

SCHOOLHOUSE APARTMENTS ROCKLAND

6 Delprete Avenue
Rockland, MA 02370

APPLICATION FOR COMPREHENSIVE PERMIT UNDER M.G.L. CH. 40B (27 Affordable Units for the Elderly)



Submitted to:
Town of Rockland, MA Zoning Board of Appeals
Updated March 21, 2022

Submitted By:
Schoolhouse Apartments Rockland, Limited Partnership
Connolly and Partners, LLC
C/o Doherty Law Offices
50 Franklin Street, Suite 300
Boston, MA 02110

MICHAEL L. FEELEY
Attorney at Law
50 FRANKLIN STREET, SUITE 3A
BOSTON, MASSACHUSETTS 02110
(617) 542-8905
FAX (617) 542-6479
mikefeeley@dohertylawoffices.net

March 21, 2022

Robert Rosa, Chairman
Town of Rockland, MA Board of Appeals
242 Union Street
Rockland, MA 02370

Re: Updated Plans for Schoolhouse Apartments Rockland located at 6 Delprete Avenue, Rockland, MA.

Dear Chairman Rosa,

I am writing to you to follow up on our presentation to the Town of Rockland's Zoning Board of Appeals (the "Board") at the Tuesday, February 22nd, 2022 meeting of the Board. Schoolhouse Apartments Rockland, Limited Partnership (the "Applicant"), Connolly and Partners, LLC (the "Developer") and the entire development team of Schoolhouse Apartments Rockland (the "Project") greatly appreciated the Board's thoughtful comments and guidance following our presentation for the Project.

As follow up to the meeting, we have incorporated the Board's comments into a full set of full-size plans, including all updated, additional, and in some cases, unchanged plans, attached hereto. It is our hope that the Board finds these updated plans and documents responsive to these comments and requests. We are grateful for the Board's feedback and look forward to presenting all updates to our application for a Comprehensive Permit under M.G.L. Chapter 40B for the Project at the April 5th, 2022 meeting of the Board.

Sincerely,


Michael Feeley

Enclosures: Exhibits A thru P

Cc: Liza Landy, Town Clerk, Town of Rockland
Debra Shettlesworth, Regulatory Coordinator

Exhibits

- Exhibit A** McKenzie Engineering letter regarding no Project Wetlands Impact dated March 15, 2022.
- Exhibit B** Existing Conditions Plan dated 1/19/21.
- Exhibit C** Form A Plan dated 12/10/21 and revised 3/15/22.
- Exhibit D** Site Plan dated 12/10/21 and revised 3/15/22.
- Exhibit E** Grading and Utility Plan dated 12/10/21 and revised 3/15/22.
- Exhibit F** Traffic Flow Plan dated 12/10/21 and revised 3/15/22.
- Exhibit G** Signage and Pavement Marking Plan dated 12/10/21 and revised 3/15/22.
- Exhibit H** Construction Management Plan dated 12/10/21 and revised 3/15/22.
- Exhibit I** Landscape Concept Plan.
- Exhibit J** Existing Elevations dated 3/15/21.
- Exhibit K** Proposed Elevations dated 3/15/21 and revised 8/28/21.
- Exhibit L** First and Second Floor Plans dated 3/15/21 and revised 8/28/21
- Exhibit M** Second and Third Floor Plans dated 3/15/21.
- Exhibit N** Lighting Plan dated 3/9/22
- Exhibit O** Lighting Fixtures Plan dated 3/9/22
- Exhibit P** Snow Removal Plan dated 3/21/22



Professional Civil Engineering • Professional Land Surveying • Land Planning

150 Longwater Drive, Suite 101
Norwell, MA 02061
Tel: 781-792-3900
www.mckeng.com

March 15, 2022

Connolly and Partners, LLC
149 Colonial Road
Manchester, CT 06042

**Re: 403 Union Street & 6 Delprete Avenue – Wetland Resources Review
Rockland, MA**

Dear Connolly and Partners, LLC:

McKenzie Engineering Group, Inc. (MEG) has reviewed the property located at 403 Union Street and 6 Delprete Avenue, both which are shown on Rockland Assessor Map as parcel 34-175-0. The property has been reviewed to provide clarification on the property containing any wetland resource areas that are jurisdictional under the Massachusetts Wetland Protect Act Regulations (Mass. General Law Chapter 131 Section 40) (State Regulations) and the Town of Rockland Wetland Protection ByLaw (Chapter 407 of the Rockland Zoning ByLaw)(Local Regulations), and thus would require permits from Massachusetts Department of Environmental Protection and Rockland Conservation Commission.

MEG has determined that the property does not contain resource areas that are jurisdictional under State Regulations or Local Regulations. The property does not contain wetlands and is not within a buffer zone to a wetland or other resource area that is jurisdictional.

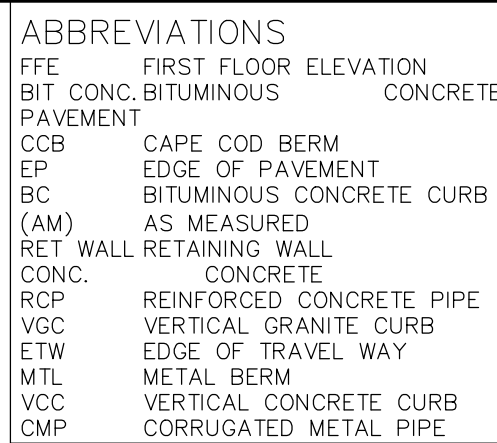
Please do not hesitate to contact us should you have any questions or require additional information.

Very truly yours,
MCKENZIE ENGINEERING GROUP, INC.

A handwritten signature in blue ink, appearing to read 'Austin Chartier', is written over a light blue horizontal line.

Austin Chartier, P.E., S.E., LEED G.A.
Project Manager

CC: Doherty Law Offices
Holy Family Church



SURVEY SYMBOLS

- | | | |
|-------|--------------------------|--------------------------------|
| | • | REBAR |
| | ∨ | ANGLE IRON |
| CB/DH | ☐ | CONCRETE BOUND WITH DRILL HOLE |
| SB | ☐ | STONE BOUND |
| SB/DH | ☐ | STONE BOUND |

UTILITY SYMBOLS

- | | |
|---|-----------------------|
|  | CHIMNEY |
|  | ELECTRIC HAND HOLE |
|  | GUY POLE |
|  | GUY WIRE |
|  | HVAC UNIT |
|  | BUILDING LIGHT W/MAST |
|  | TRANSFORMER |
|  | WATER GATE |
|  | EXH. VENT |
|  | AIR VENT |
|  | DRAINAGE SUMP |
|  | EMH |
|  | SMH |
|  | DRAIN MANHOLE |
|  | TELEPHONE MANHOLE |
|  | DRAINAGE CATCH BASIN |
|  | DOOR WAY THRESHOLD |
|  | HYDRANT |
|  | POST INDICATOR VALVE |
|  | UTILITY POLE |
|  | YARD LIGHT |

LINE DESIGNATORS

- | | |
|--|----------------------|
| | WATER MAIN |
| | HANDRAIL |
| | JERSEY BARRIER |
| | GUARD RAIL |
| | RAILROAD TRACKS |
| | OVERHEAD WIRES |
| | GAS LINE |
| | WATER SERVICE |
| | UNDERGROUND ELECTRIC |
| | STORM DRAIN LINE |
| | SANITARY SEWER LINE |
| | DRAINAGE SWALE |
| | CHAIN LINK FENCE |

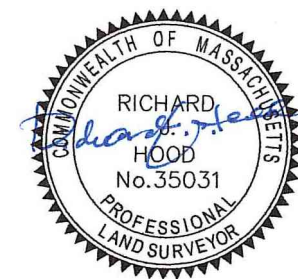
[illegible]

PREPARED BY:



**PROPOSED SCHOOLHOUSE
APARTMENTS
403 UNION STREET
(ASSESSOR PARCEL 34-157-0)
ROCKLAND, MASSACHUSETTS**

PROFESSIONAL SURVEYOR:



OWNERS/APPLICANT:
Roman Catholic Archbishop
403 Union Street
ROCKLAND, MASSACHUSETTS 02370

NOT FOR CONSTRUCTION

DRAWN BY:	RPL
DESIGNED BY:	AJC
CHECKED BY:	RTL
APPROVED BY:	RJH
DATE:	1/19/2021
SCALE:	1"=30'
PROJECT NO.:	220-160
DWG. TITLE:	

EXISTING CONDITIONS PLAN

DWG. NO:

EX-1

BUILDING, LOT AND GENERAL DISTRICT REGULATIONS

PARCEL ID NO. 34-157-0	
	R-4 RESIDENCE ZONING DISTRICT
MINIMUM LOT AREA	32,670 SQ. FT.
MAXIMUM NO. OF DWELLING UNITS PER 32,670 S.F.	4
MAXIMUM BUILDING AVERAGE % OF LOT	40
MAXIMUM NUMBER OF STORIES	3
MAXIMUM HEIGHT	36 FT.
FRONT YARD SETBACK	25 FT.
REAR YARD SETBACK	50 FT.
SIDE YARD SETBACK	15 FT.
MINIMUM LOT WIDTH	110 FT.
MINIMUM LOT FRONTAGE	110 FT.

GENERAL NOTES:

1. LOCUS IS SHOWN AS PARCEL NUMBER 34-157-0 ON THE TOWN OF ROCKLAND ASSESSORS MAPS.
2. LOCUS IS OWNED BY THE ROMAN CATHOLIC ARCHBISHOP, 403 UNION STREET, ROCKLAND MA
3. EXISTING CONDITIONS INFORMATION FOR THE SUBJECT PARCEL SHOWN HEREON IS TAKEN FROM A PLAN RECORDED WITH THE PLYMOUTH COUNTY REGISTRY OF DEEDS AS PLAN BK. 11 PG. 155 ENTITLED "HOLY FAMILY PARISH" – ROCKLAND MASSACHUSETTS, PREPARED BY REGISTERED LAND SURVEYOR LORING H. JACOBS AND DATED 01/11/1956. OFFSITE CONDITIONS INFORMATION COMPILED FROM MASSGIS DATA AND LICENSED GOOGLE ORTHO IMAGERY.
4. THE PROPERTY SHOWN HEREON IS LOCATED IN ZONE X AS SHOWN ON F.I.R.M. No. 25023C0093J, EFFECTIVE 7/17/12.
5. THE PROPERTY SHOWN HEREON DOES NOT LIE IN A FLOOD PLAN OVERLAY DISTRICT.
6. LOCUS IS SITUATED WITHIN THE TOWN OF ROCKLAND R-4 RESIDENCE ZONING DISTRICT.

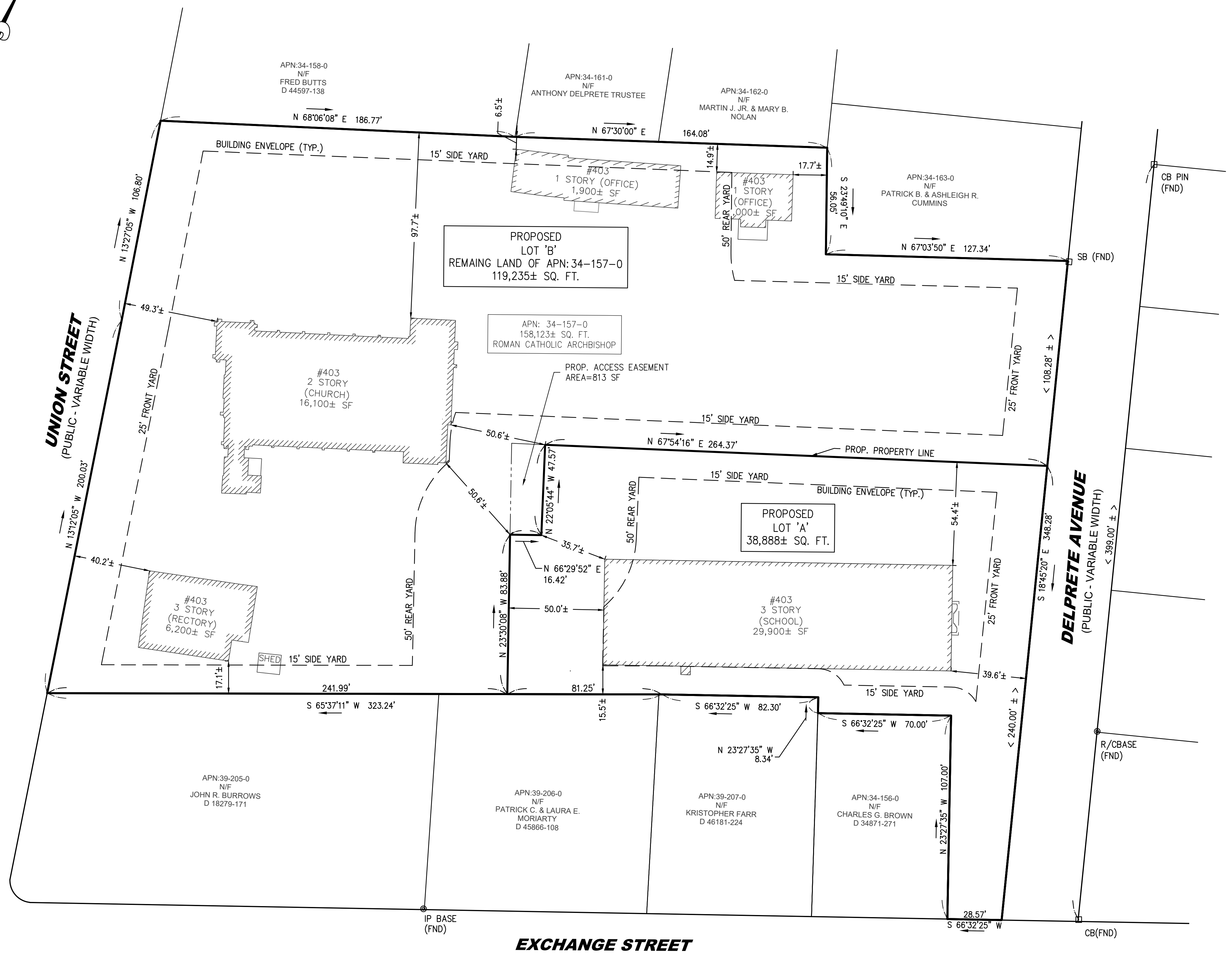
SCALE: 1" = 30'

A horizontal graphic scale bar with alternating black and white segments. The segments are labeled with the following values from left to right: 0, 15, 30, 60, and 120. The bar is divided into four equal segments, each representing 30 feet.

