

DEVELOPMENT AGREEMENT APPLICATION
MULTI-UNIT RESIDENTIAL DEVELOPMENT
FOURTH STREET NEAR BEDFORD HIGHWAY

NOVEMBER 30, 2017

SUBMITTED BY:
LYDON LYNCH ARCHITECTS



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November 30, 2017

**RE: FOURTH STREET NEAR BEDFORD HIGHWAY
DEVELOPMENT AGREEMENT APPLICATION FOR A PROPOSED MULTI-UNIT RESIDENTIAL DEVELOPMENT**

To Whom It May Concern:

INTRODUCTION

The architectural design for the above noted project has been prepared to form a comprehensive strategy for the redevelopment of lands situated at the corner of Bedford Highway and Fourth Street in Bedford. The development has been separated into two distinct yet interconnected phases – Phase 1 located directly along Bedford Highway for which a Development Permit has been issued for an as-of-right building (reference Development Permit #157954 dated February 3, 2017); and Phase 2 located uphill along Fourth Street for which a Development Agreement is hereby requested.

BY-LAW COMPLIANCE

The lands are currently zoned CMC (Main Street Commercial). Accordingly, the Phase 1 development has been designed in compliance with the by-law requirements and includes ground floor commercial spaces along Bedford Highway and residential units above. Phase 2, which this application represents, requires a zone amendment that would reclassify the designation from CMC to RMU (Residential Multiple Dwelling). This would appropriately allow for residential uses without the requirement for additional commercial spaces - which would be undesirable in behind Bedford Highway, located within an existing neighbourhood where no commercial uses exist.

Based on a reclassification of the zoning to RMU, Phase 2 has been designed to comply with the applicable by-law requirements. This includes the following:

RMU By-Law Reference	Required or Allowable	Actual or Proposed
Minimum Lot Area	10,000 sq.ft.	36,055 sq.ft.
Minimum Lot Frontage	100 feet	171.78 feet
Minimum Front Yard	30 feet	42 feet
Minimum Rear Yard	40 feet	45.5 feet
Minimum Side Yard	17.5 feet (½ the building height)	17.5 feet
Maximum Height of Building	35 feet	35 feet (refer to Note 1 below)
Lot Coverage	35%	35%
Maximum Number of Dwelling Units	36 units	18 units (all 2 bedroom)
Density	$\text{Density} = \text{Lot Area} \div 2,000 \text{ sq.ft. per two bedroom unit}$ $= 36,055 \div 2,000$ $= 18 \text{ two bedroom unit}$	
Recreation Space	18 x 575 sq.ft. = 10,350 sq.ft.	12,230 sq.ft. (refer to Note 2 below)

Note 1: The proposed maximum building height is calculated in accordance with the land use by-law, which measures the distance for the 'established grade' to the top of the building's parapet. The established grade is the average finished grade at the base of the building. Please refer to Drawings A-200/201/202/203, which illustrate the determination of the 35 feet building height. As well, refer to the Landscape Drawing L201.

Note 2: This includes an indoor Common Room of 430 square feet as well as outdoor spaces. For outdoor spaces, refer to Landscape Drawing L201, which illustrates areas of the property that are designated for recreation spaces and shall comply with the requirements for no dimension less than 30 feet and a minimum of 50 percent of the spaces to have grades between 0 and 8 percent. In total, this will provide, 11,800 square feet of common outdoor spaces that will be dedicated for use by residents. Detailed landscape drawings will be submitted at time of building permit.

As described above, the proposed development fully complies with all aspects of the RMU zone.

In addition, the design complies with the General Provisions of the Land Use By-Law. This includes the following:

By-Law Reference	Required or Allowable	Actual or Proposed
Vehicle Parking	1.5 spaces per dwelling unit = 27	29
Bicycle Parking	0.5 spaces per dwelling unit = 9 (80% Class A = 7; 20% Class B = 2)	17 (13 Class A; 4 Class B)

DESIGN STATEMENT

The overall design attempts to create appropriate scale and character that is in keeping with the architectural aesthetic of Bedford.

It is important to consider Phase 1 as part of a comprehensive design for the overall development of the lands. Phase 1 creates a carefully designed building that respects the scale, character and mix of commercial and residential uses directly along Bedford Highway. Commercial outdoor parking is provided behind the building with access off Fourth Street. Residential units include both 2-level townhouse style units with individual exterior entries as well as one-level units above the commercial space. Materials, scale and architectural language respond to the character of Bedford and establish a starting point for how the remaining development is designed.

Phase 2 continues some of the features established in Phase 1, which include a similar use of materials and architectural language with an emphasis on open spaces. The building is designed to provide views towards the Bedford Basin from each dwelling unit. This is accomplished by widening the building as it rises up the hill allowing each subsequent dwelling unit to have corner windows and balconies that can look past the units in front. This further creates a variation in the building shape that provides more character and opportunity to use a variety of materials and window configurations.

The building includes one level of indoor parking. This level increasingly becomes buried in the ground as the hill rises around it until it becomes a full basement. To take advantage of the slope along Fourth Street, a driveway entrance is located at the lower end of the site, which provides access to the parking garage. Four parking spaces are located along the driveway for use by residents and visitors. Also at this level, the main pedestrian entrance is located in order to minimize the amount climbing one must do along Fourth Street. Near the driveway, a sidewalk extends from Fourth Street and gradually widens to a plaza at the main entrance. The sidewalk and plaza are bordered with planters and

retaining walls with steps leading to an adjacent recreation space. As well, pedestrian access is extended from Phase 1 with a series of sidewalks and steps, which will allow pedestrians to have access from Bedford Highway without having to walk along Fourth Street, should they desire. Upon entry, a 2-storey lobby will include an open stair that will lead to the Common Room above. From the Common Room, residents will have direct access to a south-facing patio from where they can access recreation spaces on the property.

Overall, the site and building design take advantage of a steeply sloping site while creating opportunities for residents while respecting the character of the surrounding Bedford community.

SHADOW STUDY

The shadow studies contained within the submission illustrate that with the exception of low winter sun, shadows will almost entirely be contained within the property with little to no impact on surrounding properties.

TRAFFIC IMPACT STATEMENT

A TIS is provided in this application and can be referred to accordingly.

Yours very truly,

LYDON LYNCH ARCHITECTS LTD.

Original Signed

Eugene Pieczonka FRAIC NSAA AANB AAPEI NLAA OAA LEED AP
Principal

**BEDFORD HIGHWAY & FOURTH STREET - PHASE 2
MULTI-RESIDENTIAL DEVELOPMENT**

November 30, 2017

PROJECT DATA (ALL AREAS SHOWN IN SQUARE FEET)

RMU (RESIDENTIAL MULTIPLE DWELLING) ZONE

TOTAL SITE AREA = 36,055 SF (3,350 SM)

LOT COVERAGE = 35% (BASED ON LEVEL 2 GROSS FLOOR AREA)

RECREATIONAL SPACE REQUIREMENTS = 575 SF FOR EACH 2 BEDROOM UNIT = 575 x 18 = 10,350 SF

GROSS FLOOR AREA CALCULATIONS

FLOOR LEVEL	PARKING AREA	COMMON AREAS	RESIDENTIAL	TOTAL
LEVEL 1	10,695	2,991	0	13,686
LEVEL 2	0	2,660	10,000	12,660
LEVEL 3	0	1,456	11,204	12,660
LEVEL 4	0	1,456	11,204	12,660
TOTAL	10,695	8,563	32,408	51,666

NOTE: COMMON AREAS INCLUDE LOBBIES, CORRIDORS, EXIT STAIRS, ELEVATORS, MECHANICAL/ELECTRICAL/GARBAGE/STORAGE ROOMS, COMMON ROOM, EXTERIOR WALL THICKNESS, ETC.

UNIT CALCULATIONS

UNIT TYPE A	2 BEDROOM	6
UNIT TYPE B	2 BEDROOM	3
UNIT TYPE C	2 BEDROOM	3
UNIT TYPE D	2 BEDROOM	2
UNIT TYPE E	2 BEDROOM	4
TOTAL		18

PARKING

BY-LAW REQUIRES .5 PARKING SPACES PER UNIT = 27

PARKING TYPE	
INDOOR	23
OUTDOOR	6
TOTAL	29

BICYCLE STORAGE

BY-LAW REQUIRES 0.5 SPACES PER UNIT = 9 (80% CLASS A = 7, 20% CLASS B = 2)

TYPE	
CLASS A	13
CLASS B	4
TOTAL	17



Bedford Highway & Fourth Street Traffic Impact Statement

November 2017

Prepared for
Servant Dunbrack McKenzie & MacDonald Ltd

JRL consulting

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Prepared by

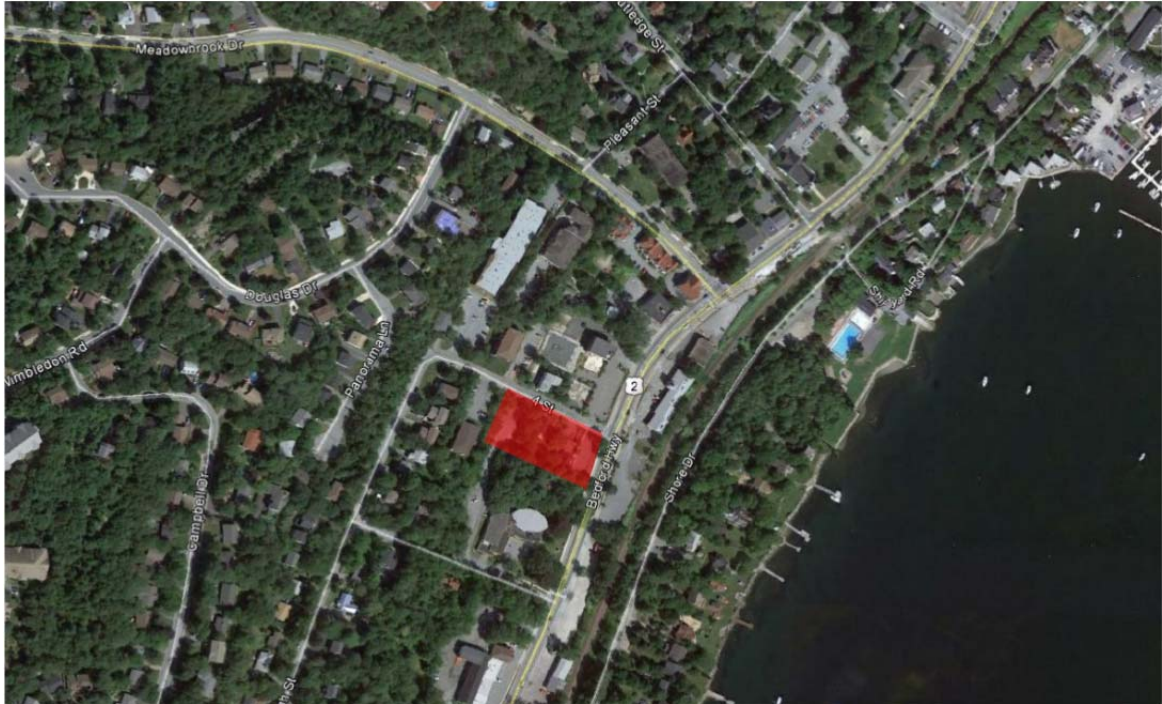
Jeff R. LeBlanc, P.Eng., PMP

1 Introduction

1.1 Background

Servant Dunbrack McKenzie & MacDonald Ltd., on behalf of the owner, are working on a proposal to develop a parcel of land at the southwest corner of the Bedford Highway/Fourth Street intersection in Bedford, Nova Scotia. Exhibit 1.1 shows the site in red in the context of the surrounding area.

