Burlington Development Review Board
149 Church Street, City Hall
Burlington, VT 05401
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BURLINGTON DEVELOPMENT REVIEW BOARD
Thursday July 5th , 2018, 5:00 PM
PUBLIC HEARING NOTICE

The Burlington Development Review Board will hold a meeting on Thursday July 5th, 2018 at 5:00pm in Contois Auditorium, City Hall.

1. **18-1044CA/CU; 92 Cherry Lane (RL, Ward 5S) Foley Living Trust**
   Construction of a 675 s.f. detached accessory dwelling unit at rear of property.

Plans may be viewed in the Planning and Zoning Office, (City Hall, 149 Church Street, Burlington), between the hours of 8:00 a.m. and 4:30 p.m.
Participation in the DRB proceeding is a prerequisite to the right to take any subsequent appeal. Please note that ANYTHING submitted to the Planning and Zoning office is considered public and cannot be kept confidential.
This may not be the final order in which items will be heard. Please view final Agenda, at www.burlingtonvt.gov/pz/drb/agendas or the office notice board, one week before the hearing for the order in which items will be heard.

The programs and services of the City of Burlington are accessible to people with disabilities.
Individuals who require special arrangements to participate are encouraged to contact the Department of Planning & Zoning at least 72 hours in advance so that proper accommodations can be arranged. For information call 865-7188 (TTY users: 865-7142).
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Site Plans

Issued for	Permitting
Date Issued	Apr. 20, 2018
Latest Issue	Apr. 20, 2018

GMT Connect Drive

Burlington, VT

vhb.com

vhb

40 IDX Dr
Building 100 Suite 200
South Burlington, VT 05403
802.497.6100

Owner

Green Mountain Transit
15 Industrial Parkway
Burlington, VT 05401

Applicant

Green Mountain Transit
15 Industrial Parkway
Burlington, VT 05401

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VHB Project : 11585.09
Issued for : PERMIT

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		BORDERING LAND SUBJECT TO FLOODING
BZ		WETLAND BUFFER ZONE
NDZ		NO DISTURB ZONE
200'RA		200' RIVERFRONT AREA
		GRAVEL ROAD
EOP	EOP	EDGE OF PAVEMENT
BB	BB	BITUMINOUS BERM
BC	BC	BITUMINOUS CURB
CC	CC	CONCRETE CURB
	CC	CURB AND GUTTER
CC	ECC	EXTRUDED CONCRETE CURB
CC	MCC	MONOLITHIC CONCRETE CURB
CC	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
E	E	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	EMH	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
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 FOUR (4) INCHES LOAM AND SEED OR AS REQUIRED TO MEET THE SOIL DEPTH AND QUALITY STANDARD.
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.

Utilities

1. THE LOCATIONS, SIZES, AND TYPES OF EXISTING UTILITIES ARE SHOWN AS AN APPROXIMATE REPRESENTATION ONLY. THE OWNER OR IT'S 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. STORM DRAINAGE PIPES SHALL BE HDPE
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. DIMENSIONS ARE FROM THE FACE OF CURB, FACE OF BUILDING, FACE OF WALL, AND CENTER LINE OF PAVEMENT MARKINGS, UNLESS OTHERWISE NOTED.
2. PROPOSED BOUNDS AND ANY EXISTING PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE SET OR RESET BY A PROFESSIONAL LICENSED SURVEYOR.
3. 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.

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.

Existing Conditions Information

1. BASE PLAN: THE PROPERTY LINES SHOWN ARE APPROXIMATE BASED ON AVAILABLE TAX MAPPING
2. TOPOGRAPHY: ELEVATIONS ARE BASED ON NAVD 88.

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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vhb

40 IDX Dr
Building 100 Suite 200
South Burlington, VT 05403
802.497.6100

GMT Connect Drive

Industrial Parkway
Burlington, VT

No.	Revision	Date	Appvd.

Designed by SMW Checked by AGM

Issued for Date

PERMIT Apr. 20, 2018

Not Approved for Construction

Drawing Title

Legend and Notes

Drawing Number

C-1.00

Sheet 1 of 11

Project Number 11585.09

Saved Friday, April 20, 2018 11:22:31 AM SWYMAN Plotted Monday, April 23, 2018 3:59:19 PM Wyman, Stephanie

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Notes:

Erosion Control:

1. CONTRACTOR ACTIVITIES SHALL ADHERE TO THE PROJECT DOCUMENTS, THE VERMONT EROSION PREVENTION AND SEDIMENT CONTROL FIELD GUIDE (2006), AND THE VERMONT STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION AND SEDIMENT CONTROL (2006, AMENDED 2008) AND THE VERMONT LOW RISK SITE HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL.

2. PRIOR TO STARTING ANY OTHER WORK ON THE SITE, THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES AND SHALL INSTALL EROSION CONTROL MEASURES AS SHWON ON THE PLANS AND AS IDENTIFIED IN FEDERAL, STATE, AND LOCAL APPROVAL DOCUMENTS PERTAINING TO THIS PROJECT.

3. EPSC MEASURES SHALL BE INSTALLED PRIOR TO EARTH DISTURBING ACTIVITIES WITH THE EXCEPTION OF LAND DISTURBANCE THAT MAY RESULT FROM ACCESSING THE AREA(S) WITH EQUIPMENT IN ORDER TO INSTALL THOSE EPSC MEASURES. TEMPORARY EPSC MEASURES INTENDED TO TRAP SEDIMENT SHALL BE INSTALLED AS A FIRST STEP IN LAND DISTURBING ACTIVITIES AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE, WITH THE EXCEPTION OF THOSE LAND DISTURBING ACTIVITIES THAT ARE NECESSARY TO INSTALL MEASURES.

4. PROPOSED CHANGES TO THE EPSC PLAN SHALL BE APPROVED BY THE PERMITTEE OR HIS/HER DESIGNEE PRIOR TO IMPLEMENTATION.

5. PERMISSION MUST BE GRANTED BY VT DEC PRIOR TO USE OF ANY SUPPORT ACTIVITIES OCCURRING OUTSIDE OF THE APPROVED PROJECT BOUNDARIES. THIS INCLUDES USE OF OFF-SITE WASTE AND BORROW AREAS.

6. CONTRACTOR SHALL INSPECT AND MAINTAIN EROSION CONTROL MEASURES ON A WEEKLY BASIS (MINIMUM) OR AS REQUIRED PER THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) OR CONSTRUCTION STORMWATER DISCHARGE PERMIT. 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.

7. 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.

8. 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.

9. 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.

10. CONTRACTOR SHALL CONDUCT DAILY INSPECTION OF ROADWAY AND SWEEPING AS NECESSARY.

Construction EPSC Notes:

1. EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED TO THE EXTENT PRACTICABLE.

2. A VEGETATED BUFFER SHALL BE MAINTAINED FOR WATER RESOURCES (E.G., WETLANDS AND STREAMS) TO THE EXTENT PRACTICABLE.

3. TO THE EXTENT PRACTICABLE, SURFACE FLOW SHALL BE DIVERTED AWAY FROM EXPOSED SOILS AND WATER RESOURCES. 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.

4. RESOURCE AREAS (E.G. STREAMS) WITHIN THE PROJECT AREA SHALL BE FLAGGED PRIOR TO ANY CONSTRUCTION RELATED ACTIVITIES OCCURRING WITHIN CLOSE PROXIMITY TO THOSE AREAS.

5. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH A SEDIMENT TRAPPING DEVICE AND DISCHARGED IN A MANNER THAT DOES NOT RESULT IN IMPACTS TO WATER QUALITY OR CONTRIBUTE TO EROSION. SEE DETAILS FOR MORE INFORMATION.

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

   a. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
   b. EXCAVATED MATERIAL SHALL BE PLACED IN UPLAND AREAS ON THE UPHILL SIDE OF THE TRENCHES, WHERE FEASIBLE.

7. SEDIMENT REMOVED FROM SEDIMENT CONTROL PRACTICES SHALL BE DISPOSED OF IN AN UPLAND AREA WITH STABILIZATION FOLLOWING DISPOSAL OF MATERIAL.

8. IN ADVANCE OF FORECASTED RAINFALL OR SNOWMELT, EPSC MEASURES THAT ARE LOCATED IN AREAS OF ACTIVE EARTH DISTURBANCE SHALL BE INSPECTED AND REPAIRED, AS NEEDED.

9. CONTRACTOR SHALL PREVENT DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS. DUST CONTROL SHALL BE HANDLED VIA WATER OR CALCIUM CHLORIDE APPLICATION TO ROADWAYS AND OTHER AREAS WHERE DUST MAY BE GENERATED.

10. PERIMETER CONTROLS (E.G., SILT FENCE) SHALL BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS WHERE THERE IS POTENTIAL FOR SOIL EROSION AND/OR SEDIMENT RUNOFF. IN SOME AREAS WHERE THE GROUND SURFACE IS LEVEL AND THERE ARE NO PATHWAYS (E.G., DITCHES OR RUTS) THAT COULD TRANSPORT RUNOFF FROM THE PROJECT AREA, INSTALLATION OF PERIMETER CONTROLS MAY NOT BE NECESSARY.

11. PRIOR TO STUMPING AND GRUBBING, LOGGING ACTIVITIES SHALL BE CONDUCTED IN ACCORDANCE WITH ACCEPTABLE MANAGEMENT PRACTICES FOR MAINTAINING WATER QUALITY ON LOGGING JOBS IN VERMONT (AMPS, 2011). CONSTRUCTION MATS AND MAT BRIDGES SHALL BE IN PLACE IN WETLANDS AND STREAM CROSSINGS PRIOR TO ACCESS BY ANY TREE CLEARING EQUIPMENT.

12. STUMPING AND GRUBBING ACTIVITIES SHALL BE CONDUCTED IN ACCORDANCE WITH THE PROJECTS EPSC PLAN.

13. CONSTRUCTION DEMARCATION AND PERIMETER CONTROLS SHALL COMPLY WITH THE FOLLOWING:

    CONSTRUCTION DEMARCATION:

    a. CONSTRUCTION DEMARCATION TO BE INSTALLED ALONG PERIMETER OF LIMITS OF DISTURBANCE PER THE EPSC PLANS
    b. WITHIN 50 FEET OF RESOURCE AREA, DEMARCATION MUST INCLUDE:
       - 2 TO 3 ROWS OF STAKED (OR STAPLED) 3-INCH (MIN.) ORANGE BARRIER MESH TAPE OR,
       - ORANGE CONSTRUCTION FENCE, OR
       - ORANGE SNOW FENCE
    c. WHEN GREATER THAN 50 FEET FROM A WATER RESOURCE AREA, DEMARCATION MAY INCLUDE:
       - ONE ROW OF STAKED (OR STAPLED)3-INCH (MIN.) ORANGE BARRIER MESH TAPE OR,
       - ORANGE CONSTRUCTION FENCE, OR
       - ORANGE SNOW FENCE

    PERIMETER CONTROLS:

    a. PERIMETER CONTROLS ARE TO BE INSTALLED ON THE DOWNSLOPE SIDE OF AREAS OF DISTURBANCE WHERE THERE IS POTENTIAL FOR SEDIMENT RUNOFF AND/OR SOIL EROSION.
    b. PERIMETER CONTROLS ARE NOT TO CROSS ACTIVE ACCESS ROUTES OR PERENNIAL FLOW PATHS (E.G. A STREAM).
    c. PARTICULAR CARE IS TO BE TAKEN WHEN INSTALLING PERIMETER CONTROLS IN A WETLAND.
    d. WITHIN 50 FEET OF A WATER RESOURCE AREA, PERIMETER CONTROLS MUST INCLUDE:
       - REINFORCED SILT FENCE - TO BE REINFORCED WITH WIRE MESH, STAKED HAYBALES, OR STAKED FIBER ROLLS.
    e. WHEN GREATER THAN 50 FEET FROM A WATER RESOURCE AREA, PERIMETER CONTROLS MAY INCLUDE:
       - SILT FENCE (NON-REINFORCED), OR
       - STAKED FIBER ROLLS,

15. 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.

16. PROJECT DEMARCATION OF AN AREA SHALL BE INSTALLED PRIOR TO EARTH DISTURBING ACTIVITIES WITHIN THAT ARE. AN EXCEPTION IS LAND DISTURBANCE THAT MAY BE NEEDED TO ACCESS THE AREA WITH EQUIPMENT IN OR TO INSTALL THE EPSC MEASURES.

17. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH A SEDIMENT TRAPPING DEVICE AND DISCHARGED IN A MANNER THAT DOES NOT RESULT IN IMPACTS TO WATER QUALITY OR CONTRIBUTE TO EROSION.

Pre-construction and Permitting Notes:

1. A COPY OF THE EPSC PLAN SHALL BE MAINTAINED ON-SITE DURING NORMAL WORKING HOURS FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE OF FINAL STABILIZATION.

Construction Sequence:

1. CONSTRUCTION SEQUENCE IS ANTICIPATED TO BE AS FOLLOWS:

   a. INSTALLATION OF PROJECT DEMARCATION FLAGGING AROUND PERIMETER OF WORK AREA
   b. INSTALLATION OF EPSC MEASURES (E.G. SILT FENCE) TO PREPARE FOR EARTH DISTURBANCE
   c. INSTALLATION OF ACCESS ROADS, ASSOCIATED DRAINAGE INFRASTRUCTURE, AND STABILIZED CONSTRUCTION ENTRANCES
   d. PREPARATION OF EQUIPMENT AND MATERIAL STAGING AND SOIL STOCKPILING AREAS
   e. ON-GOING INSTALLATION AND MAINTENANCE (E.G. REPAIR AND REPLACEMENT) OF EPSC MEASURES AS CONSTRUCTION ACTIVITIES PROGRESS
   f. STABILIZATION, EPSC MEASURE REMOVAL, AND SITE CLEANUP
   g. INSTALLATION OF SITE FEATURES AND STORMWATER TREATMENT SYSTEM.

Temporary and Final Stabilization Notes:

1. DURING REGULAR CONSTRUCTION SEASON, ALL AREAS OF EARTH DISTURBANCE MUST BE STABILIZED WITHIN 14 DAYS OF INITIAL DISTURBANCE. AFTER THIS INITIAL 14-DAY PERIOD, ALL EARTH DISTURBANCE AREAS MUST BE STABILIZED ON A DAILY BASIS, WITH THE FOLLOWING EXCEPTIONS:

   a. STABILIZATION IS NOT REQUIRED IF WORK IS TO CONTINUE WITHIN THE AREA WITHIN THE NEXT 24 HOURS AND THERE IS NO PRECIPITATION FORECAST FOR THE NEXT 24 HOURS.
   b. STABILIZATION IS NOT REQUIRED IF THE WORK IS OCCURRING IN A SELF-
   c. CONTAINED EXCAVATION (I.E., NO OUTLET FOR STORMWATER) WITH A DEPTH OF 2 FEET OR GREATER (E.G., UNDERGROUND UTILITY INSTALLATION).

2. DURING "WINTER CONSTRUCTION," (OCTOBER 15 TO APRIL 15) DISTURBED SOIL MUST BE STABILIZED AT THE END OF EACH DAY, WITH THE FOLLOWING EXCEPTIONS:
   a. IF NO PRECIPITATION WITHIN 24 HOURS IS FORECAST AND WORK WILL RESUME IN THE SAME DISTURBED AREA WITHIN 24 HOURS, DAILY STABILIZATION IS NOT NECESSARY.
   b. STABILIZATION IS NOT REQUIRED IF THE WORK IS OCCURRING IN A SELF-CONTAINED EXCAVATION (I.E., NO OUTLET FOR STORMWATER) WITH A DEPTH OF 2 FEET OR GREATER (E.G., UNDERGROUND UTILITY INSTALLATION).

3. DISTURBANCE ACTIVITIES MUST BE COORDINATED TO ENSURE THAT THE ALLOWABLE CONCURRENT EARTH DISTURBANCE IS NOT EXCEEDED. THE MAXIMUM AREA OF EARTH DISTURBANCE THAT IS ALLOWED AT ANY ONE TIME IS 2.0 ACRES.

4. WORK IS TO PROCEED INCREMENTALLY, WITH STABILIZATION OCCURRING IMMEDIATELY FOLLOWING COMPLETION OF AN INDIVIDUAL AREA (E.G. ONE BUILDING PAD OR PARKING AREA)
   TEMPORARY SOIL STABILIZATION SHALL BE ACHIEVED BY MULCH, SEED AND MULCH, HYDROSEEDING WITH MULCH TACKIFIER, SOD, STONE, AND/OR ROLLED EROSION CONTROL PRODUCTS (E.G., EROSION CONTROL BLANKET). MULCH SHALL BE COMPRISED OF STRAW, HAY, COMPOST, WOOD CHIPS, WOOD STUMP GRINDINGS, AND/OR EROSION CONTROL MIX.

5. PERMANENT STABILIZATION SHALL BE ACHIEVED BY 70% VEGETATION COVER, STONE, ASPHALT, BEDROCK, OR OTHER PERMANENT MATERIAL THAT PROVIDES COMPLETE COVER OF EXPOSED SOILS.

6. AREAS THAT HAVE REACHED TEMPORARY OR FINAL STABILIZATION SHALL NOT BE CONSIDERED PART OF TOTAL AREA OF EARTH DISTURBANCE.

7. APPROPRIATE SEED MIX SHALL BE APPLIED TO DESIGNATED AREAS PER THE SEED DETAIL SPECIFICATIONS. FOR AN AREA TO BE STABILIZED FOR WINTER BY VEGETATED COVER, SEEDING MUST BE COMPLETED BY SEPTEMBER 15.

8. AREAS TO BE STABILIZED FOR WINTER THAT DO NOT HAVE ESTABLISHED VEGETATION BY OCTOBER 15 SHALL BE STABILIZED BY ANCHORED MULCH AT THE WINTER APPLICATION RATE, OR OTHER APPROVED STABILIZATION MEASURES (E.G., ROLLED EROSION CONTROL PRODUCT). DORMANT SEEDING WITH WINTER RYE IS RECOMMENDED.

9. ALL FINAL GRADE SLOPES STEEPER THAN 3H:1V SHALL BE STABILIZED WITH BIODEGRADABLE EROSION CONTROL MATTING, UNLESS SHOWN OTHERWISE ON THE SITE STABILIZATION PLAN.

10. ALL TEMPORARY EPSC MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY EPSC MEASURES ARE NO LONGER NEEDED.

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GMT Connect Drive

Industrial Parkway
Burlington, VT

No.	Revision	Date	Appvd.

Designed by: SMW
Checked by: AGM
Issued for
Date

PERMIT
Apr. 20, 2018
Not Approved for Construction

Drawing Title

Legend and Notes

Drawing Number

C-1.01

Sheet 2 of 11

Project Number
11585.09

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Zoning Summary Chart 1 Industrial Parkway

Zoning District(S): Enterprise - Light Manufacturing (E-LM)

Zoning Regulation Requirements	Existing	Required	Provided
LOT AREA	3.0 Acres		3.0 Acres
FRONT YARD BUILDING SETBACK	65 Feet	5 Feet	65 Feet
SIDE YARD BUILDING SETBACK	100 Feet	0 Feet	100 Feet
REAR YARD BUILDING SETBACK	273 Feet	53 Feet	273 Feet
MAXIMUM BUILDING HEIGHT		45 Feet	
MAXIMUM BUILDING COVERAGE	15.9 %	40.0 %	15.9 %
BUILDING FOOTPRINT	20754 SF		20754 SF
BUILDING GROSS FLOOR AREA			
LOT COVERAGE	44.6 %	80% (MAX)	46.87%

Zoning Summary Chart 15 Industrial Parkway

Zoning District(S): Enterprise - Light Manufacturing (E-LM)

Zoning Regulation Requirements	Existing	Required	Provided
LOT AREA	4.8 Acres		4.8 Acres
FRONT YARD BUILDING SETBACK	54 Feet	5 Feet	54 Feet
SIDE YARD BUILDING SETBACK	11 Feet	0 Feet	11 Feet
REAR YARD BUILDING SETBACK	271 Feet	53 Feet	271 Feet
MAXIMUM BUILDING HEIGHT		45 Feet	
MAXIMUM BUILDING COVERAGE	22.0 %	40.0 %	22.0 %
BUILDING FOOTPRINT	45915 SF		45915 SF
BUILDING GROSS FLOOR AREA			
LOT COVERAGE	51.5 %	80% (MAX)	52.37%

Parking Summary Chart

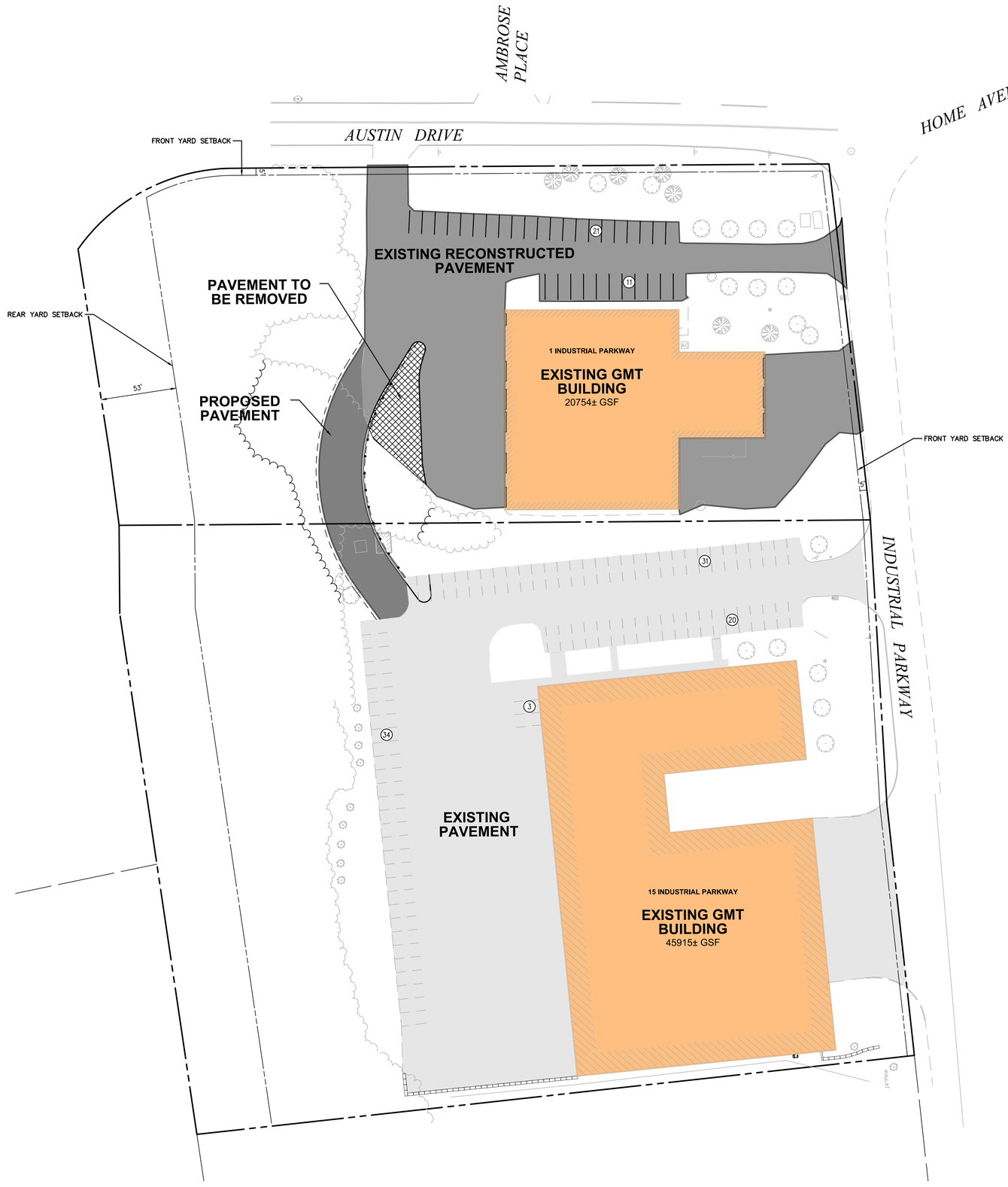
Description	Spaces		
	Existing	Required	Provided
STANDARD SPACES		40	114
STANDARD ACCESSIBLE SPACES		0	3
TOTAL SPACES	117	40	117

Parking Calculations

GMT BUILDING	19,895 SF	x	2 SPACES	/ 1,000 SF	=	40 SPACES
			TOTAL PARKING REQUIRED		=	40 SPACES

NOTES

1. PARKING CALCULATIONS BASED ON ASSUMPTIONS OF GENERAL OFFICE SPACE. 1 INDUSTRIAL PARKWAY = 3,782 SF AND 15 INDUSTRIAL PARKWAY = 16,113 SF.
2. PROPERTY LINES ARE APPROXIMATE BASED OFF OF AVAILABLE TAX MAP DATA.



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GMT Connect Drive

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Sheet 3 of 11

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AUSTIN DRIVE

HOMI

DRY SWALE OUTLET STRUCTURE
R=155.60
INV OUT = 151.00

CLEANOUT
INV = 150.00

CORE AND BOOT EXISTING STRUCTURE FOR NEW CONNECTION
INV IN = 149.50

8" PVC

156.847
156.943
157.200
157.097
157.425
152.289

PROPOSED DRY SWALE, SEE DETAIL

MATCH EXISTING
STA:103+35

+52.17
PC
102+00
103+00

157.711
157.813
157.895
157.683
157.999
152.758

FULL DEPTH DRIVEWAY RECONSTRUCTION, MATCH EXISTING GRADE SEE DETAIL

PROPOSED DRIVE CONNECTION 1 AND 15 INDUSTRIAL PARKWAY

EXCESS EXISTING SOIL STOCK PILE TO BE RELOCATED HERE

158.125

1 INDUSTRIAL PARKWAY

COMMERCIAL BUILDING

GARAGE DOOR (TYP.)

