise the steep slope boundaries shown on the application plans.

The burden of proving the correct boundary shall be on the applicant, supported by engineering and/or surveying data or mapping.

1. District Specific Regulations

- A. The Steep Slope Overlay District shall be an overlay on all zoning districts. The regulations in the overlay are in addition to those regulations of the underlying zoning district.*
- B. These regulations apply to applications within the Overlay District that include 400 square feet or more of earth disturbance.*
- C. Finished slopes of all cuts and fills shall not exceed 30%, unless the applicant can demonstrate that steeper slopes can be stabilized and maintained adequately to the satisfaction of the ZAO or DRB in consultation with the City Engineer.*
- D. Any fills placed on a steep slope shall be properly stabilized and, when necessary, supported by retaining walls or other appropriate measures as approved by the ZAO or DRB in consultation with the City Engineer.*
- E. Finished grades shall be reasonably safe from slide, collapse, or similar failure as determined by the ZAO or DRB in consultation with the City Engineer.*

2. Additional Application Requirements

- A. A site plan prepared by a registered professional engineer or surveyor that accurately depicts the proposed development and related land disturbance relative to the Steep Slope Overlay District boundaries, with all pertinent information describing the proposal, and a topographical survey depicting existing and proposed contour lines at no greater than 2-foot intervals. The plan shall depict all proposed cut, fill, and grading.*
- B. A plan depicting the extent of proposed vegetation clearing.*

3. Approval Condition

- A. Prior to construction, the applicant shall provide a geotechnical analysis prepared and stamped by a professional geotechnical engineer that determines the suitability of the steep slope for development.*

Krebs and Lansing Engineers provided the *Existing Conditions* plan (C-2.0), which includes topography at 1' intervals. The landscaping plan satisfies the previously approved and intended vegetation. The foundation and building envelope have been completed under the original permit. A site visit 1.21.2025 confirmed that the house and decks are already in place; only the driveway, parking area and landscaping remain. The area for the driveway relocation and the parking area remain flat and some distance from the lakeshore steep slope. Other than a walkway, there is no identified ground disturbance that falls within 50' of the top edge of the slope.

Affirmative finding.

Section 5.2.5 Setbacks

See Table 4.4.5-1, above. **Affirmative finding.**

Section 5.2.6 Building Height Limits

See Table 4.4.5-2, above. **Affirmative finding.**

Section 5.2.7 Density Calculations

The Neighborhood Code eliminated dwelling units/acre. In residential districts, each structure (Principal, Secondary) may have up to four residential units. One unit is proposed here in a Principal Structure. **Affirmative finding.**

Section 5.3.2 “Bianchi” controlled uses, structures and lots

Although not subject to enforcement action pursuant to Article 2, uses, structures, and lots which are deemed to be controlled by the Bianchi decision, and the subsequent enactment of 24 VSA Sec. 4454, shall be considered violations that are not considered legal to any extent and shall in no event be granted the consideration or allowances of nonconforming structures, uses, and lots. Thus, no change, alteration, enlargement, and reestablishment after discontinuance for more than sixty (60) days or reconstruction after an occurrence or event which destroys at least 50% of the structure in the judgement of the city’s building inspector shall be permitted, except to a conforming use, structure, or lot.

Submitted site plans define a small deck within the waterfront setback which has not be installed by way of a building or zoning permit. It has remained in place for more than 15 years without any enforcement action, and therefore is an unenforceable violation. It may remain, but may not be changed, altered, enlarged, or reconstructed if more than 50% destroyed by an event.

Affirmative finding as conditioned.

Section 5.3.5 Nonconforming Structures

b. Demolition

A nonconforming structure may be replaced by a new structure retaining the same degree of nonconformity as the original structure. This provision is limited to the existing dimensional nonconformity (i.e. setback, lot coverage, or height), and shall not expand the degree of nonconformity except as provided for in (a) above. The new structure shall be subject to conformance with all other dimensional requirements (i.e. setback, lot coverage, and height).

Zoning permit application for the replacement structure shall be completed within 1 year of demolition of the nonconforming structure; failure to do so shall result in the loss of the ability to retain the nonconformity.

The Assessor places a construction date of 1924, markedly before zoning regulations. The original building footprint is noncompliant with regard to side yard setbacks. The application is to replace the home utilizing a small area of the existing northerly footprint where it encroaches into the side yard setback. (See Plan C-2.0.) The remainder of the building envelope will comply with all required setbacks. In order to comply with this section, this redevelopment will be conditioned on new construction within 1 year from the date of the demolition. The project currently is underway.

A small deck appears on the site plan on the westerly (lake) side of the parcel. Although never permitted, it has been in place more than 15 years and is therefore an unenforceable violation. It may remain, but cannot be expanded or altered in any way under these regulations.

Affirmative finding as conditioned.

Section 5.4.9 Brownfield Remediation

Not applicable.

Part 5: Performance Standards

Section 5.5.1 Nuisance Regulations

This is a replacement single family home. No new impacts are identified that diverge from existing residential use. **Affirmative finding.**

Section 5.5.2 Outdoor Lighting

Fixtures are identified on Plans C-3.0, 4.0 and 5.0. All lighting is LED; lighting will be dimmable and controlled by programmable timers. **Affirmative finding.**

Section 5.5.3 Stormwater and Erosion Control

An Erosion Prevention and Sediment Control plan has been submitted and approved June 1, 2021. The Stormwater engineer has been apprised of the project amendment, and confirms continued compliance as previously approved. **Affirmative finding.**

Section 5.5.4 Tree Removal

(a) Review criteria for zoning permit requests for tree removal.

1. Grounds for Approval

Tree removal involving six (6) or more trees, each of ten (10) inches or greater in caliper or the removal of ten (10) or more trees, each of which is three (3) inches or greater in caliper during any consecutive twelve (12) month period may be permitted for any of the following reasons:

- A. *Removal of dead, diseased, or infested trees*
- B. *Thinning of trees for the health of remaining trees according to recognized accepted forestry practices*
- C. *Removal of trees that are a danger to life or property; or*
- D. *As part of a development with an approved zoning permit*

The applicant proposes removal of 5 trees over 10” in caliper, one of which was deemed unhealthy by Barrett’s Tree Service. Four additional trees over 3” in caliper are also proposed to be removed; but overall less than the 10 tree limit. The tree removal is proposed as part of this zoning permit review which includes a robust landscaping plan. See Plans C-4.0 and C-5.0. The project submission was reviewed and supported by the Conservation Board in 2021. **Affirmative finding.**

Article 6: Development Review Standards

Part 1: Land Division Design Standards

Not applicable.

Part 2: Site Plan Design Standards

Sec. 6.2.2 Review Standards

a. Protection of Important Natural Features:

The property is located along the Lake Champlain shoreline, an identified significant natural area. The parcel is affect by the Natural Resource Protection Overlay district, specifically the Riparian and Littoral Zone, which stretches inland 250’ from the 95.5’ lakeshore elevation. The new home is essentially where the existing home was located; the relocated driveway and parking area within an area that is currently greenspace and treed.

The Comprehensive Development Ordinance requires a “Low Mow” zone along the lakeshore.

This is adequately identified on the submitted landscape and site plan. **Affirmative finding.**

b. Topographical Alterations:

The site slopes gradually from east to west, toward the lake. Aside from construction disturbance, the existing topography appears to remain unchanged. A 2’ x 12”x 68’ long retaining wall is proposed west of the new home has been revised to run perpendicular to the new home, and shortened in length. Walls may encroach into required setbacks.

Affirmative finding.

c. Protection of Important Public Views:

There are no important protected public views from or through this site. Not applicable.

d. Protection of Important Cultural Resources:

Not applicable.

e. Supporting the Use of Renewable Energy Resources:

This amendment includes geothermal wells, which are supported by this standard.

Affirmative finding.

f. Brownfield Sites:

This parcel is not listed on the DEC website as an identified Brownfield. Not applicable.

g. (g) Provide for nature's events:

Special attention shall be accorded to stormwater runoff so that neighboring properties and/or the public stormwater drainage system are not adversely affected. All development and site disturbance shall follow applicable city and state erosion and stormwater management guidelines in accordance with the requirements of Art 5, Sec 5.5.3.

EPSC and Stormwater management plans are a requirement. Both have been reviewed and approved.

Design features which address the effects of rain, snow, and ice at building entrances, and to provisions for snow and ice removal or storage from circulation areas shall also be incorporated.

Both the east and west elevations include porch overhangs, which will provide some shelter from inclement weather. **Affirmative finding.**

h. Building Location and Orientation:

The replacement home is essentially in the same location as the existing home, oriented both toward the street and the lake. The street-facing entrance is clearly identifiable underneath an entry porch.

Waterfront setbacks can be based on the average of two adjacent parcels, averaging only 36 and 24 Sunset Cliff Road. From this measurements (59' and 23"), the waterfront setback average is 41'. The site plan was corrected to reflect this.

There is an existing, unpermitted structure within the waterfront setback (plans define 12'x 12', however it appears somewhat smaller than that) that has been in place more than 15 years and ittherefore an unenforceable violation. That structure may not be enlarged or altered under these regulations.

Affirmative finding as conditioned.

i. Vehicular Access:

The driveway is proposed to be relocated south of its original location. Plan C3.0 defines the driveway as asphalt, gravel or pavers.

Sunset Cliff Road is an unaccepted city street, so approval of the new driveway access by the city engineer is not required. **Affirmative finding.**

j. Pedestrian Access:

Pedestrians shall be provided one or more direct and unobstructed paths between

a public sidewalk and the primary building entrance. Well defined pedestrian routes shall be provided through parking areas to primary building access points and be designed to provide a physical separation between vehicles and pedestrians in a manner that minimizes conflicts and improves safety. Where sidewalks and driveways meet, the sidewalk shall be clearly marked by differentiated ground materials and/or pavement markings.

There are no public sidewalks along Sunset Cliff Road. A pedestrian walkway is depicted between the parking area and the principal structure, along the westerly elevation as well as a walkway to the lake. **Affirmative finding.**

k. Accessibility for the Handicapped:

Although encouraged, ADA access is not a requirement for single family homes.

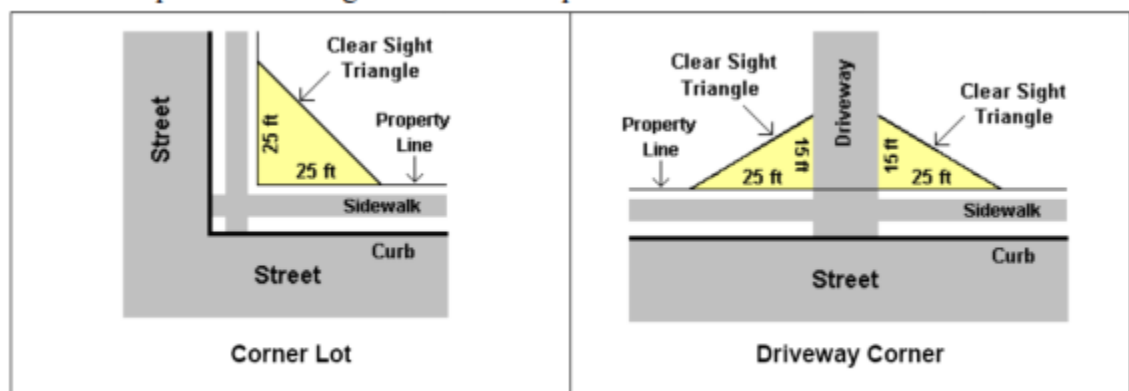
l. Parking and Circulation:

The driveway was approved to be relocated from its original location, with a new three car parking area to the south of the house. Maximum parking is defined in Table 8.1.9-1 or 3 spaces for a single family detached residence. The site plan has been revised to illustrate parking for three vehicles to the side of the principal structure, with the opportunity to turn around in the “T” at the head of the driveway to avoid backing out into the street. **Affirmative finding.**

m. Landscaping, Fences and Retaining Walls:

Any tree cutting along the waterfront required review by the Conservation Board per Section 4.5.4. (c). The conservation board has supported the plan.

The submitted landscaping plan (C-4.0) shows a plan focused on the northerly boundary, and around the perimeter of the lot. Mixed evergreen and native shrubs with native ground cover are the choices, with an allée of Maples along the driveway. The Clear Site Triangle will all be observed at the driveway entrance to provide safe sight distances for both pedestrians and vehicles.



Retaining walls are identified on the plan, one (relocated) west of the principal residence, a second by the new driveway, and a third one at the north of the site: 2'H x 1'W x 32'L long for the westerly wall, 2'H x 1'W x 5'L for the driveway wall and 2' x 1' x 20' for the northerly wall. The streetfront wall will include the street number for purposes of identification.

Retaining walls greater than 5 feet tall shall incorporate textured surfaces, terracing, and/or vegetation to avoid long monotonous unarticulated expanses and to minimize adverse visual impacts to neighboring properties.

Retaining walls do not exceed the height requiring review under that standard.

A 5' high cedar fence is identified on Plan C-3.0, This amendment proposes extending that fence; however it shall not encroach within the Clear Site Triangle (see image, above), and shall present a finished side to the street. **Affirmative finding as conditioned.**

n. Public Plazas and Open Space

There are no public plazas, nor are they required. Not applicable.

o. Outdoor Lighting:

Where exterior lighting is proposed the applicant shall meet the lighting performance standards as per Sec 5.5.2.

LED cylindrical wall mount fixtures are proposed, with recessed lighting at porches. Two types of landscape fixtures are included within the package, see Plan C-3.0 for definition. **Affirmative finding.**

p. Integrate infrastructure into the design:

Exterior storage areas, machinery and equipment installations, service and loading areas, utility meters and structures, mailboxes, and similar accessory structures shall utilize setbacks, plantings, enclosures and other mitigation or screening methods to minimize their auditory and visual impact on the public street and neighboring properties to the extent practicable.

Utility and service enclosures and screening shall be coordinated with the design of the principal building, and should be grouped in a service court away from public view. On-site utilities shall be placed underground whenever practicable. Trash and recycling bins and dumpsters shall be located, within preferably, or behind buildings, enclosed on all four (4) sides to prevent blowing trash, and screened from public view.

Any development involving the installation of machinery or equipment which emits heat, vapor, fumes, vibration, or noise shall minimize, insofar as practicable, any adverse impact on neighboring properties and the environment pursuant to the requirements of Article 5, Part 4 Performance Standards.

Heat pumps have been abandoned in favor of geothermal wells. Meters and mailbox locations have been identified on plan C3-0.

While on City water, there is an existing septic tank and pumping station. The applicant assures they receive city water and sewer, but there are no sewer lines running to Sunset Cliff. The City Water Engineer informed that he understands there is a private pumping station that connects to City infrastructure. The redeveloped lot will need a state wastewater permit for the construction of a detached structure with wastewater service. The applicant has already received of capacity from Burlington's Water Resources Division.

All new electric service must be underground. **Affirmative finding as conditioned.**

Part 3: Architectural Design Standards

Sec. 6.3.2 Review Standards

(a) Relate development to its environment:

1. Massing, Height and Scale:

The proposed single family home is largely square in footprint; two story in massing. The scale is similar to other homes along Sunset Cliff Road and within the neighborhood. **Affirmative finding.**

2. Roofs and Rooflines.

The plan is a gable and eaves design, with a partial pitched shed roof at the east elevation. The home is proposed to have a standing seam metal roof. **Affirmative finding.**

3. Building Openings

Fenestration differs from elevation to elevation, with the broadest glazing along the westerly elevation facing the lake. All windows are proposed to be aluminum/Euro vinyl. They are required to meet Residential Building Energy Standards.

Doors are limited on the single family home to the east (street front) and west (lake front) with a basement entry on the north elevation. **Affirmative finding as conditioned.**

(b) Protection of Important Architectural Resources:

Not applicable.



(c) Protection of Important Public Views:

Not applicable.

(d) Provide an active and inviting street edge:

The home and parking area will be set back a significant distance from Sunset Cliff Road. Coupled with the proposed landscaping plan, it may be largely shielded from the street.

The house has a clear identifiable principal entrance within a sheltered porch. The street front elevation includes two very large first floor windows, accompanied by a double door to a first floor bedroom/office. The distance from the road, a privacy fence and additional landscaping will assure a modicum of privacy.

Windows are regularly placed in horizontal bands.

Affirmative finding.



(e) Quality of materials:

All development shall maximize the use of highly durable building materials that extend the life cycle of the building, and reduce maintenance, waste, and environmental impacts. Such materials are particularly important in certain highly trafficked locations such as along major streets, sidewalks, loading areas, and driveways. Efforts to incorporate the use of recycled content materials and building materials and products that are extracted and/or manufactured within the region are highly encouraged.

Siding is proposed to be wood shingle (unfinished.) Roofs will be metal standing seam, windows aluminum/EuroVinyl. Deck boards are defined as unfinished wood. All are acceptable for new construction. **Affirmative finding.**

(f) Reduce energy utilization:

All new construction shall meet the Guidelines for Energy Efficient Construction pursuant to the requirements of Article VI. Energy Conservation, Section 8 of the City of Burlington Code of Ordinances. **Affirmative finding as conditioned.**

(g) Make advertising features complementary to the site:

No signs are included with this application. Not applicable.

(h) Integrate infrastructure into the building design:

See Section 6.2.2. (o), above.

(i) Make spaces secure and safe:

The proposed building must comply with the city's building and life safety code requirements, as defined by the building inspector.

Building entries will be illuminated. The street address, proposed to be installed on the short retaining wall near the front property line, will be visible and readily evident from the street.

Affirmative finding.

Article 8: Parking

Per Zoning Amendment ZA-22-07, there are no longer minimum parking requirements.

Section 8.1.9 Maximum On-Site Parking Spaces

The total number of off-street parking spaces provided in any parking district shall not be more than as required in Table 8.1.9-1.

<i>Neighborhood Parking District</i>	<i>Residential Uses: Single Family detached</i>	3
28 Sunset Cliff Road		3

Affirmative finding.

II. Conditions of Approval

1. **At least 7 days prior to the issuance of a certificate of occupancy**, the applicant shall pay to the City Treasurer's Office or Permitting and Inspections office impact fees as calculated by staff based on the net new square footage of the proposed development. Based on the difference between existing and gross area calculations submitted by the applicant July 9, 2021, and revised by this application, Impact fees are:

SF of Project 1,568

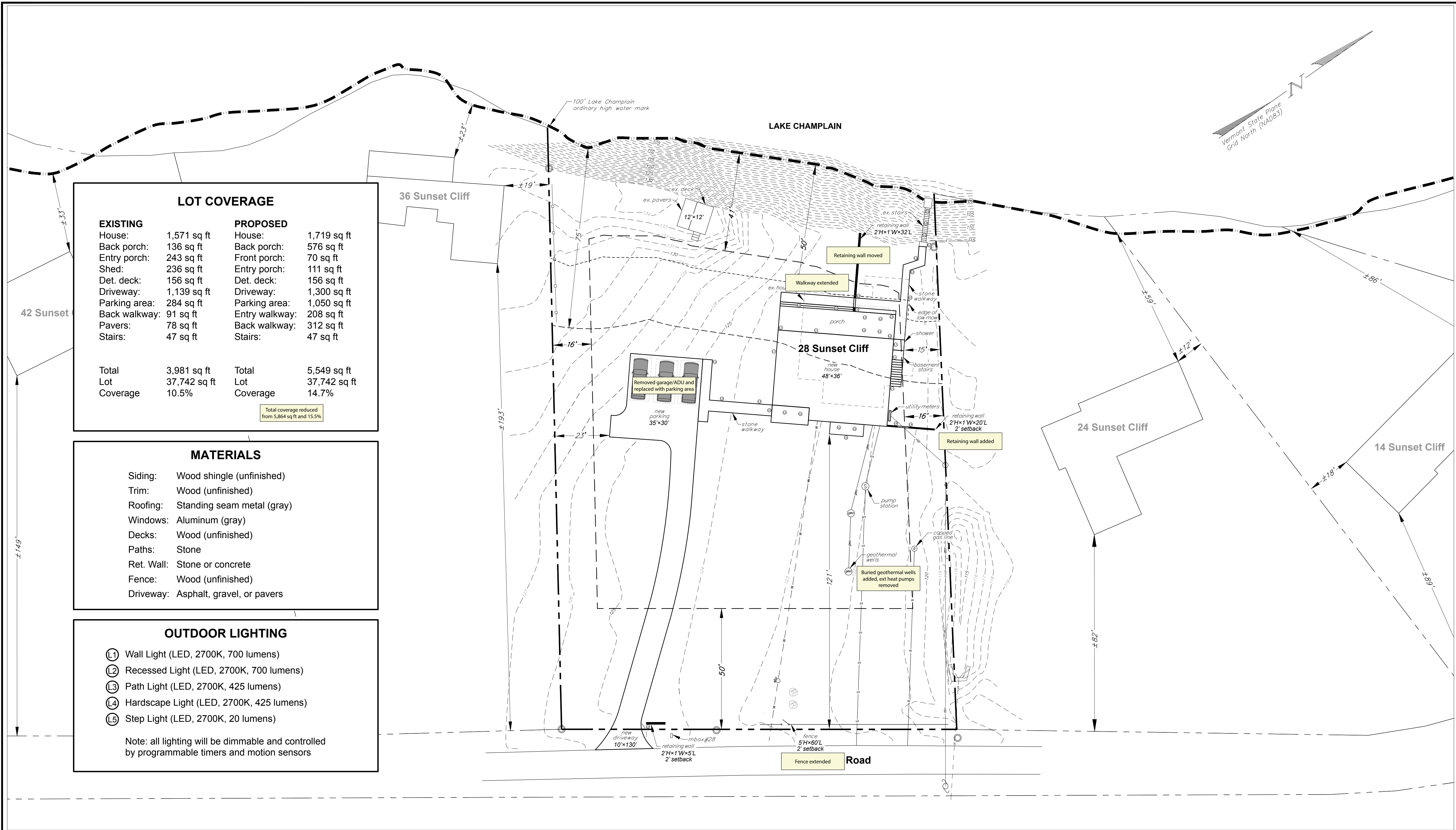
Department	<u>Residential</u>	
	Rate	Fee
Traffic	0.240	376.32
Fire	0.271	424.93
Police	0.055	86.24
Parks	0.908	1,423.74
Library	0.562	881.22
Schools	1.173	1,839.26
Total	3.209	\$ 5,031.71

2. Vermont Residential Building Energy Standards apply to this project. Compliance with the standards is the Owner's responsibility. **Prior to requesting a Certificate of Occupancy**, a copy of a completed Vermont Residential Building Energy Standards Certificate shall be submitted with a Certificate of Occupancy (final or temporary) request, and filed in the Land Records located at the Clerk/Treasurers office in City Hall

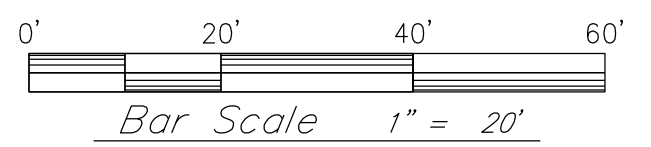
(149 Church Street). For more information, see http://publicservice.vermont.gov/energy_efficiency.

