

Project Narrative

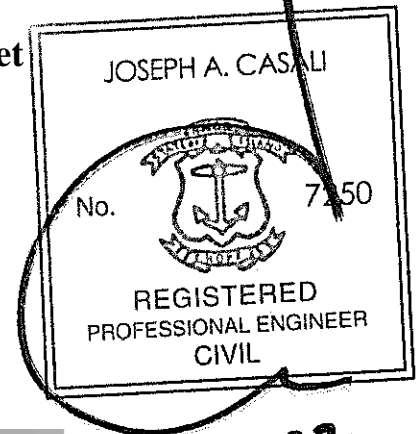
For

Waterman Street Development

**A Proposed Mixed-Use Building Consisting of a
Commercial Unit & 25 Residential Units**

**116 Waterman Street & 232 Brook Street
Providence, RI
AP 12, Lots 180 & 260**

Prepared for:
Walter Bronhard Realty
c/o Mr. Walter Bronhard, Manager
972 Highland Avenue
Fall River, MA 02720



10.18.2022



Image Courtesy of Aharonian & Associates, Inc.

Submission Date:
October 2022

Submitted by:

JCE

JOE CASALI ENGINEERING, INC.
CIVIL • SITE DEVELOPMENT • TRANSPORTATION
DRAINAGE • WETLANDS • ISDS • TRAFFIC • FLOODPLAIN
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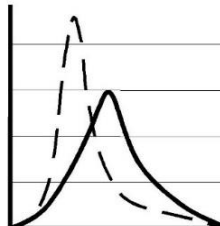


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- Appendix A: Floor Plans and Renderings, prepared by Aharonian and Associates, Inc.
Appendix B: Site Plans, prepared by Joe Casali Engineering, Inc.

1 INTRODUCTION

On behalf of Walter Bronhard Realty, LLC, Joe Casali Engineering, Inc. (JCE) has prepared the following Project Narrative to identify existing and proposed site conditions related to a proposed Major Land Development Project consisting of a new 32,122 sq. ft. (5,510 sq. ft. footprint), five-story, mixed-use building. The subject property, known as Tax Assessor's Plat (AP) 12, Lots 180 & 260, has frontage on Waterman Street, Brook Street and Fones Alley in the City of Providence.

The project consists of development of a 32,122 sq. ft. (5,510 sq. ft. footprint), five-story, mixed-use building consisting of one (1) commercial unit and 25 residential units on the subject property. Other improvements include improved sidewalks and utility connections. The five-story building is proposed to consist of five floors and a cellar totaling approximately 32,122 gross square feet, with approximately 970 sq. ft. dedicated to the commercial unit. The existing structure located at 116 Waterman Street is a three-story 6+ apartments, mixed use building. The existing structure located at 382 Brook Street is a three-story four-family mixed use building. All existing structures will be razed. The following report has been prepared to discuss existing conditions, proposed conditions, and the permitting path for the proposed project.

2 SITE LOCATION AND PHYSICAL DESCRIPTION

The subject properties have a physical address of 116 Waterman Street and 383 Brook Street in Providence, Rhode Island and is identified as Tax Assessor's Plat (AP) 13, Lots 180 and 260. Based on an August 2020 Class I Comprehensive Boundary Survey performed by Waterman Engineering Company, the site contains a total of 6,070 square feet (0.139 acres) and has frontage on Waterman Street, Brook Street and Fones Alley. The site is bound by Fones Alley to the north, Brook Street to the east, Waterman Street to the south and AP 12, Lot 181 (mixed use building including "Subway" restaurant) to the west, as shown below in Figure 1 – Locus Map.

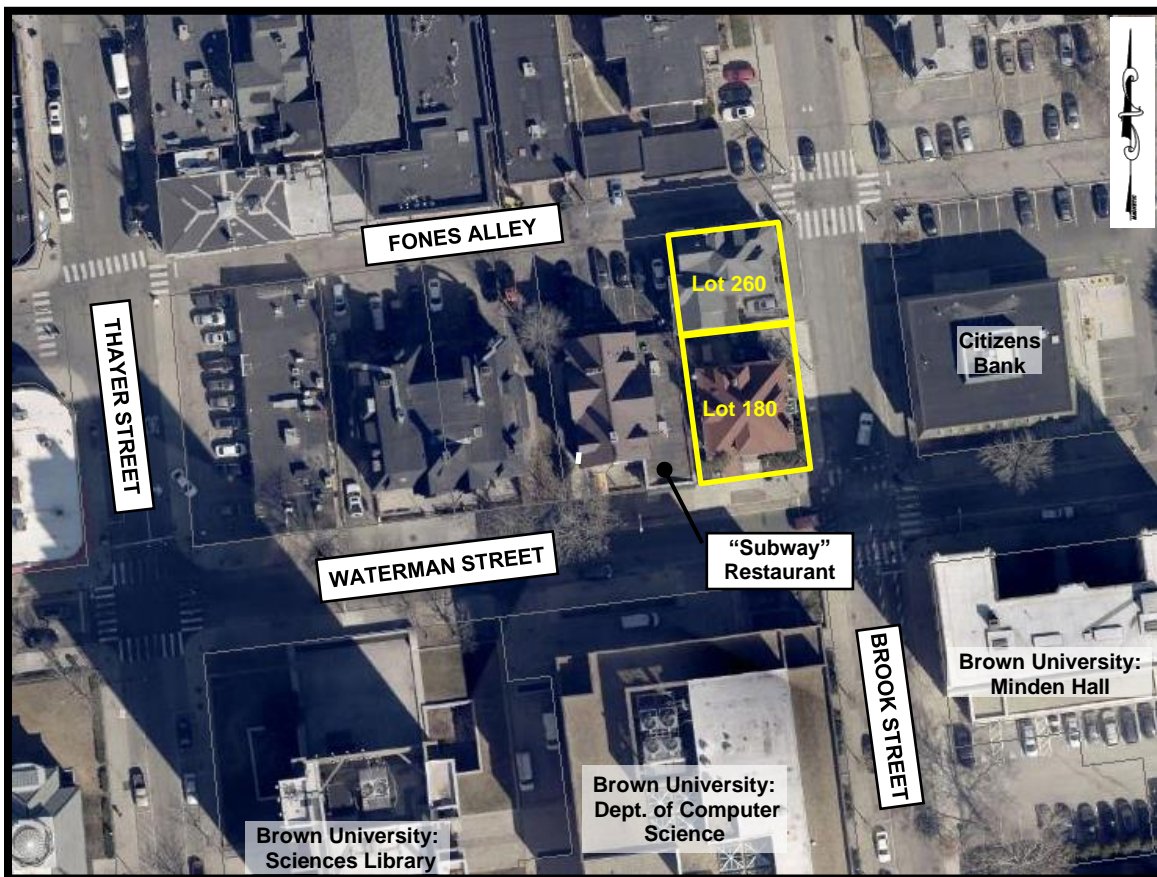


Figure 1 – Locus Map

NOT TO SCALE

The site is currently occupied by two (2) existing structures consisting of three-stories multi-unit mixed use buildings.

2.1 Soil Classification

According to the *Web Soil Survey (WSS)* operated by the US Department of Agriculture Natural Resources Conservation Service (NRCS), produced by the National Cooperative Soil Survey, the soils on-site consist entirely of Paxton-Urban land complex, 3-15% slopes (PD). PD soils consist of coarse-loamy lodgment till derived from gneiss, granite, and/or schist. These soils have a medium runoff class and are well drained. These soils have been assigned to the Hydrologic Soil Group 'C'.

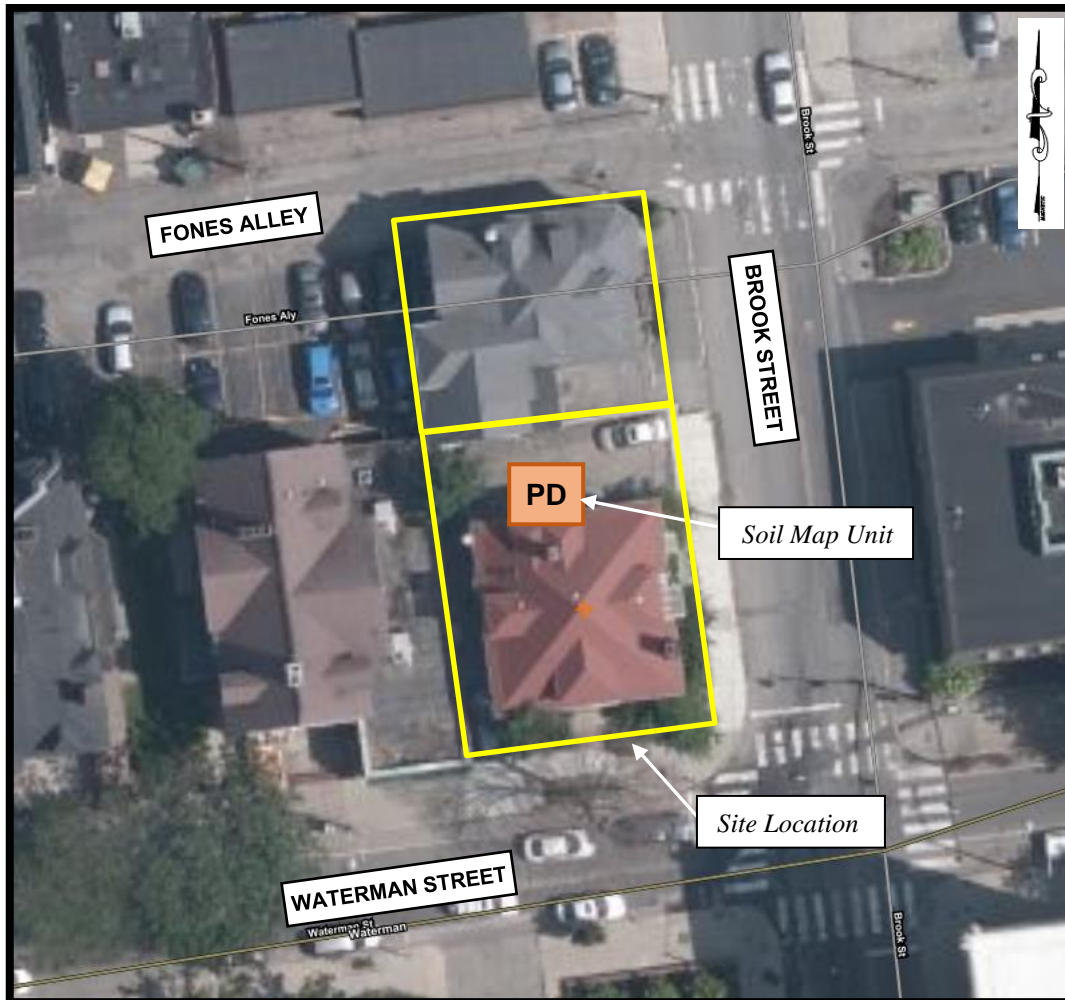


Figure 2 – Soils Map
NOT TO SCALE

2.2 Flood Zone Classification

The subject parcel is located on the Flood Insurance Rate Map (FIRM) for Providence County, Map Number 44007C0309K, effective October 2, 2015. Based on this FIRM, the site and all adjacent sites are identified as Zone X – areas determined to be outside of the 0.2% annual-chance flood hazard area.