R=153.68
RAISED STRUCTURE
I(IN)=UNK. STANDPIPE FROM BLDG
I(OUT)=153.0' 6"RCP

158.278
152.702
153.917

FULL DEPTH DRIVEWAY RECONSTRUCTION, MATCH EXISTING GRADE SEE DETAIL

52.72
PT
157.642
15'
15'
+94.62
104+09PC
158.271

PROPOSED GUARDRAIL, TYP.

PROPOSED 2' WIDE CRUSHED STONE SHOULDER, TYP.

EXISTING URBAN SOIL STOCK PILE TO BE WASTED ON SITE TO THE EXTENT POSSIBLE.

158.238
155.000
154.040
155.795

REMOVE AND RESET FENCE

157.255
157.322
157.045
157.508

157.958
157.670
157.305

EXISTING SHED AND ANTENNA/PAD TO BE REMOVED

SHED

CONC. PAD W/ANTENNA

PT
+45.45
105+00

ELEC MH

SAWCUT PAVEMENT, TYP.

106+00

INDUSTRIAL PARK

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Site Plan

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Sheet 4 of 11

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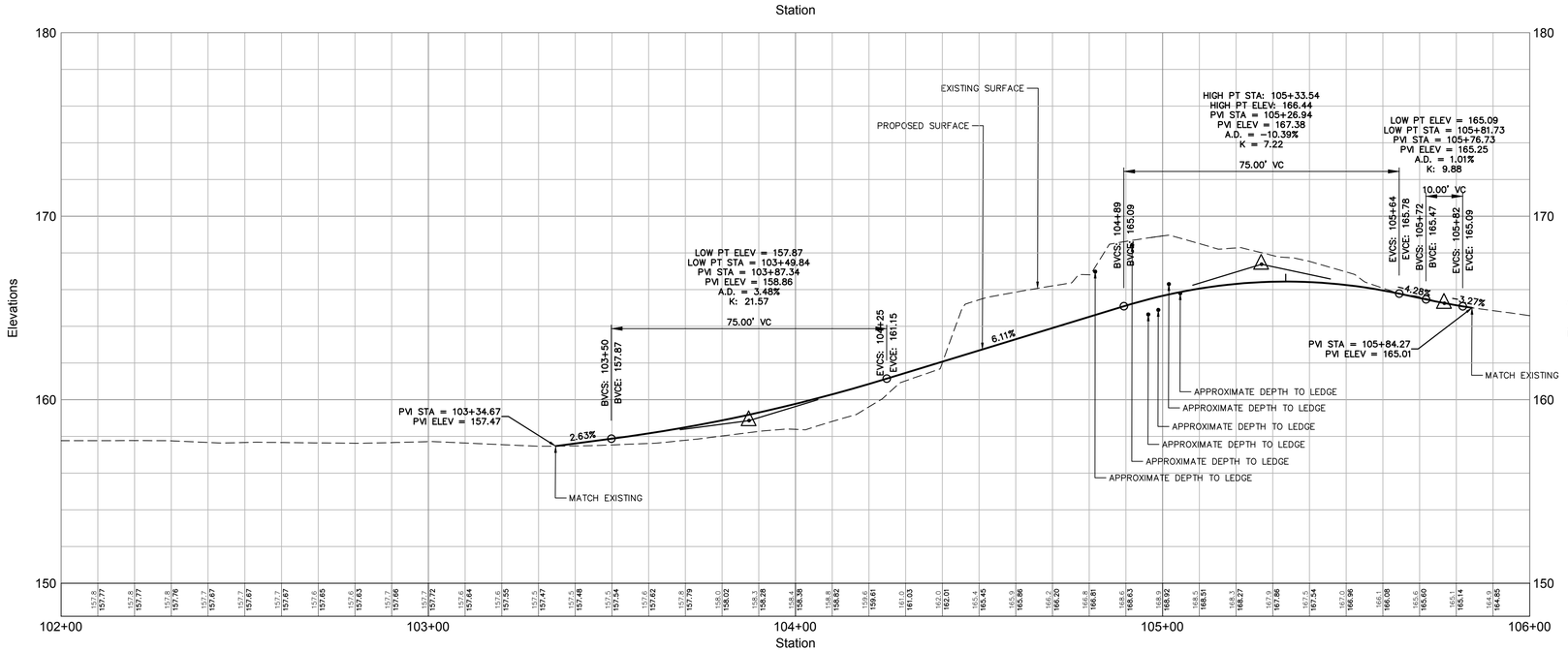

Proposed Ramp

GMT Connect Drive

0 10 20 40 Feet

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Drawing Title

Profile

Drawing Number

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Sheet 5 of 11

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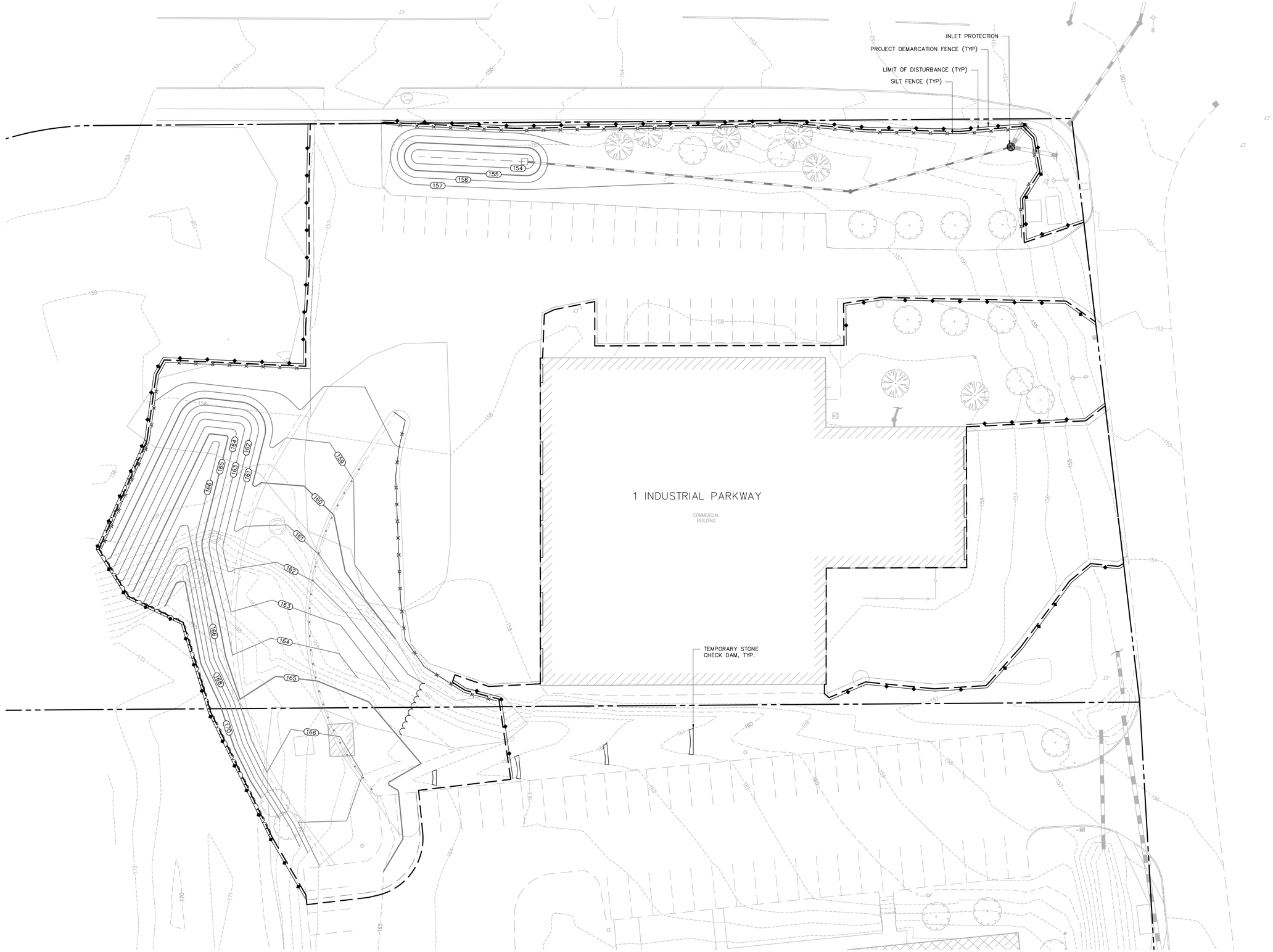

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Drawing Title
Erosion and Sediment Control Plan

Drawing Number
C-5.00

Sheet 6 of 11

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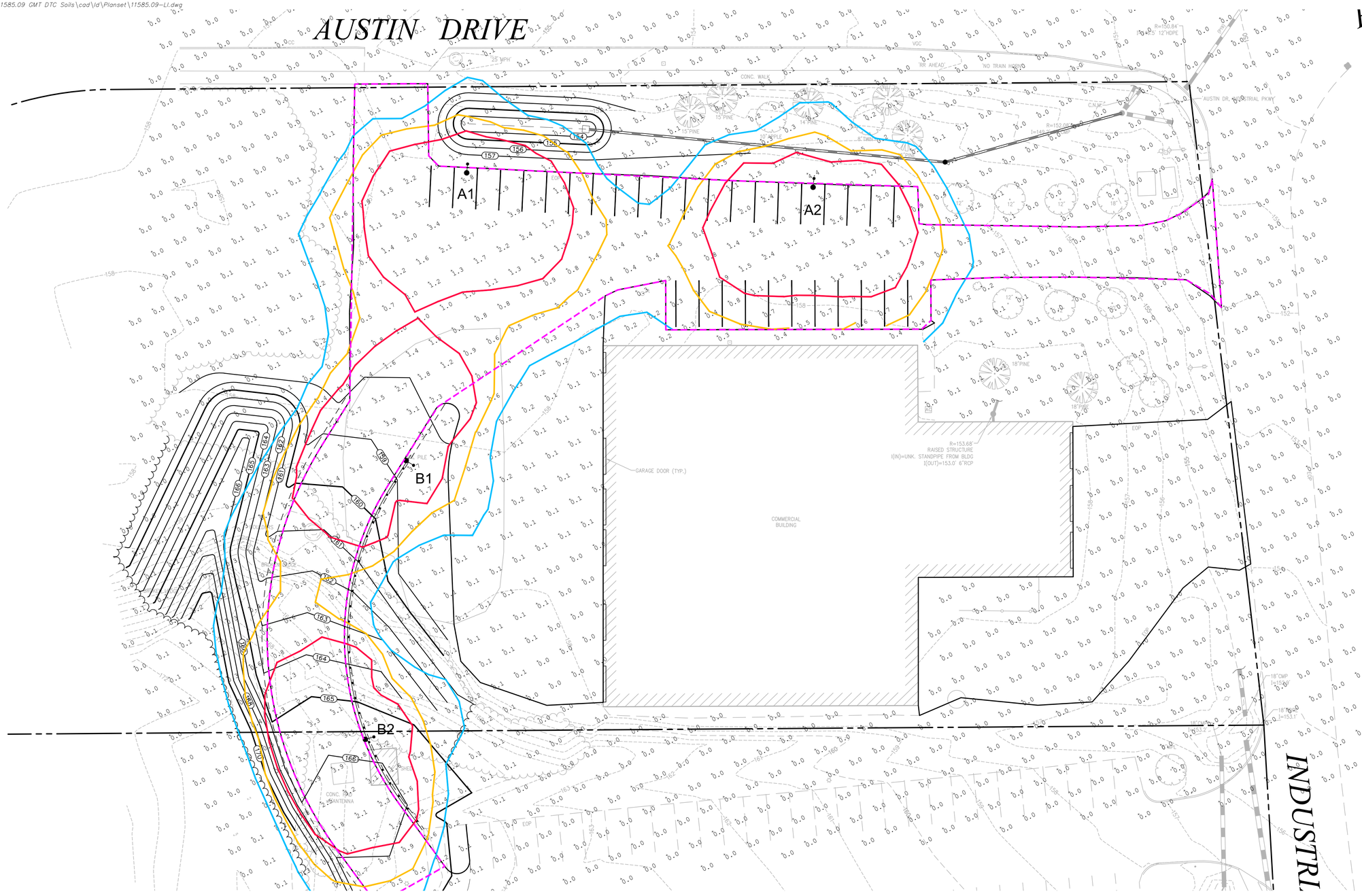

FIXTURE AND POLE SPECIFICATIONS

Fixture A		Fixture B	
Manufacturer:	Beacon Lighting Products	Manufacturer:	Beacon Lighting Products
Fixture:	Viper - L Series 64NB	Fixture:	Viper - L Series 64NB
LED:	135w	LED:	135w
LED Color:	4,000k	LED Color:	4,000k
Voltage:	120-277v (verify with electrical engineer)	Voltage:	120-277v (verify with electrical engineer)
Optics:	T4	Optics:	T3
Color:	BBT - Basic Black Textured	Color:	BBT - Basic Black Textured
Pole:	SSA-B-20-40-A (20 foot mounting height)	Pole:	SSA-B-20-40-A (20 foot mounting height)

ISO-CONTOUR KEY

ISO-CONTOUR	FOOTCANDLE VALUE
	1.00
	0.50
	0.25

STATISTICAL AREA SUMMARY

Grid Type: Horizontal Illuminance at finish grade.
Grid Units: Footcandles

Statistical Area	Avg	Max	Min	Avg/Min	Max/Min
1 Parking Lot and Entry Drive	1.32	5.80	0.00	0.00	0.00

Statistical Boundary

Disclaimer:
This analysis was calculated in accordance with published IES calculation methods and procedures with the data as entered by the user. This analysis is based on tested IES photometric data, light loss factors as defined in the LLF value. This analysis is a mathematical model of real life situations, and it can be only as accurate as the model itself. Calculated values may vary from actual measurements in certain situations. VHB is not responsible for light output deviations due to light fixture or ballast combinations or other variables.

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Lighting Plan

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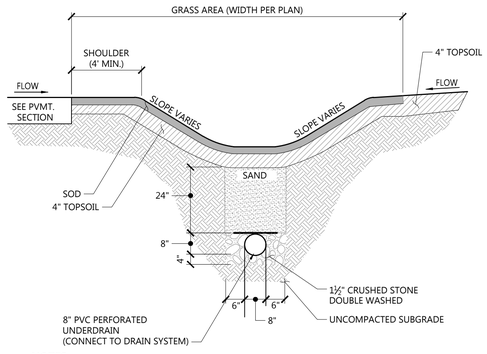


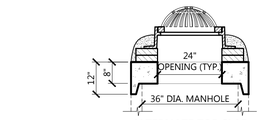
NOTES

1. SIDE SLOPES SHALL BE 3:1 MAX. 2% MIN.

Dry Swale with Underdrain

1/16

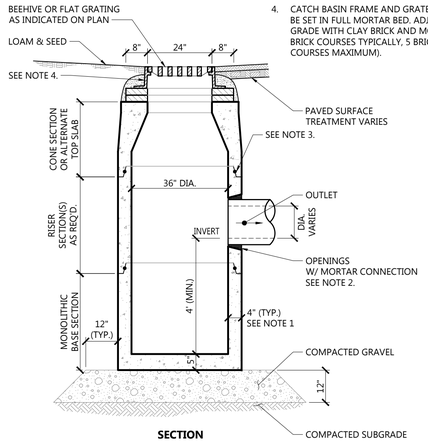
N.T.S. Source: VHB LD_350



ALTERNATE TOP SLAB AND/OR BEEHIVE GRATE

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).



SECTION

Dry Swale Outlet Structure

1/16

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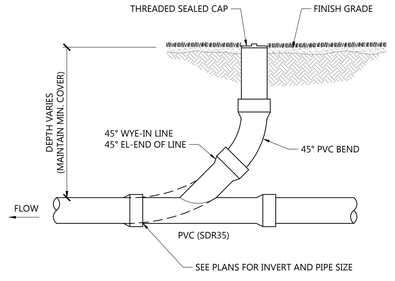
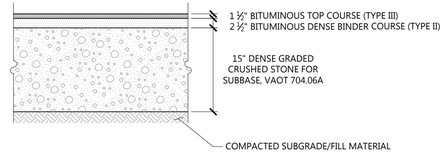


Cleanout - Landscape Area

1/16

N.T.S. Source: VHB LD_302



BITUMINOUS CONCRETE PAVEMENT

Driving Surface Section

1/16

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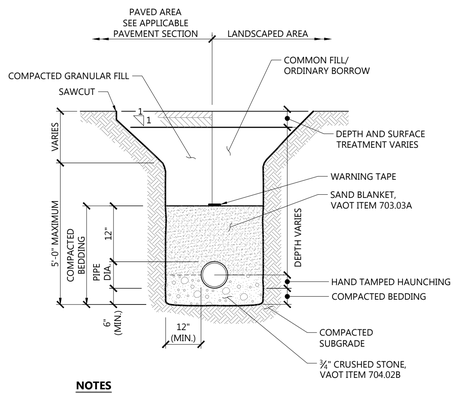


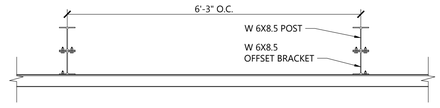
NOTES

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.
3. BEDDING TO PROVIDE A FIRM, STABLE, CONTINUOUS, AND UNIFORM SUPPORT FOR THE FULL LENGTH OF THE PIPE.
4. NO MECHANICAL TAMPERS SHALL BE USED DIRECTLY OVER THE PIPE TO ENSURE PIPE IS NOT DAMAGED

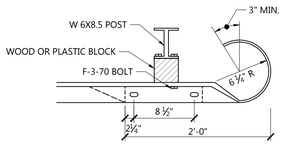
Storm Drain and Foundation Drain

1/16

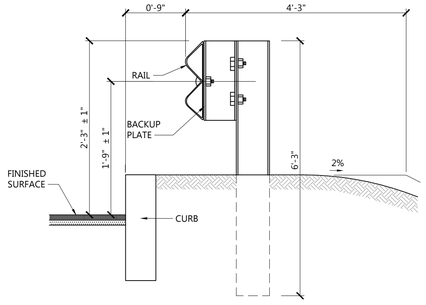
N.T.S. Source: VHB LD_



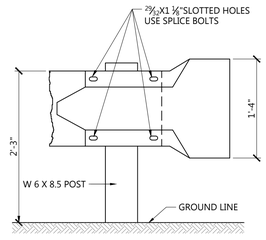
PLAN VIEW



PLAN VIEW



SECTION VIEW



ELEVATION VIEW

Steel Beam Guardrail with Steel Post

1/16

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Site Details

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Sheet 8 of 11

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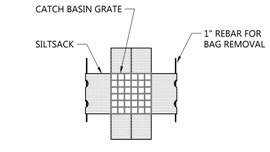


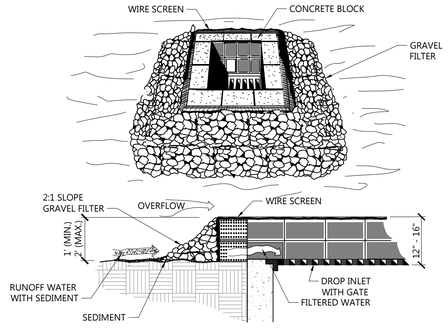
NOTES

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 LD_674

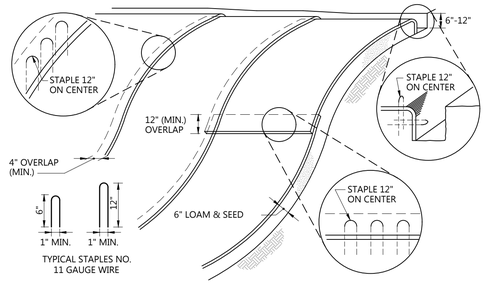


NOTES

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2" MINIMUM BELOW THE REST OF THE INLET AND BLOCKS SHALL BE PLACED AGAINST THE INLET FOR SUPPORT.
2. CONCRETE BLOCKS SHOULD BE PLACED LENGTHWISE ON THEIR SIDES IN A SINGLE ROW AROUND THE PERIMETER OF THE INLET. THE ENDS OF EACH BLOCK SHOULD BE ABUTTING. THE HEIGHT OF THE BARRIER CAN BE VARIED DEPENDING ON THE DESIGN BY STACKING VARIOUS COMBINATIONS OF DIFFERENT SIZED BLOCKS. THE BARRIER SHOULD BE A MINIMUM OF 12 INCHES HIGH AND A MAXIMUM OF 16 INCHES HIGH.
3. HARDWARE CLOTH OR ½" WIRE MESH SHOULD BE PLACED OVER THE OPENINGS OF THE CONCRETE BLOCKS AND EXTENDED AT LEAST 12 INCHES AROUND THE OPENING TO PREVENT AGGREGATE FROM BEING TRANSPORTED THROUGH THE OPENINGS IN THE BLOCK.
4. USE CLEAN STONE OR GRAVEL ½" TO ¾" IN DIAMETER PLACED 2" BELOW TOP OF THE BLOCK ON A 2H:1V SLOPE OR FLATTER.
5. A 1 FOOT THICK LAYER OF FILTER STONE WILL BE PLACED AGAINST THE 3" STONE.
6. MAXIMUM DRAINAGE AREA PER SEDIMENT TRAP IS 1 ACRE.
7. BLOCK AND GRAVEL DROP INLET SEDIMENT FILTER SHALL BE CONSTRUCTED IN PAVED AREAS.

Block and Gravel Drop Inlet Sediment Filter (Paved Areas)

N.T.S. Source: VHB LD_676-VT



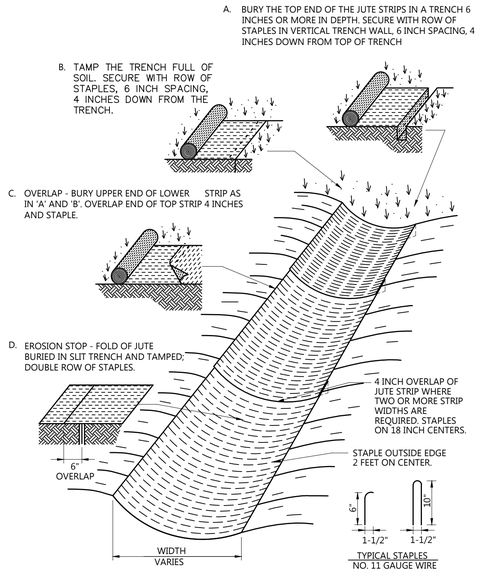
NOTES

1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. METHOD OF INSTALLATION SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS.
3. APPLY TOP SOIL, FERTILIZER, LIME AND SEED PRIOR TO PLACING MATTING.
4. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'x225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'x150' ROLL OF MATERIAL.
5. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION PREVENTION AND SEDIMENT CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE, DO NOT STRETCH AND ENSURE CLOSE CONTACT WITH THE GROUND SURFACE..
6. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.
7. BEGIN AT THE TOP OF BLANKET INSTALLATION AREA BY ANCHORING BLANKET IN A 6" TO 12" DEEP TRENCH BACKFILL AND COMPACT TRENCH AFTER STAPLING.
8. ROLL THE BLANKET DOWN IN THE DIRECTION OF THE WATER FLOW.
9. THE EDGES OF BLANKETS MUST BE STAPLED WITH APPROX. 4" OVERLAP WHERE 2 OR MORE STRIP WIDTHS ARE REQUIRED.
10. WHEN BLANKETS MUST BE SPLICED, PLACE UPPER BLANKET END OVER LOWER END WITH 12" (MIN.) OVERLAP AND STAPLE BOTH TOGETHER.

Erosion Control Blanket Swale Installation (Slope)

08/16

N.T.S. Source: VHB LD_703-VT

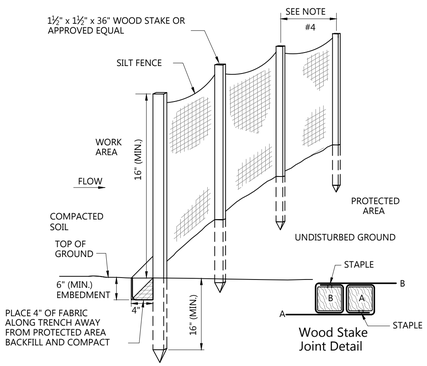


* INSTALLATION SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS

Erosion Control Blanket Swale Installation

08/16

N.T.S. Source: VHB LD_681-VT



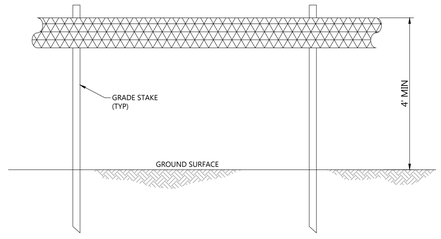
Notes:

1. WOVEN WIRE FENCE REINFORCEMENT IS REQUIRED WITHIN 50 FT UPSLOPE OF RECEIVING WATERS.
2. WHERE REQUIRED FENCE SHALL BE WOVEN WIRE, MIN. 14 GAUGE WITH A 6" MESH OPENING SHALL BE USED.
3. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUIVALENT.
4. POST SPACING FOR WIRE BACKED FENCE SHALL BE 10 FT. MAX. FOR FILTER CLOTH FENCE WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4 FT. FOR FILTER CLOTH FENCE WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6 FT.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY 6 INCHES AND FOLDED.
6. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE OR APPROVED EQUIVALENT.
7. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.
8. SILT FENCE SHALL NOT BE USED TO DEMARCATE LIMITS OF DISTURBANCE.

Silt Fence/ Reinforced Silt Fence Barrier

2/09

N.T.S. Source: VHB LD_650-VT



Notes:

1. BARRIER MESH TAPE OR ROPE SHALL BE INSTALLED ALONG THE PERIMETER OF THE PROJECT AREA TO DEMARCATE THE LIMIT OF DISTURBANCE. NO EARTHWORK OR STORAGE OF MATERIALS SHALL BE CONDUCTED BEYOND THIS LIMIT WITHOUT PRIOR APPROVAL FROM THE OSPC.
2. USE 3" ORANGE BARRIER MESH TAPE OR 1/2" YELLOW POLYPROPYLENE ROPE.
3. WITHIN 50' OF WATER RESOURCE AREAS, USE 2-3 ROWS OF TAPE OR ROPE. BEYOND 50' OF WATER RESOURCE AREAS USE 1 ROW OF TAPE OR ROPE.
4. TAPE OR ROPE MAY BE FASTENED TO STAKES, TREES, OR OTHER APPROPRIATE FIXED OBJECTS.
5. PROJECT DEMARCATION SHALL NOT CROSS ACTIVE ACCESS ROUTES (E.G. ROADS). PROJECT DEMARCATION MAY CROSS RESOURCES AREAS WITH EXCEPTION OF LARGER WATER BODIES WHERE IT IS NOT FEASIBLE OR ADVISABLE.
6. PROJECT DEMARCATION SHALL REMAIN IN PLACE AND BE MAINTAINED/REPLACED AS NEEDED UNTIL FINAL STABILIZATION IN THE AREA HAS BEEN ACHIEVED.