Exhibit 1.1 – Bedford Highway & Fourth Street in Bedford, Nova Scotia

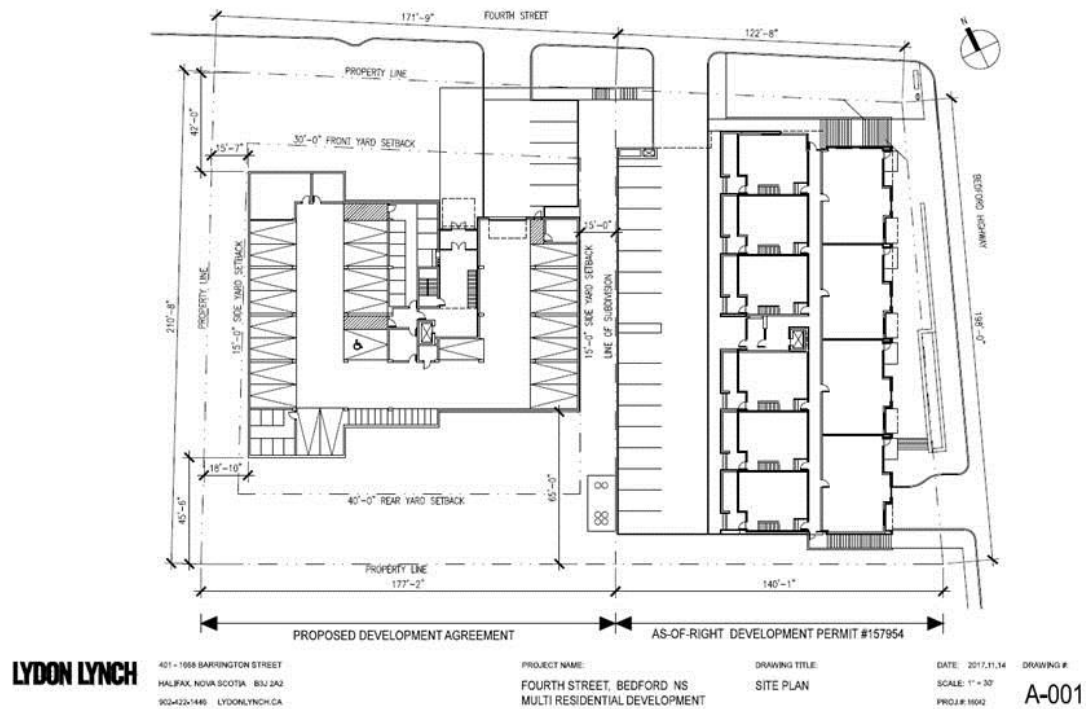


Source: Google Earth

The proposed development will be developed in two phases. Phase 1 (as of right) will be completed in accordance with the existing land use bylaw for Mainstreet Commercial (CMC) Zone and will have 6,990 sqft of Commercial/Retail Space on Ground Level along Bedford Highway with 6 townhouses and 4 apartments above including parking with access from Fourth Street and Bedford Highway. Phase 2 (proposed development agreement) will be developed behind Phase 1 with access from Fourth Street. It will contain 18 apartment units.

Refer to Exhibit 1.2 for a proposed site plan and proposed floor plans prepared by Servant Dunbrack McKenzie & MacDonald Ltd and Lydon Lynch.

Exhibit 1.2 – Bedford Highway & Fourth Street Proposed Site Plan



JRL consulting inc. was retained by SDMM to prepare a Traffic Impact Statement (TIS) to assess the potential traffic impacts of the proposed development at Bedford Highway & Fourth Street in Bedford, Nova Scotia.

The purpose of a Traffic Impact Statement is to provide a high level overview of a proposed development including estimates of site-generated traffic along with an initial review of existing traffic counts in the general area of the proposed development. This information will form part of the initial application to HRM which will be reviewed by staff and council. We are pleased to submit this report which summarizes our findings and provides the information required by HRM for review.

2 Existing Traffic Conditions

2.1 Description

The principal route affected by this development is Bedford Highway. Exhibit 2.1 summarizes HRM's Characteristics of Street Classes from HRM's Municipal Service Systems Design Guidelines.

Exhibit 2.1 - HRM Characteristics of Street Classes

Characteristic	Arterial Street	Major Collector	Minor Collector	Local Industrial	Local Street
1. Traffic Service Function	First Consideration	Traffic movement primary consideration, land access secondary consideration, some parking	Traffic movement of equal importance with land access, parking permitted	Traffic movement secondary consideration with land access primary consideration, parking permitted	Traffic movement secondary consideration with land access primary consideration, parking permitted
2. Land Access Function	Limited Access with no parking				
3. Range of design traffic average daily volume	More than 20,000	12,000 to 20,000 or more	Up to 12,000	Less than 3,000	Less than 3,000
4. Characteristics of traffic flow	Uninterrupted flow except at signals; w/ pedestrian overpass	Uninterrupted flow except at signals and crosswalks	Interrupted flow	Interrupted flow	Interrupted flow
5. Average running speed in off-peak conditions	50-70 km/hr	40-60 km/hr	30-50 km/hr	15-30 km/hr	15-30 km/hr
6. Vehicle types	All types	All types but trucks may be limited	All types with truck limitation	All types	Passenger and service vehicles, transit buses; large vehicles restricted
7. Connects to	Expressways, arterials, major collectors, minor collectors	Expressways, arterials, major collectors, minor collectors, some locals	Arterials, major collectors, minor collectors, locals	Some major collectors, minor collectors, locals	Some major collectors, minor collectors, locals

Bedford Highway is major collector (Nova Scotia Highway 2) that runs along the Bedford Basin and is a major artery for traffic accessing the Halifax peninsula. The portion of the Bedford Highway in the study area provides access to commercial/residential properties and it has single northbound and southbound lanes along with a two-way left turn lane in the middle.

There are concrete sidewalks built to HRM specifications on the eastern and western sides of Bedford Highway. The posted speed limit is 50km/hr. The proposed redevelopment site is located south of the signalized Bedford Highway at Meadowbrook Drive intersection.

Refer to Exhibit 2.2 for photos of the Study Area near Bedford Highway and Fourth Street.

Exhibit 2.2 – Study Area Photos



Bedford Highway at Fourth Street



Bedford Highway at Fourth Street



Bedford Highway at Fourth Street looking north



Fourth Street looking to Bedford Highway



Bedford Highway looking south from Fourth Street



Bedford Highway looking north from Fourth Street



Bedford Highway at Meadowbrook Drive looking north



Bedford Highway at Meadowbrook Drive looking west



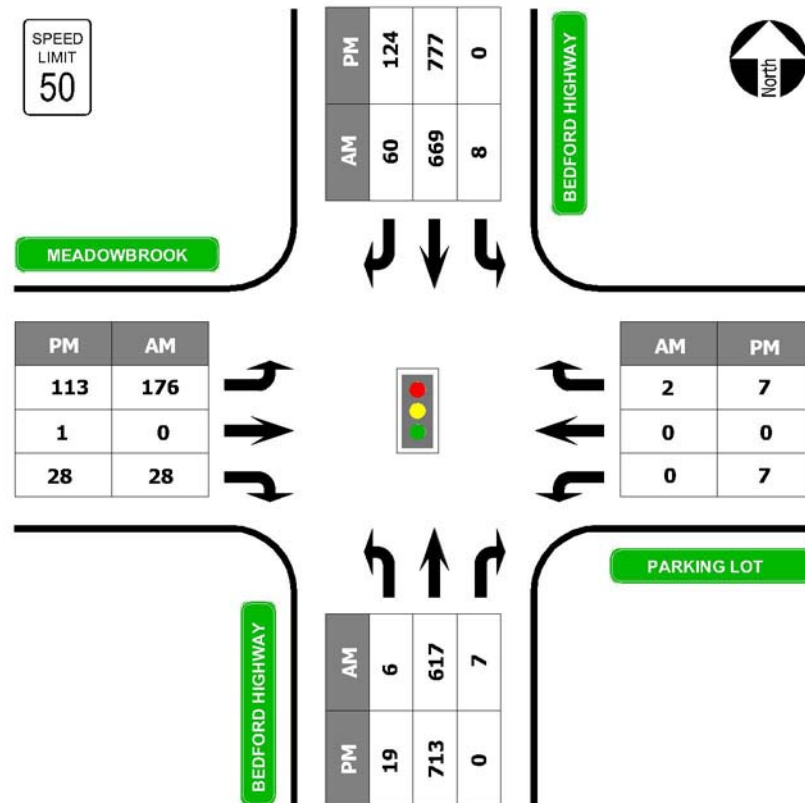
Bedford Highway approaching Meadowbrook Drive to the north

2.2 Existing Traffic Volumes

We completed a site review at the proposed development at the Bedford Highway/Fourth Street intersection and the signalized Bedford Highway/Meadowbrook Drive intersection is located approximately 150 meters to the north.

HRM completed AM and PM peak hour manual turning movement counts at this intersection in October 2016 as summarized in Exhibit 2.3.

Exhibit 2.3 – Bedford Highway at Fourth Street Existing Traffic 2016



2.3 Existing Trip Distribution

HRM counts at the Bedford Highway/Meadowbrook Drive intersection provide an accurate picture of the current trip distribution in the study area and we expect that traffic generated by the proposed development at Bedford Highway/Fourth Street will follow similar patterns.

2.4 Stopping Site Distance

As per the Transportation of Canada Geometric Design Guide for Canadian Roads, adequate stopping site distance *“is essential for safe operation that the vehicle operator be able to see far enough ahead to stop if necessary. Conditions that would force a vehicle operator to stop are for example, an object on the roadway, a culvert washout or other fault in the roadway.*

Adequate stopping site distance is required throughout the length of the roadway. Minimum stopping site distance is the sum of two distances namely:

- *Brake reaction distance*

The distance travelled during the brake reaction time, that is the time that elapses from the instant an object, for which the driver decides to stop, comes into view to the instant the driver takes remedial action (contacts brake pedal).

- *Braking distance*

The distance travelled from the time that braking begins to the time the vehicle comes to a stop.”

For a design speed of 50 km/h, the minimum stopping site distance is 65 m.

