Memorandum

To: Mayor's Office of Strategic Planning
and Community Development
City of Somerville
93 Highland Avenue
Somerville, MA 02143

Date: January 2, 2019

Project #: 13788.00

From: Patrick Dunford, P.E.
Senior Project Manager

Re: Transportation Access Plan
20 Inner Belt Road
Somerville, Massachusetts

The following information is being provided to document the draft Transportation Access Plan (TAP) for the proposed development (the "Project") of 20 Earle Street in Somerville, Massachusetts (the "Site"). The Project involves the construction of a new residential building containing 205 units at the southerly end of the Site and a new 120-room hotel to be constructed at the northerly end of the Site. The existing City Club use currently located at the Site will continue to operate, but within a new and improved area within the proposed residential building. The TAP will be issued as a final document upon review and approval by the city, following and required edits or additional from that review. This document and accompanying information depicts the proposed Project access for automobile, bicycle, and pedestrian traffic. Information regarding truck deliveries and service vehicles (trash, recycling, etc.) also is provided for review.

Site Access Plan

The Project Site currently has three full-access curb cuts on Inner Belt Road serving the existing City Club portion of the Site. Two of these curb cuts provide access to an approximately 61-space surface parking lot located to the south of the building. The first curb cut is located just north of New Washington Street, and the second driveway is located 60 feet further to the north. The third curb cut to the City Club is provided to the north of that building, and it services a small parking area for that use. The northerly portion of the Site, which currently is occupied by an approximately 139-space parking lot, has a single full-access driveway located on Crescent Street at its intersection with Roland Street.

In conjunction with the Project, the existing City Club driveways on Inner Belt Road will be closed and replaced by a single new full-access driveway at the southerly end of the Site to the proposed 427-space parking garage. As noted earlier, a new Roland Street Extension also will be constructed between the two uses connecting Inner Belt Road to Crescent Street. VHB has evaluated the available sight lines at both new Inner Belt Road curb cuts and there will be sufficient stopping sight distance and intersection sight distance available at both locations. A full-access driveway for the garage also will be provided on the new Roland Street Extension roadway, with that curb cut being located at the easterly end of the residential building. A full-access driveway to the hotel will be located on the northerly side of the new circulation road opposite the residential garage driveway. This hotel driveway will provide access to a six-space surface parking lot and hotel pick-up/drop-off area next to the main building entrance.

As part of the Project construction, new and improved sidewalks complying with Massachusetts Architectural Access Board (AAB) requirements will be provided along the Site's frontage on Inner Belt Road and Washington Street. In addition to the sidewalk, the area between the new buildings and the street edge will feature space to be used for tree pits, pavers, or street furniture.

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Site Plans and Supporting Graphics

The Project Site plans accompanying this application have been attached for reference. To supplement the Site plans, graphics highlighting the planned vehicular and pedestrian accommodations have been provided for general reference.

Transportation Elements Plan

The attached "Figure 1 – Transportation Elements Plan" provides the required content specified for the TAP Transportation Elements Plan. This plan is being provided solely for the purposes of this TAP, and any detailed architectural information should be taken from the plans accompanying this overall submittal package. The roadway dimensions, roadway striping, and signage all are depicted on the "Layout & Materials Plan" within the civil/site plans accompanying this submittal.

On-Street Parking

The regulation of on-street parking will be coordinated through consultation with the City of Somerville. The current plans accompanying this submittal depicts the existing unstriped on-street parking being maintained along the easterly side of Inner Belt Road adjacent to the Site. The only exception to this is where a limited amount of on-street parking will need to be eliminated at the newly created intersection of Inner Belt Road with the proposed "Roland Street Extension" roadway connecting Inner Belt Road to Roland Street and Crescent Street. Signage on Inner Belt Road indicates that parking currently is prohibited from this point to Washington Street, so the new curb cut should only require the elimination of parking for one or two vehicles at most.

Pedestrian Access Plan

Figure 2 depicts the Project sidewalk network and general building entrance locations is provided attached to this document. The building entrances shown are general locations; the exact details are provided within the architectural plans accompanying this overall submittal.

Bicycle Parking Plan

As indicated on the Project Site plan accompanying this submittal, total of 67 bicycle parking spaces will be provided for the new residential use. An additional 8 spaces also will be provided for the City Club use that will continue to operate within that building. To maximize use by residents and visitors, this bicycle parking supply will be provided through a combination of an internal bike room and bicycle racks provided around the perimeter of the building. The resulting supply will satisfy the City of Somerville Zoning Bylaws requirement for both uses. Likewise, 12 bicycle parking spaces will be provided for the hotel, which exceeds the City of Somerville Zoning Bylaws requirement of 11 spaces.

Motor Vehicle Parking Plan

A plan showing the proposed structured parking supply, surface parking spaces, and on-street parking is provided attached to this document as Figure 3.

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Vehicle Movement Plan

Vehicle tracking diagrams have been provided to demonstrate the ability of large vehicles to navigate in and out of the Project Site from the various loading facilities and/or driveways. It is expected that both the hotel and residential development deliveries and service vehicles will be limited to single-unit trucks.

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ATTACHMENTS

- **Proposed Site Plans – October 10, 2018 (revised through January 3, 2019)**
- **Transportation Elements Plan**
- **Pedestrian Access Plan**
- **Motor Vehicle Parking Plan**
- **Vehicle Tracking Diagrams – January 3, 2019**

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- **Proposed Site Plans – October 10, 2018 (revised through January 3, 2019)**

Site Plans

Issued for	**Local Approvals**
Date Issued	**October 10, 2018**
Latest Issue	**January 3, 2019**

Hotel & Residential Development

20 Inner Belt Road
Somerville, MA

Applicant:

CPC-T Innerbelt, LLC
1601 Trapelo Road, Suite 174
Waltham, Massachusetts 02451

Owner - Residential

Paradigm Direct Roland LLC &
Somerville City Club
20 Inner Belt Road
Somerville, Massachusetts 02145

Owner - Hotel

Paradigm Direct Roland LLC
c/o Paradigm Properties LLC
93 Summer Street
Boston, Massachusetts 02110

Assessor's Map: 107
Lot: B-1A, B-1, B-2, B-3, B-4

Sheet Index

No.	Drawing Title	Latest Issue
C-1	Legend and General Notes	January 3, 2019
C-2	Overall Site Plan	January 3, 2019
C-3	Utility Plan	January 3, 2019
C-4	Site Details 1	January 3, 2019
C-5	Site Details 2	January 3, 2019

Reference Drawings

No.	Drawing Title	Latest Issue
Sv-1	Existing Conditions Plan of Land	August 20, 2018

Landscape Architect Drawings

No.	Drawing Title	Latest Issue
L-0	Existing Landscape and Site Preparation Plan	January 3, 2019
L-1	Landscape Improvements Plan	January 3, 2019
L-2	Landscape Details	January 3, 2019

Architect Drawings - Hotel

No.	Drawing Title	Latest Issue
A1.0	Proposed Ground Floor Plan	January 3, 2018
A1.1	Proposed Typical Floor Plan (2-6)	January 3, 2018
A2.0	Proposed Building Elevations	January 3, 2018
P1.0 - P1.3	Perspective View	January 3, 2018

Architect Drawings - Residential

No.	Drawing Title	Latest Issue
X-101	Shadow Study	December 13, 2018
A-102 - A-109	Ground Floor - Roof Plan	December 13, 2018
A-201, -203	Overall Building Elevations	December 13, 2018
P-1 - P-4	Perspectives	December 13, 2018

vhb.com

vhb

101 Walnut Street
PO Box 9151
Watertown, MA 02471
617.924.1770

Architect - Residential
ICON Architecture, Inc.
101 Summer Street
Boston, MA 02110
617.451.3333

Architect - Hotel
Group One Partners
21 W 3rd Street
Boston, MA 02127
617.268.7000

Landscape Architect
GroundView
5 Dell Street
Somerville, MA 02145
617.548.9688

CITY OF SOMERVILLE

VHB Project : 13788.00 - Hotel & Residential
Issued for : Local Approvals - 1/3/19

Legend

Exist.	Prop.	
		PROPERTY LINE
		PROJECT LIMIT LINE
		RIGHT-OF-WAY/PROPERTY LINE
		EASEMENT
		BUILDING SETBACK
		PARKING SETBACK
10+00	10+00	BASELINE
		CONSTRUCTION LAYOUT
		ZONING LINE
		TOWN LINE
		LIMIT OF DISTURBANCE
		WETLAND LINE WITH FLAG
		FLOODPLAIN
BLSF	BLSF	BORDERING LAND SUBJECT TO FLOODING
BZ	BZ	WETLAND BUFFER ZONE
NDZ	NDZ	NO DISTURB ZONE
200'RA	200'RA	200' RIVERFRONT AREA
		GRAVEL ROAD
EOP	EOP	EDGE OF PAVEMENT
BB	BB	BITUMINOUS BERM
BC	BC	BITUMINOUS CURB
CC	CC	CONCRETE CURB
CG	CG	CURB AND GUTTER
ECC	ECC	EXTRUDED CONCRETE CURB
MCC	MCC	MONOLITHIC CONCRETE CURB
PCC	PCC	PRECAST CONC. CURB
SGE	SGE	SLOPED GRAN. EDGING
VGC	VGC	VERT. GRAN. CURB
		LIMIT OF CURB TYPE
		SAWCUT
		BUILDING
	EN	BUILDING ENTRANCE
	LD	LOADING DOCK
		BOLLARD
D	D	DUMPSTER PAD
		SIGN
		DOUBLE SIGN
		STEEL GUARDRAIL
		WOOD GUARDRAIL
		PATH
		TREE LINE
		WIRE FENCE
		FENCE
		STOCKADE FENCE
		STONE WALL
		RETAINING WALL
		STREAM / POND / WATER COURSE
		DETENTION BASIN
		HAY BALES
		SILT FENCE
		SILT SOCK / STRAW WATTLE
4	4	MINOR CONTOUR
20	20	MAJOR CONTOUR
10	10	PARKING COUNT
	C10	COMPACT PARKING STALLS
DYL	DYL	DOUBLE YELLOW LINE
SL	SL	STOP LINE
		CROSSWALK
		ACCESSIBLE CURB RAMP
		ACCESSIBLE PARKING
VAN	VAN	VAN-ACCESSIBLE PARKING

Exist.	Prop.	
		CONCRETE
		HEAVY DUTY PAVEMENT
		BUILDINGS
		RIPRAP
		CONSTRUCTION EXIT
27.35 TC×	27.35 TC×	TOP OF CURB ELEVATION
26.85 BC×	26.85 BC×	BOTTOM OF CURB ELEVATION
132.75 ×	132.75 ×	SPOT ELEVATION
45.0 TW× 38.5 BW	45.0 TW× 38.5 BW	TOP & BOTTOM OF WALL ELEVATION
		BORING LOCATION
		TEST PIT LOCATION
MW	MW	MONITORING WELL
UD	UD	UNDERDRAIN
12"D	12"D	DRAIN
6"RD	6"RD	ROOF DRAIN
12"S	12"S	SEWER
FM	FM	FORCE MAIN
OHW	OHW	OVERHEAD WIRE
6"W	6"W	WATER
4"FP	4"FP	FIRE PROTECTION
	2"DW	DOMESTIC WATER
3"G	G	GAS
E	E	ELECTRIC
STM	STM	STEAM
T	T	TELEPHONE
FA	FA	FIRE ALARM
CATV	CATV	CABLE TV
		CATCH BASIN
		DOUBLE CATCH BASIN
		GUTTER INLET
		DRAIN MANHOLE
TD		TRENCH DRAIN
		PLUG OR CAP
CO	CO	CLEANOUT
		FLARED END SECTION
		HEADWALL
S		SEWER MANHOLE
CS	CS	CURB STOP & BOX
WV	WV	WATER VALVE & BOX
TSV	TSV	TAPPING SLEEVE, VALVE & BOX
		SIAMESE CONNECTION
HYD	HYD	FIRE HYDRANT
WM	WM	WATER METER
PIV	PIV	POST INDICATOR VALVE
W	W	WATER WELL
GG	GG	GAS GATE
GM	GM	GAS METER
E	DMH	ELECTRIC MANHOLE
EM	EM	ELECTRIC METER
		LIGHT POLE
T	TMH	TELEPHONE MANHOLE
T	T	TRANSFORMER PAD
		UTILITY POLE
		GUY POLE
		GUY WIRE & ANCHOR
HH	HH	HAND HOLE
PB	PB	PULL BOX
Matchline		MATCHLINE

Abbreviations

General

ABAN	ABANDON
ACR	ACCESSIBLE CURB RAMP
ADJ	ADJUST
APPROX	APPROXIMATE
BIT	BITUMINOUS
BS	BOTTOM OF SLOPE
BWLL	BROKEN WHITE LANE LINE
CONC	CONCRETE
DYCL	DOUBLE YELLOW CENTER LINE
EL	ELEVATION
ELEV	ELEVATION
EX	EXISTING
FDN	FOUNDATION
FFE	FIRST FLOOR ELEVATION
GRAN	GRANITE
GTD	GRADE TO DRAIN
LA	LANDSCAPE AREA
LOD	LIMIT OF DISTURBANCE
MAX	MAXIMUM
MIN	MINIMUM
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
PERF	PERFORATED
PROP	PROPOSED
REM	REMOVE
RET	RETAIN
R&D	REMOVE AND DISPOSE
R&R	REMOVE AND RESET
SWEL	SOLID WHITE EDGE LINE
SWLL	SOLID WHITE LANE LINE
TS	TOP OF SLOPE
TYP	TYPICAL