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M: \MEG\2020 PROJECTS\220-160

CONNOLLY - HOLY FAMILY, ROCKLAND\DWGS\220-160 ECP.DWG



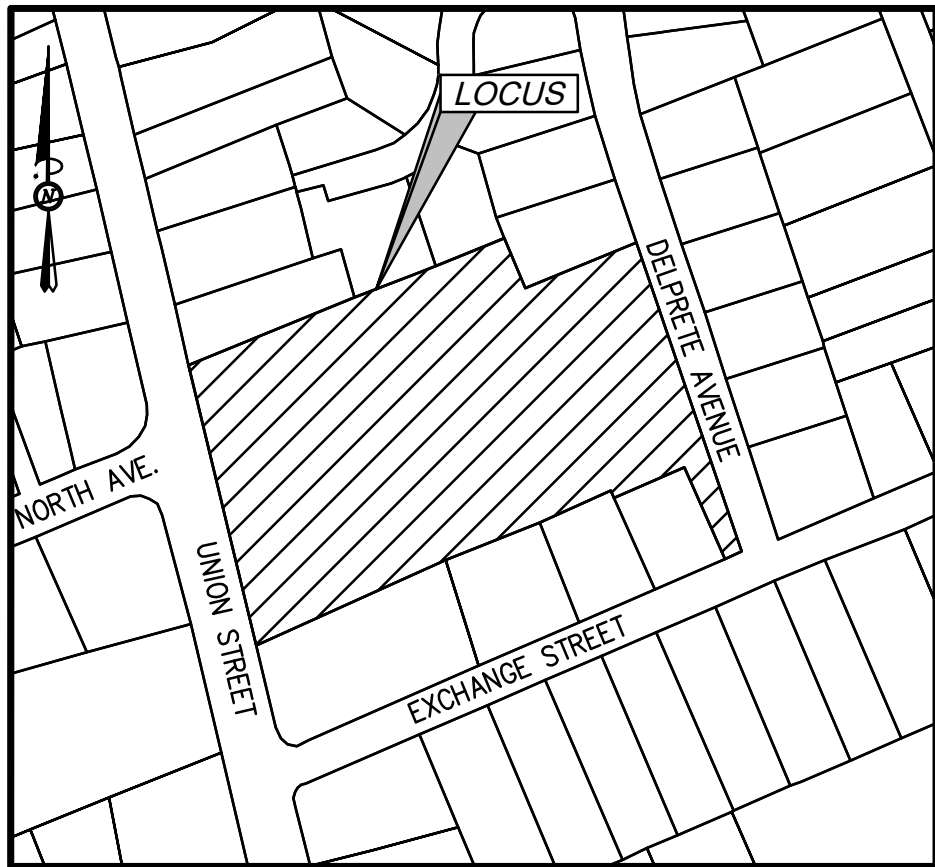
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4. THE PROPERTY SHOWN HEREON IS LOCATED IN ZONE X AS SHOWN ON F.I.R.M. No. 25023C0093J, EFFECTIVE 7/17/12.
5. THE PROPERTY SHOWN HEREON DOES NOT LIE IN A FLOOD PLAIN OVERLAY DISTRICT.
6. LOCUS IS SITUATED WITHIN THE TOWN OF ROCKLAND R-4 RESIDENCE ZONING DISTRICT.
7. THE PURPOSE OF THIS PLAN IS TO CONVEY A PORTION OF THE EXISTING ASSESSOR PARCEL NUMBER 34-157-0 WITH AN EXISTING AREA OF 158,123± SQUARE FEET, TO CREATE A BUILDABLE LOT 'A' WITH AN AREA OF 38,888± SQUARE FEET, THE REMAINING PORTION OF APN 34-157-0 SHALL HAVE NO CHANGE IN OWNERSHIP, AND IS SHOWN AS LOT 'B' WITH AN AREA OF 119,235± SQUARE FEET.

RICHARD J. HOOD, PLS _____ DATE _____

[illegible]

DWG. NO: **ANR-1**



LOCUS MAP
SCALE 1"=200'

GENERAL NOTES:

- LOCUS IS SHOWN AS PARCEL NUMBER 34-157-0 ON THE TOWN OF ROCKLAND ASSESSORS MAPS.
- LOCUS IS OWNED BY THE ROMAN CATHOLIC ARCHBISHOP, 403 UNION STREET, ROCKLAND MASSACHUSETTS.
- EXISTING CONDITIONS INFORMATION WAS OBTAINED FROM AN ON THE GROUND INSTRUMENT SURVEY BY MCKENZIE ENGINEERING GROUP INC. IN JANUARY OF 2021. THE PROPERTY LINE INFORMATION IS IN REFERENCE TO A PLAN RECORDED WITH THE PLYMOUTH COUNTY REGISTRY OF DEEDS AS PLAN BK. 11 PG. 155 ENTITLED "HOLY FAMILY PARISH" - ROCKLAND MASSACHUSETTS, PREPARED BY REGISTERED LAND SURVEYOR LORING H. JACOBS AND DATED 01/11/1956.
- THE PROPERTY SHOWN HEREON IS LOCATED IN ZONE X OF THE FLOOD INSURANCE RATE MAP COMMUNITY PANEL No. 25023C0093J, WHICH BEARS AN EFFECTIVE DATE OF 7/17/2012.
- THE PROPERTY SHOWN HEREON DOES NOT LIE IN A FLOOD PLAIN OVERLAY DISTRICT.
- LOCUS IS SITUATED WITHIN THE TOWN OF ROCKLAND R-4 RESIDENCE ZONING DISTRICT.

LOT COVERAGE TABLE - AREA 'B'

COVERAGE	EXISTING	PROPOSED	NET CHANGE
IMPERVIOUS	53,899 S.F.	53,657 S.F.	-242 S.F.
PERVIOUS	10,162 S.F.	10,404 S.F.	+242 S.F.
TOTAL	64,061 S.F.	64,061 S.F.	0 S.F.

SITE COVERAGE TABLE - PROPOSED LOT A

PROPOSED LOT 'A'	
LOT AREA	38,888 S.F. / 0.89 ACRE
BUILDING COVERAGE	10,184 S.F. (26.2%)
PAVED PARKING (VEHICULAR)	15,770 S.F. (40.5%)
OPEN SPACE	11,385 S.F. (29.3%)
TOTAL HOUSING UNITS	27 UNITS
TOTAL PARKING SPACES	35 SPACES
PARKING SPACES PER UNIT	1.3 SPACES / UNIT
UNIT DENSITY	30.3 UNITS / ACRE

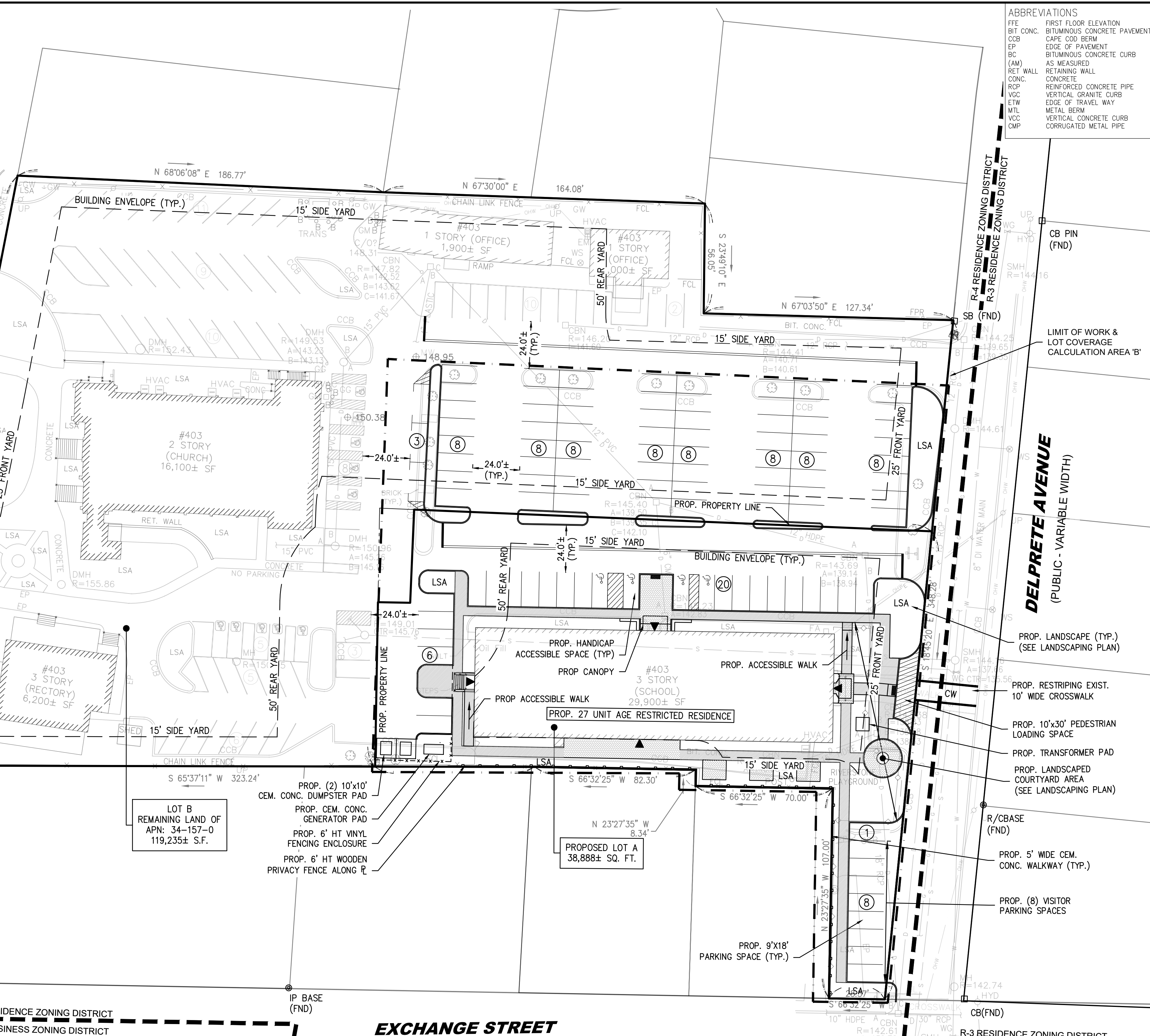
BUILDING, LOT AND GENERAL DISTRICT REGULATIONS

PARCEL ID NO. 34-157-0	R-4 RESIDENCE ZONING DISTRICT
MINIMUM LOT AREA	32,670 SQ. FT.
MAXIMUM NO. OF DWELLING UNITS PER 32,670 S.F.	4
MAXIMUM BUILDING AVERAGE % OF LOT	40
MAXIMUM NUMBER OF STORIES	3
MAXIMUM HEIGHT	36 FT.
FRONT YARD SETBACK	25 FT.
REAR YARD SETBACK	50 FT.
SIDE YARD SETBACK	15 FT.
MINIMUM LOT WIDTH	110 FT.
MINIMUM LOT FRONTAGE	110 FT.

PARKING SUMMARY - REMAINING LAND OF APN: 34-157-0

PER ROCKLAND ZONING BY LAW 415-35 OFF-STREET PARKING REQUIREMENTS		
R-4 RESIDENCE ZONING	NUMBER OF SPACES REQUIRED	NUMBER OF SPACES PROVIDED
CHURCH HOUSE (CHURCH OR OTHER PLACE OF WORSHIP)	* 1.0 FOR EVERY 12 SEATS UPPER CHURCH CAPACITY=486 SEATS LOWER CHURCH CAPACITY=430 SEATS (1.0 x 916 SEATS/12 = 77 SPACES)	> 85 SPACES
	1.0 FOR EVERY CHURCH OFFICIAL (1.0 x 3 PRIESTS = 3 SPACES)	
	1.0 FOR EVERY TWO EMPLOYEES (1.0 x (10 EMPLOYEE/2) = 5 SPACES)	
	TOTAL = 85 SPACES	
RECTORY BUILDING (SINGLE FAMILY DWELLING)	2.0 PER DWELLING (2.0 x 1 DWELLING = 2 SPACES)	> 2 SPACES
TWO OUTBUILDING OFFICES (PROFESSIONAL OFFICES)	1.0 PER 250 Sq. Ft. FLOOR AREA (2,000+1,100)/250 = 13 SPACES	> 13 SPACES
TOTAL	100 SPACES	136 SPACES

* CHURCH HOUSE DATA FOR CHURCH OFFICIALS, EMPLOYEES, AND CHURCH SEATING OBTAINED FROM FATHER HICKEY, HOLY FAMILY CHURCH OF ROCKLAND



ABBREVIATIONS

FTE	FIRST FLOOR ELEVATION
BIT CONC.	BITUMINOUS CONCRETE PAVEMENT
CCB	CAPE COD BERM
EP	EDGE OF PAVEMENT
BC	BITUMINOUS CONCRETE CURB
(AM)	AS MEASURED
RET WALL	RETAINING WALL
CONC.	CONCRETE
RCP	REINFORCED CONCRETE PIPE
VGC	VERTICAL GRANITE CURB
ETW	EDGE OF TRAVEL WAY
MTL	METAL BERM
VCC	VERTICAL CONCRETE CURB
CMP	CORRUGATED METAL PIPE

LEGEND

SURVEY SYMBOLS

•	REBAR
∨	ANGLE IRON
CB/DH	CONCRETE BOUND WITH DRILL HOLE
SB	STONE BOUND
SB/DH	STONE BOUND

UTILITY SYMBOLS

CHIMNEY	CHIMNEY
ELECTRIC HAND HOLE	ELECTRIC HAND HOLE
GUY POLE	GUY POLE
GUY WIRE	GUY WIRE
HVAC UNIT	HVAC UNIT
BUILDING LIGHT W/MAST	BUILDING LIGHT W/MAST
BUILDING LIGHT TRANSFORMER	BUILDING LIGHT TRANSFORMER
WATER GATE	WATER GATE
EXHAUST VENT	EXHAUST VENT
AIR VENT	AIR VENT
DRAINAGE SUMP	DRAINAGE SUMP
EMH	ELECTRIC MANHOLE
SMH	SEWER MANHOLE
DMH	DRAIN MANHOLE
TMH	TELEPHONE MANHOLE
CBN	DRAINAGE CATCH BASIN
DOOR WAY THRESHOLD	DOOR WAY THRESHOLD
HYDRANT	HYDRANT
POST INDICATOR VALVE	POST INDICATOR VALVE
UTILITY POLE	UTILITY POLE
YARD LIGHT	YARD LIGHT

LINE DESIGNATORS

W	WATER MAIN
H	HANDRAIL
J	JERSEY BARRIER
G	GUARD RAIL
R	RAILROAD TRACKS
OWH	OVERHEAD WIRES
G	GAS LINE
WS	WATER SERVICE
E	UNDERGROUND ELECTRIC
D	STORM DRAIN LINE
S	SANITARY SEWER LINE
X	DRAINAGE SWALE
X	CHAIN LINK FENCE