3. All new construction is required to meet the Guidelines for Energy Efficient Construction pursuant to the requirements of Article VI. Energy Conservation, Section 8 of the City of Burlington Code of Ordinances.
4. Hours of construction are limited to Monday-Friday 7:00 am to 5:30 pm; Saturday construction hours are limited to interior work unless specific allowances are granted by the DRB. Construction is not permitted on Sundays.
5. New utility lines must be buried.
6. The proposed building must comply with all building and life safety code as defined by the building inspector and fire marshal.
7. Redevelopment is subject to state review for the waste water infrastructure. It is the applicant's obligation to secure applicable state permits **prior to issuance of a Certificate of Occupancy**.
8. The new driveway, fence and landscaping shall observe the Clear Site Triangle. The fence shall present a finished side to the street.
9. Per NFPA Fire Code, *New and existing buildings shall have approved address numbers placed in a position to be plainly legible and visible from the street or road fronting the property.*
 - a. *Address numbers shall contrast with their background, and*
 - b. *Address numbers shall be Arabic numerals or alphabet letters.*
10. Standard Permit Conditions 1-15.

NOTE: These are staff comments only. The Development Review Board, who may approve, table, modify, or deny projects, makes decisions.



LOCATION MAP
SCALE: 1" = 2,000 FT



Project:

28 Sunset Cliff Road
Burlington, VT

Project No. 20317
Scale 1"=20'
Drawn by Maxx Garrison
Checked by
Date 1/9/2025

Revisions		
No.	Date	Description
1	6/4/2021	Setbacks, parking, labels, lighting
2	7/8/2021	Parking revised
3	1/9/2025	Garage removed

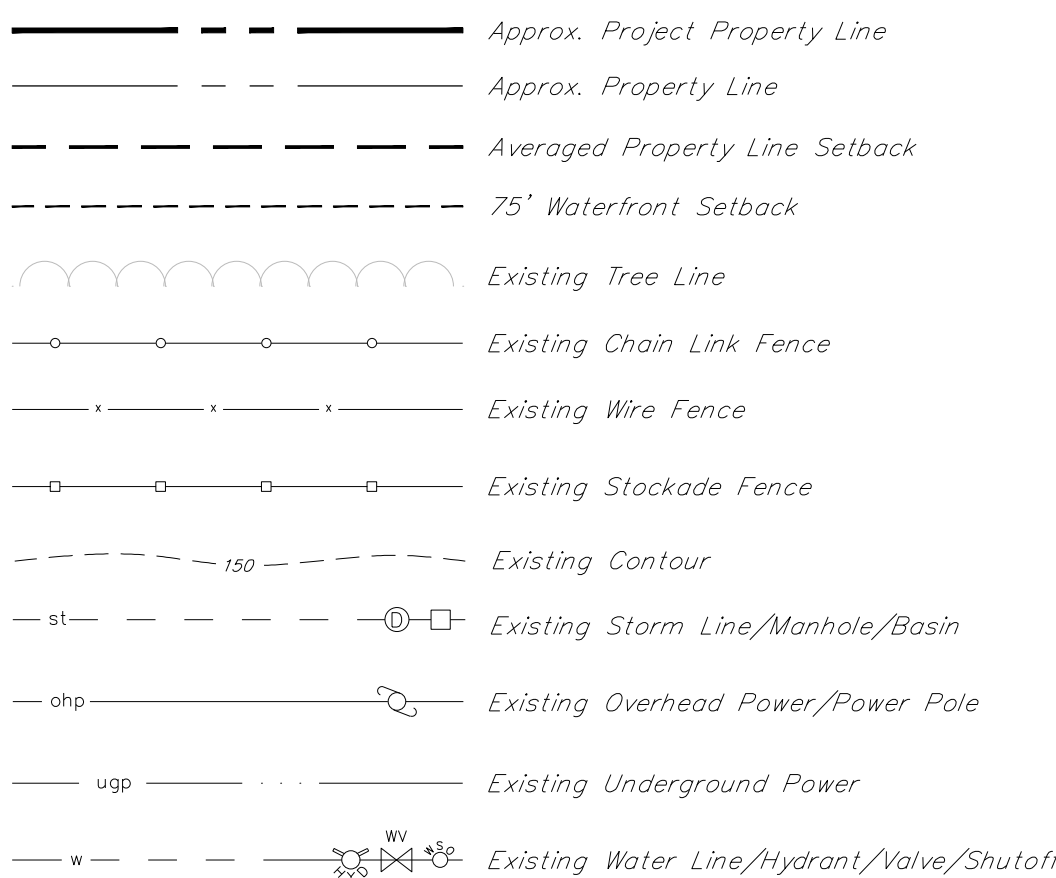
Drawing Title

Changes from
Original Site Plan

Drawing No.

C-3.1

LEGEND



Property Line Setback Information

(based on p.4-34 of Article 4: Zoning Maps and Districts of the Burlington Comprehensive Development Ordinance last updated April 29, 2020)

Property line setbacks determined by averaging the setbacks of the (2) adjacent properties on both sides

FRONT YARD:
(149'+193'+82'+89')/4 = 128.25' (MAX required = 50')

SIDE YARD:
(19'+12')/2 = 15.5' (rounded to 16')

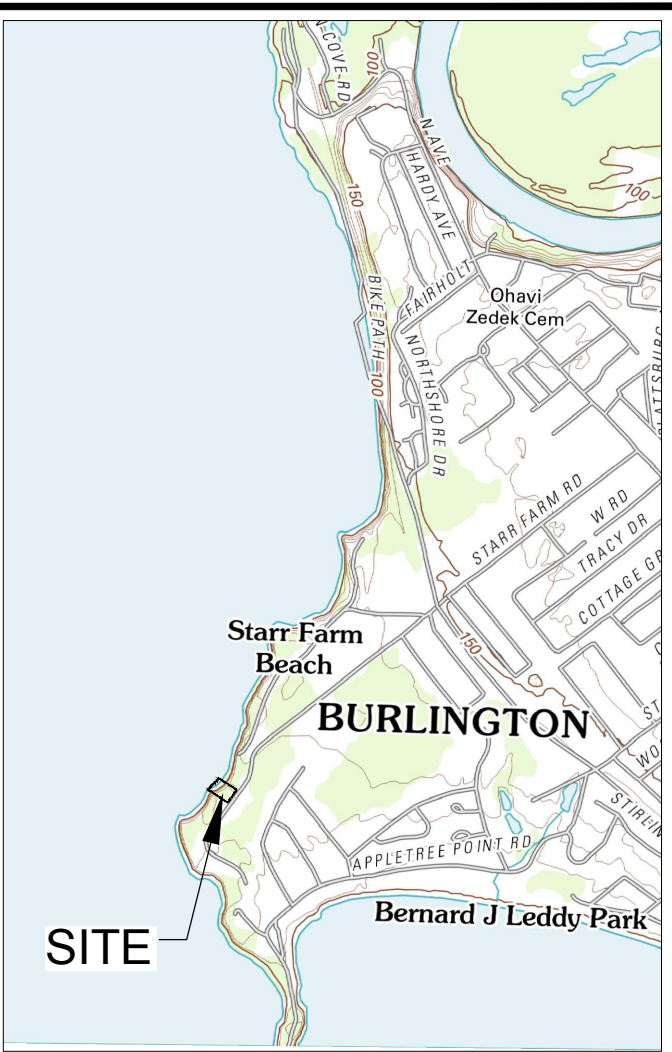
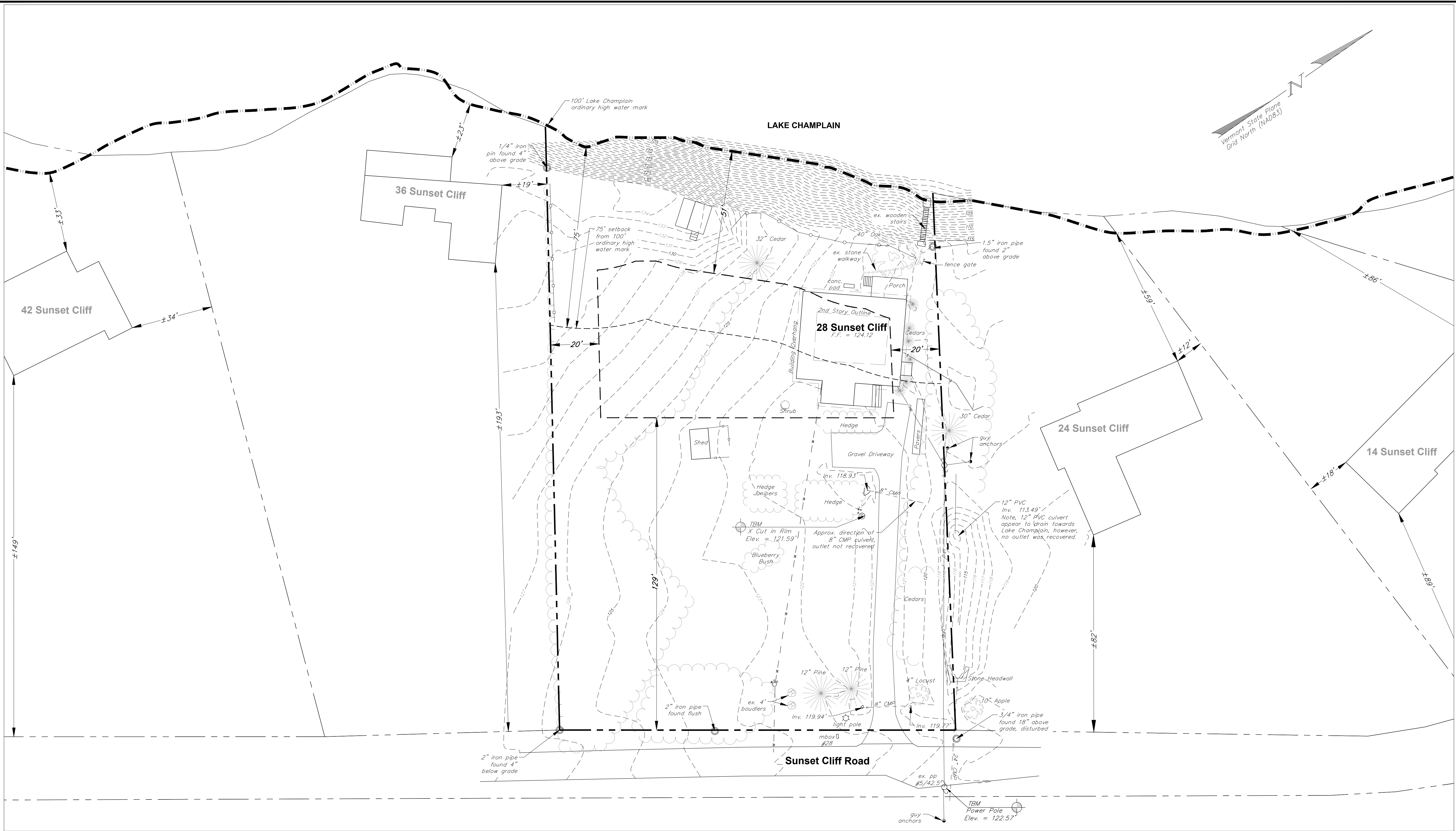
WATERFRONT:
(23'+59')/2 = 41'

Planning & Zoning Information

Owner/Applicant: Garrison
Parcel I.D.: 26-04-17
Address: 28 Sunset Cliff Road
Area: ±0.87 Acres (37,742 s.f.)
Frontage: 164'
District: Residential Low Density
- Waterfront (RL-W)

Notes:

- This plan is not intended to be a boundary survey. Property lines are based on physical evidence located in the field and tax map information from the City of Burlington.
- The horizontal coordinate system is based on NAD83 Vermont State Plane 4400 (US Survey Feet). Elevations are based on NAVD88 datum (US Survey Feet).
- Existing conditions are based on a topographic survey completed by Krebs & Lansing Consulting Engineers on November 11, 2020.
- Utilities are based on visible structures located during the topographic survey and are not warranted to exact or complete. Contractor shall contact Dig Safe and other non-member utilities prior to beginning any excavation.
- Setbacks shown are based on City of Burlington Zoning Regulations, P.4-34.
- The 100' Lake Champlain ordinary high water mark shown within the property lines of 28 Sunset Cliff is based on a topographic survey performed by Krebs & Lansing Consulting Engineers on November 11, 2020. The 100' high water mark shown outside of the property lines is based on LIDAR data from Vermont Center for Geographic Information (VCGI).



LOCATION MAP
SCALE: 1" = 2,000 FT

KREBS & LANSING
CONSULTING ENGINEERS
164 Main Street, Suite 201
Colchester, Vermont 05446
P: (802) 878-0375
www.krebsandlansing.com

STAMP:



Project:

28 Sunset Cliff Road
Burlington, VT

Project No. 20317
Scale 1"=20'
Drawn by RA
Checked by DMR
Date 12/14/2020

Revisions		
No.	Date	Description

Drawing Title
**Overall Existing
Conditions Plan**

Drawing No.
C-1.0

20317\DWGS\Garrison 28 Sunset Cliff.dwg

LEGEND

	Approx. Project Property Line
	Approx. Property Line
	Averaged Property Line Setback
	75' Waterfront Setback
	Existing Tree Line
	Existing Chain Link Fence
	Existing Wire Fence
	Existing Stockade Fence
	Existing Contour
	Existing Storm Line/Manhole/Basin
	Existing Overhead Power/Power Pole
	Existing Underground Power
	Existing Water Line/Hydrant/Valve/Shutoff

Property Line Setback Information

(based on p.4-34 of Article 4: Zoning Maps and Districts of the Burlington Comprehensive Development Ordinance last updated April 29, 2020)

Property line setbacks determined by averaging the setbacks of the (2) adjacent properties on both sides

FRONT YARD:
 $(149' + 193' + 82' + 89') / 4 = 128.25'$ (rounded to **129'**)

SIDE YARD:
 $(34' + 19' + 12' + 18') / 4 = 20.75'$ (MAX required = **20'**)

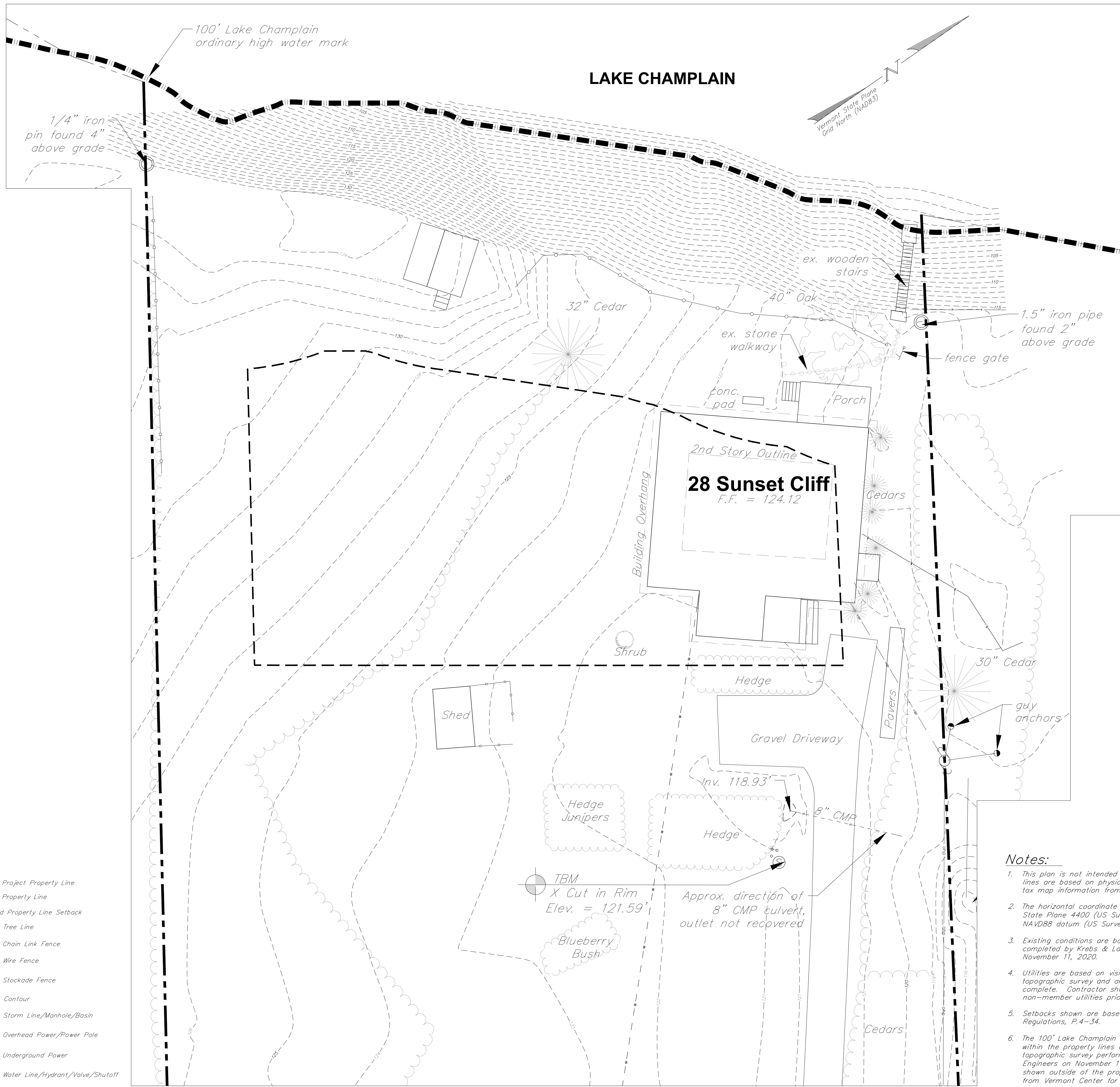
WATERFRONT:
 $(33' + 23' + 59' + 86') / 4 = 50.25'$ (rounded to **51'**)

Planning & Zoning Information

Owner/Applicant: Garrison
Parcel I.D.: 26-04-17
Address: 28 Sunset Cliff Road
Area: ±0.87 Acres (37,742 s.f.)
Frontage: 164'
District: Residential Low Density
- Waterfront (RL-W)

Notes:

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LEGEND

- — — — — Approx. Project Property Line
- — — — — Approx. Property Line
- — — — — Averaged Property Line Setback
- — — — — Existing Tree Line
- — — — — Existing Chain Link Fence
- — — — — Existing Wire Fence
- — — — — Existing Stockade Fence
- — — — — Existing Contour
- st — — — — — Existing Storm Line/Manhole/Basin
- ohp — — — — — Existing Overhead Power/Power Pole
- ugp — — — — — Existing Underground Power
- w — — — — — Existing Water Line/Hydrant/Valve/Shutoff

Notes:

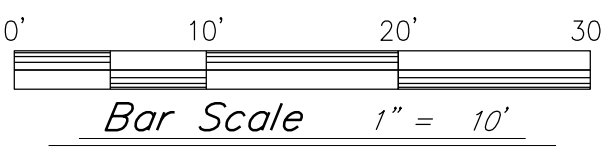
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LOCATION MAP
SCALE: 1" = 2,000 FT

KREBS & LANSING
CONSULTING ENGINEERS
164 Main Street, Suite 201
Colchester, Vermont 05446
P: (802) 878-0375
www.krebsandlansing.com

STAMP:



Project:

28 Sunset Cliff Road
Burlington, VT

Project No.	20317
Scale	1" = 10'
Drawn by	RA
Checked by	DMR
Date	12/14/2020

Revisions		
No.	Date	Description

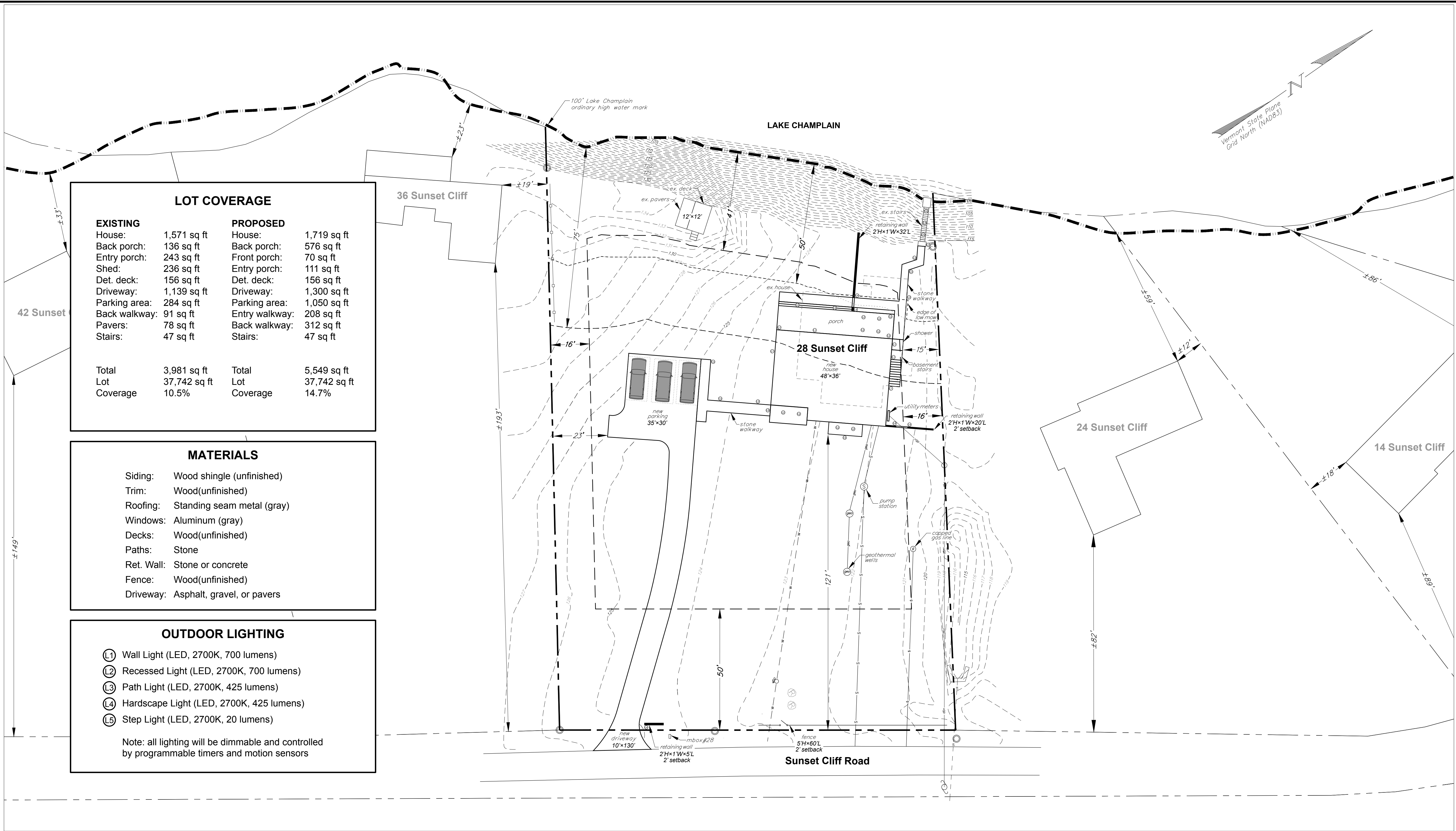
Drawing Title

Existing
Conditions Plan

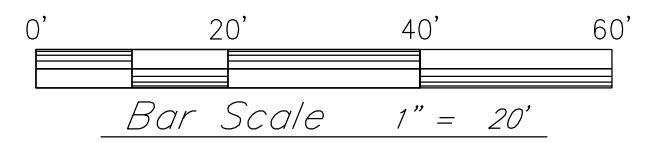
Drawing No.