Utility

CB	CATCH BASIN
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
DCB	DOUBLE CATCH BASIN
DMH	DRAIN MANHOLE
CIP	CAST IRON PIPE
COND	CONDUIT
DIP	DUCTILE IRON PIPE
DOM	DOMESTIC
FES	FLARED END SECTION
FM	FORCE MAIN
F&G	FRAME AND GRATE
F&C	FRAME AND COVER
GI	GUTTER INLET
GT	GREASE TRAP
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HH	HANDHOLE
HW	HEADWALL
HYD	HYDRANT
INV	INVERT ELEVATION
I=	INVERT ELEVATION
LP	LIGHT POLE
MES	METAL END SECTION
PIV	POST INDICATOR VALVE
PWW	PAVED WATER WAY
PVC	POLYVINYLCHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
R=	RIM ELEVATION
SMH	SEWER MANHOLE
TSV	TAPPING SLEEVE, VALVE AND BOX
UG	UNDERGROUND
UP	UTILITY POLE

Notes

General

1. CONTRACTOR SHALL NOTIFY "DIG-SAFE" (1-888-344-7233) AT LEAST 72 HOURS BEFORE EXCAVATING.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
3. ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS AND WALKWAYS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE FEDERAL AMERICANS WITH DISABILITIES ACT AND WITH STATE AND LOCAL LAWS AND REGULATIONS (WHICHEVER ARE MORE STRINGENT).
4. AREAS DISTURBED DURING CONSTRUCTION AND NOT RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC.) SHALL RECEIVE SIX (6) INCHES LOAM AND SEED.
5. WITHIN THE LIMITS OF THE BUILDING FOOTPRINT, THE SITE CONTRACTOR SHALL PERFORM EARTHWORK OPERATIONS REQUIRED UP TO SUBGRADE ELEVATIONS.
6. WORK WITHIN THE LOCAL RIGHTS-OF-WAY SHALL CONFORM TO LOCAL MUNICIPAL STANDARDS. WORK WITHIN STATE RIGHTS-OF-WAY SHALL CONFORM TO THE LATEST EDITION OF THE STATE HIGHWAY DEPARTMENTS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
7. UPON AWARD OF CONTRACT, CONTRACTOR SHALL MAKE NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN NECESSARY PERMITS, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK INDICATED ON THE DRAWINGS, IN THE SPECIFICATIONS, AND IN THE CONTRACT DOCUMENTS. DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, AND FIRE HYDRANTS, WITHOUT APPROPRIATE PERMITS.
8. TRAFFIC SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
9. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
10. IN THE EVENT THAT SUSPECTED CONTAMINATED SOIL, GROUNDWATER, AND OTHER MEDIA ARE ENCOUNTERED DURING EXCAVATION AND CONSTRUCTION ACTIVITIES BASED ON VISUAL, OLFACTORY, OR OTHER EVIDENCE, THE CONTRACTOR SHALL STOP WORK IN THE VICINITY OF THE SUSPECT MATERIAL TO AVOID FURTHER SPREADING OF THE MATERIAL, AND SHALL NOTIFY THE OWNER IMMEDIATELY SO THAT THE APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN.
11. CONTRACTOR SHALL PREVENT DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS.
12. DAMAGE RESULTING FROM CONSTRUCTION LOADS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
13. CONTRACTOR SHALL CONTROL STORMWATER RUNOFF DURING CONSTRUCTION TO PREVENT ADVERSE IMPACTS TO OFF SITE AREAS, AND SHALL BE RESPONSIBLE TO REPAIR RESULTING DAMAGES, IF ANY, AT NO COST TO OWNER.
14. THIS PROJECT DISTURBS MORE THAN ONE ACRE OF LAND AND FALLS WITHIN THE NPDES CONSTRUCTION GENERAL PERMIT (CGP) PROGRAM AND EPA JURISDICTION. PRIOR TO THE START OF CONSTRUCTION CONTRACTOR IS TO FILE A CGP NOTICE OF INTENT WITH THE EPA AND PREPARE A STORMWATER POLLUTION PREVENTION PLAN IN ACCORDANCE WITH THE NPDES REGULATIONS. CONTRACTOR SHALL CONFIRM THE OWNER HAS ALSO FILED A NOTICE OF INTENT WITH THE EPA.

Utilities

1. THE LOCATIONS, SIZES, AND TYPES OF EXISTING UTILITIES ARE SHOWN AS AN APPROXIMATE REPRESENTATION ONLY. THE OWNER OR ITS REPRESENTATIVE(S) HAVE NOT INDEPENDENTLY VERIFIED THIS INFORMATION AS SHOWN ON THE PLANS. THE UTILITY INFORMATION SHOWN DOES NOT GUARANTEE THE ACTUAL EXISTENCE, SERVICEABILITY, OR OTHER DATA CONCERNING THE UTILITIES, NOR DOES IT GUARANTEE AGAINST THE POSSIBILITY THAT ADDITIONAL UTILITIES MAY BE PRESENT THAT ARE NOT SHOWN ON THE PLANS. PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY AND DETERMINE THE EXACT LOCATIONS, SIZES, AND ELEVATIONS OF THE POINTS OF CONNECTIONS TO EXISTING UTILITIES AND, SHALL CONFIRM THAT THERE ARE NO INTERFERENCES WITH EXISTING UTILITIES AND THE PROPOSED UTILITY ROUTES, INCLUDING ROUTES WITHIN THE PUBLIC RIGHTS OF WAY.
2. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, OR EXISTING CONDITIONS DIFFER FROM THOSE SHOWN SUCH THAT THE WORK CANNOT BE COMPLETED AS INTENDED, THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED IN WRITING TO THE OWNER'S REPRESENTATIVE FOR THE RESOLUTION OF THE CONFLICT AND CONTRACTOR'S FAILURE TO NOTIFY PRIOR TO PERFORMING ADDITIONAL WORK RELEASES OWNER FROM OBLIGATIONS FOR ADDITIONAL PAYMENTS WHICH OTHERWISE MAY BE WARRANTED TO RESOLVE THE CONFLICT.
3. SET CATCH BASIN RIMS, AND INVERTS OF SEWERS, DRAINS, AND DITCHES IN ACCORDANCE WITH ELEVATIONS ON THE GRADING AND UTILITY PLANS.
4. RIM ELEVATIONS FOR DRAIN AND SEWER MANHOLES, WATER VALVE COVERS, GAS GATES, ELECTRIC AND TELEPHONE PULL BOXES, AND MANHOLES, AND OTHER SUCH ITEMS, ARE APPROXIMATE AND SHALL BE SET/RESET AS FOLLOWS:
   A. PAVEMENTS AND CONCRETE SURFACES: FLUSH
   B. ALL SURFACES ALONG ACCESSIBLE ROUTES: FLUSH
   C. LANDSCAPE, LOAM AND SEED, AND OTHER EARTH SURFACE AREAS: ONE INCH ABOVE SURROUNDING AREA AND TAPER EARTH TO THE RIM ELEVATION.
5. THE LOCATION, SIZE, DEPTH, AND SPECIFICATIONS FOR CONSTRUCTION OF PROPOSED PRIVATE UTILITY SERVICES SHALL BE INSTALLED ACCORDING TO THE REQUIREMENTS PROVIDED BY, AND APPROVED BY, THE RESPECTIVE UTILITY COMPANY (GAS, TELEPHONE, ELECTRIC, FIRE ALARM, ETC.). FINAL DESIGN LOADS AND LOCATIONS TO BE COORDINATED WITH OWNER AND ARCHITECT.
6. CONTRACTOR SHALL MAKE ARRANGEMENTS FOR AND SHALL BE RESPONSIBLE FOR PAYING FEES FOR POLE RELOCATION AND FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE, FIRE ALARM, AND ANY OTHER PRIVATE UTILITIES, WHETHER WORK IS PERFORMED BY CONTRACTOR OR BY THE UTILITIES COMPANY.
7. UTILITY PIPE MATERIALS SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED ON THE PLAN:
   A. WATER PIPES SHALL BE COPPER TYPE 'K'
   B. SANITARY SEWER PIPES SHALL BE POLYVINYL CHLORIDE (PVC) SEWER PIPE
   C. STORM DRAINAGE PIPES SHALL BE HIGH DENSITY POLYETHYLENE (HDPE) PIPE
   D. PIPE INSTALLATION AND MATERIALS SHALL COMPLY WITH THE STATE PLUMBING CODE WHERE APPLICABLE. CONTRACTOR SHALL COORDINATE WITH LOCAL PLUMBING INSPECTOR PRIOR TO BEGINNING WORK.
8. CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR AND SHALL FURNISH EXCAVATION, INSTALLATION, AND BACKFILL OF ELECTRICAL FURNISHED SITEWORK RELATED ITEMS SUCH AS PULL BOXES, CONDUITS, DUCT BANKS, LIGHT POLE BASES, AND CONCRETE PADS. SITE CONTRACTOR SHALL FURNISH CONCRETE ENCASEMENT OF DUCT BANKS IF REQUIRED BY THE UTILITY COMPANY AND AS INDICATED ON THE DRAWINGS.
9. CONTRACTOR SHALL EXCAVATE AND BACKFILL TRENCHES FOR GAS IN ACCORDANCE WITH GAS COMPANY'S REQUIREMENTS.
10. ALL DRAINAGE AND SANITARY STRUCTURE INTERIOR DIAMETERS (4' MIN.) SHALL BE DETERMINED BY THE MANUFACTURER BASED ON THE PIPE CONFIGURATIONS SHOWN ON THESE PLANS AND LOCAL MUNICIPAL STANDARDS. FOR MANHOLES THAT ARE 20 FEET IN DEPTH AND GREATER, THE MINIMUM DIAMETER SHALL BE 5 FEET.

Layout and Materials

1. SEE LANDSCAPE DRAWINGS FOR LAYOUT, GRADING, LANDSCAPE, AND PLANTING DETAIL.
2. SEE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS AND DETAILS CONTIGUOUS TO THE BUILDING, INCLUDING SIDEWALKS, RAMPS, BUILDING ENTRANCES, STAIRWAYS, UTILITY PENETRATIONS, CONCRETE DOOR PADS, COMPACTOR PAD, LOADING DOCKS, BOLLARDS, ETC.
3. PROPOSED BOUNDS AND ANY EXISTING PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE SET OR RESET BY A PROFESSIONAL LICENSED SURVEYOR.
4. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL VERIFY EXISTING PAVEMENT ELEVATIONS AT INTERFACE WITH PROPOSED PAVEMENTS, AND EXISTING GROUND ELEVATIONS ADJACENT TO DRAINAGE OUTLETS TO ASSURE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED FACILITIES.
5. SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SCALED TO THEIR ACTUAL DIMENSIONS OR LOCATIONS ON THE DRAWINGS. THE CONTRACTOR SHALL REFER TO THE DETAIL SHEET DIMENSIONS, MANUFACTURER'S LITERATURE, SHOP DRAWINGS, AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.
6. CONTRACTOR SHALL NOT RELY SOLELY ON ELECTRONIC VERSIONS OF PLANS, SPECIFICATIONS, AND DATA FILES THAT ARE OBTAINED FROM THE DESIGNERS, BUT SHALL VERIFY LOCATION OF PROJECT FEATURES IN ACCORDANCE WITH THE PAPER COPIES OF THE PLANS AND SPECIFICATIONS THAT ARE SUPPLIED AS PART OF THE CONTRACT DOCUMENTS.

Demolition

1. CONTRACTOR SHALL REMOVE AND DISPOSE OF EXISTING MANMADE SURFACE FEATURES WITHIN THE LIMIT OF WORK INCLUDING BUILDINGS, STRUCTURES, PAVEMENTS, SLABS, CURBING, FENCES, UTILITY POLES, SIGNS, ETC. UNLESS INDICATED OTHERWISE ON THE DRAWINGS. REMOVE AND DISPOSE OF EXISTING UTILITIES, FOUNDATIONS AND UNSUITABLE MATERIAL BENEATH AND FOR A DISTANCE OF 10 FEET BEYOND THE PROPOSED BUILDING FOOTPRINT INCLUDING EXTERIOR COLUMNS.
2. EXISTING UTILITIES SHALL BE TERMINATED, UNLESS OTHERWISE NOTED, IN CONFORMANCE WITH LOCAL, STATE AND INDIVIDUAL UTILITY COMPANY STANDARD SPECIFICATIONS AND DETAILS. THE CONTRACTOR SHALL COORDINATE UTILITY SERVICE DISCONNECTS WITH THE UTILITY REPRESENTATIVES.
3. CONTRACTOR SHALL DISPOSE OF DEMOLITION DEBRIS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND STATUTES.
4 THE DEMOLITION LIMITS DEPICTED IN THE PLANS IS INTENDED TO AID THE CONTRACTOR DURING THE BIDDING AND CONSTRUCTION PROCESS AND IS NOT INTENDED TO DEPICT EACH AND EVERY ELEMENT OF DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THE DETAILED SCOPE OF DEMOLITION BEFORE SUBMITTING ITS BID/PROPOSAL TO PERFORM THE WORK AND SHALL MAKE NO CLAIMS AND SEEK NO ADDITIONAL COMPENSATION FOR CHANGED CONDITIONS OR UNFORESEEN OR LATENT SITE CONDITIONS RELATED TO ANY CONDITIONS DISCOVERED DURING EXECUTION OF THE WORK.
5. UNLESS OTHERWISE SPECIFICALLY PROVIDED ON THE PLANS OR IN THE SPECIFICATIONS, THE ENGINEER HAS NOT PREPARED DESIGNS FOR AND SHALL HAVE NO RESPONSIBILITY FOR THE PRESENCE, DISCOVERY, REMOVAL, ABATEMENT OR DISPOSAL OF HAZARDOUS MATERIALS, TOXIC WASTES OR POLLUTANTS AT THE PROJECT SITE. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY CLAIMS OF LOSS, DAMAGE, EXPENSE, DELAY, INJURY OR DEATH ARISING FROM THE PRESENCE OF HAZARDOUS MATERIAL AND CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ANY CLAIMS MADE IN CONNECTION THEREWITH. MOREOVER, THE ENGINEER SHALL HAVE NO ADMINISTRATIVE OBLIGATIONS OF ANY TYPE WITH REGARD TO ANY CONTRACTOR AMENDMENT INVOLVING THE ISSUES OF PRESENCE, DISCOVERY, REMOVAL, ABATEMENT OR DISPOSAL OF ASBESTOS OR OTHER HAZARDOUS MATERIALS.