PROPOSED SCHOOLHOUSE

APARTMENTS

403 UNION STREET

(ASSESSOR PARCEL 34-157-0)

ROCKLAND, MASSACHUSETTS

PROFESSIONAL ENGINEER:



OWNERS/APPLICANT:
Roman Catholic Archbishop
403 Union Street
ROCKLAND, MASSACHUSETTS 02370

DRAWN BY:	AJC
DESIGNED BY:	AJC
CHECKED BY:	BCM
APPROVED BY:	BCM
DATE:	12/10/2021
SCALE:	1"=30'
PROJECT NO.:	220-160
DWG. TITLE:	

SITE PLAN

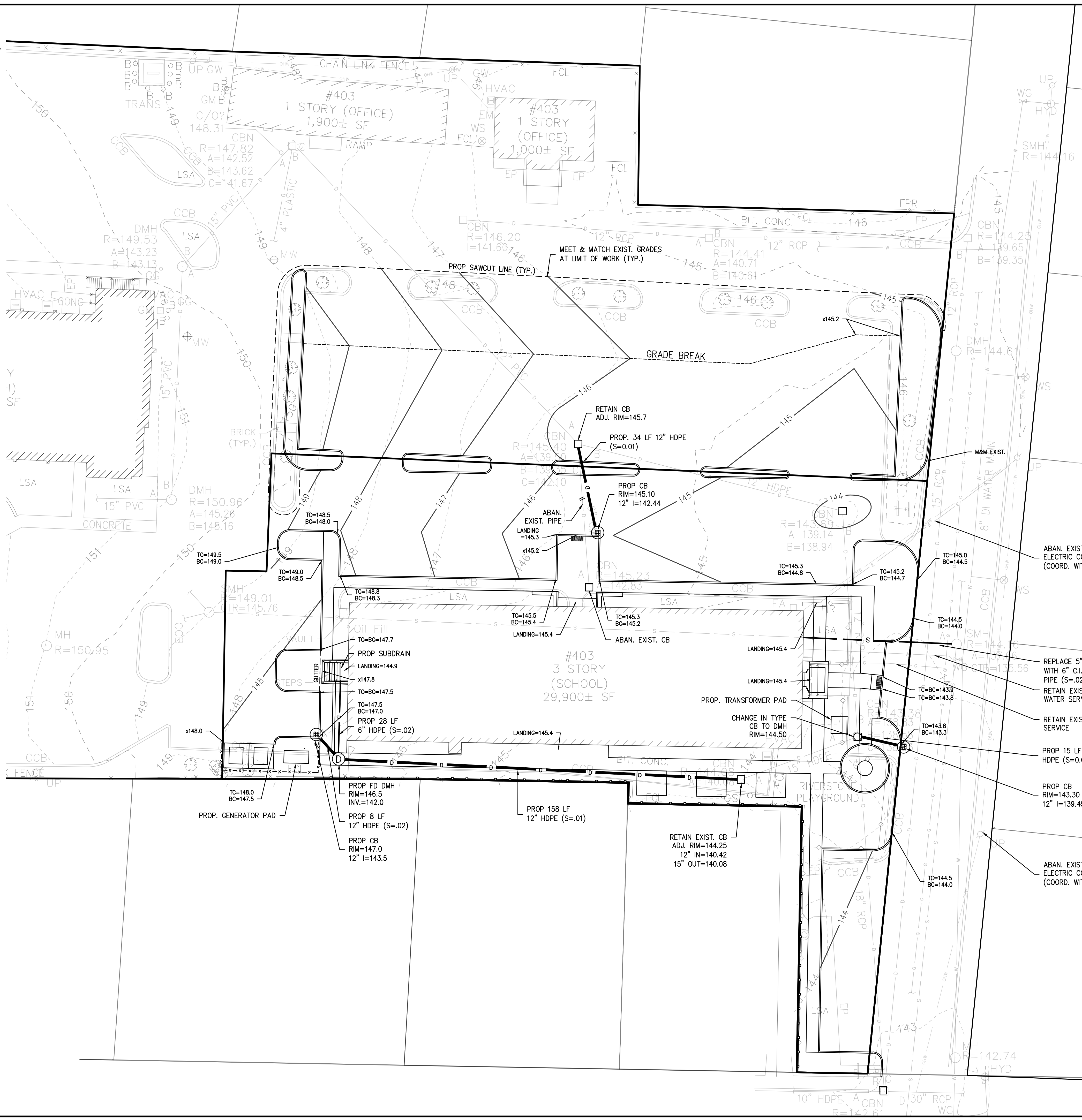
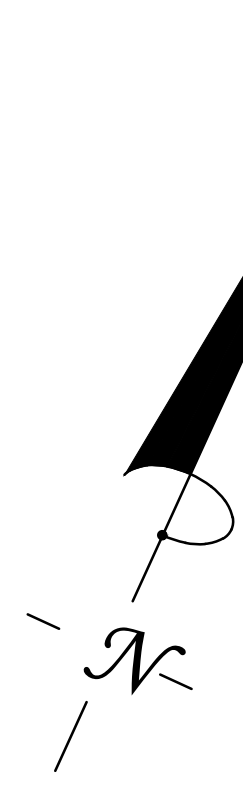
DWG. NO.:

C-1

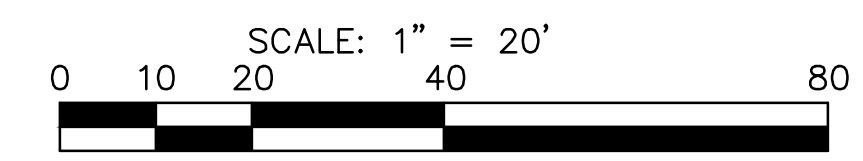
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N:\MEG\2020 PROJECTS\220-160

CONNOLLY - HOLY FAMILY, ROCKLAND\DWGS\220-160 MAIN.DWG

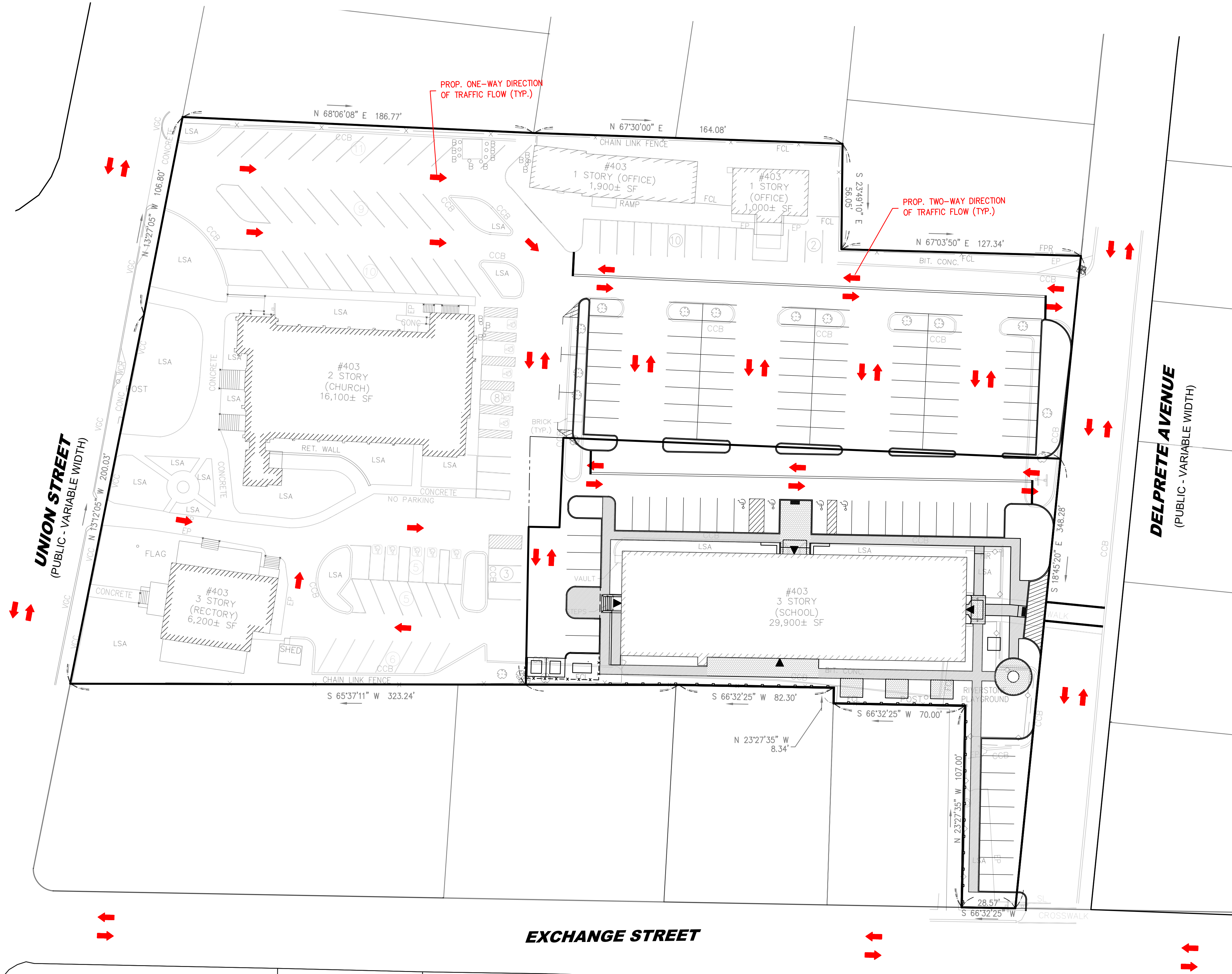
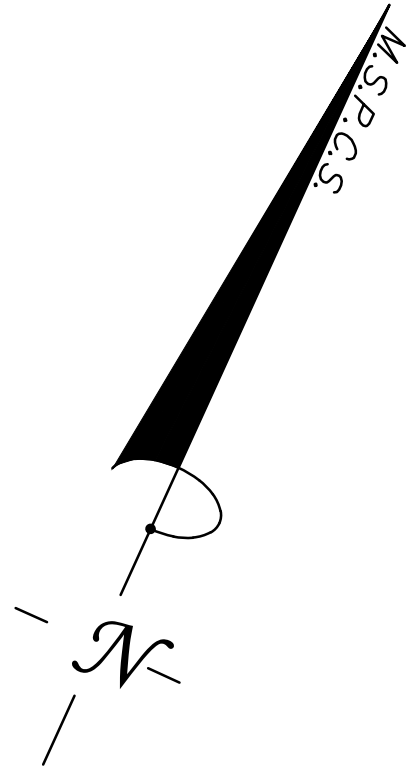


- GENERAL UTILITY & CONSTRUCTION NOTES:**
- 1) THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "DIGSAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF UTILITIES AND THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLAN.
 - 2) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCHMARKS NECESSARY FOR THE WORK.
 - 3) THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE MASSDOT CONSTRUCTION SPECIFICATIONS AND DETAILS FOR ALL CONSTRUCTION. ANY DEVIATION FROM THE APPROVED SPECIFICATIONS AND DETAILS MUST BE APPROVED BY THE DESIGN ENGINEER PRIOR TO COMMENCEMENT OF WORK.
 - 4) ANY ERRORS OR OMISSIONS IN THE DESIGN PLANS DISCOVERED BY THE CONTRACTOR SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER PRIOR TO COMPLETING RELATED WORK.
 - 5) ALL ELEVATIONS ARE REFERENCED TO NAVD88 VERTICAL DATUM.
 - 6) WHERE AN EXISTING UNDERGROUND UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
 - 7) ALL EXISTING SIGNS, BOLLARDS AND BOULDERS WITHIN THE PROJECT LIMITS SHALL BE RETAINED UNLESS OTHERWISE NOTED.
 - 8) JOINTS BETWEEN THE NEW HOT MIX ASPHALT ROADWAY PAVEMENT AND SAWCUT EXISTING PAVEMENT SHALL BE SEALED WITH BITUMEN AND BACKSAND.
 - 9) ALL EXISTING DRAINAGE GRATES AND COVERS AND WATER GATES SHALL BE ADJUSTED TO FINISHED GRADE WITHIN LIMITS OF WORK.
 - 10) ALL PROPOSED PEDESTRIAN ACCOMMODATIONS (I.E. SIDEWALKS, WHEELCHAIR RAMPS, ETC.) SHALL COMPLY WITH CURRENT ADA & MAAB RULES AND REGULATIONS AND MASSDOT STANDARDS.
 - 11) ALL DRAINAGE STRUCTURES WITHIN THE LIMITS OF WORK SHALL BE CLEANED PRIOR TO THE CONCLUSION OF THE PROJECT UNLESS OTHERWISE NOTED.
 - 12) ALL EXISTING PAVEMENT MARKINGS AND STRIPING SHALL BE REPLACED, IN KIND, FOLLOWING PLACEMENT OF THE TOP COURSE OF PAVEMENT, AS REQUIRED. ALL PAINTING SHALL COMPLY WITH MASSDOT SPECIFICATION 860 "REFLECTORIZED PAVEMENT MARKINGS" AND MUTCD STANDARDS.



© MCKENZIE ENGINEERING GROUP, INC.