C-2.0

20317\DWGS\Garrison 28 Sunset Cliff.dwg



LOCATION MAP
SCALE: 1" = 2,000 FT



Project:

**28 Sunset Cliff Road
Burlington, VT**

Project No. 20317
Scale 1"=20'
Drawn by Maxx Garrison
Checked by
Date 1/9/2025

Revisions		
No.	Date	Description
1	6/4/2021	Setbacks, parking, labels, lighting
2	7/8/2021	Parking revised
3	1/9/2025	Garage removed

Drawing Title

**Proposed
Site Plan**

Drawing No.

C-3.0

LEGEND

	Approx. Project Property Line
	Approx. Property Line
	Averaged Property Line Setback
	75' Waterfront Setback
	Existing Tree Line
	Existing Chain Link Fence
	Existing Wire Fence
	Existing Stockade Fence
	Existing Contour
	Existing Storm Line/Manhole/Basin
	Existing Overhead Power/Power Pole
	Existing Underground Power
	Existing Water Line/Hydrant/Valve/Shutoff

Property Line Setback Information

(based on p.4–34 of Article 4: Zoning Maps and Districts of the Burlington Comprehensive Development Ordinance last updated April 29, 2020)

Property line setbacks determined by averaging the setbacks of the (2) adjacent properties on both sides

FRONT YARD:
(149'+193'+82'+89')/4 = 128.25' (MAX required = 50')

SIDE YARD:
(19'+12')/2 = 15.5' (rounded to 16')

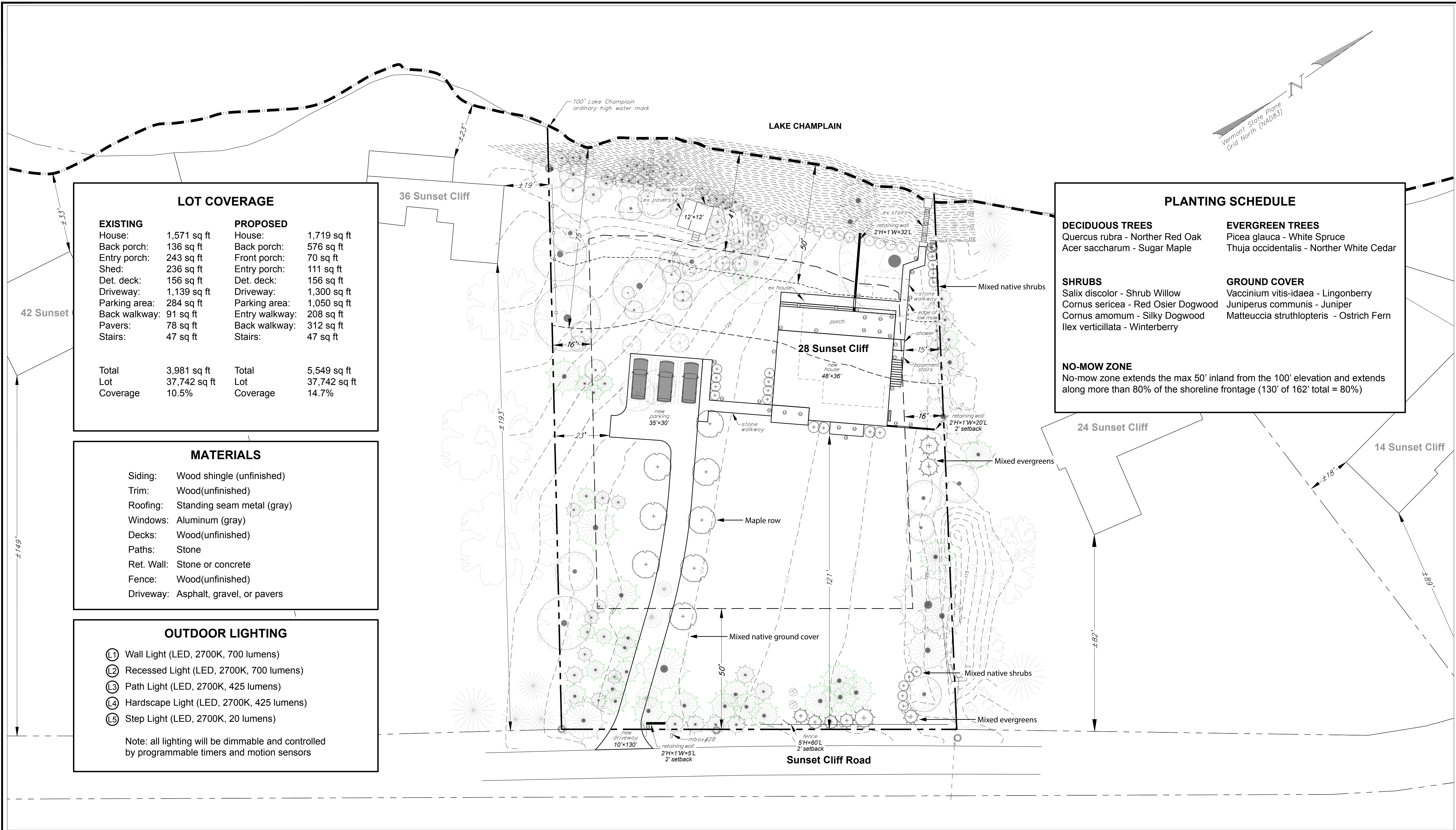
WATERFRONT:
(23'+59')/2 = 41'

Planning & Zoning Information

Owner/Applicant: Garrison
Parcel I.D.: 26–04–17
Address: 28 Sunset Cliff Road
Area: ±0.87 Acres (37,742 s.f.)
Frontage: 164'
District: Residential Low Density – Waterfront (RL–W)

Notes:

- This plan is not intended to be a boundary survey. Property lines are based on physical evidence located in the field and tax map information from the City of Burlington.
- The horizontal coordinate system is based on NAD83 Vermont State Plane 4400 (US Survey Feet). Elevations are based on NAVD88 datum (US Survey Feet).
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LOCATION MAP
SCALE: 1" = 2,000 FT

0'	20'	40'	60'
Bar Scale 1" = 20'			

Project:	
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28 Sunset Cliff Road Burlington, VT
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Project No.	20317
Scale	1"=20'
Drawn by	Maxx Garrison
Checked by	
Date	1/9/2025

Project No.	20317
Scale	1"=20'
Drawn by	Maxx Garrison
Checked by	
Date	1/9/2025

Revisions		
No.	Date	Description
1	6/4/2021	Setbacks, parking, labels, lighting
2	7/8/2021	Parking revised
3	1/9/2025	Garage removed

Drawing No.	C-4.0
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LOT COVERAGE

EXISTING		PROPOSED	
House:	1,571 sq ft	House:	1,719 sq ft
Back porch:	136 sq ft	Back porch:	576 sq ft
Entry porch:	243 sq ft	Front porch:	70 sq ft
Shed:	236 sq ft	Entry porch:	111 sq ft
Det. deck:	156 sq ft	Det. deck:	156 sq ft
Driveway:	1,139 sq ft	Driveway:	1,300 sq ft
Parking area:	284 sq ft	Parking area:	1,050 sq ft
Back walkway:	91 sq ft	Entry walkway:	208 sq ft
Pavers:	78 sq ft	Back walkway:	312 sq ft
Stairs:	47 sq ft	Stairs:	47 sq ft

Total	3,981 sq ft	Total	5,549 sq ft
Lot	37,742 sq ft	Lot	37,742 sq ft
Coverage	10.5%	Coverage	14.7%

MATERIALS

Siding:	Wood shingle (unfinished)
Trim:	Wood(unfinished)
Roofing:	Standing seam metal (gray)
Windows:	Aluminum (gray)
Decks:	Wood(unfinished)
Paths:	Stone
Ret. Wall:	Stone or concrete
Fence:	Wood(unfinished)
Driveway:	Asphalt, gravel, or pavers

OUTDOOR LIGHTING

- ① Wall Light (LED, 2700K, 700 lumens)
- ② Recessed Light (LED, 2700K, 700 lumens)
- ③ Path Light (LED, 2700K, 425 lumens)
- ④ Hardscape Light (LED, 2700K, 425 lumens)
- ⑤ Step Light (LED, 2700K, 20 lumens)

Note: all lighting will be dimmable and controlled by programmable timers and motion sensors

LEGEND

— — — — —	Approx. Project Property Line
— — — — —	Approx. Property Line
— — — — —	Averaged Property Line Setback
— — — — —	75' Waterfront Setback
— — — — —	Existing Tree Line
— — — — —	Existing Chain Link Fence
— — — — —	Existing Wire Fence
— — — — —	Existing Stockade Fence
— — — — —	Existing Contour
— st — — — — —	Existing Storm Line/Manhole/Basin
— ohp — — — — —	Existing Overhead Power/Power Pole
— ugp — — — — —	Existing Underground Power
— w — — — — —	Existing Water Line/Hydrant/Valve/Shutoff

Property Line Setback Information

(based on p.4–34 of Article 4: Zoning Maps and Districts of the Burlington Comprehensive Development Ordinance last updated April 29, 2020)

Property line setbacks determined by averaging the setbacks of the (2) adjacent properties on both sides

FRONT YARD:
 $(149' + 193' + 82' + 89') / 4 = 128.25'$ (MAX required = 50')

SIDE YARD:
 $(19' + 12') / 2 = 15.5'$ (rounded to 16')

WATERFRONT:
 $(23' + 59') / 2 = 41'$

Planning & Zoning Information

Owner/Applicant: Garrison

Parcel I.D.: 26–04–17

Address: 28 Sunset Cliff Road

Area: ±0.87 Acres (37,742 s.f.)

Frontage: 164'

District: Residential Low Density
– Waterfront (RL–W)

PLANTING SCHEDULE

DECIDUOUS TREES

Quercus rubra - Northern Red Oak
Acer saccharum - Sugar Maple

EVERGREEN TREES

Picea glauca - White Spruce
Thuja occidentalis - Northern White Cedar

SHRUBS

Salix discolor - Shrub Willow
Cornus sericea - Red Osier Dogwood
Cornus amomum - Silky Dogwood
Ilex verticillata - Winterberry

GROUND COVER

Vaccinium vitis-idaea - Lingonberry
Juniperus communis - Juniper
Matteuccia struthiopteris - Ostrich Fern

NO-MOW ZONE

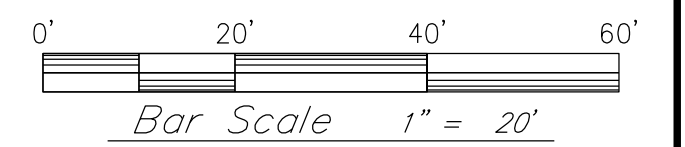
No-mow zone extends the max 50' inland from the 100' elevation and extends along more than 80% of the shoreline frontage (130' of 162' total = 80%)

Notes:

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LOCATION MAP
SCALE: 1" = 2,000 FT



Project:

28 Sunset Cliff Road
Burlington, VT

Project No.	20317
Scale	1"=20'
Drawn by	Maxx Garrison
Checked by	
Date	1/9/2025

Revisions		
No.	Date	Description
1	6/4/2021	Setbacks, parking, labels, lighting
2	7/8/2021	Parking revised
3	1/9/2025	Garage removed

Drawing Title
**Proposed Color
Landscape Plan**

Drawing No.
C-5.0

LOT COVERAGE

EXISTING		PROPOSED	
House:	1,571 sq ft	House:	1,719 sq ft
Back porch:	136 sq ft	Back porch:	576 sq ft
Entry porch:	243 sq ft	Front porch:	70 sq ft
Shed:	236 sq ft	Entry porch:	111 sq ft
Det. deck:	156 sq ft	Det. deck:	156 sq ft
Driveway:	1,139 sq ft	Driveway:	1,300 sq ft
Parking area:	284 sq ft	Parking area:	1,050 sq ft
Back walkway:	91 sq ft	Entry walkway:	208 sq ft
Pavers:	78 sq ft	Back walkway:	312 sq ft
Stairs:	47 sq ft	Stairs:	47 sq ft
Total	3,981 sq ft	Total	5,549 sq ft
Lot	37,742 sq ft	Lot	37,742 sq ft
Coverage	10.5%	Coverage	14.7%

MATERIALS

Siding:	Wood shingle (unfinished)
Trim:	Wood(unfinished)
Roofing:	Standing seam metal (gray)
Windows:	Aluminum (gray)
Decks:	Wood(unfinished)
Paths:	Stone
Ret. Wall:	Stone or concrete
Fence:	Wood(unfinished)
Driveway:	Asphalt, gravel, or pavers

OUTDOOR LIGHTING

- ① Wall Light (LED, 2700K, 700 lumens)
- ② Recessed Light (LED, 2700K, 700 lumens)
- ③ Path Light (LED, 2700K, 425 lumens)
- ④ Hardscape Light (LED, 2700K, 425 lumens)
- ⑤ Step Light (LED, 2700K, 20 lumens)

Note: all lighting will be dimmable and controlled by programmable timers and motion sensors

PLANTING SCHEDULE

DECIDUOUS TREES	EVERGREEN TREES
Quercus rubra - Norther Red Oak	Picea glauca - White Spruce
Acer saccharum - Sugar Maple	Thuja occidentalis - Norther White Cedar
SHRUBS	GROUND COVER
Salix discolor - Shrub Willow	Vaccinium vitis-idaea - Lingonberry
Cornus sericea - Red Osier Dogwood	Juniperus communis - Juniper
Cornus amomum - Silky Dogwood	Matteuccia struthiopteris - Ostrich Fern
Ilex verticillata - Winterberry	
NO-MOW ZONE	
No-mow zone extends the max 50' inland from the 100' elevation and extends along more than 80% of the shoreline frontage (130' of 162' total = 80%)	

LEGEND

---	Approx. Project Property Line
---	Approx. Property Line
---	Averaged Property Line Setback
---	75' Waterfront Setback
---	Existing Tree Line
---	Existing Chain Link Fence
---	Existing Wire Fence
---	Existing Stockade Fence
---	Existing Contour
---	Existing Storm Line/Manhole/Basin
---	Existing Overhead Power/Power Pole
---	Existing Underground Power
---	Existing Water Line/Hydrant/Valve/Shutoff

Property Line Setback Information

(based on p.4-34 of Article 4: Zoning Maps and Districts of the Burlington Comprehensive Development Ordinance last updated April 29, 2020)

Property line setbacks determined by averaging the setbacks of the (2) adjacent properties on both sides

FRONT YARD:
 $(149' + 193' + 82' + 89') / 4 = 128.25'$ (MAX required = 50')

SIDE YARD:
 $(19' + 12') / 2 = 15.5'$ (rounded to 16')

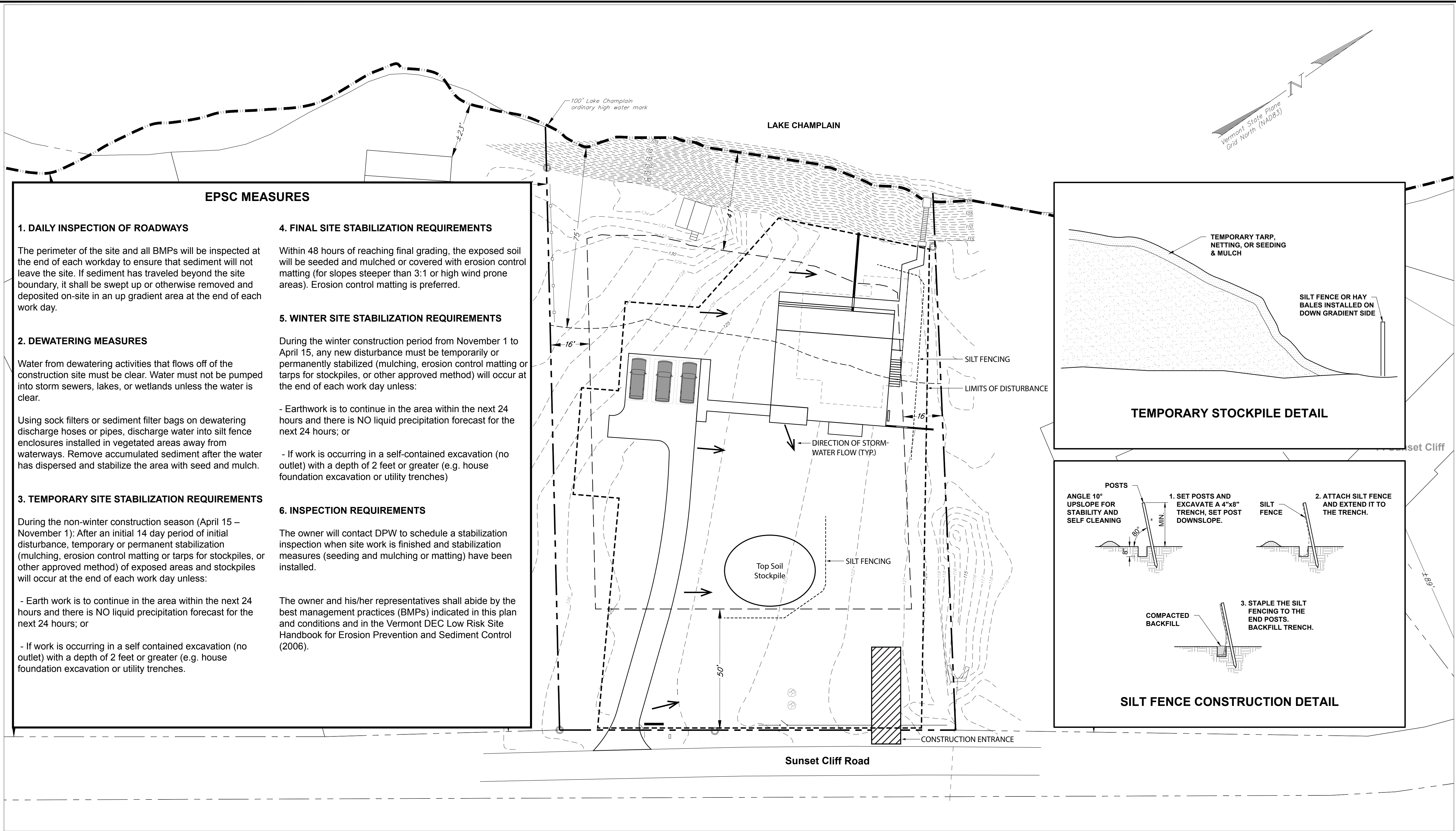
WATERFRONT:
 $(23' + 59') / 2 = 41'$

Planning & Zoning Information

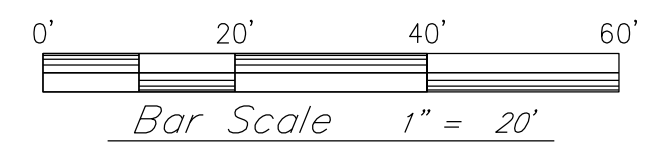
Owner/Applicant:	Garrison
Parcel I.D.:	26-04-17
Address:	28 Sunset Cliff Road
Area:	±0.87 Acres (37,742 s.f.)
Frontage:	164'
District:	Residential Low Density - Waterfront (RL-W)

Notes:

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LOCATION MAP
SCALE: 1" = 2,000 FT



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28 Sunset Cliff Road
Burlington, VT

Project No.	20317
Scale	1"=20'
Drawn by	Maxx Garrison
Checked by	
Date	1/9/2025

Revisions	No.	Date	Description

Drawing Title

EPSC Plan

Drawing No.

C-6.0

LEGEND

- Approx. Project Property Line
- Approx. Property Line
- Averaged Property Line Setback
- 75' Waterfront Setback
- Existing Tree Line
- Existing Chain Link Fence
- Existing Wire Fence
- Existing Stockade Fence
- Existing Contour
- Existing Storm Line/Manhole/Basin
- Existing Overhead Power/Power Pole
- Existing Underground Power
- Existing Water Line/Hydrant/Valve/Shutoff

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WATERFRONT:
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Planning & Zoning Information

Owner/Applicant: Garrison

Parcel I.D.: 26-04-17

Address: 28 Sunset Cliff Road

Area: ±0.87 Acres (37,742 s.f.)

Frontage: 164'

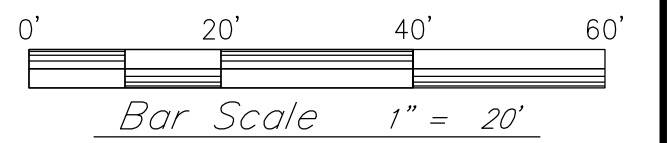
District: Residential Low Density - Waterfront (RL-W)

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SCALE: 1" = 2,000 FT



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28 Sunset Cliff Road
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Project No. 20317
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No.	Date	Description
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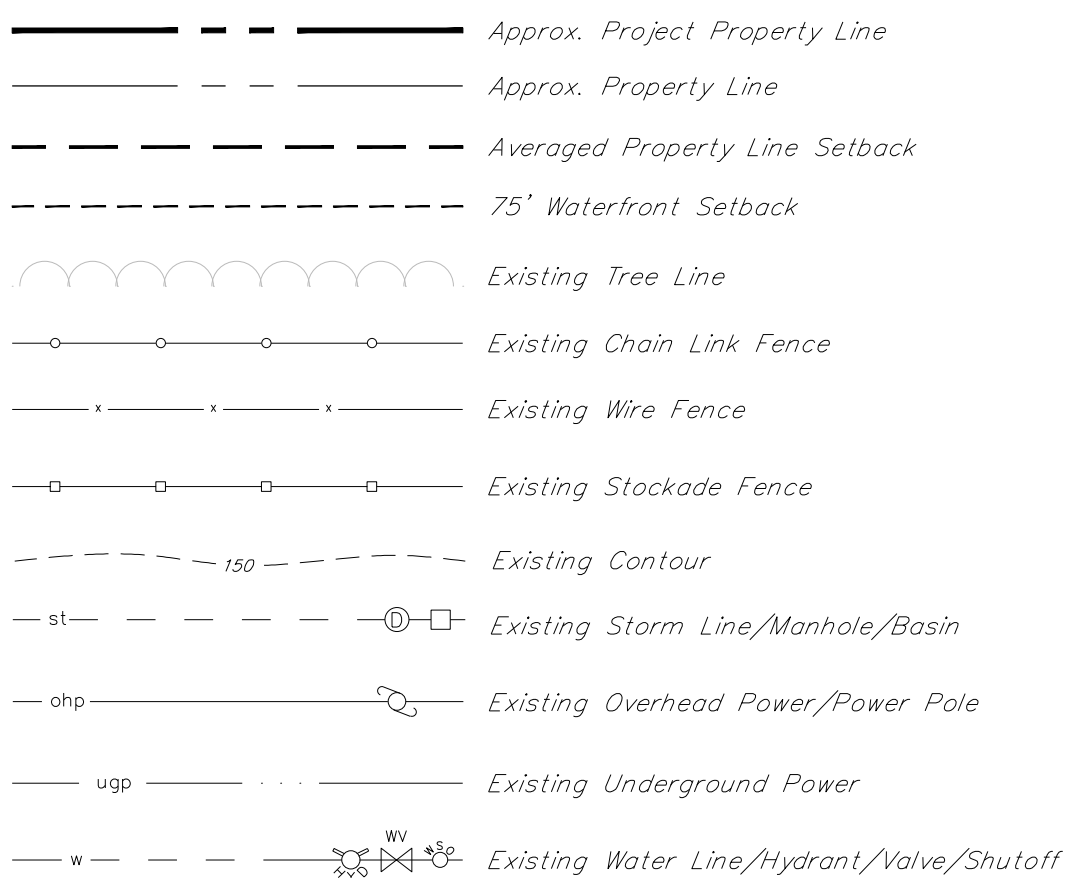
Drawing Title

Stormwater
Management Plan

Drawing No.