Erosion Control

1. PRIOR TO STARTING ANY OTHER WORK ON THE SITE, THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES AND SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS IDENTIFIED IN FEDERAL, STATE, AND LOCAL APPROVAL DOCUMENTS PERTAINING TO THIS PROJECT.
2. CONTRACTOR SHALL INSPECT AND MAINTAIN EROSION CONTROL MEASURES ON A WEEKLY BASIS (MINIMUM) OR AS REQUIRED PER THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). THE CONTRACTOR SHALL ADDRESS DEFICIENCIES AND MAINTENANCE ITEMS WITHIN TWENTY-FOUR HOURS OF INSPECTION. CONTRACTOR SHALL PROPERLY DISPOSE OF SEDIMENT SUCH THAT IT DOES NOT ENCUMBER OTHER DRAINAGE STRUCTURES AND PROTECTED AREAS.
3. CONTRACTOR SHALL BE FULLY RESPONSIBLE TO CONTROL CONSTRUCTION SUCH THAT SEDIMENTATION SHALL NOT AFFECT REGULATORY PROTECTED AREAS, WHETHER SUCH SEDIMENTATION IS CAUSED BY WATER, WIND, OR DIRECT DEPOSIT.
4. CONTRACTOR SHALL PERFORM CONSTRUCTION SEQUENCING SUCH THAT EARTH MATERIALS ARE EXPOSED FOR A MINIMUM OF TIME BEFORE THEY ARE COVERED, SEEDED, OR OTHERWISE STABILIZED TO PREVENT EROSION.
5. UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER, CONTRACTOR SHALL REMOVE AND DISPOSE OF EROSION CONTROL MEASURES AND CLEAN SEDIMENT AND DEBRIS FROM ENTIRE DRAINAGE AND SEWER SYSTEMS.

Existing Conditions Information

1. BASE PLAN: THE PROPERTY LINES SHOWN WERE DETERMINED BY AN ACTUAL FIELD SURVEY CONDUCTED BY VHB, INC. IN JANUARY 17, 2017 AND FROM DEEDS AND PLANS OF RECORD. THE EXISTING CONDITIONS SHOWN ON THIS PLAN ARE BASED UPON AN ACTUAL ON-THE-GROUND INSTRUMENT SURVEY PERFORMED BY VHB, INC. IN JANUARY, 2017.
2. TOPOGRAPHY: ELEVATIONS ARE BASED ON NAVD 1988.
3. GEOTECHNICAL DATA INCLUDING TEST PIT AND BORING LOCATIONS AND ELEVATIONS WERE OBTAINED FROM A PRELIMINARY FOUNDATION ENGINEERING REPORT, COMPLETED BY MCPHAIL ASSOCIATES, LLC ON NOVEMBER 1, 2017.

Document Use

1. THESE PLANS AND CORRESPONDING CADD DOCUMENTS ARE INSTRUMENTS OF PROFESSIONAL SERVICE, AND SHALL NOT BE USED, IN WHOLE OR IN PART, FOR ANY PURPOSE OTHER THAN FOR WHICH IT WAS CREATED WITHOUT THE EXPRESSED, WRITTEN CONSENT OF VHB. ANY UNAUTHORIZED USE, REUSE, MODIFICATION OR ALTERATION, INCLUDING AUTOMATED CONVERSION OF THIS DOCUMENT SHALL BE AT THE USER'S SOLE RISK WITHOUT LIABILITY OR LEGAL EXPOSURE TO VHB.
2. CONTRACTOR SHALL NOT RELY SOLELY ON ELECTRONIC VERSIONS OF PLANS, SPECIFICATIONS, AND DATA FILES THAT ARE OBTAINED FROM THE DESIGNERS, BUT SHALL VERIFY LOCATION OF PROJECT FEATURES IN ACCORDANCE WITH THE PAPER COPIES OF THE PLANS AND SPECIFICATIONS THAT ARE SUPPLIED AS PART OF THE CONTRACT DOCUMENTS.
3. SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SCALED TO THEIR ACTUAL DIMENSIONS OR LOCATIONS ON THE DRAWINGS. THE CONTRACTOR SHALL REFER TO THE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.

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Hotel & Residential Development

0-20 Inner Belt Road
Somerville, Massachusetts

No.	Revision	Date	Appvd.
1	City Comments	January 3, 2019	CPN

Designed by JRM | Checked by CPN

Issued for: Local Approvals | Date: October 10, 2018

Not Approved for Construction

Drawing Title: Legend and General Notes

Drawing Number: C-1

Sheet 1 of 5

Project Number: 13788.00

Zoning Summary Chart - Hotel

Zoning District(S):	BB - Commercial Residential
Overlay District(S):	Medical Marijuana Overlay

Zoning Regulation Requirements	Required	Provided
LOT AREA	-	21,734 SF
BUILDING FOOTPRINT	-	13,484 SF
MAXIMUM GROUND COVERAGE	80%	62%
MINIMUM LANDSCAPED AREA	10%	2.1%
NET FLOOR AREA	-	62,640 SF
MAXIMUM FLOOR AREA RATIO	2.0	2.9
MAXIMUM HEIGHT	50 Feet	69.5 Feet
MINIMUM FRONT YARD	15 Feet	0.24 Feet
MINIMUM SIDE YARD	N/A	N/A
MINIMUM REAR YARD	N/A	N/A
RESIDENTIAL SETBACK	1/3 height of building (24 Feet)	>24 Feet

Zoning Summary Chart - Residential

Zoning District(S):	BB - Commercial Residential
Overlay District(S):	Medical Marijuana Overlay

Zoning Regulation Requirements	Required	Provided
MINIMUM LOT AREA PER UNIT	1,000 SF/UNIT (205,000 SF)	69,200 SF
BUILDING FOOTPRINT	-	61,197 SF
MAXIMUM GROUND COVERAGE	80%	89%
MINIMUM LANDSCAPED AREA	10%	14.4% [A]
NET FLOOR AREA	-	223,750 SF
MAXIMUM FLOOR AREA RATIO	2.0	3.3
MAXIMUM HEIGHT	50 Feet	85 Feet
MINIMUM FRONT YARD	15 Feet	0.26 Feet
MINIMUM SIDE YARD	N/A	N/A
MINIMUM REAR YARD	10 feet plus 2 feet for each story above ground floor (22')	5 Feet

FOOTNOTES:
A INCLUDES AREA ON ELEVATED COURTYARDS; SEE LANDSCAPE PLANS

Parking Summary Chart - Hotel

Description	Size Required	Size Provided	Spaces Required	Spaces Provided
SURFACE STANDARD SPACES	9 x 18	9 x 18	98	5
SURFACE ACCESSIBLE SPACES [A]	9 x 18	9 x 18	5	1
TOTAL SPACES			103	6 [C]
LOADING AREAS			0	0
BIKE PARKING SPACES [B]			11	12

FOOTNOTES:
A ADA/STATE/LOCAL REQUIREMENTS
B BIKE PARKING REQUIREMENTS:
HOTEL: 103 PARKING SPACES REQUIRED; 1 BIKE SPACE REQ'D / 10 PARKING SPACES
11 BIKE SPACES REQUIRED
C PARKING PROVIDED WITHIN THE GARAGE TO MEET HOTEL PARKING REQUIREMENTS

Parking Requirements:

HOTEL	14 EMPLOYEES	x	0.5 SPACE	/	1 EMPLOYEE	= 7 SPACES
	120 ROOMS	x	0.8 SPACE	/	1 ROOM	= 96 SPACES
					TOTAL PARKING REQUIRED	= 103 SPACES

Parking Summary Chart - Residential

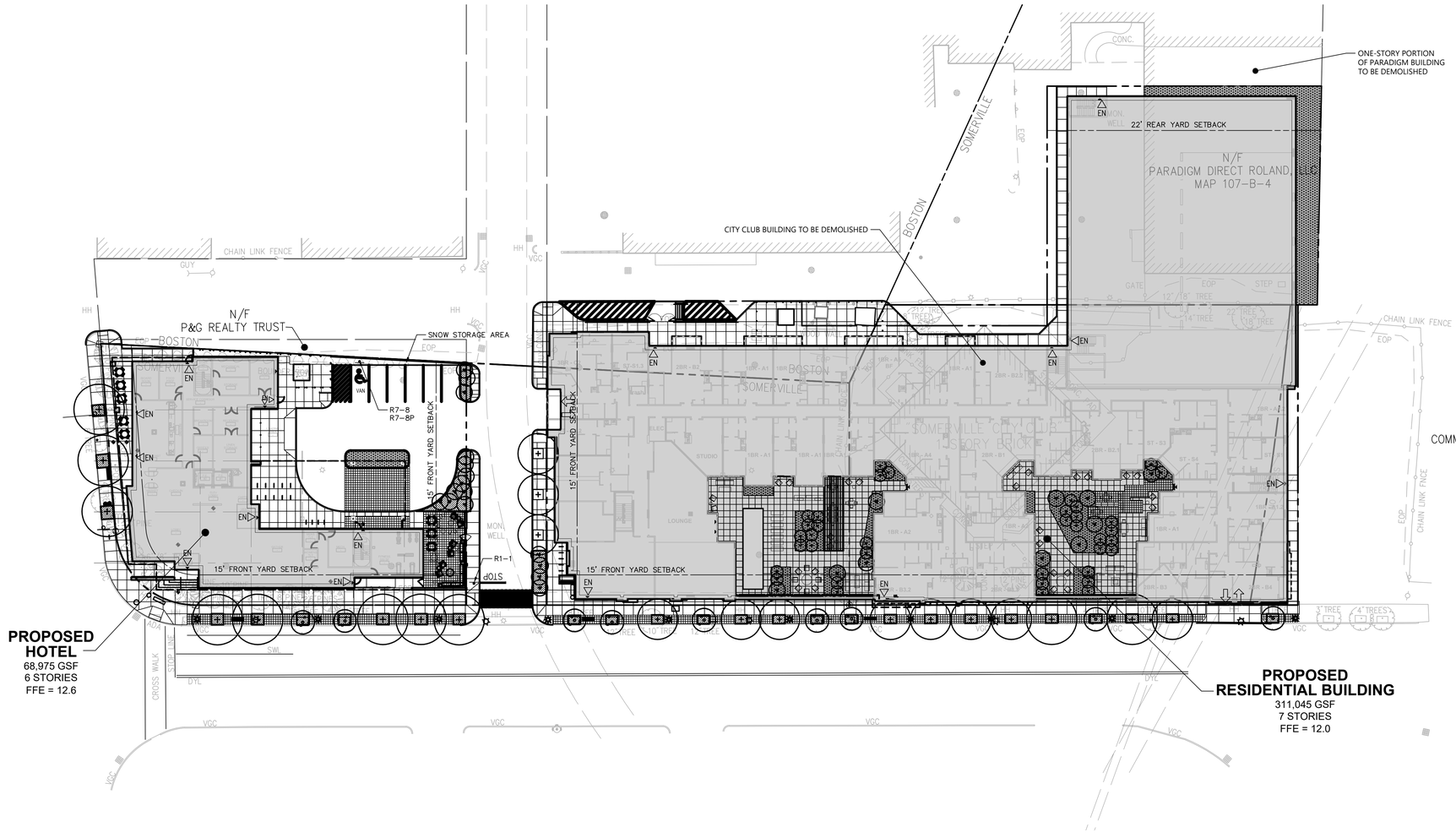
Description	Size Required	Size Provided	Spaces Required	Spaces Provided
GARAGE STANDARD SPACES	9 x 18	9 x18	520	190 [C]
GARAGE COMPACT SPACES	8 x 16 MIN.	8 x 16 MIN.	-	225
GARAGE ACCESSIBLE SPACES [A]	9 x 18	9 x 18	11	12
TOTAL SPACES			531	427
LOADING AREAS [B]	12 x 30	9 x 30	1	1
BIKE PARKING SPACES [D]			75	75

FOOTNOTES:
A ADA/STATE/LOCAL REQUIREMENTS
B LOADING AREA PROVIDED FOR HOTEL AND FOR RESIDENTIAL / CITY CLUB USE
C INCLUDES 75 PARKING SPACES UNDER RESIDENTIAL BUILDING, AND 97 PARKING SPACES FOR HOTEL USE
D BIKE PARKING REQUIREMENTS:
RESIDENTIAL: 1 BIKE SPACE / 7 DWELLING UNITS PLUS
1 BIKE SPACE / 3 DWELLING UNITS (ADDITIONAL DU ABOVE 7)
67 BIKE SPACES REQUIRED
CITY CLUB: 80 PARKING SPACES REQUIRED; 1 BIKE SPACE REQ'D / 10 PARKING SPACES
8 BIKE SPACES REQUIRED

Parking Requirements:

STUDIO	37 UNITS	x	1 SPACE	/	1 UNIT	= 37 SPACES
1- & 2- BEDROOM	162 UNITS	x	1.5 SPACES	/	1 UNIT	= 243 SPACES
3-BEDROOM	6 UNITS	x	2 SPACES	/	1 UNIT	= 12 SPACES
VISITOR PARKING	205 UNITS	x	1 SPACE	/	6 UNITS	= 34 SPACES
CITY CLUB	475 VISITORS	x	1 SPACE	/	6 VISITORS	= 80 SPACES
PARADIGM PROPERTY						125 SPACES [A]
					TOTAL PARKING REQUIRED	= 531 SPACES

FOOTNOTES:
A BASED ON THE EXISTING PARKING RATIO OF 1.74
AFTER BUILDING DEMOLITION, PARADIGM REMAINING BUILDING = 144.794 SF x 1.72 SPACES / 1000 SF = 250 SPACES.
125 SPACES ARE REMAINING ON THEIR PROPERTY, THEREFORE 125 SPACES ARE REQUIRED FOR USE WITHIN PARKING GARAGE.