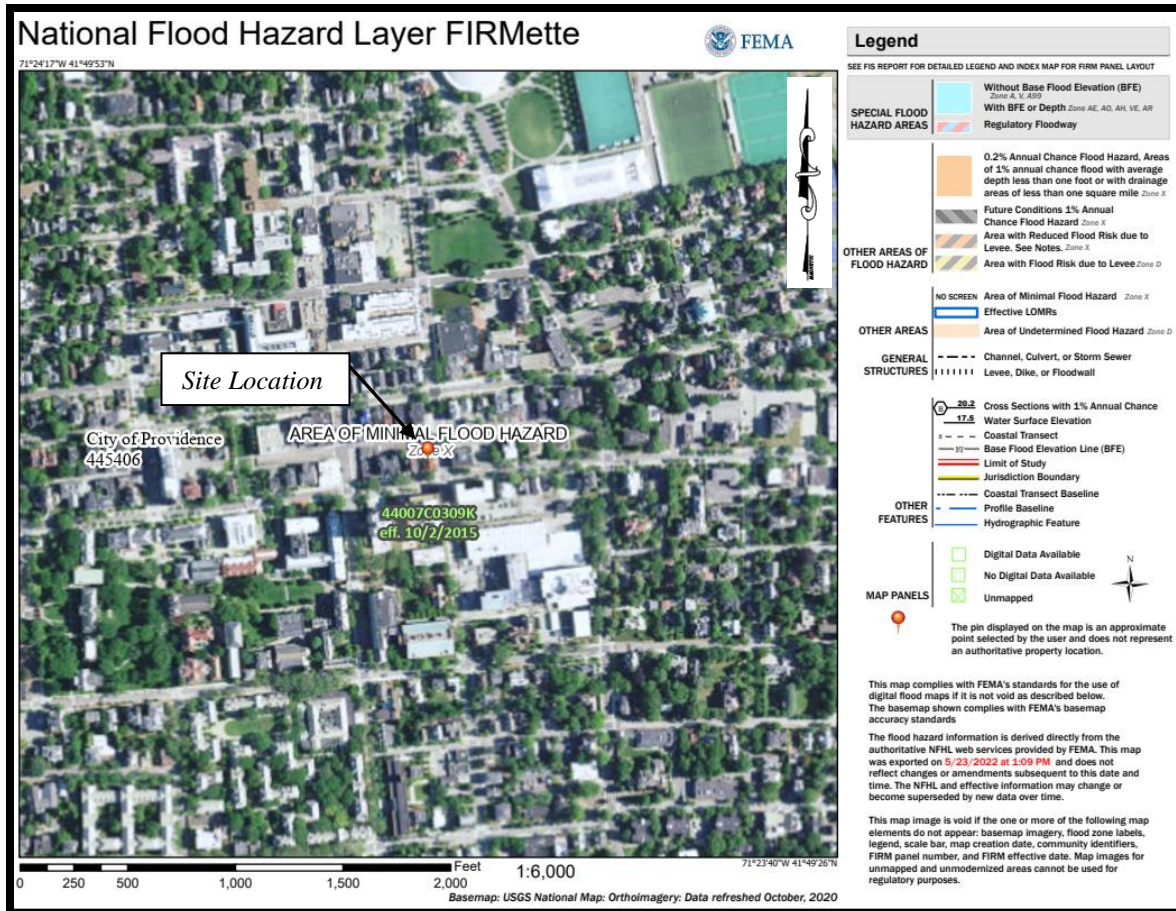


Figure 3 – Flood Map
 NOT TO SCALE

2.3 Natural Resource Inventory

According to the Rhode Island Department of Environmental Management (RIDEM) Environmental Resource Mapping, there are no wetland features within or adjacent to the subject parcels. In addition, the subject parcel is not located within any known historic planning district, land conservation area or natural heritage area.

The site is located within the Seekonk River – Providence River Watershed (#010900040902). Stormwater runoff from the site sheet flows to existing catch basins within Brook Street. Stormwater runoff from this area is routed through a series of pipes to discharge to the Providence River (RI0007020E-01B) which is included in the State of Rhode Island 2016 303(d) List, List of Impaired Waters (RIDEM, February 2020). Impairments include dissolved oxygen, total nitrogen, and fecal coliform. There are no total maximum daily loads (TMDL) established for these impairments.

2.4 Easements

Based on the August 2020 Class I Comprehensive Boundary Survey performed by Waterman Engineering Company, there are no existing easements on the subject parcels.

2.5 Zoning

According to the City of Providence Zoning Ordinance and Zoning Map, the subject property is currently located within the General Commercial District (C-2). This district is intended for more intensive commercial uses and key commercial nodes, including larger retail establishments. Structures with dwellings above ground floor non-residential uses are considered mixed-use development, which are considered a non-residential use for the purposes of the Ordinance. Residential and parking uses are prohibited on the ground floor of a building within 20 feet of Waterman Street and Brook Street. The proposed mixed-use development is permitted by right in the C-2 zone.

The following are the current dimensional requirements for the C-2 Zone:

Requirement	C-2 Zone Req'd
Minimum Lot Area	None
Minimum Building Height	16 ft.
Minimum First Story Height	9' Residential use 11' Non-Residential Use
Maximum Building Height	50 ft., not to exceed 4 stories
Maximum Building Coverage	None
Total Maximum Impervious Surface Coverage	None
Minimum Front Setback	Build-to-zone of 0' to 5' ¹
Minimum Side Setback	None; unless abutting residential district, then 10'
Minimum Rear Setback	None; unless abutting residential district, then 20'

Notes:

1. The required build-to percentage is 60% on the front lot line.

The subject property is also located within the Educational Institutional Overlay District (I-3E). The I-3E Educational Institutional Overlay District is intended to encourage development in Downtown and along the City's commercial corridors by permitting higher education institutional uses, student housing, and practicums in addition to a variety of commercial, entertainment, residential, public, and other uses in select areas.

Compatible and appropriate mixed-uses are encouraged to promote pedestrian activity at street levels while encouraging full and varied use on the upper floors. This district is intended to encourage the development of educational uses while preserving and fostering the economic vitality of the Downtown and the City's commercial corridors.

2.6 Existing Utilities

Water: An 8-inch cast iron water main exists within Brook Street and a 6-inch cast iron water main exists within Brook Street. There is an existing 5/8-inch water service currently servicing the existing building located on Waterman Street. A 1-inch water service is currently utilized by the existing building located on Brook Street. This water main is owned and maintained by the Providence Water Supply Board (PWSB).

The closest fire hydrant is located approximately 305 feet east of the subject property, on the same side of the street on Waterman Street.

Sewer: A 12-inch sewer main owned and maintained by the City of Providence exists within Waterman Street and a 30-inch sewer main exists within Brook Street. Effluent is ultimately routed to the Field's Point Wastewater Treatment Facility, owned, and operated by the Narragansett Bay Commission.

Drainage: A 20-inch drainage main exists within Brook Street. All stormwater discharge from the subject property sheet flows towards Brook Street and is conveyed to existing catch basins within the street. Ultimately stormwater runoff is discharged to the Providence River.

Gas: A 6-inch cast iron gas main exist within Thayer Street. A gas main also exists within Brook Street. These gas mains are owned and maintained by National Grid.

Electric/Communications: Electric and communications services are available to the subject site via overhead lines on the west side of Brook Street and the north side of Fomes Alley; owned and maintained by RI Energy. Underground electric is available within Thayer Street.

3 PROPOSED SCOPE OF WORK

3.1 General

The proposed project consists of an approximately 32,122 sq. ft. (5,510 sq. ft. footprint), five-story, mixed-use building consisting of one (1) commercial unit and 25 residential units on the subject property. The residential units have been designed as two-bedroom units with two (2) bathrooms each. The five-story building is proposed to consist of five floors and a cellar totaling approximately 32,122 gross square feet, with approximately 970 sq. ft. dedicated to a commercial unit. The cellar will have a gym, a communal space, a trash room, a bike room, one (1) residential unit, and a utility room. Frontage and access to the development will be provided via Waterman Street for the commercial unit, and Fones Alley for the residential units. The residential entrance will open to a lobby that provides access to the stairs and the elevator. Access to the residential portion of the cellar will be provided via an entrance on Brook Street. The rooftop is proposed to contain a common area with seating and landscaped areas. Floor Plans and Renderings are included in Appendix A. Please refer to Appendix B for Site Plans.

3.2 Zoning

As discussed previously, the subject property is located within the General Commercial District (C-2). The proposed mixed-use development is permitted by right in the C-2 zone.

The following are the current dimensional requirements for the C-2 Zone:

Requirement	C-2 Zone Req'd	Proposed
Minimum Lot Area	None	6,070 sq. ft.
Minimum Building Height	16 ft.	58 ft.
Minimum First Story Height	11' Non-Residential Use	11 ft.
Maximum Building Height	50 ft., not to exceed 4 stories	58 ft. (5 stories) ²
Maximum Building Coverage	None	91%
Total Maximum Impervious Surface Coverage	None	82.2%
Minimum Front Setback	Build-to-zone of 0' to 5' ¹	Varies (0-4.96 ft.)
Minimum Side Setback	None	N/A
Minimum Rear Setback	None	4.93 ft.

Notes:

1. The required build-to percentage is 60% on the front lot line.

2. Dimensional adjustment requested for an additional story (8 feet above max.).

The Applicant seeks the following waivers and/or adjustments for this project:

- Height: Pursuant to Section 1904E, the Applicant seeks adjustment of twelve (12) feet or one (1) story because a vertical mixed-use development is provided, of which at least fifty percent (50%) is devoted to residential use.
- Ground Floor Uses – The Applicant seeks a design waiver from the requirements that residential uses are prohibited on the ground floor of the building within twenty (20) feet of a main street. A commercial use will front on Waterman Street; but the design waiver is requested for the residential use on Brook Street.

The proposed building complies with Article 5 Commercial Districts, Section 503A C-1 and C-2 District Design Standards. The proposed building has been designed to have an orientation to and entrance from the sidewalk along the primary building frontage along Waterman Street for the commercial unit. The ground floor building entrance is not recessed more than six feet from the required front setback and is less than the maximum width of eight feet. Regarding fenestration, the ground floor facades contain a total area of transparency greater than 50% of the wall area of the ground floor. Each upper story façade exceeds the 10% transparency requirement.

The proposed development is exempt from parking requirements per Article 14 Off-Street Parking and Loading, Section 1410.B.7 of the Providence Zoning Ordinance, which states “in the C-1 and C-2 districts, all lots of 10,000 square feet or less are exempt from parking requirements.” Bicycle parking is still required. Per Table 14-1, multi-family dwellings require one (1) bicycle space per every five (5) dwelling units; the proposed development will require 5 bicycle spaces. Of these five (5) bicycles spaces, 80% of these spaces shall be long-term spaces. Storage space for 10 bicycles will be located within the cellar of the building. Access will be provided via the entrance on Brook Street.

Per Article 15 Trees and Landscaping, Section 1503 On-Site Landscaping and Required Trees, sufficient trees shall be retained and/or planted on a lot so that the square footage of vegetative canopy of such trees, when mature, equals 15% of the square footage of the lot. The subject property requires 911 square feet of tree canopy. Existing street trees located in the public right-of-way directly adjacent to the lot line may be counted toward the canopy coverage for the lot. The existing street tree in front of the project site appears to have been cut down during 2020, a large new street will be planted to meet this

requirement. The proposed rooftop area will provide approximately 1,070 square feet of landscaping. Coordination with the City Forester will be required to confirm this requirement has been met.

Trash will be handled internally with a dedicated trash compactor within the cellar. Trash will be removed via the elevator and rear exit onto Fones Alles.

3.3 Utilities

Water: The proposed development will require a new domestic water service connection and a new fire protection service connection from the existing water main within Brook Street. A 2-inch domestic water service and a 6-inch fire protection service is proposed. Review and approval of the proposed domestic and fire protection service designs will be required by Providence Water.

Sewer: The proposed development will require a new sewer service connection to the existing sewer service within Brook Street. Review and approval will be required by the City of Providence Engineering Division and the Narragansett Bay Commission.