C-7.0

LEGEND



Property Line Setback Information

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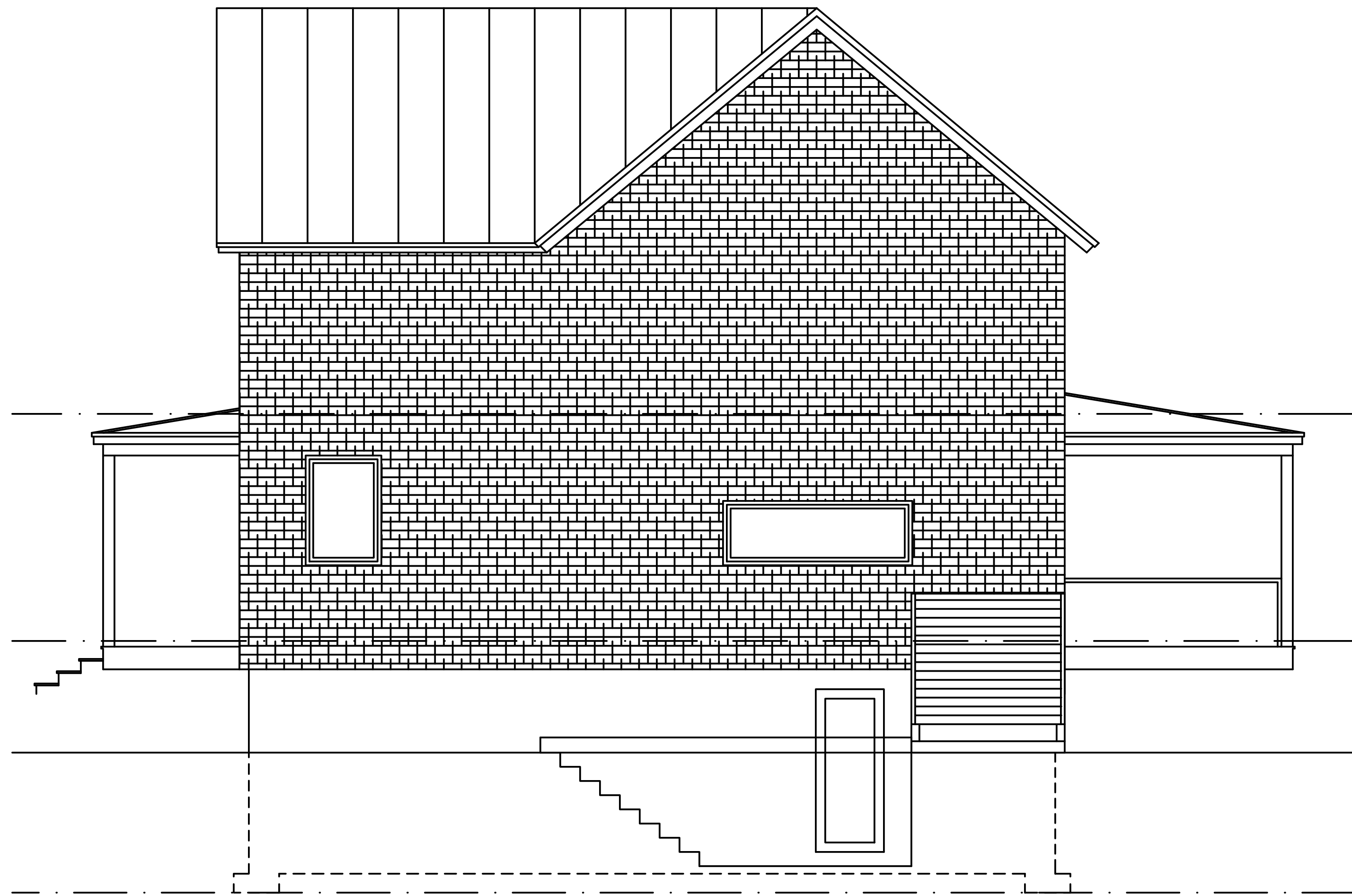
WATERFRONT:
 $(23' + 59') / 2 = 41'$

Planning & Zoning Information

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Parcel I.D.: 26-04-17
Address: 28 Sunset Cliff Road
Area: ±0.87 Acres (37,742 s.f.)
Frontage: 164'
District: Residential Low Density - Waterfront (RL-W)

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NORTH ELEVATION

SECOND FLOOR 136'-0"

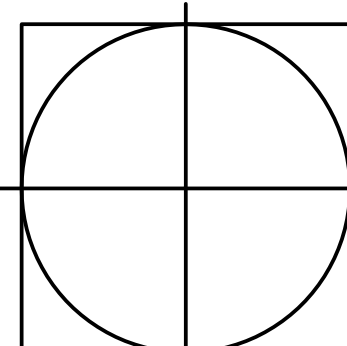
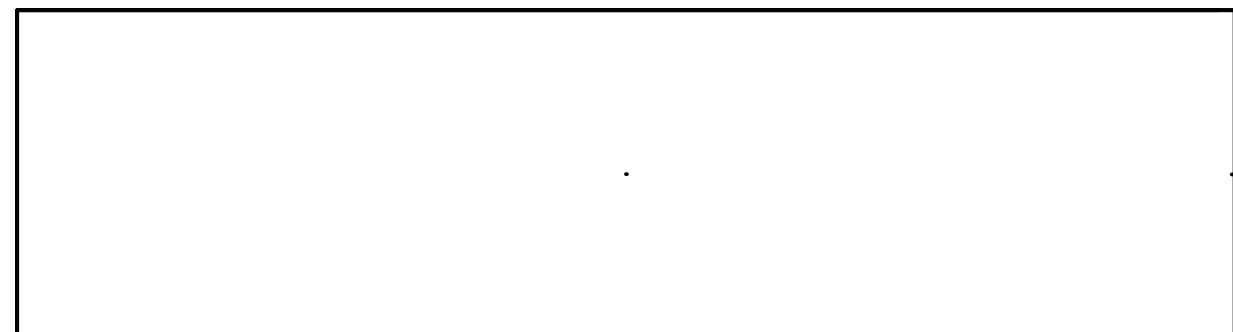
FIRST FLOOR 126'-0"

FOOTER BASE 114'-11"



EAST ELEVATION

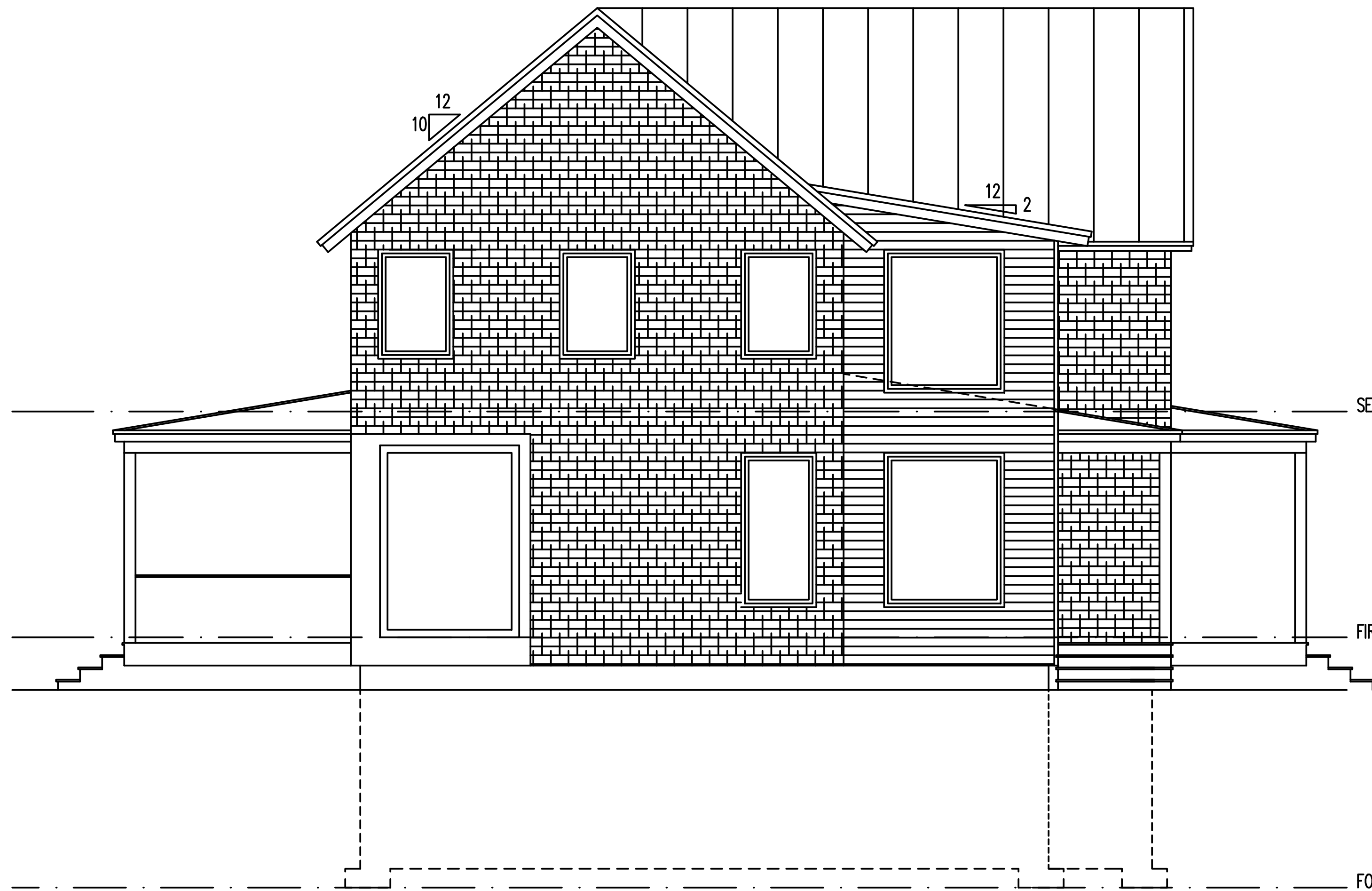
30'-2 3/8"



DRAWING		EXTERIOR ELEVATIONS – NORTH & EAST	
PROJECT		28 SUNSET CLIFF BURLINGTON, VERMONT	

REVIEW	
FILE	28 SUNSET
DRAWN	DW
DATE	
REVISED	

SCALE	
1/4"=1'	
A1.1	
DATE	05.20.21

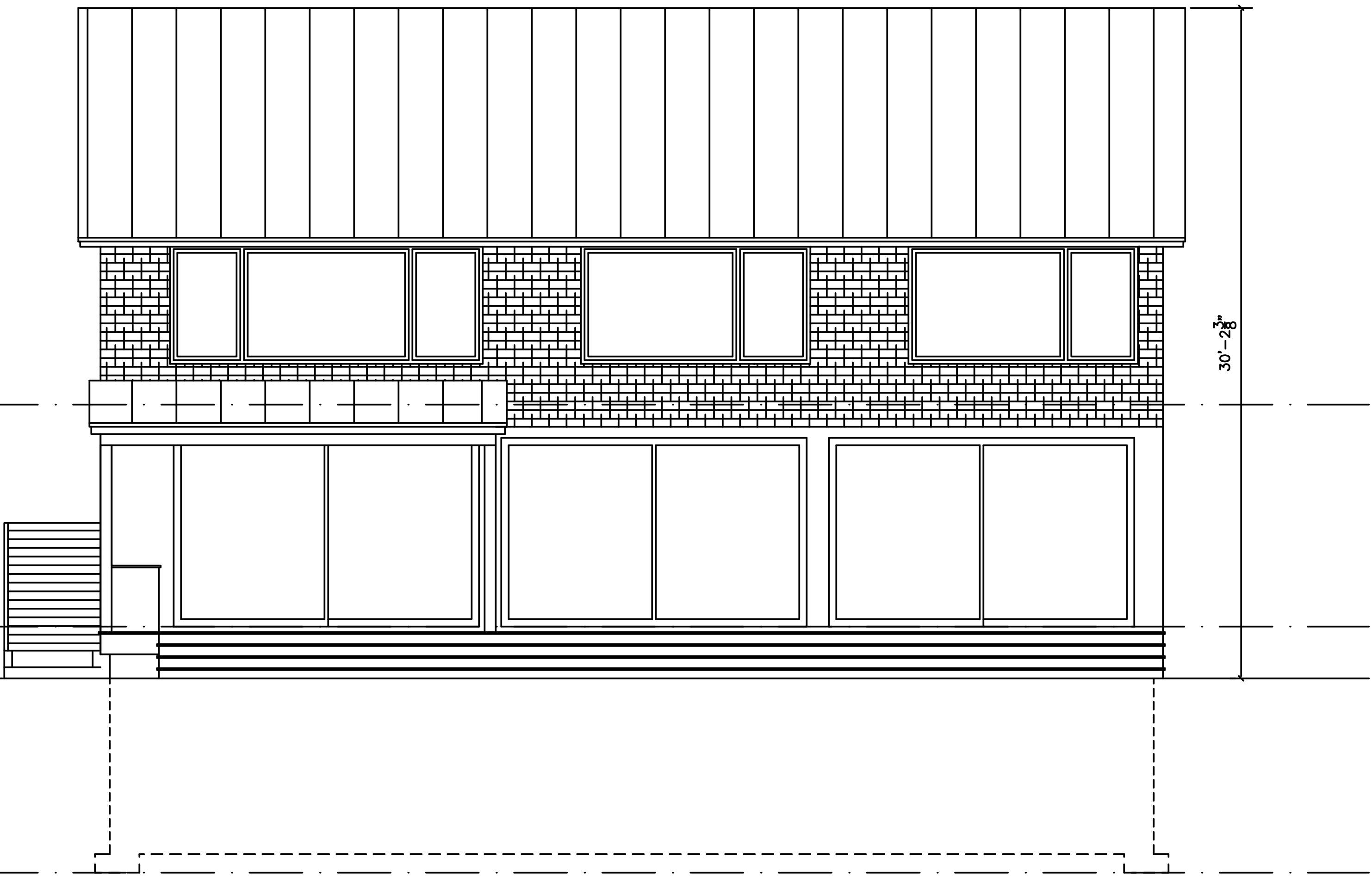


SOUTH ELEVATION

SECOND FLOOR 136'-0"

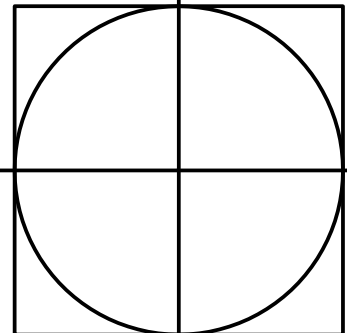
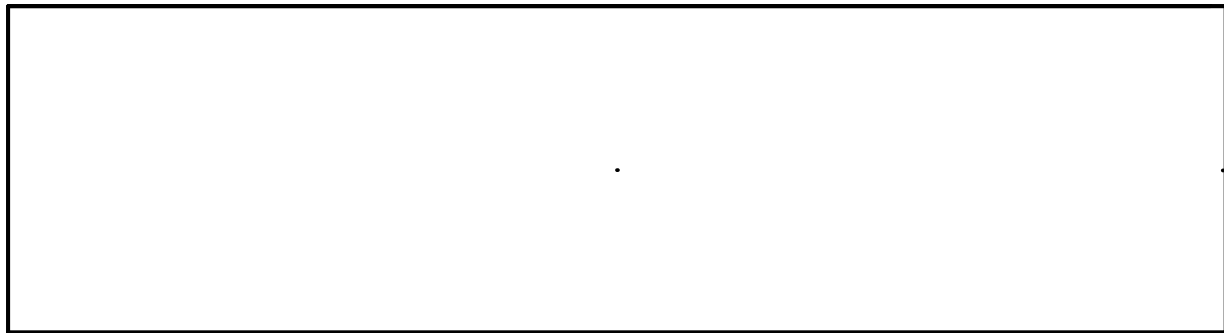
FIRST FLOOR 126'-0"

FOOTER BASE 114'-11"



WEST ELEVATION

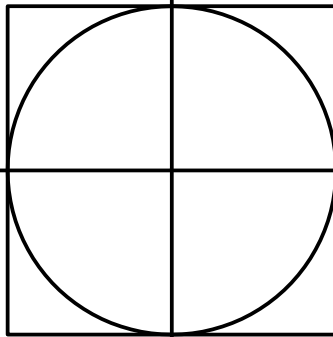
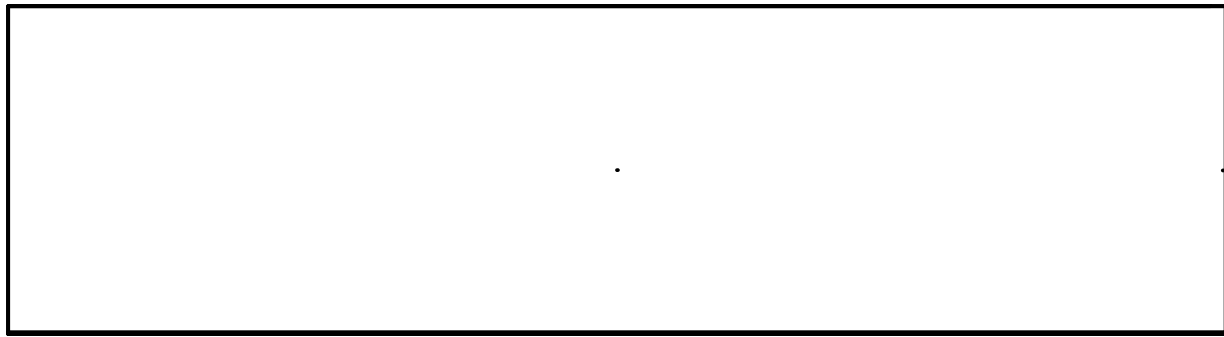
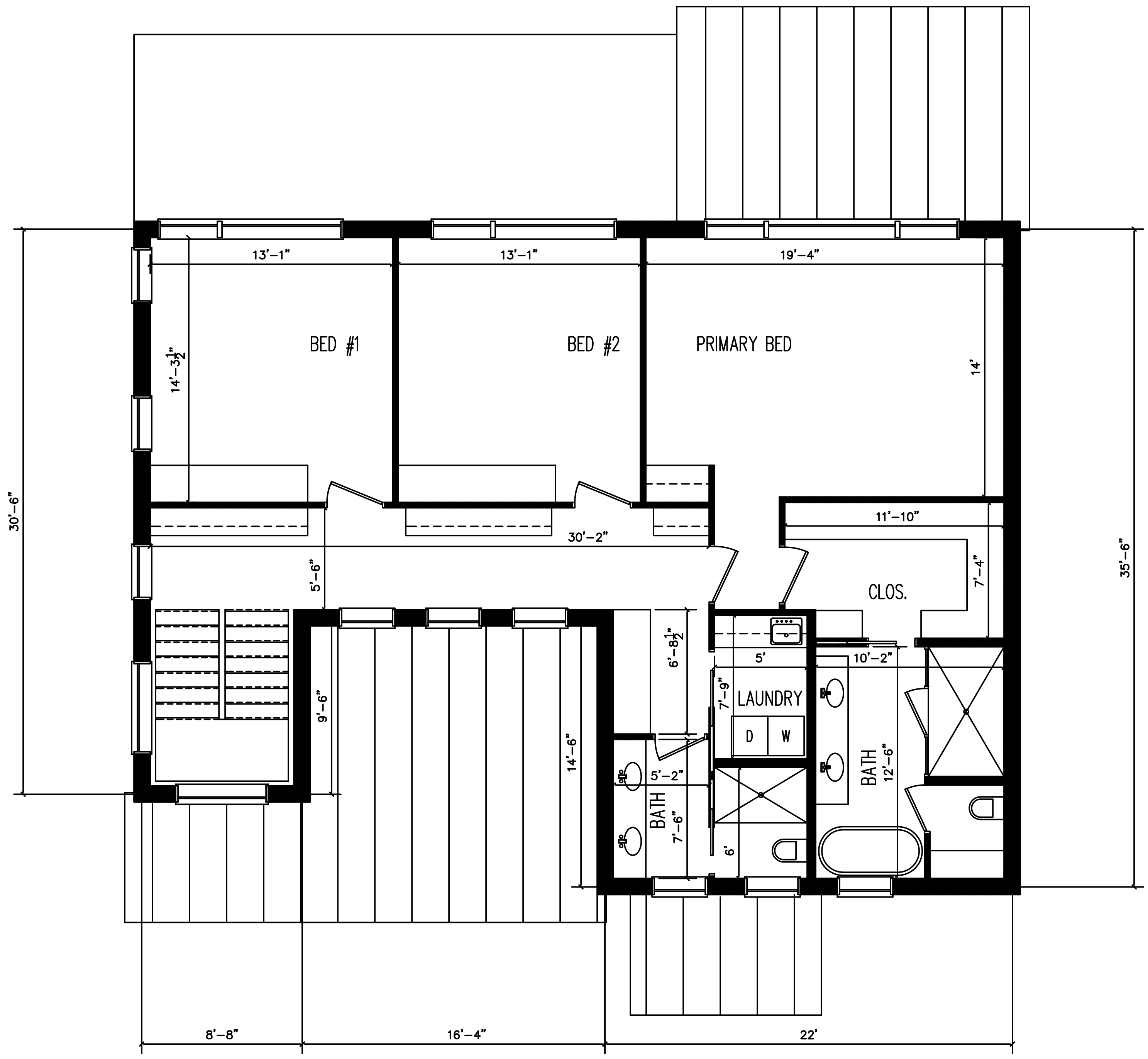
30'-2 3/8"



DRAWING		EXTERIOR ELEVATIONS – SOUTH & WEST	
PROJECT		28 SUNSET CLIFF BURLINGTON, VERMONT	

ISSUE	REVIEW
FILE	28 SUNSET
DRAWN	DW
DATE	
REVISED	

SCALE	1/4" = 1'
A1.2	
DATE	05.20.21



DRAWING		FLOOR PLANS – SECOND FLOOR	
PROJECT		28 SUNSET CLIFF BURLINGTON, VERMONT	

REVIEW	
FILE	28 SUNSET
DRAWN	DW
DATE	
REVISED	

SCALE	
1/4" = 1'	
A2.2	
DATE	05.20.21

Unit Features

Frame:

Frame Thickness: 70mm (2 3/4")

Frame Width: 67mm (2 5/8") or 80mm (3 5/32") Steel Reinforced

Sash:

Sash Thickness: 70mm (2 3/4")

Sash Width: 80mm (3 5/32") Steel Reinforced

Shape Options:

Fixed and Operable

Hardware:

Tilt Turn:

Roto multi-point locking hardware with white handle and hinge covers

Keyed Custodial Handle Available

Optional Keyed or Non Keyed Handle/Hinge Colors:

Silver, brass, bronze, brown, titanium, champagne

Upgraded Non Keyed Handle Colors:

Chrome, Brushed Chrome, Satin Nickel, Antique Brass, Oil Rubbed Bronze, Matte Black

Optional Features:

Concealed Hinge Hardware, Custodial Locking Tilt First, Turn Limiters

Hopper:

Roto multi-point locking hardware w/ Stainless Friction Hinges

Handle/Hinge Colors: Same as Tilt Turn

Optional Features: Concealed Hinge Hardware

Weather Strip:

Weather Stripping: Frame, Sash & Bead

Color: Black

Screening:

Fixed Screen:

Flexscreen: pvc coated spring steel frame with fiberglass mesh charcoal grey screen cloth (50" width restriction) or 3/8"x3/4" Roll-formed metal screen bar(white or painted) with fiberglass mesh charcoal grey screen cloth. Spring loaded installation.