Sign Summary

M.U.T.C.D. Number	Specification Width	Specification Height	Desc.
R1-1	30"	30"	STOP
R7-8	12"	18"	RESERVED PARKING
R7-8P	12"	6"	VAN ACCESSIBLE

0 15 30 60 Feet

Hotel & Residential Development

0-20 Inner Belt Road
Somerville, Massachusetts

No.	Revision	Date	Appvd.
1	City Comments	January 3, 2019	CPN

Designed by: SKE
Checked by: CPN

Issued for: Local Approvals
Date: October 10, 2018

Not Approved for Construction

Drawing Title: Overall Site Plan

Drawing Number: C-2

Sheet 2 of 5

Project Number: 13788.00

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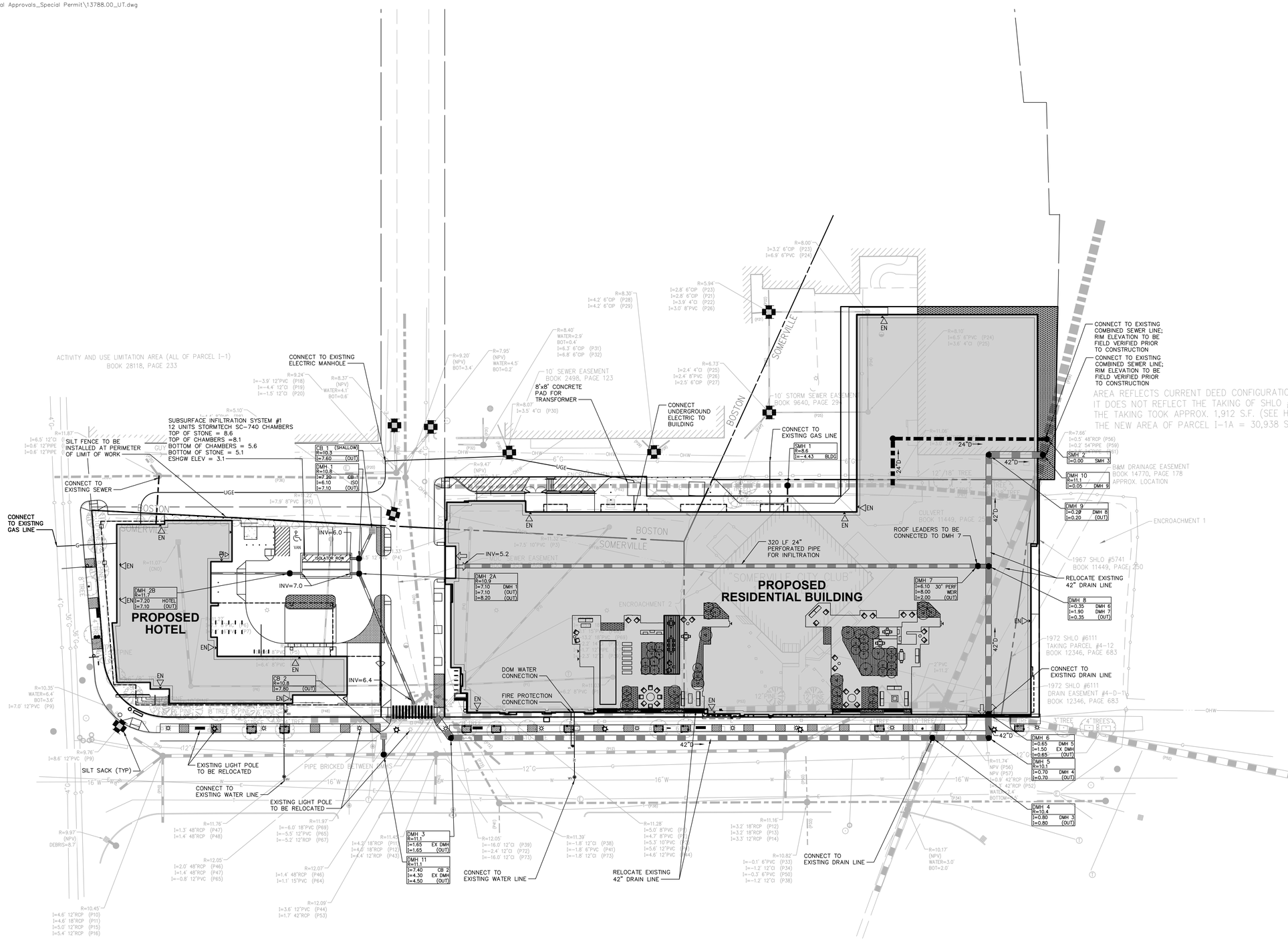

0 15 30 60 Feet

Hotel & Residential Development

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Somerville, Massachusetts

No.	Revision	Date	Appvd.
1	City Comments	January 3, 2019	CPN

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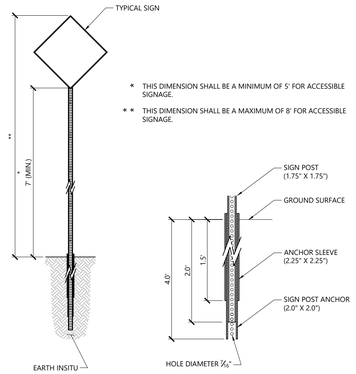
Drawing Title
Utility Plan

Drawing Number
C-3

Sheet 3 of 5

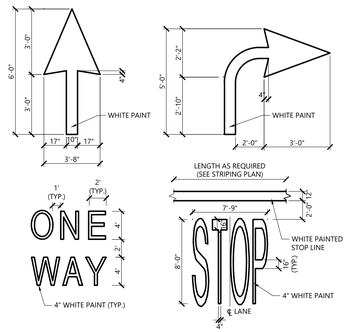
Project Number
13788.00



Sign Post - Type 'B'

1/16

N.T.S. Source: VHB LD_702



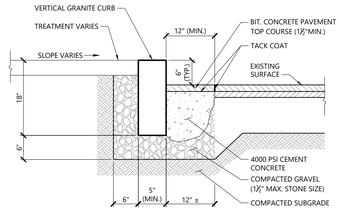
NOTES

1. PAVEMENT MARKINGS TO BE INSTALLED FOR ON SITE WORK IN LOCATIONS SHOWN.

Painted Pavement Markings - On Site

1/16

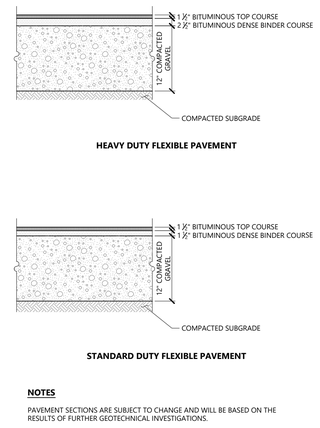
N.T.S. Source: VHB LD_554



Vertical Granite Curb (VGC) Set In Existing Pavement

1/16

N.T.S. Source: VHB LD_403



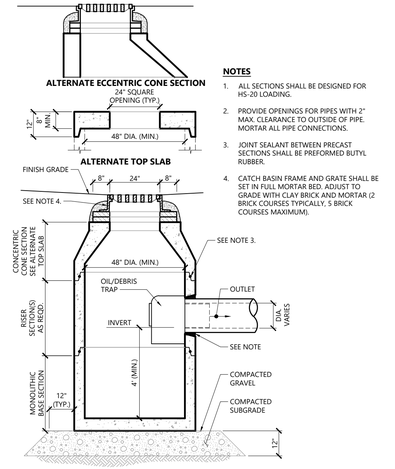
NOTES

PAVEMENT SECTIONS ARE SUBJECT TO CHANGE AND WILL BE BASED ON THE RESULTS OF FURTHER GEOTECHNICAL INVESTIGATIONS.

Bituminous Concrete Pavement Sections

1/16

N.T.S. Source: VHB LD_430



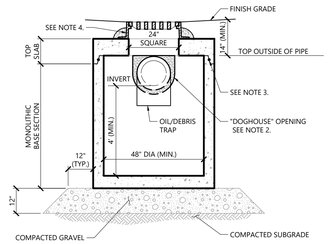
NOTES

1. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
2. PROVIDE OPENINGS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
3. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
4. CATCH BASIN FRAME AND GRATE SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM).

Catch Basin (CB) With Oil/Debris Trap

1/16

N.T.S. Source: VHB LD_101



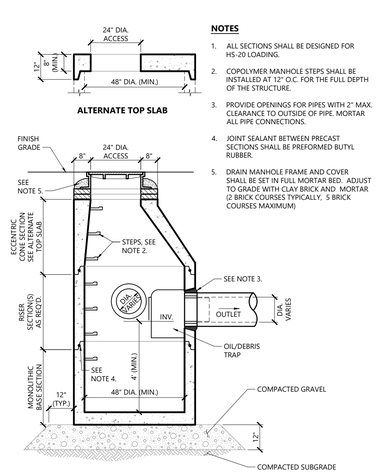
NOTES

1. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
2. PROVIDE DOGHOUSE OPENING FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. TOP SLAB SHALL NOT REST DIRECTLY ON PIPE. GROUT ALL PIPE CONNECTIONS (NON-SHRINK GROUT).
3. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
4. CATCH BASIN FRAME AND GRATE (4"DEPTH) SHALL BE SET IN FULL MORTAR BED.
5. ADJUST TO FINISH GRADE WITH CLAY BRICK AND MORTAR AS REQUIRED.

Catch Basin (CB) Shallow Cover with Oil/Debris Trap

1/16

N.T.S. Source: VHB LD_105



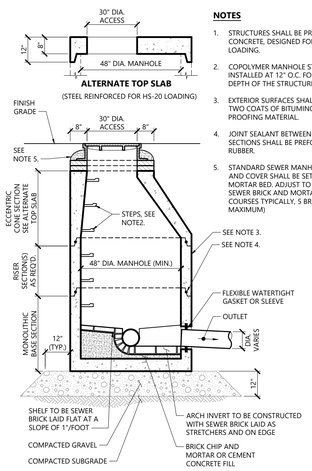
NOTES

1. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
2. COPOLYMER MANHOLE STEPS SHALL BE INSTALLED AT 12" O.C. FOR THE FULL DEPTH OF THE STRUCTURE.
3. PROVIDE OPENINGS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
4. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
5. DRAIN MANHOLE FRAME AND COVER SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM)

Drain Manhole (DMH) with Oil Debris/Trap

1/16

N.T.S. Source: VHB LD_116



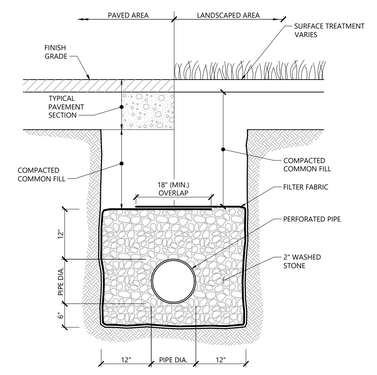
NOTES

1. STRUCTURES SHALL BE PRECAST CONCRETE, DESIGNED FOR HS-20 LOADING.
2. COPOLYMER MANHOLE STEPS SHALL BE INSTALLED AT 12" O.C. FOR THE FULL DEPTH OF THE STRUCTURE.
3. EXTERIOR SURFACES SHALL BE GIVEN TWO COATS OF BITUMINOUS WATER-PROOFING MATERIAL.
4. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
5. STANDARD SEWER MANHOLE FRAME AND COVER SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH SEWER BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM)

Sanitary Sewer Manhole (SMH)

1/16

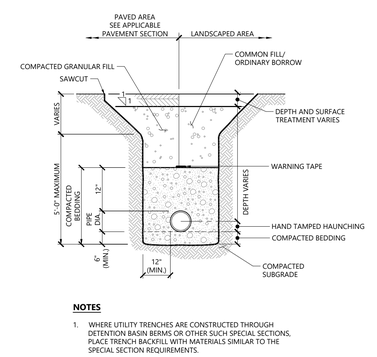
N.T.S. Source: VHB LD_200



Underdrain (UD)

1/16

N.T.S. Source: VHB LD_184



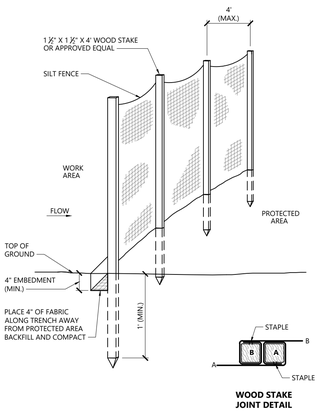
NOTES

1. WHERE UTILITY TRENCHES ARE CONSTRUCTED THROUGH DETENTION BASIN BERMS OR OTHER SUCH SPECIAL SECTIONS, PLACE TRENCH BACKFILL WITH MATERIALS SIMILAR TO THE SPECIAL SECTION REQUIREMENTS.
2. USE METALLIC TRACING/WARNING TAPE OVER ALL PIPES.