Barrier Mesh Tape or Rope

12/12

N.T.S. Source: VHB LD_

PERMANENT SEEDING

1. SEE SEEDING SPECIFICATIONS FOR RECOMMENDED SEED MIXES. USE RIPARIAN AND WETLAND SEEDING MIX WITHIN 50 FEET OF STREAM CROSSINGS AND IN DISTURBED WETLAND AREAS. USE UPLAND NATURAL COMMUNITY MIX WITHIN AREAS IDENTIFIED AS SIGNIFICANT NATURAL COMMUNITIES. USE PERMANENT SEEDING MIX FOR ALL OTHER DISTURBED UPLAND AREAS. SEE VERMONT STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION AND SEDIMENT CONTROL FOR ADDITIONAL SEED MIXTURES.
2. AREA TO BE SEEDED MUST BE ROUGH GRADED AND SLOPES PHYSICALLY STABLE; CHISELING OR DISKING MAY BE NEEDED IF SOIL IS COMPACTED.
3. SEEDING METHOD TO RESULT IN GOOD SOIL TO SEED CONTACT.
4. PERMANENT SEEDING TO OCCUR PRIOR TO SEPTEMBER 15TH UNLESS WEATHER PERMITS SEEDING BEYOND SEPTEMBER 15TH.
5. AFTER SEEDING, MULCH THE AREA WITH HAY OR STRAW AT 2 TONS/AC (APPROX 90 LBS/1,000 SF OR 2 BALES/1,000 SF); SEE MULCH DETAIL AND SPECIFICATIONS.
6. MULCH ANCHORING MAY BE NEEDED WHERE WIND OR AREAS OF CONCENTRATED WATER ARE POSSIBLE.
7. WOOD FIBER HYDROMULCH OR OTHER SPRAYABLE PRODUCTS APPROVED FOR EROSION CONTROL MAY BE USED IF APPLIED ACCORDING TO MANUFACTURERS' SPECIFICATIONS.
8. IRRIGATION MAY BE NEEDED TO FACILITATE GRASS GROWTH AND ESTABLISH ADEQUATE GRASS COVER.

Seeding Notes

12/12

N.T.S. Source: VHB LD_

PERMANENT SEEDING MIX*

TYPE	SEASON	RATE (LBS/ACRE)
BIRDSFOOT TREFOIL(1)**	APRIL 15 - SEPTEMBER 15	5
COMMON WHITE CLOVER (1)**	APRIL 15 - SEPTEMBER 15	8
TALL FESCUE (2)	APRIL 15 - SEPTEMBER 15	10
REDTOP (3)	APRIL 15 - SEPTEMBER 15	2
RYEGRASS (PERENNIAL) (3)	APRIL 15 - SEPTEMBER 15	5

*PERMANENT SEEDING MIX IS A COMBINATION OF BIRDSFOOT TREFOIL OR COMMON WHITE CLOVER PLUS TALL FESCUE PLUS REDTOP OR RYEGRASS (PERENNIAL) I.E. PERMANENT SEEDING MIX = (1) + (2) + (3). (SEE PAGE 4.27 OF THE VERMONT STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION AND SEDIMENT CONTROL) ** ADD INOCULANT IMMEDIATELY PRIOR TO SEEDING

RIPARIAN AND WETLAND SEEDING MIX

TYPE	SEASON	RATE (LBS/ACRE)
"WET MEADOW AND DETENTION BASIN"* OR APPROVED EQUAL	APRIL 15 -SEPTEMBER 15	35

*SEED SPECIFIED IS FROM VERMONT WETLAND PLANT SUPPLY AND COMPOSED OF THE FOLLOWING SPECIES: PANICUM VIRGATUM, ELYMUS VIRGINICUS, FESTUCA RUBRA, CAREX VULPINOIDEA, CAREX SCOPARIA, SCIRPUS CYPERINUS, SCIRPUS ATROVIRENS, BIDENS CERNUA, EUPATORIUM PERFOLIATUM, EUPATORIADELPHUS MACULATUS, JUNCUS EFFUSUS, ONOCLEA SENSIBILIS, VERBENA HASTATA, SYMPHYOTRICHUM NOVAE-ANGLIAEA

Seeding Mix

12/12

N.T.S. Source: LD_

GMT Connect Drive

Industrial Parkway
Burlington, VT

No.	Revision	Date	Appvd.

Designed by SMW Checked by AGM

Issued for Date

PERMIT Apr. 20, 2018

Not Approved for Construction

Drawing Title

Site Details

Drawing Number

D-1.01

Sheet 9 of 11

Project Number

11585.09

Saved Wednesday, April 18, 2018 12:14:04 PM SMYMAN Plotted Monday, April 23, 2018 3:55:12 PM Wymon, Stephanie

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MULCH MATERIAL AND APPLICATION				
MULCH MATERIAL	QUALITY STANDARDS	PER 1,000 SQ-FT	PER ACRE	DEPTH OF APPLICATION
WOOD CHIPS OR SHAVINGS	AIR DRIED, FREE OF OBJECTIONABLE MATERIAL	500 – 900 LBS	10 – 20 TONS	2" – 7"
WOOD FIBER CELLULOSE (PARTIALLY DIGESTED WOOD FIBERS)	MADE FROM NATURAL WOOD USUALLY WITH GREEN DYE AND DISPERSING AGENT	50 LBS	2,000 LBS	N/A
GRAVEL, CRUSHED STONE OR SLAG	WASHED; SIZE 2B OR 3A – 1 1/2"	9 CY	405 CY	3"
HAY OR STRAW	AIR-DRIED; FREE OF UNDESIRABLE SEEDS AND COARSE MATERIALS	90 – 100 LBS, 2-3 BALES	2 TONS (100-120 BALES)	COVER ABOUT 90% SURFACE
COMPOST	UP TO 3" PIECES, MODERATELY TO HIGHLY STABLE	3 – 9 CY	3 – 9 CY	1-3"
Erosion Control Mix	WELL-GRADED MIXTURE OF PARTICLE SIZES. ORGANIC CONTENT BETWEEN 80-100% DRY WEIGHT. PARTICLE SIZE SHALL PASS 6" SCREEN (100%)	*Slopes 3(Hz.):1(Vert.) = 2 inch depth plus additional 1/2 inch depth per 20 ft. of slope up to 100 ft. **Slopes between 3(Hz.):1(Vert.) and 2(Hz.):1(Vert.) = 4 inch depth plus additional 1/2 inch per 20 ft. of slope up to 100 ft. ***Slopes steeper than 2(Hz.):1(Vert.) applicability to specific site and mulch depth to be reviewed and approved prior to use by OPSC or EPSC Specialist		

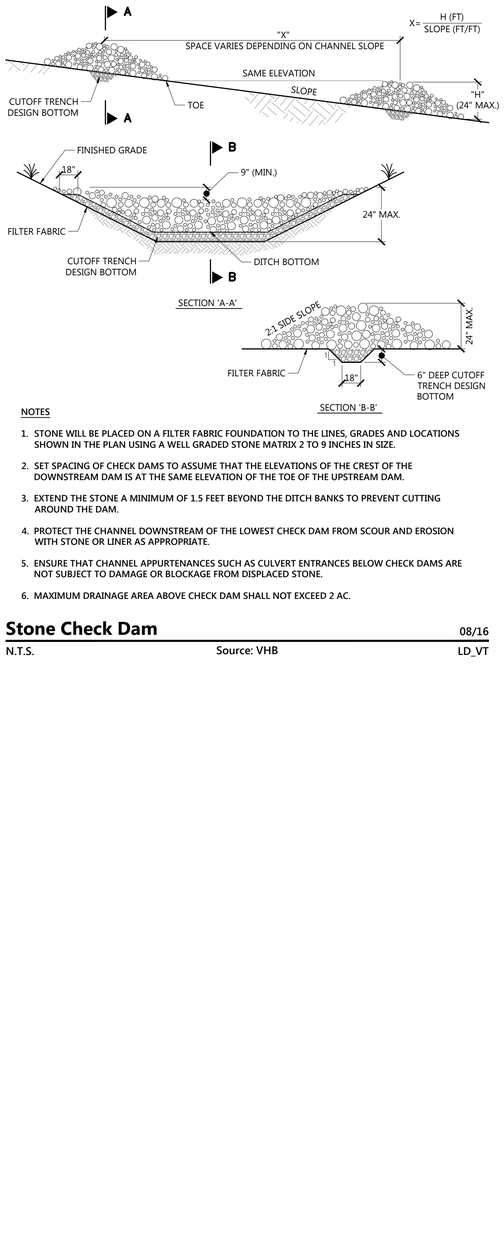
Notes:

1. APPLY TACKIFIER AS NEEDED TO MINIMIZE POTENTIAL FOR MULCH TO BLOW AWAY.
2. MULCH MUST NOT CONTAIN INVASIVE PLANT SPECIES. (SEEDS OR SEEDLINGS)
3. TACKIFIER MAY BE WATER, NETTING, OR SIMILAR.
4. OTHER THAN EROSION CONTROL MIX, MULCH IS NOT TO BE INSTALLED ON SLOPES > 3:1.

Mulch Table

12/12

N.T.S. Source: VHB LD_



NOTES

1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN IN THE PLAN USING A WELL GRADED STONE MATRIX 2 TO 9 INCHES IN SIZE.
2. SET SPACING OF CHECK DAMS TO ASSUME THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.
6. MAXIMUM DRAINAGE AREA ABOVE CHECK DAM SHALL NOT EXCEED 2 AC.

Stone Check Dam

08/16

N.T.S. Source: VHB LD_VT

POST CONSTRUCTION SOIL DEPTH AND QUALITY REQUIREMENTS

THESE REQUIREMENTS APPLY TO ALL DISTURBED AREAS WITHIN THE LIMITS OF THE SITE WHICH ARE NOT COVERED BY AN IMPERVIOUS SURFACE, INCORPORATED INTO A STRUCTURAL STORMWATER TREATMENT PRACTICE, OR ENGINEERED AS STRUCTURAL FILL ONCE DEVELOPMENT IS COMPLETE. FOR THIS PROJECT THESE AREAS INCLUDE THE DISCONNECTION AREAS AND FILTER STRIP AND AREAS DISTURBED DURING ROAD AND UTILITY INSTALLATION. IT IS ASSUMED THAT INSTALLATION OF THE ARRAY AND FENCING WILL BE DONE WITH LOW-PRESSURE EQUIPMENT AND IN A MANNER THAT MINIMIZED VEHICLE TRAVEL OVER UNDISTURBED AREAS. A DENSE AND VIGOROUS VEGETATIVE COVER SHALL BE ESTABLISHED OVER TURF AREAS. ANY AREAS NOT DESCRIBED ABOVE WHICH ARE DISTURBED OR COMPACTED DURING CONSTRUCTION SHALL ALSO BE SUBJECT TO THESE REQUIREMENTS.

ALTERNATIVELY TO LEAVING EXISTING TOPSOIL IN PLACE WITHOUT DISTURBING OR COMPACTING IT, THERE ARE THREE METHODS THAT MAY BE USED TO SATISFY THESE REQUIREMENTS.

1. AMEND EXISTING TOPSOIL IN PLACE

   • SCARIFY OR TILL SUBSOILS TO 4 INCHES OR DEPTH OR TO THE DEPTH NEEDED TO ACHIEVE A TOTAL DEPTH OF 8 INCHES OF UNCOMPACTED SOIL AFTER A CALCULATED AMOUNT OF AMENDMENT IS ADDED.

   • AMEND THE SOIL TO MEET THE ORGANIC CONTENT REQUIREMENTS. ORGANIC MATERIAL MAY BE PLACED AT A PRE-APPROVED RATE OF 1 INCH WITH AN ORGANIC MATTER CONTENT OF 40-65% AND ROTOTILLED INTO 3 INCHES OF SOIL OR AT A CALCULATED RATE ROTOTILLED INTO A DEPTH OF SOIL NEEDED TO ACHIEVE 4 INCHES OF SETTLED SOIL AT 4% ORGANIC CONTENT.

2. REMOVE AND STOCKPILE EXISTING TOPSOIL DURING GRADING

   • TOPSOIL SHOULD BE STOCKPILED ON SITE IN A CONTROLLED AREA AT LEAST 50 FEET FROM SURFACE WATERS, WETLANDS, FLOODPLAINS, OR OTHER CRITICAL RESOURCE AREAS.

   • SCARIFY OR TILL SUBGRADE TO A DEPTH OF 4 INCHES, EXCEPT FOR WITHIN THE DROP LINE OF EXISTING TREES, THE ENTIRE SURFACE SHALL BE DISTURBED BY SCARIFICATION.

   • STOCKPILED TOPSOIL SHALL ALSO BE AMENDED, IF NEEDED, TO MEET THE ORGANIC CONTENT REQUIREMENTS IDENTIFIED ABOVE.

   • REPLACE STOCKPILED TOPSOIL PRIOR TO PLANTING AND RAKE TO LEVEL, REMOVING ANY SURFACE ROCKS LARGER THAN 2 INCHES IN DIAMETER.

   • WATER OR ROLL SOILS IN TURF AREAS TO 85% OF MAXIMUM DRY DENSITY.

3. IMPORT TOPSOIL MIX OF SUFFICIENT ORGANIC CONTENT AND DEPTH

   • SCARIFY OR TILL SUBGRADE TO A DEPTH OF 4 INCHES. EXCEPT FOR WITHIN THE DRIP LINE OF EXISTING TREES, THE ENTIRE SURFACE SHALL BE DISTURBED BY SCARIFICATION.

   • PLACE 4 INCHES OF IMPORTED TOPSOIL MIX THAT CONTAINS 4% ORGANIC MATTER. SOILS USED IN THE MIX SHALL BE SAND OR SANDY LOAM AS DEFINED BY THE USDA.

   • RAKE TO LEVEL, REMOVING ANY SURFACE ROCKS GREATER THAN 2 INCHES IN DIAMETER.

   • WATER OR ROLL SOIL IN TURF AREAS TO 85% OF MAXIMUM DRY DENSITY.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING AND EXECUTING A PLAN FOR VERIFYING THAT THESE AREAS HAVE MET THIS STANDARD. THIS PLAN SHOULD INCLUDE A MINIMUM OF 9 TEXT HOLES PER ACRE OF AREA SUBJECT TO THIS STANDARD. THESE TEST HOLES SHALL BE EXCAVATED TO 8 INCHES USING ONLY A SHOVEL DRIVEN SOLELY BY THE WEIGHT OF THE INSPECTOR AND SHALL BE A MINIMUM OF 50 FEET APART.

SOIL DEPTH AND QUALITY NOTES

01/05

N.T.S. Source: VHB LD_

vhb.com

vhb

40 IDX Dr
Building 100 Suite 200
South Burlington, VT 05403
802.497.6100

GMT Connect Drive

Industrial Parkway
Burlington, VT

No.	Revision	Date	Appvd.

Designed by SMW Checked by AGM

Issued for Date

PERMIT Apr. 20, 2018

Not Approved for Construction

Drawing Title

Site Details

Drawing Number

D-1.02

Sheet 10 of 11

Project Number

11585.09

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The Low Risk Site Handbook
for
Erosion Prevention and Sediment Control

VERMONT ENVIRONMENTAL CONSERVATION

August 2006

The Low Risk Site Handbook for Erosion Prevention and Sediment Control

Any construction activity that disturbs 1 or more acres of land, or is part of a larger development plan that will disturb 1 or more acres, requires a Vermont state permit for stormwater discharges from construction sites.

Construction General Permit 3-9020 guides an applicant in the determination of the potential risk to water quality from the construction activity and categorizes the applicant's activity as Low Risk, Moderate Risk, or that which requires an Individual Permit.

The standards in this handbook serve as the required Erosion Prevention and Sediment Control Plan for construction sites determined to be "Low Risk" under GP-3-9020.

Contact Information

Vermont Department of Environmental Conservation
Watershed Management Division
One National Life Drive - Main Building - 2nd Floor
Montpelier, VT 05620-3522
Tel: 802-828-1535
Fax: 802-828-1544
dec.vermont.gov/watershed/stormwater

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UPDATE

Rolled Erosion Control Product (RECP) materials have the potential to ensnare animals such as snakes and birds, which can lead to injury or fatality. This has been observed to be most problematic in products with chemically bound joints in the supporting mesh.

Accordingly, only woven and interlinked products are approved for use in temporary RECP applications.

(See Tables 4.3 and 4.4 of the Vermont Standards & Specifications for Erosion Prevention and Sediment Control)

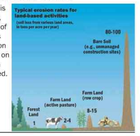
Section 1
Introduction

What is erosion prevention and sediment control?

Sediment washing into streams is one of the largest water quality problems in Vermont. Sediment can kill or weaken fish and other organisms and adversely impact aquatic habitat.

On most construction sites, vegetation that holds the soil in place and protects it from erosive forces of rain and runoff is removed, leaving large areas of soil exposed to the elements. During rainfall or snowmelt, the exposed soil may be easily eroded and transported to nearby streams, lakes, or wetlands.

To prevent this from happening, a small number of simple practices to prevent erosion and contain soil on the construction site must be used.



Do I need a permit?

Any construction activity that disturbs 1 or more acres of land, or is part of a larger development plan that will disturb 1 or more acres, requires a Vermont state permit for stormwater discharges from construction sites.

Application Process

1. Obtain a copy of the permit and determine the Risk Category of the proposed project. The permit is available online at: dec.vermont.gov/watershed/stormwater
2. Submit the Notice of Intent (NOI) form, notifying the Department of your intent to begin construction. **Submit the NOI to DEC at least 60 days before you plan to begin construction to allow sufficient time for processing.*
3. Upon receipt of written authorization from DEC, you are covered under the permit and may begin construction.
4. If your project is determined to be "Low Risk", you must follow this handbook for erosion prevention and sediment control on your construction site.
5. If your site is not classified as Low Risk, then you must follow the Department guidance in GP 3-9020 for Moderate Risk activities or those requiring an Individual Permit.

Section 2
The Requirements

1. Mark Site Boundaries

Purpose:

Mark the site boundaries to identify the limits of construction. Delineating your site will help to limit the area of disturbance, preserve existing vegetation and limit erosion potential on the site.

Requirements:

You must physically mark the limits of construction.

Limit of Disturbance
Limit of Disturbance
Limit of Disturbance

VIPER

Outstanding Performance. Exceptional Value.

BEACON
design . performance . technology

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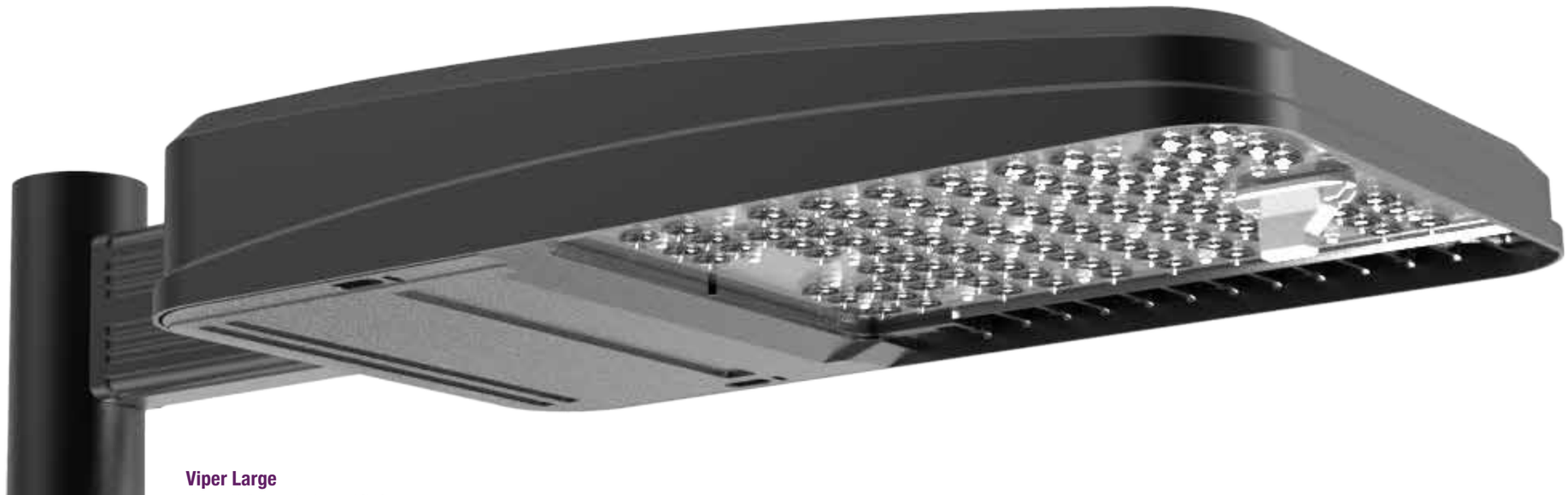


Viper Large
shown with Rectangular Arm and SiteSync

Minimalist in **Form.** Robust in **Design.** Adaptable in **Application.**

Beacon Products' exclusive Strike Optics for Viper deliver category leading performance. By maximizing target efficiency, the Viper ensures simple layout design that is high in uniformity and minimal in light trespass. Such control reduces energy consumption, lowers installation costs, and improves the visual acuity.

SiteSync and Energeni integrated controls offer outstanding performance at exceptional price levels. Pre-commissioned and simple to use, Viper controls give the most novice of users the ability to create highly functional, robust control schedules for optimal luminaire usage and maximized energy savings.

Advanced luminaire design separates the Viper from other area and site products. With Lifeshield™ thermal control, an elegantly simple heat sink design and industry leading surge protection, the Viper is designed for sustained, long-term performance.

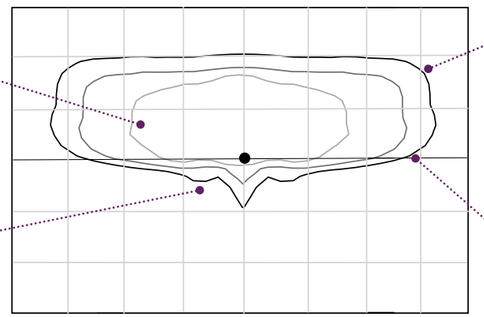
One Product Family One family, boundless configurations. Offered in two sizes, Viper optimizes performance, output, and efficiency. The Viper is ideal for applications ranging from pedestrian walkways to large logistical centers with extremely high mounting heights. Outputs begin at 5,000 lm. Maximum output exceeds 42,000 lm.

OPTICS
STRIKE

Beacon Products' exclusive Strike Optics for Viper maximizes target zone illumination with minimal losses at the house-side, greatly reducing light trespass issues. This outstanding optic control simplifies layouts and installations, reduces energy consumption, lowers installation costs and improves visual acuity.

Strike Optics - Precision Wins.

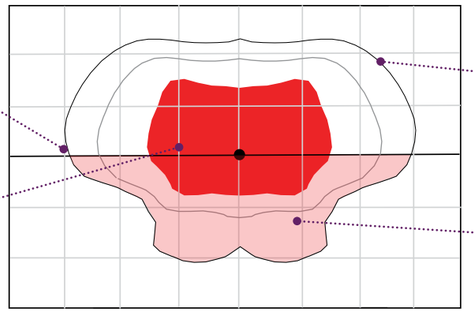
Viper Strike Optic (Type 3)



Total Delivered Lumens: 22,683 lm

Total Street Side Lumens: 19,550 lm @ 181W

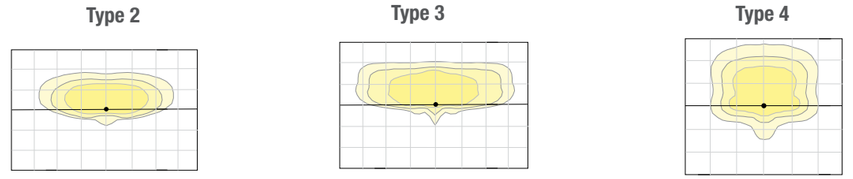
Competitor Optics (Type 3)



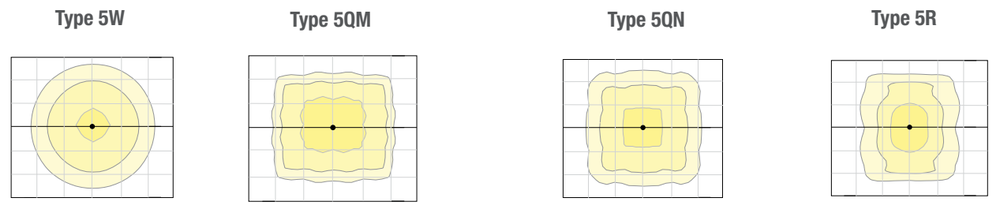
Total Delivered Lumens: 21,337 lm

Total Street Side Lumens: 15,947 lm @ 188W

Strike Optics - Type 2, 3 and 4...Superior Control, Outstanding Efficiency.



Symmetric Distributions - Type 5W, 5QM, 5QN and 5R...Flexibility in Application.



Specific Distributions - Type FR Automotive Front Row, Type 4W Wide Forward Throw

*Backlight control demonstrated on front roadways.

Front Row Auto Optic

Optimize merchandise display by maximizing illumination on the front row product display using the Beacon Viper FR auto optic.