Unit Features (continued)

Glass & Glazing:

Standard:

1 1/2" 180/Clear/180, 272/Clear/272, 272/Clear/180 Argon, Annealed

Available IG Sizes:

1", 1 1/2"

Optional Glazing Available:

Tempered, Dual Glazed, Laminated, Obscure, Tints

Grid Options:

Simulated Divided Lite (SDL) with and without spacer, True Divided Lite (85mm 3 11/32" T Mull)

Upgraded Grid Option:

Decralite SDLs, Two-Tone Grid Color, Painted per customer color request

Color/Finish Options:

Standard:

White Interior/White Exterior

Laminate/Foil Options:*

Interior Only

Natural Oak, Hillside Oak, Colonial Cherry, Cavalier Oak, American Maple, American Cherry

Interior/Exterior Woodgrains:

Rojo Oak, Golden Oak, Walnut, Mahogany, Chestnut

Interior/Exterior Colors:

Black Onyx, Bronze, Hunter Green, Brushed Silver, Clay, Basalt Gray

Paint Options

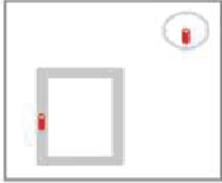
Black, Dark Bronze, Slate Gray, Silver, Linen, Almond, Sand, Clay, Hartford Green, Brick Red

Product comes with 10-Year Manufacturer's Warranty

**Sample booklet available upon request*

Unit Operation / Certified Testing Info / Thermal Tests

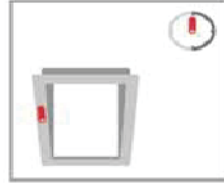
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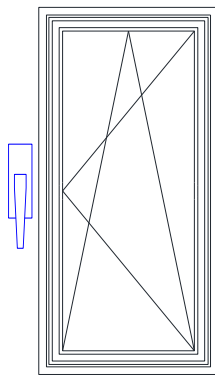
Open



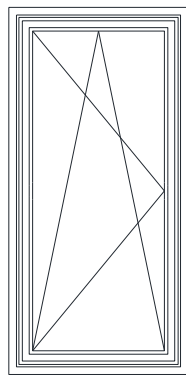
Tilt



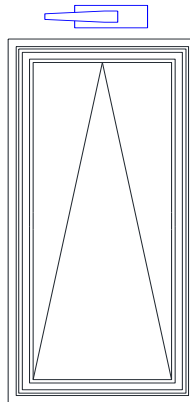
Handing as viewed from interior



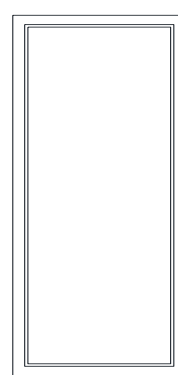
Right Hinged



Left Hinged



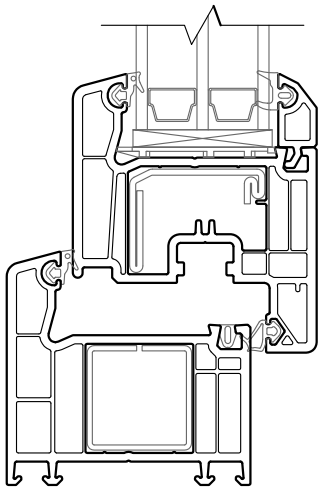
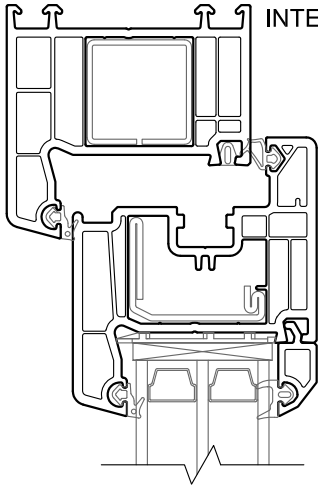
Bottom Hinged



Fixed

VERTICAL SECTION

EXTERIOR INTERIOR



LOGIC
WINDOWS & DOORS

Tel: 207-588-6590

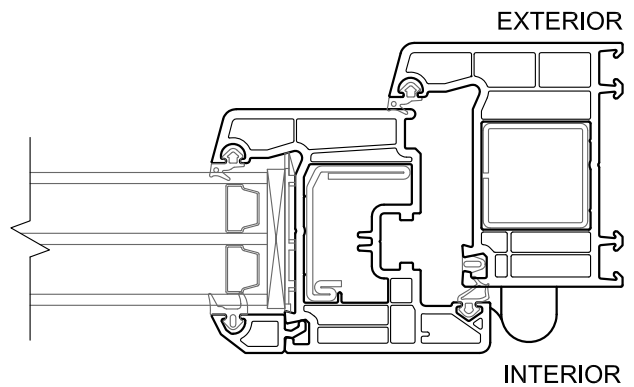
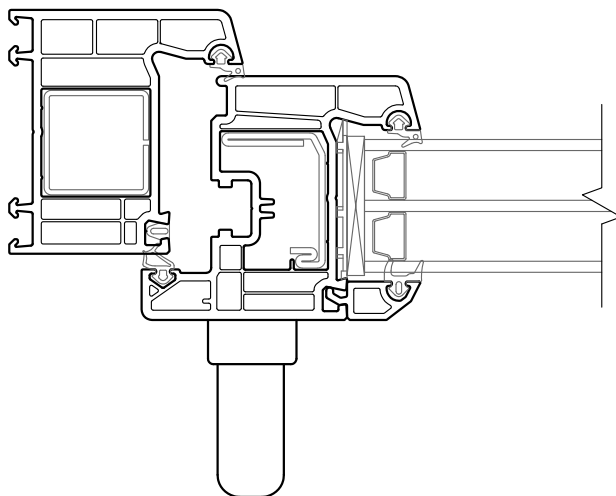
17 Hope Drive, Hallowell, ME 04347

TILT/TURN WINDOW

TRIPLE GLAZING

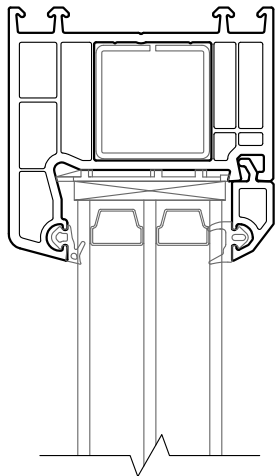


HORIZONTAL SECTION

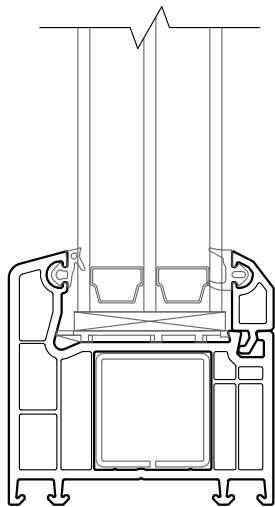


VERTICAL SECTION

EXTERIOR



INTERIOR



LOGIC
WINDOWS & DOORS

Tel: 207-588-6590

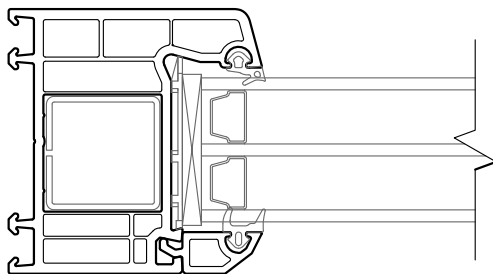
17 Hope Drive, Hallowell, ME 04347

FIXED WINDOW

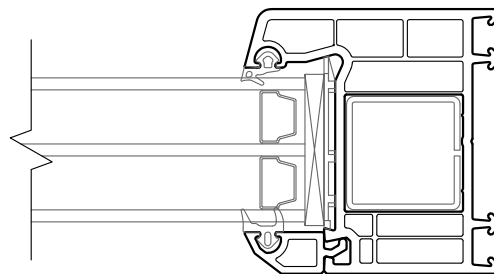
TRIPLE GLAZING



HORIZONTAL SECTION

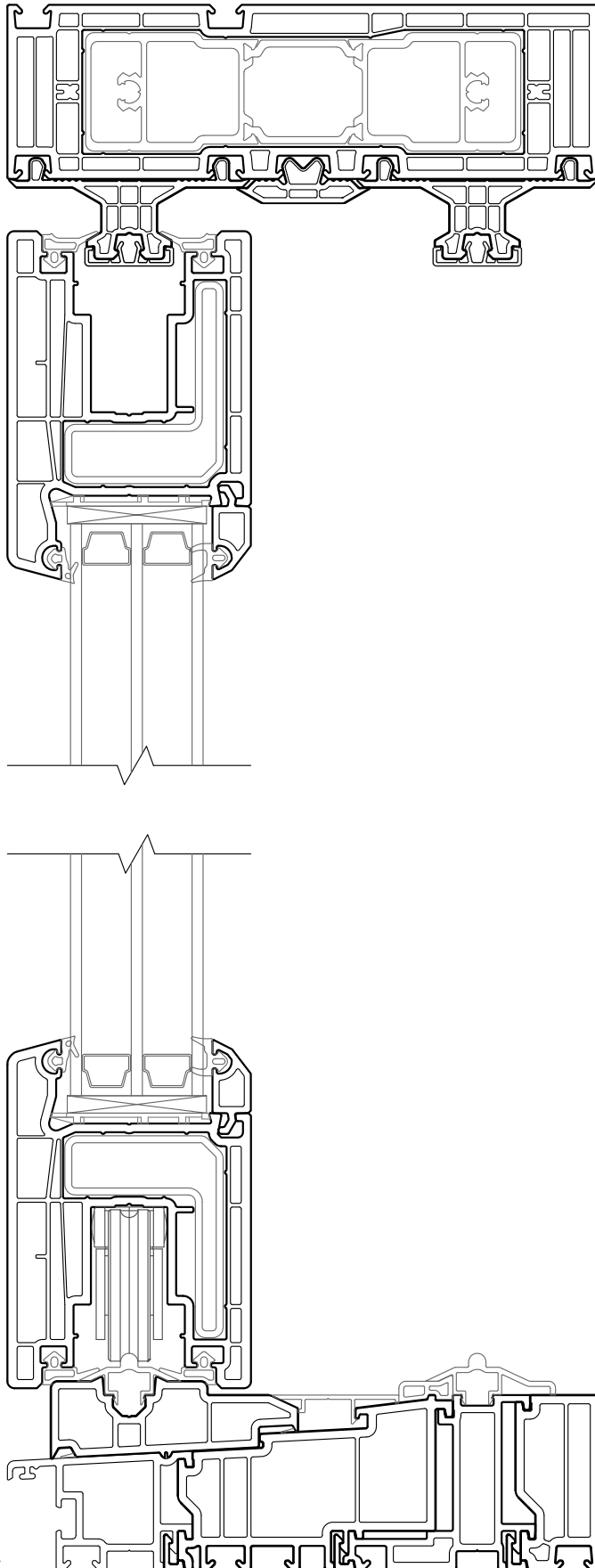


EXTERIOR



INTERIOR

VERTICAL SECTION



LOGIC
WINDOWS & DOORS

Tel: 207-588-6590

17 Hope Drive, Hallowell, ME 04347

LIFT & SLIDE

2 ACTIVE PANELS

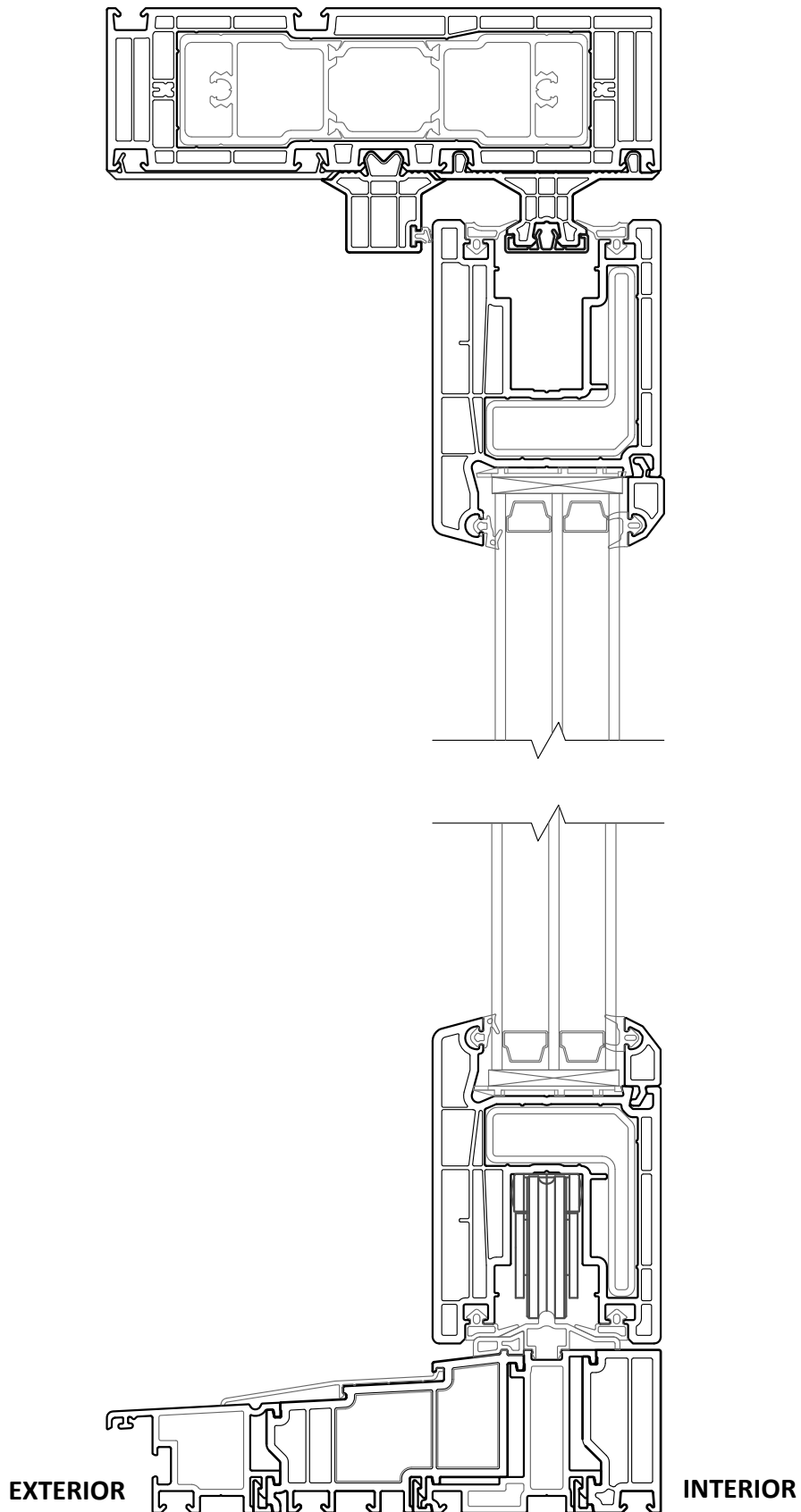
TRIPLE GLAZING



EXTERIOR

INTERIOR

VERTICAL SECTION

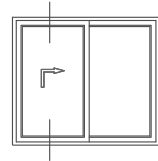


LOGIC
WINDOWS & DOORS

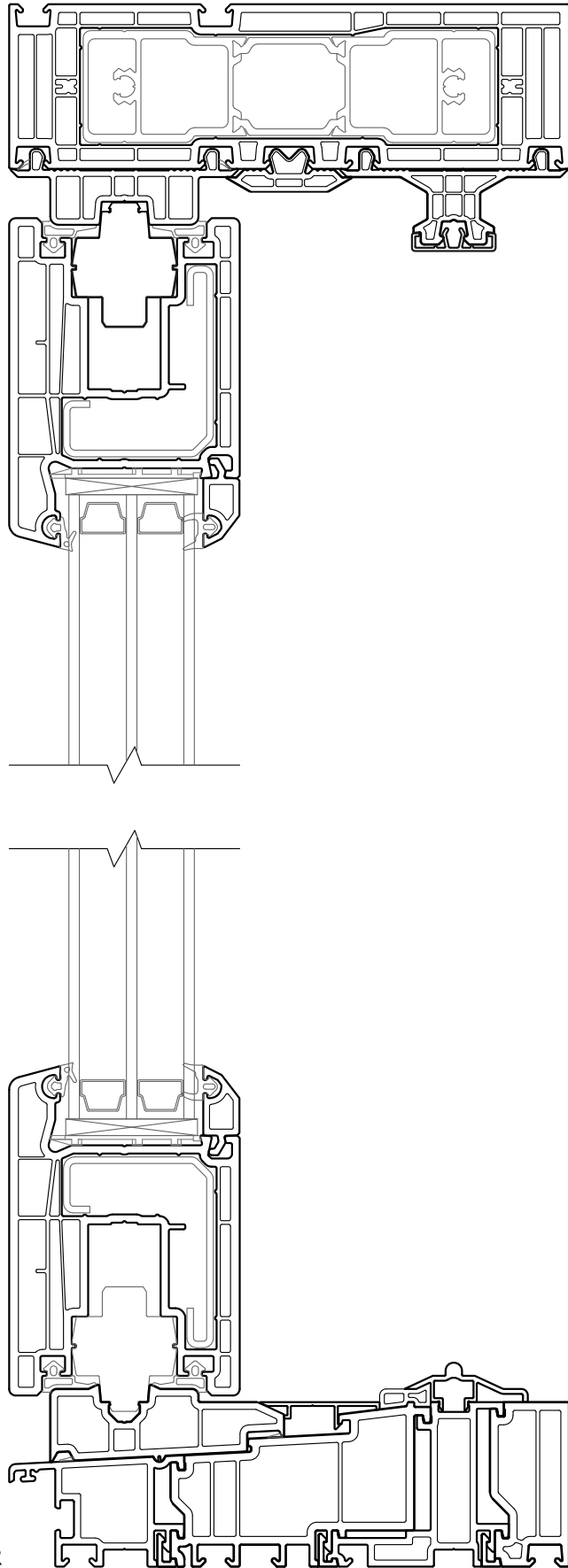
Tel: 207-588-6590
17 Hope Drive, Hallowell, ME 04347

LIFT & SLIDE 2 PANEL

TRIPLE GLAZING



VERTICAL SECTION



LOGIC
WINDOWS & DOORS

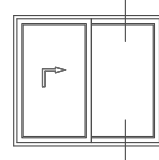
Tel: 207-588-6590

17 Hope Drive, Hallowell, ME 04347

LIFT & SLIDE - 2 PANEL

INACTIVE PANEL

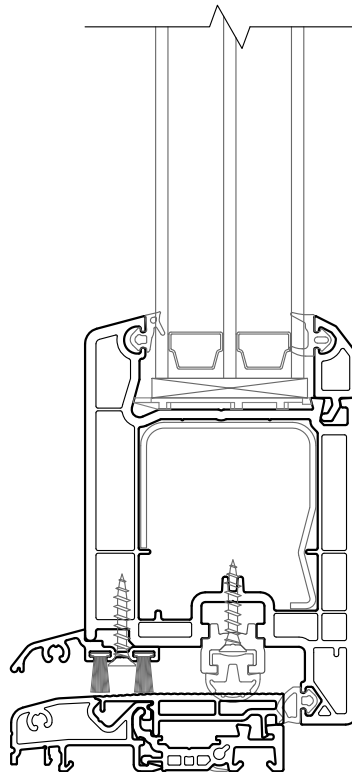
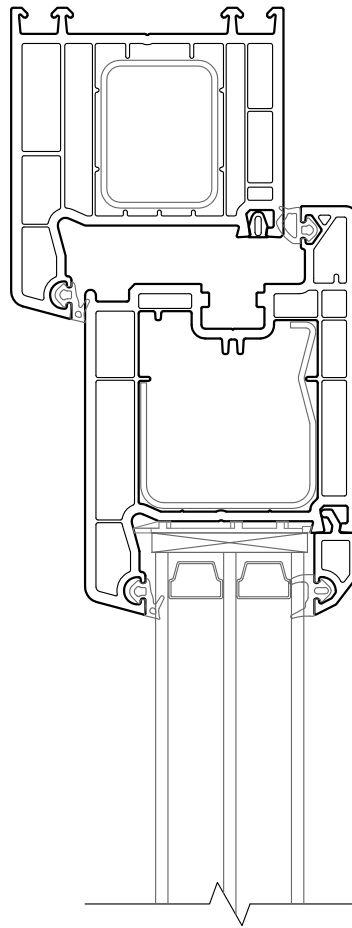
TRIPLE GLAZING



EXTERIOR

INTERIOR

VERTICAL SECTION



EXTERIOR

INTERIOR

LOGIC
WINDOWS & DOORS

Tel: 207-588-6590

17 Hope Drive, Hallowell, ME 04347

INSWING DOOR

TRIPLE GLAZING

Logic Euro Product Specification

Section 08560 PVC Windows & Doors

Note: The following serves as a template to assist in the specification of Steel Reinforced Vinyl Products. The specification covers the broad range of European inspired products, allowing the specifier(Window Manufacturer, Architect, GC, etc.) to incorporate the entire product offering.

Note: In order to identify specific window and door requirements for a project, the specifier will edit the noted/highlighted areas for only those items that are applicable.

Part 1 General

1.1 Section Includes

- A. New Construction or Replacement window and door system application.

Select Only Those Window and Door Types That Apply to Project

- a. Configuration of windows and doors require
 - a.i. Standard Tilt/Turn window or Tilt in Hopper
 - a.ii. Fixed Picture Window
 - a.iii. Standard Single or French Swing Doors
 - a.iii.1. Outswing
 - a.iv. Lift and Slide Doors
 - a.iv.1. 2 Panel, 3 Panel, or 4 Panel
 - a.v. Fixed Architectural Shape
 - a.v.1. Specify Shape

1.2 Related Sections

- A. Rough Opening Requirements
 - a. 06-1000 – Rough Carpentry/Framed Openings
 - b. 03-3000 – Cast in Place Concrete
 - c. 04-8100 – Masonry Assemblies
 - d. 05-4000 – Cold Formed Metal Framing
 - e. ADD OTHERS HERE

B. Additional Related Section Requirements

- a. 07-9200 – Joint Sealants
- b. 08-8000 – Glazing
- c. ADD OTHERS HERE

1.3 References

A. AAMA – American Architectural Manufacturers Association

- a. AAMA/WDMA/CSA 101/I.S.2/A440-08 – Standard/Specification for Windows, Doors and unit Skylights.
- b. AAMA303 – Voluntary Specification for Rigid Poly Vinyl Chloride (PVC) Exterior Profiles.
- c. AAMA502 – Voluntary Specification for Field Testing of Windows and Doors.
- d. AAMA800 – Voluntary Specification and Test Methods for Sealants.
- e. AAMA1504 – Voluntary Standard for Thermal Performance of Windows, Doors and Glazed Wall Sections.