Utility Trench

1/16

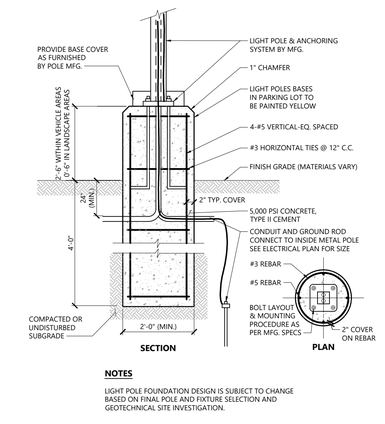
N.T.S. Source: VHB LD_300



Silt Fence Barrier

1/16

N.T.S. Source: VHB LD_650



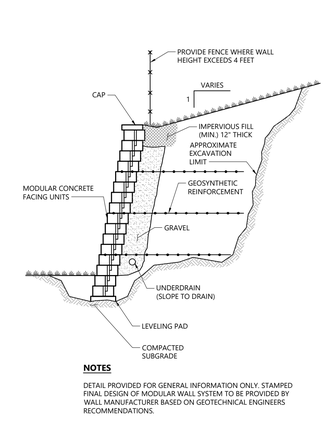
NOTES

LIGHT POLE FOUNDATION DESIGN IS SUBJECT TO CHANGE BASED ON FINAL POLE AND FIXTURE SELECTION AND GEOTECHNICAL SITE INVESTIGATION.

Light Pole Foundation Detail (Up to 15' Pole)

1/16

N.T.S. Source: VHB LD_310A



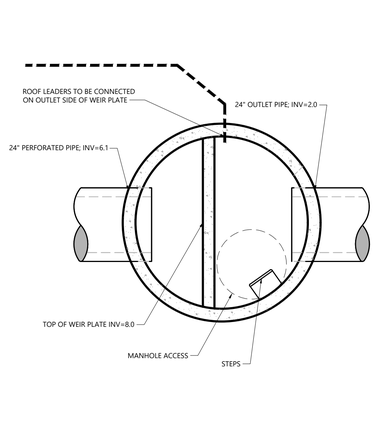
NOTES

DETAIL PROVIDED FOR GENERAL INFORMATION ONLY. STAMPED FINAL DESIGN OF MODULAR WALL SYSTEM TO BE PROVIDED BY WALL MANUFACTURER BASED ON GEOTECHNICAL ENGINEERS RECOMMENDATIONS.

Modular Retaining Wall

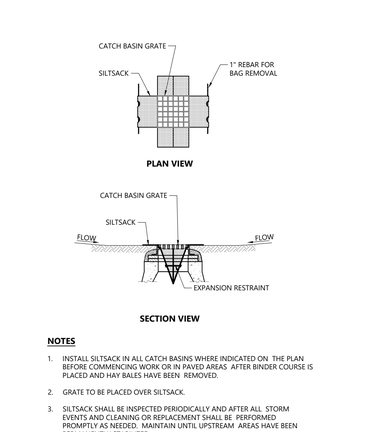
1/16

N.T.S. Source: VHB LD_750



DMH-7

N.T.S. Source: VHB



NOTES

1. INSTALL SILTSACK IN ALL CATCH BASINS WHERE INDICATED ON THE PLAN BEFORE COMMENCING WORK OR IN PAVED AREAS AFTER BINDER COURSE IS PLACED AND HAY BALES HAVE BEEN REMOVED.
2. GRATE TO BE PLACED OVER SILTSACK.
3. SILTSACK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED. MAINTAIN UNTIL UPSTREAM AREAS HAVE BEEN PERMANENTLY STABILIZED

Siltsack Sediment Trap

1/16

N.T.S. Source: VHB REV LD_674

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Drawing Title

Site Details 1

Drawing Number

C-4

Sheet 4 of 5

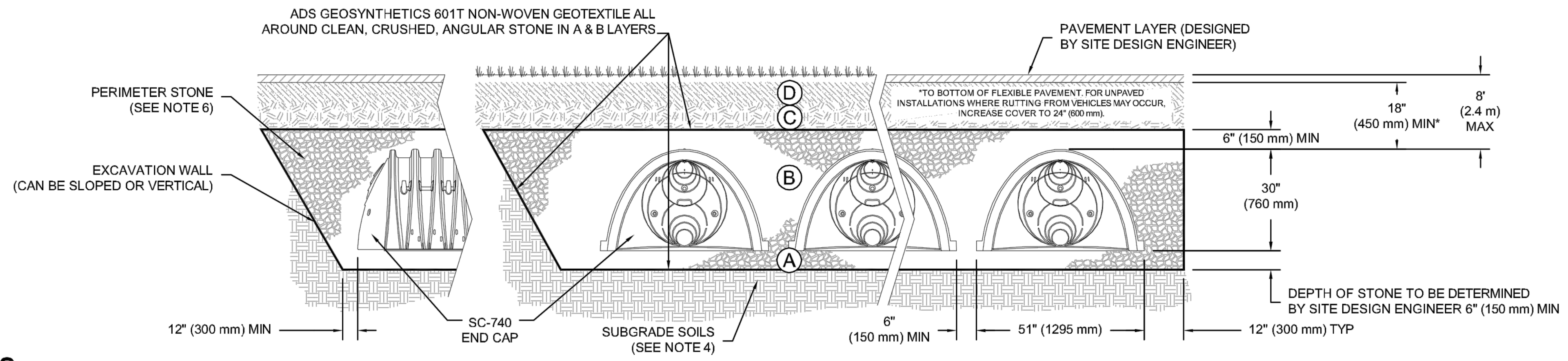
Project Number

13788.00

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. [2 3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.



NOTES:

1. SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
4. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
5. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
6. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

SC-740 STANDARD CROSS SECTION
DATE: 11/18/14 DRAWN: JLM
PROJECT #: CHECKED: JLM

REV	DRW	CHK	DESCRIPTION
01/19/16	JLM	JLM	UPDATE

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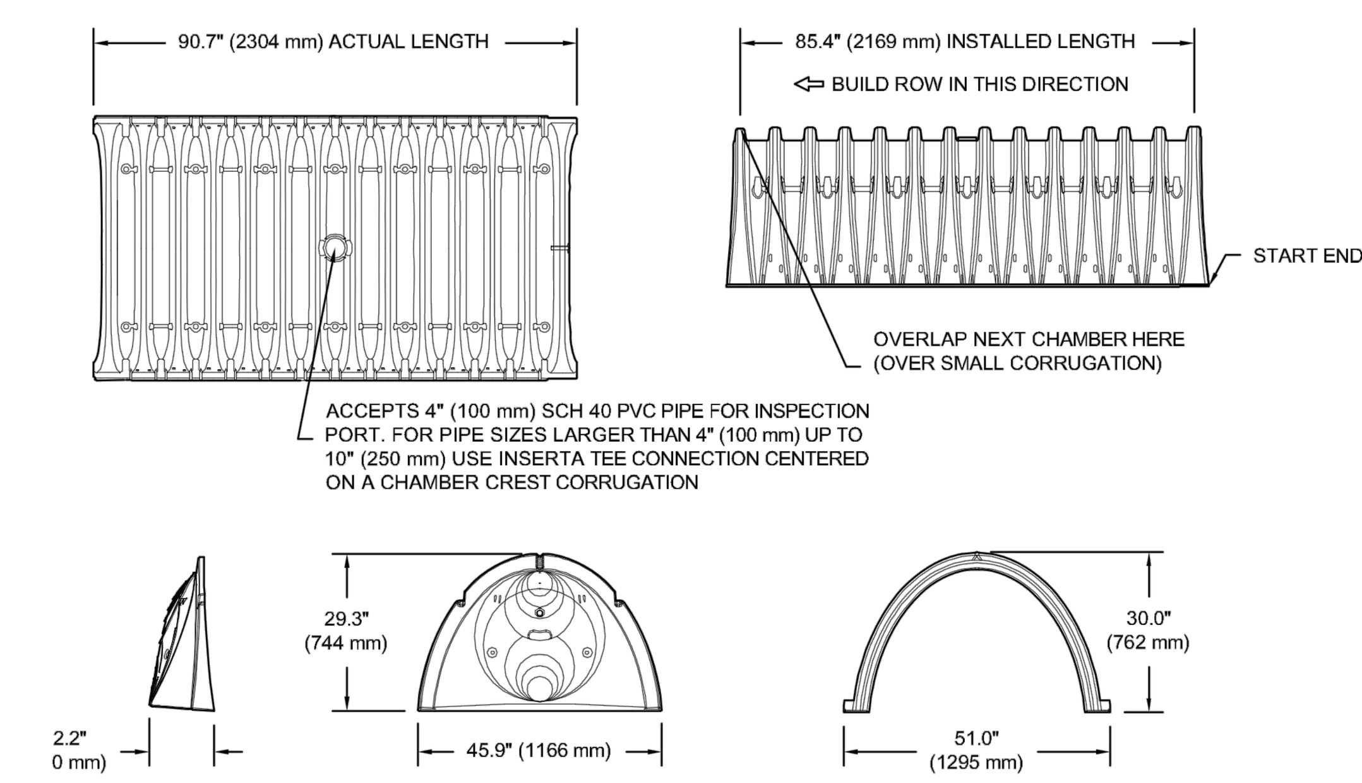
ADS® ADVANCED DRAINAGE SYSTEMS, INC. 4640 TRUEMAN BLVD HILLIARD, OH 43026 1-800-733-7473

THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER OR OTHER PROJECT REPRESENTATIVE. THE SITE DESIGN ENGINEER SHALL REVIEW THIS DRAWING PRIOR TO CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO ENSURE THAT THE PRODUCT(S) DEPICTED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.

SHEET 1 OF 1

SC-740 TECHNICAL SPECIFICATION

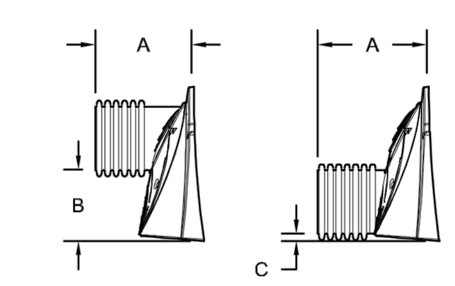
NTS



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	51.0" X 30.0" X 85.4"	(1295 mm X 762 mm X 2169 mm)
CHAMBER STORAGE	45.9 CUBIC FEET	(1.30 m³)
MINIMUM INSTALLED STORAGE*	74.9 CUBIC FEET	(2.12 m³)
WEIGHT	75.0 lbs.	(33.6 kg)

*ASSUMES 6" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS



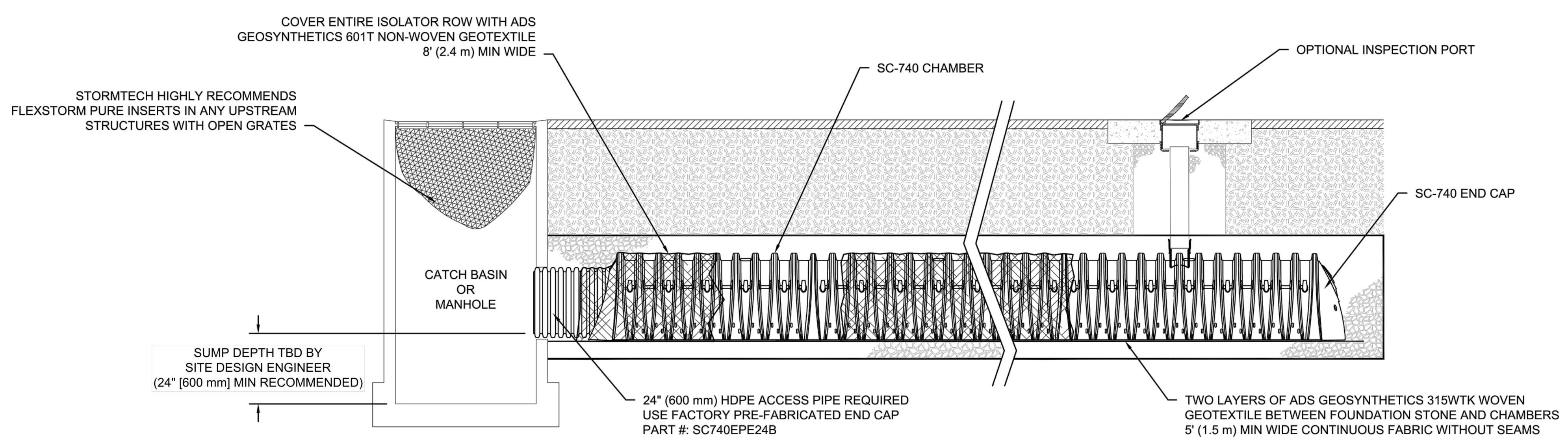
STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

PART #	STUB	A	B	C
SC740EPE06T / SC740EPE06TPC	6" (150 mm)	10.9" (277 mm)	18.5" (470 mm)	---
SC740EPE06B / SC740EPE06BPC			---	0.5" (13 mm)
SC740EPE08T /SC740EPE08TPC	8" (200 mm)	12.2" (310 mm)	16.5" (419 mm)	---
SC740EPE08B / SC740EPE08BPC			---	0.6" (15 mm)
SC740EPE10T / SC740EPE10TPC	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)	---
SC740EPE10B / SC740EPE10BPC			---	0.7" (18 mm)
SC740EPE12T / SC740EPE12TPC	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)	---
SC740EPE12B / SC740EPE12BPC			---	1.2" (30 mm)
SC740EPE15T / SC740EPE15TPC	15" (375 mm)	18.4" (467 mm)	9.0" (229 mm)	---
SC740EPE15B / SC740EPE15BPC			---	1.3" (33 mm)
SC740EPE18T / SC740EPE18TPC	18" (450 mm)	19.7" (500 mm)	5.0" (127 mm)	---
SC740EPE18B / SC740EPE18BPC			---	1.6" (41 mm)
SC740EPE24B*	24" (600 mm)	18.5" (470 mm)	---	0.1" (3 mm)