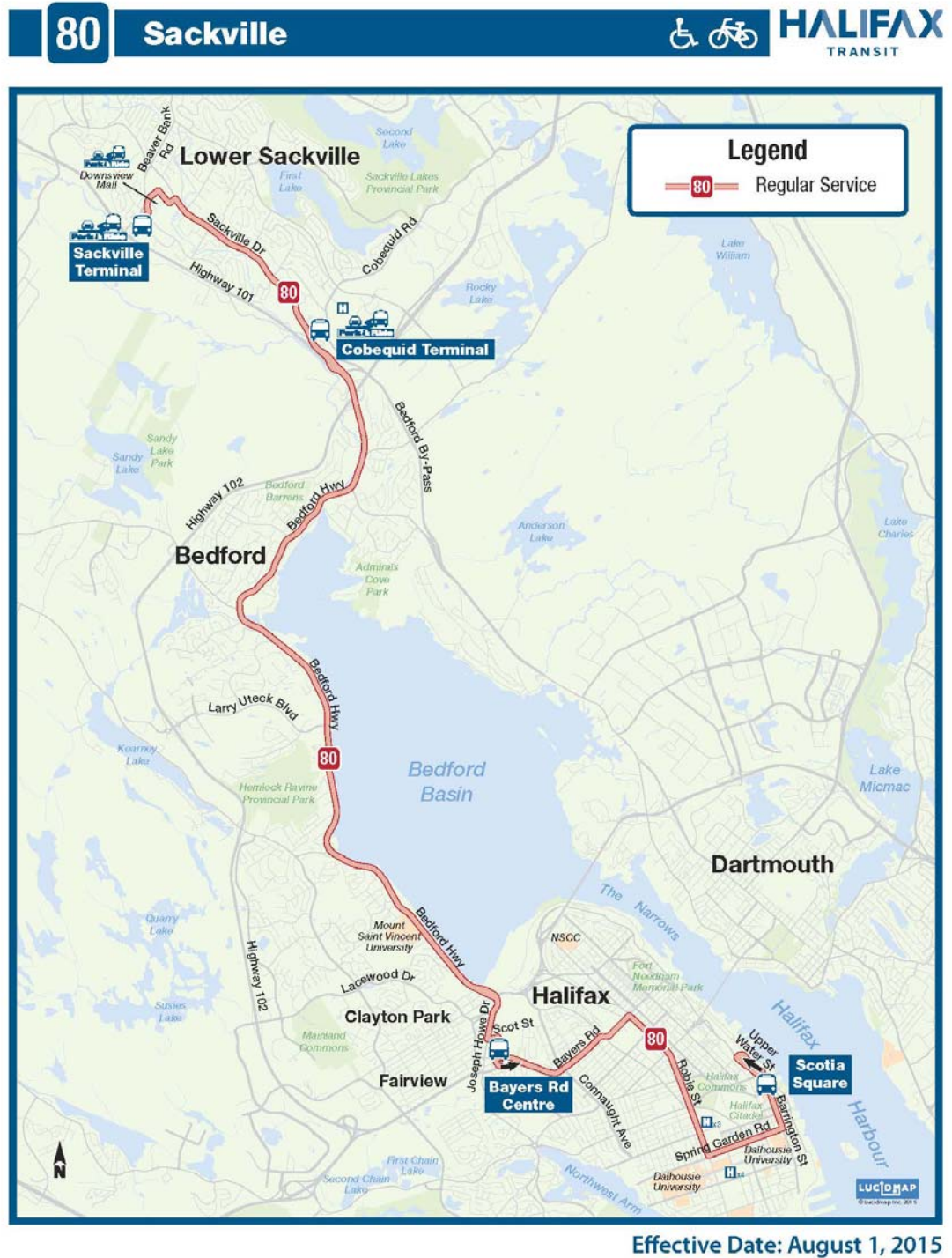
The proposed development will have two driveways on Fourth Street which are located close to two existing driveways. There is no direct access to Bedford Highway. Fourth Street is steep but we did not observe any issues with stopping site distance during our site visit.

2.5 Transit and Pedestrians

The study area is well serviced by Halifax Transit on Routes 80 Sackville, 82 Millwood, 86 Basinview and 89 Bedford (see Exhibit 2.4).

There are concrete sidewalks on both sides of Bedford Highway near at the proposed development at Bedford Highway/Fourth Street though the sidewalk on the east sides ends just south of the proposed development.

Exhibit 2.4 – Halifax Transit Route Maps



82 Millwood

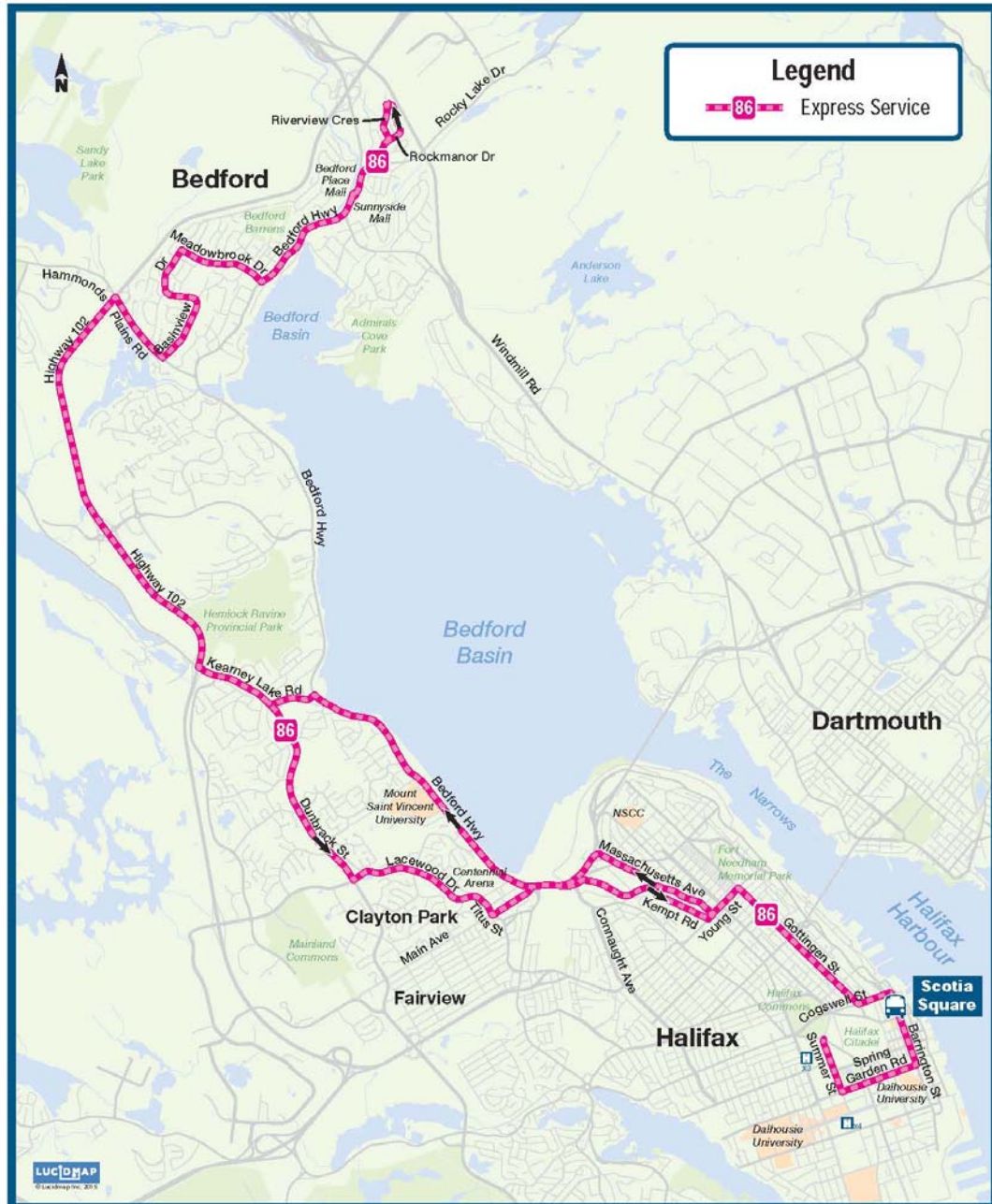


HALIFAX
TRANSIT



Effective Date: August 1, 2015

Basinview

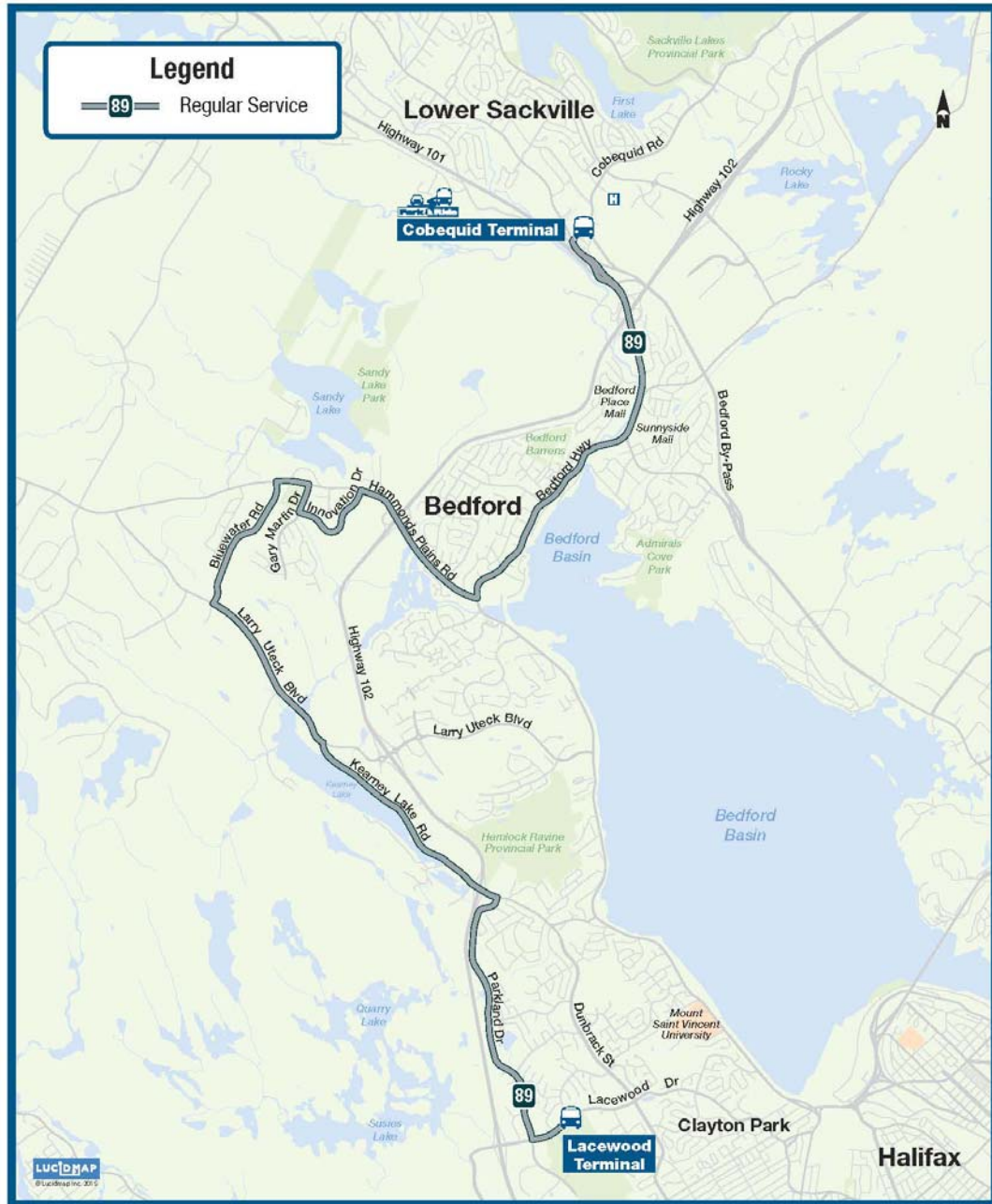


Effective Date: August 1, 2015

89 Bedford



HALIFAX
TRANSIT



3 Site Generated Traffic

3.1 Trip Generation

Phase 1 (as of right) will be completed in accordance with the existing land use bylaw for Mainstreet Commercial (CMC) Zone and will have 6,990 sqft of Commercial/Retail Space on Ground Level along Bedford Highway with 6 townhouses and 4 apartments above including parking with access from Fourth Street and Bedford Highway. Phase 2 (proposed development agreement) will be developed behind Phase 1 with access via Fourth Street. It will contain 18 apartment units. There will be a total of 6 townhouses, 22 apartments and 6,990 sqft of commercial/retail space for the entire development

We completed trip generation estimates using equations provided in Institute for Transportation Engineer's Trip Generation Manual Ninth Edition. We used the following ITE Land Use Codes to assess site generated trips:

- ITE Land Use 210 Single Family Detached Housing

"Single-family detached housing includes all single-family detached homes on individual lots. A typical site surveyed is a suburban subdivision." The unit of measurement for average vehicle trip ends is dwelling units.