B. ASTM – American Society of Testing Material

- a. ASTM E283 – Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Difference Across the Specimen.
- b. ASTM E547 – Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Difference.
- c. ASTM E1332 – Standard Classification of Determination of Outdoor-Indoor Transmission Class.

C. NFRC - National Fenestration Rating Council

- a. NFRC 100-2010 – Procedure for Determining Fenestration Product U-Factors.
- b. NFRC 200-2010 – Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence.
- c. NFRC 400-2010 – Procedure for Determining Fenestration Air Infiltration.
- d. NFRC 500-2010 – Procedure for Determining Fenestration Product Condensation Resistance Values.

D. ASCE – American Society of Civil Engineers

- a. ASCE7-05 – Minimum Design Loads for Building and Other Structures.

- E. US Department of Energy
 - a. Energy Star 6.0 Windows Program - 2016

1.4 System Description/Performance Requirements

- A. Conform to Performance Requirements of AAMA/WDMA/CSA 101/I.S.2/A440-05
- B. Comply with Energy Star/NFRC Certification
- C. Comply with published recommendations of glass manufacturers and with GANA's "Glazing Manual" unless more stringent requirements are indicated.
 - a. Glazed Units to have label affixed per requirements
- D. Performance Class and Grade – AAMA/WDMA/CSA 101/I.S.2/A440-08

Select Only Those Window and Door Types That Apply to Project

- a. Tilt Turn Window
 - a.i. CW-PG85 – Test Size:48"x72" – AAMA CW-PG85-DAW
- b. Tilt In Hopper Window
 - b.i. CW-PG90 – Test Size:60"x36" – AAMA CW-PG90-AP
- c. Fixed Window
 - c.i. CW-PG65 – Test Size:99"x63" – AAMA CW-PG65-FW
- d. Single Swing Door – Out Swing Only
 - d.i. LC-PG60 – Test Size:40"x83" – AAMA LC-PG60-SHD
- e. Lift and Slide Doors
 - e.i. LC-PG45 – Test Size:97"x96" – AAMA LC-PG45-SD
- E. Thermal Transmittance (U-Factor) for overall window area shall be less than or equal to: 0.30.
- F. Solar Heat-Gain Coefficient (SHGC) for overall window area shall not exceed: 0.40.
- G. Sound Transmission Class (STC) when tested for Laboratory Sound Transmission loss according to ASTM E90, the rated assembly is not less than: 25 STC.
- H. Limit air leakage through assembly to 0.3 cfm/sf of window/door area, measured at a reference differential pressure across assembly of 1.60 psf (75pa) as tested in accordance with ASTM E283.
- I. Water Resistance (Window): There shall be no leakage when the unit is subjected to a pressure drop of 7.5 psf (431 Pa). Test shall be conducted in accordance with ASTM E547 and E331.

- J. Water Resistance (Door): There shall be no leakage when the unit is subjected to a pressure drop of 7.5 psf (431 Pa). Test shall be conducted in accordance with ASTM E547 and E331.
- K. Uniform Load Deflection = 50 psf (3120 Pa) / Uniform Load Structural = 75 psf (4680 Pa). Test shall be conducted in accordance with ASTM E330.
- L. Hardware to be multi-point and corrosion resistant and fastened using corrosion resistant screws. All locking points and fasteners have been salt spray tested to exceed 1,000 hours.
- M. Forced Entry Resistance shall be Grade 10 or greater on operable units and Grade 40 or greater on fixed units.

1.5 Submittals

- A. General
 - a. Submitted under the provisions of Section 01300
- B. Product Data
 - a. Data sheets on each specified product including
 - a.i. All available test reports
 - a.ii. Standard installation instructions and recommendations per install method
 - a.iii. Storage and handling requirements and recommendations, including hardware maintenance sheet
- C. Shop Drawings
 - a. Standard drawings to provide cross section details of specified product w/ dimensions.
 - b. Installation detail drawings per requested install method with corresponding anchorage systems and or accessory connections.
- D. Samples
 - *Select Only Those Samples that are Required for the Project ***
 - a. Selections Samples
 - a.i. Submit (Lamination) (Painted) color chip sample set representing full range of available lamination colors.
 - b. Verification Samples
 - b.i. For each specified product supply minimum 12" corner sample illustrating quality of construction and interior steel support.

- b.ii. If required, standard 24"x36" operating unit, or similar size, provided for Architects approval.

1.6 Quality Assurance

- A. Manufacturer Qualifications
 - a. Minimum 10 year experience fabricating fully welded vinyl window and door systems.
 - b. Manufacturer must be active AAMA member in good standing.
- B. Installer Qualifications
 - a. An installer approved by Developer, Building Owner, Architect or General Contractor.
- C. Product Approval
 - a. Work will not commence until final sizes, finish, operation and accessories are approved/verified by architect or appropriate person(s).

1.7 Delivery, Storage and Handling

- A. Deliver to site undamaged in Manufacturers product specific packaging. Each shipping unit will include contents checklist.
- B. All shipments will be visually inspected for damages. Manufacturer must be notified immediately of damage in transit.
- C. Units will be marked with project specific coding provided by specifier.
- D. Store units according to manufacturer's requirements, in upright position, off the ground and protected from weather, direct sunlight and construction activities.
- E. Keep on site handling to a minimum. Protect materials and finish during handling and installation to prevent damage.
- F. Larger units will include handles mounted on exterior of frame jambs to assist with handling.

1.8 Project Conditions

- A. Environmental
 - a. Maintain environmental conditions (temperature, humidity and ventilation) within limits recommended for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
 - b. Sealants shall not be applied when conditions are not within limits permitted by sealant manufacturer. This includes applying to wet substrates.
- B. Field Measurements

- a. Verify window and door openings by field measurements before fabrication and indicate measurements on final window/door schedule.
- b. Contractor/Installer will work with manufacturer to verify make size dimensions of all units.

1.9 Warranty

- A. 10 Year Limited Manufacturer's Warranty written against material defects and workmanship. Defects include, but are not limited to, the following:
 - a. Coverage for insulated glass against seal failure
 - b. Hardware failure with the exception of misuse
 - c. Frames of sashes failing during normal use
 - d. Operating failure under normal conditions
 - e. 10 year limited warranty on laminated and Painted finishes per laminate and painted finish warranty
- B. Manufacturer's warranty does not cover any damages or defects caused by faulty installation practices or in the case of misuse and abuse.

Part 2 Products

2.1 Manufacturers

- A. Acceptable Manufacturer:

Logic Windows and Doors as represented by Pinnacle Window Solutions

17 Hope Drive

Hallowell, Maine 04347

Phone: 207-588-6590

www.logicwd.com

2.2 Units

- A. Frames, Sashes and Rails
 - a. Frame depth: **(70mm) (86mm)**
 - b. Min wall thickness .098".

- c. Multi-chambered design with maximum optimal air spaces between exterior and interior surfaces.
- d. Window and door reinforcement – Galvanized steel with .075” minimum thickness installed in frames and sashes as required by window manufacturer.
- e. All frames and sashes are to be made of unplasticized polyvinyl chloride (UPVC).
- f. Window and door finish – PVC finish will not fade, blister, crack or warp under normal atmospheric conditions.

B. Components

- a. Fasteners – Stainless steel
 - a.i. If required for installation, anchors must be approved by responsible engineer/architect for the project.
 - a.ii. Avoid exposed fasteners wherever possible.

***Select Only Those Configurations that are Required for the Project ***

- b. Hardware
 - b.i. Window Hardware - ASTM B117 to exceed 1,000 hours salt spray exposure.
 - b.i.1. Multi-point locking system
 - b.i.2. Lever Handle Style: (Roto) (Ferco) (Hoppe)
 - b.i.2.a. Handle Options: (Standard - Non Keyed) (Optional - Keyed for Custodial Locking (Tilt First Application))
 - b.i.2.b. Handle Finish:
 - b.i.2.b.i.1. Roto Options: (Silver) (Champagne) (Matte Brass) (Bronze) (Medium Bronze) (Titanium Matte) (Grey-Brown) (White)
 - b.i.2.b.i.2. Ferco Options: (White) (Titanium Matte) (Silver)
 - b.i.2.b.i.3. Hoppe Options: (Brass) (Brushed Chrome) (Black) (Oil Rubbed Bronze) (Satin Nickel) (Rustic Umber)
 - b.i.3. Hinges:

b.i.3.a. Style: (Manufacturer's standard butt hinges with covers)
(Optional - Designo Concealed Hinge System) (Optional -
Stainless Friction Hinges for Hoppers/Awnings)

b.i.3.b. Finish: to be selected from standard finish options)

b.ii. Fold & Slide Door Hardware and Swing Door Hardware – ASTM B117 to exceed
1,000 hrs salt spray exposure.

b.ii.1. Multi-Point Locking System

b.ii.2. Handle Set with cylinder and deadbolt

b.ii.2.a. (Full keyed) (half thumb) turn cylinder

b.ii.2.b. Style *Standard*: (Roto) (Rotoline Long)

b.ii.2.c. Style *Upgraded*: (Verona) (New Orleans) (Frankfurt)

b.ii.2.d. Handle Set Finish: (Silver) (Champagne) (Matte Brass)
(Bronze) (Medium Bronze) (Titanium Matte) (Grey-Brown)
(White)

b.ii.3. Hinges:

b.ii.3.a. Style: (Standard - Roto flag style surface mount) (HAPS
barrel style)

b.ii.3.b. Finish: to be selected from standard finish options

b.iii. Lift & Slide Door Hardware – ASTM B117 to exceed 1,000 hrs salt spray
exposure.

b.iii.1. Manufacturer's standard Lift and slide door hardware

b.iii.2. Handle Set

b.iii.2.a. Style: (Rondo) (Dirgent)

b.iii.2.b. Finish: *Rondo* - Stainless Steel

b.iii.2.c. Finish: *Dirgent* - (White) (Silver) (Grey-Brown)

c. Glazing

c.i. Glazing shall be accomplished from the interior by use of applied PVC glazing
stop with Neoprene gaskets.

d. Insect Screens

Select Screen Type Required for the Project. Delete if Not Required

- d.i. Standard for inward operating windows. Fixed (spring/grommet) (flex frame) screens fabricated using aluminum frames. Meshing to be charcoal fiberglass.
- d.ii. Screen frame finishes to match window and door finishes.

e. Glass & Glazing Materials

- e.i. Insulating glass panels shall have an overall nominal thickness of 1 3/8" (triple glaze) or 1" (dual glaze).
- e.ii. Glazing Specification is as follows: (Include Manufacturer, pane thickness, tints, coatings and performance as required).

e.ii.1. _____

- e.iii. Grid: 7/8" GBG or SDL (Specify below if grids are required by including size, color, type)

e.iii.1. _____

- e.iv. Setting blocks and bridges are to be provided by the manufacturer for any units that are to be glazed on site. Units glazed on site are to follow manufacturer's glazing instructions.

f. Accessory Items

Select Only Those Required for Project

- f.i. Vinyl placement / flashing Fin with anchor brackets
- f.ii. Installation brackets
- f.iii. ADD OTHERS HERE

2.3 Fabrication

A. General Requirements

- a. Fabricate Framing and Sash members with fusion welded corners and joints. Frame, Sash and Mullions to have galvanized steel reinforcement.
- b. Welds to be finished with shadow groove weld cleaning.
- c. Frames, Sashes and Mullions contain weep holes in accordance with Fabrication Guidelines.

- d. Dual seal neoprene gaskets used on operable vents.

B. Finishes

Edit to Specify Finish Required for Project

- a. Laminated Coatings/Foils – Select from Pinnacle Standard Offering
 - a.i. Interior - _____
 - a.ii. Exterior - _____
 - a.iii. Coatings/laminates shall be uniform and free from streaks, blisters and other surface imperfections.
- b. Custom Painting
 - b.i. Paint product to match provided color swatch
 - b.i.1. Interior - _____
 - b.i.2. Exterior - _____
- c. Protection
 - c.i. Protective film to be applied to exposed finished surfaces during shipment, storage and installation whenever possible.

Part 3 Execution

3.1 Examination

- A. Do not begin installation until substrates have been properly prepared.
 - a. If substrate preparation is the responsibility of another installer, notify appropriate person(s) of unsatisfactory preparation before proceeding.
 - b. Verify rough opening dimensions, levelness of sill and operating clearances.
 - c. Examine all wall flashing, vapor barriers and other components to ensure weather tight installation.
 - d. Verify sealant compatibility and adhesion to vinyl with sealant Manufacturer.

3.2 Preparation

- A. Coordinate installation with work of other trades.
- B. Clean surfaces thoroughly prior to installation.

- C. When installing in masonry openings, no parts other than anchor devices shall be put in place until masonry work has been completed and cleaned.

3.3 Installation

- A. Install unit frames, glass and components in accordance with shop drawings and manufacturer's instructions. For installation procedures/requirements not addressed in manufacturer's written instructions, comply with the installation requirements in ASTM E2112.
- B. Align frames plumb and level, free of warp, bowing or twist. Maintain dimensional tolerances and check operation before permanently setting unit.
 - a. Erection tolerances
 - a.i. Variations from plumb $\pm 1/8''$ max in height
 - a.ii. Variations from level $\pm 1/8''$ max in width
- C. Coordinate attachment and seal or air and vapor barrier materials. Shim spaces at perimeter of frame to maintain continuity of thermal barrier and insulate using backer rod and minimal expansion foam around perimeter.

3.4 Quality Control and Adjustments

- A. After installation and curing of any sealant and glazing compounds, testing using AAMA 502 test shall be performed.
- B. The Architect/Owner/Contractor to specify quantity and types of windows and doors to be tested.
- C. Final hardware adjustments shall be made using manufacturer supplied adjustment tools.

3.5 Protection

- A. Clean installed units inside and out promptly after application of trims and sealant. Remove excess glazing and joint sealants, dirt and other substances.
- B. Remove protective film from pre-finished surfaces.
- C. Wash down exposed surfaces using a mild detergent in warm water. Apply with soft, clean cloth.
- D. Special attention to areas in and around installation holes. Steel shards left after installation may cause corrosion/rust stains if left on finished surfaces.



Cylinders are a complete design solution. They are available in various sizes, mounting options, colors and beam angles, and suitable for indoor/outdoor use.

Color: Matte silver

Weight: 2.4 lbs

Project:

Type:

Prepared By:

Date:

Driver Info

Type	Constant Current
120V	0.10A
208V	0.06A
240V	0.05A
277V	0.05A
Input Watts	11.7W

LED Info

Watts	10W
	2700K (Residential Warm)
Color Temp	
Color Accuracy	92 CRI
R9	57
L70 Lifespan	50,000 Hours
Lumens	699
Efficacy	59.7 lm/W

Technical Specifications

Compliance

UL Listed:

Suitable for wet locations

IESNA LM-79 & IESNA LM-80 Testing:

RAB LED luminaires and LED components have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80.

Electrical

Driver:

Constant Current, Class 2, 120-277V, 50/60 Hz, 120V: 0.10A, 208V: 0.06A, 240V: 0.05A, 277V: 0.05A

Dimming Driver:

0 - 10V (at 120-277V), TRIAC and ELV (at 120V only)

THD:

10.8% at 120V, 25.9% at 277V

Power Factor:

99.1% at 120V, 88% at 277V

Optical

Optics:

40°

Performance

Lifespan:

50,000-Hour LED lifespan based on IES LM-80 results and TM-21 calculations

LED Characteristics

LEDs:

Long-life, high-efficacy, surface-mount LEDs

Color Stability:

LED color temperature is warrantied to shift no more than 200K in color temperature over a 5-year period

Construction

Cold Weather Starting:

The minimum starting temperature is -20°C (-4°F)

Maximum Ambient Temperature:

Suitable for use in up to 40°C (104°F)

Lens:

TIR-Polycarbonate (Total Internal Reflection)

Reflector:

Vacuum-metalized polycarbonate

Technical Specifications (continued)

Construction

Housing:

Extruded aluminum

Mounting:

Wall direct light only

Gaskets:

High-temperature silicone

Green Technology:

Mercury and UV free. RoHS-compliant components.

Finish:

Formulated for high durability and long-lasting color

Other

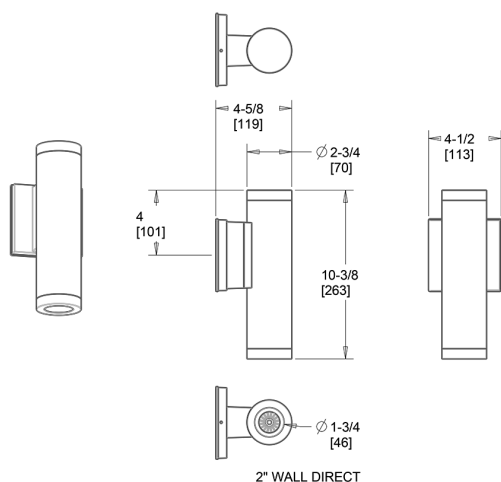
Warranty:

RAB warrants that our LED products will be free from defects in materials and workmanship for a period of five (5) years from the date of delivery to the end user, including coverage of light output, color stability, driver performance and fixture finish. RAB's warranty is subject to all terms and conditions found at rablighting.com/warranty.

Buy American Act Compliance:

RAB values USA manufacturing! Upon request, RAB may be able to manufacture this product to be compliant with the Buy American Act (BAA). Please contact customer service to request a quote for the product to be made BAA compliant.

Dimensions



Features

Sleek, contemporary, architectural-grade design
Universal dimming driver (TRIAC, ELV and 0-10V)
50,000-Hour LED lifespan

Ordering Matrix

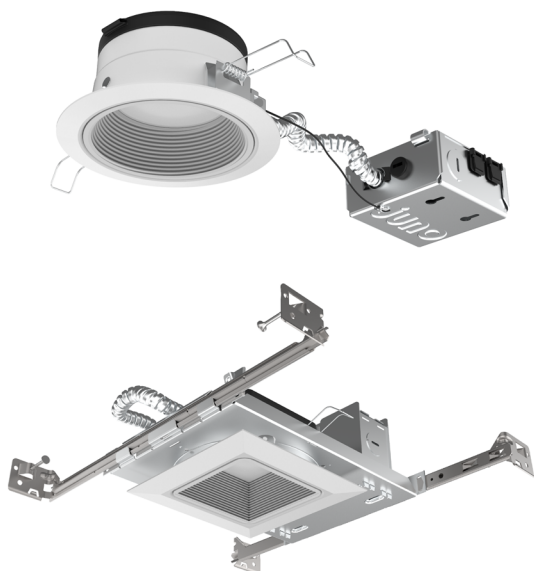
Family	Size	Mounting		Wattage		Optic	CRI/Color Temp		Finish
CDLED	2	WD	-	10W	-	40D	927	-	S
	2 = 2"	WD = Wall Direct (Downlight) Only		10W = 10W		20D = 20°	927 = 90 CRI, 2700K		W = Matte
	4 = 4"	WU = Wall Indirect (Uplight) Only		20W = 20W		30D = 30°	930 = 90 CRI, 3000K		White
	6 = 6"	W = Wall Direct/Indirect (Downlight/Uplight)		26W = 26W		40D = 40°	935 = 90 CRI, 3500K		K = Matte Black
		S = Surface (Ceiling Mount)		40W = 40W		50D = 50°	940 = 90 CRI, 4000K		S = Matte
		PC = Pendant Cord 48" Standard				80D = 80°	950 = 90 CRI, 5000K		Silver
		PS = Pendant Stem				WW = Wall Wash			Z = Bronze

Juno®

Podz™ LED Downlight Series

4" Canless Round and Square LED Downlight
New Construction or Remodel

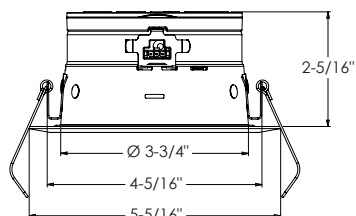
JPDZ4 Series



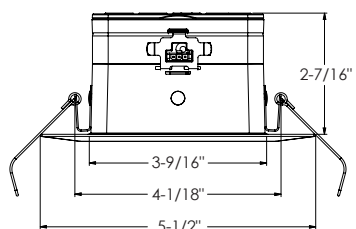
WarmDim®

Dimensions

4" Round



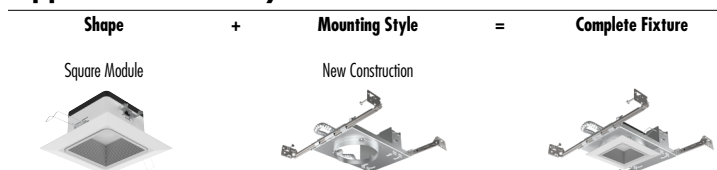
4" Square



Application Flexibility - Remodel



Application Flexibility - New Construction



Project:

Fixture Type:

Location:

Contact/Phone:

Product Features

Canless low profile 4" LED recessed downlight with deeply regressed light source and technology rich features offers performance up to 1200L and installation solutions for both new construction and remodel applications.

Patent pending integral light engine

- Integrated design offers switchable LED color temperature and adjustable lumen output directly on module for easy switching
- Advanced color mixing technology provides consistent color rendering on the black body curve at all LED color temperatures while maintaining a high 90+ CRI
- WarmDim™ setting provides performance similar to incandescent light sources and warms the LED color temperature over the dimming range from 2850K to 1900K

Installation flexibility and ease

- Low profile integrated LED downlight less than 3" in height fits virtually anywhere
- Installs directly into the plenum - eliminates need for typical recessed housing
- Installs into new construction or remodel applications

Applications

- Ideal for a breadth of residential and commercial applications
- Shallow plenum installations
- IC rated - for direct contact with insulation
- Wet location listed - for use in shower applications

Performance

Switchable Delivered Lumens	700L, 1000L, 1200L
Switchable LED Color Temperature	27K, 30K, 35K, 40K, 50K
WarmDim Included as standard	2850K - 1900K over dimming range
CRI	90+
Voltage	Dedicated 120V or MVOLT (120-277V)
Dimming	Forward/Reverse Phase or 0-10V



Podz™ LED Downlight Series

4" Canless Round and Square LED Downlight
New Construction or Remodel

ORDERING INFORMATION For complete fixture, order trim module + mounting option

Podz TRIM MODULE

Example: JPDZ4 DC ALO10 SWW5WD 90CRI JPDZRMJBX 120 FRPC WWH

Series	Trim Type	Lumens	Color Temperature	CRI
JPDZ4 Juno Podz 4" LED Downlights	DB Round Downlight Baffle DC Round Downlight Cone SQDB Square Downlight Baffle SQDC Square Downlight Reflector	ALO10 Adjustable Lumen Output 700L, 1000L, and 1200L	SWW5WD Switchable White 2700K, 3000K, 3500K, 4000K, 5000K, + WarmDim (2850K-1900K)	90CRI 90+CRI

Mounting Options	Voltage/Driver	Finish
REMODEL: JPDZRMJBX 4 Juno Podz universal remodel junction box (for 4", 5", 6")	120 FRPC 120V Forward/Reverse Phase Cut, 5% dim MVOLT ZT10 Multi-Volt (120-277), 0-10V, 10% dim	WWH 1 White, White Trim Ring BWH 2 Black, White Trim Ring CWH 3 Clear, White Trim Ring HZWH 3 Haze, White Trim Ring WHZW 3 Wheat Haze, White Trim Ring
NEW CONSTRUCTION: JPDZ4RDNCMF Juno Podz 4IN Round New Construction Mounting Frame JPDZ4SQNCMF Juno Podz 4IN Square New Construction Mounting Frame		

Square trim options available to order May 2021.