ALL STUBS, EXCEPT FOR THE SC740EPE24B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

* FOR THE SC740EPE24B THE 24" (600 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL



SC-740 ISOLATOR ROW DETAIL

NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

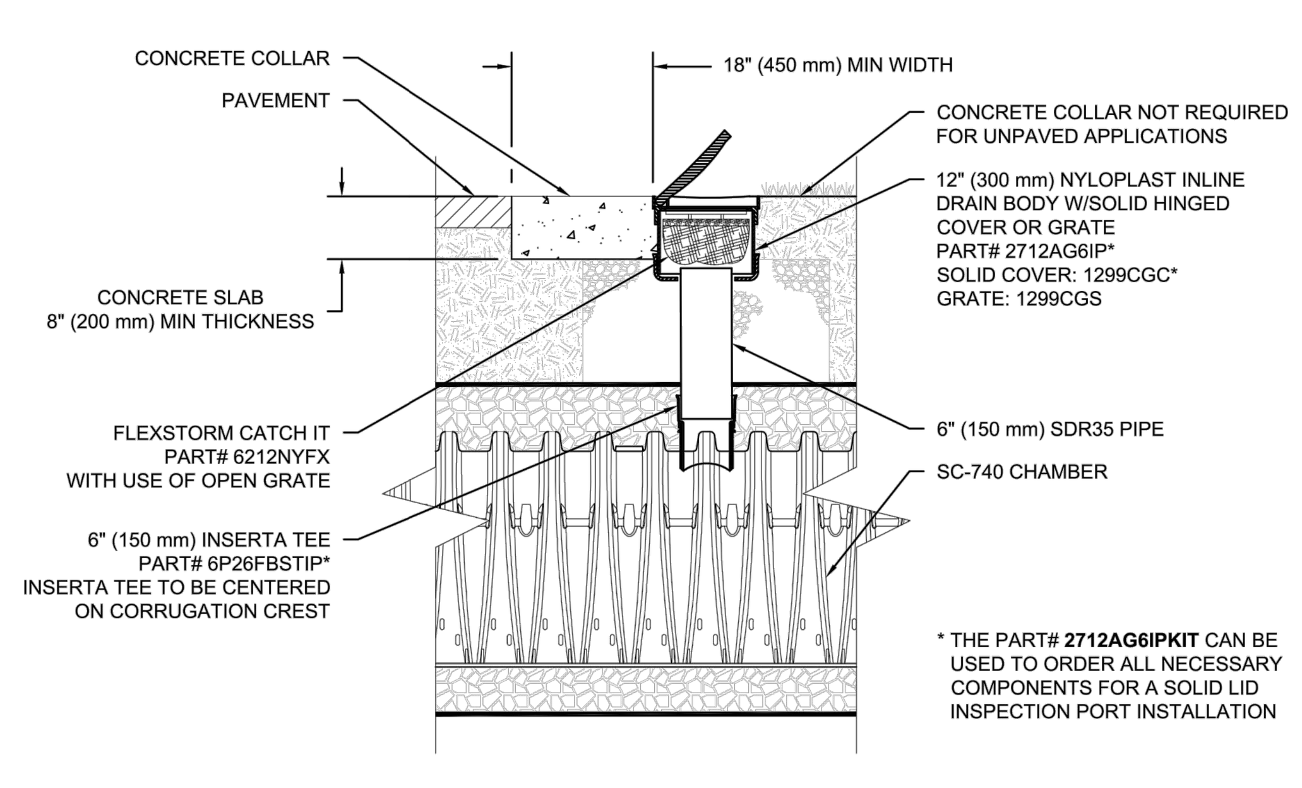
STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



SC-740 6" INSPECTION PORT DETAIL

NTS

ISOLATOR ROW DETAILS SC-740
DATE: 03/08/17 DRAWN: JLM
PROJECT #: CHECKED:

REV	DRW	CHK	DESCRIPTION

StormTech® Detention • Retention • Water Quality
70 INWOOD ROAD, SUITE 3 | ROCKY HILL | CT | 06067
860-529-8188 | 888-892-2694 | WWW.STORMTECH.COM

ADS® ADVANCED DRAINAGE SYSTEMS, INC. 4640 TRUEMAN BLVD HILLIARD, OH 43026 1-800-733-7473

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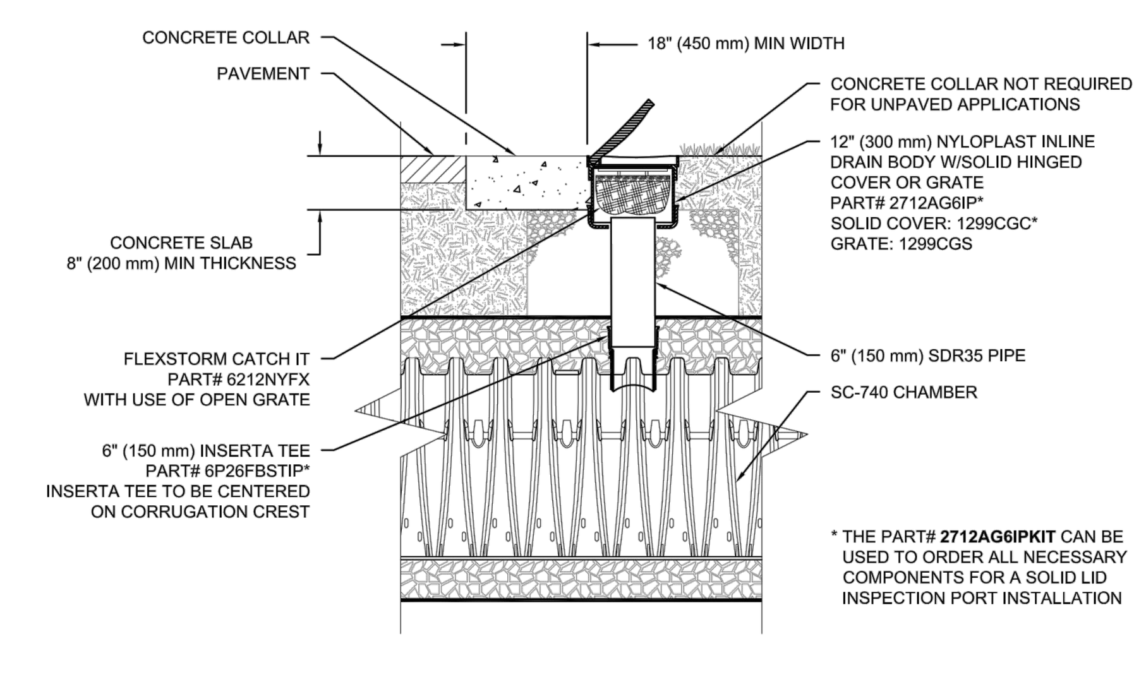
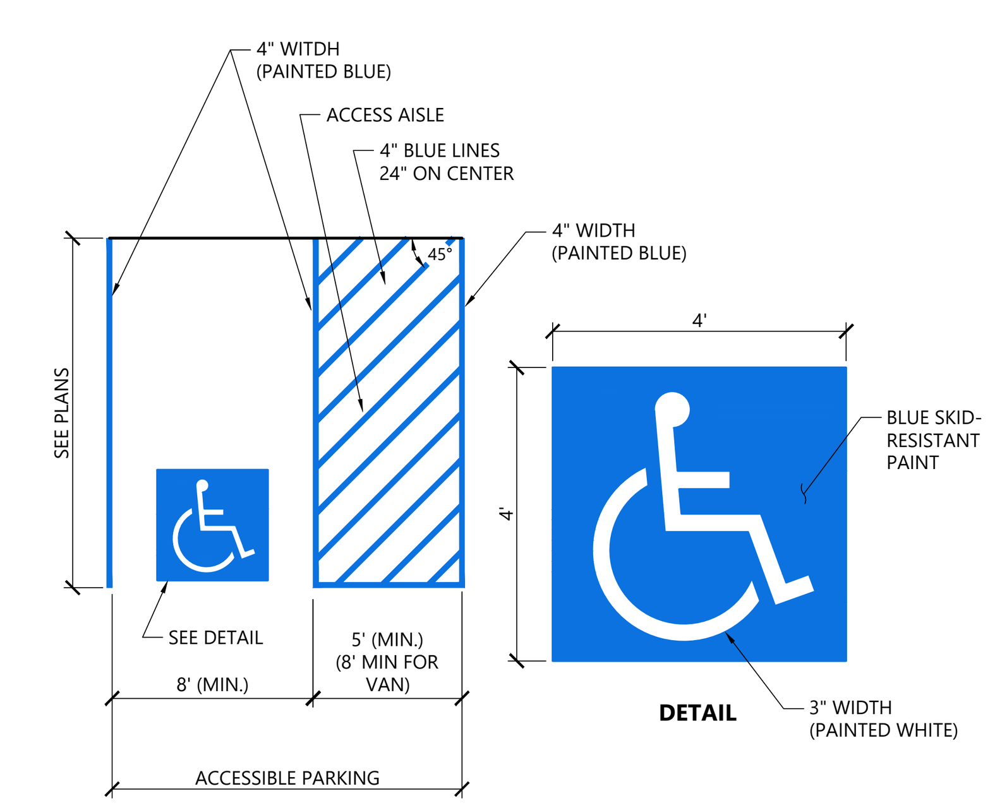
SHEET 1 OF 1



SC-740 6" INSPECTION PORT DETAIL

NTS



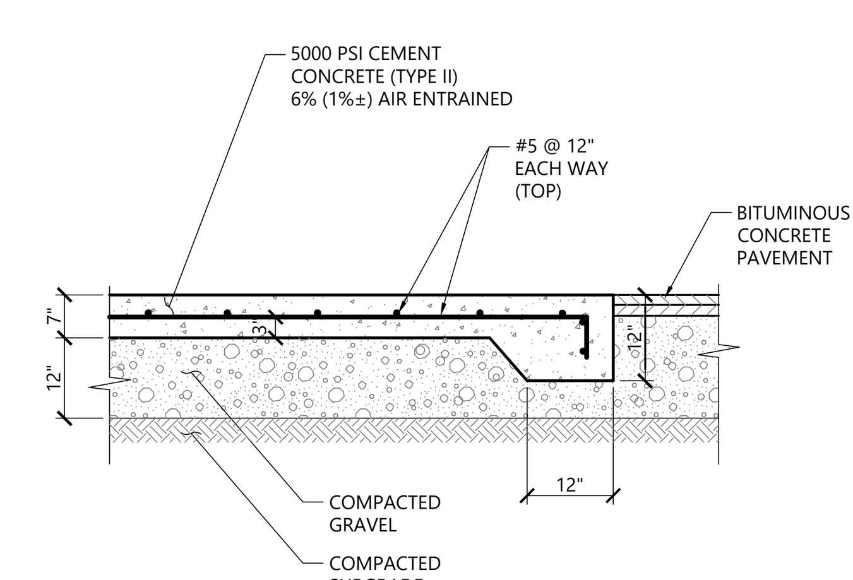
NOTES

1. ALL DIMENSIONS TO EDGES OF 4" PAVEMENT STRIPING.
2. 8' STALL WIDTH REFERS TO 8' CLEAR BETWEEN INSIDE EDGES OF PAVEMENT MARKINGS.
3. ALL SLOPES THROUGHOUT THE ACCESSIBLE PARKING AND AISLE AREAS SHALL NOT EXCEED 1.5%.
4. ACCESS AISLE MEASURED BETWEEN OUTSIDE EDGES OF PAVEMENT MARKINGS.

Accessible Parking Space

1/16

N.T.S. Source: VHB LD_552B



NOTES

1. SIZE OF COMPACTOR PAD TO BE AS INDICATED ON PLANS.
2. CONSTRUCTION JOINTS SHALL BE SPACED NO MORE THAN 30 FEET ON CENTER AND SHALL BE EQUALLY SPACED OVER THE LENGTH AND WIDTH OF THE PAD.
3. PAD SHALL MEET EVERSOURCE SPECIFICATIONS.