Backlight Control

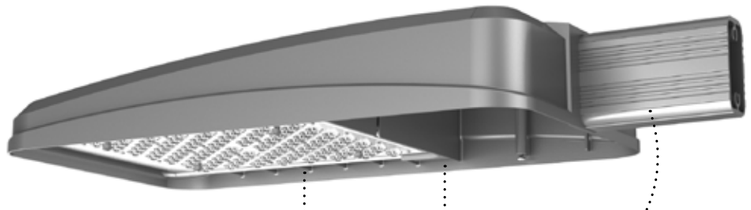
Reduce light trespass by up to 85% by using backlight control on the Type 4W optic without compromising fixture appearance or increasing the system EPA.

Advanced Luminaire Design

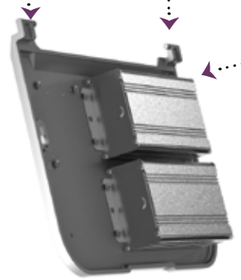
Reliability begins with design. Key design principles that are the foundation for the Beacon Viper include effective thermal management, circuit protections, and mechanical integrity. Integrated Lifeshield™ thermal controls protect the Viper from excessive temperature conditions while still providing illumination, even when ambient temperatures exceed rated limits. Complemented with an elegantly simple heat sink housing design, the Viper optimizes performance and long term reliability.

Integrated surge suppression safeguards against over voltage conditions.

Robust mechanical design begins with material selection, including die cast aluminum and stainless steel, incorporates conservative design strategies, and ends with high corrosion resistant finishes. By leveraging all of these design principles, the Viper is enduring.



Removable Door The hinged door is designed not only to swing down to allow access, but also to be removed to allow uninhibited access to the mounting hardware and wiring.



Hinged Access The swing-down, hinged door (secured with two screws) provides access to the drivers, rotatable photocell and terminal block. It allows for easy installation and hassle-free maintenance and component hardware replacement.

Mounting Options

Versatility in mounting simplifies installation and accelerates investment returns. Viper is ideal for relight or new construction projects.

Rectangular Arm (A)

Slip Fitter (MAF)

Knuckle (K)

Wall Bracket (WB)

Decorative Upswept Arm (AD)

Decorative Upswept Arm
Adjustable mounting for most 2 hole bolt patterns for a drill free retrofit. Available for both Viper Small and Large.

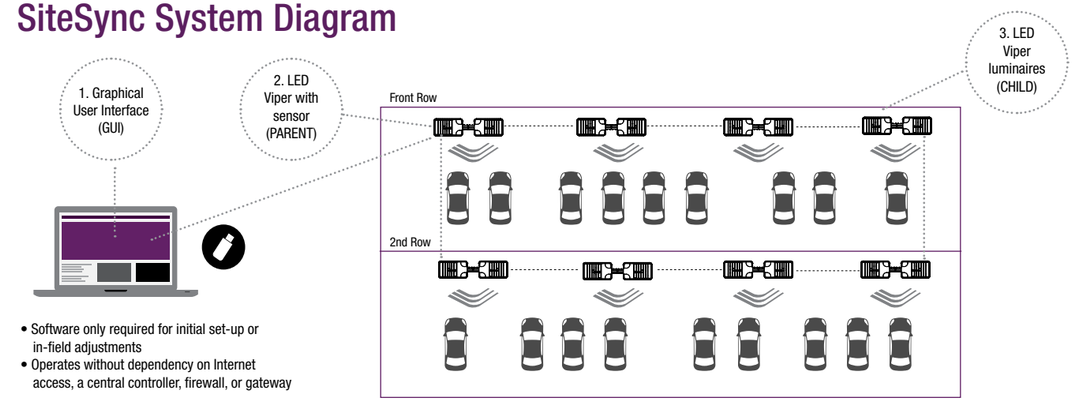
Integrated Controls

SiteSync™ LIGHTING CONTROL

Simple, Reliable and Affordable...SiteSync delivers flexible control strategies for reducing power consumption and minimizing maintenance costs while delivering the right light levels with a simple and affordable wireless solution. With SiteSync's pre-programmed approach, installation becomes a quick and easy process, greatly reducing the complexity, time, and cost compared to typical field commissioning.

SiteSync is based on a wireless mesh network architecture that enables luminaries to operate independently without the need for web based connectivity. This provides a cyber safe platform that delivers reliable communication and control versus other gateway based systems. With a complete offering of Hubbell Lighting site and area, decorative, garage, wall, and flood LED luminaries available with SiteSync, you have the flexibility to create an intelligent outdoor lighting package that will meet a wide variety of application needs.

SiteSync System Diagram

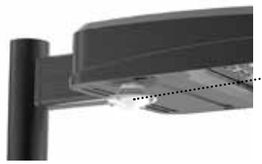


- Software only required for initial set-up or in-field adjustments
- Operates without dependency on Internet access, a central controller, firewall, or gateway

energeni

a compact control device that gives lighting owners a simple way to save on energy costs...

The **ENERGENI** lighting control system is a simple way for owners to save money by dimming the fixtures during unoccupied hours. The **ENERGENI** has flexible setting options to work with fixtures activated by photocontrols or time clocks. The delay and dimming level options can be configured at the factory or reconfigured at will in the field without the need for special cables or computers.



Occupancy Sensors
Optional sensors control light output based on area utilization. Use for energy savings and local code compliance.

HUBBELL Lighting

701 Millennium Blvd.
Greenville, SC 29607
hubbelllighting.com

ALERA LIGHTING

ARCHITECTURAL AREA LIGHTING

BEACON PRODUCTS

COLUMBIA LIGHTING

COMPASS

DUAL-LITE

HUBBELL CONTROL SOLUTIONS

HUBBELL INDUSTRIAL LIGHTING

HUBBELL OUTDOOR LIGHTING

KIM LIGHTING

KURT VERSEN

LITECONTROL

PRESCOLITE

WHITEWAY

BEACON
design . performance . technology

2041 58th Avenue Circle East
Bradenton, FL 34203

t 800.345.4928
f 941.751.5535

June 19, 2017 1:10 PM

Turtle Friendly

BEACON
design . performance . technology
www.beaconproducts.com

Type:	
Project Name:	
Notes:	

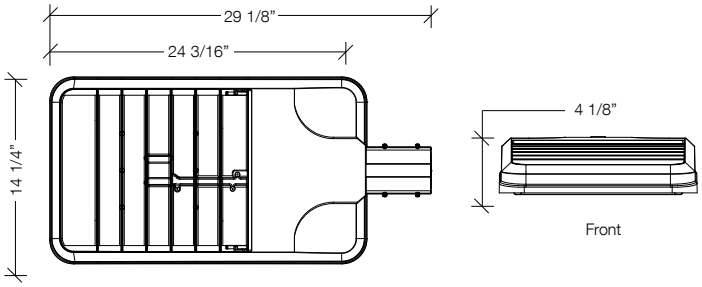
rev. 07.18.2017

VIPER - LARGE (LED)

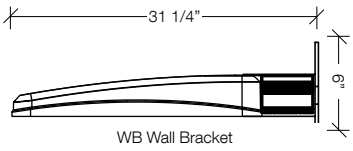
Large Viper Luminaire
Max Weight: 25.0 lbs
Max EPA: 1 sq ft

Sample	VP-L	64E-115	AMB	T5R	180	UNV	PCR-TL	RA	BBT
Ordering		/	/	/	/	/	/	/	/
	A	B	C	D	E	F	G	H	I

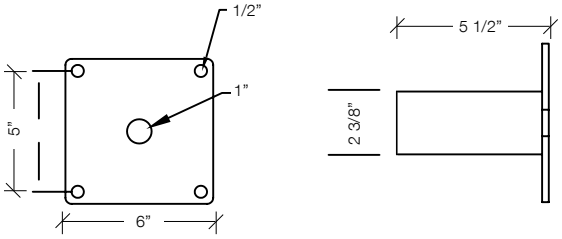
DETAILS

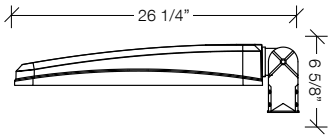


MOUNTING OPTIONS



WB Wall Bracket





PK2 2-3/8" Adjustable Knuckle

SF2 2-3/8" OD Slip Fitter

RA Rectangular Arm

A. MODEL

VP-L	Viper - Large

B. ENGINE-WATTS

64E-115	115 Watts - LED array
80E-140	140 Watts - LED array
96E-170	170 Watts - LED array

C. LED CHIP WAVELENGTH

AMB	amber 590nm (std.)

D. OPTICS

T2	type II
T3	type III
T4	type IV
T5R	type V, rectangular
T5QM	type V, square medium
T5W	type V, round wide

E. VOLTAGE

UNV	120-277V
347V	347V
480V	480V

F. ELECTRICAL OPTIONS

PCR-TL	photocell, twist-lock
PCR-SC	photocell, shorting cap
2PF	dual power feed [1,2]

G. HOUSE SIDE SHIELD OPTIONS

HSS-90	house side shield 90°
HSS-180	house side shield 180°
BLC	backlight control[4]

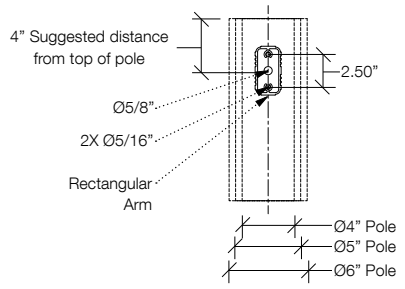
H. MOUNTING OPTIONS

RA	rectangular arm
SF2	2 3/8" OD slip-fitter
PK2	2 3/8" adjustable knuckle
WB	wall bracket

I. COLOR

BBT	basic black textured
BMT	black matte textured
WHT	white textured
MBT	metallic bronze textured
BZT	bronze textured
DBT	dark bronze textured
GYS	gray smooth
DPS	dark platinum smooth
GNT	green textured
MST	metallic silver textured
MTT	metallic titanium textured
OWI	old world iron
RAL	_____

DRILL PATTERN



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rev. 07.18.2017

VIPER - LARGE (LED)

Large Viper Luminaire
Max Weight: 25.0 lbs
Max EPA: 1 sq ft

General: The Beacon Viper luminaire is available in two sizes with a wide choice of different LED Wattage configurations and optical distributions designed to replace HID lighting up to 1000W MH or HPS and with 5 different mounting options for application in a wide variety of new and existing installations. Luminaires are suitable for wet locations.

Bezel Optic System: Each Viper luminaire is supplied with an one piece optical cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel. The cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system. Two-piece silicone and micro-cellular polyurethane foam gasket ensures a weather-proof seal around each individual LED.

The optical cartridge is secured to the die cast housing with fasteners. The optics are held in place without the use of adhesives. The cartridge assembly is available in various lighting distributions using TIR designed acrylic optical lenses over each LED.

Lifeshield™ Circuit: Thermal circuit shall protect the luminaire from excessive temperature by interfacing with the 0-10V dimmable drivers to reduce drive current as necessary. The factory-preset temperature limits shall be designed to ensure maximum hours of operation to assure L70 rated lumen maintenance. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range.

A luminaire equipped with the device may be reliably operated in any ambient temperature up to 55ºC (131ºF). The thermal circuit will allow higher maximum Wattages than would be permissible on an unregulated luminaire (if some variation in light output is permissible), without risk of premature LED failure or lumen depreciation. Operation shall be smooth and undetectable to the eye. Thermal circuit shall directly measure the temperature at the LED solder point. Thermal circuit shall consist of surface mounted components mounted on the LED engine (printed circuit board). For maximum simplicity and reliability, the device shall have no dedicated enclosure, circuit board, wiring harness, gaskets, or hardware. Device shall have no moving parts, and shall operate entirely at low voltage. The device shall be located in an area of the luminaire that is protected from the elements. Thermal circuit shall be designed to “fail on”, allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers.

Device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.). The device will effectively control the solder point temperature as needed; otherwise it will allow the other control device(s) to function unimpeded.

Printed Circuit Board (PCB): Aluminum thermal clad board with 0.062” thick aluminum base layer, thermally conductive dielectric layer, 0.0014” thick copper circuit layer circuit layer designed with copper pours to minimize thermal impedance across dielectric. Board will be mounted to the heat sink using minimum 12 #4-40 screws to ensure contact with thermal pad and heat sink. Use of thermal grease will not be allowed.

Housing and LED Thermal Management: The Viper’ monolithic housing design creates over 4.5 square feet (small Viper) or 7.7 square feet (large Viper) of heat-sinking surface area. Vertical fins, combined with flow-thru openings prevent sediment and moisture buildup on critical heat sinking surfaces without the need for grates, screens or other debris control tactics. The Viper housing, electrical compartment and fitter are made from die cast aluminum that is pre-treated and powder-coated to meet the most rugged industry standards. The finish is corrosion resistant to meet ASTMB-117, resists cracking or loss of adhesion per ASTM D522, resists surface impacts of up to 160 inch-pound. All external hardware is corrosion resistant. The housing serves as a heat-sink for the LED bezel with a separate compartment for the drivers.

Electrical Assembly: The fixture electrical compartment shall contain all LED driver components and shall be provided with a push-button terminal block for AC power connections. The housing is designed for an optional twist lock photo control receptacle.

Accessibility: Although the Viper luminaire is designed to operate for many years without maintenance, accessibility is a key component in its design. The Drivers are mounted on a removable door that is secured with keyslotted screws and hinges down for convenient access. The drivers are field replaceable using quick disconnects.

Drivers: Luminaires are equipped with an LED driver that accepts 100V through 277V, 50 Hz to 60 Hz (UNIV), or a driver that accepts 347V or 480V input. Power factor is .92 at full load. All electrical components are rated at 50,000 hours at full load and 25°C ambient conditions per MIL- 217F Notice 2. Dimming drivers are standard, with connections for external dimming equipment available upon request. Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is listed by UL for use at 600VAC at 50°C or higher. Plug disconnects are listed by UL for use at 600 VAC, 13A or higher. 13A rating applies to primary (AC) side only.

Surge Protector: The on-board surge protector shall be a UL recognized component for the United States and Canada and have a surge current rating of 20,000 Amps using the industry standard 8/20 pSec wave. The LSP shall have a clamping voltage of 825V and surge rating of 540J. The case shall be a high-temperature, flame resistant plastic enclosure.

Fasteners: All fasteners shall be stainless steel. When tamper resistant fasteners are required, spanner HD (snake eye) style shall be provided (special tool required, consult factory).

Operating Environment: Shall be able to operate normally in ambient temperatures from -40°C to 40°C

Finish: Finish shall be a Beacote V polyester powder-coat electro-statically applied and thermocured. Beacote V finish shall consist of a five stage iron phosphate chemical pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pound.

Agency Certification: The luminaire shall bear a CSA label and be marked suitable for wet locations. This product is approved by the Florida Fish and Wildlife Conservation Commission.

Warranty: Beacon luminaires feature a 5 year limited warranty. Beacon LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays. LED drivers are covered by a 5 year limited warranty. PIR sensors carry a 5 year limited warranty from the sensor manufacturer. See Warranty Information on www.beaconproducts.com complete details and exclusions.

Due to our continued efforts to improve our products, product specifications are subject to change without notice.

1 & 15 Industrial Parkway Site Photos

Photo 1: 1 Industrial East Side

Photo 2: 1 Industrial at East Entrance

Photo 3: 1 Industrial from NE Corner

Photo 4: 1 Industrial from North Entrance

Photo 5: 15 Industrial from SE Corner

Photo 6: 15 Industrial Looking NW

Photo 7: 1/15 Industrial at 15 Industrial Entrance

Attachment 1: Stormwater Permit Application Narrative, Location Map, and Soils Map

GMT CONNECT DRIVE PROJECT

Burlington, Vermont

Prepared for **Green Mountain Transit**
15 Industrial Parkway
Burlington, VT 05401

Prepared by **VHB**
40 IDX Drive, Building 100
Suite 200
South Burlington, Vermont 05403

April 20, 2018

Table of Contents

1.0 Introduction 3
2.0 Project Description 3
3.0 Existing Conditions 3
4.0 Proposed Stormwater Management System 4

1.0 Introduction

On behalf of Green Mountain Transit ("GMT"), VHB has prepared this application package and narrative to describe the regulatory framework and obligations for stormwater management associated with the construction of a 5,118 square foot paved access ramp located at Green Mountain Transit in Burlington, Vermont (the "Project").

This application is for a State Stormwater Discharge Permit Pursuant to the General Permit 3-9015 due to an expansion of impervious when existing site impervious exceeds one acre.

2.0 Project Description

The GMT Project involves construction of an access drive between two existing parcels in Burlington located at 1 and 15 Industrial Parkway. The two existing parcels currently being used as bus storage and maintenance as well as offices for Green Mountain Transit. Access to the site is provided by an existing paved drive off Industrial Parkway. The Project will include the construction the access drive joining two parking lots to allow for vehicle circulation between the two parcels without the use of the public roadway and associated stormwater treatment and drainage infrastructure, in addition to full depth reconstruction of the existing parking lot and driveway on the 1 Industrial Parkway parcel.

The Project requires coverage as there is over an acre of existing impervious surface on the 1 Industrial Parkway parcel and the Project creates additional impervious which causes the project to fall under the jurisdiction of stormwater management rules – Environmental Protection Rules, Chapter 18. Additionally, the 15 Industrial Parkway has prior stormwater permit coverage. The Project is in the Lake Champlain watershed.

3.0 Existing Conditions

Existing Topography, Land Cover, Hydrology, and Soils

The 1 Industrial Parkway parcel is currently being used as a commercial building for Green Mountain Transit bus storage and maintenance and has approximately 1.05 acres of impervious cover consisting of buildings and paved drives/parking. The Project area mainly consists of a forested area and grass embankment at the southwest corner of the 1 Industrial parcel as well as the northwest corner of the 15 Industrial parcel. There are two existing driveways providing access to the site; Austin Drive to the North and Industrial Parkway to the East. The topography on the site generally slopes from south to north and west to east with slopes ranging from approximately 0.5 to 5 percent. There are no wetlands located on the property.

Runoff is conveyed to Lake Champlain via overland flow and through a series of ditches and culverts.

There are two of soils in the Project area as identified in Table 1 below. A Natural Resources Conservation Service ("NRCS") soils map highlighting hydrologic soil groups ("HSG") is included at the end of this attachment.

Table 1: Project Soils

Map Unit Name	Map Unit Symbol	Hydrologic Soil Group
Farmington extremely rocky loam, 5 to 20 percent slopes	FaC	D
Covington silty clay	Cv	D

Existing Stormwater Systems

The 1 Industrial parcel does not have prior stormwater permit coverage and has no existing stormwater management infrastructure. Stormwater runoff from the site area is conveyed via overland flow to the City of Burlington drainage system and routed through a series of ditches and culverts with eventual discharge to Lake Champlain.

The 15 Industrial parcel was originally permitted under discharge permit 1-1277 with two discharge points and included grass channel treatment and a detention basin. This permit was subsequently renewed under 3102-9010 and 3102-9010.R. In 2005, the southern portion of this parcel was redeveloped and permitted under 3102-9015 which included grass channel treatment systems. The northern portion of the parcel remained covered under 3102-9010.R. The 2005 permitting effectively split the two original discharge points between the 9010 and 9015 permits, however the language indicating two discharge points was inadvertently still included in the 9010 permit.

3102-9015 expired in 2015 and due to an oversight has not yet been renewed. Pending acceptance of the permitting methodology outlined in Section 4.0, GMT intends to submit an application to renew this expired permit.

4.0 Proposed Stormwater Management System

Compliance with the 2017 Vermont Stormwater Management Manual

This Project will result in 0.12 acres of new impervious surface consisting of the new paved access ramp. Due to topography and site constraints, runoff from the new impervious surface is split between the 1 and 15 and Industrial parcels, with 0.08 acres of new impervious draining to 1 Industrial and 0.04 acres of new

impervious draining to 15 Industrial. The new impervious draining to 15 Industrial is within the area covered under 3102-9010.R. Efforts were made to provide treatment for this portion of the new impervious in the grass area along the boundary between the two parcels, however due to the constraints imposed by the existing develop and the amount of effectively unmanaged existing impervious draining to this area, treatment in accordance with the VSMM was found to be not feasible.

Therefore this application proposes to utilize site balancing to demonstrate compliance which is accomplished by treating existing unmanaged impervious on the 1 Industrial parcel.

The receiving water for the Project is Lake Champlain which is designated as warm-water fish habitat, where depths are less than 25 feet at Low Lake Level (93 feet NGVD) from June 1, through September 20, per Appendix A of the Vermont Water Quality Standards.

Post-Construction Soil Depth and Quality Treatment Standard

The Post-Construction Soil Depth and Quality Standard applies to all disturbed areas within the limits of the site which are not covered by an impervious surface, incorporated into a structural stormwater treatment practice, or engineered as structural fill once development is complete. The various options available to the Contractor for meeting this criterion have been provided on the plans.

Water Quality Treatment Standard

The water quality requirements for this project will be met by site balancing and treating the impervious parking area along the northwest part of the parcel draining to the north. The proposed treatment system will treat 0.34 acres of existing impervious which exceeds the 0.09 of new impervious that will not be treated, therefore meeting the site balancing requirements. Due to the site being located on HSG 'D' soils, a Tier 1 treatment practice could not be utilized. Additionally, due to site constraints Tier 2 treatment practices were unable to fit in the limited area available for treatment, which lead to Tier 3 being necessary for treatment.

The proposed stormwater treatment approach utilizes a dry swale in the grass area between the northern parking lot and Austin Drive. A grass filter strip has been proposed for pre-treatment. Please refer to the accompanying DEC application forms and worksheets for demonstration of compliance with the applicable treatment standards of the VSMM as well as conformance with the applicable VSMM treatment criteria and design requirements for stormwater treatment practices to be implemented for the Project. The VSMM treatment standards that apply to this Project are Water Quality, and Overbank Flood Protection Treatment Standards.

The proposed Dry Swale has been designed to contain a 24" thick sand filter underlain by a 12-inch thick layer of crushed drainage stone which features an 8-inch underdrain system. Runoff enters a grass filter strip for pre-treatment before entering the dry swale.

Channel Protection Standard

This standard is waived because the site is discharging to waters with a drainage area equal to or greater than 10 square miles and that is less than 5% of the watershed area at the site's upstream boundary.

Groundwater Recharge Standard

This standard is not applicable due to the HSG D soils on the site.

Overbank Flood Protection Standard

This standard is waived because the site is discharging to waters with a drainage area equal to or greater than 10 square miles and that is less than 5% of the watershed area at the site's upstream boundary.

Extreme Flood Protection Standard

This standard is waived because the site is discharging to waters with a drainage area equal to or greater than 10 square miles and that is less than 5% of the watershed area at the site's upstream boundary.

Department of Planning and Zoning
149 Church Street
Burlington, VT 05401
http://www.burlingtonvt.gov/PZ/
Telephone: (802) 865-7188
(802) 865-7195 (FAX)

David E. White, FAICP, Director
Meagan Tuttle, AICP, Comprehensive Planner
Jay Appleton, Senior GIS/IT Programmer/Analyst
Scott Gustin, AICP, CFM, Principal Planner
Mary O'Neil, AICP, Principal Planner
Ryan Morrison, Associate Planner
Layne Darfler, Planning Technician
Shaleigh Draper, Zoning Clerk

MEMORANDUM

To: Development Review Board
From: Mary O'Neil, AICP, Principal Planner
Date: July 5, 2018
RE: ZP18-1406CA 1 Industrial Parkway, and ZP18-1407CA; 15 Industrial Parkway

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

Project Number: ZP18-1406CA (1 Industrial Parkway) and ZP18-1407CA, 15 Industrial Parkway.
Zone: ELM **Ward**: 5S
Date application accepted: May 14, 2018
Applicant/ Owner: . VHB, on behalf of CCTA / Green Mt. Transit
Request: Construction of a 5,118 sq. ft. access ramp between 1 and 15 Industrial Parkway; full depth reconstruction of existing parking lot and driveway apron at 1 Industrial Parkway with additional site lighting. Construction of dry swale with underdrain with overflow discharging by controlled outlet structure and stabilized outfall.

Background:

1 Industrial Parkway

- **Non-Applicability of Zoning Permit Requirements 17-0435NA;** create call center and service room at 1 Industrial Parkway and Dispatch Center at 15 Industrial Parkway. Interior remodeling. October 2016.
- **Non-Applicability of Zoning Permit Requirements 17-0074NA,** One-day auction**.** July 2016.
- **Zoning Permit 06-855CA**; Provide 7 parking spots for trailer trucks on existing parking lot. Parking to be used for vehicles not associated with the onsite business. Use constitutes a private parking lot. No site of building changes proposed. July 2006.
- **Zoning Permit 03-472**; Amend COA 00-033 and 033A to allow storage for four trucks, four trailers with no excavation or landscaping. Denied without prejudice April 2003.

  [Appealed to VEC. Project 00-033 and 033A was not constructed.]
- **Zoning Permit 03-415 / COA 00-033**; time extension of MA2000-012 and COA 00-033 for the construction of a commercial building. April 2003. [Permit expired. Construction did not commence.]

The programs and services of the City of Burlington are accessible to people with disabilities. For accessibility information call 865-7188 (for TTY users 865-7142).