NOTES

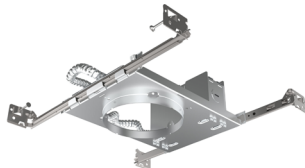
- 1 WWH is only available with DB, SQDB, DC and SQDC.
- 2 BWH only available with DB and SQDB.
- 3 CWH, HZWH and WHZW only available with DC and SQDC.
- 4 Not for use in an existing housing.

Product ships in two parts

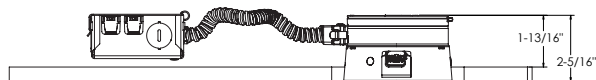
Trim Module



Mounting Option

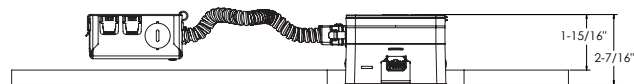


Remodel - Round

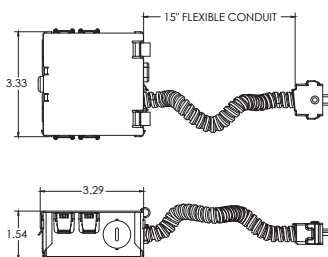


4 1/2" CEILING CUTOUT

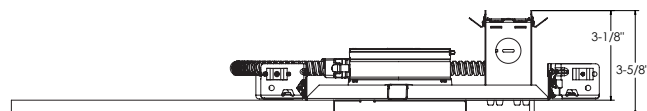
Remodel - Square



4 3/4" CEILING CUTOUT

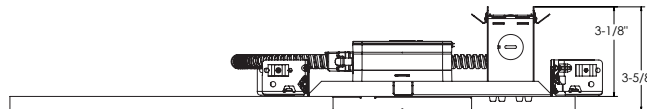


New Construction - Round

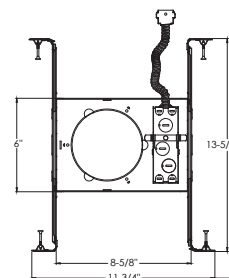


4 1/2" CEILING CUTOUT

New Construction - Square



4 3/4" CEILING CUTOUT





Podz™ LED Downlight Series

4" Canless Round and Square LED Downlight
New Construction or Remodel

Specifications

LED Light Engine

Patent pending integral light engine mounts directly to aluminum housing providing superior heat transfer to ensure long life of the electronics

- Switchable LED color temperature and adjustable lumen output directly on module for easy switching
- Advanced color mixing technology provides consistent color rendering on the black body curve at all LED color temperatures
- LED color temperature settings include 2700K, 3000K, 3500K, 4000K and 5000K; factory set at 3000K
- Three lumen switching options include 700L, 1000L and 1200L; factory set at 1000L
- Dedicated WarmDim setting provides performance similar to incandescent light sources and warms the LED color temperature over the dimming range from 2850K to 1900K
- 90CRI minimum

LED Driver

Choice of dedicated 120 volt (120) driver or universal voltage (MVOLT) drivers that accommodate input voltages from 120-277 volts AC at 50/60Hz

- Power factor > 0.9 at 120V input
- 120 volt only driver is dimmable with the use of most incandescent, magnetic low voltage and electronic low voltage wall box dimmers
- Universal voltage drivers are dimmable with the use of most 0-10V wall box dimmers
- For a list of compatible dimmers, see [JUNOICLED-DIM](#)

Optical System

Computer-optimized reflector design with high reflectance white finish coupled with a high transmission diffusing lens conceals the LEDs and produces uniform aperture luminance

- Deep regression of lens produces a low glare, efficient system typical of a standard 4" downlight medium flood distribution providing even illumination for general downlighting applications.

Certifications

ENERGY STAR® Certified • Can be used to comply with 2019 Title 24, Part 6, JA8 high efficacy LED light source requirements • UL listed for U.S. and Canada through-branch wiring, damp locations and for wet location (indoor covered ceiling) • UL and cUL

Testing All reports are based on published industry procedures; field performance may differ from laboratory performance.

Trim Module Construction

Low profile, < 3" aluminum housing with integral white flange • Designed for installation directly into the plenum in IC (insulated ceiling) or non-IC construction

- Provided with spring clips for ease of installation
- Accommodates up to a 1 1/2" ceiling thickness

Trim Finishes

Choice of baffle or cone trims in a selection of finishes ship installed in trim

Remodel Junction Box Construction

22-gauge die-formed galvanized steel junction box • Conduit cable with quick connect electrical plug pre-wired on junction box and allows for easy electrical connection with the trim module • Junction box provided with (5) 1/2" and (1) 3/4" knockouts, (4) integrated wire traps for 12/2 or 12/3 NM cable UL listed and cUL listed for through-branch wiring, maximum of 4 #12 branch circuit

New Construction Mounting Frame

22-gauge die-formed galvanized steel mounting frame • Rough-in section (junction box, mounting frame and bar hangers) fully assembled for ease of installation • Pre-installed Air-Loc gasket applied to frame • Conduit cable with quick connect electrical plug pre-wired on junction box and allows for easy electrical connection with the trim module • Junction box provided with (5) 1/2" and (1) 3/4" knockouts, (4) knockouts for 12/2 or 12/3 NM cable and ground wire • UL listed and cUL listed for through-branch wiring, maximum of 6 #12 branch circuit conductors • Junction box provided with removable access plates • Knock-outs equipped with pryout slots

Includes Patented (US Patent D552,969) Real Nail® 3 bar hangers: telescoping system permits quick placement of housing any where within 24" O.C. joists or suspended ceilings • Includes removable nail for repositioning of fixture in wood joist construction • Integral T-bar notch and clip for suspended ceilings.

LED housing is designed to provide 50,000 hours of life • 5 year limited warranty on LED components.

Note: Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25 °C.

Specifications subject to change without notice.

ELECTRICAL DATA

Dedicated 120V Only Driver Option (120 FRPC)

	700L	1000L	1200L
Input Power	8.1W (+/-5%)	13.6W (+/-5%)	15W (+/-5%)
Input Current	0.07A	0.11A	0.13A
Frequency	50/60Hz	50/60Hz	50/60Hz
EMI/RFI	FCC Title 47 CFR, Part 15, Class B (residential)	FCC Title 47 CFR, Part 15, Class B (residential)	FCC Title 47 CFR, Part 15, Class B (residential)
Minimum starting temp	-20°C	-20°C	-20°C

ELECTRICAL DATA

Universal Voltage

MVOLT ZT10

700L		1000L		1200L	
120V	277V	120V	277V	120V	277V
Input Power	8.1W (+/-5%)	8.1W (+/-5%)	13.6W (+/-5%)	13.6W (+/-5%)	15W (+/-5%)
Input Current	0.07A	0.03A	0.11A	0.05A	0.13A
Frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
EMI/RFI	FCC Title 47 CFR, Part 15, Class B (residential)	FCC Title 47 CFR, Part 15, Class B (residential)	FCC Title 47 CFR, Part 15, Class B (residential)	FCC Title 47 CFR, Part 15, Class B (residential)	FCC Title 47 CFR, Part 15, Class B (residential)
Minimum starting temp	-20°C	-20°C	-20°C	-20°C	-20°C



Podz™ LED Downlight Series

4" Canless Round and Square LED Downlight
New Construction or Remodel

PHOTOMETRICS

Distribution Curve

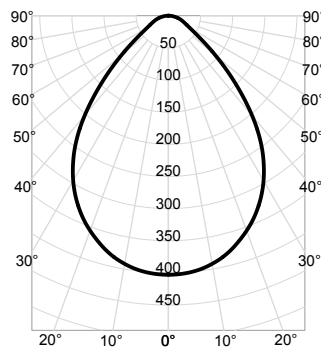
Distribution Data

Output Data

Coefficient of Utilization

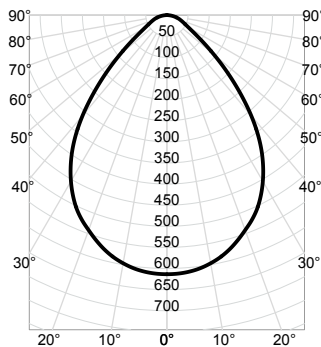
Illuminance Data at 30" Above Floor for a Single Luminaire

JPDZ4 DB 07LM 30K 90CRI WWH, Input Watts: 8.1, Delivered Lumens: 672, LPW: 83.0, S/MH: 1.11, Test No: 20-973-1



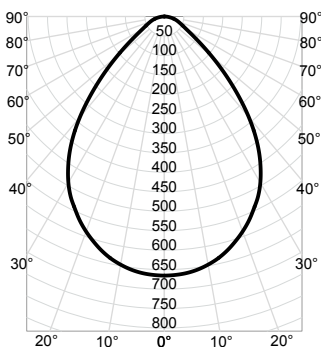
CP Summary		Zonal Lumen Summary				Coefficients of Utilization										Cone of Light			Luminance (cd/sq.m)		
						pf	80%			20%			50%				Mounting Height	Initial FC Center Beam	Beam Diameter	Average Luminance	
0°		Zone	Lumens	% Fixture	pc	50%	30%	10%	50%	30%	10%	50%	30%	10%							
0°	403	0° - 30°	295	44%	0	119	119	119	116	116	116	111	111	111	6.0	11.2	10.1	0°	65,673		
5°	400	0° - 40°	452	67%	1	108	104	101	105	102	100	101	99	97	8.0	6.3	13.5	45°	33,417		
15°	377	0° - 60°	619	92%	2	97	92	87	95	90	86	92	88	84	10.0	4.0	16.8	55°	16,678		
25°	330	0° - 90°	672	100%	3	88	81	76	86	80	75	84	78	74	12.0	2.8	20.2	65°	11,259		
35°	254	90° - 180°	0	0%	4	80	73	67	79	72	67	76	71	66	14.0	2.1	23.6	75°	10,515		
45°	145	0° - 180°	672	100%	5	73	65	60	72	65	60	70	64	59	Beam Angle: 80.2° Field Angle: 119.3°			85°	8,975		
55°	59				6	67	59	54	66	59	54	64	58	53							
65°	29				7	62	54	49	61	54	49	59	53	48							
75°	17				8	57	50	44	56	49	44	55	49	44							
85°	5				9	53	46	41	52	45	41	51	45	41							
90°	0				10	49	42	38	49	42	37	48	42	37							

JPDZ4 DB 10LM 30K 90CRI WWH, Input Watts: 13.6, Delivered Lumens: 1028, LPW: 75.6, S/MH: 1.12, Test No: 20-973-2



CP Summary		Zonal Lumen Summary				Coefficients of Utilization										Cone of Light			Luminance (cd/sq.m)			
						pf					20%						Mounting Height	Initial FC Center Beam	Beam Diameter			
0°		Zone	Lumens	% Fixture	pc	50%	30%	10%	50%	30%	10%	50%	30%	10%	Average Luminance							
0°	614	0° - 30°	451	44%	0	119	119	119	116	116	116	111	111	111	6.0	17.0	10.1	0°	99,993			
5°	610	0° - 40°	692	67%	1	108	104	101	105	102	100	101	99	97	8.0	9.6	13.5	45°	51,301			
15°	574	0° - 60°	948	92%	2	97	92	87	95	90	86	92	88	84	10.0	6.1	16.9	55°	25,656			
25°	506	0° - 90°	1,028	100%	3	88	81	76	86	80	75	84	78	74	12.0	4.3	20.3	65°	17,198			
35°	390	90° - 180°	0	0%	4	80	73	67	79	72	67	76	71	66	14.0	3.1	23.7	75°	16,056			
45°	223	0° - 180°	1,028	100%	5	73	65	60	72	65	60	70	64	59				85°	13,649			
55°	90				6	67	59	54	66	59	54	64	58	53	Beam Angle: 80.4° Field Angle: 119.4°							
65°	45				7	62	54	49	61	54	49	59	53	48								
75°	26				8	57	50	44	56	49	44	55	49	44								
85°	7				9	53	46	41	52	45	41	51	45	40								
90°	0				10	49	42	37	49	42	37	48	42	37								

JPDZ4 DB 12LM 30K 90CRI WWH, Input Watts: 15.0, Delivered Lumens: 1116, LPW: 74.4, S/MH: 1.12, Test No: 20-973-3



CP Summary	Zonal Lumen Summary				Coefficients of Utilization										Cone of Light			Luminance (cd/sq.m)		
	0°	Zone	Lumens	% Fixture	pf	80%					20%					Mounting Height	Initial FC Center Beam	Beam Diameter	Average Luminance	
					pc	50%	30%	10%	50%	30%	10%	50%	30%	10%						
					pw	50%	30%	10%	50%	30%	10%	50%	30%	10%						
0°	665	0° - 30°	488	44%	0	119	119	119	116	116	116	111	111	111	6.0	18.5	10.2	0°	108,434	
5°	661	0° - 40°	750	67%	1	108	104	101	105	102	100	101	99	97	8.0	10.4	13.5	45°	55,818	
15°	622	0° - 60°	1,029	92%	2	97	92	87	95	90	86	92	88	84	10.0	6.7	16.9	55°	27,928	
25°	544	0° - 90°	1,116	100%	3	88	81	76	86	80	75	84	78	74	12.0	4.6	20.3	65°	18,702	
35°	424	90° - 180°	0	0%	4	80	73	67	79	72	67	76	70	66	14.0	3.4	23.7	75°	17,441	
45°	242	0° - 180°	1,116	100%	5	73	65	60	72	65	60	70	64	59				85°	14,771	
55°	98				6	67	59	54	66	59	54	64	58	53	Beam Angle: 80.5° Field Angle: 119.5°					
65°	49				7	62	54	49	61	54	49	59	53	48						
75°	28				8	57	50	44	56	49	44	55	49	44						
85°	8				9	53	46	41	52	45	41	51	45	40						
90°	0				10	49	42	37	49	42	37	48	42	37						



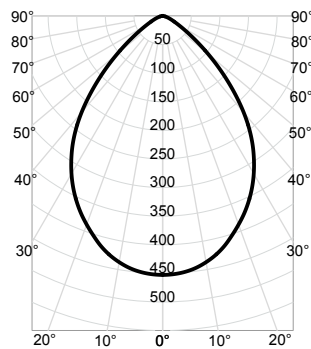
Podz™ LED Downlight Series

4" Canless Round and Square LED Downlight
New Construction or Remodel

PHOTOMETRICS

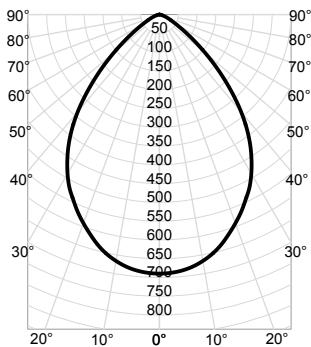
Distribution Curve	Distribution Data	Output Data	Coefficient of Utilization	Illuminance Data at 30" Above Floor for a Single Luminaire
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JPDZ4 DC 07LM 30K 90CRI HZWH, Input Watts: 8.1, Delivered Lumens: 699, LPW: 86.3, S/MH: 1.07, Test No: 20-973-4



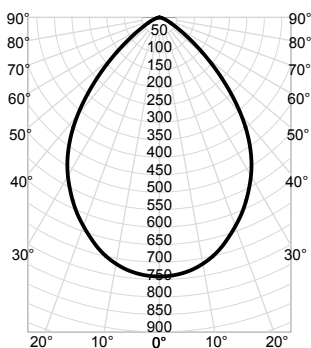
CP Summary				Zonal Lumen Summary								Coefficients of Utilization								Cone of Light			Luminance (cd/sq.m)
0°	Zone	Lumens	% Fixture	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	10°	20°	30°	40°	50°	60°	70°	80°	90°	Average Luminance
0°	453	0° - 30°	323	46%	0	119	119	119	116	116	116	111	111	111	6.0	12.6	9.9	0°	73,789				
5°	449	0° - 40°	493	70%	1	109	106	103	106	104	101	102	100	98	8.0	7.1	13.2	45°	36,874				
15°	417	0° - 60°	672	96%	2	99	94	89	97	92	88	94	90	86	10.0	4.5	16.5	55°	17,047				
25°	357	0° - 90°	699	100%	3	90	84	79	88	83	78	86	81	77	12.0	3.1	19.8	65°	7,404				
35°	274	90° - 180°	0	0%	4	82	75	70	81	74	69	78	73	68	14.0	2.3	23.1	75°	3,463				
45°	160	0° - 180°	699	100%	5	75	68	62	74	67	62	72	66	62				85°	1,309				
55°	60				6	69	62	56	68	61	56	66	60	56	Beam Angle: 78.9° Field Angle: 114.9°								
65°	19				7	63	56	51	63	56	51	61	55	51									
75°	6				8	59	52	47	58	51	46	57	51	46									
85°	1				9	55	47	43	54	47	43	53	47	42									
90°	0				10	51	44	39	50	44	39	49	43	39									

JPDZ4 DC 10LM 30K 90CRI HZWH, Input Watts: 13.6, Delivered Lumens: 1070, LPW: 78.7, S/MH: 1.07, Test No: 20-973-5



CP Summary		Zonal Lumen Summary				Coefficients of Utilization										Cone of Light			Luminance (cd/sq.m)	
		Zone	Lumens	% Fixture	pf	80%		70%		50%		Mounting Height	Initial FC Center Beam	Beam Diameter	Average Luminance					
					pc	50%	30%	10%	50%	30%	10%					50%	30%	10%		
0°	690	0° - 30°	493	46%	0	119	119	119	116	116	111	111	111	6.0	19.2	9.9	0°	112,427		
5°	684	0° - 40°	754	70%	1	109	106	103	106	104	101	102	100	98	8.0	10.8	13.2	45°	56,624	
15°	635	0° - 60°	1,029	96%	2	99	94	89	97	92	88	94	90	86	10.0	6.9	16.6	55°	26,224	
25°	543	0° - 90°	1,070	100%	3	90	84	79	88	83	78	85	81	77	12.0	4.8	19.9	65°	11,298	
35°	421	90° - 180°	0	0%	4	82	75	70	81	74	69	78	73	68	14.0	3.5	23.2	75°	5,289	
45°	246	0° - 180°	1,070	100%	5	75	68	62	74	67	62	72	66	61	Beam Angle: 79.3° Field Angle: 114.9°			85°	2,057	
55°	92				6	69	61	56	68	61	56	66	60	56						
65°	29				7	63	56	51	63	56	51	61	55	50						
75°	8				8	59	51	46	58	51	46	57	51	46						
85°	1				9	54	47	43	54	47	43	53	47	42						
90°	0				10	51	44	39	50	44	39	49	43	39						

JPDZ4 DC 12LM 30K 90CRI HZWH, Input Watts: 15.0, Delivered Lumens: 1149, LPW: 76.6, S/MH: 1.07, Test No: 20-973-6



CP Summary		Zonal Lumen Summary				Coefficients of Utilization										Cone of Light			Luminance (cd/sq.m)	
	0°	Zone	Lumens	% Fixture	pf	80%		20%		70%		50%		Mounting Height	Initial FC Center Beam	Beam Diameter	Average Luminance			
					pc	50%	30%	10%	50%	30%	10%	50%	30%					10%		
0°	741	0° - 30°	529	46%	0	119	119	119	116	116	116	111	111	111	6.0	20.6	9.9	0°	120,819	
5°	735	0° - 40°	809	70%	1	109	106	103	106	104	101	102	100	98	8.0	11.6	13.2	45°	60,796	
15°	682	0° - 60°	1,104	96%	2	99	94	89	97	92	88	94	90	86	10.0	7.4	16.6	55°	28,127	
25°	584	0° - 90°	1,149	100%	3	90	84	79	88	83	78	86	81	77	12.0	5.1	19.9	65°	12,146	
35°	452	90° - 180°	0	0%	4	82	75	70	81	74	69	78	73	68	14.0	3.8	23.2	75°	5,667	
45°	264	0° - 180°	1,149	100%	5	75	68	62	74	67	62	72	66	61				85°	2,244	
55°	99				6	69	61	56	68	61	56	66	60	56	Beam Angle: 79.2° Field Angle: 114.9°					
65°	32				7	63	56	51	63	56	51	61	55	50						
75°	9				8	59	51	46	58	51	46	57	51	46						
85°	1				9	54	47	43	54	47	43	53	47	42						
90°	0				10	51	44	39	50	44	39	49	43	39						

4" LUMEN OUTPUT MULTIPLIERS

CCT	DB WWH	DB BWH	DC WWH	DC CWH	DC WHZWH	DC HZWH
2700K	1.01	0.78	1.07	1.11	1.03	1.01
3000K	1.00	0.77	1.06	1.09	1.01	1.00
3500K	1.00	0.77	1.07	1.10	1.02	1.00
4000K	1.01	0.78	1.07	1.11	1.02	1.01
5000K	1.00	0.77	1.06	1.09	1.01	1.00
Warm Dim	0.92	0.71	0.98	1.01	0.93	0.92



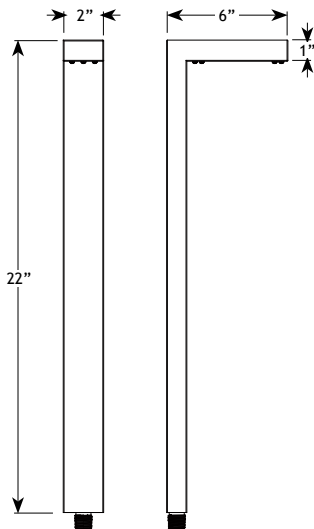
VOLT® Low Voltage Landscape Lighting

Wider Modernelle- VPL-1043-4-BBZ

Product Description

The VOLT® Wider Modernelle Brass Path & Area Light is a robust modern fixture with a low profile and clean lines. Use this ultra-modern fixture to complement your modern architecture and décor. It provides a moderate-sized region of illumination to create a pool of soft-edged evenly dispersed light. The Wider Modernelle comes with a lifetime warranty to ensure optimal performance for the life of your landscape.