Concrete Pad

1/16

N.T.S. Source: VHB REV LD_712

vhb.com
101 Walnut Street
PO Box 9151
Watertown, MA 02471
617.924.1770

Hotel & Residential Development

0-20 Inner Belt Road
Somerville, Massachusetts

No.	Revision	Date	Appvd.
1	City Comments	January 3, 2019	CPN

Designed by SKE — Checked by CPN

Issued for: Local Approvals — Date: October 10, 2018

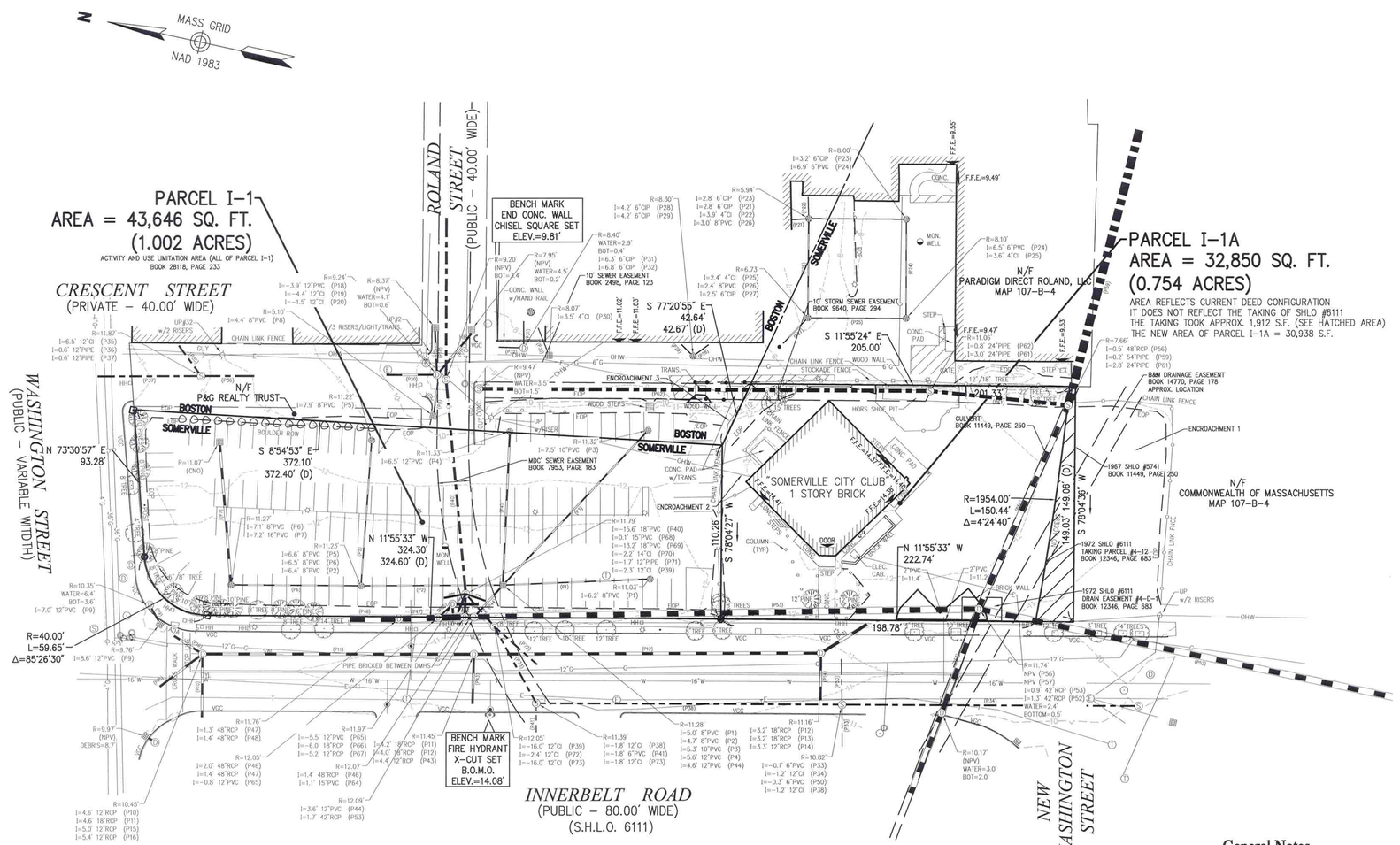
Not Approved for Construction

Drawing Title: Site Details 2

Drawing Number: C-5

Sheet 5 of 5

Project Number 13788.00



Record Owner

PARCEL ONE

PARCEL I-1
PARADIGM DIRECT ROLAND LLC
MAP 107 BLOCK B LOT 1A
MIDDLESEX REGISTRY
BOOK 63061, PAGE 120 (AS TO PARCEL I-1)

PARCEL I-1A
SOMERVILLE CITY CLUB, INC
MAP 107 BLOCK B LOT 1
MIDDLESEX REGISTRY
BOOK 13780, PAGE 679 (AS TO PARCEL I-1A)

Property Notes

ALL DIMENSION SHOWN ARE THE RESULT OF A GROUND SURVEY AND MATCH THE RECORD DEED DIMENSIONS UNLESS OTHERWISE NOTE WITH A (D) REFERRING TO THE DEED DIMENSION

THE AREA OF PARCEL I-1A REFLECTS THE RECORD DESCRIPTION OF THE PARCEL. HOWEVER THERE WAS A TAKING BY MASSDOT IN 1972 STATE HIGHWAY LAYOUT #6111, WHICH TOOK 1,912 S.F. OF LAND. VHB DID NOT FIND ANY EVIDENCE THAT THE LAND WAS NOT TAKEN OR GIVEN BACK TO THE SOMERVILLE CITY CLUB.

20 0 20 40
SCALE IN FEET

General Notes

1) THE PROPERTY LINES SHOWN ON THIS PLAN ARE BASED UPON AN ACTUAL FIELD SURVEY CONDUCTED BY VHB, INC. ON JANUARY 17, 2017 AND FROM DEEDS AND PLANS OF RECORD. SEE PROPERTY NOTE HEREON.

2) THE EXISTING CONDITIONS SHOWN ON THIS PLAN ARE BASED UPON AN ACTUAL ON-THE-GROUND INSTRUMENT SURVEY PERFORMED BY VHB, INC. IN JANUARY, 2017.

3) THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED ON FIELD OBSERVATIONS AND INFORMATION OF RECORD. THEY ARE NOT WARRANTED TO BE EXACTLY LOCATED NOR IS IT WARRANTED THAT ALL UNDERGROUND UTILITIES OR OTHER STRUCTURES ARE SHOWN ON THIS PLAN.

4) HORIZONTAL DATUM IS BASED ON MASS. GRID SYSTEM, NAD 1983.

5) THE LOT LIES ENTIRELY WITHIN ZONE X (UNSHADED) (AREAS TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS SHOWN ON THE FLOOD INSURANCE RATE MAP FOR MIDDLESEX COUNTY, MASSACHUSETTS, MAP NUMBER 25017C0439E, EFFECTIVE DATE JUNE 4, 2010.

6) THE LOT LIES ENTIRELY WITHIN THE COMMERCIAL RESIDENTIAL DISTRICT (BB) AS SHOWN ON THE "CITY OF SOMERVILLE, MASSACHUSETTS, CURRENT OFFICIAL ZONING MAP", DATED NOVEMBER 26, 2013. DIMENSIONAL REQUIREMENTS FOR A (BB) AT THE TIME OF THIS SURVEY ARE:

	REQUIRED	REQUIRED**
MINIMUM LOT AREA	N/A	
MINIMUM FRONTAGE	N/A	
MINIMUM FRONT YARD SETBACK	15 FEET	12 FEET
MINIMUM SIDE YARD SETBACK	N/A FEET	10 FEET
MINIMUM REAR YARD SETBACK	10+2 FT./EA. STORY	
MAXIMUM BUILDING HEIGHT	50 FEET	

**SEE DOCUMENTS LISTED IN TITLE NOTES EXCEPTIONS #14 & 15

7) NO WETLAND IDENTIFICATION WAS OBSERVED.

8) BOTH PARCELS HAVE DIRECT ACCESS TO INNER BELT ROAD.

vhb.com
vhb
101 Walnut Street
PO Box 9151
Watertown, MA 02471
617.924.1770

Legend

- DRAIN MANHOLE
- CATCH BASIN
- SEWER MANHOLE
- ELECTRIC MANHOLE
- TELEPHONE MANHOLE
- MANHOLE
- HAND HOLE
- WATER GATE
- FIRE HYDRANT
- GAS GATE
- BOLLARD w/LIGHT
- STREET SIGN
- LIGHT POLE
- UTILITY POLE
- GUY POLE
- GUY WIRE
- MONITORING WELL
- FLOOD LIGHT
- WELL
- MARSH
- F.F.E.=45.27' FINISHED FLOOR ELEVATION
- CNO COULD NOT OPEN
- NPV NO PIPES VISIBLE
- DYL DOUBLE YELLOW LINE
- DWL DASHED WHITE LINE
- SYL SINGLE WHITE LINE
- LSA LANDSCAPED AREA
- EOP EDGE OF PAVEMENT
- CC CONCRETE CURB
- VGC VERTICAL GRANITE CURB
- SGE SLOPED GRANITE EDGE
- BB BITUMINOUS BERM
- BC BITUMINOUS CURB
- GUARD RAIL
- CHAIN LINK FENCE
- DRAINAGE LINE
- SEWER LINE
- OHW OVERHEAD WIRE
- E UNDERGROUND ELECTRIC
- T TELEPHONE LINE
- G GAS LINE
- W WATER LINE
- STONE WALL
- TREE LINE
- 100'BZ 100-FT BUFFER ZONE
- 100'RA 100-FT RIVER FRONT AREA
- 200'RA 200-FT RIVER FRONT AREA
- AF1-100 LIMIT MEAN ANNUAL HIGH WATER
- BF1-100 LIMIT OF BANK
- WF1-100 VEGETATED WETLAND BOUNDARY

Criterion Development

Inner Belt Road
Somerville, Massachusetts

No.	Revision	Date	Appvd.