- ITE Land Use 220 Apartment

"Apartments are rental dwelling units that are located within the same building with at least three other dwelling units, for examples quadraplexes and all types of apartment buildings." The unit of measurement for average vehicle trip ends is dwelling units.

- ITE Land Use 820 Shopping Centre

"A shopping center is an integrated group of commercial establishments that is planned, developed, owned and managed as a unit. A shopping center's composition is related to its market area in terms of size, location and type of store. A shopping center also provides on-site parking facilities sufficient to serve its own parking demands." The unit of measurement for average vehicle trip ends is 1,000 Square Feet Gross Floor Area.

Exhibit 3.1 – Bedford Highway at Fourth Street Estimated Site Generated Traffic Volumes

LAND USE	QUANTITY	AM PEAK			PM PEAK		
		TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT
Single Family Detached Housing ITE Land Use 210	6	14	25%	75%	8	63%	37%
			3	10		5	3
Apartments ITE Land Use 220	22	15	20%	80%	30	65%	35%
			3	12		19	10
Shopping Centre ITE Land Use 820	6,990	32	61%	39%	108	48%	52%
			19	12		52	56
TOTAL		60	26	34	146	77	70

3.2 Pass By Trips

We expect that this proposed development will attract a significant portion of its trips from the existing traffic passing by the site. These pass-by trips do not add new traffic to the surrounding transportation network; however, they are included in the traffic volumes entering and exiting the site. Essentially, pass-by trips are intermediate stops of a trip that already exists on the transportation network. They are not diverted from another roadway. The proposed retail portion of the development is relatively small and as a result will primarily serve the local area and not attract regional traffic.

We reviewed ITE's Trip Generation Manual, 9th Edition for their recommended practice regarding pass-by trips and it states that *"Pass-by trips are drawn from the passing traffic stream, but are always included in site driveway movements. In traffic analyses, the summation of driveway volumes must equal the total external site generation (i.e., the sum of primary, pass-by and diverted linked trips). Pass-by trips are not included in (and thus subtracted from) the through volumes passing a given site access point on an adjacent road."*

ITE provides data plots and equations that estimate the average pass-by trip percentage versus 1,000 Square Feet Gross Leasable Area of retail space that are based on field studies completed across North America. The smaller the retail space is the larger the percentage of pass-by trips.

The average pass-by trip percentage for a 6,990 sqft shopping center is 84% during the PM peak hour. To determine a more reasonable estimate of net new traffic we reduced PM peak hour traffic for the proposed retail component by the pass-by percentage described above.

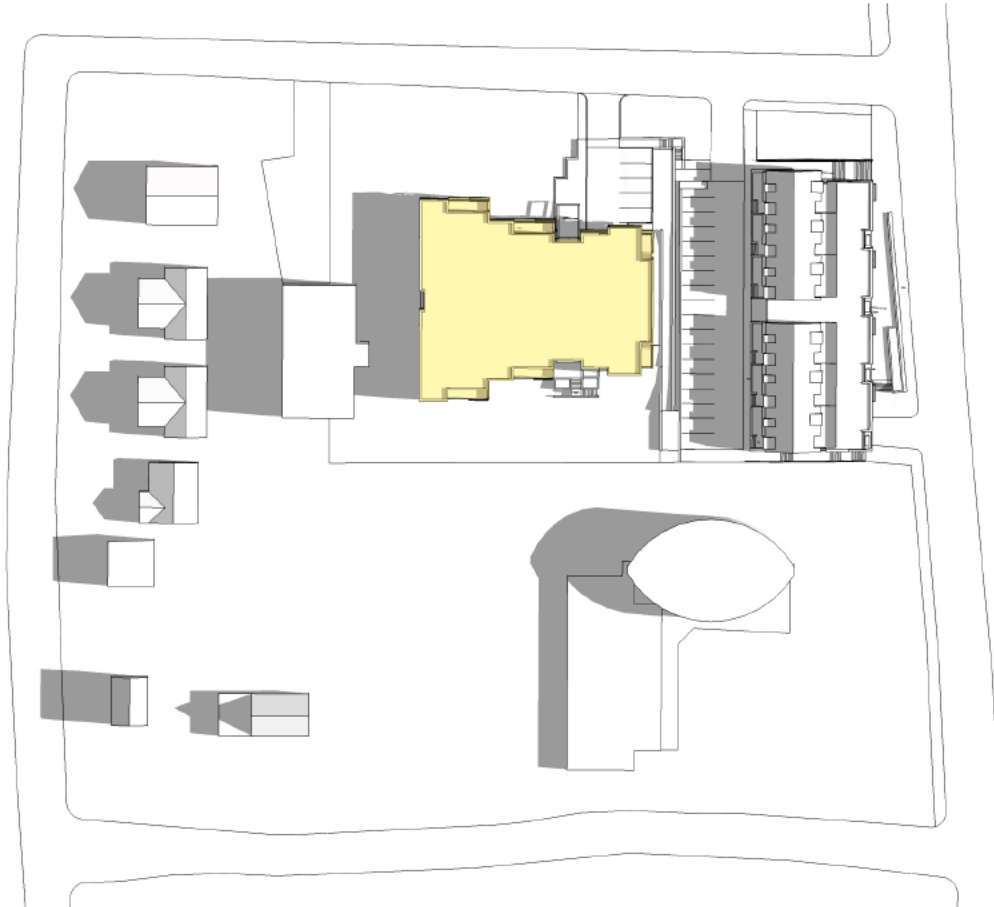
Exhibit 3.2 – Estimated Net Future Traffic Volumes with Pass-By Trip Adjustments

LAND USE	QUANTITY	AM PEAK			PM PEAK		
		TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT
TOTAL		60	26	34	55	33	22

4 Conclusions and Recommendations

- This Traffic Impact Statement has provided a high level overview of the proposed development at Bedford Highway/Fourth Street that will include 22 apartments, 6 townhouses and 6,990 sqft of commercial space on the ground floor.
- It includes an estimate of existing site generated trips; total new site generated trips and an analysis of existing traffic volumes in the surrounding area.
- We estimate that the proposed development will add a total of **60** new trips on the AM peak hour period and **55** new trips in the PM peak hour period after an adjustment for Pass-By Trips for the retail component.
- The close proximity to numerous key transit routes may reduce the estimate traffic generated by the rental apartments as provided in the report bases on ITE rates.
- New site generated traffic will most likely follow existing trip distribution patterns in the area on Bedford Highway during the AM and PM peak hour periods.