- **Zoning Permit 03-294**; Change in use from CO2 subcontractor to Salvation Army warehouse/sorting with up to 25% retail. January 2003.
- **Zoning Permit 03-256**; Install an aluminum parallel business sign above center garage door. December 2002.
- **Zoning Permit 02-532 / COA 02-063**; Relocate interior gas tank to fenced area in front of existing industrial building. May 2002.
- **Zoning Permit 02-443**; Amend zoning permit 02-326 and COA 00-033A to allow construction of dry cleaning plant in existing Ryan Brothers building. April 2002.
- **Zoning Permit 02-326 / COA 00-033A**; Change of use to allow the establishment of a 6000 sf dry cleaning plant. February 2002.
- **MA2000-012**; Review curb cut width and access for all vehicle traffic; consolidated building per Planning Commission's Request; truck parking on site; location of storage area per Planning Commission's request. Reason for appearance associated with Judge's decision of 6.22.2000. Approved 8.31.2000. [Building expansion never constructed.]
- **Zoning Permit 98-369**; Change of use from bus terminal to electrical contractor with a warehouse component. Internally illuminated parallel sign to be placed at office entrance. March 1998.
- **Zoning Permit 97-036**; Two-year extension for the installation of the temporary trailer per the conditions of approval dated 9.5.1995. July 1996.
- **Zoning Permit 96-122**; One-year extension for the installation of the temporary trailer as per the original conditions of approval dated 4.14.1994. September 1995.
- **Zoning Permit 95-113 / COA 093-101C**; one-year extension for the installation of the temporary trailer as per the original conditions of approval dated 4.14.1994. September 1994.
- **Zoning Permit 95-139 / COA 093-101D**; Revise size of temporary trailer. September 1994.
- **Zoning Permit 93-454 / 093-101**; 20,136 sf. addition (bus barn, office, repair space and parking) for CCTA. May 1993. [Permit expired.]
- **Zoning Permit 94-363 / COA 093-101B**; installation of a temporary trailer not to exceed six months, placed adjacent to the north wall of the existing facility for expanded office functions. April 1994.
- **Zoning Permit 94-340 / COA 093-101A**; Construct 21,840 sf bus storage, maintenance and administration structure on adjacent parcel to existing CCTA facility. March 1994. [Permit expired.]
- **Zoning Permit 89-474**; replace existing window and entry door. September 1989.
- **Zoning Permit 81-159**; new addition for storage. September 1980.
- **Zoning Permit 78-99;** Construction of a 10,00 sf. pre-engineered building for printing plant and storage. September 1978.

- **Zoning Permit**; CCTA to erect 100' radio antenna tower on the premises. May 1974.
- **Zoning Permit**; CCTA to erect a 60' x 182' garage and 30' x 98' office attached. Pave off street parking area and driveways; install gasoline tank and pump. November 1973.

15 Industrial Parkway

- **Zoning Permit 18-0923CA;** installation of security cameras on exterior of building. May 2018.
- **Non-Applicability of Zoning Permit Requirements 17-0436NA;** create call center and service room at 1 Industrial Parkway and Dispatch Center at 15 Industrial Parkway. Interior remodeling. October 2016.
- **Zoning Permit 14-0789CA**; replace exterior light fixtures and install additional exterior light fixtures with wall and pole mounted LED fixtures. March 2014.
- **Zoning Permit 09-442FC**; install galvanized steel security gate at main driveway/entrance to CCTA. November 2008.
- **Zoning Permit 08-486CA**; install rooftop mechanical unit for painting booth. Associated steel pipe guard at roof edge. January 2008.
- **Zoning Permit 07-828CA;** install chain link fence around above ground storage tank; add guard rail in front of existing tank; install concrete walkway from existing doorway to existing parking lot. July 2007.
- **Zoning Permit 04-557CA**; Building addition to south end of CCTA bus facility for additional bus storage. New landscaping and stormwater work. April 2005.
- **Non-Applicability of Zoning Permit Requirements;** install timber frame bus passenger shelter and walkway on city street ROW. July 2004.
- **Non-Applicability of Zoning Permit Requirements;** install bicycle racks at several locations along the Chittenden County Transportation Authority (CCTA) bus route. Accessory use to CCTA. June 1999.
- **Zoning Permit 00-067**; installation of ground lighting for the existing flag pole and freestanding sign for the bus facility. August 1999.
- **Zoning Permit 99-121**; installation of externally illuminated free standing sign for the existing bus terminal. September 1998.
- **Zoning Permit COA096-075A**; Relocation of the pole mounted transformer to the site in front of the existing CCTA bus barn. Relocating above ground fuel tank at the rear of the site. [Ultimately determined that transformer will bel located on pole as originally approved.] 1997.
- **Zoning Permit 97-119 / COA 097-008**; courtesy review of the CCTA bus shelter prototype to be erected throughout the city. September 1996.
- **Zoning Permit 96-400 / COA 096-075**; construction of a bus barn facility and associated site improvements on a vacant lot. March 1996.

Overview: CCTA (Green Mountain Transit) proposes a connecting ramp between the rear parking areas at 1 and 15 Industrial Parkway to provide off-street vehicle circulation between the two existing facilities. The existing parking area on the 1 Industrial Parkway site will be fully reconstructed with new site lighting for both the ramp and the parking area. Stormwater treatment measures are included, and under the review of the Stormwater Engineering program. Because the alteration threshold of 500 sf is exceeded, Administrative Authority under Section 3.2.7 (a) 10. is *not* authorized and DRB review is required.

Recommended motion: Consent approval of both applications, per the following findings and conditions:

I. Findings

Article 2: Administrative Mechanisms
Section 2.7.8 Withhold Permit
Per this standard, the applicant is required to remedy all violations and close out all zoning permits issued after July 13, 1989 prior to issuance of a Certificate of Occupancy for this permit. See attached list for guidance on open permits/violations. **Affirmative finding as conditioned.**

Article 4: Zoning Maps and Districts
Sec. 4.4.3 Enterprise Districts

(a)Purpose:

The 2 Enterprise districts as illustrated in Map 4.4.3-1 are described as follows:

*The **Light Manufacturing** (E-LM) district is the primary commercial/industrial center of Burlington, and is intended primarily to accommodate enterprises engaged in the manufacturing, processing, distribution, creating, repairing, renovating, painting, cleaning, or assembling of goods, merchandise, or equipment without potential conflicts from interspersed residential uses. Other accessory commercial uses are allowed to support a wide range of services and employment opportunities. This district is intended to ensure that sufficient land area is appropriately designated within the city to provide an adequate and diversified economic base that will facilitate high-density job creation and retention. This district is primarily intended to provide for industrial uses suitable for location in areas of proximity to residential development. Development is intended to respect interspersed historic industrial buildings, and reflect the industrial aesthetic of the district's past. Parking is intended to be hidden within, behind, or to the side of structures.*

CCTA/ GMT is an existing bus garage/transportation facility; the use and proposed parking lot and vehicular access link is consistent with the intent of the E-LM zoning district. **Affirmative finding.**

Table 4.4.3 -1 Dimensional Standards and Density

Districts	**Max. Intensity**	**Max. Lot Coverage**[1]	**Minimum Building Setbacks**[1] (feet) Front	Side	Rear[3]	**Max. Height**[1]

	(floor area ratio[1])					(feet)
Light Manufacturing	2.0 FAR	80%	5 min	0[2]	10%[2]	45’
1 Industrial Parkway	No change	44.6 existing 46.87% proposed	65’ No change	100’ No change	53’ required 273’ provided	No change
15 Industrial Parkway	No change	51.5% existing 52.37% proposed	5 feet required 54’ proposed No change.	11’ existing and proposed. No change.	53’ required 271’ proposed No change.	No change.

1 – Floor area ratio is further described in Art 5. Measurement of and exceptions to coverage, setback, and height standards are found in Art 5. Actual maximum build out potential may be reduced by site plan and architectural design considerations of Art 6.
2 – Structures shall be setback a minimum of 25-feet along any zoning district boundary line that abuts a residential zoning district. Lots of record existing as of September 9, 2015 that are split by enterprise and residential zones are exempt from this district boundary setback.
3 – Percentage of the lot depth.

Affirmative finding.

(c) Permitted and Conditional Uses:

The principal land uses that may be permitted, or conditionally permitted pursuant to the requirements of Article 3, within the Enterprise districts shall be as defined in Appendix A – Use Table.

No change is proposed to the existing uses. Not applicable.

(d) District Specific Regulations:

1. Convenience Stores. Not applicable.

<u>Article 5: General Citywide Regulations</u>

Section 5.2.1 Existing Small Lots
Not applicable.

Section 5.2.2 Required Frontage or Access
Development is proposed on parcels with existing access and frontage on Industrial Parkway.
Affirmative finding.

Section 5.2.3 Lot Coverage Requirements
See Table 4.4.3-1, above.

Section 5.2.4 Buildable Area Calculation
The parcel is not within RCO, WRM, RM, WRL or RL zoning districts. Not applicable.

Section 5.2.5 Setbacks.
See Table 4.4.3-1, above.

Section 5.2.6 Building Height Limits

See Table 4.4.3-1, above.

Section 5.2.7 Density and Intensive of Development Calculations
See Table 4.4.3-1, above.

Part 3: Non-conformities
Not applicable.

Part 4: Special Use Regulations
Not applicable.

Section 5.4.8 Historic Buildings and Sites
Not applicable

Section 5.4.9 Brownfield Remediation
Neither site is listed on Vermont DEC's brownfield or hazardous site map. Not applicable.

Part 5: Performance Standards
Section 5.5.1 Nuisance Regulations
Construction activities will be limited Monday-Friday 7:30 am – 5:30 pm, with no construction on Saturdays or Sundays.
Affirmative finding as conditioned.

Section 5.5.2 Lighting
(f) Outdoor Lighting
1. Parking Lot lighting
A. The maximum mounting height for any fixture shall be 25 feet.
*B. The maximum illumination level **shall not exceed 4 footcandles** at any point.*
C. The maximum illumination level shall only be computed for the functional area of the parking lot.
D. The maximum to minimum uniformity ratio shall not exceed 20:1.
E. Illumination levels are encouraged to be reduced by at least 50% within one hour after the end of public business hours.
Mounting height for pole lights is proposed at 20'; acceptable under these standards.
The provided photometric defines two "hot spots" under Fixtures A1 and A2, where footcandle measurements exceed the 4 fc maximum. The applicant shall adjust those fixtures to produce compliant footcandle measurements and ratio per these standards. A revised photometric shall be required. **Affirmative finding as conditioned.**

Section 5.5.3 Stormwater and Erosion Control
Written approval of the EPSC and Stormwater Plan by the Stormwater Engineering team shall be a requirement prior to release of the zoning permit. **Affirmative finding as conditioned.**

Section 5.5.4 Tree Removal
Not applicable.

<u>Article 6: Development Review Standards</u>

Part 1: Land Division Design Standards
Not applicable.

Part 2: Site Plan Design Standards
Section 6.2.2 Review Standards

(a) Protection of Important Natural Features
No natural features have been identified in the location of the connector. **Affirmative finding.**

(b) Topographical Alterations
The topography of the site generally slopes from south to north and west to east.

Contours of the proposed topography of the connector have been provided. See Plans C-4.00 and C-5.00, which reflect the changing grades between parcels. **Affirmative finding.**

(c) Protection of Important Public Views
There are no protected or important views from this parcel. Not applicable.

(d) Protection of Important Cultural Resources
There are no identified architectural or archaeological resources at the site. Not applicable.

(e) Supporting the Use of Renewable Energy Resources
No part of this application precludes the use of wind, water, solar, geothermal or other renewable energy resource. **Affirmative finding.**

(f) Brownfield Sites
None identified. Not applicable.

(g) Provide for Nature's Events
1 Industrial Parkway does not have prior stormwater permit coverage and no existing stormwater management infrastructure. The 15 Industrial parcel has prior permitting for discharge. GMT will be updating that permit with a new application pending acceptance of the methodology outlined in Section 4.0, under review by the Stormwater engineering program.

The project plan includes significant infrastructure to address and improve Stormwater flow and dispersal. Review and approval by the Stormwater engineering program is a requirement of any permit. **Affirmative finding as conditioned.**

(h) Building Location and Orientation
No change to existing buildings. Not applicable.

(i) Vehicular Access
Access will be maintained via the existing entrances off Austin Drive to the north and Industrial Parkway to the east. To facilitate free circulation of vehicles, the connector path is proposed to link existing parking areas. No work shall be executed within the public right-of-way without prior approval of DPW. **Affirmative finding as conditioned.**

(j) Pedestrian Access

There are no public sidewalks along Industrial Parkway nor internal walkways between lots. The purpose of the project is to improve stormwater performance, rehabilitate the parking lot and to facilitate vehicular access between parcels. Not applicable.

(k) Accessibility for the Handicapped
ADA compliance is under the jurisdiction of the building inspector. No h/c parking spaces are illustrated on plan C-3.00. Assuming handicap accessible parking is a requirement for the GMT building at 1 Industrial Parking, a revised site plan shall be submitted that has those identified handicap parking spaces illustrated. **Affirmative finding as conditioned.**

(l) Parking and Circulation
See 6.2.2. (i) and (k) above. No change is proposed to the number of parking spaces at 1 Industrial Parkway. **Affirmative finding as conditioned.**

(m) Landscaping and Fences
An existing shed and antenna pad on 15 Industrial Parkway will be removed. A guardrail will be installed adjacent to the connector path, with a crushed stone shoulder. See Plans C-3.00 and D-100. Excess existing soil stock will be wasted on site. **Affirmative finding.**

(n) Public Plazas and Open Space
There are no public plazas or required open space as part of this application. Not applicable.

(o) Outdoor Lighting
See Section 5.5.2, above.

(p) Integrate Infrastructure into the design:
Affirmative finding.

Part 3: Architectural Design Standards
Section 6.3.2 Review Standards
Not applicable.

Article 7: Signs
Not applicable**.**

Article 8: Parking
No building expansion is proposed that would require additional parking. The approved site plan from ZP06-885CA defines 34 parking spaces in the lot and 7 truck parking spaces at 1 Industrial Parkway.

The applicant shall confirm that the new parking lot shall provide minimally the same number of parking spaces as existing. The required number of handicap accessible spaces shall be provided, per the building inspector's ADA review. **Affirmative finding as conditioned.**

II. Conditions of Approval

1. Section 2.7.8, Withhold Permit requires that any open violations on this property be remedied, and any zoning permits issued since July 13, 1989 be closed out prior to issuance of a Certificate of Occupancy for this project. See attached property permit history for further information.

2. Light fixtures shall be adjusted to meet the requirements of Section 5.5.2; particularly maximum footcandle measurements within the parking lot area shall not exceed 4 fc; those on walkways 2 fc. A revised photometric shall be supplied prior to release of the zoning permit to confirm these revisions.
3. Illumination levels are encouraged to be reduced by at least 50% within one hour after the end of public business hours.
4. Written approval of the EPSC and Stormwater Plan by the Stormwater Engineering team shall be a requirement prior to release of the zoning permit.
5. Unless specifically altered by the DRB, construction activities shall be limited to 7:30 am to 5:30 pm, Monday through Friday. There shall be no construction on Saturdays or Sundays.
6. The applicant shall confirm that the new parking lot shall provide the same number of parking spaces as existing.
7. Any changes to the curb cut will require approval (and potentially a curb cut permit) from the Department of Public Works. No work shall be executed within the public right-of-way without prior approval of DPW.
8. A revised site plan shall be submitted identifying the location of handicap parking spaces in the replaced parking lot of 1 Industrial Parkway, per the guidance of the Building Inspector.
9. All development is required to meet the Guidelines for Energy Efficient Construction pursuant to the requirements of Article VI. Energy Conservation, Section 8 of the City of Burlington Code of Ordinances.
10. Standard Permit Conditions 1-15.

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

Burlington Development Review Board
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Samantha Tilton
Jim Drummond, (Alternate)
Vacant, (Alternate)

BURLINGTON DEVELOPMENT REVIEW BOARD
THURSDAY July 5th, 2018, 5:00 PM
Contois Auditorium, City Hall, 149 Church St, Burlington, VT
AMENDED SPECIAL MEETING AGENDA

I. Agenda
II. Communications
III. Minutes
IV. Consent

1. **18-1046CA; 1 Industrial Parkway (ELM, Ward 5S) Chittenden County Transportation Authority**
   Construction of access ramp between 1 and 15 Industrial Parkway, full depth reconstruction of the existing parking lot and driveway apron and site lighting. Construction of a dry swale with overflow discharging by controlled outlet structure and stabilized outfall to municipal drainage system. (Project Manager: Mary O'Neil)

2. **18-1047CA; 15 Industrial Parkway (ELM, Ward 5S) Chittenden County Transportation Authority**
   Construction of an access ramp between 1 and 15 Industrial Parkway, as well as full depth reconstruction of the existing parking lot and driveway apron at 1 Industrial parkway and site lighting. No changes in use; additionally the project includes the construction of a dry swale (with underdrain), with overflow discharging by controlled outlet structure and stabilized outfall to municipal drainage system. (Project Manager: Mary O'Neil)

V. Public Hearing

1. **18-0899CA/MA; 56, 58 & 66 North Ave (RM, Ward 3C) Sara Holbrook Community Center**
   For the purpose of closing the public hearing regarding: combining three parcels and expand Sara Holbrook Community Center at 66 North Avenue, demolish a duplex and garage at 58 North Avenue, and demolish a duplex and a shed at 56 North Avenue. (Project Manager: Ryan Morrison)

2. **18-1044CA/CU; 92 Cherry Lane (RL, Ward 5S) Foley Living Trust**
   Construction of a 675 s.f. detached accessory dwelling unit at rear of property. (Project Manager: Ryan Morrison)

VI. Certificate of Appropriateness

1. **18-0929CA; 97 Spear St (I, Ward 8E) University of Vermont & State Agricultural College**
   Addition of new 96,681 g.s.f. multipurpose events center at the east side of the existing UVM PFG complex; also a 17,331 g.s.f addition to the north side for Health and Wellness, for a total of 119,099 g.s.f new space. The proposed - 3000 seat events center will replace the existing Patrick Gym, which will be reconfigured into practice space. No net addition of spectator seats. Existing circulation to remain. (Project Manager: Scott Gustin)

The programs and services of the City of Burlington are accessible to people with disabilities.
Individuals who require special arrangements to participate are encouraged to contact the Department of Planning & Zoning at least 72 hours in advance so that proper accommodations can be arranged. For information call 865-7188 (TTY users: 865-7142).
Printed on 100% Recycled Paper

VII. Adjournment

Plans may be viewed in the Planning and Zoning Office, (City Hall, 149 Church Street, Burlington), between the hours of 8:00 a.m. and 4:30 p.m.
Participation in the DRB proceeding is a prerequisite to the right to take any subsequent appeal. Please note that ANYTHING submitted to the Planning and Zoning office is considered public and cannot be kept confidential. This may not be the final order in which items will be heard. Please view final Agenda, at www.burlingtonvt.gov/pz/drb/agendas or the office notice board, one week before the hearing for the order in which items will be heard.

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David White, FAICP, Director
Meagan Tuttle, AICP, Comprehensive Planner
Jay Appleton, GIS Manager
Scott Gustin, AICP, CFM, Principal Planner
Mary O'Neil, AICP, Principal Planner
Ryan Morrison, Associate Planner
Layne Darfler, Planning Technician
vacant, Zoning Clerk

TO: Development Review Board
FROM: Scott Gustin
DATE: July 5, 2018
RE: 18-0929CA; 97 Spear Street

==========

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

Zone: I Ward: 8E

Owner/Applicant: University of Vermont & State Agricultural College

Request: Construct new multipurpose events center within the UVM PFG complex and construct health & wellness addition on north side of the existing complex. Related landscaping and parking changes.

Applicable Regulations:
Article 2 (Administrative Mechanisms), Article 3 (Applications, Permits, and Project Reviews), Article 4 (Maps & Districts), Article 5 (Citywide General Regulations), Article 6 (Development Criteria & Guidelines), Article 8 (Parking)

Background Information:
The applicant is seeking approval to construct a new 96,681 sf, ~ 3,000 seat multipurpose events center to be situated between the existing Gutterson Field House and Patrick Gym facilities. The proposed events center will replace Patrick Gym for basketball games and other events. Patrick Gym will be converted to a practice facility. There will be no net increase in the number of spectator seats. A 17,331 sf addition is also proposed along the north side of the existing athletics complex to house additional health and wellness facilities. A new concourse is proposed along the south side of Gutterson. A 150-space parking lot will be removed to accommodate the new multipurpose events center. Some new parking is included in the project design (16 spaces), but more importantly, the project is addressed in the current Joint Institutional Parking Management Plan.

The University of Vermont is an educational institution and, therefore, is subject to only limited zoning review per 24 VSA, Sec. 4413, *Limitations on municipal bylaws*. This application may be reviewed only with respect to location, size, height, building bulk, yards, courts, setbacks, density of buildings, off-street parking, loading facilities, traffic, noise, lighting, landscaping, and screening requirements.

The Design Advisory Board reviewed this application May 22, 2018. The Board voted to recommend approval of the project as presented and forward to the Development Review Board.

Recommendation: <u>Certificate of appropriateness approval</u> as per, and subject to, the following findings and conditions:

I. Findings

Article 2: Administrative Mechanisms

There is at least one prior zoning permit (08-768CA) for this property that has expired without issuance of a required certificate of occupancy. Per this section, this prior zoning permit must be closed out with a final certificate of occupancy prior to issuance of a certificate of occupancy for this new zoning permit. **(Affirmative finding as conditioned)**

Article 3: Applications, Permits, and Project Reviews:

Sec. 3.3.2, Applicability

The new building area associated with this project is subject to impact fees per the provisions of *Part 3: Impact Fees* of Article 3. **(Affirmative finding as conditioned)**

Article 4: Maps & Districts

Sec. 4.4.4, Institutional District:

(a) Purpose

See Sec. 4.5.2 (f) *District Specific Regulations: UVM South of Main Street Campus*.

(b) Dimensional Standards & Density

See Sec. 4.5.2 (f) *District Specific Regulations: UVM South of Main Street Campus*.

(c) Permitted & Conditional Uses

See Sec. 4.5.2 (f) *District Specific Regulations: UVM South of Main Street Campus*.

Sec. 4.5.2, Institutional Core Campus Overlay Districts

(a) Purpose

The Institutional Core Campus Overlay Districts are intended to provide for reasonable future growth for institutions within the core of their respective campuses without further intrusion into surrounding residential neighborhoods. It provides for increased development scale and intensity than would be found in adjacent residential areas and for a variety of uses associated with higher education, health care, and cultural and research centers. The proposed construction of the new multipurpose events center is consistent with this intent. **(Affirmative finding)**

(b) Areas Covered

The proposed construction is located within the UVM South of Main Street Campus overlay. **(Affirmative finding)**

(f) District Specific Regulations: UVM South of Main Street Campus (ICC-UVMS)

1. Lot Coverage

Within this overlay district, a maximum aggregate lot coverage of 60% is allowed. Lot coverage will increase from an existing 40.4% to 40.9%. **(Affirmative finding)**

2. Setbacks

Side and rear setback requirements pertain to the periphery of the overlay district. The proposed construction is nowhere near the peripheral lines of the overlay. **(Affirmative finding)**

3. Development Buffer
The proposed development does not infringe on the Development Buffers at the northwestern end of the overlay district. **(Affirmative finding)**

4. Surface Parking
No net increase in surface parking is included in this proposal. **(Affirmative finding)**

5. Building Height
The proposed development is located within the ICC-UVMS Height Overlay. Within this overlay, building height is limited to 80.' The proposed height is well under this limit at ~ 60.'
(Affirmative finding)

6. Density
Within the ICC-UVMS district, the non-residential density equivalent set forth in Sec. 5.2.7 (a) 2 does not apply to the proposed development. **(Affirmative finding)**

7. Uses
Within the ICC-UVMS district, post-secondary schools shall be treated as permitted uses. The project is part of the university, and the post-secondary school use will remain unchanged.
(Affirmative finding)

Article 5: Citywide General Regulations
Sec. 5.2.3, Lot Coverage Requirements
See Sec. 4.5.2.

Sec. 5.2.4, Buildable Area Calculation
This criterion does not apply to properties in the I zone. **(Not applicable)**

Sec. 5.2.5, Setbacks
See Sec. 4.5.2.

Sec. 5.2.6, Building Height Limits
See Sec. 4.5.2.

Sec. 5.2.7, Density and Intensity of Development Calculations
See Sec. 4.5.2.

Sec. 5.5.1, Nuisance Regulations
Nothing in this proposal appears to have any bearing on the city's nuisance regulations.
(Affirmative finding)

Sec. 5.5.2, Outdoor Lighting
New outdoor lighting is included in the project design. Building entries, walkways, and circulation areas will be illuminated. Acceptable LED lantern fixtures will be used. A photometric plan has been submitted that demonstrates acceptable illumination levels. **(Affirmative finding)**

Sec. 5.5.3, Stormwater and Erosion Control

As required, plans for erosion prevention and sediment control and for post construction stormwater management have been provided to the city's stormwater program staff. The stormwater runoff associated with this project will be directed into the university's existing stormwater infrastructure for attenuation and treatment. Final review and approval by the city's stormwater program staff is required. **(Affirmative finding as conditioned)**

Article 6: Development Review Standards
Part 1, Land Division Design Standards
Not applicable.

Part 2, Site Plan Design Standards
Sec. 6.2.2, Review Standards
(a) Protection of important natural features
Much of the new building space will be constructed on what is presently asphalt. Relatively minimal existing green space will be lost. None of the areas affected are important natural features as identified in the Open Space Protection Plan. **(Affirmative finding)**

(b) Topographical alterations
Not applicable per 24 VSA, Sec. 4413.

(c) Protection of important public views
Not applicable per 24 VSA, Sec. 4413.

(d) Protection of important cultural resources
Not applicable per 24 VSA, Sec. 4413.

(e) Supporting the use of alternative energy
Not applicable per 24 VSA, Sec. 4413.

(f) Brownfield sites
Not applicable per 24 VSA, Sec. 4413.

(g) Provide for nature's events
See Sec. 5.5.3.

(h) Building location and orientation
Not applicable per 24 VSA, Sec. 4413.

(i) Vehicular access
Not applicable per 24 VSA, Sec. 4413.

(j) Pedestrian access
Not applicable per 24 VSA, Sec. 4413.

(k) Accessibility for the handicapped
Not applicable per 24 VSA, Sec. 4413. Applicable accessibility requirements under the City's building code continue to apply.

(l) Parking and circulation
A 150-space parking lot will be replaced by the new multipurpose events center. A total of 16 new parking spaces will be provided for service vehicles and individuals in need of handicap accessible spaces. Within the Gutterson parking area, 134 (JIPMP says 133) parking spaces will be reassigned from the hospital to the university. The project is addressed in the current Joint Institutional Parking Management Plan. Sufficient parking remains as reflected in the management plan. See Sec. 8.1.8 for details.