BY	APP	DESCRIPTION	DATE	REV	PREPARED BY:
		PER FEB. 22 ZBA HEARING	3/15/2022	1	
PROPOSED SCHOOLHOUSE APARTMENTS 403 UNION STREET (ASSESSOR PARCEL 34-157-0)					
ROCKLAND, MASSACHUSETTS					
PROFESSIONAL ENGINEER: 					
OWNERS/APPLICANT: Roman Catholic Archbishop 403 Union Street ROCKLAND, MASSACHUSETTS 02370					
DRAWN BY: AJC DESIGNED BY: AJC CHECKED BY: BCM APPROVED BY: BCM DATE: 12/10/2021 SCALE: 1"=20' PROJECT NO.: 220-160 DWG. TITLE:					
GRADING & UTILITY PLAN					
DWG. NO.: C-2					



ABBREVIATIONS

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CCB	CAPE COD BERM
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BUILDING LIGHT	BUILDING LIGHT
TRANSFORMER	TRANSFORMER
WATER GATE	WATER GATE
EXHAUST VENT	EXHAUST VENT
AIR VENT	AIR VENT
DRAINAGE SUMP	DRAINAGE SUMP
EMH	ELECTRIC MANHOLE
SMH	SEWER MANHOLE
DMH	DRAIN MANHOLE
TMH	TELEPHONE MANHOLE
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DOOR WAY THRESHOLD	DOOR WAY THRESHOLD
HYDRANT	HYDRANT
POST INDICATOR VALVE	POST INDICATOR VALVE
UTILITY POLE	UTILITY POLE
YARD LIGHT	YARD LIGHT
RIP RAP	RIP RAP
BOLLARD	BOLLARD
SIGN	SIGN
FIRE ALARM	FIRE ALARM
DECIDUOUS TREE	DECIDUOUS TREE
CONIFEROUS TREE	CONIFEROUS TREE
LINE DESIGNATORS	
W	WATER MAIN
H	HANDRAIL
J	JERSEY BARRIER
G	GUARD RAIL
R	RAILROAD TRACKS
OW	OVERHEAD WIRES
G	GAS LINE
WS	WATER SERVICE
E	UNDERGROUND ELECTRIC
D	STORM DRAIN LINE
S	SANITARY SEWER LINE
SW	DRAINAGE SWALE
X	CHAIN LINK FENCE

BY	APP	DESCRIPTION	DATE	REV	PREPARED BY:
	AJC	PER FEB. 22 ZBA HEARING	3/15/2022	1	

MCKENZIE ENGINEERING GROUP
Assinippi Office Park
150 Longwater Drive, Suite 101
Norwell, MA 02061
P: 781.792.3900
www.mckeng.com

PROPOSED SCHOOLHOUSE APARTMENTS
403 UNION STREET
(ASSESSOR PARCEL 34-157-0)

ROCKLAND, MASSACHUSETTS

PROFESSIONAL ENGINEER:

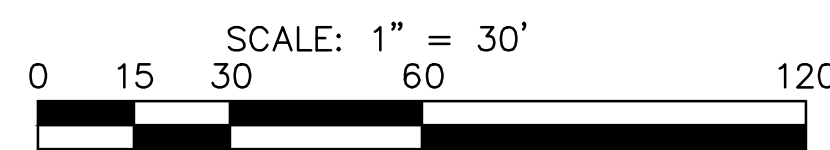
OWNERS/APPLICANT:

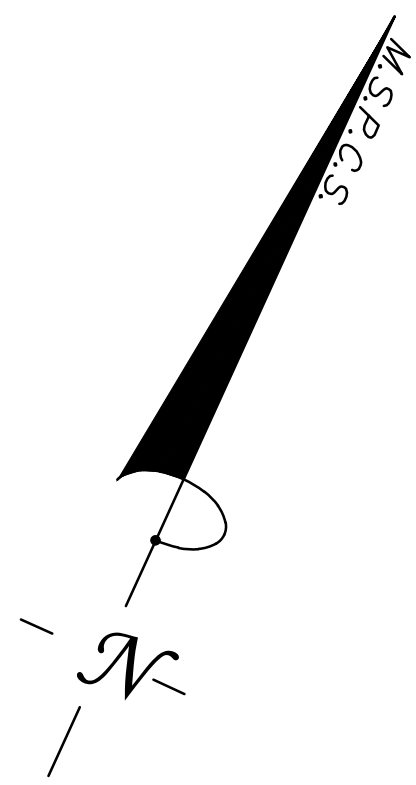
Roman Catholic Archbishop
403 Union Street
ROCKLAND, MASSACHUSETTS 02370

DRAWN BY:	AJC
DESIGNED BY:	AJC
CHECKED BY:	BCM
APPROVED BY:	BCM
DATE:	12/10/2021
SCALE:	1" = 30'
PROJECT NO.:	220-160
DWG. TITLE:	TRAFFIC FLOW PLAN

DWG. NO:

T-1





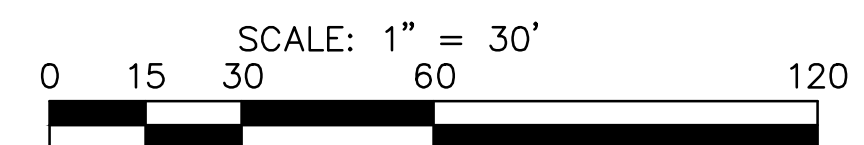
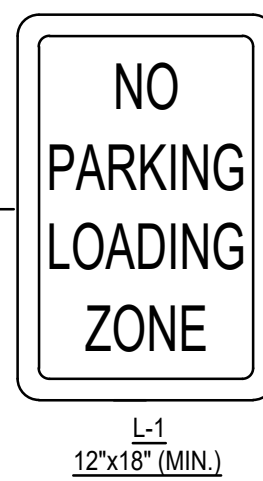
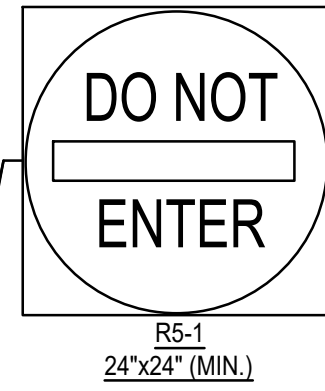
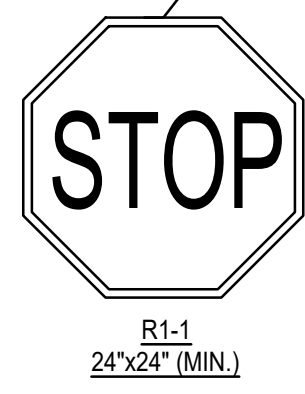
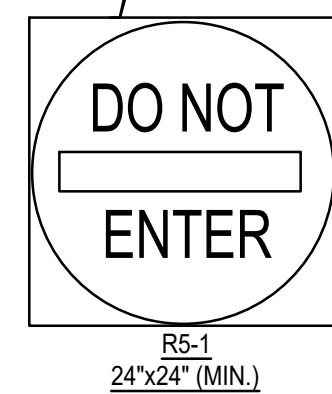
UNION STREET
(PUBLIC - VARIABLE WIDTH)

DELPRETE AVENUE
(PUBLIC - VARIABLE WIDTH)

EXCHANGE STREET

PAVEMENT MARKING LEGEND

- EXISTING PARKING SPACE TO REMAIN
- 9'X18' PARKING SPACE
4" SOLID WHITE PAINT
(HOLY FAMILY CHURCH ONLY)
- 9'X18' PARKING SPACE
4" SOLID YELLOW PAINT
(SCHOOLHOUSE APARTMENT ONLY)
- SL 12" WHITE STOP LINE
- DYCL DOUBLE YELLOW CENTER LINE
- CW CROSSWALK



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BY APP	DESCRIPTION	DATE	REV	PREPARED BY:
AJC	PER FEB. 22 ZBA HEARING	3/15/2022	1	

MCKENZIE ENGINEERING GROUP
Assinippi Office Park
150 Longwater Drive, Suite 101
Norwell, MA 02061
P: 781.792.3900
www.mckeng.com

PROPOSED SCHOOLHOUSE APARTMENTS
403 UNION STREET
(ASSESSOR PARCEL 34-157-0)

ROCKLAND, MASSACHUSETTS

PROFESSIONAL ENGINEER:

OWNERS/APPLICANT:
Roman Catholic Archbishop
403 Union Street
ROCKLAND, MASSACHUSETTS 02370

NOT FOR CONSTRUCTION

DRAWN BY: AJC
DESIGNED BY: AJC
CHECKED BY: BCM
APPROVED BY: BCM
DATE: 12/10/2021
SCALE: 1" = 30'
PROJECT NO.: 220-160
DWG. TITLE:
SIGNAGE & PAVEMENT MARKING PLAN
DWG. NO.: S-1



PROJECT ARCHITECT

SEAL

CIVIL:
Mckenzie Engineering Group
150 Longwater Drive, Suite 101
Norwell, MA 02061
P: 781-792-3900

LANDSCAPE ARCHITECT:
Michael D'Angelo Landscape Architecture
LLC
732 East Broadway, Suite #3
Boston, MA 02127
P: 203-592-4788

MECHANICAL, ELECTRICAL,
PLUMBING, FIRE PROTECTION:
BLW Engineers, Inc.
311 Great Road
Littleton, MA 01460
P: 978-486-4301

PROJECT CONSULTANTS

SCHOOLHOUSE
APARTMENTS
ROCKLAND

6 Delprete
Avenue
Rockland, MA

PROJECT INFORMATION

Connolly and Partners, LLC
439 Washington Street
Braintree, MA 02184
P: 617-523-8620

First Hartford Realty Corp.
P.O. Box 1270
149 Colonial Road
Manchester, CT 06045
P: 860-646-6555

OWNER INFORMATION

No.	Description	Date

PROJECT REVISIONS

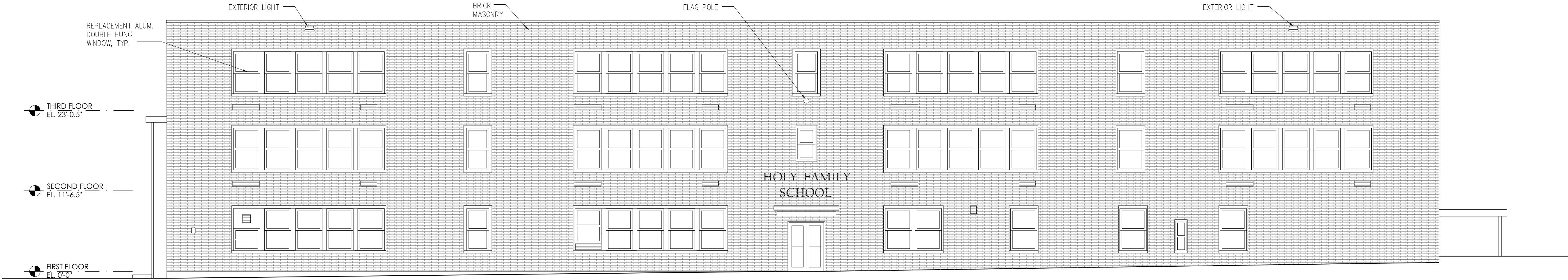
Job No.:	2020-027
Date:	March 15, 2021
Scale:	As Noted
Designed By:	DR
Drawn By:	JM
Checked By:	JAS
Approved By:	JAS
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Existing
Elevations

SHEET NAME

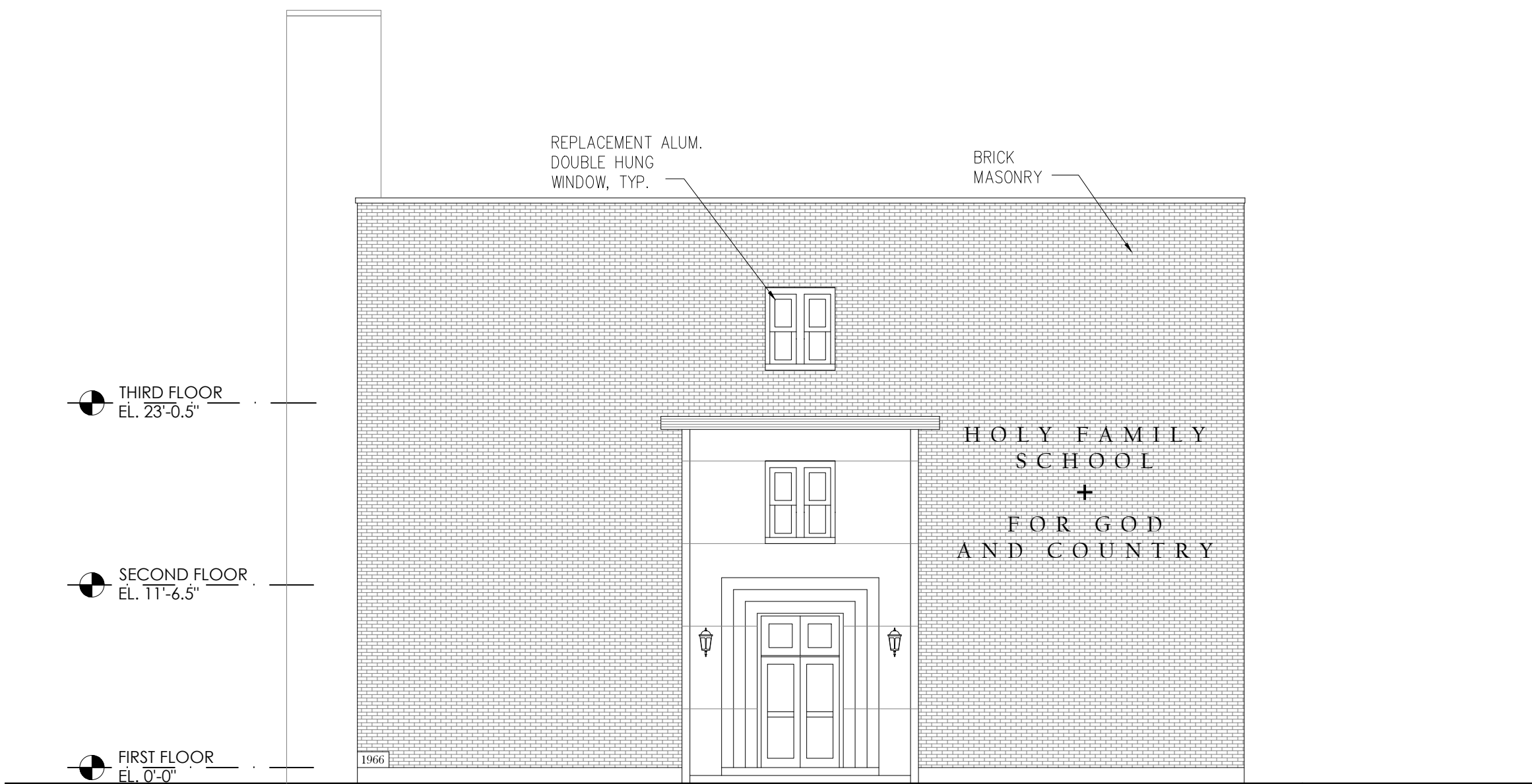
EX-3

SHEET NO.