FOURTH STREET MULTI RESIDENTIAL DEVELOPMENT

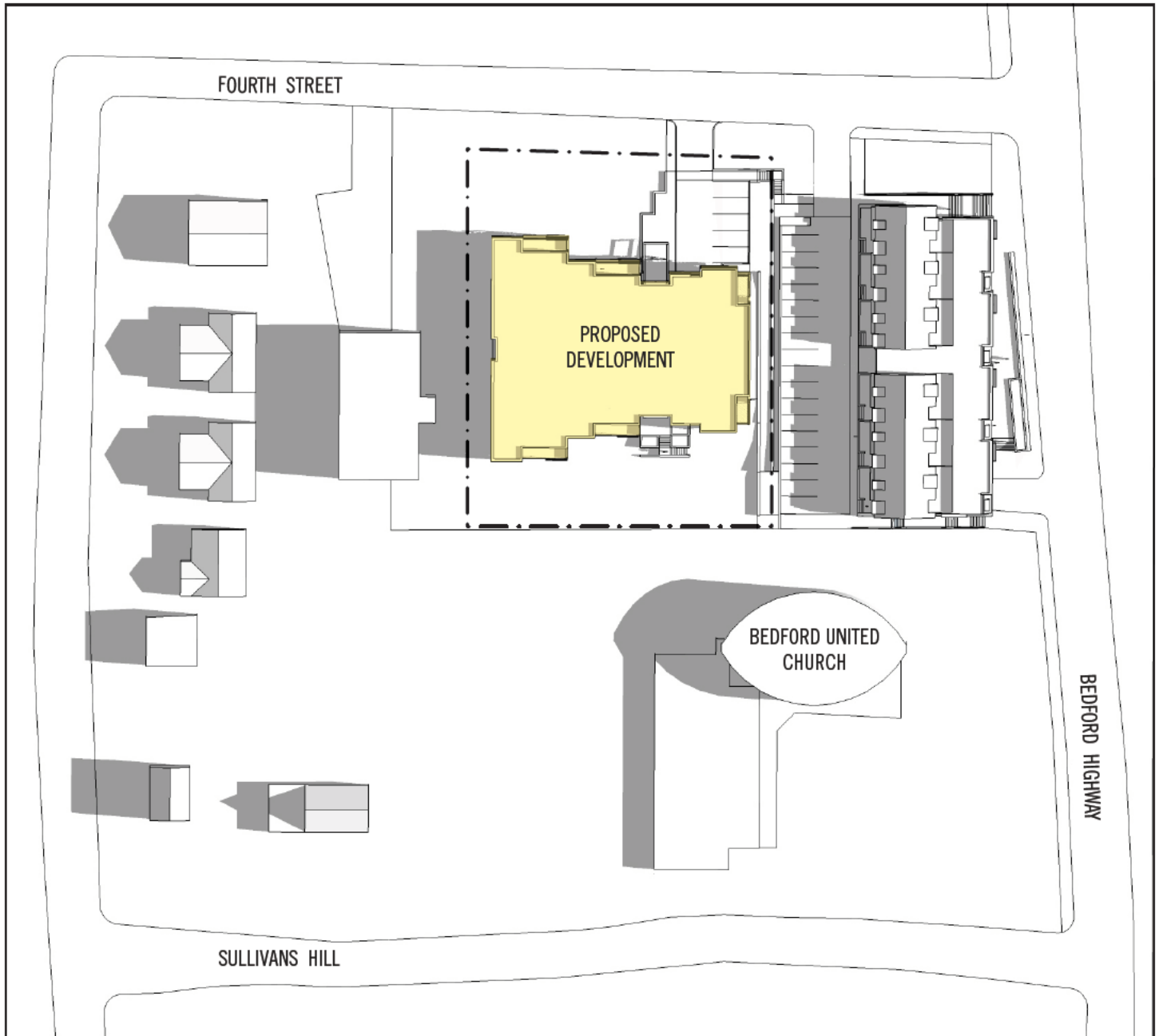


SHADOW STUDY

LYDON LYNCH
ARCHITECTURE

FOURTH STREET MULTI RESIDENTIAL DEVELOPMENT

LYDON LYNCH
ARCHITECTURE



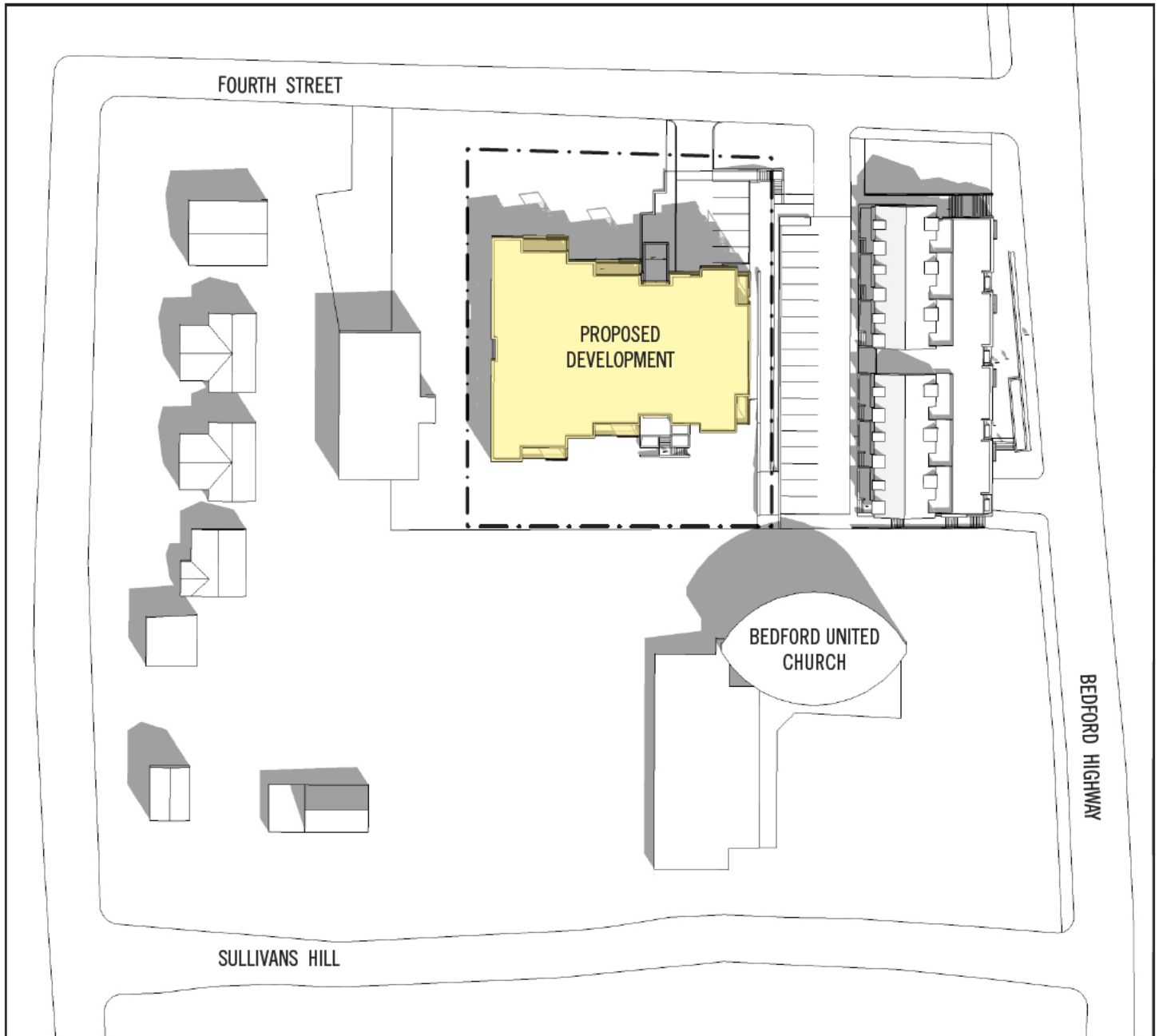
SHADOW STUDY - 9AM MARCH 21



NOVEMBER 30, 2017

FOURTH STREET MULTI RESIDENTIAL DEVELOPMENT

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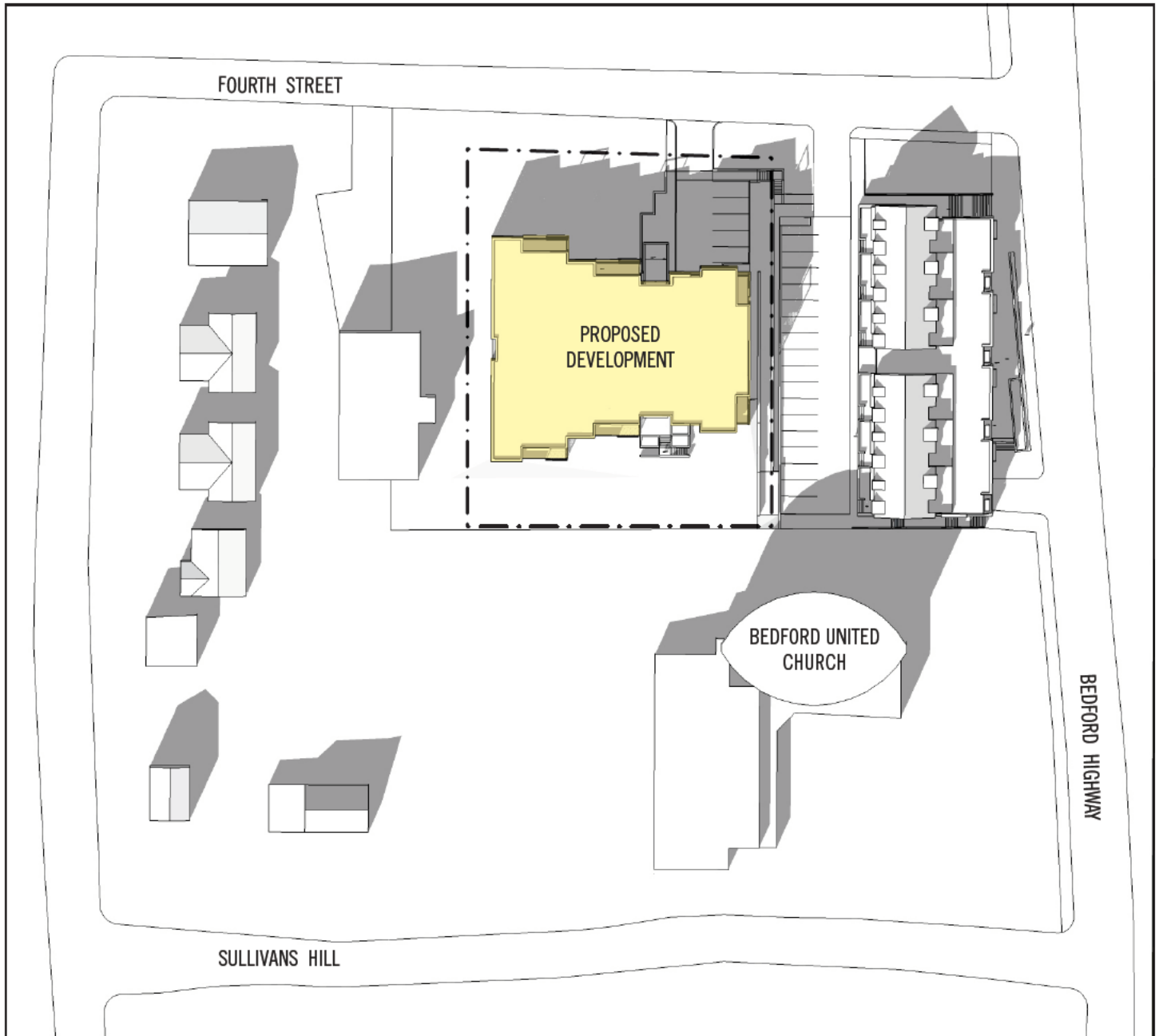
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NOVEMBER 30, 2017

FOURTH STREET MULTI RESIDENTIAL DEVELOPMENT

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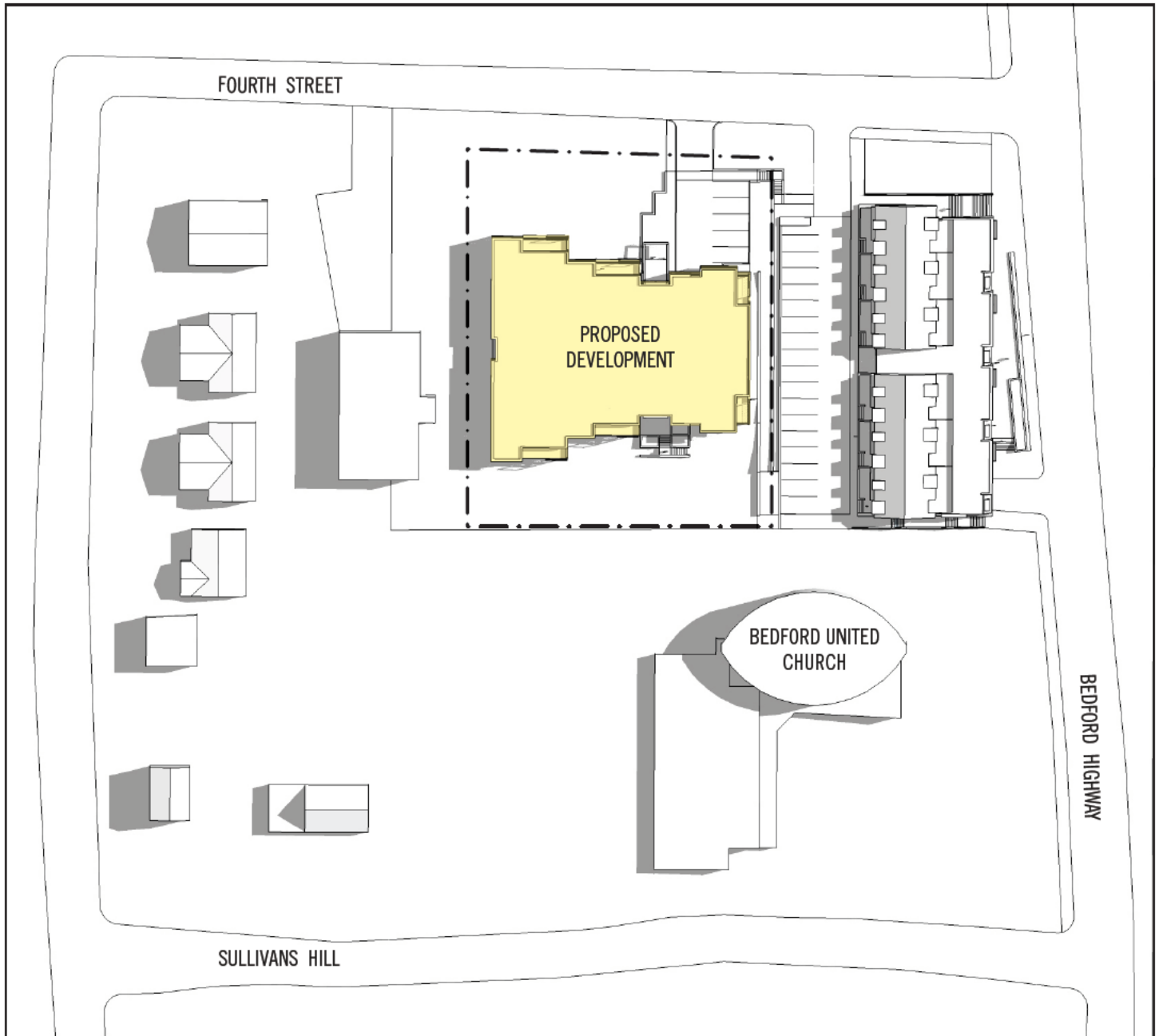
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NOVEMBER 30, 2017