Minimal revisions to circulation are proposed and are mostly related to event-day access to the multi-purpose events center. Traffic on the roadway paralleling the proposed events center to the east will be controlled by onsite personnel on event days. Only shuttles and vehicles with handicap tags will be allowed on this road during events. All other vehicles will park at Gutterson or at parking facilities further away. As is presently the case, shuttle service will be provided to afford access during events. Overall site circulation will not change. Davis Road remains one-way affording access onto campus. There is no permitted exit onto South Prospect Street except during emergencies. A nearby resident has expressed concern about the defunct gate controlling access at Davis Road. The applicant is advised to fix or replace this gate. Effort is underway to do so. Other access remains from Spear Street and University Heights Road. All traffic will flow to Main Street or Spear Street as is currently the case.

As there will be no increase in spectator seats, no traffic analysis has been provided or is required for this application. **(Affirmative finding)**

(m) Landscaping, fences, and retaining walls
New landscaping and pedestrian pathways are included in the project design. New plantings will enhance surrounding green spaces, particularly at the northeast end of the site. A comprehensive landscaping plan is included in the application and incorporates a variety of trees, shrubs, and perennials. As proposed, the new landscaping effectively compliments the project design. **(Affirmative finding)**

(n) Public plazas and open space
No public plaza or open space is included or required in this proposal. **(Not applicable)**

(o) Outdoor lighting
See Sec. 5.5.2.

(p) Integrate infrastructure into the design
Any new utility lines serving the proposed facility must be buried. A proposed "service yard" will contain a trash compactor and loading bay. The location is minimally visible. The Design Advisory Board found that no additional screening measures were necessary. **(Affirmative finding)**

Part 3, Architectural Design Standards
Sec. 6.3.2, Review Standards
(a) Relate development to its environment
1. Massing, Height, and Scale
The proposed multipurpose events center is large at 96,861 sf. Perception of the structure's large scale will be significantly mitigated by its placement within the existing athletic complex.

While sizeable, the new building will be set among larger existing components of the university's athletic complex. Building height and massing are comparable to those of the existing Gutterson Field House. Both incorporate curving rooflines and similar proportions. The two will be viewed side-by-side from the east and will read as two components of the overall athletic complex. The much smaller health and wellness addition to the north represents a simpler rectilinear design, albeit with more generous glazing than existing conditions and a sloping roofline. **(Affirmative finding)**

2. Roofs and Rooflines
Not applicable per 24 VSA, Sec. 4413.

3. Building Openings
Not applicable per 24 VSA, Sec. 4413.

(b) Protection of important architectural resources
Not applicable per 24 VSA, Sec. 4413.

(c) Protection of important public views
Not applicable per 24 VSA, Sec. 4413.

(d) Provide an active and inviting street edge
Not applicable per 24 VSA, Sec. 4413.

(e) Quality of materials
Not applicable per 24 VSA, Sec. 4413.

(f) Reduce energy utilization
Not applicable per 24 VSA, Sec. 4413.

(g) Make advertising features complimentary to the site
Some outdoor signage is depicted in the project plans. Generally, it looks acceptable except, perhaps, the large "V" between the new multipurpose center and Gutterson. Height limit may be exceeded for this feature. In any event, outdoor signage is subject to review and approval under separate zoning permit. **(Affirmative finding as conditioned)**

(h) Integrate infrastructure into the building design
The application materials include a roof plan and related elevation plans depicting the rooftop equipment. Mechanical equipment is screened or located such that it is not visible from surrounding areas. The cooling unit remains visible; however, given its height, the DAB felt that screening it would be ineffective. **(Affirmative finding)**

(i) Make spaces safe and secure
The proposed building must comply with the city's current egress requirements. Building entries will be illuminated. **(Affirmative finding as conditioned)**

Article 8: Parking
Sec. 8.1.8, Minimum Off-Street Parking Requirements

This project is incorporated into the 2014-2019 Joint Institutional Parking Management Plan as approved by the Development Review Board May 19, 2014. Under the JIPMP, this project was envisioned to be substantially larger with a net increase of several thousand spectator seats. The actual proposal is quite a bit smaller and includes no net increase in spectator seats. Even under the larger project scenario, UVM's parking inventory continues to show a 748-space parking surplus for total demand in 2019. With the smaller project actually being proposed, parking surplus is expected to be greater. The next update of the JIPMP must address the multi-purpose events center as actually proposed. **(Affirmative finding)**

Sec. 8.2.5, Bicycle Parking Requirements

The proposed development will require 6 long-term bicycle parking spaces (1 per 20,000 sf) and 71 short-term bicycle parking spaces (3 per 5,000 sf). The project plans depict the required 6 enclosed long-term bicycle parking spaces. They are in the form of enclosed bike lockers by the event center's main entry. The plans depict 72 short-term bicycle parking spots using hoop racks. They are appropriately located near building entries. **(Affirmative finding)**

II. Conditions of Approval

1. **Prior to release of the zoning permit**, the applicant shall obtain written approval of the Erosion Prevention and Sediment Control Plan from the Stormwater Administrator.
2. **Prior to the release of the zoning permit**, the applicant shall obtain the written approval of the Stormwater Management Plan from the Stormwater Administrator.
3. **Prior to issuance of a certificate of occupancy**, zoning permit 08-768CA shall be closed out with a final certificate of occupancy.
4. At least **7 days prior to issuance of a certificate of occupancy**, impact fees based on the net new building square footage shall be paid to the Department of Planning & Zoning.
5. All new utility lines shall be buried.
6. All outdoor signs require separate zoning permits.
7. The Applicant/Property Owner is responsible for obtaining all necessary Zoning Permits and Building Permits through the Department of Public Works as well as other permit(s) as may be required.
8. Standard permit conditions 1-15.

The University of Vermont

To: Scott Gustin, Principal Planner
Burlington Planning & Zoning Department
149 Church Street
Burlington, VT 05401

April 16, 2018

Dear Scott,

Re: Zoning Permit Application for the University of Vermont Multipurpose Center at 97 Spear Street, Burlington

This is a COA Level II application for the University of Vermont (UVM) to construct additions to the Patrick Forbush Gutterson (PFG) athletics complex at 97 Spear Street, at the UVM athletic campus, in Burlington.

The additions will consist of a new 96,681 gross square feet (GSF) multipurpose events center at the east side of the existing UVM PFG complex as well as a 17,331 GSF addition to the north side of the complex, as part of a Health and Wellness renovation/expansion, for a total of 119,099 GSF new space. The proposed ~3,000 seat events center will replace the existing Patrick Gym, which will be reconfigured into practice space. There will be no net addition of spectator seats. The existing traffic circulation pattern, as per the 2003 South Campus Master Transportation Plan and updated in 2009, will remain.

The landscaping plan includes an overall increase in number of trees as well as paving of informal existing paths to better facilitate pedestrian circulation.

See Project Description for more details.

Lot coverage for the existing UVM South of Main campus is 40.36%. This number reflects a correction in lot coverage calculations that we recently discovered. This project will increase lot coverage to 40.90%.

The City's Planning & Zoning Department has previously advised the University that the University of Vermont is subject to limited zoning review per 24 VSA, §4413, *Limitations on Municipal Bylaws*. This specifies that this application may be reviewed only with respect to location, size, height, building bulk, yards, courts, setbacks, density of buildings, off street parking, loading facilities, traffic, noise, lighting, landscaping and screening requirements.

Location: The proposed multipurpose center will fit in with the existing Gutterson Field House, and share core accessory spaces. The proposed center will replace Patrick Gym, located in the same complex.

Size, height, building bulk: The new events center will replace the existing Patrick Gym with the same number of spectator seats, within the same complex. That means that traffic volume and circulation patterns can remain essentially the same. The overall undulating shape of the new events center echoes the Gutterson Field House, and was designed at a similar scale. The addition on the north is modest in scope, and fills out the existing façade and keeps the same scale and building materials.

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Yards, courts, setbacks: The entire addition is within the UVM athletics campus, set back from all surrounding streets. The roadway to the east of the events center will have a sidewalk, curb and tree plantings. There are athletic fields to the south of the PFG complex, subject to previous permits.

Building density: There are no residential units in this project.

Off street parking: The seating capacity will not change, so the need for parking spaces will not change. The events center will be built on an existing surface parking lot, displacing 150 spaces. Sixteen spaces will be built on the southwest corner of the PFG complex, for service and accessible parking. 134 existing spaces will be transferred back to UVM affiliates use from the bottom level of the Gutterson Garage, which is currently used by UVM Medical Center (UVM MC).

Loading facilities: The existing loading dock on the east side of the facility will be rebuilt in essentially the same spot.

Traffic: Overall circulation will not change, and will conform with the 2003 South Campus Master Transportation Plan, updated in 2009. The roadway to the east of the complex, where spectators will enter on game day, will have a special events protocol with personnel directing traffic. This will be a primarily pedestrian corridor on game day, with most vehicles parking in Gutterson Garage or farther away. The Gutterson Garage entrances are on the north, south and northwest corner of the garage. The only vehicles accessing the roadway near the event center entries will be either shuttles or vehicles with handicap tags, for either drop off or parking in the accessible parking spots near the entries. See L600 for more details.

Noise: The new events center replaces the existing Patrick Gym for spectator events. Both are indoor venues and there should be no new sources of noise.

Lighting: All outdoor lighting will conform with IESNA standards. No new sporting event lighting is planned. See L500 for more details.

Landscaping and screening: New landscaping and path paving will improve the existing landscape. See L100, L300 and L400 for more details.

Stormwater and Erosion Control: See attached Erosion Prevention & Sediment Control Narrative and permit application, as well as the Stormwater Discharge Narrative. The University will continue to work closely with the Burlington DPW Stormwater Program Manager and copy her on information given to and received from the state stormwater permitting authorities.

The University is working with the Burlington Fire Department, the Burlington Electric Department and the Burlington Department of Public Works on completion of technical details.

As consistent with past practices, the University has met with key community stakeholders including the NPAs as well as our South Burlington neighbors to inform them about this project.

The project construction cost is $65,000,000. Construction is scheduled to start in the spring of 2019 and be completed in February 2021. The University requests that this zoning permit be extended until the summer of 2021, for a period of 3.5 years, in order to complete all construction and landscaping.

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The University of Vermont

Please contact me if you have any further questions or need more information.

Sincerely,

Lani Ravin

Lani Ravin, AICP, UVM Associate Planner

Campus Planning Services

cc: Linda Seavey, Director, Campus Planning Services
Robert Vaughan, Director, Capital Planning & Management
Paula Carlaccini, Director, Facilities Design & Construction

ATTACHMENTS:

Zoning Permit Application
Check # 1438100 for $130,110.00
Project Description
Site Location Plan
EPSC Application
2009 Traffic Circulation Plan, from the South Campus Transportation Master Plan (existing, to remain)
Lighting Specifications
Blue Lights Specifications
Bollard Specifications
"Twig Bench" Specifications
Bike Rack Inverted U's Specifications
Bike Lockers Specifications
Master Plan Concept
Existing Conditions: Campus Health & Wellness perspective
Exterior Perspective: Campus Health & Wellness
Exterior Perspectives: Events Center (1) & (2)
Exterior Elevation
Plans, dated 4/12/2018: L100, L300, L400, L500, L600, C0100, C0101, C0102, C0103, C0104, C0105, C0106, C0107, C0108, C0200, C0201, C0202, C0300, C0301, C0400, C0401, C0600, C0601, C0602, C0603, C0604, A0105, A0305, A0311, A0312, A0313, A0314, A0315, A0350, A0351 A0352

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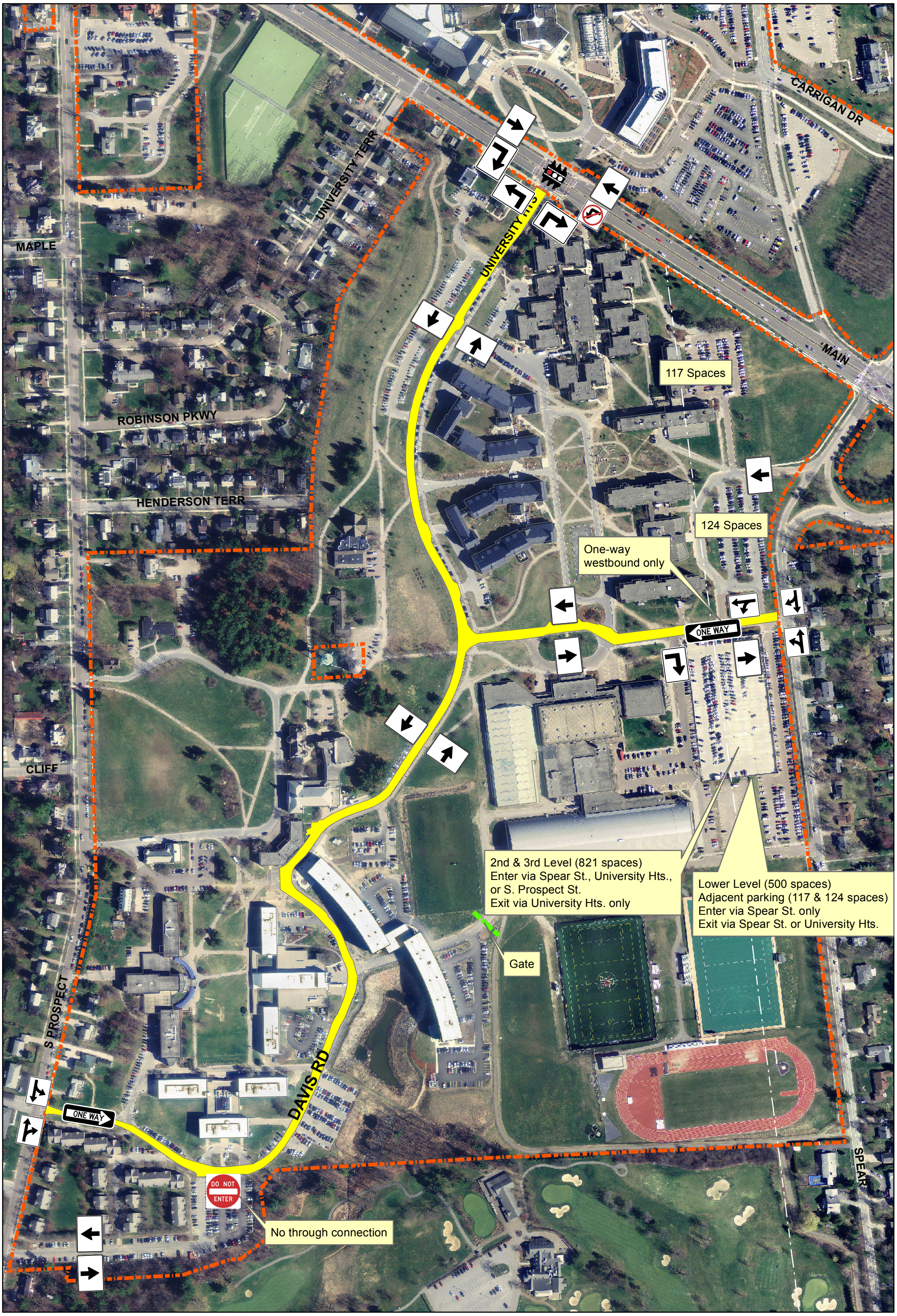

UVM MAIN CAMPUS

UVM_BOUNDARY (APPROXIMATE)

0 100 200 400 600 800 Feet

N

Map Produced by UVM Campus Planning Services
Orthophotography: 2013 CCRPC 15cm; Fugro Earthdata, Inc.

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NOTES

1. The Contractor shall be responsible for repairing all disturbed areas back to original condition, including but not limited to curbing, sidewalks, road, parking areas, landscaping, site lighting, electrical, and etc. All asphalt shall be sawcut prior to paving.
2. All stumps, rock, and other non-approved trench backfill material discovered during construction is the exclusive property of the Contractor and shall be removed from UVM property and disposed of in a State approved disposal location. All existing soils reused for fill shall conform to all applicable sections of VTRANS specifications Section 203-Excavation & Embankments.Contractor shall review soil investigation report and soils logs prior to bid. Any soil reused as fill under roads and applicable concrete sidewalks shall pass a subgrade proof roll with a loaded tandem. Fill soils that do not pass a subgrade proof roll shall be removed and replaced at the Contractor's expense.
3. All passing sieve, proctor, and compaction testing expenses shall be paid by Owner. Testing coordination, all other required testing, and expenses for failed tests shall be the Contractor's responsibility.
4. The Contractor shall contact the Burlington Electric Department prior to any work in the vicinity of the existing electric conduits.
5. This project requires coverage under an Individual Construction Stormwater Discharge Permit and the City of Burlington Standard Erosion Prevention & Sediment Control Permit. The Contractor shall be the On-site Coordinator for the project and shall be responsible for all required inspections (minimum weekly and after any storm event that produces a discharge), turbidity readings, maintenance, and reporting. The On-Site Plan Coordinator shall be required to provide a turbidity meter for the project. The Contractor shall be responsible for installing, maintaining and removing all erosion and sediment control devices shown on the plans or details and, to the maximum extent practical, to minimize potential contamination of stormwater runoff from the construction activities.
6. Contractor shall be responsible for all "As-built" measurement and drafting requirements as outlined on the Detail Sheets. All trench excavations shall remain open until all as-built survey shots have been taken. Progress Record Drawings shall be submitted to the Engineer as indicated in the Record Drawing specifications.
7. See Erosion Control and Logistics Plans for locations of staging / storage areas.
8. The Contractor shall be responsible for all construction barrier/safety fencing required for the project.
9. Definition of "Preconstruction Excavation" for these contract documents shall be:
   The site contractor shall expose utilities and obtain all necessary information, including but not limited to, invert elevation, size, depth, pipe type, joint location, etc. Contractor shall transit survey the location and elevations of the utility. Contractor shall provide the engineer with sketches indicating horizontal and vertical information of pipe or conduit type and size, cross-section information, concrete encasement information (top and bottom elevations, width, etc.), joint location, etc. of each required existing underground utility. Accuracy of horizontal location is within 1 foot, and accuracy of vertical elevation is within 0.02 ft. (1/4"). Coordinate all excavation with City, Owner, and Engineer. Preconstruction excavations shall occur prior to ordering structures and prior to utility construction to facilitate redesign and/or design confirmation.
10. The location of the preconstruction excavation symbols does not necessarily indicate the location of the buried utility. It is the responsibility of the Contractor to find and expose the utility.
11. Contractor shall include 10 preconstruction excavations in addition to the ones shown on the drawings.
12. Contractor shall be responsible for importing topsoil as required to complete the project. Contractor shall test topsoil for approval by the Owner and Engineer.
13. The Contractor shall be responsible for all signage and fencing necessary to providing safe vehicular and pedestrian access through or around the site during construction.
14. All sewer and storm pipes shall be PVC SDR 35 unless otherwise noted. PVC pipe shall contain no recycled content.
15. Core and boot all existing structures unless otherwise noted.
16. All new catch basins and sanitary sewer manhole must have one 6" precast concrete grade ring.
17. All waterline pipe shall be Class 52 ductile iron. All bends and fittings shall have redi-mix cast in place thrust blocks
18. Contractor shall contact UVM Risk Management Training and Compliance office for any work involving contact with asbestos cement pipe.
19. Temporary groundwater, stormwater, and sewer by-pass pumping and/or diversion is the responsibility of the Contractor. The Contractor is responsible for providing all necessary pumps and equipment to perform the work. Overnight pumping is not allowed.
20. All sidewalks shall have 2% maximum cross slope.
21. Contractor to pin concrete sidewalk/slabs to all contact points with stairs, building, bike slab, retaining walls, etc.
22. Contractor shall maintain full occupancy and fire department access to all surrounding buildings. Coordinate all temporary access with the University representative.
23. This project is subject to all erosion prevention and sediment control measures including the monitoring, inspection, and reporting requirements of an Individual Construction Stormwater Discharge Permit. The General Contractor shall be the On-Site Plan Coordinator for the project and shall be responsible for providing a turbidity meter for water quality measurements.
24. Buried natural gas is shown for alignment purposes only. Contact Vermont Gas Systems for design and details of new gas line. Contractor shall be responsible for the excavation, backfill, and restoration for the construction of the natural gas lines. Vermont Gas Systems will provide the piping, labor to install, and testing for the new gas main. Coordinate work and all gas shut down procedures with the Owner.
25. Removal of all erosion control matting and inlet protection is the responsibility of the Contractor.
26. At the end of the project, clean the sumps of all new and existing catch basins and storm manholes within the project limits.
27. Electrical, lighting and PBX lines are shown for illustrative/coordination purposes only. Refer to Electrical plans and specifications for design.
28. Refer to Plumbing plans for sewer and storm design within five feet of the building.
29. Refer to Plumbing and/or Fire Protection plans for waterline design within five feet of building.
30. There are existing PBX conduits located in the vicinity of this project. The Contractor shall contact UVM Telecommunications and Network Services (656-3339) prior to any work in the vicinity of the PBX conduit. The Contractor shall carefully excavate around the PBX conduit to prevent damage to the PBX infrastructure. Contractor shall be responsible for placing Owner supplied locator balls over exposed conduits prior to backfilling.

Legend (See Sheet EX1.0 for existing conditions Legend)

- Proposed blue phone
- New light pole and base
- Inlet protection around catch basin
- Preconstruction Excavation
- x363.9 — Finish Grade Spot Grade Elevation
- Finish Grade Direction of Flow
- 150 — New Finish Grade Contour
- G — GV — New Gas Line/Valve
- S — S — New Sewer Line/Manhole
- FM — New Sewer Forcemain
- ST — ST — New Storm Line/Manhole/Basin
- UD — New Underdrain
- FD — New Footing Drain – See Structural
- RD — New Roof Drain
- W — WV — New Water Line/Hydrant/Valve/Shutoff
- PBX — PBX — New PBX Line/manhole
- New Concrete/Granite Curb
- New Loading Dock Chain-link fence
- New Building
- New pavement
- New Heavy Duty Concrete
- New Concrete Walk
- New Multi-Use Concrete walk
- New Concrete Pad at Exterior Door
- Pavement Repair – Remove existing and repave (3" min.)

0' 40' 80' 160' 240'

Bar Scale 1" = 40'

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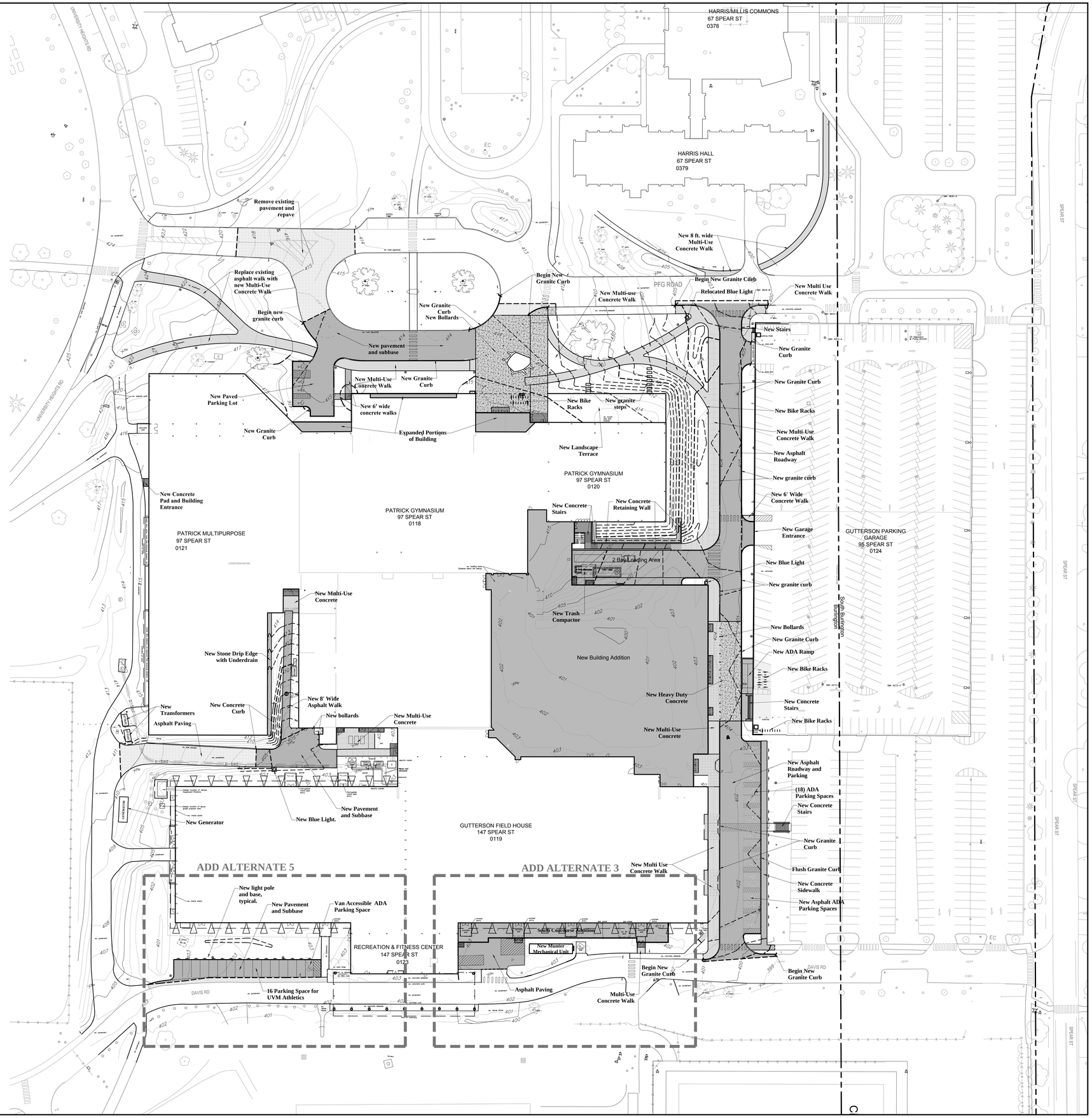

The University of Vermont

University of Verm
Multipurpose Cent

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(802) 658-2775

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Colchester, VT 05446
(802) 878-0375

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Howe Engineers
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101 Longwater Circle Suite 203
Norwell, MA 02061
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The Sextant Group
Tel-Data Consultant
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Boston, MA 02115
(617) 933-9229

Slade Engineering
Associate Mechanical Engineer
18 Clarendon Avenue
Montpelier, VT 05602
(802) 777-3198

Pearson and Associates
Associate Electrical Engineer
174 Thomas Lane
Stowe, VT 05672
(802) 253-9607

NOT FOR CONSTRUCTION

No.	Description	Da
-	Burlington DRB	12 AP
-	DD Pricing Set	23 MA
-	DD Progress Set	02 MA
-	Supplemental SD Set	03 NO
-	SD Pricing Set	25 AU

N

KEY PLAN

Drawing Title:

OVERALL CIVIL SITE PLAN

Project No.: 005353.00 Checked by:

C0100

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PATRICK MULTIPURPOSE
97 SPEAR ST
0121

PATRICK GYMNASIUM
97 SPEAR ST
0118

GUTTERSON FIELD HOUSE
147 SPEAR ST
0119

RECREATION & FITNESS CENTER
147 SPEAR ST
0123

LOCKER ROOM ADDITION

South Concourse Addition

New Munter Unit

2 Bay Loading Area

DAVIS RD

GENERATOR

Concrete Pad at exterior doors, typical. See Structural

New Multi-Use Concrete

New Stone Drip Edge with Underdrain

New Yard Drain Rim = 411.5 Inv. = 409.5

New Asphalt Walk

New Electric Manhole

New Yard Drain Rim = 411.0 Inv. = 409.0

New CB Rim 406.2 Inv. in 400.6 Inv. out 400.5

New Bollards, typical

New transformers. See Electrical

New steel bollards, typ.