Product Dimensions



Specifications

- **Construction:** Solid Brass
- **Finish:** Bronze
- **Lead Wire:** 18AWG
- **Mounting:** 10" Hammer Stake with cutout for wire exit
- **Light Source:** LED Bi-Pin
- **Operating Voltage:** 12VAC-15VAC
- **Powered by:** VOLT's Low Voltage Transformer

Warranty

Lifetime Warranty

Certifications



Features & Benefits

- Solid Brass Construction.
- Pre-aged finish- natural patina that does not corrode.
- Silicone plug at lead wire exit prevents ground moisture and insects from entering luminaire through the stem.
- Polycarbonate shatter-resistant lens



VOLT® Low Voltage Landscape Lighting

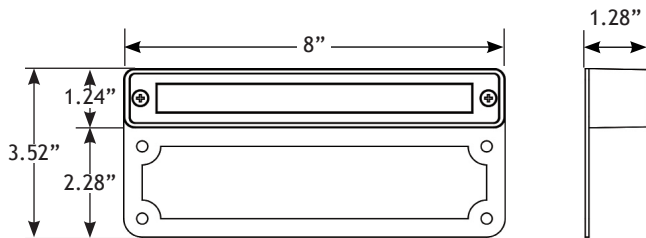
6" Undercover Hardscape Light - VHS-668-4-BBZ

Product Description

VOLT's Undercover Hardscape light is truly a one-of-a-kind pro-grade, quality landscape lighting fixture. This low voltage light is best used in areas that require a low profile light fixture that illuminates downward. Example applications include railings, retaining walls, counter tops (for outdoor kitchens) and even property walls/fences. These luminaires are constructed of high quality solid cast brass, with premium internal components as well. This fixture is completely sealed to protect from moisture and the environment. The frosted lens provides for a beautifully even soft light that compliments any application.



Product Dimensions



Features & Benefits

- ▶ Solid Brass Construction
- ▶ Pre-aged finish; a natural patina that does not corrode
- ▶ Beryllium copper socket - more corrosion resistant than copper
- ▶ Protective brass tube to protect lead wire from crushing when installed in stone, concrete or masonry
- ▶ Frosted lens for smooth photometric results

Specifications

- ▶ **Construction:** Brass
- ▶ **Finish:** Bronze
- ▶ **Lead Wire:** 4' (standard) or 25' (optional) 16AWG
- ▶ **Mounting (included):** mounting plate with 4 screw holes
- ▶ **Lens:** Frosted lens
- ▶ **Light Source (sold separately):** Bi-pin (LED or Halogen)
- ▶ **Operating Voltage:** 12VAC
- ▶ **Powered by:** VOLT's Low Voltage Transformer

Warranty

Lifetime Warranty

Certifications



Max 20 Watts
File #E466348



Max 20 Watts
File #E466348



VOLT® Low Voltage Landscape Lighting

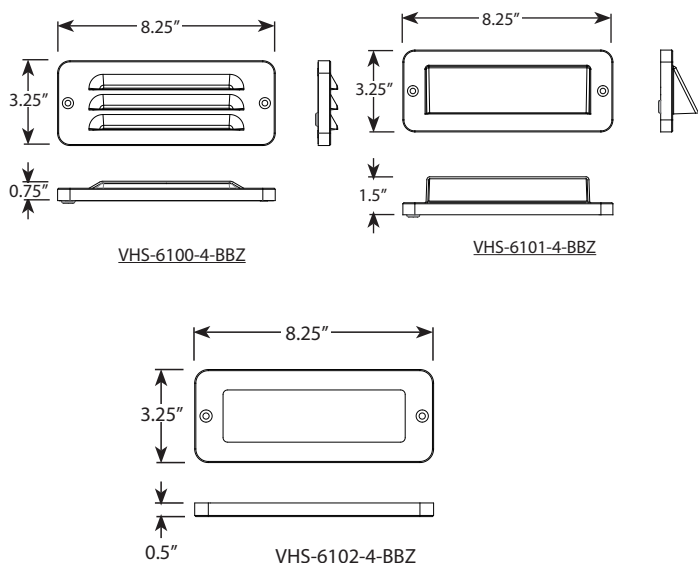
Brass Bunker Thin Integrated Step Light- VHS-610X-4-BBZ

Product Description

The Brass Bunker Thin Integrated Step Lights are designed for quick and easy installation for step-lighting projects. Traditional step lights must be recessed into a step or a wall, whereas these thin, integrated step lights allow for simple surface mounting thanks to pre-drilled screw slots on the faceplates. All of the necessary mounting hardware is included. The solid brass housings are constructed for a lifetime of durability and are completely sealed for water protection. Offset screws sticking out of the backsides of the step lights allow for a minimal gap for the lead wire to easily exit as needed between the fixture and the object it is being mounted to. Ideal applications include: illuminating walkways next to stone walls, retaining walls and nooks around outdoor kitchens.



Product Dimensions



Specifications

- **Construction:** Brass
- **Finish:** Bronze
- **Lead Wire:** 18AWG
- **Glass or Lens Type:** Frosted Lens
- **Light Source:** Integrated
- **Operating Voltage:** 12VAC
- **Powered by:** VOLT's Low Voltage Transformer

Warranty

Lifetime Warranty

Certifications



File #E466348



File #E466348

Features & Benefits

- Easy installation, this fixture does not need to be recessed into a surface.
- Pre-aged finish- a natural patina that does not corrode
- Silicone plug at lead wire exit prevents moisture and insects from entering luminaire
- Completely water tight; pressure fit rubber gasket and rubber seal around wire exit. This fixture is IP65 rated.
- Ideal lumen count creates a soft light to illuminate an area without being overly bright.

Date:

For: ☐ File ☐ Resubmit

PO No.:

☐ Approval ☐ Other

Architect:

GC:

Engr:

Mech:

Rep:

(Company)

(Project Manager)

LMU180HHV

Multi F with LGRED° Heat Pump Outdoor Unit

Performance:

Cooling (Min-Rated-Max, Btu/h)	8,400 ~ 18,000 ~ 19,980
Heating (Min-Rated-Max, Btu/h)	10,248 ~ 22,000 ~ 24,000
Max Heating at 5°F (Btu/h)	22,000
Cooling Power Input (Min-Rated-Max, kW)	0.88 ~ 1.33 ~ 1.87
Heating Power Input (Min-Rated-Max, kW)	1.25 ~ 2.22 ~ 3.11

Cooling Nominal Test Conditions:

Indoor: 80°F DB/67°F WB
 Outdoor: 95°F DB/75°F WB

Heating Nominal Test Conditions:

Indoor: 70°F DB/60°F WB
 Outdoor: 47°F DB/43°F WB

Electrical:

Power Supply (V/Hz/Ø)	208-230/60/1
MOP (A)	30
MCA (A)	18.6
Recommended Fuse Size (A)	25
Cooling Rated Amps (A)	15.33
Heating Rated Amps (A)	15.33
Compressor (A)	13
Fan Motor (A)	0.73

MOP - Maximum Overcurrent Protection MCA - Minimum Circuit Ampacity

Piping:

Refrigerant Charge (lbs.)	6.18
Liquid Line (in, OD)	Ø1/4 x 2
Vapor Line (in, OD)	Ø3/8 x 2
Max Total Piping ² (ft)	164
Max ODU to IDU Piping (ft)	82
Piping Length (no add'l refrigerant, ft)	49.2
Max Elevation between ODU and IDU (ft)	49.2
Max Elevation between IDU and IDU (ft)	24.6

ODU - Outdoor Unit IDU - Indoor Unit

Controls Features:

- Auto operation
- Auto restart
- Defrost/Deicing
- Inverter (variable speed compressor)
- Low ambient operation to 14F (cooling mode)
- Restart delay (3-minutes)
- Self diagnosis
- Soft start
- Factory installed Drain Pan Heater

Optional Accessories:

- ☐ PI-485 Integration Board - PMNFP14A1
- ☐ AC Smart IV - PACS4B000
- ☐ ACP IV - PACP4B000
- ☐ Power Distribution Indicator - PQNPD1S41
- ☐ MultiSITE™ CM - PBACNBTR0A
- ☐ LonWorks® Gateway - PLNWKB100
- ☐ AC Smart IV BACnet® Gateway - PBACNA000
- ☐ ACP IV BACnet Gateway - PQNFB17C2
- ☐ Low Ambient Wind Baffle (Cooling operation to -4°F) - ZLABGP04A

For a complete list of available accessories, contact your LG representative.

For continual product development, LG reserves the right to change specifications without notice.

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Operating Range:

Cooling (°F DB)	14 to 118
Heating (°F WB)	-13 to +75

Unit Data:

Refrigerant Type	R410A
Refrigerant Control	EEV
Sound Pressure ³ (Cool/Heat) ±3 dB(A)	50 / 54
Net/Shipping Weight (lbs)	147.7 / 163.1
Heat Exchanger Coating	GoldFin™
Min Number of Indoor Units	2
Max Number of Indoor Units	2

Compressor:

Quantity	1
Type	Twin Rotary
Oil/Type	FVC68D

Fan:

Type	Propeller
Quantity	1
Fan Motor/Drive	Brushless Digitally Controlled/Direct
Airflow Rate (CFM)	2,295

Notes:

- Acceptable operating voltage: 187V - 253V.
- Piping lengths are equivalent.
- Sound Pressure levels are tested in an anechoic chamber under ISO Standard 3745.
- All power/communication cable to be minimum 18 American wire gage (AWG), 4-conductor, stranded, shielded or unshielded wire and must comply with applicable local and national code. If shielded, the wire must be grounded to the chassis at the outdoor unit only.
- Power wiring cable size must comply with the applicable local and national code.
- This data is rated 0 ft above sea level, with 25 ft of refrigerant line and a 0 ft level difference between outdoor and indoor units. All capacities are net with a combination ratio between 95 - 105%.
- Must follow installation instructions in the applicable LG installation manual.
- Refer to the Combination Data Manual for combination capacity tables.
- See Performance Data Manual for sensible and latent capacities.



BACnet® is a registered trademark of ASHRAE. LonWorks is a trademark of Echelon Corporation. Energy Star rating at least for Non-Ducted combinations; refer to AHRI directory for complete list.

LMU180HHV

Multi F with LGRED® Heat Pump Outdoor Unit

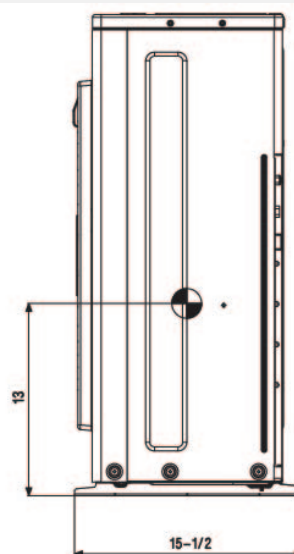
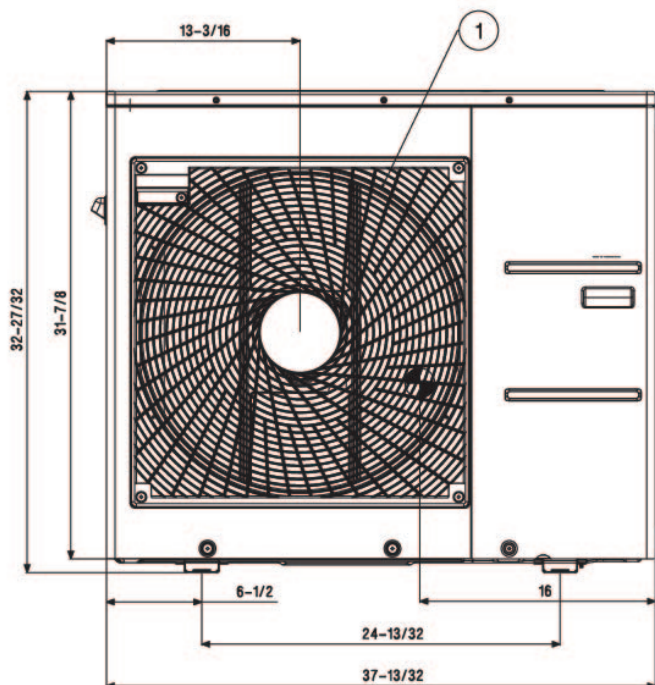
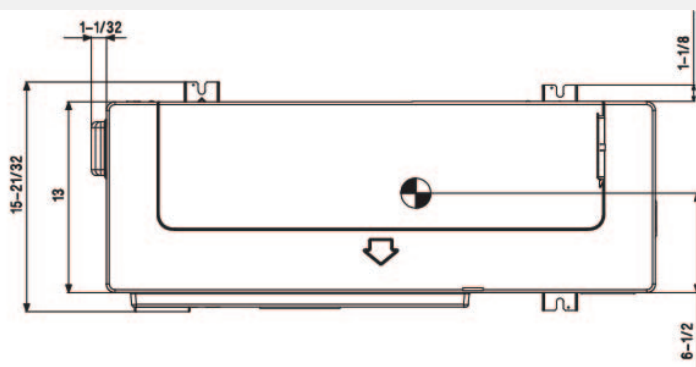
**LG**

Life's Good

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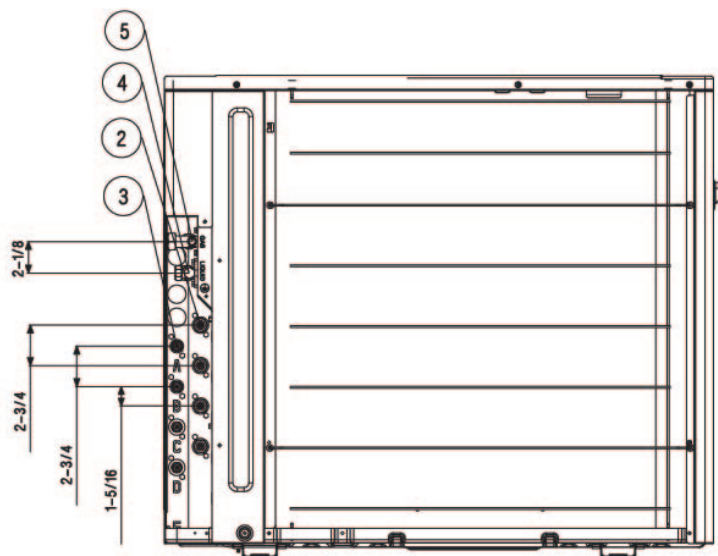
Date:

PO No.:



Unit: Inch

Gravity point



No.	Part Name
1	Air discharge grille
2	Gas pipe connection
3	Liquid pipe connection
4	Main service valve (Liquid)
5	Main service valve (Gas)

Job Name/Location:

Tag No:

Date:

For:	File	Resubmit
	Approval	Other

PO No.:

Architect:

GC:

Engr:

Mech:

Rep:

(Company)

(Project Manager)

ARUM036GSS5

Multi V™ S with LGRED® Outdoor Unit
3.0 Ton Heat Pump and Heat Recovery

**Performance:**

Cooling Mode:

Rated Capacity (Btu/h)	36,000
Power Input (kW)	2.32

Heating Mode:

Rated Capacity (Btu/h)	42,000
Power Input (kW)	2.92

Rated Capacity is based on the following conditions:

Cooling	Heating:
Indoor: 80°F DB / 67°F WB	Indoor: 70°F DB
Outdoor: 95°F DB	Outdoor: 47°F DB / 43°F WB

Electrical:

Power Supply (V/Hz/Ø) ¹	208-230V, 60, 1
MOP (A)	40.0
MCA (A)	23.5
Rated Amps (A)	
Compressor Amps (A)	18.0
Fan (A) x Qty.	0.5 x 2

Piping / Connections:²

Refrigerant Charge (lbs.)	7.7
Piping / Connections for Heat Recovery Operation	
Liquid Line (in., O.D.)	3/8 Braze
Low Pressure Vapor Line (in., O.D.)	3/4 Braze
High Pressure Vapor Line (in., O.D.)	5/8 Braze
Piping / Connections for Heat Pump Operation	
Liquid Line (in., O.D.)	3/8 Braze
Vapor Line (in., O.D.)	5/8 Braze

Compressor:

Type	Hermetically Sealed Scroll
Quantity	1
Oil / Type	PVE / FVC68D

Standard Features:

- Night Quiet Operation
- Fault Detection and Diagnosis
- Smart Load Control
- Smart Oil Management
- Drain Pan Heater Built In

Optional Accessories:

- ☐ Low Ambient Baffle Kit - ZLABGP04A (2 required)³

Operating Range:

Cooling (°F DB) ³	23 to 122
Heating (°F WB)	-13 to +61
Synchronous	
Cooling Based (°F DB)	14 to 81
Heating Based (°F WB)	14 to 61

Unit Data:

Refrigerant Type	R410A
Refrigerant Control	EEV
Max. Number of Indoor Units ⁴	6
Sound Pressure dB(A) ⁵	
Cooling Mode	50
Heating Mode	53
Weight	
Net (lbs.)	263
Shipping (lbs.)	294
Communication Cable (No x AWG) ⁶	2 x 18
Heat Exchanger Coating	Black Fin™

Fan:

Type	Axial Flow
Quantity	2
Motor / Drive	Brushless Digitally Controlled/Direct
Air Flow Rate (CFM)	4,238

Notes:

1. Power wiring size must comply with the applicable local and national codes.
2. For main pipe segment size, refer to the LATS Multi V tree diagram.
3. Installation of an optional Low Ambient Wind Baffle Kit will allow operation down to -9.9°F in cooling mode.
4. The combination ratio must be between 50 - 130%.
5. Sound pressure levels are tested in an anechoic chamber under ISO Standard 3745.
6. Communication cable between ODU, IDU(s) / HRU(s) must be a minimum of 2-conductor, 18 AWG, twisted, stranded, and shielded. Ensure the communication cable shield is properly grounded to the ODU chassis only. ⚡ **DO NOT** ground the communication cable at any other point. Wiring must comply with all applicable local and national codes.
7. Nominal data is rated 0 ft above sea level, with 25 ft of refrigerant line per indoor unit and a 0 ft level difference between outdoor and indoor units. All capacities are net with a combination ratio between 95-105%.
8. Power wiring cable size must comply with the applicable local and national codes.
9. The voltage tolerance is ± 10%.

LGRED®*Inverter*

Job Name/Location: _____

ARUM036GSS5

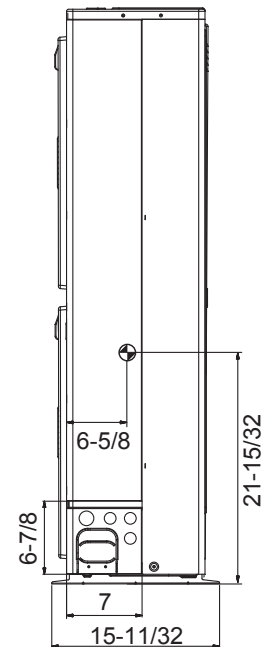
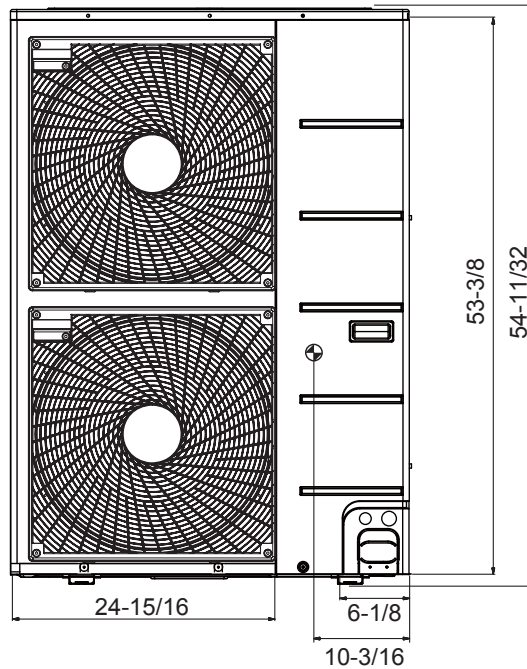
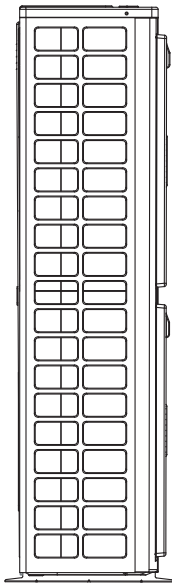
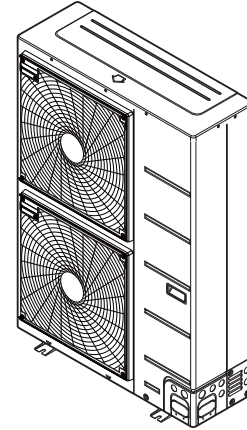
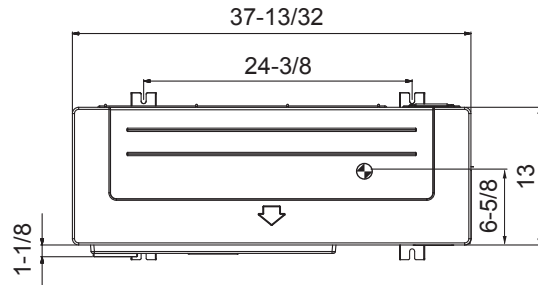
Multi V™ S with LGRED® Outdoor Unit
3.0 Ton Heat Pump and Heat Recovery



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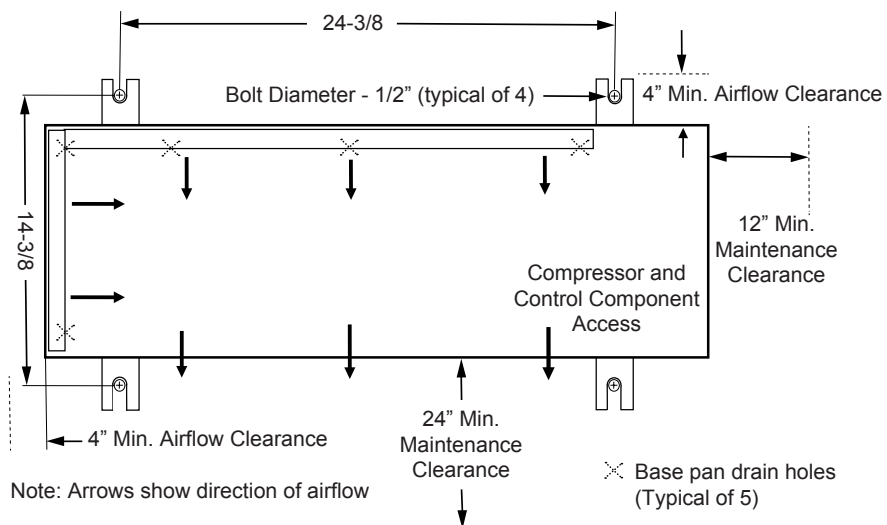
Date: _____

PO No.: _____



Unit: inch

⊕ Center of Gravity



Job Name/Location: _____

ARUM036GSS5

Multi V™ S with LGRED° Outdoor Unit

3.0 Ton Heat Pump and Heat Recovery



Tag No.: _____

Date: _____

PO No.: _____

AHRI Data:

Reference Number	Indoor Unit Type	Cooling Capacity (95°F)	EER (95°F)	SEER	High Heating Capacity (47°F)	Low Heating Capacity (17°F)	HSPF
205967237	Non-Ducted Indoor Units	36,000	15.50	23.00	42,000	26,000	12.00
205967238	Ducted Indoor Units	36,000	13.00	18.30	42,000	28,000	11.40
205967240	Mixed Ducted and Non-Ducted Indoor Units	36,000	14.25	20.65	42,000	27,000	11.70