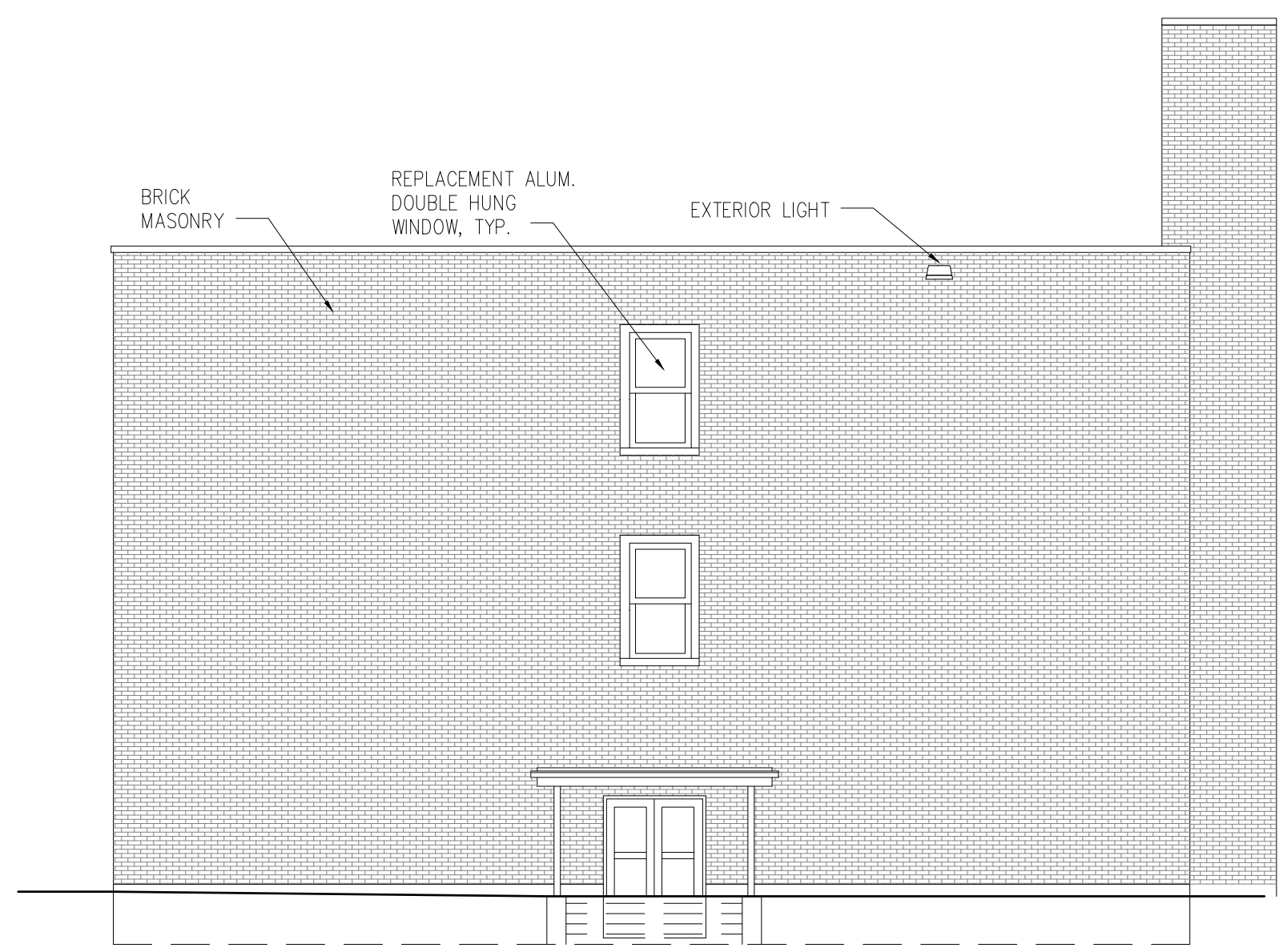
1 Existing North Elevation

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



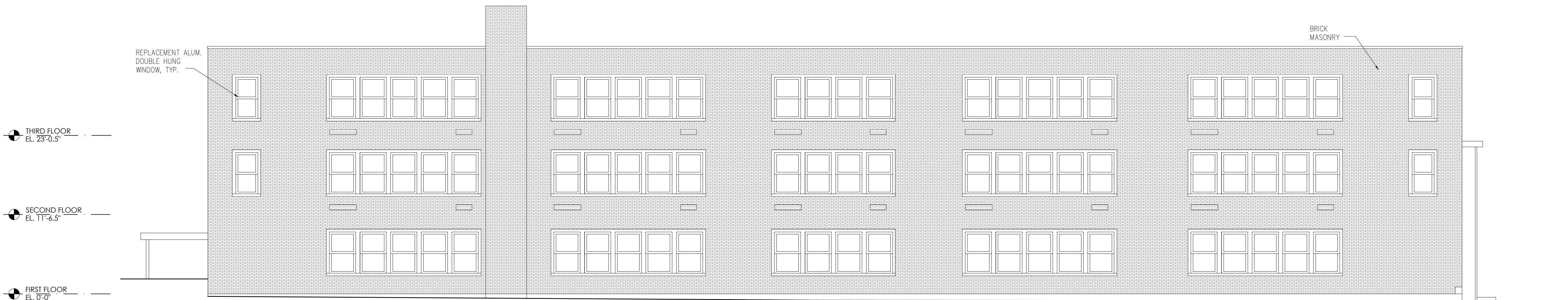
2 Existing East Elevation

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



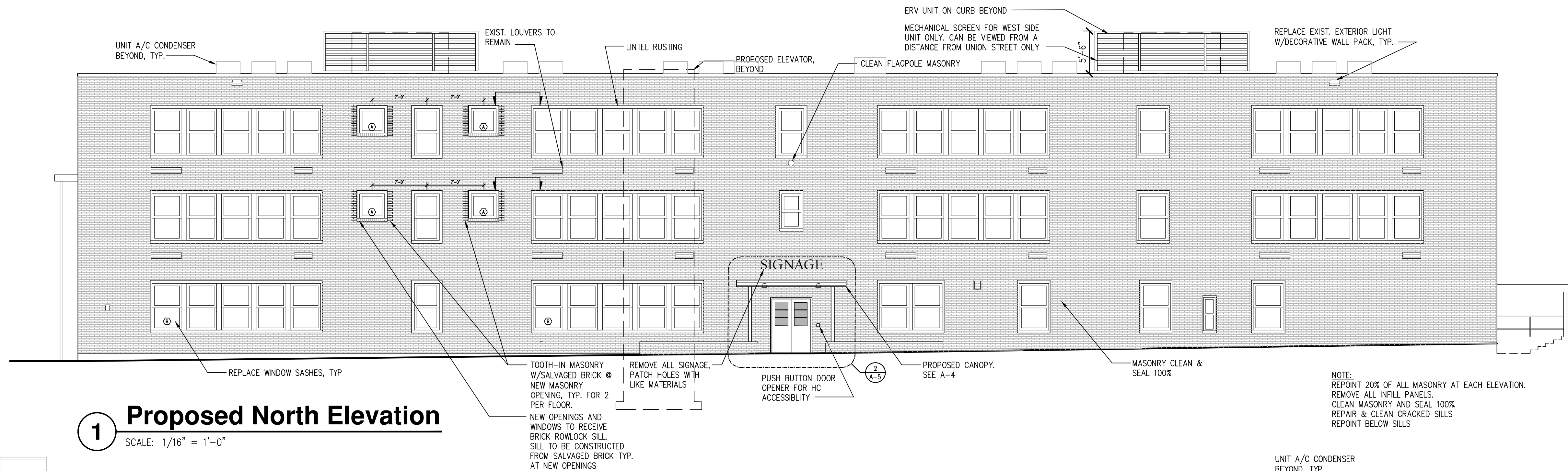
3 Existing West Elevation

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



4 Existing South Elevation

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



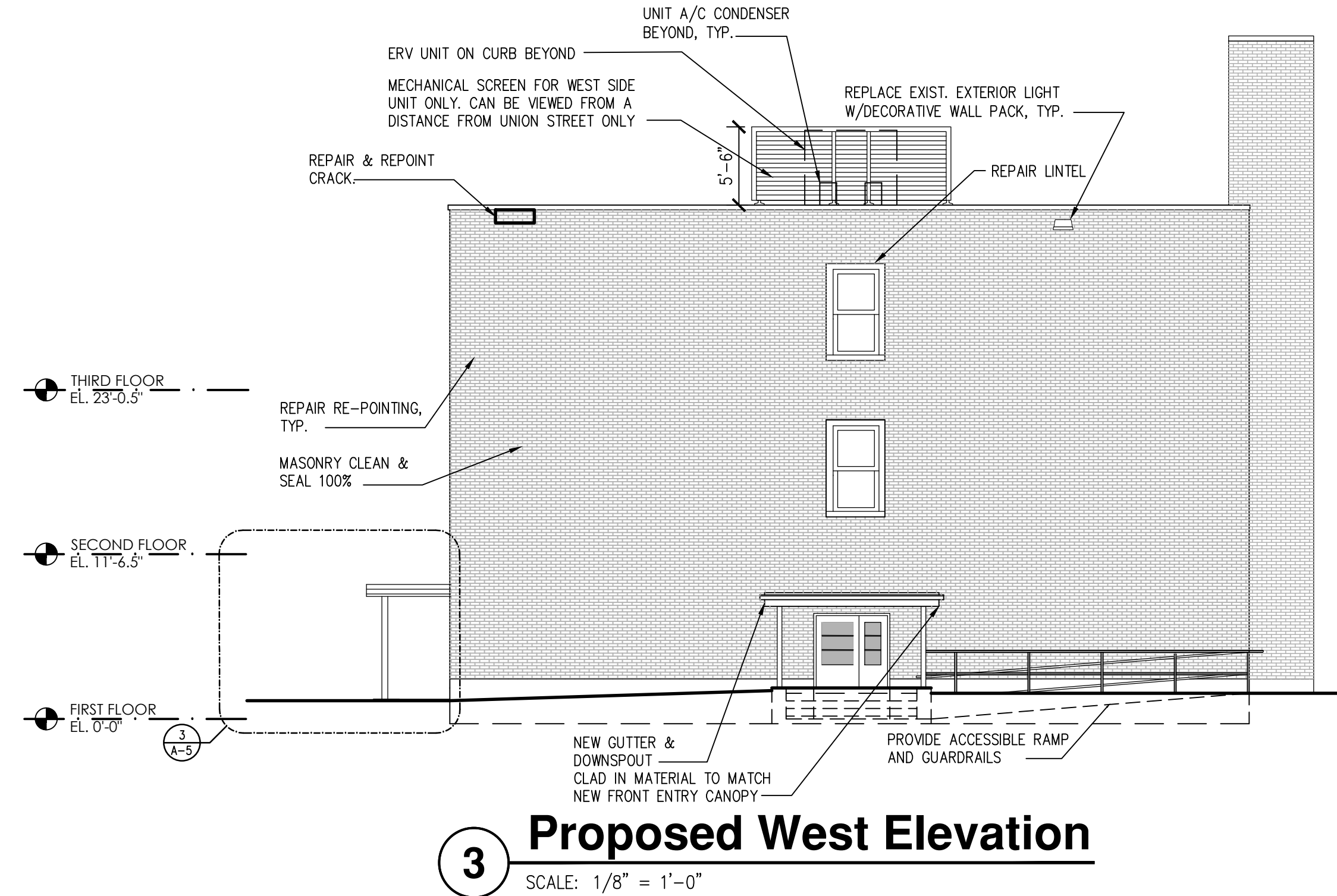
1 Proposed North Elevation

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



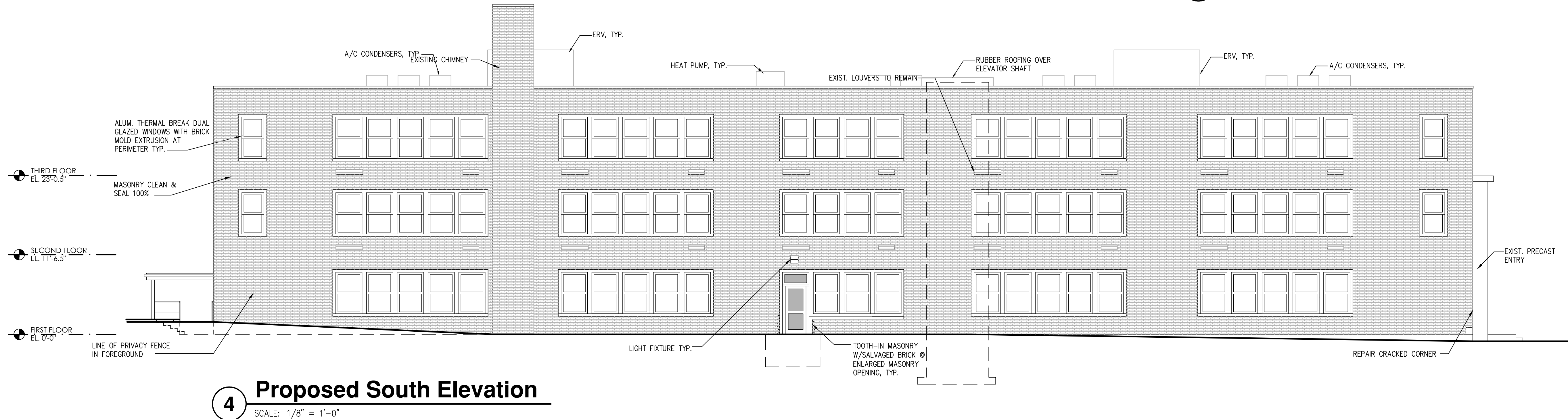
2 Proposed East Elevation

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



3 Proposed West Elevation

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



4 Proposed South Elevation

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

SCHOOLHOUSE APARTMENTS ROCKLAND

6 Delprete
Avenue
Rockland, MA

PROJECT INFORMATION

Connolly and Partners, LLC
439 Washington Street
Braintree, MA 02184
P: 617-523-8620

First Hartford Realty Corp.
P.O. Box 1270
149 Colonial Road
Manchester, CT 06045
P: 860-646-6555

OWNER INFORMATION

No.	Description	Date
1	MHC revisions	9/28/2021

Job No.:	2020-027
Date:	March 15, 2021
Scale:	As Noted
Designed By:	DR
Drawn By:	JM
Checked By:	JAS
Approved By:	JAS
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Proposed Elevations

SHEET NAME

A-3

SHEET NO.