Drainage: The proposed development is exempt from the City's Stormwater Ordinance. Rooftop runoff from the proposed building will be conveyed via roof drains to an underground drainage pipe that will connect directly to the existing 20-inch drainage main within Brook Street.

Gas/Electric/Communications: Gas, electric and communications services are proposed from existing infrastructure within or along Brook Street and Fones Alley. The existing transformer located on the adjacent parcel, AP 12, Lot 181 is proposed to be removed by RI Energy. A new transformer and transformer pad will be installed by RI Energy to service the proposed development and adjacent developments under the same ownership. Coordination with RI Energy is ongoing.

3.4 Quasi-State and Local Permit Requirements

3.4.1 City Plan Commission (CPC)

The proposed mixed-use building will need to be reviewed by the City Plan Commission. The project requires three stages of review: (1) Master Plan (2) Preliminary Plan, and (3) Final Plan. The project received Master Plan approval at the July 27, 2022 City Plan Commission hearing. The Applicant seeks a wavier and/or adjustment for an additional building story and a residential ground floor use within 20 feet of a main street.

3.4.2 City of Providence Engineering Division & Traffic Division; City Forester

The proposed development will require review and approval from the City of Providence Engineering Division for the proposed sewer connection. In addition, the development will require review and approval from the City of Providence Traffic Division. Coordination with the City Forester will be required regarding existing street trees.

3.4.3 Fire Department

The site will require review and approval from the City of Providence Fire Department.

3.4.4 Providence Water Supply Board

The proposed development will require approval from the Providence Water Supply Board for the proposed fire protection and domestic water service design.

3.4.5 Narragansett Bay Commission (NBC)

All effluent from the subject parcel is ultimately treated at the Fields Point Wastewater Facility, operated by the Narragansett Bay Commission (NBC). Accordingly, the proposed sewer service will require a Sewer Connection Permit from the Narragansett Bay Commission.

Appendix A

Floor Plans and Renderings

Prepared by Aharonian and Associates, Inc., dated October 2022



PROPOSED VIEW

SCALE: N.T.S.

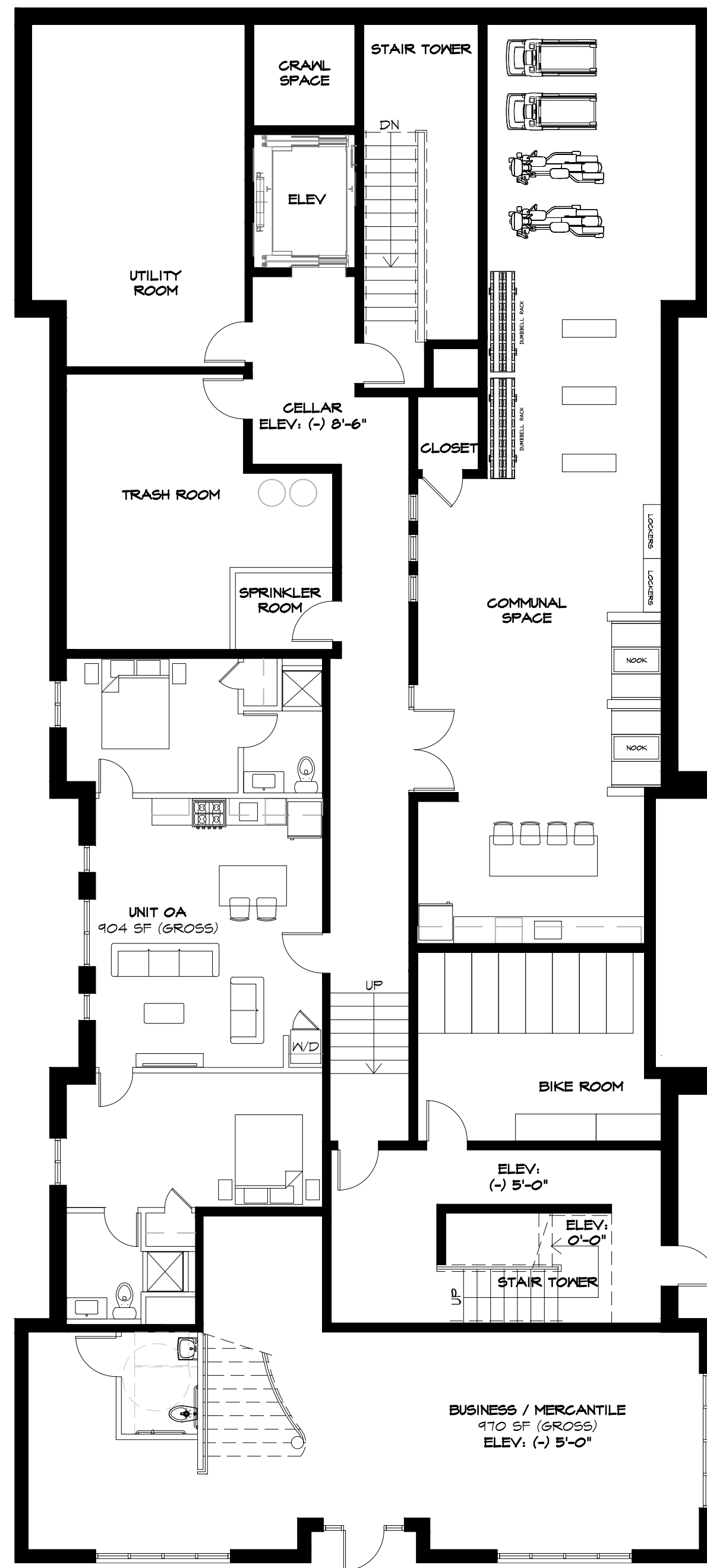


AHARONIAN
& ASSOCIATES, INC.
Architects

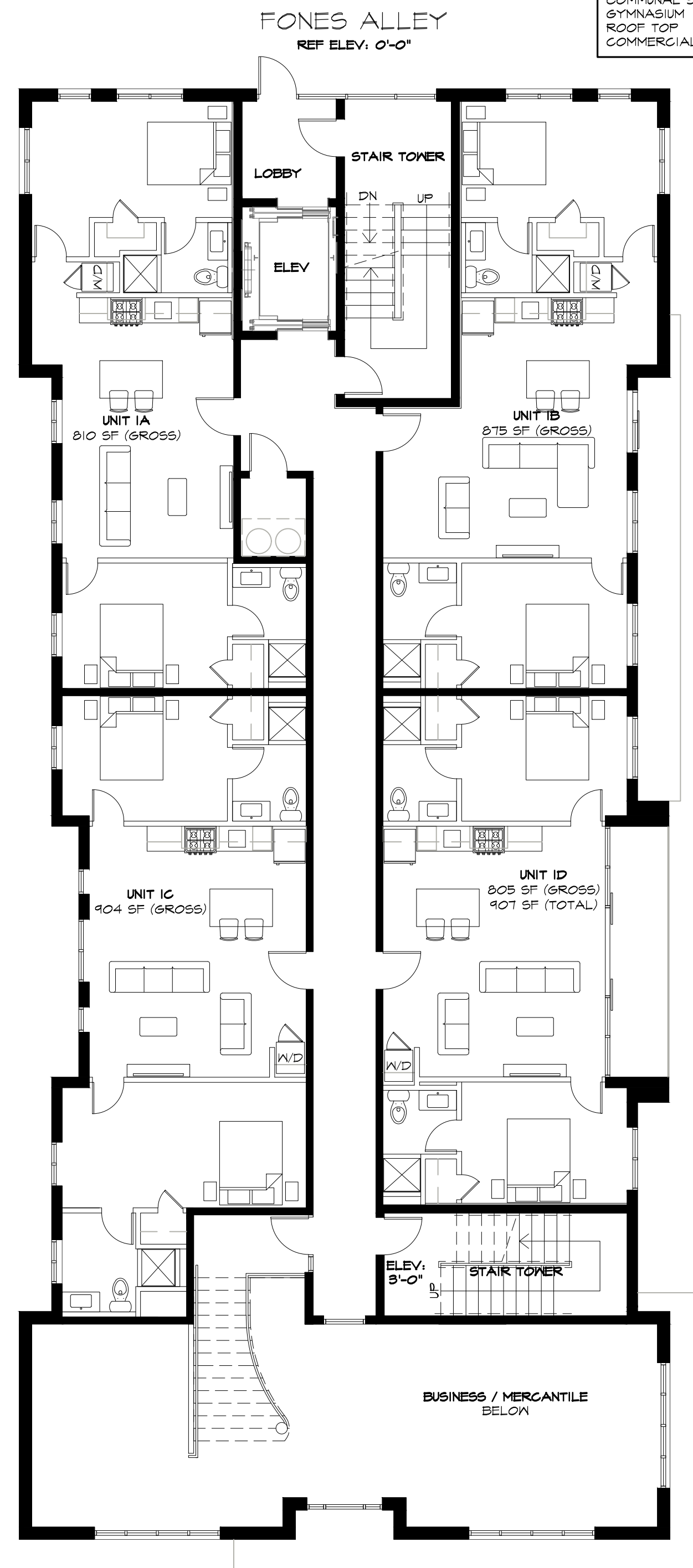
401-232-5010
www.arch-eng.com

WATERMAN STREET DEVELOPMENT
PROVIDENCE, RHODE ISLAND
MAY 24, 2022

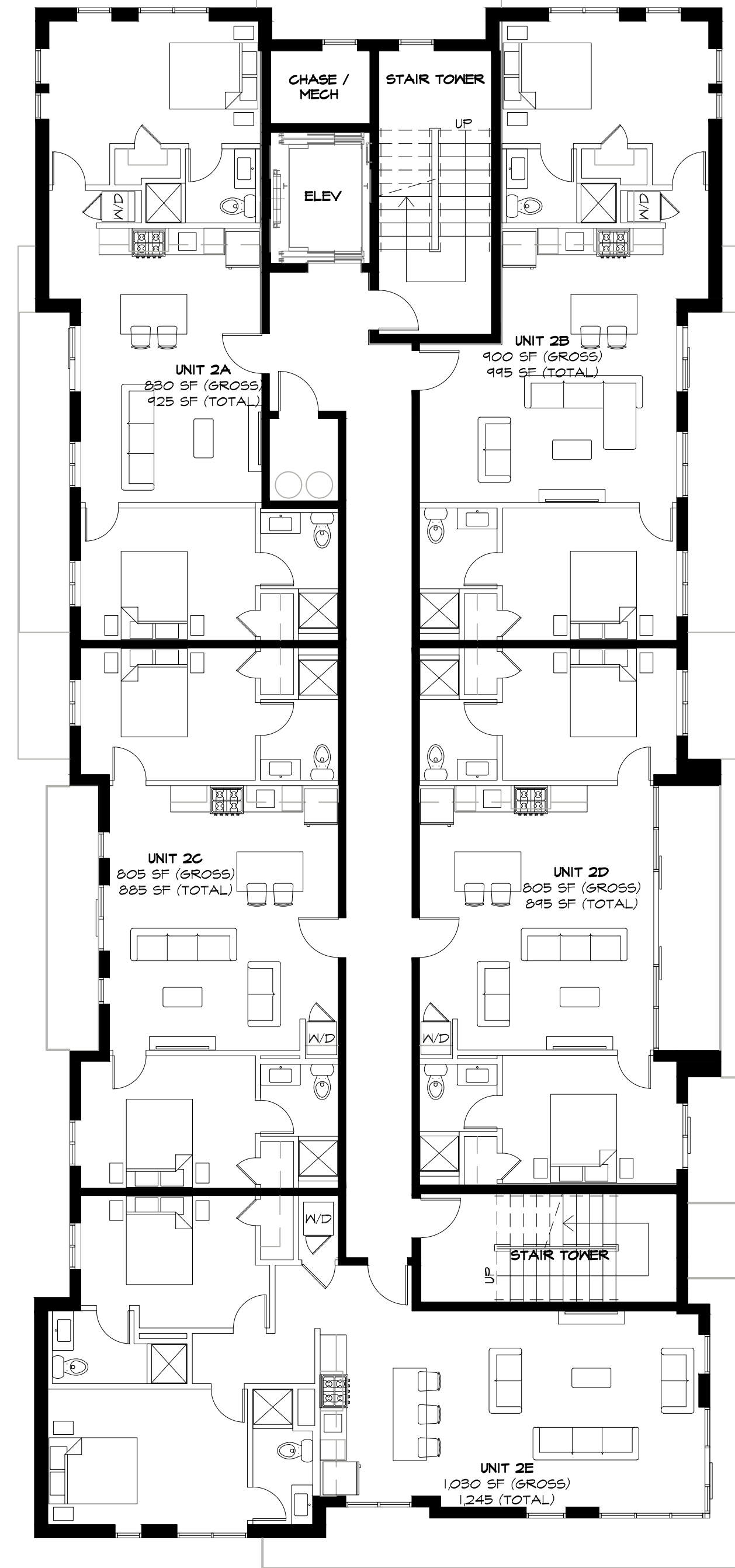
BUILDING ATTRIBUTES:
 5,510 SF PER LEVEL
 4,512 SF CELLAR
 TOTAL: 92,122 SF
 25 UNITS
 50 BEDROOMS
 COMMUNAL SPACE
 GYMNASIUM
 ROOF TOP
 COMMERCIAL SPACE