FOURTH STREET MULTI RESIDENTIAL DEVELOPMENT

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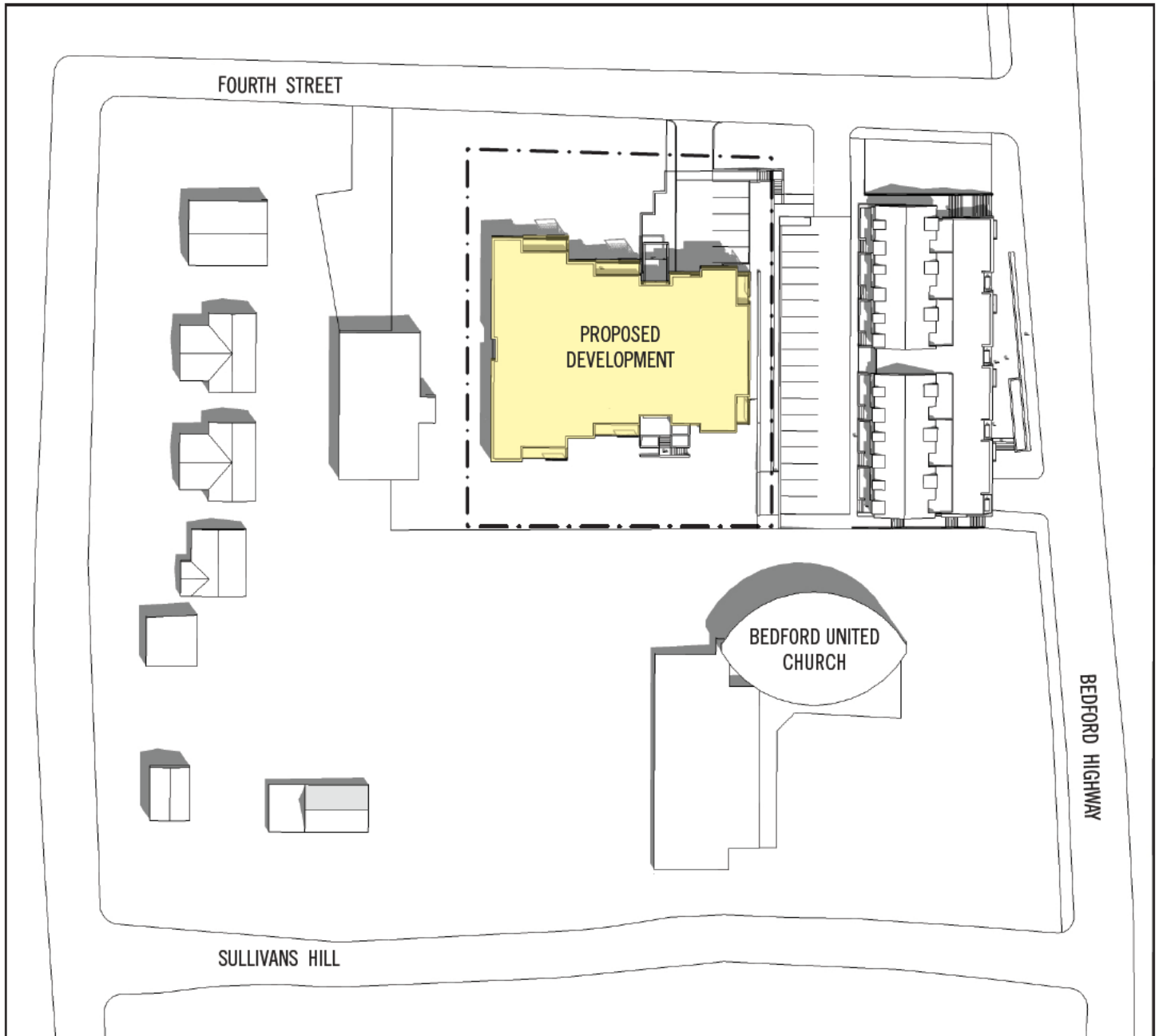
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NOVEMBER 30, 2017

FOURTH STREET MULTI RESIDENTIAL DEVELOPMENT

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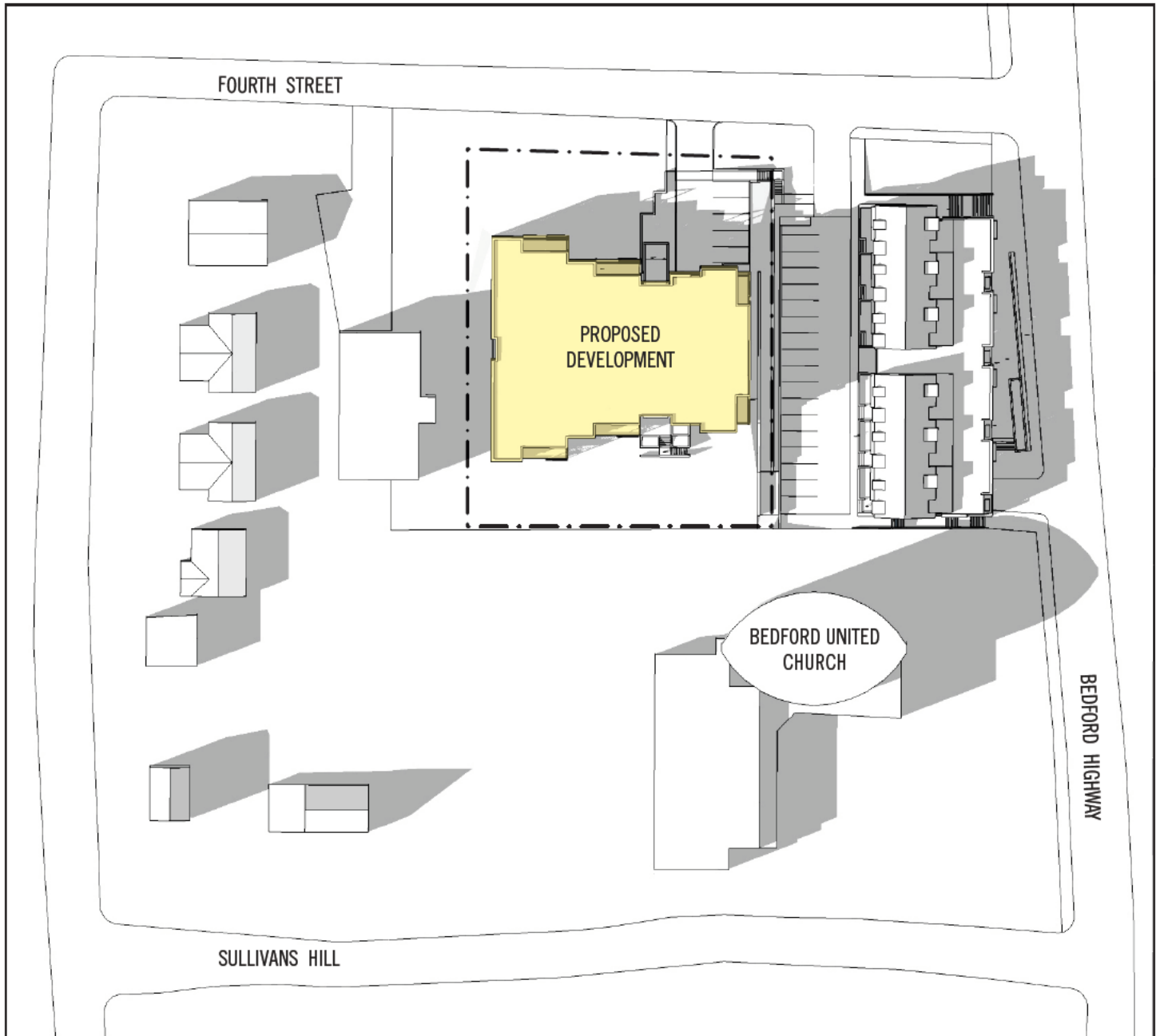
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FOURTH STREET MULTI RESIDENTIAL DEVELOPMENT