New electrical duct banks. See Electric Site Plan

New Yard Drain Rim = 410.5 Inv. = 408.5

New concrete curb

New Multi-Use Concrete Sidewalk

New structural concrete at exterior doors, typical

New golf cart parking

New 12" PVC Storm

Core and boot new penetration. Inv. 398.5

New structural concrete at exterior doors, typical

Wood roof structure

cleanouts

electric meter

electric panels

Remove asphalt, and repave

New Blue Light. See Electrical

New CB Rim 403.75 Inv 399.1

Corrugated metal pipe entry

New Pavement and Subbase

Design location of Verizon Equipment Platform

Design location of above grade propane tank.

New Generator. See Electrical Plans

ex. metal stairs

Regrade area

Regrade area

1 Van Accessible ADA parking space with signs and pavement markings

New CB Rim 401.50 Inv. out 398.6

15 parking spaces with signs for service and athletic department vehicles

Sawcut pavement, typical

Repair pavement. See Detail

New light pole and base, typical. See Landscape and Electrical Plans

Core & boot new penetration. Inv. 397.8

Cb 4950–1
Rim 401.34
Inv. in
Inv. out

Cb0119–2
Rim 402.88
Inv. in 399.8 (12"NE)
Inv. in 399.2 (12"N)
Inv. out 399.0 (12")

New CB Rim 403.00 Inv. in 398.7 (6" RD) Inv. out 398.6

New CB Rim 402.40 Inv. in 398.4 (12") Inv. in 398.4 (6"RD) Inv. out 398.3

Cb 4950–2
Rim 402.88
Inv. in
Inv. out

Stmh 4950–3
Rim 399.48
Inv. in
Inv. out

Remove pavement, add subbase as reqired to achieve design finished grades, and repave (3")

New 12" Underslab Storm, See Plumbing Plans

New Concrete Retaining Wall. See Structural

New Concrete Stairs. See Structural

Cut in new 8"x8" hydrant tee and valves.

After new line is installed and successfully tested, cut and cap existing pipe at valve. Remove valve box.

New Stone Drip Edge with Underdrain

Concrete Pad at exterior doors, typical. See Structural

New CB Rim 399.50 Inv in 394.50 (S) Inv. Out 394.40 (E)

New CB Rim 399.70 Inv in 395.7 (6" UD) Inv. Out 394.7 (N)

New Fuel Oil Tank, See Mechanical Plans

New Gas Meter

New 10" Underslab Sewer. See Plumbing Plans

New 12" Underslab Storm, See Plumbing Plans

Install temporary gas meter during building construction. Coordinate with Vermont Gas for temporary meter and service line. Protect temporary meter with concrete construction waste blocks

New FDC

New 8" waterline

New CB Rim 402.15 Inv in 397.10 (N) Inv. in 393.50 (W) Inv. Out 393.40 (E)

New Blue Light

New 8" D.I. Water

Begin Granite Curb

New Gas Service

New bollards, typical.

Cap existing storm pipe

Concrete Pad at exterior doors, typical. See Structural

New Heavy Duty Concrete

New 12" Underslab Storm, See Plumbing Plans

New gas service. See Vermont Gas Specifications.

New 4" Underslab Storm, See Plumbing Plans

New CB Rim 402.71 Inv. In 389.17 (SW) Inv. Out 389.07 (12" N)

New CB 4264-5 Rim 402.8 Inv. In 389.44 (SE) Inv. In 390.6 (W) Inv. Out 389.34 (NE)

New Heavy Duty Concrete Sidewalk

New hydrant (100' from FDC)

New CB Rim 402.70 Inv in 398.80 (4"UD) Inv. Out 398.70 (S)

8"x8"tee and valves.

New SMH 4264-D Rim 404.0 Inv. in 390.5 (W) Inv. in 390.5 (S) Inv. out 390.4

New CB Rim 402.30 Inv. Out 397.30 (12")

Strnh 4264–2
Rim 404.42
Inv. in 390.73 (15",12"NW)
Inv. in 387.53 (18")
Inv. in 385.73 (12"W)
Inv. out 385.73

New STMH 4264-2B Rim 402.54 Inv. in 397.00 (12"E) Inv in 393.10 (12"NW) Inv. in 393.5 (12"SW) Inv. in 387.33 (18"SE) Inv. Out 385.73 (N)

Cb 4264–1
Rim 405.23
Inv. in 393.67 (10")
Inv. in 388.22 (12")
Inv. out 388.2

New ADA Ramp. See Structural

New Bike Racks

New CB Rim 402.71 Inv. In 388.57 (S) Inv. Out 388.47 (N)

New Stairs. See Structural

New Bike Racks

Cb 4271–3

New CB Rim 401.68 Inv. In 389.9 (S) Inv. Out 389.8 (NW)

New SMH Rim 403.0 Inv. In 392.20 (8") Inv. In 392.5 (6") Inv. Out 389.8 (NW)

After testing: 392.10 connect new waterline to existing

(18) ADA Parking Spaces With Signs and Pavement Marking

New CB Rim 401.72 Inv. In 390.62 (S) Inv. Out 390.52 (N)

New SMH Rim 402.7 Inv. In 392.8 Inv. Out 392.7

New concrete stairs

Flush Granite Curb

New CB Rim 401.75 Inv. In 391.2 (S) Inv. Out 391.1 (N)

New Concrete Sidewalk

New Asphalt ADA Parking Spaces

New CB Rim 401.17 Inv. In 392.09 (W) Inv. Out 391.99 (N)

New Bike Racks

New SMH Rim 400.2 Inv. 394.4

Begin New Granite Curb

New gas service. Vermont Gas

New CB Rim 402.00 Inv. In 392.98 Inv. out 392.88

New CB Rim 402.50 Inv. in 397.9 (12") Inv. in 397.9 (6" RD) Inv. out 397.48

New 6" D.I. Waterline

Begin New Granite Curb

New Yard Drain Rim = 410.5 Inv. = 408.5

New CB Rim 406.2 Inv. in 400.6 Inv. out 400.5

New Yard Drain Rim = 411.0 Inv. = 409.0

New Stone Drip Edge with Underdrain

New Yard Drain Rim = 411.5 Inv. = 409.5

New Asphalt Walk

New Electric Manhole

New Bollards, typical

New transformers. See Electrical

New steel bollards, typ.

New electrical duct banks. See Electric Site Plan

New concrete curb

New Multi-Use Concrete Sidewalk

New structural concrete at exterior doors, typical

New golf cart parking

New 12" PVC Storm

Core and boot new penetration. Inv. 398.5

New structural concrete at exterior doors, typical

Wood roof structure

cleanouts

electric meter

electric panels

Remove asphalt, and repave

New Blue Light. See Electrical

New CB Rim 403.75 Inv 399.1

Corrugated metal pipe entry

New Pavement and Subbase

Design location of Verizon Equipment Platform

Design location of above grade propane tank.

New Generator. See Electrical Plans

ex. metal stairs

Regrade area

Regrade area

1 Van Accessible ADA parking space with signs and pavement markings

New CB Rim 401.50 Inv. out 398.6

15 parking spaces with signs for service and athletic department vehicles

Sawcut pavement, typical

Repair pavement. See Detail

New light pole and base, typical. See Landscape and Electrical Plans

Core & boot new penetration. Inv. 397.8

Cb 4950–1
Rim 401.34
Inv. in
Inv. out

Cb0119–2
Rim 402.88
Inv. in 399.8 (12"NE)
Inv. in 399.2 (12"N)
Inv. out 399.0 (12")

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Rim 402.88
Inv. in
Inv. out

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Inv. in
Inv. out

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New Concrete Stairs. See Structural

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New CB Rim 399.70 Inv in 395.7 (6" UD) Inv. Out 394.7 (N)

New Fuel Oil Tank, See Mechanical Plans

New Gas Meter

New 10" Underslab Sewer. See Plumbing Plans

New 12" Underslab Storm, See Plumbing Plans

Install temporary gas meter during building construction. Coordinate with Vermont Gas for temporary meter and service line. Protect temporary meter with concrete construction waste blocks

New FDC

New 8" waterline

New CB Rim 402.15 Inv in 397.10 (N) Inv. in 393.50 (W) Inv. Out 393.40 (E)

New Blue Light

New 8" D.I. Water

Begin Granite Curb

New Gas Service

New bollards, typical.

Cap existing storm pipe

Concrete Pad at exterior doors, typical. See Structural

New Heavy Duty Concrete

New 12" Underslab Storm, See Plumbing Plans

New gas service. See Vermont Gas Specifications.

New 4" Underslab Storm, See Plumbing Plans

New CB Rim 402.71 Inv. In 389.17 (SW) Inv. Out 389.07 (12" N)

New CB 4264-5 Rim 402.8 Inv. In 389.44 (SE) Inv. In 390.6 (W) Inv. Out 389.34 (NE)

New Heavy Duty Concrete Sidewalk

New hydrant (100' from FDC)

New CB Rim 402.70 Inv in 398.80 (4"UD) Inv. Out 398.70 (S)

8"x8"tee and valves.

New SMH 4264-D Rim 404.0 Inv. in 390.5 (W) Inv. in 390.5 (S) Inv. out 390.4

New CB Rim 402.30 Inv. Out 397.30 (12")

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Inv. in 385.73 (12"W)
Inv. out 385.73

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Rim 405.23
Inv. in 393.67 (10")
Inv. in 388.22 (12")
Inv. out 388.2

New ADA Ramp. See Structural

New Bike Racks

New CB Rim 402.71 Inv. In 388.57 (S) Inv. Out 388.47 (N)

New Stairs. See Structural

New Bike Racks

Cb 4271–3

New CB Rim 401.68 Inv. In 389.9 (S) Inv. Out 389.8 (NW)

New SMH Rim 403.0 Inv. In 392.20 (8") Inv. In 392.5 (6") Inv. Out 389.8 (NW)

After testing: 392.10 connect new waterline to existing

(18) ADA Parking Spaces With Signs and Pavement Marking

New CB Rim 401.72 Inv. In 390.62 (S) Inv. Out 390.52 (N)

New SMH Rim 402.7 Inv. In 392.8 Inv. Out 392.7

New concrete stairs

Flush Granite Curb

New CB Rim 401.75 Inv. In 391.2 (S) Inv. Out 391.1 (N)

New Concrete Sidewalk

New Asphalt ADA Parking Spaces

New CB Rim 401.17 Inv. In 392.09 (W) Inv. Out 391.99 (N)

New Bike Racks

New SMH Rim 400.2 Inv. 394.4

Begin New Granite Curb

New gas service. Vermont Gas

New CB Rim 402.00 Inv. In 392.98 Inv. out 392.88

New CB Rim 402.50 Inv. in 397.9 (12") Inv. in 397.9 (6" RD) Inv. out 397.48

New 6" D.I. Waterline

Begin New Granite Curb

See C-0100 for Notes and Legend

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NOT FOR CONSTRUCTION

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

No.	Description	Date
-	Burlington DRB	12 APR
-	DD Pricing Set	23 MA
-	DD Progress Set	02 MA
-	Supplemental SD Set	03 NO
-	SD Pricing Set	25 AU

KEY PLAN

Drawing Title:

CIVIL SITE & UTILITY PLAN

Project No.: 005353.00 Checked by: DF

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HARRIS HALL
67 SPEAR ST
0379

PATRICK MULTIPURPOSE
97 SPEAR ST
0121

PATRICK GYMNASIUM
97 SPEAR ST
0118

PATRICK GYMNASIUM
97 SPEAR ST
0120

PFG ROAD

LOCKER ROOM ADDITION

2 Bay Loading Area

Remove asphalt and repave

Limit of Pavement Disturbance

Begin New Granite Curb

New Granite Curb

Remove existing hydrant and cap waterline

Restore existing impervious to vegetation.

Restore pavement to vegetation

New Multi-Use Concrete Sidewalk

New Pavement and subbase

New Bollard, typ. See Landscape Details

New Heavy Duty Concrete Sidewalk

Restore existing impervious to vegetation.

New 8" waterline

New Light Pole

New Granite Steps

New Multi-Use Concrete Walk

New 6' wide concrete walks

Expanded Portions of Building

New Bike Racks. See Landscape Plans

New Landscape Terrace, See Landscape Plans

Abandon 10" AC sewer in place. Fill with flowable fill concrete

Salvage and relocate blue light and base

Remove and relocate light

New 8 ft. wide Multi-Use Concrete Walk

New Multi-Use Concrete Walk

New light pole and base. See Electrical Plans, typical.

6" step, pave to match

Concrete Pad at exterior doors, typical. See Structural

New Stone Drip Edge with Underdrain

New Yard Drain Rim = 411.5 Inv. = 409.5

New Asphalt Walk

New Electric Manhole

New Yard Drain Rim = 411.0 Inv. = 409.0

New Concrete Retaining Wall, See Structural

New Concrete Stairs, See Structural

Cut in new 8"x8" hydrant tee and valves.

After new line is installed and successfully tested, cut and cap existing pipe at valve. Remove valve box.

New hydrant (100' from FDC)

New Stone Drip Edge with Underdrain

New Fuel Oil Tank, See Mechanical Plans

New Gas Meter

New FDC

New 10" Underslab Sewer. See Plumbing Plans

New 12" Underslab Storm, See Plumbing Plans

Install temporary gas meter during building construction. Coordinate with Vermont Gas for temporary meter and service line. Protect temporary meter with concrete construction waste blocks

New Blue Light

New 8" D.I. Water

Begin Granite Curb

New Gas Service

New bollards, typical.

Cap existing storm pipe

Concrete Pad at exterior doors, typical. See Structural

New Heavy Duty Concrete

New ADA Ramp. See Structural

New Bike Racks

New CB Rim 402.71 Inv. In 388.57 (S) Inv. Out 388.47 (N)

New CB Rim 403.00 Inv. In 395.00 (4" U.D.) Inv. Out 394.8 (12")

New CB Rim 405.00 Inv. Out 400.00 (12")

New CB Rim 403.50 Inv in 399.5 (NW) Inv. Out 399.4 (SE)

New CB Rim 404.50 Inv in 399.0 (NW) Inv. In 394.57 (SW) Inv. Out 394.46 (NE)

New Multi-Use Concrete Sidewalk

Core new penetration through structure to existing trough. Inv. 387.0 (10")

New Granite Curb

New CB Rim 403.32 Inv. Out 398.3 (12")

New 10" PVC Sewer

New CB Rim 403.50 Inv in 397.9 (E) Inv. Out 397.38 (N)

New CB Rim 402.70 Inv in 398.80 (4"UD) Inv. Out 398.70 (S)

8"x8"tee and valves.

New SMH 4264-D Rim 404.0 Inv. in 390.5 (W) Inv. in 390.5 (S) Inv. out 390.4

New CB Rim 402.30 Inv. Out 397.30 (12")

New STMH 4264-2B Rim 402.54 Inv. in 397.00 (12"E) Inv in 393.10 (12"NW) Inv. in 393.5 (12"SW) Inv. in 387.33 (18"SE) Inv. Out 385.73 (N)

New CB Rim 402.15 Inv in 397.10 (N) Inv. in 393.50 (W) Inv. Out 393.40 (E)

New CB Rim 399.70 Inv in 395.7 (6" UD) Inv. Out 394.7 (N)

New CB Rim 399.50 Inv in 394.50 (S) Inv. Out 394.40 (E)

New Granite Curb

New CB Rim 403.32 Inv. Out 398.3 (12")

New CB Rim 403.50 Inv in 397.9 (E) Inv. Out 397.38 (N)

New 10" PVC Sewer

New hydrant (100' from FDC)

New CB Rim 402.70 Inv in 398.80 (4"UD) Inv. Out 398.70 (S)

8"x8"tee and valves.

New SMH 4264-D Rim 404.0 Inv. in 390.5 (W) Inv. in 390.5 (S) Inv. out 390.4

New CB Rim 402.30 Inv. Out 397.30 (12")

New STMH 4264-2B Rim 402.54 Inv. in 397.00 (12"E) Inv in 393.10 (12"NW) Inv. in 393.5 (12"SW) Inv. in 387.33 (18"SE) Inv. Out 385.73 (N)

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-	DD Pricing Set	23 MA
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-	Supplemental SD Set	03 NO
-	SD Pricing Set	25 AU

KEY PLAN

Drawing Title:

CIVIL SITE & UTILIY PLAN

Project No.: 005353.00 Checked by: DI

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New Concrete Retaining Wall. See Structural

New Stone Drip Edge with Underdrain

Concrete Pad at exterior doors, typical. See Structural

New CB
Rim 399.50
Inv in 394.50 (S)
Inv. Out 394.40 (E)

New CB
Rim 399.70
Inv in 395.7 (6" UD)
Inv. Out 394.7 (N)

ex. loading dock items are below)

ff 415.49

ff 415.45 (upper)

ff 415.51 (above)

ff 403.47 (lower)

New Gas Meter

New Fuel Oil Tank, See Mechanical Plans

New Gas Meter

Install temporary gas meter and service to feed existing building during construction. Coordinate temporary service with Vermont Gas. Protect temporary meter with concrete waste blocks

New FDC

Install 2 new steel bollards to protect gas meter

New 10" Underslab Sewer. See Plumbing Plans

New 12" Underslab Storm, See Plumbing Plans

New 15" Underslab Storm, See Plumbing Plans

New 6" Underslab Sewer, See Plumbing Plans

New mountable granite curb

New 8" waterline

Install sleeve around new storm pipe, centered on water line, see detail

12" PVC

New CB
Rim 402.15
Inv in 397.10 (N)
Inv. in 393.50 (W)
Inv. Out 393.40 (E)

New 10" Sewer. Inv. 391.0 See Plumbing Plans

Drop storm to Inv. 394.00 See Drop Outlet Connection Detail

Collect 12" building Storm Service. Inv. 396.0 See Plumbing Plans

New 8" D.I. Water

Concrete Pad at exterior doors, typical. See Structural

New Gas Service

Cap existing storm pipe

Concrete Pad at exterior doors, typical. See Structural

New Heavy Duty Concrete

New CB
Rim 402.71
Inv. In 389.17 (SW)
Inv. Out 389.07 (12"N)

New CB 4264-5
Rim 402.8
Inv. In 389.44 (SE)
Inv. In 390.6 (W)
Inv. Out 389.34 (NE)

New 15" Storm Inv. 391.0 See Plumbing Plans

Cut and cap ex. gas service. See Vermont Gas Specifications.

New gas service. See Vermont Gas Specifications.

Drop sewer to Inv. 393.00 See Drop Outlet Connection Detail

New 6" Sewer. Inv. 395.0 See Plumbing Plans

Construct and test new waterline to new valve. Connect to existing line after completion of all testing.

New 8" CL52 d.i. waterline

New 8" PVC sewer

New 18" Storm

New 2" PE Gas

New 12" storm

8" PVC sewer

6" PVC sewer

10" sewer

15"

New hydrant

New 8"x6" hydrant tee

New CB
Rim 402.70
Inv in 398.80 (4"UD)
Inv. Out 398.70 (S)

8"x8"tee and valves.

New SMH 4264-D
Rim 404.0
Inv. in 390.5 (W)
Inv. in 390.5 (S)
Inv. out 390.4

New CB
Rim 402.30
Inv. Out 397.30 (12")
New 4" Underdrain Cleanout 398.0'
New CB

Stmh 4264-2
Rim 404.42
Inv. in 390.73 (15",12"NW)
Inv. in 387.33 (18")
Inv. in 385.73 (12"W)
Inv. out 385.73

New STMH 4264-2B
Rim 402.54
Inv. in 397.00 (12"E)
Inv in 393.10 (12"NW)
Inv. in 393.5 (12"SW)
Inv. in 387.33 (18"SE)
Inv. Out 385.73 (N)

Remove barrel section of storm structure and reset rim elevation

Core and boot new penetration. Inv. 388.32

Cb 4264-1
Rim 405.22
Inv. in 393.67 (10")
Inv. in 389.72 (12")
Inv. out 388.22

New ADA Ramp. See Structural & Landscape

New Bike Racks

New CB
Rim 402.71
Inv. In 388.57 (S)
Inv. Out 388.47 (N)

New Stairs. See Structural & Landscape Plans

Remove overhead parking garage sign structure

New Bike Racks

New 4" Underdrain Cleanout 398.0'

New CB
Rim 401.68
Inv. In 389.9 (S)
Inv. Out 389.8 (NW)

Cb 4271-3

New SMH
Rim 403.0
Inv. in 392.20 (8")
Inv. In 392.5 (6")
Inv. 392.10

New ADA Parking signs, typical.

New Pavement Markings

New Overhead Parking Garage Sign posts and beam, see structural

ex. concrete

ex. metal post

bollards

parking kiosk

ex. mulch bed

ex. concrete sidewalk

ex. pavement

ex. concrete stairs/retaining wall

ex. concrete pad

ex. 2" PE

ex. 8" CI water

ex. 6" PVC

ex. 12" PVC

ex. 8" PVC

ex. 4" PVC

ex. 4" AC

ex. 8" AC

ex. 6" AC

ex. 12" AC

ex. 8" DI

ex. 6" DI

ex. 4" DI

ex. 12" DI

ex. 8" CMP

ex. 12" CMP

ex. 18" CMP

ex. 24" CMP

ex. 30" CMP

ex. 36" CMP

ex. 48" CMP

ex. 60" CMP

ex. 72" CMP

ex. 84" CMP

ex. 96" CMP

ex. 108" CMP

ex. 120" CMP

ex. 132" CMP

ex. 144" CMP

ex. 156" CMP

ex. 168" CMP

ex. 180" CMP

ex.

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PFG ROAD

PATRICK GYMNASIUM
97 SPEAR ST
0120

Begin New Granite Curb
Replace stop bar pavement marking
Sawcut Pavement
Begin New Granite Curb
New Granite Curb
New Kiosk
6' transition to full reveal
New Bollard, typ. See Landscape Details
Cut in new 8"x8" hydrant tee and valves. Restrain assembly.
New 8" waterline
After new line is installed and successfully tested, cut and cap existing pipe at valve. Remove valve box.
New Light Pole
Connect new waterline to existing line
New Granite Steps. See Landscape
Concrete Pad at exterior doors, typical. See Structural
New Building Addition
New structural concrete at exterior doors, typ.
Construct and test new waterline to new valve. Connect to existing line after completion of all testing.
New Heavy Duty Concrete Sidewalk
Raise existing frame and grate to match new finish grade. Replace grade rings with precast concrete
New Multi-Use Concrete Walk
New CB
Rim 408.50
Inv. Out 403.5 (NE)
New CB
Rim 405.00
Inv. Out 400.00 (12")
New CB
Rim 403.50
Inv in 399.5 (NW)
Inv. Out 399.4 (SE)
New Granite Steps. See Landscape
New Concrete Retaining Wall. See Structural
New Stone Drip Edge with Underdrain
New Concrete Stairs. See Structural
Concrete Pad at exterior doors, typical. See Structural
New Landscape Terrace, See Landscape Plans
New Bike Racks. See Landscape Plans
New CB
Rim 403.50
Inv in 397.9 (E)
Inv. Out 397.38 (N)
Abandon 10" AC sewer in place. Fill with flowable fill concrete
Cut in new 8"x8" hydrant tee and valves.
After new line is installed and successfully tested, cut and cap existing pipe at valve. Remove valve box.
New Concrete Retaining Wall. See Structural
New Stone Drip Edge with Underdrain
New hydrant
New 8"x6" hydrant tee
New 10" PVC Sewer
New Multi-Use Concrete
New Pavement Markings
New Overhead Parking Garage Sign posts and beam, see structural
Salvage and relocate Blue Light. See Electrical Plans
Sawcut pavement, typical
Replace Pavement Markings
Core & Boot New Penetration Inv. 394.0
New CB
Rim 403.00
Inv. In 395.00 (4" U.D.)
Inv. Out 394.8 (12")
6 ft. curb transition to flush
Begin new granite curb at end of existing curb stone.
Remove and relocate light
Remove and adjust frame and cover to match new finished grade
New concrete steps. See Landscape and Structural Plans
Relocate stop sign
New Granite Curb
New CB
Rim 404.50
Inv in 399.0 (NW)
Inv. In 394.57 (SW)
Inv. Out 394.46 (NE)
New Multi-Use Concrete Sidewalk
Core new penetration through structure to existing trough.
Inv. 387.0 (10")
New Granite Curb
New CB
Rim 403.32
Inv. Out 398.3 (12")
New 10" PVC Sewer
New Multi-Use Concrete
New Pavement Markings
New Overhead Parking Garage Sign posts and beam, see structural
New hydrant
New 8"x6" hydrant tee

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0' 10' 20'
Bar Scale 1" = 10'

No.	Description	Da
-	Burlington DRB	12 APR
-	DD Pricing Set	23 MA
-	DD Progress Set	02 MA
-	Supplemental SD Set	03 NO
-	SD Pricing Set	25 AU

KEY PLAN
Drawing Title:

CIVIL SITE & UTILIY PLAN

Project No.: 005353.00 Checked by: DI

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Cb 0118-8
Rim 414.95
Inv. out 410.50

Cb 4251-1
Rim 413.35
Inv. in 407.60
Inv. out 407.40

Saweut Pavement, typical

Remove and dispose of pavement. Install new pavement (3") per Typical Road Cross Section Detail.

ex. pavement

ex. curb (granite)

12" CPOO

Cb 0118-6
Rim 413.82
Inv. in 409.17 (N)
Inv. in 409.07 (W)
Inv. in 408.92 (E)
Inv. in 411.02 (4")
Inv. out 409.07 (S)

Begin New Granite Curb

18" maple

14" maple

New Granite Curb

New Kiosk

6' transition to full reveal

Begin New Granite Curb

Replace stop bar pavement marking

Saweut Pavement

Begin New Granite Curb

New Multi-Use Concrete Sidewalk

Cb 0118-5
Rim 418.73
Inv. in 414.9 (12"W)
Inv. in 413.3 (12"SW)
Inv. out 413.3

Cb 0118-7
Rim 413.14
Inv. out 411.00

15" PVC

4" PVC

12" PVC

6" ADS

Adjust existing hand hole to match concrete slope

12"HPS, 6"PCR & 1-1/2"HPR

(2000)

New Bollard, typ. See Landscape Details

CB 0118-3
Rim 414.38
Inv. in 408.3 (4")
Inv. in 408.3 (S)
Inv. in 408.2 (N)
Inv. out 408.1 (E)

Cb 0118-10
Rim 413.81
Inv. in 409.0
Inv. out 409.0

12" ADS

Cb 0118-11
Rim 413.86
Inv. out 410.1

Core and boot new penetration. Inv. 409.05

New Pavement and subbase

Replace crosswalk pavement markings

Cut in new 8"x8" hydrant tee and valves. Restrain assembly.