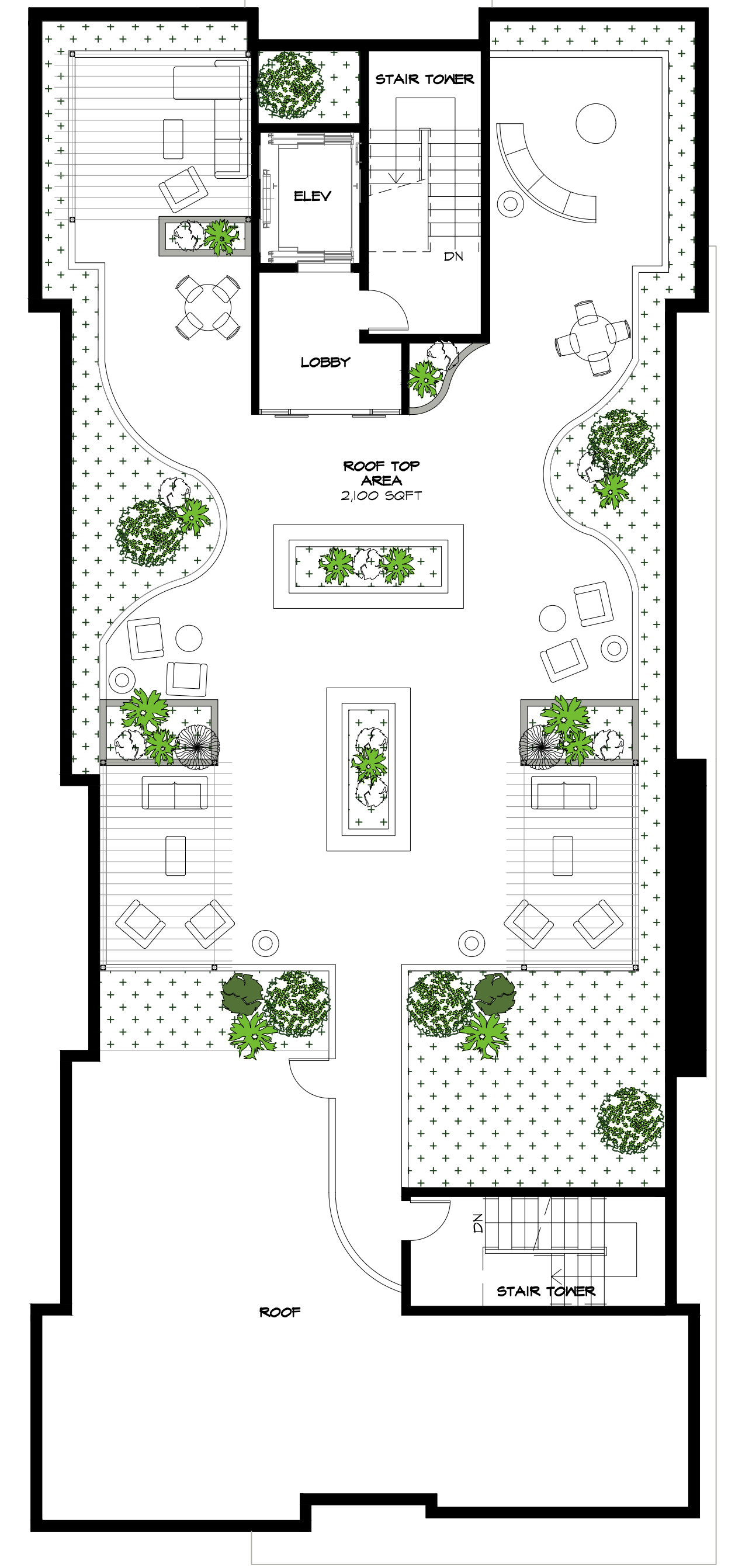
WATERMAN STREET
 ELEV. (-) 0'-0"
PROPOSED LOWER LEVEL
 SCALE: 1/8"=1'-0"



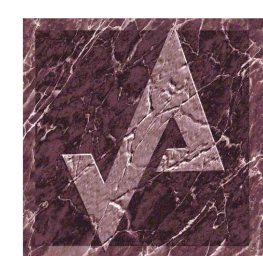
PROPOSED FIRST LEVEL
 SCALE: 1/8"=1'-0"



PROPOSED TYPICAL LEVEL
 SCALE: 1/8"=1'-0"

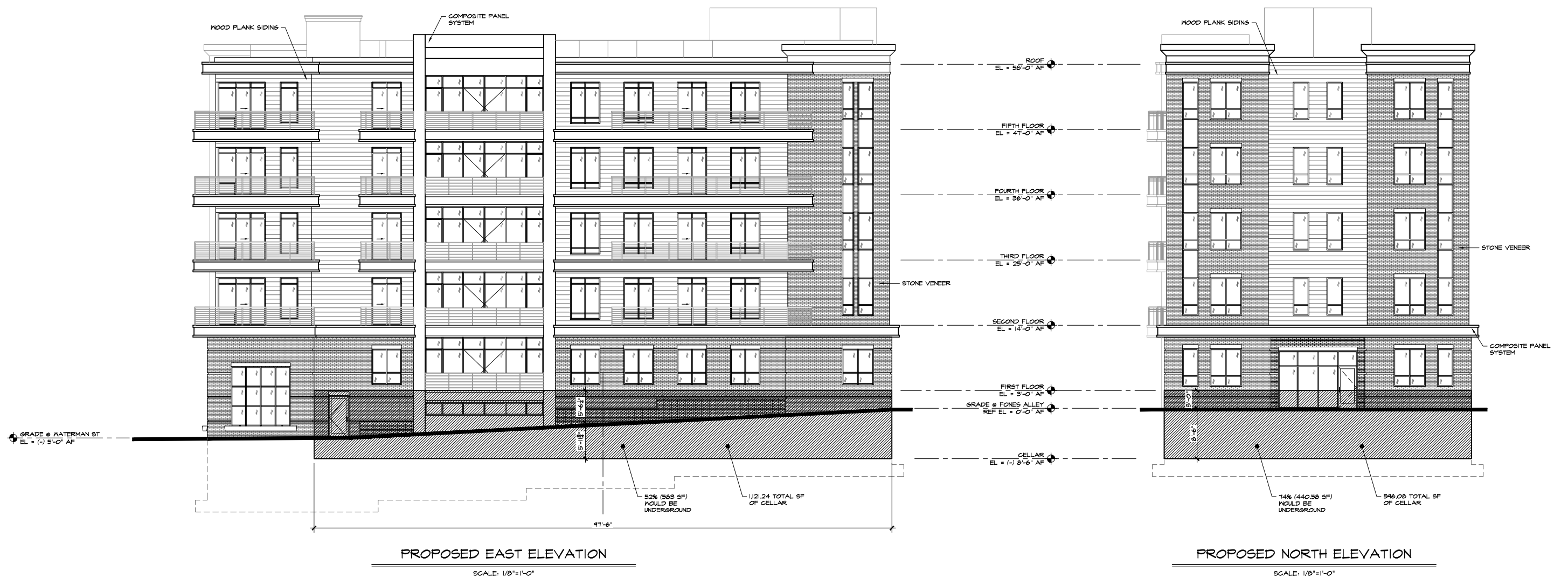


PROPOSED ROOF LEVEL
 SCALE: 1/8"=1'-0"



AHARONIAN
 & ASSOCIATES, INC.
 Architects
 401-232-5010
 www.arch-eng.com

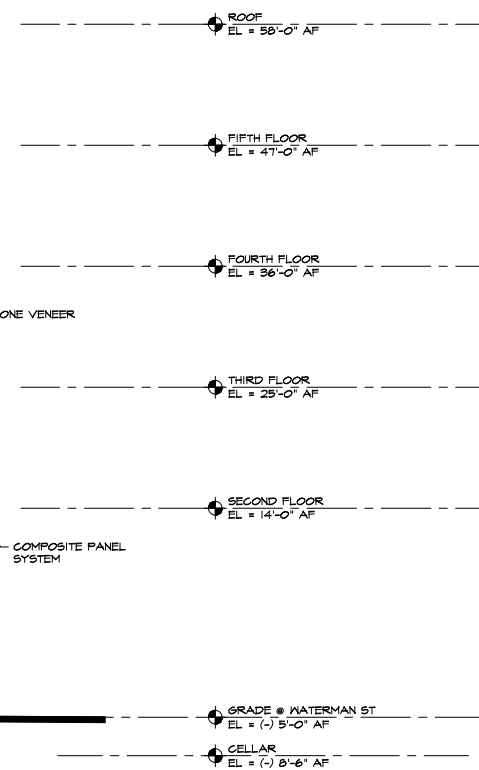
WATERMAN STREET DEVELOPMENT
 PROVIDENCE, RHODE ISLAND
 OCTOBER 18, 2022





PROPOSED WEST ELEVATION

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



PROPOSED SOUTH ELEVATION

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



AHARONIAN
& ASSOCIATES, INC.
Architects

401-232-5010
www.arch-eng.com

WATERMAN STREET DEVELOPMENT
PROVIDENCE, RHODE ISLAND
MAY 24, 2022

Appendix B

Site Plans

Prepared by Joe Casali Engineering, Inc., dated October 2022

WATERMAN STREET REDEVELOPMENT

A PROPOSED MIXED-USE BUILDING CONSISTING OF 1 COMMERCIAL UNIT & 25 RESIDENTIAL UNITS

116 WATERMAN STREET & 382 BROOK STREET
PROVIDENCE, RHODE ISLAND
AP 12, LOTS 180 & 260

ZONING DISTRICT: C-2 GENERAL COMMERCIAL DISTRICT &
IE-3 EDUCATIONAL INSTITUTIONAL OVERLAY DISTRICT



IMAGE COURTESY OF AHRONIAN & ASSOCIATES, INC., DATED MAY 24, 2022

APPROVALS:

MASTER PLAN: PROVIDENCE CITY PLAN COMMISSION (CPC) (JULY 27, 2022)