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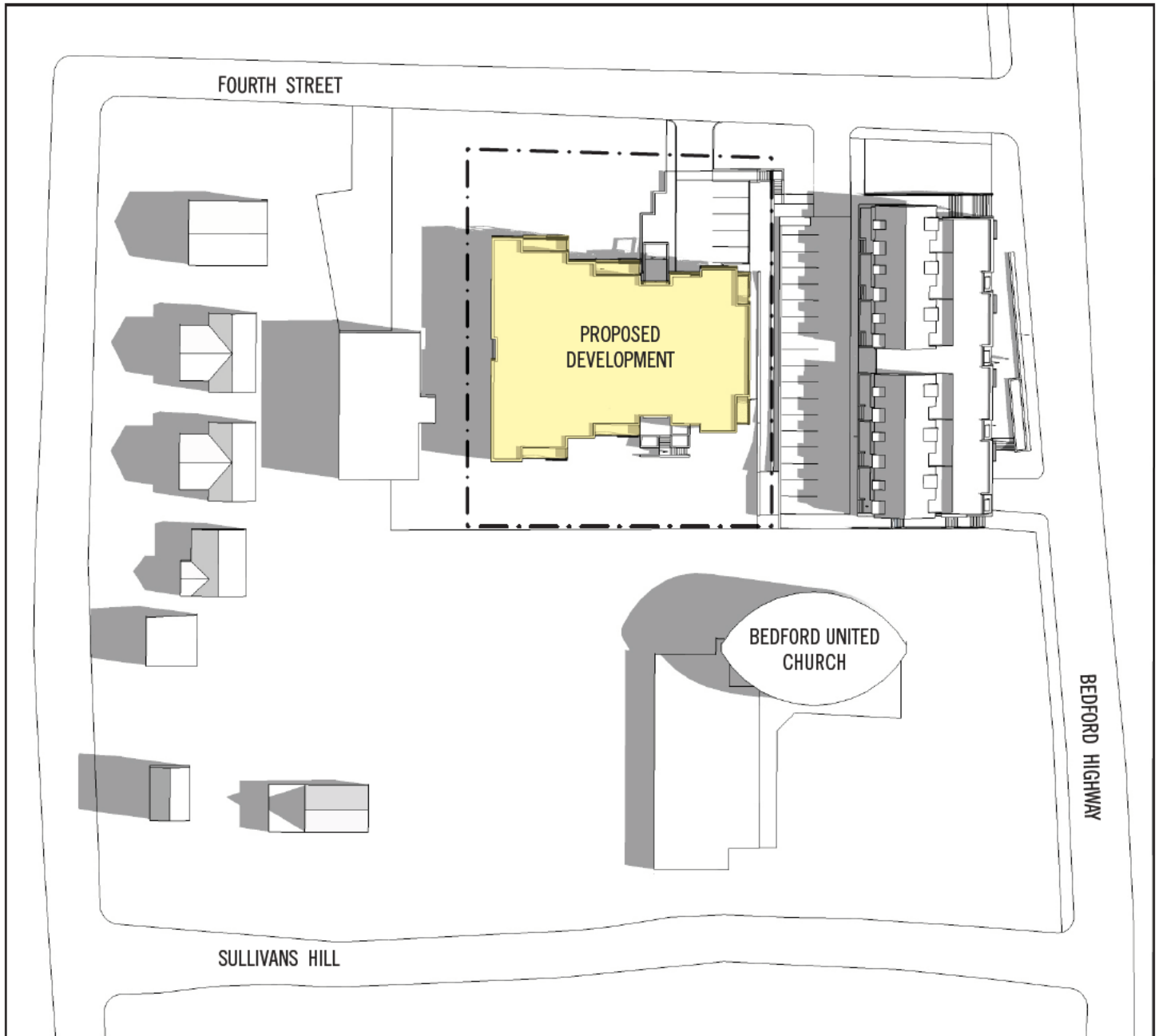
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NOVEMBER 30, 2017

FOURTH STREET MULTI RESIDENTIAL DEVELOPMENT

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ARCHITECTURE



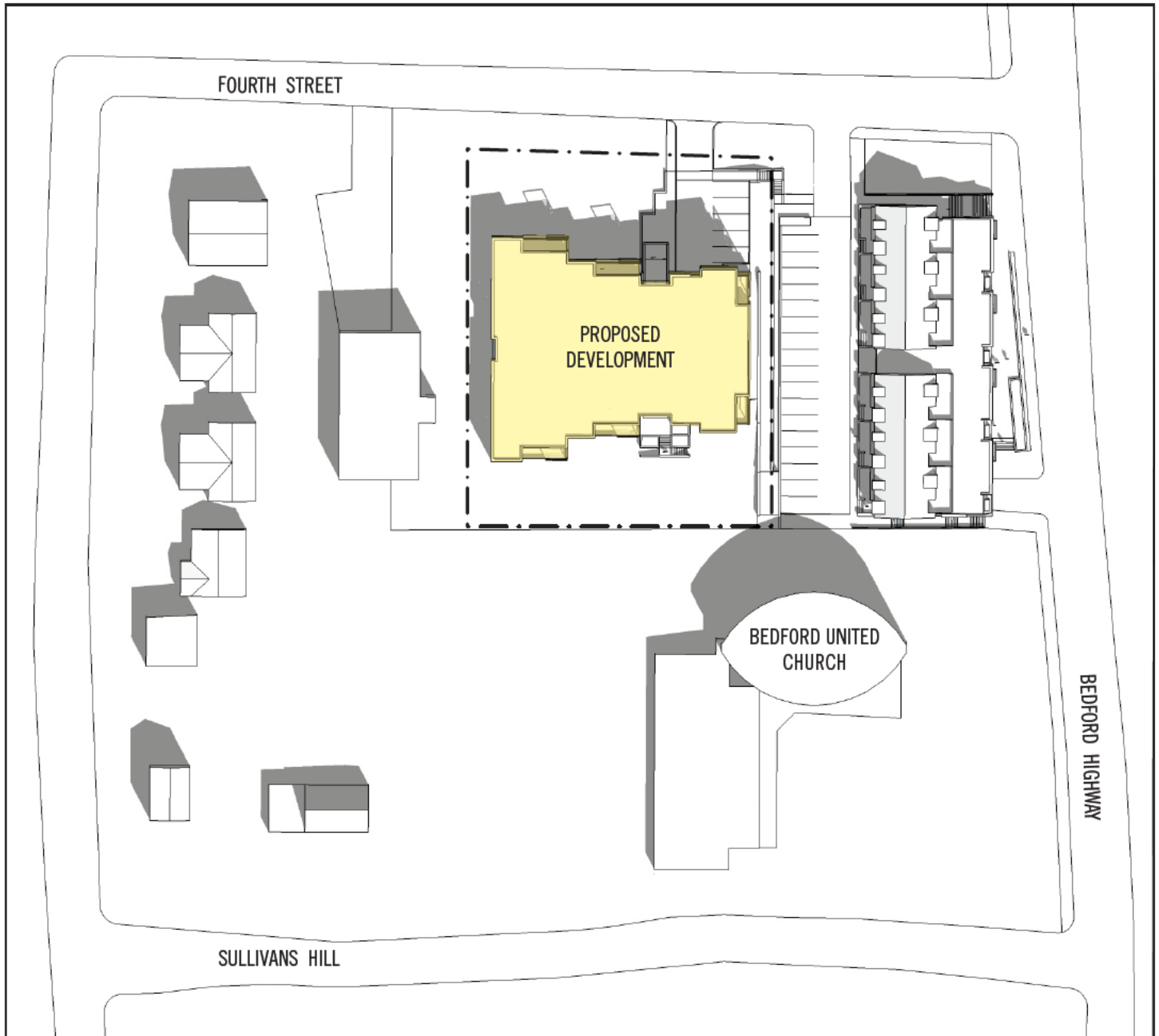
SHADOW STUDY - 9AM SEPTEMBER 21



NOVEMBER 30, 2017

FOURTH STREET MULTI RESIDENTIAL DEVELOPMENT

LYDON LYNCH
ARCHITECTURE



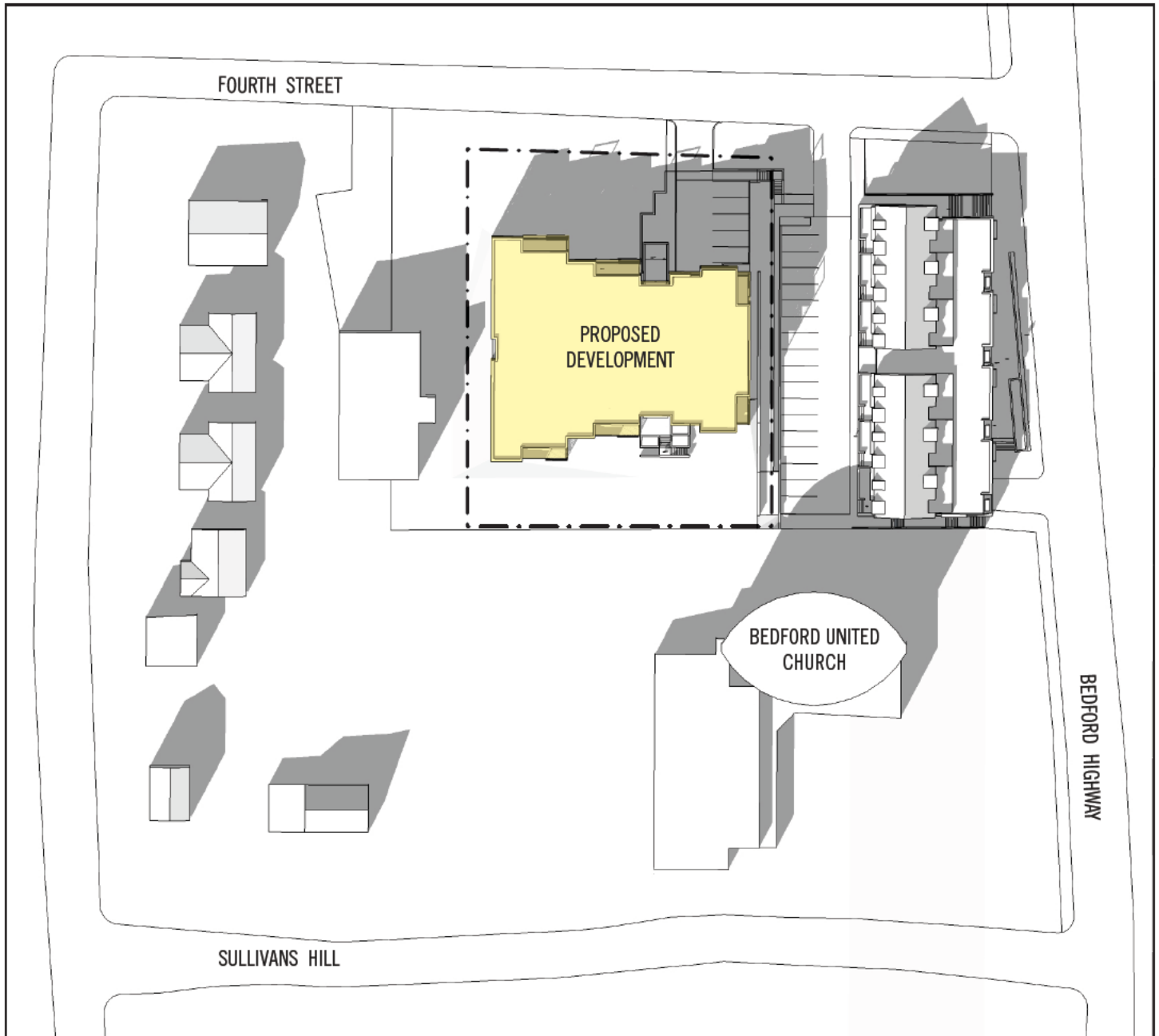
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NOVEMBER 30, 2017