SCHOOLHOUSE
APARTMENTS
ROCKLAND

6 Delprete
Avenue
Rockland, MA

PROJECT INFORMATION

Connolly and Partners, LLC
439 Washington Street
Braintree, MA 02184
P: 617-523-8620

First Hartford Realty Corp.
P.O. Box 1270
149 Colonial Road
Manchester, CT 06045
P: 860-646-6555

OWNER INFORMATION

1 MHC revisions 9/28/2021

No.	Description	Date
-----	-------------	------

PROJECT REVISIONS

Job No.: 2020-027

Date: March 15, 2021

Scale: As Noted

Designed By: DR

Drawn By: JM

Checked By: JAS

Approved By: JAS

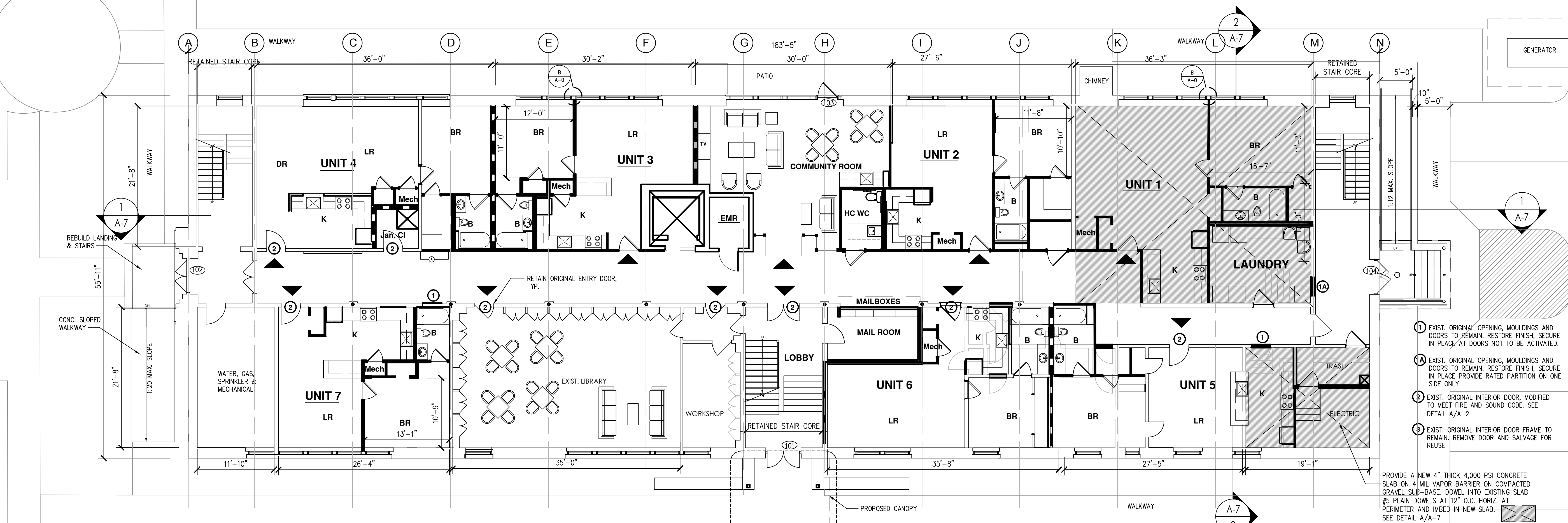
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First and
Second Floor
Plans

SHEET NAME

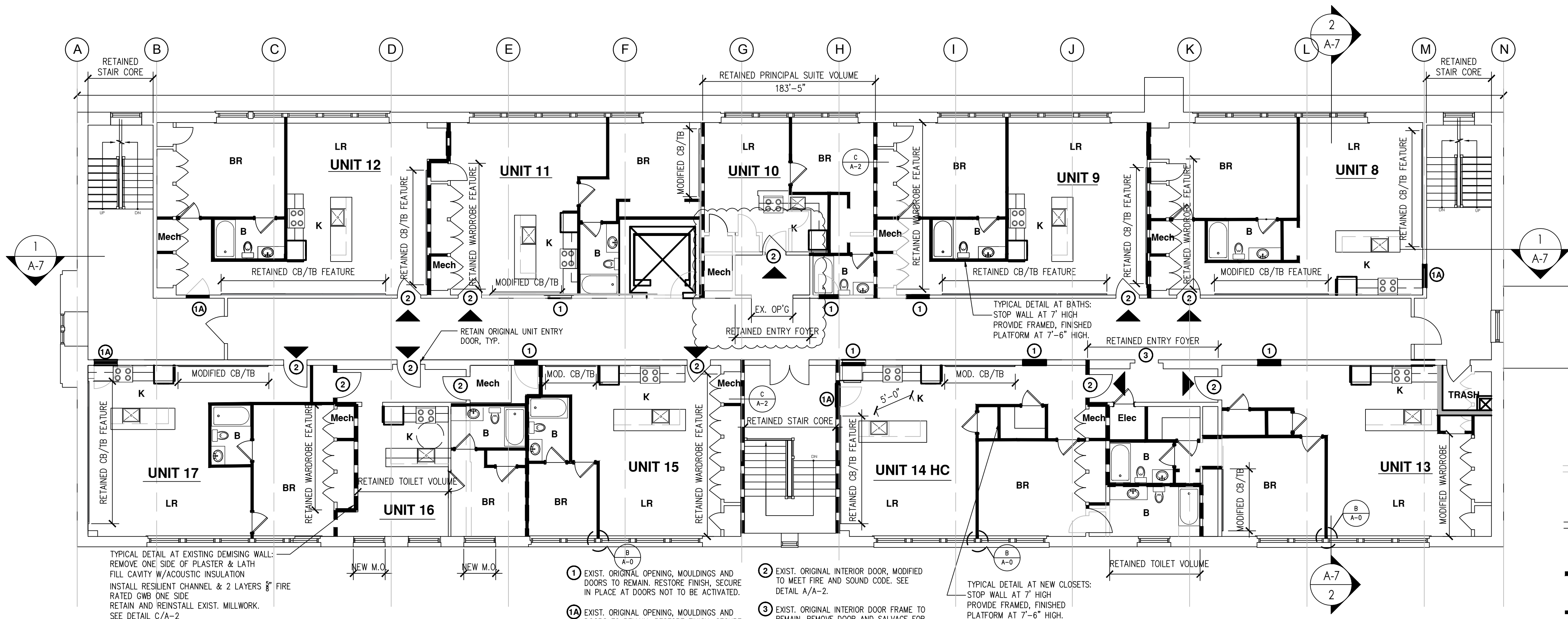
A-1

SHEET NO.



First Floor Plan

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



Second Floor Plan

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

- DENOTES REMOVED EXIST. PARTITION, DOOR AND MODIFIED WARDROBE OR CHALKBD./ TACKBD. PATCH ALL FABRIC TO REMAIN WITH LIKE MATERIALS, PREP, PRIME AND PAINT
- DENOTES EXIST. PARTITION, DOOR AND WARDROBE OR CHALKBD./ TACKBD TO REMAIN. REFURBISH WITH LIKE MATERIALS, PREP, PRIME AND PAINT
- 1 HOUR RATED DEMISING WALL
- DENOTES NEW PARTITION

LANDSCAPE ARCHITECT:
Michael D'Angelo Landscape Architecture
LLC
32 East Broadway, Suite #3
Boston, MA 02127
203-592-4788

MECHANICAL, ELECTRICAL,
PLUMBING, FIRE PROTECTION:
LW Engineers, Inc.
11 Great Road
Littleton, MA 01460
978-486-4301

PROJECT CONSULTANTS

6 Delprete
Avenue
Rockland, MA

Donnelly and Partners, LLC
39 Washington Street
Braintree, MA 02184
t 617-523-8620

First Hartford Realty Corp.
P.O. Box 1270
49 Colonial Road
Manchester, CT 06045
t 860-646-6555

PROJECT REVISIONS

Sub No.: 2020-027

Sub No.: 2020-027

Date: March 15, 2021

Sample:	As Noted
---------	----------

Sale.	As Noted
1. 15	25

Designed By:	DR
--------------	----

Drawn By: JM

Checked By: JAS

Approved By:	JAS
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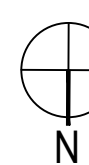
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Second & Third Floor Plans

SHEET NAME

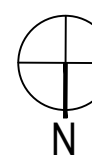
A-2

SHEET NO.



Third Floor Plan

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

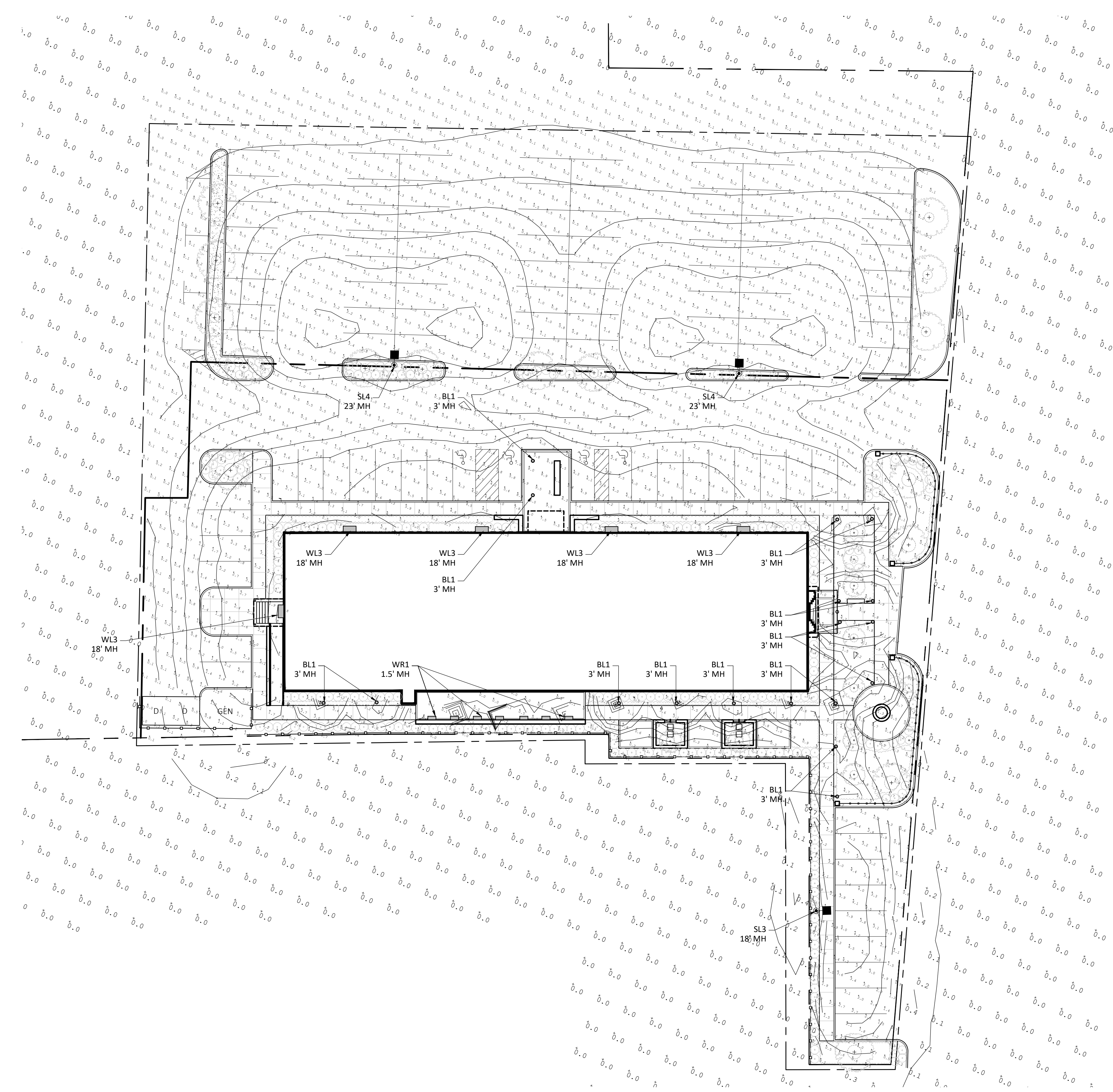


Roof Plan

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

LEGEND

	EXISTING WALL TO REMAIN
	PROPOSED WALL
	DEMISING WALL



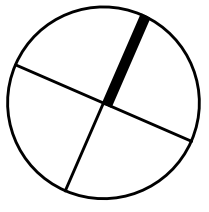
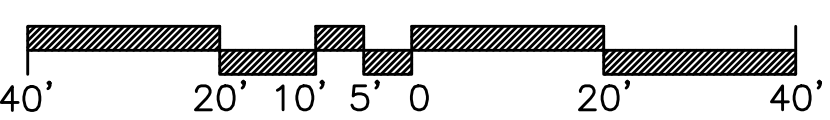
LIGHT SCHEDULE						REP
SYMBOL	LABEL	MODEL	MOUNT	ARRANGEMENT	OPTIONS	
	SL4	HUBBELL RATIO SERIES - HEAD RAR1-160L-135-4K7-4W-U HUBBELL RATIO SERIES - POLE SSS-H-21'-40-A-X-XX-XX	CONCRETE FOOTING 2' EXPOSED FROM GRADE	SINGLE	COLOR: BLK	OMNILITE ILLUMINATE 617-947-8996 STEVE PRUDHOMME
	SL3	HUBBELL RATIO SERIES - HEAD RAR1-160L-100-4K7-3-BC HUBBELL RATIO SERIES - POLE SSS-H-16'-40-A-X-XX-XX	CONCRETE FOOTING 2' EXPOSED FROM GRADE	SINGLE	COLOR: BLK	
	WL3	HUBBELL RATIO SERIES - HEAD RWL2-160L-50-4K7-3-U	COORDINATE WITH THE ARCHITECT	SINGLE	COLOR: BLK	
	BL1	BEGA 99570K4-BEGA-IES	MOUNT TO CONCRETE FOOTING	SINGLE	COLOR: BLK	
	WR1	BEGA 22794-BEGA-IES	MOUNT TO CONCRETE FOOTING	SINGLE	COLOR: BLK	

- SUBMIT CUT SHEETS FOR APPROVAL; SEE PHOTOMETRIC PLAN PROVIDED WITH THIS DRAWING SET FOR MORE INFORMATION.
- FOUNDATION DESIGN BY LICENSED ENGINEER. CONTRACTOR TO COORDINATE.

Qty	Label	Arrangement	LLF	Description	Lum. Lumens
2	SL4	SINGLE	0.900	RAR1-160L-135-4K7-4W-U	17568
5	WL3	SINGLE	0.900	RWL2-160L-50-4K7-3-U	7839
1	SL3	SINGLE	0.900	RAR-1-160L-100-4K7-3-BC	8269
18	BL1	SINGLE	0.900	99570K4_BEGA_IES	1091
7	WR1	SINGLE	0.900	22794_BEGA_IES	44

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
LANDSCAPE AREA	Illuminance	Fc	2.10	16.2	0.0	N.A.	N.A.
PARKING LOT	Illuminance	Fc	1.25	9.9	0.0	N.A.	N.A.
SPILL LIGHT	Illuminance	Fc	0.01	0.7	0.0	N.A.	N.A.
STREET PARKING	Illuminance	Fc	2.51	5.0	0.3	8.37	16.67

SCALE: 1" = 20'-0"



1 SITE PHOTOMETRIC PLAN
SCALE: 1" = 20'-0"

MDLA

MICHAEL D'ANGELO
LANDSCAPE ARCHITECTURE

MICHAEL D'ANGELO
LANDSCAPE ARCHITECTURE LLC

840 SUMMER STREET
SUITE 201A
BOSTON, MA 02127
T. 203.592.4788
www.m-d-la.com

SCHOOLHOUSE APARTMENTS
ROCKLAND, MA

STAMP

REV. NO.	DATE	DESCRIPTION

PHOTOMETRIC
PLAN

DRAWN:

CHECKED:

SCALE:
AS NOTED

DATE:
03/09/22

L1

SHEET 1 OF 2

plot date: 3/9/2022

LED recessed wall - shielded

BEGA

Application

The shielded light distribution is ideal for the glare-free illumination of ground surfaces, building entrances, stairs, and footpaths.