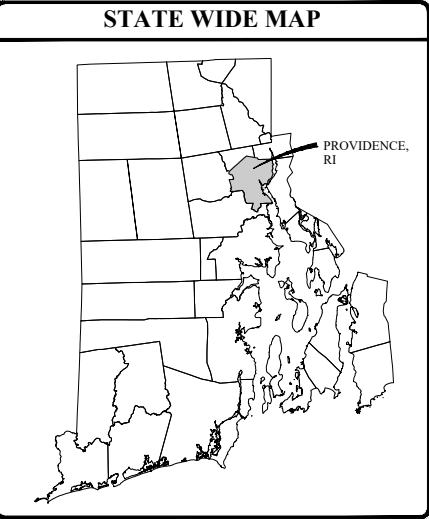
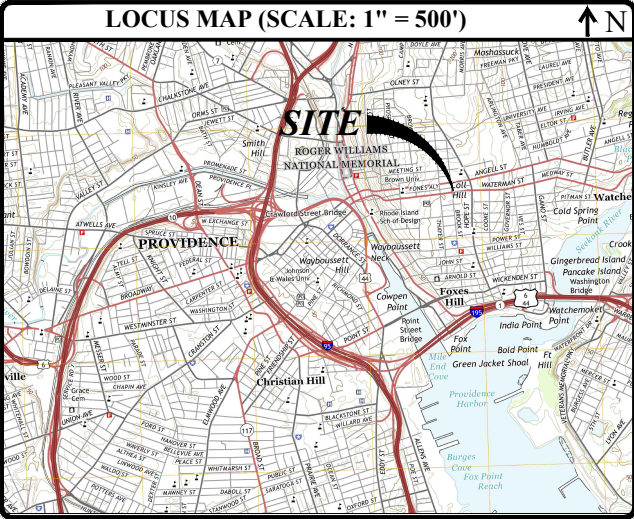
FILINGS:

- PRELIMINARY PLAN: PROVIDENCE CITY PLAN COMMISSION (CPC)
- PROVIDENCE WATER SUPPLY BOARD - DOMESTIC AND FIRE PROTECTION CONNECTION PERMIT
- NARRAGANSETT BAY COMMISSION - SEWER CONNECTION PERMIT
- CITY OF PROVIDENCE DEPT. OF PUBLIC WORKS - ENGINEERING AND TRAFFIC
- CITY OF PROVIDENCE PARKS DEPARTMENT - CITY FORESTER

NOTES TO CONTRACTOR - WORK IN CITY RIGHT-OF-WAY:

1. A PERMIT MUST BE OBTAINED FROM TRAFFIC ENGINEERING AT THE CITY OF PROVIDENCE DEPARTMENT OF PUBLIC WORKS (DPW) PRIOR TO THE REMOVAL OF SIDEWALKS WITHIN WATERMAN AND/OR BROOK STREETS. THE PERMIT APPLICATION MUST ADDRESS ALTERNATIVE PEDESTRIAN PATHS OF TRAVEL.

PROJECT TEAM			
OWNER/ APPLICANT:	WALTER BRONHARD REALTY & BROOK HOLDING LLC ATTN: MR. WALTER BRONHARD, MGR 972 HIGHLAND AVENUE FALL RIVER, MA 02720	CIVIL:	JOE CASALI ENGINEERING, INC. 300 POST ROAD WARWICK, RI 02888 PHONE: 401-944-1300 FAX: 401-944-1313
ARCHITECT:	AHARONIAN & ASSOCIATES, INC. 310 GEORGE WASHINGTON HIGHWAY SMITHFIELD, RI 02917 PHONE: 401-232-5010	SURVEYOR:	WATERMAN ENGINEERING COMPANY 46 SUTTON AVENUE EAST PROVIDENCE, RI 02914 PHONE: 401-438-5773



INDEX OF DRAWINGS	
SHEET NO.	PLAN
1	COVER SHEET
2	GENERAL NOTES AND LEGEND
3	EXISTING CONDITIONS & SITE PREPARATION PLAN
4	SITE, GRADING, DRAINAGE & UTILITY PLAN
5	CIVIL DETAILS I
6	CIVIL DETAILS II
R1	BOUNDARY & TOPOGRAPHIC SURVEY PLAN, PREPARED BY WATERMAN ENGINEERING COMPANY, DATED AUGUST 2020

JOE CASALI ENGINEERING, INC.
CIVIL, SITE DEVELOPMENT, TRAFFIC ENGINEERING
300 POST ROAD, WARWICK, RI 02888
(401) 944-1300 (401) 944-1313 FAX WWW.JOECASALI.COM

JOSEPH A. CASALI
No. 7550
REGISTERED PROFESSIONAL ENGINEER
CIVIL
10.18.2022

25-UNIT, FIVE-STORY MIXED-USE BUILDING
116 WATERMAN STREET
PROVIDENCE, RHODE ISLAND
AP 12, LOTS 180 & 260

REVISIONS:
NO. DATE DESCRIPTION

DESIGNED BY: WMLR
DRAWN BY: SEP
CHECKED BY: JAC
DATE: OCT. 2022
PROJECT NO: 19-194

PRELIMINARY, NOT FOR CONSTRUCTION

COVER SHEET

SHEET 1 OF 6

1. THIS PLAN IS BASED ON CLASS I COMPREHENSIVE BOUNDARY SURVEY AND A CLASS III TOPOGRAPHIC SURVEY DATED AUGUST 2020, PERFORMED BY WATERMAN ENGINEERING COMPANY LOCATED AT 46 SUTTON AVENUE, EAST PROVIDENCE, RI.
2. THE LOCATION AND DEPTH OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE LATEST AVAILABLE INFORMATION. THE UTILITY LOCATIONS ARE APPROXIMATE AND MAY NOT BE ALL INCLUSIVE. THE CONTRACTOR SHALL CHECK AND VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, BOTH OVERHEAD AND UNDERGROUND, AND "DIG-SAFE" MUST BE NOTIFIED PRIOR TO COMMENCING ANY CONSTRUCTION OPERATIONS. RESTORATION AND REPAIR OF DAMAGE TO EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR WITH NO ADDITIONAL COST TO THE OWNER. NO EXCAVATION SHALL COMMENCE UNTIL ALL INVOLVED UTILITY COMPANIES AND/OR CITY WHOSE FACILITIES MIGHT BE AFFECTED BY ANY WORK TO BE PERFORMED BY THE CONTRACTOR ARE NOTIFIED AT LEAST 72 HOURS IN ADVANCE.
3. THE SITE IS LOCATED ON THE FLOOD INSURANCE RATE MAP FOR PROVIDENCE COUNTY, MAP NUMBER 440007C0309K, BASED ON THE FEMA FLOOD INSURANCE RATE MAP, DATED OCTOBER 2, 2015. THE SITE AND ALL ADJACENT SITES LIE IN ZONE X - AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL-CHANCE FLOOD HAZARD AREA.
4. SOILS ON THE SITE CONSIST OF PAXTON-URBAN LAND COMPLEX, 3 TO 15 PERCENT SLOPES (PD). THESE SOILS ARE GENERALLY WELL DRAINED, WITH A DEPTH TO THE SEASONAL HIGH GROUNDWATER OF 18 TO 37-INCHES, BELONGING TO HYDROLOGIC GROUP C.
5. THERE ARE NO KNOWN WETLANDS ON SITE. THE SITE IS LOCATED WITHIN THE SEEKONK-PROVIDENCE RIVER WATERSHED (RIDEW IDENTIFY NO. 010900040901).
6. THERE ARE NO EXISTING EASEMENTS WITHIN THE SUBJECT PROPERTY.

1. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) OF ALL MATERIALS INDICATED ON THE PLANS.
2. ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS, AND WALKWAYS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE FEDERAL AMERICAN WITH DISABILITIES ACT AND WITH ALL APPLICABLE STATE AND LOCAL LAWS AND REGULATIONS, WHICHEVER IS MORE STRINGENT.
3. STOCKPILES OF EARTH MATERIALS SHALL NOT BE LOCATED ADJACENT TO DRAINAGE STRUCTURES.
4. ALL DISTURBED AREAS OUTSIDE OF THE PAVED AREAS WILL RECEIVE A MINIMUM OF 6" OF LOAM AND SEED.
5. THE LAYOUT SHOWN REPRESENTS A GRAPHICAL DESIGN, AND PRIOR TO THE CONSTRUCTION, THE CONTRACTOR SHALL ENGAGE A PROFESSIONAL LAND SURVEYOR (PLS) REGISTERED IN THE STATE OF RHODE ISLAND TO SET AND VERIFY ALL LINES AND GRADES. ALL EXISTING UTILITY LOCATIONS AND ELEVATIONS ARE TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY ITEMS FOUND WHICH DO NOT MATCH THE PLANS MUST BE BROUGHT TO THE ENGINEERS ATTENTION PRIOR TO CONSTRUCTION FOR REVIEW. NO WORK SHALL PROCEED UNTIL AUTHORIZED BY THE ENGINEER.
6. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SURVEY LAYOUT SERVICES FOR THE WORK AND SHALL SUBMIT "AS-BUILT" DRAWINGS OF ALL WORK, WHICH SHALL BE STAMPED AND CERTIFIED BY A RHODE ISLAND REGISTERED PROFESSIONAL LAND SURVEYOR.
7. ANY ITEM OF WORK NOT SPECIFICALLY INDICATED ON THE PLANS BUT IS REQUIRED FOR THE COMPLETE CONSTRUCTION OF THE PROJECT WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND INCLUDED IN THE CONTRACT BID PRICE. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING SITE CONDITIONS.
8. REFER TO ARCHITECTURAL PLANS, STRUCTURAL PLANS, PLUMBING PLANS, FIRE PROTECTION PLANS, AND ELECTRICAL PLANS, FOR ACTUAL SIZE OF THE PROPOSED BUILDING AND WORK WITHIN 5 FEET OF THE PROPOSED BUILDING.
9. WHERE NECESSARY TO REMOVE CURBS, CATCH BASINS OR DRAINS TO COMPLETE WORK, THE CONTRACTOR SHALL REPLACE SUCH ITEMS TO THE SATISFACTION OF THE OWNER / CITY OF PROVIDENCE AT NO ADDITIONAL COST TO THE OWNER / CITY OF PROVIDENCE.
10. ANY EXISTING PIPE OR UTILITY DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR AT NO COST TO THE OWNER.
11. THE CONTRACTOR SHALL RESTORE TO ITS ORIGINAL CONDITION OR REPLACE TREES, SHRUBS, FENCES, SIGNS, GUARDRAILS, DRIVEWAYS, SIDEWALKS AND ANY OTHER OBJECT AFFECTED BY THIS OPERATION, UNLESS OTHERWISE NOTED ON THE SITE PLANS.
12. THE TOPS OF ALL VALVE BOXES AND CURB BOXES SHALL BE FLUSH WITH GROUND OR PAVEMENT SURFACE LEVEL AND PLUMB, UNLESS OTHERWISE DIRECTED.
13. ROADWAYS SHALL BE LEFT PASSABLE AT ALL TIMES. CLOSURE OF ROADWAY IS NOT PERMITTED.
14. WATER SERVICE SHALL BE MAINTAINED AT ALL TIMES.
15. ALL LEDGE TO BE REMOVED BY MECHANICAL MEANS.
16. ALL CONSTRUCTION WORK SHALL BE PERFORMED IN THE DRY. THE CONTRACTOR SHALL PROVIDE, OPERATE AND MAINTAIN ALL PUMPS, DRAINS, WEI POINTS, SCREENS, OR OTHER FACILITIES NECESSARY TO CONTROL, COLLECT AND DISPOSE OF ALL SURFACE AND SUBSURFACE WATER ENCOUNTERED IN THE PERFORMANCE OF THE WORK.
17. ALL SITE WORK, INCLUDING BUT NOT LIMITED TO, BITUMINOUS PAVEMENT, ROADWAY CONSTRUCTION, AGGREGATE MATERIALS, DRAINAGE STRUCTURES, CURBING, SIDEWALK, LANDSCAPING, SAW CUTTING, ETC., SHALL CONFORM TO THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, AMENDED DECEMBER 2010 (WITH LATEST ADDENDA) AND THE RIDOT STANDARD DETAILS, 2019 EDITION (WITH LATEST ADDENDA).