FOURTH STREET MULTI RESIDENTIAL DEVELOPMENT

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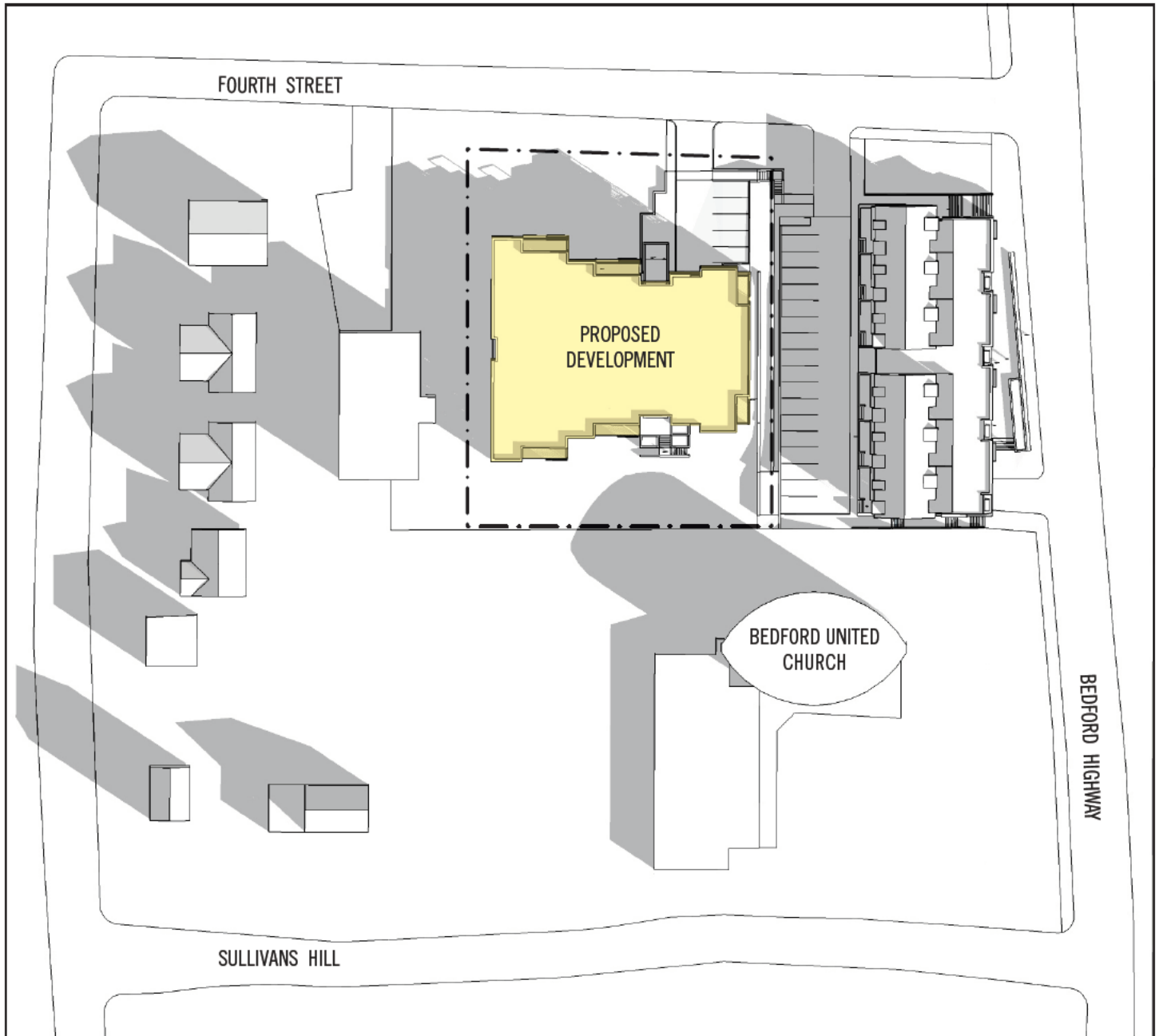
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NOVEMBER 30, 2017

FOURTH STREET MULTI RESIDENTIAL DEVELOPMENT

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ARCHITECTURE



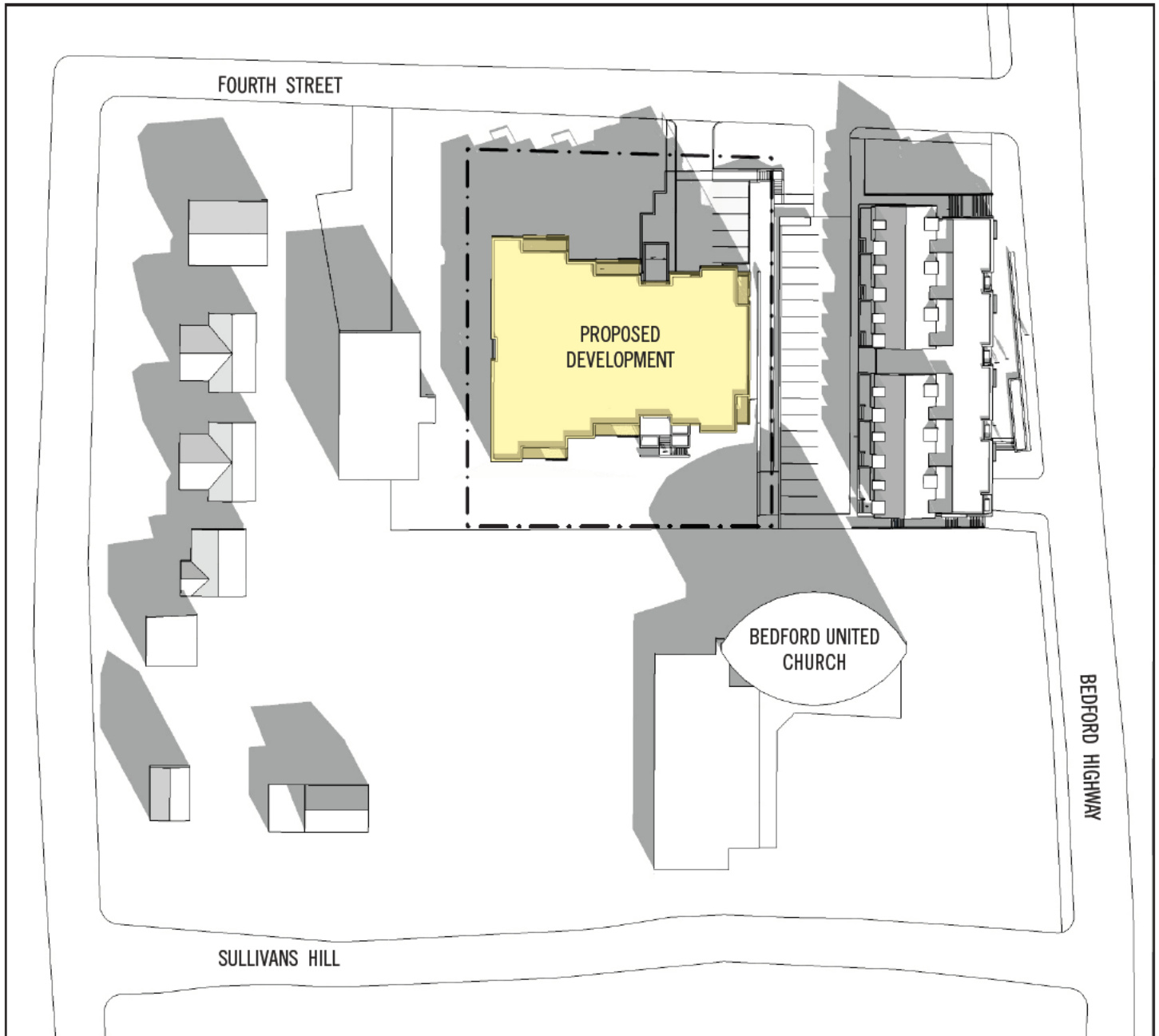
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NOVEMBER 30, 2017

FOURTH STREET MULTI RESIDENTIAL DEVELOPMENT

LYDON LYNCH
ARCHITECTURE



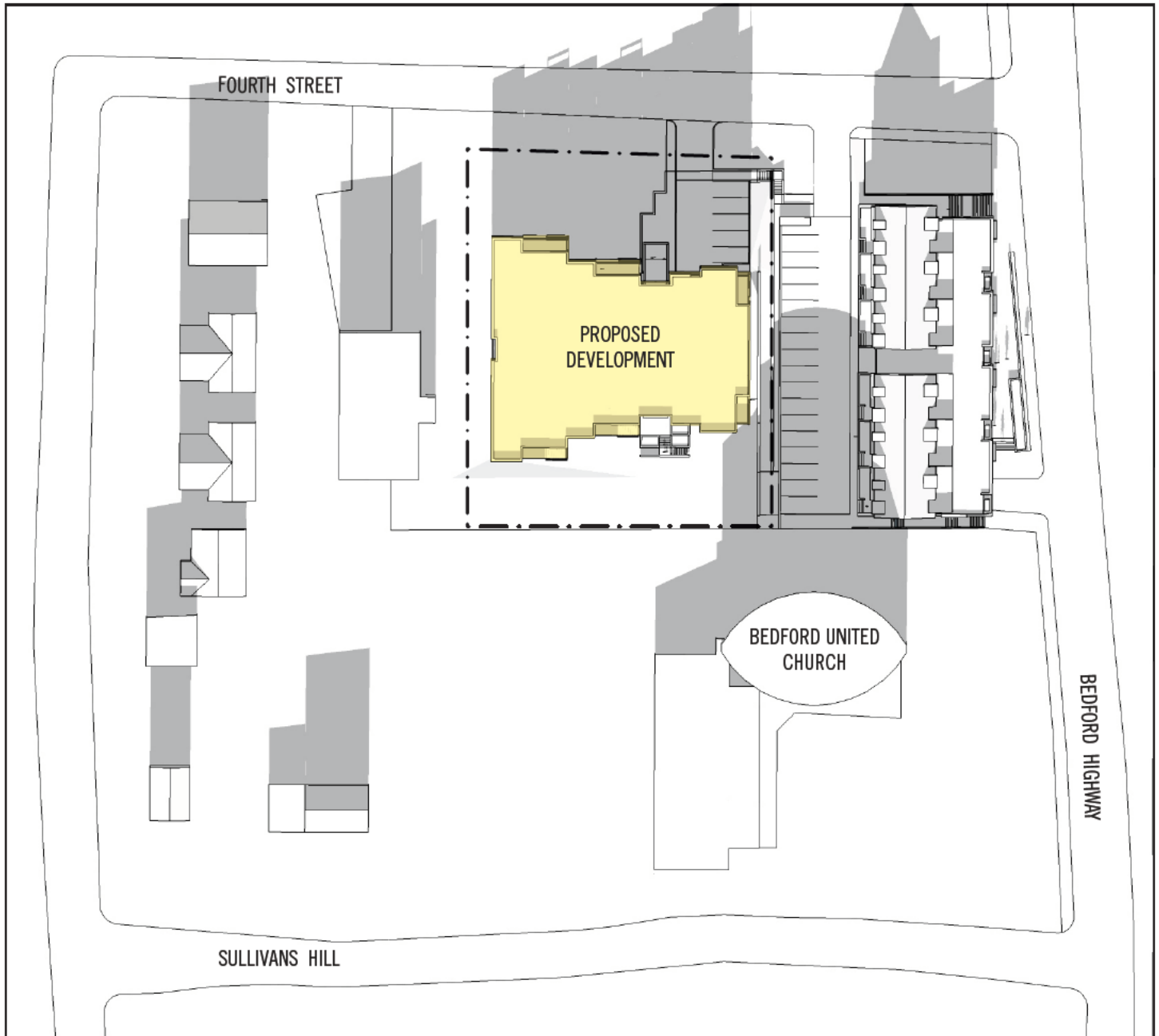
SHADOW STUDY - 12PM DECEMBER 21



NOVEMBER 30, 2017

FOURTH STREET MULTI RESIDENTIAL DEVELOPMENT

LYDON LYNCH
ARCHITECTURE



SHADOW STUDY - 2PM DECEMBER 21



NOVEMBER 30, 2017