Materials

Luminaire housing and faceplate constructed of die-cast marine grade, copper free (±0.3% copper content) A360.0 aluminum alloy

Clear safety glass with optical texture

High temperature silicone gasket

Mechanically captive stainless steel fasteners

Stainless steel screw clamps

Painted aluminum installation housing

NRTL listed to North American Standards, suitable for wet locations

Protection class IP65

Weight: 0.5 lbs

Electrical

Operating voltage	24VDC (remote power supply req.)
LED module wattage	2.0 W
System wattage	2.7 W
Color rendering index	Ra > 80
Luminaire lumens	44 lumens (3000K)
Lifetime at Ta = 25° C	50,000 h (L70)

LED color temperature

□ 4000K - Product number + **K4**

□ 3500K - Product number + **K35**

□ 3000K - Product number + **K3 (EXPRESS)**

□ 2700K - Product number + **K27**

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

Finish

All BEGA standard finishes are matte, textured polyester powder coat with minimum 3 mil thickness.

Available colors	□ Black (BLK)	□ White (WHT)	□ RAL:
	□ Bronze (BRZ)	□ Silver (SLV)	□ CUS:

Available Accessories

□ **19580** Remote 25W LED driver and box

□ **19591** Remote 50W LED driver and box

See individual accessory spec sheet for details.

LED recessed wall - shielded			
LED	A	B	C
22794	2.0 W	3 1/4"	4 1/4"

BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com

Due to the dynamic nature of lighting products and the associated technologies, luminaire data on this sheet is subject to change at the discretion of BEGA North America. For the most current technical data, please refer to bega-us.com. © copyright BEGA 2018 Updated 12/12/19

1
N.T.S.

LED bollard - 360° distribution

BEGA

Application

LED bollard with shielded 360° light distribution. This luminaire is designed to provide rotationally symmetric illumination of ground surfaces. Provided with mounting system that allows the luminaire to be adjusted independent of anchor bolt orientation.

Materials

Luminaire housing and base constructed of die-cast and extruded marine grade, copper free (±0.3% copper content) A360.0 aluminum alloy

Borosilicate glass lens

Reflector made of pure anodized aluminum

High temperature silicone gasket

Mechanically captive stainless steel fastener

NRTL listed to North American Standards, suitable for wet locations

Protection class IP65

Weight: 15.4 lbs

Electrical

Operating voltage	120-277VAC
Minimum start temperature	-30° C
LED module wattage	14.4 W
System wattage	20.0 W
Controllability	0-10V, TRIAC, and ELV dimmable
Color rendering index	Ra > 80
Luminaire lumens	746 lumens (3000K)
Lifetime at Ta = 15° C	77,000 h (L70)
Lifetime at Ta = 55° C	53,000 h (L70)

LED color temperature

□ 4000K - Product number + **K4**

□ 3500K - Product number + **K35**

□ 3000K - Product number + **K3**

□ 2700K - Product number + **K27**

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

Finish

All BEGA standard finishes are matte, textured polyester powder coat with minimum 3 mil thickness.

Available colors	□ Black (BLK)	□ White (WHT)	□ RAL:
	□ Bronze (BRZ)	□ Silver (SLV)	□ CUS:

LED bollard - 360° distribution			
LED	A	B	Anchorage
99570	14.4 W	6 1/4"	39 1/4"
79817			

BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com

Due to the dynamic nature of lighting products and the associated technologies, luminaire data on this sheet is subject to change at the discretion of BEGA North America. For the most current technical data, please refer to bega-us.com. © copyright BEGA 2018 Updated 07/18/19

1
N.T.S.

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

RATIO Wall

RWLURWL2 LED WALLPACK

FEATURES

- Low profile LED wall luminaire with a variety of IES distributions for lighting applications such as retail, commercial and industrial building mount
- Featuring Micro Strike Optics which maximizes target zone illumination with minimal losses at the house-side, reducing light trespass issues
- Visual comfort standard
- Control options including photo control, occupancy sensing, NX Distributed Intelligence™, WiScape and 7-pin with networked controls
- Battery Backup options available for emergency code compliance
- Quick-mount adapter allows easy installation/maintenance
- 347V and 480V versions for industrial applications and Canada
- Stock versions available in 3500lm and 5500lm configurations at 4000K

RELATED PRODUCTS

Ratio Family Ratio Area Ratio Flood

CONTROL TECHNOLOGY

SiteSine™ NX DISTRIBUTED INTELLIGENCE™ WiSCAPE™

SPECIFICATIONS

CONSTRUCTION

- Die-cast housing with hidden vertical heat fins that are optimal for heat dissipation while keeping a clean smooth outer surface
- Corrosion resistant, die-cast aluminum housing with powder coat paint finish
- Powder paint finish provides durability in outdoor environments. Tested to meet 1000 hour salt spray rating.

OPTICS

- Entire optical aperture illuminates to create a larger luminous surface area resulting in a low glare appearance without sacrificing optical performance
- 48 or 160 midpower LEDs
- 3000K, 4000K or 5000K (70 CRI/80 CRI) CCT
- Zero uplight distributions
- LED optics provide IES type II, III and IV distributions. Type II only available in RWL2 configurations.

INSTALLATION

- Quick-mount adapter provides easy installation to wall or to recessed junction boxes (4" square junction box)
- Designed for direct / box mount.
- Integral back box contains 1/2" conduit hubs
- Integral back box standard with Dual Drive, Dual Power Feed, NX, WiScape and battery versions (battery versions for RWL1 only)

ELECTRICAL

- 120V/277V universal voltage 50/60Hz 0-10V dimming drivers
- 347V and 480V dimmable driver option for all wattages above 35W.

ELECTRICAL (CONTINUED)

- Ambient operating temperature -40°C to 40°C
- Drivers have greater than .90 power factor and less than 20% Total Harmonic Distortion
- Driver RoHS and IP65
- Field replaceable surge protection device provides 20kA protection meeting ANSI/IEEE C82.41.2 Category C High and Surge Location Category C3. Automatically takes future off-line for protection when device is compromised
- Dimming drivers are standard and dimming leads are extended out of the luminaire unless control options require connection to the dimming leads. Must specify if wiring leads are to be greater than 6" standard.

CONTROLS

- Photo control, occupancy sensor and wireless available for complete on/off and dimming control
- Button photocell is suitable for 120-277V operation
- 7-pin ANSI C136.41-2013 photocell receptacle option available for twist lock photocontrols or wireless control modules (control accessories sold separately)
- NX Distributed Intelligence™ available with in future wireless control module, features dimming and occupancy sensor
- WiSCAPE™ available with in future wireless control module, features dimming and occupancy sensor
- Integral Battery Backup provides emergency lighting for the required 90 minute path of egress
- Battery Backup suitable for operating temperatures -25°C to 40°C

CONTROLS (CONTINUED)

- Dual Driver and Dual Power Feed options creates product configuration with 2 internal drivers for code compliance
- Please consult brand or sales representative when combining control and electrical options as some combinations may not operate as anticipated depending on your application.

CERTIFICATIONS

- Listed to UL1598 and CSA C22.2 2250.0-24 for wet locations
- IP65 rated housing
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 04/23/2020. See Buy American Solutions
- DLC® (DesignLights Consortium Qualified), with some Premium Qualified configurations. Please refer to the DLC website for specific product qualifications at www.designlights.org

WARRANTY

- 5 year limited warranty
- See HLI Standard Warranty for additional information

KEY DATA

Lumen Range	1300-18300
Wattage Range	10-155
Efficacy Range (LPW)	119-348
Fixture Projected Life (Hours)	170-60K
Weights lbs. (kg)	6.5/6.5 (2.9/2.9)

Page 97 Rev. 11/16/21
RWLED-SPEC

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701 Millersum Blvd - Greenville, SC 29607 / Tel 864.678.0000 / Website www.hubbeloutdoor.com

PHOTO METRY

RATIO BROCHURE

PARTNERSHIP PAGE

INSTALLATION INSTRUCTIONS

1
N.T.S.

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

RATIO Series

AREA/SITE LIGHTER

FEATURES

- Low profile LED area/site luminaire with a variety of IES distributions for lighting applications such as retail, commercial and campus parking lots
- Featuring Micro Strike Optics which maximizes target zone illumination with minimal losses at the house-side, reducing light trespass issues
- Visual comfort standard
- Compact and lightweight design with low EFA
- 3G rated for high vibration applications including bridges and overpasses
- Control options including photo control, occupancy sensing, NX Distributed Intelligence™ and 7-pin with networked controls
- Best in class surge protection available

RELATED PRODUCTS

Area Cimarron LED Ratio Family

CONTROL TECHNOLOGY

SiteSine™ NX DISTRIBUTED INTELLIGENCE™ WiSCAPE™

SPECIFICATIONS

CONSTRUCTION

- Rectilinear form mimics the traditional shoebox form factor keeping a similar but updated style and appearance, ideal for retrofit applications
- Die-cast housing with hidden vertical heat fins that are optimal for heat dissipation while keeping a clean smooth outer surface
- Corrosion resistant, die-cast aluminum housing with powder coat paint finish

OPTICS

- Entire optical aperture illuminates to create a larger luminous surface area resulting in a low glare appearance without sacrificing optical performance
- 80, 160, 320 or 480 midpower LEDs
- 3000K, 4000K or 5000K (70 CRI) CCT
- Zero uplight at 0 degrees of tilt
- Field rotatable optics

INSTALLATION

- Standard square arm mount, compatible with ISJ rail pattern
- Optional universal mounting block for ease of installation during retrofit applications. Available as an option or accessory for square and round poles.
- KnuScape arm filter option available for 2-3/8" OD tension. Max tilt of 60 degrees with 4 degree adjustable increments. (Restrictions apply for 7-pin options)

ELECTRICAL

- Universal 120-277 VAC or 347-480 VAC input voltage, 50/60 Hz

ELECTRICAL (CONTINUED)

- Ambient operating temperature -40°C to 40°C
- Drivers have greater than 90% power factor and less than 20% THD
- LED drivers have output power over-voltage, over-current protection and short circuit protection with auto recovery
- Field replaceable surge protection device provides 20kA protection meeting ANSI/IEEE C82.41.2 Category C High and Surge Location Category C3. Automatically takes future off-line for protection when device is compromised

CONTROLS

- Photo control, occupancy sensor and wireless available for complete on/off and dimming control
- 7-pin ANSI C136.41-2013 photocell receptacle option available for twist lock photocontrols or wireless control modules (control accessories sold separately)
- 0-10 V Dimming Drivers are standard and dimming leads are extended out of the luminaire unless control options require connection to the dimming leads. Must specify if wiring leads are to be greater than the 6" standard
- SiteSync™ wireless control system is available via 7-pin See ordering information and details at www.hubbellighting.com/sitesync
- NX Distributed Intelligence™ available with in future wireless control module, features dimming and occupancy sensor
- WiSCAPE™ available with in future wireless control module, features dimming and occupancy sensor via 7-pin

WARRANTY

- 5 year limited warranty
- See HLI Standard Warranty for additional information

KEY DATA

Lumen Range	3000-48,000
Wattage Range	25-340
Efficacy Range (LPW)	119-155
Fixture Projected Life (Hours)	170-60K
Weights lbs. (kg)	13.5-24 (6.1-10.9)

Page 111 Rev. 12/06/21
RALED-SPEC

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701 Millersum Blvd - Greenville, SC 29607 / Tel 864.678.0000 / Website www.hubbeloutdoor.com

PHOTO METRY

RATIO BROCHURE

PARTNERSHIP PAGE

INSTALLATION INSTRUCTIONS

1
N.T.S.

MICHAEL D'ANGELO
LANDSCAPE ARCHITECTURE

MICHAEL D'ANGELO
LANDSCAPE ARCHITECTURE LLC

840 SUMMER STREET
SUITE 201A
BOSTON, MA 02127
T. 203.592.4788
www.m-d-la.com

SCHOOLHOUSE APARTMENTS
ROCKLAND, MA

STAMP

REV. NO.	DATE	DESCRIPTION

LIGHTING
CUT
SHEETS

DRAWN:

CHECKED:

SCALE:

AS NOTED

DATE:

03/09/22

L2

SHEET 2 OF 2

plot date: 3/9/2022

Schoolhouse Apartments Rockland

Snow and Ice Removal Program

Location: 6 Delprete Avenue, Rockland, MA 02370
Owner: Schoolhouse Apartments Rockland, Limited Partnership
Management: FHRC Management Corporation
Last Updated: 2022-03-21

Overview

Schoolhouse Apartments Rockland will rely on private contractors to conduct snow plowing of the roadways and parking areas on-site. (The "Snow Removal Specification Sheet" from Clarendon Hill Towers, included at the end of this plan, provides a more detailed example.) The remainder of the site is cleared by property maintenance staff.

Seasonal Preparation

Seasonal preparation is critical to the success of the Snow Removal and Ice Control Program. There are five phases to the Snow Removal and Ice Control Program:

1. Readiness Phase
2. Alert Phase
3. Operations Phase
4. Recovery
5. Post-Storm Assessment

Readiness Phase

Snow blowers, shovels, ice choppers, wheelbarrows, abrasives, and chemicals needed in the first phase of operations are readied ahead of time. Stockpile levels of materials, ice melt, heating oil, and generator fuel supplies, salt are restored by the maintenance team after each storm. Obstacles should be identified, then marked with reflective poles if required. The markers should be tall enough that they will be seen by the snowplow operators to prevent plows from doing damage to property.

In the Spring of each year, the Maintenance Supervisor evaluates the adequacy of storage requirements and levels of stockpiled de-icing and abrasive material in anticipation of needs of the upcoming season. Suppliers are also found. In addition, stockpile levels are re-established following each storm event. Facilities are also evaluated for the need to add ice cleats along the roofline, even where roof slopes do not exceed a 6:12 ratio.

Agreement Contracts for Snow Removal Services

The Maintenance Supervisor annually execute contracts, usually in September.

Contractual arrangements will be made with a private contractor(s) at pre-specified rates for snow removal depending on the depth of the snow (See Snow Removal Specification Sheet) and for additional dump trucks, tractors, graders, as well as front end loaders for snow removal services during extreme storms.

During November, all personnel are trained to ensure that they fully understand how to use and maintain the snow blowers, tractors, scrapers, spreaders, and other equipment assigned to them during Snow and Ice Operations. Staff are also instructed on how to shovel snow to avoid injuries.