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MAINTENANCE AND PROTECTION OF PEDESTRIAN AND VEHICULAR TRAFFIC INCLUDING POLICE PROTECTION. ALL TEMPORARY AND VEHICULAR SIGNS, BARRICADES AND LANE CLOSURES SHALL BE IN CONFORMANCE WITH THE LATEST REVISIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2009 EDITION.
2. TEMPORARY CONSTRUCTION SIGNS AND ALL APPLICABLE TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF WORK IN ANY AREA OPEN TO TRAFFIC.
3. THE PRIVATE VEHICLES OF CONSTRUCTION WORKERS SHALL NOT BE PARKED IN THE STATE OR CITY RIGHT-OF-WAY.
4. ALL MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL SETUPS, SIGNS CHANNELING DEVICES, ETC., SHALL BE IN ACCORDANCE WITH THE LATEST REVISIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION.
5. SIGN MOUNTINGS SHALL BE IN ACCORDANCE WITH THE RIDOT SPECIFICATIONS FOR TEMPORARY CONSTRUCTION SIGNS.

3. THE LIMITS OF CLEARING, GRADING, AND DISTURBANCE SHALL BE KEPT TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION. ALL AREAS OUTSIDE OF THESE LIMITS, AS DEPICTED ON THE PLAN SHALL BE TOTALLY UNDISTURBED, TO REMAIN IN NATURAL CONDITION.
2. ALL CATCH BASINS SHALL BE PROTECTED WITH SILTSACK SEDIMENT TRAPS DURING CONSTRUCTION ACTIVITIES. ALL PROPOSED STORM WATER DISCHARGE AREAS SHALL BE LINED WITH A RIPRAP SPLASH PAD AND PROTECTED WITH STAKED HAYBALE OUTLET PROTECTION (R.I. STD. 9.1.0), OR STAKED HAYBALE WITH SILT FENCE (R.I. STD. 9.3.0) OUTLET PROTECTION (STAKED HAYBALE OR STAKED HAYBALE WITH SILT FENCE) SHALL ALSO BE INSTALLED AT ALL EXISTING STORMWATER DISCHARGE LOCATIONS WHERE DISTRIBUTING PIPES, CATCH BASINS, AND MANHOLES ARE TO BE CLEANED AND FLUSHED.
3. ALL DISTURBED SLOPES EITHER NEWLY CREATED OR CURRENTLY EXPOSED SHALL BE SEEDED, PROTECTED AND MAINTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL REGULARLY CHECK ALL SEEDED AREAS TO ENSURE THAT A GOOD STANDING OF VEGETATION IS MAINTAINED.
4. ALL SILT FENCE, TEMPORARY TREATMENT (HAY, STRAW, ETC.) AND TEMPORARY EROSION PROTECTION SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.
5. STOCKPILES OF TOPSOIL SHALL NOT BE LOCATED NEAR WATERWAYS. THEY SHALL HAVE SIDE SLOPES OF NO GREATER THAN 2:1 AND SHALL BE TEMPORARILY SEEDED AND/OR STABILIZED PER CONTRACT SPECIFICATIONS.
6. THE SILT FENCE/HAYBALES SHALL BE CHECKED BY THE CONTRACTOR ON A WEEKLY BASIS AND AFTER EACH STORM FOR UNDERMINING OR DETEIORATION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY SILT FENCE/HAYBALES AS NEEDED. THE CONTRACTOR SHALL CLEAN THE ACCUMULATED SEDIMENT IF HALF OF THE ORIGINAL HEIGHT OF THE HAY-BALES BECOMES FILLED WITH SEDIMENTS.
7. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL SOIL EROSION AND SEDIMENT CONTROLS ON THE PROJECT SITE FOR THE ENTIRE DURATION OF THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL FOLLOW THE DIRECTION OF THE RESIDENT ENGINEER, TOWN ENGINEER, OR OWNER WITH REGARD TO INSTALLATION, MAINTENANCE, AND REPAIR OF ALL SOIL EROSION AND SEDIMENTATION CONTROLS ON THE PROJECT SITE. TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROLS (HAYBALES, SILT FENCE, ETC.) SHALL BE MAINTAINED UNTIL ALL EXPOSED SOILS ARE SATISFACTORILY STABILIZED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND/OR RESEEDING ALL AREAS THAT DO NOT DEVELOP WITHIN ONE YEAR FROM THE COMPLETION OF CONSTRUCTION.
8. ALL REFERENCED SOIL EROSION AND SEDIMENTATION CONTROLS INCLUDING MATERIALS USED, APPLICATION RATES AND THE INSTALLATION PROCEDURES SHALL BE PERFORMED PER THE "RHODE ISLAND EROSION AND SEDIMENTATION HANDBOOK", DATED 1993 AMENDED 2014.

3. PRIOR TO CONSTRUCTION ALL POTENTIAL UTILITY/ DRAINAGE CONFLICTS MUST BE IDENTIFIED BY THE CONTRACTOR. ANY MODIFICATIONS TO THE PROPOSED UTILITIES TO AVOID CONFLICTS MUST BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
2. OVERHEAD ELECTRIC AND TELEPHONE SERVICES ARE TO BE REMOVED BY THE APPROPRIATE UTILITY COMPANY AND COORDINATED BY THE CONTRACTOR.
3. THE CONTRACTOR SHALL AT ALL TIMES PROVIDE A SUFFICIENT NUMBER OF WORKMEN AND GUARDS AS MAY BE NECESSARY TO PROPERLY SAFEGUARD THE PUBLIC FROM THEIR OPERATIONS.
4. THE CONTRACTOR SHALL TAKE PRECAUTIONS AGAINST DAMAGING OF PAVING, SIDEWALKS, UTILITIES, OR PRIVATE PROPERTIES AND SHALL PROMPTLY REPAIR AT THEIR OWN EXPENSE ANY DAMAGE TO SUCH PAVING, SIDEWALKS, UTILITIES, OR PRIVATE PROPERTIES TO THE SATISFACTION OF THE OWNER OR CITY.
5. EXISTING UTILITY FRAMES AND COVERS FOR SANITARY SEWER, WATER, GAS, STORM DRAINAGE AND OTHER UTILITIES SHALL BE ADJUSTED TO GRADE AS REQUIRED IN NEW PAVING AND PAVEMENT OVERLAY AREAS.
6. ALL SEWER CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE NARRAGANSETT BAY COMMISSION AND CITY OF PROVIDENCE SEWER REQUIREMENTS.
7. ALL NEW SEWER PIPES AND MANHOLES SHALL BE CLEANED AND TESTED PRIOR TO ACCEPTANCE. GRAVITY SEWER PIPES SHALL BE REQUIRED TO PASS BOTH LOW PRESSURE AIR AND DEFLECTION (IE., MANDREL) TESTING. LOW PRESSURE SEWER PIPING SHALL BE REQUIRED TO PASS A LOW PRESSURE (IE., HYDROSTATIC) TEST.
8. A BACKFLOW PREVENTION DEVICE MUST BE INSTALLED AT EACH SEWER SERVICE BUILDING CONNECTION THAT IS BELOW THE RIM ELEVATION OF THE NEAREST SEWER MANHOLE, AS REQUIRED BY THE INTERNATIONAL PLUMBING CODE AND THE NARRAGANSETT BAY COMMISSION.
9. APPLICANT IS REQUIRED TO PROVIDE TWO SETS OF FINAL AS-BUILT PLANS TO NARRAGANSETT BAY COMMISSION AND THE CITY OF PROVIDENCE DEPARTMENT OF PUBLIC WORKS (DPW) ENGINEERING DEPARTMENT. UPON COMPLETION OF CONSTRUCTION, PRIOR TO FINAL ACCEPTANCE, AS-BUILT PLANS SHALL INCLUDE FIELD MEASUREMENTS OF ALL INSTALLED PIPE AND APPURTENANCES, INCLUDING LENGTH, SLOPE, MANHOLE RIMS AND INVERTS, AS WELL AS SWING TIES/MEASUREMENTS TO ALL MANHOLES, SEWER STUBS, AND/OR LATERAL SERVICE CONNECTIONS. AN INSPECTION SHOULD BE REQUESTED WITH THE DPW ENGINEERING DEPARTMENT ONCE FINAL PLUMBING CONNECTIONS ARE MADE AND PRIOR TO BACKFILL.
10. INSPECTION OF ALL SEWER CONSTRUCTION SHALL BE PERFORMED BY NARRAGANSETT BAY COMMISSION. APPLICANT SHALL PROVIDE SCHEDULE FOR CONSTRUCTION AS SOON AS POSSIBLE TO ALLOW FOR DEVELOPMENT OF INSPECTION FEE, TO BE PAID BY APPLICANT DIRECTLY TO THE NARRAGANSETT BAY COMMISSION. UPON PAYMENT OF FEE, COMMENCEMENT OF CONSTRUCTION INSPECTION REQUIRES MINIMUM NOTIFICATION OF 48-HOURS.
11. APPLICANT IS RESPONSIBLE FOR SECURING ALL REQUIRED PERMITS FROM LOCAL, STATE, AND/OR FEDERAL AGENCIES WITH REGULATORY JURISDICTION OVER THE PROPOSED WORK. COPIES OF ALL PERMITS SHALL BE PROVIDED TO NARRAGANSETT BAY COMMISSION AND CITY ENGINEER PRIOR TO CONSTRUCTION. ALL SEWER CONSTRUCTION SHALL BE PERFORMED BY A DRAIN LAYER LICENSED IN THE STATE OF RHODE ISLAND AND THE CITY OF PROVIDENCE.
12. NO FLOW WILL BE ACCEPTED UNTIL A COMPLETION CERTIFICATE IS ISSUED.
13. THE CONTRACTOR SHALL CONFINE HIS CONSTRUCTION OPERATIONS AND ACTIVITIES TO WITHIN THE STREET LINES, EASEMENT AND/OR RIGHT-OF-WAY, AS SHOWN ON THE DRAWINGS.
15. PRIOR TO CONSTRUCTION OF THE RELOCATION OF ALL WATER MAINS, THE CONTRACTOR SHALL COORDINATE WITH PROVIDENCE WATER SUPPLY BOARD FOR INSPECTION AND CHLORINATION OF NEW PIPING, FITTINGS AND VALVES.

RECOMMENDED SEEDING DATES ARE MARCH 15 TO JUNE 15 AND SEPTEMBER 15 TO NOVEMBER 15. AT THE CONTRACTORS DISCRETION, SEED MAY BE APPLIED BY HYDROSEEDING RATHER THAN THE METHOD DESCRIBED ABOVE.