Designed by | Checked by
Issued for | Date

August 9, 2018

Drawing Title
Existing Conditions Plan of Land

Drawing Number
Sv-1

Sheet 1 of 1

Project Number
13788.00

COMMONWEALTH OF MASSACHUSETTS
RUSSELL J. BOUSQUET
NO. 35389
REGISTERED
PROFESSIONAL LAND SURVEYOR
10/10/18

Ref: 13788.00
January 2, 2019

Memorandum

- **Transportation Elements Plan**

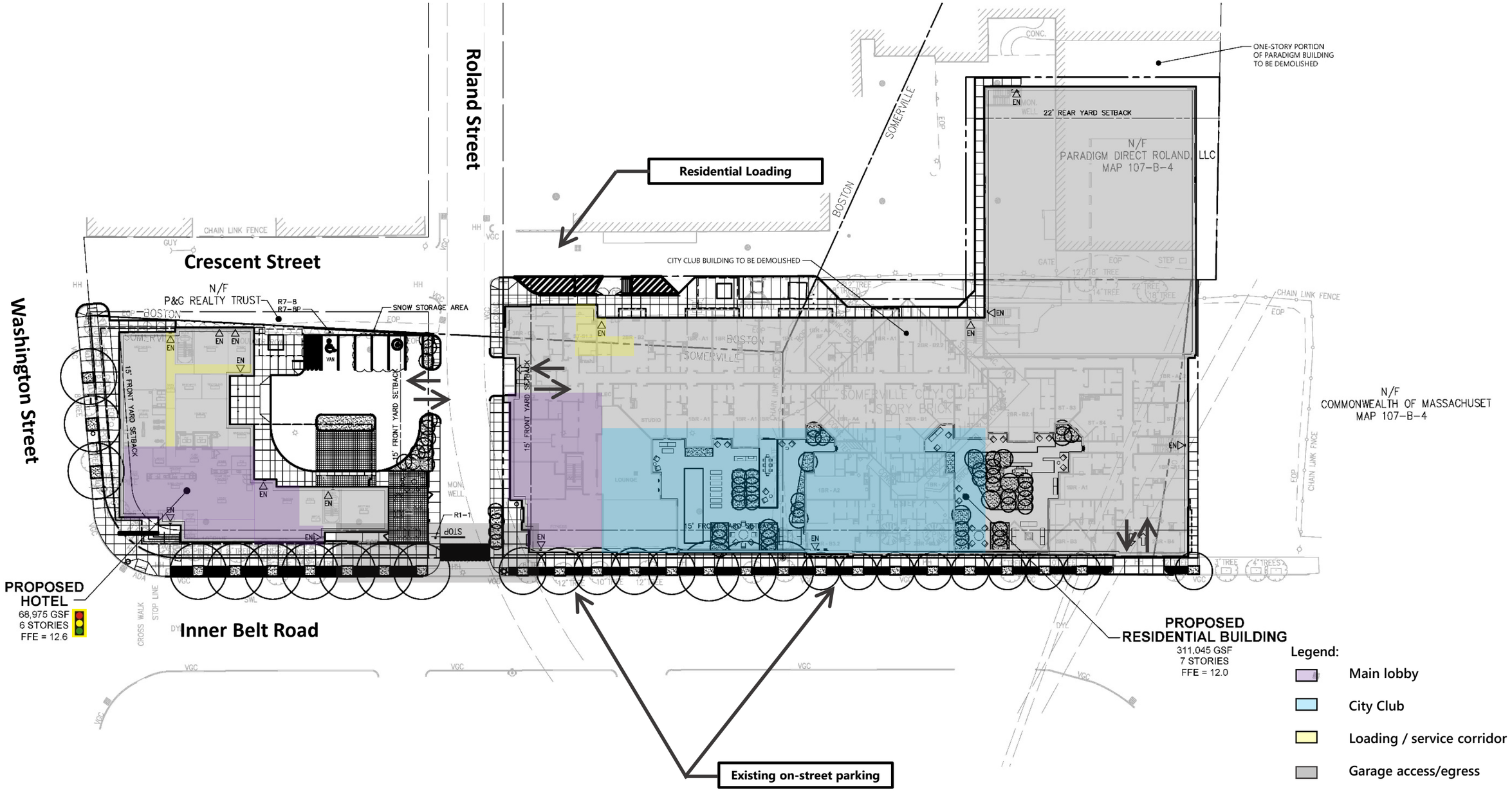


Figure 1
Transportation Elements Plan

20 Inner Belt Road
Somerville, Massachusetts

Ref: 13788.00
January 2, 2019

Memorandum

- **Pedestrian Access Plan**

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Pedestrian Access Plan

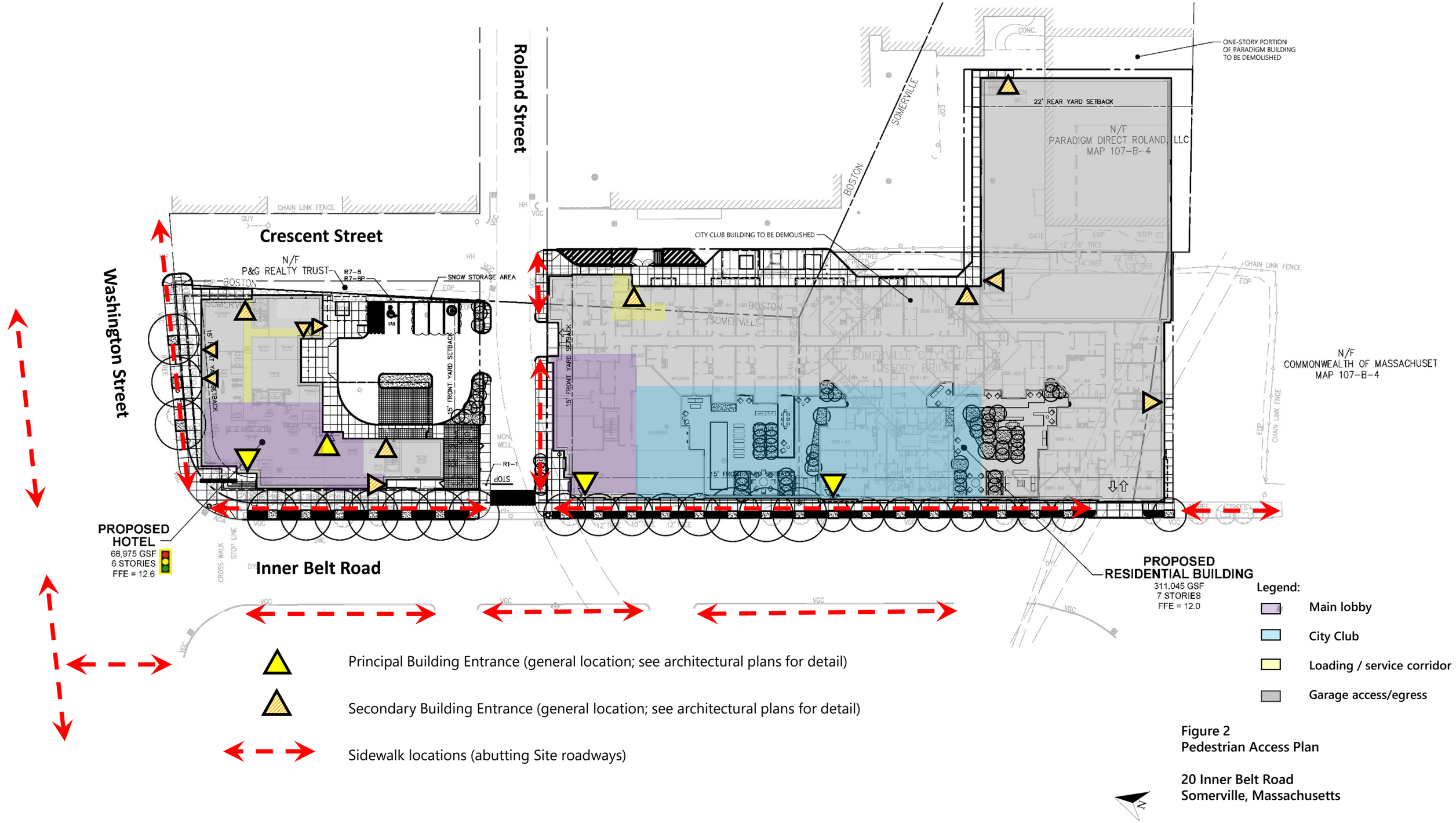

Figure 2
Pedestrian Access Plan

20 Inner Belt Road
Somerville, Massachusetts

Ref: 13788.00
January 2, 2019

Memorandum

- **Motor Vehicle Parking Plan**

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Motor Vehicle Parking Plan

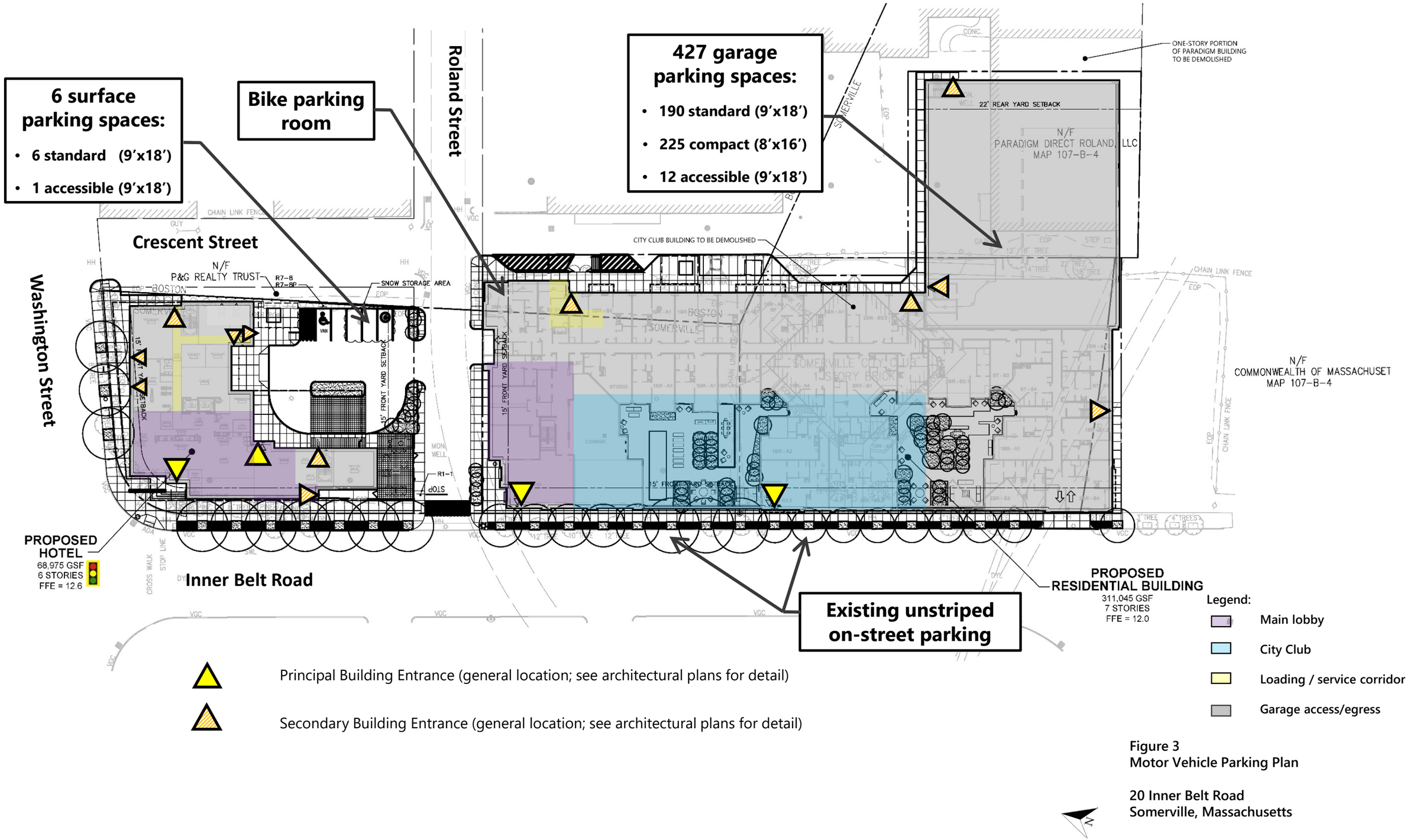


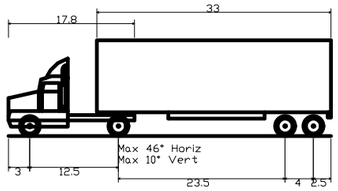
Figure 3
Motor Vehicle Parking Plan

20 Inner Belt Road
Somerville, Massachusetts

Ref: 13788.00
January 2, 2019

Memorandum

- **Vehicle Tracking Diagrams – January 3, 2019**



WB-40 - Intermediate Semi-Trailer

Overall Length	45.499ft
Overall Width	8.000ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.334ft
Track Width	8.000ft
Lock-to-lock time	4.00s
Max Steering Angle (Virtual)	20.30°

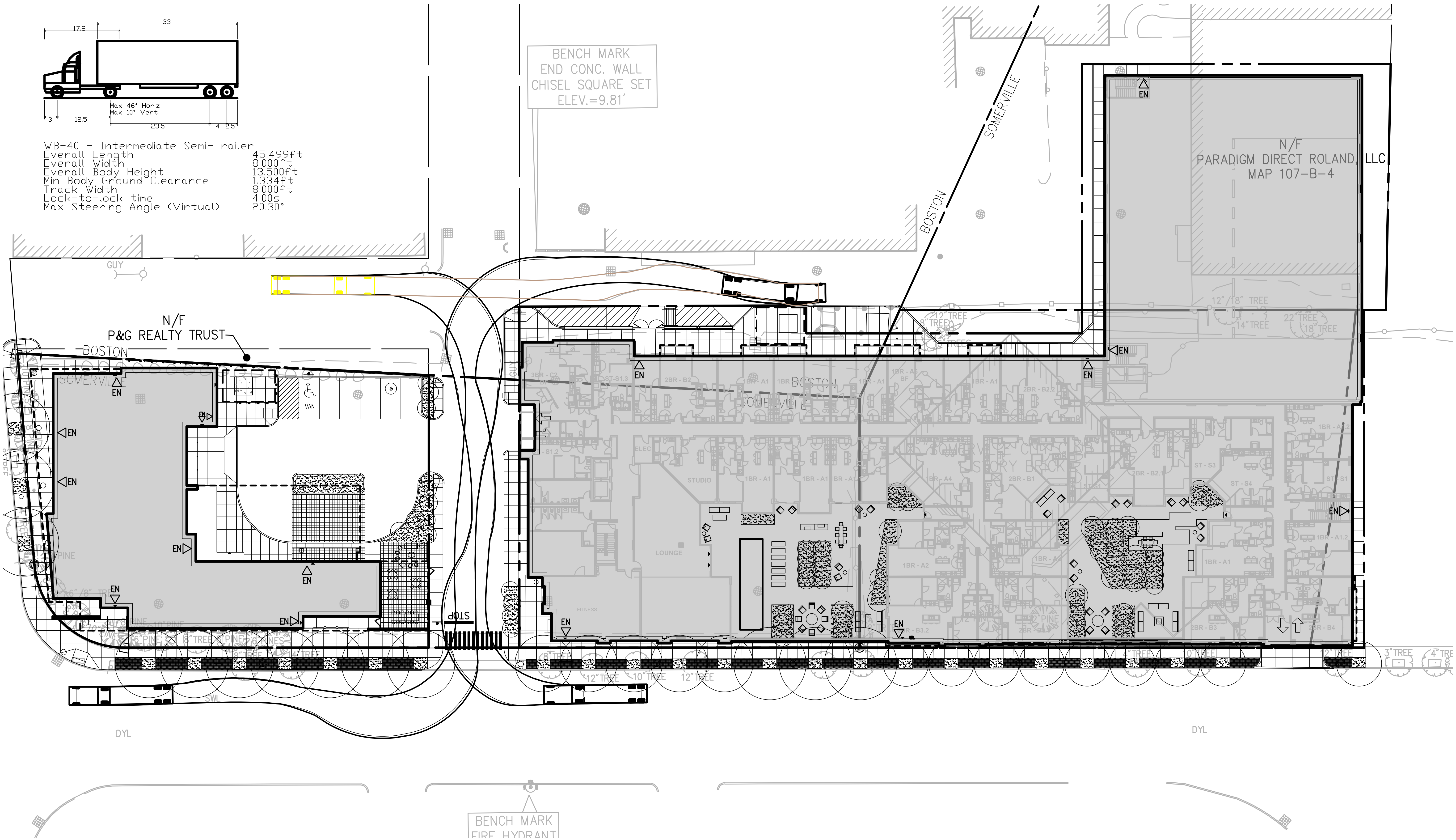
0 15 30 Feet

Hotel Loading Truck Turn
20 Inner Belt Road Development
Somerville, Massachusetts

Figure 4

1/3/2019

\\vhb\proj\Wat-LD\13788.00 Criterion Inner Belt\cad\ld\Planmisc\Truck Turn\13788.00_OSP.dwg



17.8
33
Max 46° Horiz
Max 10° Vert
3
12.5
23.5
4
2.5
WB-40 - Intermediate Semi-Trailer
Overall Length 45.499ft
Overall Width 8.000ft
Overall Body Height 13.500ft
Min Body Ground Clearance 1.334ft
Track Width 8.000ft
Lock-to-lock time 4.00s
Max Steering Angle (Virtual) 20.30°
BENCH MARK
END CONC. WALL
CHISEL SQUARE SET
ELEV.=9.81'
SOMERVILLE
BOSTON
N/F
PARADIGM DIRECT ROLAND, LLC
MAP 107-B-4
GUY
N/F
P&G REALTY TRUST
BOSTON
SOMERVILLE
EN
VAN
STOP
STUDIO
LOUNGE
FITNESS
ELEC
12"/18" TREE
14" TREE
22" TREE
18" TREE
12" TREE
10" TREE
8" TREE
4" TREE
3" TREE
PINE
SWL
DYL
BENCH MARK
FIRE HYDRANT

0 20 40 Feet

Residential Loading Truck Turn
20 Inner Belt Road Development
Somerville, Massachusetts

Figure 5

1/3/2019