Alert Phase

Depending on the weather forecast and current conditions, the Maintenance Supervisor will notify the snowplow contractor and site staff to mobilize for the storm. Each staff member must be available in the case of an impending storm. If a storm occurs during regular work hours, then the staff will deploy according to the pre-arranged snow removal plan. The Maintenance Supervisor will decide the need to keep staff on duty beyond normal work hours. If a storm strikes during after duty hours, then staff is to assume that they are on call-back status. The Supervisor will call back staff as needed.

Weather Forecasting

A key element in implementing an efficient Snow and Ice Control Program is receiving and acting on timely weather information. Accurate weather forecasting is imperative in deciding which of the various operational procedures will be initiated. It is recognized that forecasts will occasionally be in error and operation plans may change. The Property Manager and Maintenance Supervisor should be informed of impending weather conditions by the National Weather Service. Local radio and television stations are a useful source for information. Other sources include the Weather Channel (on cable) or NOAA's alert system.

Winter Weather Terminology

The U.S. Department of Commerce National Oceanic and Atmospheric Administration National Weather Service uses the following definitions and criteria to describe hazardous winter weather:

- Winter Storm Watch: Heavy snow or a blizzard is possible, but the exact timing, location, or occurrence of the storm is still uncertain. A watch means to get prepared for a storm.
- Winter Storm Warning: You should be ready for a storm by the time a warning is issued. A life-threatening storm is likely with:
 - Snow 6 inches or more in 12 hours or less; or 8 inches or more in 24 hours,
 - Heavy ice accumulations that cause extremely dangerous conditions and considerable damage,
 - High winds, and/or
 - Wind chills indices -40°F or colder.
- Blizzard Warning: You should use caution when an advisory is issued. A storm with winds 35 mph or greater and significant snow or blowing snow with visibilities less than 1/4 mile.
- Winter Weather Advisory: Weather conditions that cause inconvenience, but are not life-threatening, such as:
 - High Wind Warning: Winds 40 mph or greater; or wind gusts 58 mph or greater.
 - Wind Advisory: Winds 30 mph or greater; or wind gusts 45 mph or greater.

Analysis of this data and other factors by the Property Manager/Maintenance Supervisor results in a decision of when to become operational. This planning process is made more difficult due to the variable weather conditions met during each storm and whether a winter weather advisory, winter storm, winter storm watch, winter storm warning or blizzard warning etc. is in effect.

Available lead time, storm intensity, rate, and type (wet or powdery) of accumulation, moisture content, air/ pavement temperatures, time of day, traffic, and pedestrian volumes (peak or off-peak), wind direction and velocity, storm duration, geographical distribution of snow/ice, and most importantly the availability of equipment and rested personnel are all factors that interact to create a unique aspect for each storm.

Condition Alerts

The following alert conditions are set by the Maintenance Supervisor:

- Condition 1: Approximately 36 hours before effects of storm are predicted to reach the property's location.
- Condition 2: When the storm is predicted within 12-18 hours.
- Condition 3: When the arrival of the storm is imminent. All preventive measures should have been taken. Required personnel stand by in pre-selected locations. All other personnel are relieved of duties.

Operations Phase

When snowfall accumulations reach the established threshold, parking lot plowing (by contractor) and/or snow shoveling and snow blowing operations will start. The primary purpose of plowing is to open Priority Code 1 areas and make primary entrances and walkways "passable". Remaining areas are plowed and treated following established priorities to restore the property to normal operations after a storm ceases.

- ***Priorities***

- Priority 1
 - Roadways into and out of the property
 - Main entranceways and doorways
 - Management and Maintenance Office
- Priority 2
 - Parking lots
 - Walkways
 - Around dumpsters

- ***Spreading Abrasives and Chemicals***

Apply salt or abrasives to sidewalks, landings, entrances, parking areas, ramps, or other reported / known trouble spots. Salt all pavements before/after a snow / ice storm followed by conditions inconsistent with natural melting. Application width studies show that snow melts faster when salt is applied in narrow strips ("windrows"). As such, salt is normally applied in a windrow of 4-5 feet wide down the middle of parking lots and on the "high" side of paved areas.

- ***Storm Types***

- Minor Storms

An ice or snowstorm of four (4) inches or less (fallen or is forecasted) on the paved surfaces is considered a Minor Storm.

 - If less than 2", Priority Code 1 locations (roadways/walkways/building entrances) are cleared and plowed within 4-5 hours after the storm ends.
 - If greater than 2", Priority Code 1 locations can be re-plowed/treated in 4-5 hours. After Priority Code 1 locations are completed (i.e., lots, sidewalks, and at least one ADA accessible route made "passable"), Priority Code 2 facilities should be fully addressed between 8-10 hours after the storm ends.
- Major Storms

Snow or ice storms that develop an accumulation of more than four (4) inches (fallen or is forecasted) on paved surfaces are considered Major Storms. All available staff and/or contractor support should be considered for mobilization at this time. This action will require the Property Manager and Maintenance Supervisor approval and will vary based on an assessment of current conditions, weather forecast, and budgetary constraints.

- ***Suspended Operations***

In the event a storm reaches an intensity that the continuation of operations would prove ineffective or would pose an undue safety risk for staff, contractors and/or the traveling residents (i.e., during blizzard conditions), snow and ice control activities should be shut down until weather conditions have improved. The Maintenance Supervisor at each property or designee is responsible for making a closure decision. Crews will be demobilized to the maintenance shop or other designated location for food, shelter, and rest. Likewise, contractors will be placed on stand-by status at half-time pay rates until remobilized.

- ***Contractor Assistance***

Additional equipment and personnel from private contractors may be mobilized to meet goals during major storms, if necessary. Contract labor, rental equipment, structural engineers, operators, roofing contractor(s) etc. are alerted for service, if deemed necessary.

- ***Snow Removal Procedures***

- Steps, Entranceways and Sidewalks

- Removal of snow from main entrances, landings, fire lanes/exits, and handicap routes/ramps will be high priority and will be cleared before all secondary entrances and walkways. Conditions will be monitored to assure icy or slippery areas treated. Every effort will be made to use only a salt product for sidewalks. As a last resort to assure safe walks, a sand product will be used sparingly.
 - During severe storms, steps and entryways shall be partially shoveled with a path along the railings for initial opening of these areas. At least one (1) handicap route must be fully passable. Sidewalks should be cleared at least one shovel's width within 24 hours after snowfall ceases. Staff is advised that snow should not be shoveled or moved onto the roadway or into parking areas.

- Parking Lots

- Employees and visitors may be directed to park on one side, or in designated areas during snow removal operations. Fire lanes, delivery, loading/unloading zones, and handicapped parking receive priority. Once one side of the parking lot has been cleared, residents may be requested to move their vehicle to the other side. To help avoid the frustration that occurs when a snowplow covers sidewalks, plowing operations shall be performed to stockpile snow in parking spaces, preferably in a location that does not block storm drain inlets, sidewalks, or ADA ramp / access points.
 - Parking lots will be plowed with the priority for handicap spaces being first, and employee parking as a secondary priority. It must be understood that lots with vehicles parked in them make it difficult to do an adequate job in snow removal. Efforts will be first made to open areas with no vehicle traffic to make room for incoming vehicles. If the surface in the parking lots becomes slippery and determined a safety hazard, sand/salt will be spread in the main driving lanes and lot entrances. During parking lot snow removal, it may become necessary for staff and visitors to park in an alternate lot other than the one they normally park in until all lots are cleared and available. Every reasonable effort will be made to open parking lanes to allow for two-way traffic.

- Snow Hauling and Disposal

As snowbanks build up around the parking lots, sidewalks and entrances, the maintenance crews may have to remove necessary snow and haul to an unused area of the property or an authorized snow dump. This is done to provide adequate parking in lots, assure visibility for pedestrians and vehicles, to make room for more snow, and to control flooding problems when snow and ice melts.

○ Removal of Snow and Ice from Roofs

The removal of snow accumulations on roofs which will take the weight off the roof, is the best way to prevent a loss. It is important to follow proper snow-removal procedures to avoid creating an undesired loading on a roof. The following procedures should be followed to safely remove snow from roofs, as relates to this site:

- Drifted snow should be removed first, which will be on lower roofs. Drifted snow can also occur around rooftop mechanical vents, skylights, parapet walls and around penthouse walls.
- Snow should be removed from the middle of the bays first. (i.e., if your building has 50-foot bays with the primary steel running from the peak to the eave, the snow should be removed from the center of the bay starting at the peak and working toward the eave.) The greatest deflection will occur at the center of the bay. This should be repeated for all the bays.
- It is important to remove snow evenly from both sides of the roof so that the live load on one side of the roof is not significantly greater than the other side. For peaked roofs, the snow should be removed from the center of a given bay on one side of the roof and then the snow should be removed on the same bay on the other side of the ridge or peak.
- Do not pile snow from upper roofs onto lower roofs.
- Take care while removing snow and/or ice accumulation to prevent damage to the roof membrane. Avoid removal within 2 inches of the surface of the roof membrane. The use of plastic snow shovels is recommended.
- When removing snow from one section of a roof, avoid traveling over and compacting snow on adjacent roof sections. Areas onto which snow will be dumped from a roof should be secured to prevent access.
- Snow removal personnel should stay spread out to avoid additional localized concentrations of weight. Workers on a roof must use proper personal protective fall-arrest type equipment.

○ ***Snow Loads***

Following major and repeated snow and ice storm events, where there is significant snow on the roof of buildings and there is physical evidence that a roof is sagging or is showing other visible signs of distress, the roof should be assessed by a structural engineer, or other qualified professional, to determine if:

- Snow loads are excessive
- There are signs of structural distress
- Special removal procedures are needed to avoid additional structural problems
- To determine if a structure is overstressed. Most buildings are designed to accommodate a roof snow load associated with 2 feet (24 inches) of dense, compact and/or wet snow.
- Here are some warning signs that a roof may be giving way under the weight of snow. If there are any of the warning signs below, the building needs to be evacuated at once:
 - Cracked or split wood members/Popping, cracking, and creaking sounds.
 - Bowed utility pipes or conduit attached at ceiling.
 - Sagging ceiling tiles and/or sprinkler heads pushed down below ceiling tiles.
 - Sagging roof members including steel bar joists.
 - Doors and/or windows that pop open or are difficult to open and close.
 - Metal decking, wood rafters, wood trusses and plywood sheathing-visually deformed.

○ **Snow Load Based on Accumulation Depth**

• Snow Depth on Roof • (ft)	Dry Snow (lbs./ft ²)	In Between Snow (lbs./ft ²)	Wet Snow (lbs./ft ²)
1	3	12	21
2	6.5	24	42
3	9.5	36	62
4	12.5	48	83
5	15.5	60	104

Source: Winter Snow Loads. Curt Gooch, Sr. Cornell University. 2002

○ **Roofs, Gutter, Downspouts and Maintenance Equipment**

The following items should be addressed before and during a major snow or rain event:

- Keep roof drains clear of ice and accumulated debris. Inspect roof immediately after major winter storms where precipitation more than 8 inches of snow fall and/or 2 inches of rain fall has occurred in a 24- hour period.
- Keep gutters and downspouts clear so they will flow freely.
- Keep the bottom of downspouts clear of snow and ice so the water has a place to drain.
- Truncate downspouts 2 feet above grade to ensure they flow freely and do not freeze at the bottom.
- Ensure that snow is not plowed or shoveled against downspouts, which will prevent proper drainage.
- Do not install equipment (air handlers, air conditioners, transformers, etc.) or storage below eaves where the equipment could be affected by snow or ice sliding off the roof.
- If there is existing equipment located below eaves, a structurally sound roof should be installed over the equipment to help prevent damage to the equipment from falling snow or ice.

Recovery Phase

As the storm abates and with the completion of clearing, staff moves into the Recovery Phase. Recovery consists of phasing-down operations by: terminating contractor support; returning employees to regular work schedules; pushing back or removing any piles of snow blocking or remaining at entrances to facilities, downspouts, or storm drains; removing areas of isolated compacted snow or ice within porch, entrance, handicapped entrances, or sidewalks; evaluating the need for any damage repairs; cleaning and servicing vehicles and equipment; replenishing or shifting snow-related supplies; and preparing the needed financial paperwork.

Post-Storm Assessment Phase

The Property Manager and Maintenance Supervisor should perform an internal evaluation and assessment of storm related operational decisions. Issues to consider include:

- How responsive in terms of timeliness was the private contractor?
- What was the quality of snow removal operations? Did staff have to do more work when the contractor ended operations?
- How responsive was site personnel?
- Did residents cooperate with staff?
- Was there a need for additional contracted personnel?
- Is there a need to change priorities in the snow removal policy?

Lessons can be learned from both successes and failures of any winter maintenance operation. Improvements in operation, and even equipment, can be found and implemented through a post-storm assessment of the practices and treatments used. It is important that all levels of maintenance personnel be involved in the evaluation process. This process includes the evaluation of treatment effectiveness, assessment of operational decision timing, and an examination of costs. Recommendations for improved safety such as the installation of roof guards, shields, or cleats on roofs over public walkway areas, or effectiveness of existing measures are reported at this time. In the event of significant storm events, snow removal costs are accounted for, and budget amendments are prepared and processed by the Property Manager. In case of a declared emergency, special project accounts may be set up to preclude the need for the processing of separate budget amendments.

Property Damage and Repair

Although significant caution and safety efforts are made to avoid damage to the buildings / grounds during snow and ice removal operations, property damage may inevitably occur. In cases where turf damage has resulted from the plow jumping the curb, snow shovels or blowers, restoration will be done as soon as weather conditions allow. Under only extreme circumstances will the damage to turf from salt application be restored or treated. If contracted services are used, then the contractor is contractually responsible for all damage to life and property during their snow removal activities and operations.

Sample Snow Specification

CLARENDON HILL TOWERS

1366 Broadway ♦ Somerville, Massachusetts 02144 ♦ Phone 617-625-7150 ♦ Facsimile 617-625-3741

Snow Removal Specification Sheet

Snow Removal Rates For The 2009 - 2010 Winter Season

Plowing Per Storm

1- 3"

3- 6"

9-12"

Additional Price Per Inch After 12"

Snow Removal off Site from Parking Lots as Requested by Management

Equipment Prices Hourly:

Bob Cat

Back Hoe

Front end Loader

6 Wheeler Dump

14 Wheeler Dump

Snow Dumping fee

Areas under Contract – All Parking Lots

All asphalt road ways and parking lots.

All Drivers are to be fully licensed and insured up to 1,000,000.00

Certificates of insurance are required with bids

Insurance Company will provide upon acceptance as per coverage requirements.

Please contact the Site for a visit at (617) 625-7150.

Managed By FHRC Management Corporation, Manchester, Connecticut

Clarendon Hill Towers does not discriminate against any person because of race, color, religion, sex, sexual orientation, handicap, familial status or national origin.