 EXISTING PROPERTY LINE
 ABUTTING PROPERTY LINE
 BUILDING SETBACK LINE
 EXISTING CONTOUR
 PROPOSED CONTOUR
 EXISTING STONE WALL
 EXISTING CURB
 PROPOSED CURB
 EXISTING GUARD RAIL
 EXISTING DRAIN LINE
 PROPOSED DRAIN LINE
 EXISTING DRAINAGE MANHOLE
 PROPOSED DRAINAGE MANHOLE
 EXISTING CATCH BASIN
 PROPOSED CATCH BASIN
 EXISTING UTILITY POLE
 PROPOSED UTILITY POLE
 EXISTING TELECOM DUCTBANK
 EXISTING ELECTRIC DUCTBANK
 RELOCATED ELECTRIC DUCTBANK
 EXISTING GAS LINE
 PROPOSED GAS LINE
 EXISTING WATER LINE
 PROPOSED WATER LINE
 EXISTING WATER SHUT OFF VALVE
 PROPOSED WATER SHUT OFF VALVE
 EXISTING SEWER LINE
 PROPOSED SEWER LINE
 EXISTING SEWER MANHOLE
 PROPOSED SEWER MANHOLE
 NOW OR FORMERLY
 TREELINE
 SILT FENCE
 LIMIT OF DISTURBANCE
 TEMPORARY LIMIT OF DISTURBANCE
 TIME HOLE

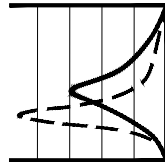
225-UNIT, FIVE-STORY MIXED-USE BUILDING
116 WATERMAN STREET
PROVIDENCE, RHODE ISLAND
AP 12, LOTS 180 & 260

REVISIONS:	
NO.	DATE DESCRIPTION
DESIGNED BY:	WMLJR
DRAWN BY:	SEP
CHECKED BY:	JAC
DATE:	OCT. 2022
PROJECT NO:	19-19d

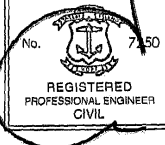
PRELIMINARY, NOT FOR
CONSTRUCTION

GENERAL NOTES AND LEGEND

SHEET
2 OF 6



JCE
JOE CASALI ENGINEERING, INC.
CIVIL · SITE DEVELOPMENT · TRANSPORTATION
MANAGEMENT · WETLANDS · ISDS · TRAFFIC · FLOODPLAIN
300 POST ROAD, WARWICK, RI 02886
(401) 864-1300 · FAX (401) 864-1301



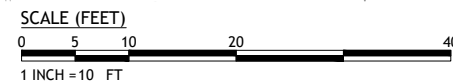
18.2022

1. THE REQUIRED BUILD-TO PERCENTAGE IS 60% ON THE FRONT LOT LINE
2. NONE, UNLESS ABUTTING RESIDENTIAL DISTRICT THEN 10'
3. THE REQUIRED BUILD-TO PERCENTAGE IS 40% ON THE CORNER SIDE LOT LINE
4. NONE, UNLESS ABUTTING RESIDENTIAL DISTRICT THEN 20'

1. A PERMIT MUST BE OBTAINED FROM TRAFFIC ENGINEERING AT CITY OF PROVIDENCE DEPARTMENT OF PUBLIC WORKS (DPW) PRIOR TO THE REMOVAL OF SIDEWALK WITHIN CITY RIGHT-OF-WAYS. THE PERMIT APPLICATION MUST ADDRESS ALTERNATIVE PEDESTRIAN PATH OF TRAVEL.

- SOIL EROSION AND STORMWATER NOTES:**

1. CONTRACTOR SHALL ESTABLISH SUFFICIENT SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ALONG THE NORTHERN AND EASTERN, DOWN GRADIENT SIDE OF PROJECT AREA INCLUDING BUT NOT LIMITED TO COMPOST SOCK AND SILT SACKS, SEDIMENT TRAPS ILLUSTRATED ON THE PLANS.
2. PER SECTION 5-83 OF THE CITY OF PROVIDENCE CODE OF ORDINANCES, THIS PROJECT IS EXEMPT FROM THE POST-CONSTRUCTION STORMWATER CONTROL ORDINANCE, AS THE LOT IS LOCATED WITHIN THE C2 ZONE AND IS LESS THAN 20,000 SQ. FT. IN AREA.



LOCATION OF EXISTING UTILITIES SHOWN, ARE FROM GATE LOCATION AND EXISTING DOCUMENTATION AND MAY NOT BE ACCURATE. EXACT LOCATION BE DONE BY THE APPROPRIATE UTILITY COMPANY OR MUNICIPALITY PRIOR TO ANY EXCAVATION CALL DIGSAFE AT: 1-888-DIG-SAFE
1-888-344-7233



No. 7250
REGISTERED
PROFESSIONAL ENGINEER
CIVIL

10.18.2022

25-UNIT, FIVE-STORY MIXED-USE BUILDING
116 WATERMAN STREET
PROVIDENCE, RHODE ISLAND
AP 12, LOTS 180 & 260

REVISIONS:		
NO.	DATE	DESCRIPTION

DESIGNED BY:	WMLJR
DRAWN BY:	SEP
CHECKED BY:	JAC
DATE:	OCT. 2022
PROJECT NO:	19-19d

PRELIMINARY, NOT FOR CONSTRUCTION

EXISTING CONDITIONS & SITE PREP. PLAN

**SHEET
3 OF 6**

1. THE REQUIRED BUILD-TO PERCENTAGE IS 60% ON THE FRONT LOT LINE
2. NONE, UNLESS ABUTTING RESIDENTIAL DISTRICT THEN 10'
3. THE REQUIRED BUILD-TO PERCENTAGE IS 40% ON THE CORNER SIDE LOT LINE
4. NONE, UNLESS ABUTTING RESIDENTIAL DISTRICT THEN 20'
5. ADJUSTMENT REQUESTED FOR ONE (1) ADDITIONAL STORY (+8 FEET); 2 ALLOWED

PER SECTION 1503, - ONSITE LANDSCAPING AND REQUIRED TREES
SECTION C - REQUIRED TREE CANOPY (ALL OTHER DISTRICTS:
15% OF THE SQUARE FOOTAGE OF THE LOT).

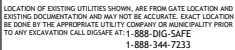
6,070 SF TOTAL LOT AREA x 15% OF LOT AREA
= 911 SF OF TREE CANOPY REQUIRED

REQUIRED: 911 SF OF TREE CANOPY*
PROPOSED: 1,000 SF (1 LARGE STREET TREE)

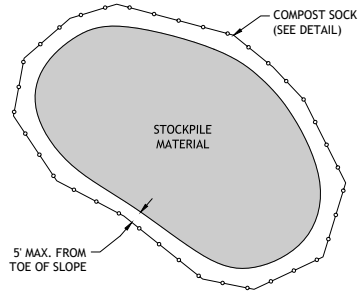
VEHICLE PARKING: PER SECTION 1410.B.7 OF THE PROVIDENCE ZONING ORDINANCE, IN THE C-1 AND C-2 DISTRICTS, ALL LOTS OF 10,000 SQ. FT. OF LESS ARE EXEMPT FROM PARKING REQUIREMENTS. THEREFORE, NO VEHICLE PARKING IS PROPOSED.

BICYCLE PARKING: PER SECTION SECTION 1402, TABLE 14-1, OF THE PROVIDENCE ZONING ORDINANCE, ONE (1) BICYCLE SPACES IS REQUIRED PER FIVE (5) DWELLINGS. TWENTY-FIVE (25) DWELLING UNITS ARE PROPOSED, THEREFORE FIVE (5) BICYCLE SPACES ARE REQUIRED. 10 BICYCLE SPACES ARE PROPOSED WITHIN THE BASEMENT OF THE STRUCTURE; REFER TO ARCHITECTURAL PLANS FOR DETAILED LOCATIONS.

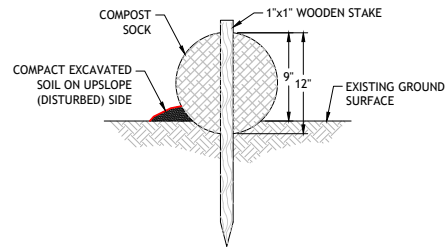
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PUBLIC RIGHT-OF-WAY OR SEWER CONNECTION AT 401-680-7525.
2. ALL CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY MUST BE IN ACCORDANCE WITH THE CITY'S STANDARD DETAILS.
3. ANY AND ALL SURPLUS GRASS/ERD CURBING SHALL BE RETURNED TO THE CITY OF PROVIDENCE DEPARTMENT OF PUBLIC WORKS.
4. ANY CONSTRUCTION ACTIVITY THAT HINDERS VEHICLE TRAFFIC OR PEDESTRIAN TRAFFIC MUST BE PERMITTED THROUGH THE CITY TRAFFIC ENGINEER.
5. CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING A LETTER OF APPROVAL AND SUBMITTING TO THE DEPARTMENT OF STANDARDS. A PHYSICAL ALTERATION PERMIT, ROAD EXCAVATION PERMIT FOR EACH STREET AND SEWER PERMITS ARE REQUIRED BEFORE THAT PARTICULAR WORK COMMENCES.
6. ROOF DRAINS SHALL NOT BE TIED INTO THE SANITARY SEWER CONNECTION.



NOTE TO CONTRACTOR:
CONTRACTOR TO COORDINATE WITH OWNER REGARDING FINAL LOCATION OF CONSTRUCTION TRAILER AND STAGING AREAS.

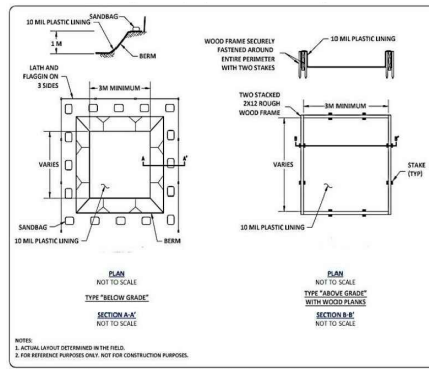


1 STOCKPILE DETAIL
NOT TO SCALE

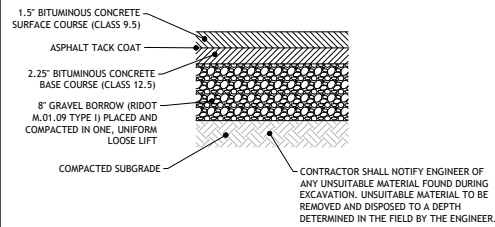


- NOTES:**
- BEGIN WATTLE INSTALLATION BY EXCAVATING A 2 TO 3-INCH-DEEP BY 9" WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE OR ALONG THE EXISTING GROUND SURFACE. EXCAVATED SOIL SHOULD BE PLACED UP-SLOPE OR ON THE DISTURBED SIDE OF THE ANCHOR TRENCH.
 - PLACE WATTLE IN THE TRENCH SUCH THAT IT CONTOURS TO THE EXISTING SOIL SURFACE. COMPACT SOIL FROM THE EXCAVATED TRENCH AGAINST THE WATTLE ON THE UP-SLOPE OR DISTURBED SIDE. ADJACENT WATTLES SHOULD TIGHTLY ABUT.
 - SECURE WATTLE WITH 18 TO 24-INCH-LONG STAKES. INSTALL AN ADDITIONAL STAKE AT EACH END OF THE WATTLE. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE WATTLE LEAVING AT LEAST 2 TO 3 INCHES OF STAKE EXTENDING ABOVE. THE STAKES SHOULD BE DRIVEN PERPENDICULAR TO THE SLOPE FACE OR GROUND SURFACE.

2 COMPOST SOCK
NOT TO SCALE



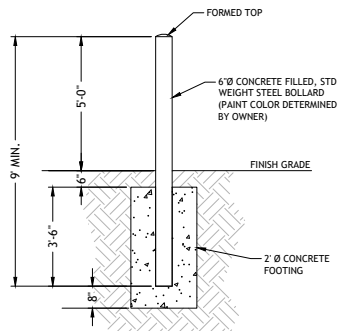
3 TEMPORARY CONCRETE WASHOUT DETAIL
NOT TO SCALE



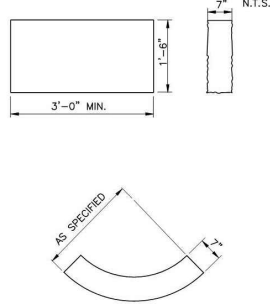
NOTES:

- IF UNSUITABLE MATERIALS ARE ENCOUNTERED AT SUBGRADE ELEVATION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER. THE DEPTH OF UNSUITABLE MATERIAL TO BE REMOVED WILL BE DETERMINED IN THE FIELD. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE THE UNSUITABLE MATERIALS AND REPLACE WITH SUITABLE MATERIAL APPROVED BY THE ENGINEER.
- MINIMUM COMPACTION FOR GRAVEL BORROW SUB-BASE AND SUBGRADE: 95% MODIFIED PROCTOR.
- DETAIL IS APPLICABLE TO PAVEMENT ON PRIVATE PROPERTY ONLY. PAVEMENT WITHIN CITY RIGHT-OF-WAY IS PER CITY OF PROVIDENCE STANDARD 60.2.0P.

4 BITUMINOUS CONCRETE PAVEMENT
NOT TO SCALE



5 BOLLARD DETAIL
NOT TO SCALE

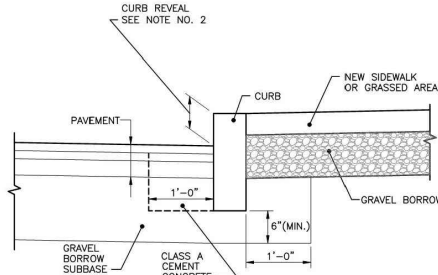


- NOTE:**
- SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
 - TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE SAWCUT OR QUARRY SPLIT.
 - MINIMUM LENGTH OR CIRCULAR PIECES TO BE 3'-0\"/>
 - CIRCULAR CURB IS REQUIRED ON CURVES AS INDICATED. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0\"/>
 - CURB TO BE SET PER PROVIDENCE CURB SETTING DETAIL.

GRANITE CURB - STRAIGHT AND CIRCULAR
N.T.S.



ISSUE DATE: 1/6/17

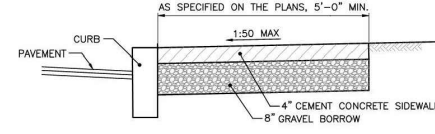


- NOTES:**
- SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
 - NEW CURBING CONSTRUCTION SHALL BE SET AT A 6 INCH REVEAL OR AS INDICATED ON PLANS OR DIRECTED BY PROVIDENCE DPW. NEW CURBING INSTALLED ADJACENT TO EXISTING CURBING SHALL MATCH THE EXISTING REVEAL OR A MINIMUM OF 4 INCHES, WHICHEVER IS GREATER. IF ADJACENT EXISTING REVEAL IS LESS THAN 4 INCHES, THE FIRST SECTION OF NEW CURB SHALL TRANSITION TO 4\"/>

CURB SETTING DETAIL
N.T.S.



ISSUE DATE: 1/6/17



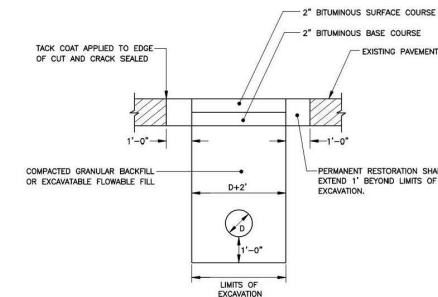
NOTES:

- SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
- SEE CURB SETTING DETAIL WHERE APPLICABLE.
- RUNNING SLOPE OF SIDEWALK SHALL NOT EXCEED 8.3% (1:12). TYPICALLY, RUNNING SLOPE SHALL MATCH ROAD SLOPE.
- CROSS SLOPE OF SIDEWALK SHALL NOT EXCEED 2% (1:50).
- SIDEWALK MAY BE SUBJECT TO GRASS STRIP INSTALLATION. CONSULT WITH DPW ENGINEERING.
- GRAVEL BORROW BASE SHALL COMPACT TO ACHIEVE SOIL DENSITY VALUES OF 95% MODIFIED PROCTOR DENSITY (AASHTO T180).
- SIDEWALK REPAIRS TWENTY FEET OR LONGER ARE SUBJECT TO REQUIREMENTS HEREIN. SIDEWALK REPAIRS SHORTER THAN TWENTY FEET SHALL MAKE EVERY EFFORT TO MEET REQUIRED SLOPES.
- CONTROL JOINTS SHALL BE INSTALLED EVERY 5 FEET IN EACH DIRECTION.
- EXPANSION JOINTS SHALL BE INSTALLED EVERY 20 FEET IN EACH DIRECTION AT FOUNDATIONS AND WALLS AND IN A SQUARE PATTERN AROUND MANHOLE COVERS, HYDRANTS, SIGN POSTS AND UTILITY POLES. THE EXPANSION JOINT SHALL BE THE FULL DEPTH OF THE SIDEWALK AND FILLED WITH AN APPROVED TYPE OF PREMOLDED EXPANSION JOINT FILLER.

CEMENT CONCRETE SIDEWALK
N.T.S.



ISSUE DATE: 1/6/17



NOTES:

- BITUMINOUS CONCRETE SHALL ADHERE TO RIDOT SPECIFICATIONS, SECTION 401.
- GRANULAR BASE MATERIAL SHALL BE COMPACTED TO 95% OF MODIFIED PROCTOR DENSITY (AASHTO T180). GRAVEL BASE COURSE SHALL ADHERE TO RIDOT SPECIFICATIONS, SECTION 301.
- EXCAVATABLE FLOWABLE FILL (CONTROLLED DENSITY FILL, CDF) SHALL ADHERE TO 95% OF THE MODIFIED PROCTOR DENSITY (AASHTO T180), ADHERING TO RIDOT SPECIFICATIONS, SECTION 603.
- PRIOR TO PERMANENT RESTORATION, ALL EDGES OF THE EXCAVATED AREA AND ONE FOOT BEYOND SHALL BE SAWCUT TO A CLEAN, SQUARE EDGE.
- IF EXCAVATION IS ON A PROTECTED STREET, THE REMAINING ROADWAY OUTSIDE THE TRENCH TO THE NEAREST CURB SHALL BE MILLED 1.5 INCHES WITH 1.5 INCH BITUMINOUS CONCRETE SURFACE OVERLAY. THE JOINTS SHALL BE SEALED USING INFRARED TECHNOLOGY. THE LENGTH OF THE NEW PAVED AREA MUST BE A MINIMUM OF 10 FEET TO ALLOW FOR PROPER ROLLING.
- IF EXCAVATION IS ON A NON-PROTECTED STREET, AND THE DISTANCE FROM EDGE OF EXCAVATION TO EDGE OF ROADWAY IS TWO FEET OR LESS, THE REMAINING AREA TO EDGE OF ROADWAY SHALL BE REMOVED AND REPLACED IN CONJUNCTION WITH THE PERMANENT PAVEMENT RESTORATION.

PERMANENT ROADWAY RESTORATION - GRANULAR BASE
N.T.S.



ISSUE DATE: 1/6/17

25-UNIT, FIVE-STORY MIXED-USE BUILDING
116 WATERMAN STREET
PROVIDENCE, RHODE ISLAND
AP 12, LOTS 180 & 260

REVISIONS:
NO. DATE DESCRIPTION

DESIGNED BY: WMLR
DRAWN BY: SEP
CHECKED BY: JAC
DATE: OCT. 2022
PROJECT NO: 19-194

PRELIMINARY, NOT FOR
CONSTRUCTION

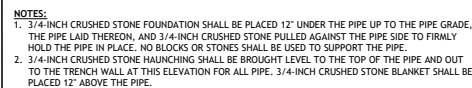
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DETAILS I

SHEET
5 OF 6

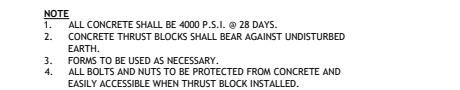
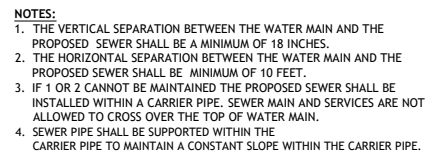


PROPOSED WATER SERVICE LINES AND/OR APPURTENANCES SHALL BE INSTALLED AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING COMPONENT OF A PUBLIC SANITARY SEWER SYSTEM (PIPELINE, MANHOLE, VAULT, METER PIT, PUMP STATION WELL, ETC.). DISTANCE SHALL BE MEASURED PERPENDICULARLY FROM THE EDGE OF PIPE TO THE EDGE OF PIPE. NO VERTICAL SEPARATION IS REQUIRED PROVIDED THE 10 FOOT HORIZONTAL SEPARATION IS MAINTAINED. WHEN THIS CRITERIA CANNOT BE MET, THE FOLLOWING STIPULATIONS APPLY. (SEE BOTTOM OF PAGE FOR INDIVIDUAL SEWAGE DISPOSAL SYSTEMS)

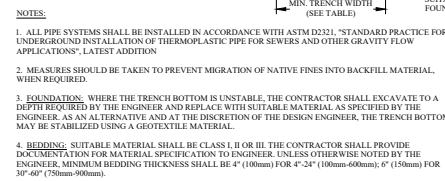
- INDIVIDUAL SEWAGE DISPOSAL SYSTEMS (SEPTIC SYSTEMS) ARE REGULATED BY R.I. DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (RDEM). MINIMUM DISTANCES BETWEEN DRINKING WATER LINES AND SEPTIC SYSTEM COMPONENTS ARE: 25 FEET(MIN.) TO LEACHING TRENCHES, BEDS AND PITS AND 10 FEET MIN. TO SEPTIC TANKS, DISTRIBUTION BOXES, GRAPE TRAPS, DROPPING CHAMBERS, PUMP CHAMBERS, AND BUILDING SEWERS. WHEN THESE DISTANCES CANNOT BE MET, RDEM REQUIRES ENCASEMENT OF WATER LINES AT LEAST TO THE POINT WHERE THE REQUIRED MINIMUM DISTANCES CAN BE MET. ENCASEMENT MUST BE APPROVED BY RDEM AND THE APPROVED PLAN MUST BE PRESENTED AS PART OF THE APPLICATION PROCESS TO OBTAIN WATER SERVICE. PRESSURIZED SEWER LINES CANNOT CROSS WATER LINES.



10 TYPICAL SEWER LINE TRENCH DETAIL
NOT TO SCALE



9 THRUST BLOCK DETAIL
NOT TO SCALE



PIPE DIAM.	SURFACE LIVE LOADING CONDITION	
	H-20	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48"	12"	48"
54" - 60"	24"	60"

MINIMUM RECOMMENDED COVER BASED ON RAILWAY LOADING CONDITIONS	
PIPE DIAM.	COOPER E-80**
UP TO 24"	24"
30"-36"	36"
42"-60"	48"


12 DRAIN PIPE TRENCH INSTALLATION DETAIL
NOT TO SCALE

DESIGNED BY:	WMLJR
DRAWN BY:	SEP
CHECKED BY:	JAC
DATE:	OCT. 2022
PROJECT NO:	19-19d

PRELIMINARY, NOT FOR
CONSTRUCTION

CIVIL DETAILS II

**SHEET
6 OF 6**



JCE
JOE CASALI ENGINEERING, INC.
 CIVIL - SITE DEVELOPMENT - TRANSPORTATION
 DRAINAGE - WETLANDS - ISDS - TRAFFIC - FLOODPLAIN
 300 POST ROAD, WARWICK, RI 02888
 401.944.1000

JOSEPH A. CASALI

No. 7350

REGISTERED
PROFESSIONAL ENGINEER
CIVIL

10.18.2022