New Heavy Duty Concre

12" RCP

New CB
Rim = 413.7
Inv. in = 408.5 (SE)
Inv. in = XXX (SW)
Inv. out = 408.4 (N)

14" oak

ex. bush with bushes

Regrade to Drain

New Granite Curb

New Pavement and Subbase

12" Storm

New Multi-Use Concrete Sidewalk

New Granite Curb

12" Storm

8" RD

New Light Pole

New 8" waterline

New Light Pole

After new line is installed and successfully tested, cut and cap existing pipe at valve. Remove valve box.

Connect new waterline to existing line

New Building Addition

Concrete Pad at exterior doors, typical. See Structural

New 6 ft. wide Concrete Sidewalk

New CB
Rim = 414.0
Inv. out = 409.1

New DI
Rim = 414.5
Inv. in = 409.45 (E)
Inv. out = 409.35 (N)

New DI
Rim = 414.5
Inv. in = 409.88 (E)
Inv. out = 409.78 (W)

New 8" Roof Drain
Inv. 410.0
See Plumbing Plans

Concrete Pad at exterior doors, typical. See Structural

New Building Addition

New structural concrete at exterior doors, typ.

Construct and test new waterline to new valve. Connect to existing line after completion of all testing.

ff 415.50
ff 415.43
ff 415.41
ff 415.50
ff 415.50
ff 415.48
ff 415.45

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0' 10' 20'

Bar Scale 1" = 10'

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-	Burlington DRB	12 APR
-	DD Pricing Set	23 MA
-	DD Progress Set	02 MA
-	Supplemental SD Set	03 NO
-	SD Pricing Set	25 AUG

N

KEY PLAN

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CIVIL SITE & UTILIY PLAN

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Concrete Pad at exterior doors, typical. See Structural

New Multi-Use Concrete

New Cleanout Inv. 413.0

New Stone Drip Edge with Underdrain

New Yard Drain
Rim = 411.5
Inv. = 409.5

New Yard Drain
Rim = 411.0
Inv. = 409.0

12" PVC vertical bend
Inv. = 401.0

2 - 45° bend and wye connection

New Yard Drain
Rim = 410.5
Inv. = 408.5

New transformers. See Electrical

New steel bollards, typ.

New electrical duct banks. See Electric Site Plan

Sawcut pavement

Sawcut, Typical

Remove existing asphalt and repave. See Typical Road Cross Section Detail for paving requirements

New Blue Light. See Electrical

New Asphalt Walk

New Electric Manhole

New Electric Manhole. See Electrical Plans

New electric over storm

New CB
Rim 406.2
Inv. in 400.6
Inv. out 400.5

New Bollards. See Landscape for Details

New Multi-Use Concrete Sidewalk

New CB
Rim 403.75
Inv 399.1

New Pavement and Subbase

Corrugated metal pipe entry

Corrugated metal pipe entry

Concrete Pad at exterior door, see structural

Core and boot new penetration. Inv. 398.5

Concrete Pad at exterior d
see structural

Design location of Verizon Equipment Platform

Design location of above grade propane tank.

New Generator. See Electrical Plans

GENERATOR

ex. metal stairs

ex. pavement

ex. covered entrance way concrete w/ multiple man doors

limit of overhang

ex. wall wooden

ex. conc. walk

riprap

hand hole mapped out not found

UH #250

UH #255

T.Pad 413.50

T.Pad 412.50

XFRMR

XFRMR

New 12" PVC

New 12" PVC Storm

CB 317-3
RIM=402.26
inv in=398.8' (6"se)
inv in=398.8' (10"se)
inv in=399.4' (4"s)
inv in=400.4' (6"nw)
inv out=398.3' (12"e)

ff 415.48

ff 404.88

ff 403.51

ff 417.97

ff 404.18

ff 404.22

ff 403.52

electric meter

Wood roof structure

cleanouts

electric panels

vent

gravel

concrete

dirt

bollards

Cooling Tower

Cooling Tower

Cooling Tower

12" DI

4"PVC

6"PVC

10"PVC

12" HDPE pen.

bush

trash

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NOT FOR CONSTRUCTION

0' 10' 20'
Bar Scale 1" = 10'

No.	Description	Da
-	Burlington DRB	12 AP
-	DD Pricing Set	23 MA
-	DD Progress Set	02 MA
-	Supplemental SD Set	03 NO
-	SD Pricing Set	25 AU

N

KEY PLAN

Drawing Title:

CIVIL SITE & UTILIY PLAN

Project No.: 005353.00 Checked by: DI

C0106

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GUTTERSON FIELD HOUSE
147 SPEAR ST
0119

New 4" Underslab Storm, See Plumbing Plans

Construct and test new waterline to new valve. Connect to existing line after completion of all testing.

New ADA Parking signs, typical.

New CB
Rim 401.73
Inv. In 390.62 (S)
Inv. Out 390.52 (N)

New SMH
Rim 402.7
Inv. In 392.8
Inv. Out 392.7

(18) ADA Parking Spaces With Signs and Pavement Marking

New flush granite curb

New CB
Rim 401.75
Inv. In 391.2 (S)
Inv. Out 391.1 (N)

New Heavy Duty Concrete

New Multi-Use Concrete Sidewalk

New Concrete Sidewalk

(18) New ADA Parking spaces with signs and pavement markings

New Asphalt ADA Parking Spaces

New 6 ft. wide concrete walk

6 ft. transition to flush granite curb

New CB
Rim 401.17
Inv. In 392.09 (W)
Inv. Out 391.99 (N)

Begin New Granite Curb

Begin new granite curb

Restore pavement to vegetation

New SMH
Rim 400.2
Inv. 394.4

New 8" PVC Sewer

New 12" storm

New 12" storm

Concrete frost wall and slab. See Structural

See Plumbing Plans for waterline design within 5 ft of the building

New 6" Roof Drain Inv. 399.00. See Plumbing Plans

Concrete frost wall and slab. See Structural

New South Concourse

Re-route electrical service. See Electrical Plans

Remove hydrant

New 6" Roof Drain Inv. 398.8 See Plumbing Plans

See Electrical Plans for electrical design

See Plumbing Plans for waterline design within 5 ft of the building

See Mechanical Plans for demolition requirements

Concrete frost wall and slab. See Structural

New 6" Roof Drain Inv. 398.2 See Plumbing Plans

Excavate to expose existing storm pipe. Contact UVM to camera pipe

After new line is installed and successfully tested, cut and cap existing pipe at valve. Remove valve box.

Cut in new 6"x6" hydrant tee and valves. Restrain assembly.

New Gas Meter

New Munter Unit
See Mechanical Plans for Design

Remove and dispose of catch basin. Cap existing storm pipe

New concrete curb

Restore pavement to vegetation

New buried natural gas service

Preconstruction excavation to locate existing electric conduit

New 6"x6" hydrant tee and valve. Restrain assembly.

New CB
Rim 403.00
Inv. in 398.7 (6" RD)
Inv. out 398.6

New CB
Rim 402.40
Inv. in 398.4 (12")
Inv. in 398.4 (6"RD)
Inv. out 398.3

New CB
Rim 402.50
Inv. in 397.9 (12")
Inv. in 397.9 (6"RD)
Inv. out 393.48

New CB
Rim 402.00
Inv. in 392.98
Inv. out 392.88

New Pavement and Subbase

New 6" waterline

New 12" storm

New 12" storm

Begin New Granite Curb

See C-0100 for Notes and Legend

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Drawing Title:

CIVIL SITE & UTILIY PLAN

Project No.: 005353.00 Checked by: DI

C0107

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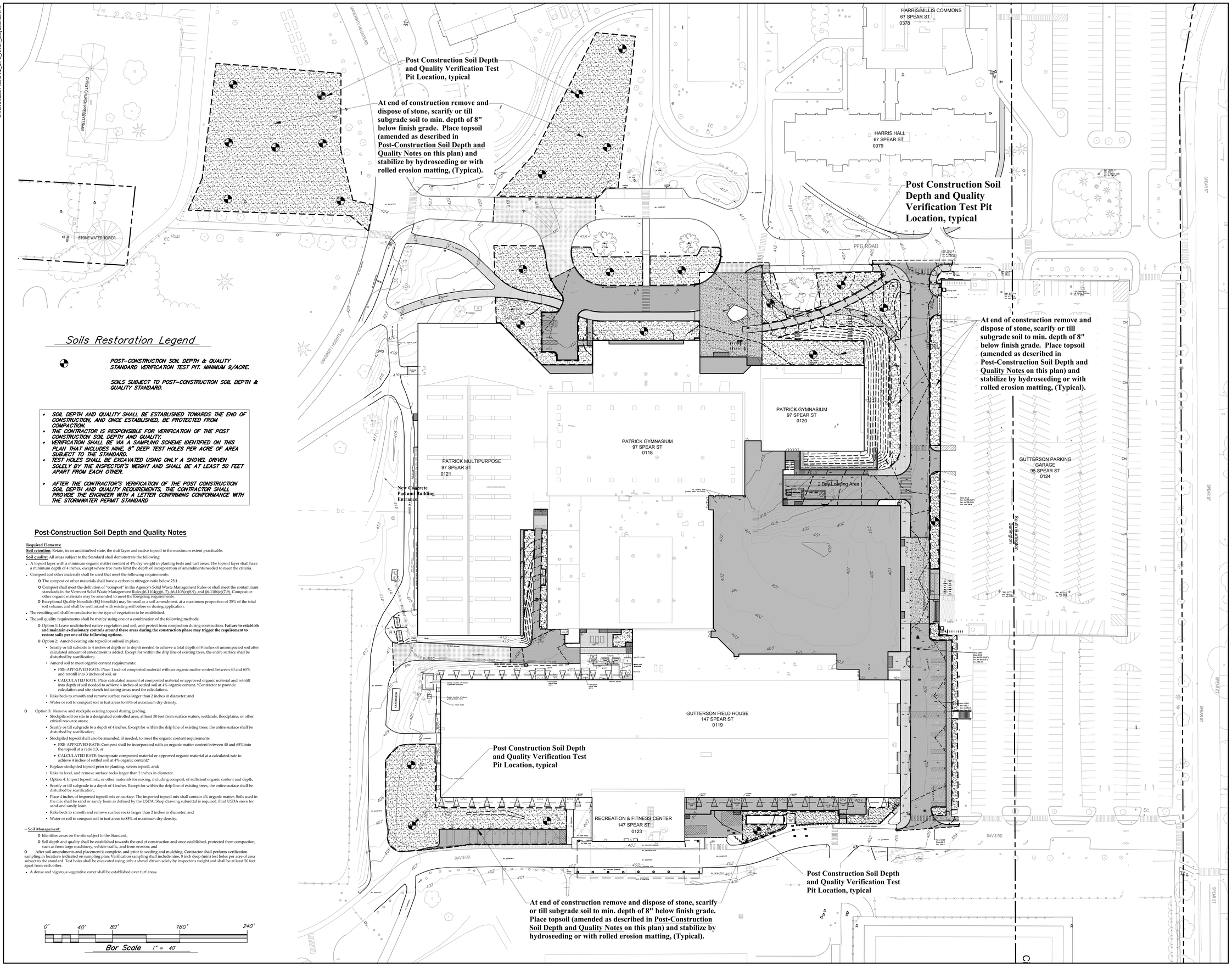

Soils Restoration Legend

POST-CONSTRUCTION SOIL DEPTH & QUALITY STANDARD VERIFICATION TEST PIT. MINIMUM 9/ACRE.

SOILS SUBJECT TO POST-CONSTRUCTION SOIL DEPTH & QUALITY STANDARD.

- SOIL DEPTH AND QUALITY SHALL BE ESTABLISHED TOWARDS THE END OF CONSTRUCTION, AND ONCE ESTABLISHED, BE PROTECTED FROM COMPACTION.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF THE POST CONSTRUCTION SOIL DEPTH AND QUALITY.
- VERIFICATION SHALL BE VIA A SAMPLING SCHEME IDENTIFIED ON THIS PLAN THAT INCLUDES NINE, 8" DEEP TEST HOLES PER ACRE OF AREA SUBJECT TO THE STANDARD.
- TEST HOLES SHALL BE EXCAVATED USING ONLY A SHOVEL DRIVEN SOLELY BY THE INSPECTOR'S WEIGHT AND SHALL BE AT LEAST 50 FEET APART FROM EACH OTHER.
- AFTER THE CONTRACTOR'S VERIFICATION OF THE POST CONSTRUCTION SOIL DEPTH AND QUALITY REQUIREMENTS, THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A LETTER CONFIRMING CONFORMANCE WITH THE STORMWATER PERMIT STANDARD

Post-Construction Soil Depth and Quality Notes

Required Elements:

Soil retention: Retain, in an undisturbed state, the duff layer and native topsoil to the maximum extent practicable.

Soil quality: All areas subject to the Standard shall demonstrate the following:

- A topsoil layer with a minimum organic matter content of 4% dry weight in planting beds and turf areas. The topsoil layer shall have a minimum depth of 4 inches, except where tree roots limit the depth of incorporation of amendments needed to meet the criteria.
- Compost and other materials shall be used that meet the following requirements:
  - The compost or other materials shall have a carbon to nitrogen ratio below 25:1.
  - Compost shall meet the definition of "compost" in the Agency's Solid Waste Management Rules or shall meet the contaminant standards in the Vermont Solid Waste Management Rules §6-1104(g)(6- 7), §6-1105(e)(8-9), and §6-1106(e)(7-9). Compost or other organic materials may be amended to meet the foregoing requirements.
  - Exceptional Quality biosolids (EQ biosolids) may be used as a soil amendment, at a maximum proportion of 35% of the total soil volume, and shall be well mixed with existing soil before or during application.
- The resulting soil shall be conducive to the type of vegetation to be established.
- The soil quality requirements shall be met by using one or a combination of the following methods:
  - Option 1: Leave undisturbed native vegetation and soil, and protect from compaction during construction. **Failure to establish and maintain exclusionary controls around these areas during the construction phase may trigger the requirement to restore soils per one of the following options.**
  - Option 2: Amend existing site topsoil or subsoil in place.
    - Scarify or till subsoils to 4 inches of depth or to depth needed to achieve a total depth of 8 inches of uncompacted soil after calculated amount of amendment is added. Except for within the drip line of existing trees, the entire surface shall be disturbed by scarification;
    - Amend soil to meet organic content requirements:
      - PRE-APPROVED RATE: Place 1 inch of composted material with an organic matter content between 40 and 65% and rototill into 3 inches of soil, or
      - CALCULATED RATE: Place calculated amount of composted material or approved organic material and rototill into depth of soil needed to achieve 4 inches of settled soil at 4% organic content. *Contractor to provide calculation and site sketch indicating areas used for calculations.
    - Rake beds to smooth and remove surface rocks larger than 2 inches in diameter; and
    - Water or roll to compact soil in turf areas to 85% of maximum dry density.
  - Option 3: Remove and stockpile existing topsoil during grading.
    - Stockpile soil on site in a designated controlled area, at least 50 feet from surface waters, wetlands, floodplains, or other critical resource areas;
    - Scarify or till subgrade to a depth of 4 inches. Except for within the drip line of existing trees, the entire surface shall be disturbed by scarification;
    - Stockpiled topsoil shall also be amended, if needed, to meet the organic content requirements:
      - PRE-APPROVED RATE: Compost shall be incorporated with an organic matter content between 40 and 65% into the topsoil at a ratio 1:3, or
      - CALCULATED RATE: Incorporate composted material or approved organic material at a calculated rate to achieve 4 inches of settled soil at 4% organic content;*
    - Replace stockpiled topsoil prior to planting, screen topsoil, and;
    - Rake to level, and remove surface rocks larger than 2 inches in diameter.
    - Option 4: Import topsoil mix, or other materials for mixing, including compost, of sufficient organic content and depth,
    - Scarify or till subgrade to a depth of 4 inches. Except for within the drip line of existing trees, the entire surface shall be disturbed by scarification;
    - Place 4 inches of imported topsoil mix on surface. The imported topsoil mix shall contain 4% organic matter. Soils used in the mix shall be sand or sandy loam as defined by the USDA; Shop drawing submittal is required. Find USDA sieve for sand and sandy loam.
    - Rake beds to smooth and remove surface rocks larger than 2 inches in diameter; and
    - Water or roll to compact soil in turf areas to 85% of maximum dry density.

Soil Management:

- Identifies areas on the site subject to the Standard;
- Soil depth and quality shall be established towards the end of construction and once established, protected from compaction, such as from large machinery, vehicle traffic, and from erosion; and

After soil amendments and placement is complete, and prior to seeding and mulching, Contractor shall perform verification sampling in locations indicated on sampling plan. Verification sampling shall include nine, 8 inch deep (min) test holes per acre of area subject to the standard. Test holes shall be excavated using only a shovel driven solely by inspector's weight and shall be at least 50 feet apart from each other.

- A dense and vigorous vegetative cover shall be established over turf areas.

0' 40' 80' 160' 240'

Bar Scale 1" = 40'

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-	SD Pricing Set	25 AU

KEY PLAN

Drawing Title:

POST CONSTRUCTIO
SOIL RESTORATION PL

Project No.: 005353.00 Checked by:

C0108

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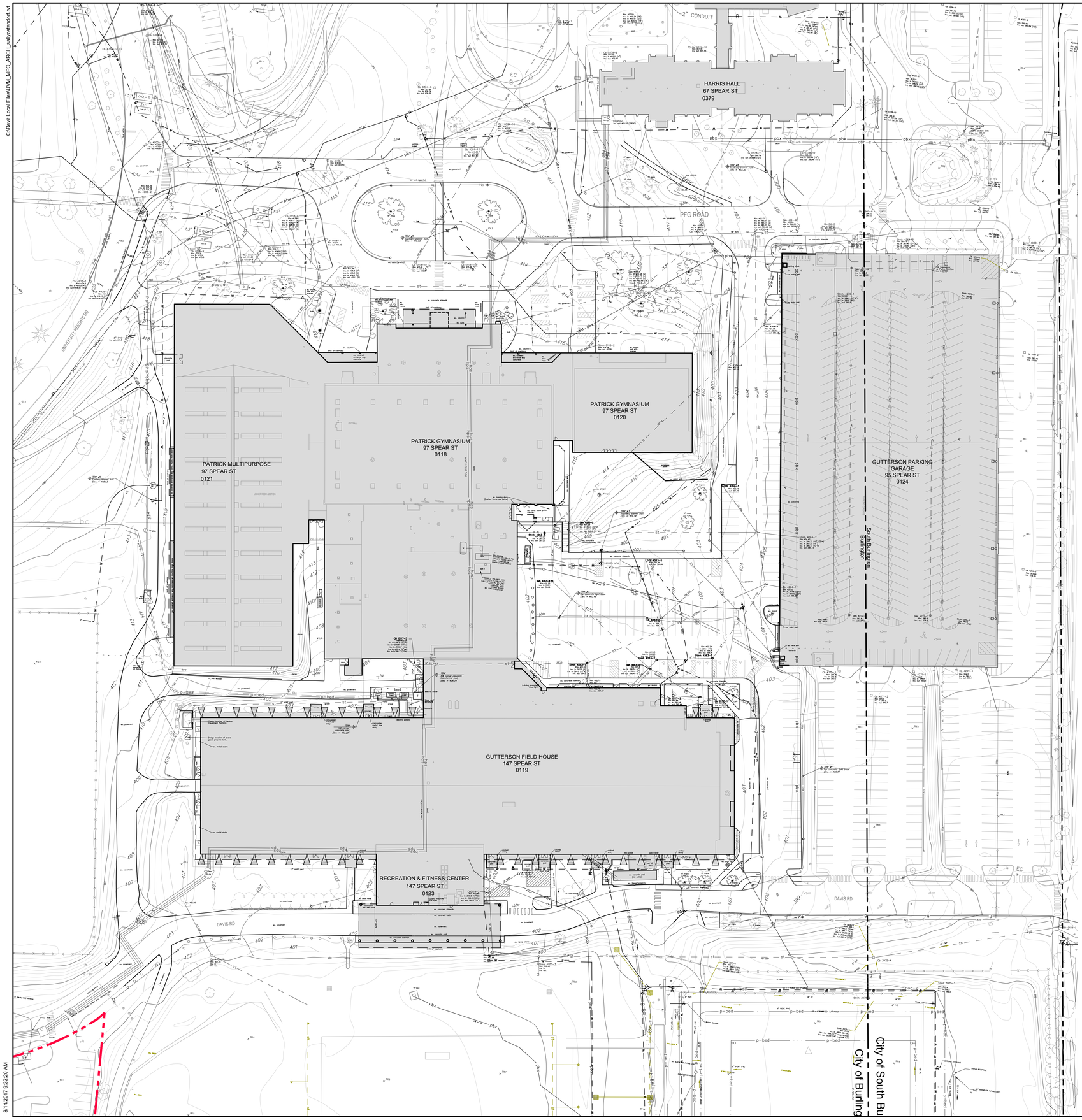

Notes

1. This plan is not a boundary survey. Property line shown are based on digital information provided by UVM are considered approximate.

2. The underground utilities shown on this plan are based on visible utilities located during a topographic survey performed by Krebs & Lansing in April 2014 and the following:
   - Electric: Electrical lines are based on plans prepared by Burlington Electric Department titled, "FAHC - UVM, North Campus System Upgrade Site Plan," dated 07/05/07, digital utility mapping provided by Fletcher Allen, and limited dig safe markings located during the survey. Limited secondary electric and site lighting electric is shown based on Utility Master Plan mapping provided by UVM. Other secondary and site lighting electrical may be present on site and is not warranted to be exact or complete.
   - Water: Waterlines are based on visible evidence found during the survey and digital utility mapping provided by the University of Vermont.
   - Sewer: Sanitary sewer mains are shown from manhole to manhole as located during the survey. Sanitary service lines are shown based on digital utility mapping provided by the University of Vermont. Sewer pipe elevations, type, and sizes were measured during the survey. Pipe information is not always evident from visual observations. Prior to making connections to the existing sanitary system and prior to ordering materials, the Contractor shall be responsible for confirming all pipe information.
   - Storm: Storm pipes are shown from manhole to manhole as located during the survey. Stormwater service lines are shown based on digital utility mapping provided by the University of Vermont. Storm pipe elevations, type, and sizes were measured during the survey. Pipe information is not always evident from visual observations. Prior to making connections to the existing storm system and prior to ordering materials, the Contractor shall be responsible for confirming all pipe information.
   - PBX: PBX telecommunications conduits are based on Utility Master Plan digital mapping provided by the University of Vermont.
   - Steam: Steam lines are based on Record drawings and Utility Master Plan digital mapping provided by the University of Vermont.

3. Underground utilities are approximate and not warranted to be exact or complete. Dig Safe shall be contacted prior to any excavation. DigSafe may not mark private utilities. It is the Contractors responsibility to mark private utilities (other than PBX). Secondary electric is not shown on this plan.

4. Elevations are based on the NAVD 88 vertical datum.

5. Project Horizontal Coordinates derived from GPS observation using reference frame NAD83 (2011) 2010.00 epoch.

6. Building roof lines are taken from orthophoto topography by the Sells Mapping Company.

Legend

- Survey Control Point
- Existing Sign
- Existing Light Pole
- Existing Deciduous Tree
- Existing Evergreen Tree
- 314.7 x — Existing Spot Grade Elevation
- s — Existing Sewer Line/Manhole
- st — Existing Storm Line/Manhole/Basin
- usp — Existing Underground Power
- pbx — Existing PBX Line
- Existing Select-A-Code Line
- Existing Site Light Line
- hps — Existing Steam Line
- Existing Condensate Line
- chws — Existing Chilled Water Supply
- chwr — Existing Chilled Water Return
- duct — Existing HVAC duct
- wv — Existing Water Line/Hydrant/Valve/Shutoff
- Existing Grade Contour
- Limit of Topographic Survey

0' 40' 80' 160' 240'

Bar Scale 1" = 40'

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-	SD Pricing Set	25 AU

KEY PLAN

Drawing Title:

OVERALL EXISTING CONDITIONS PLAN

Project No.: 005353.00 Checked by: D

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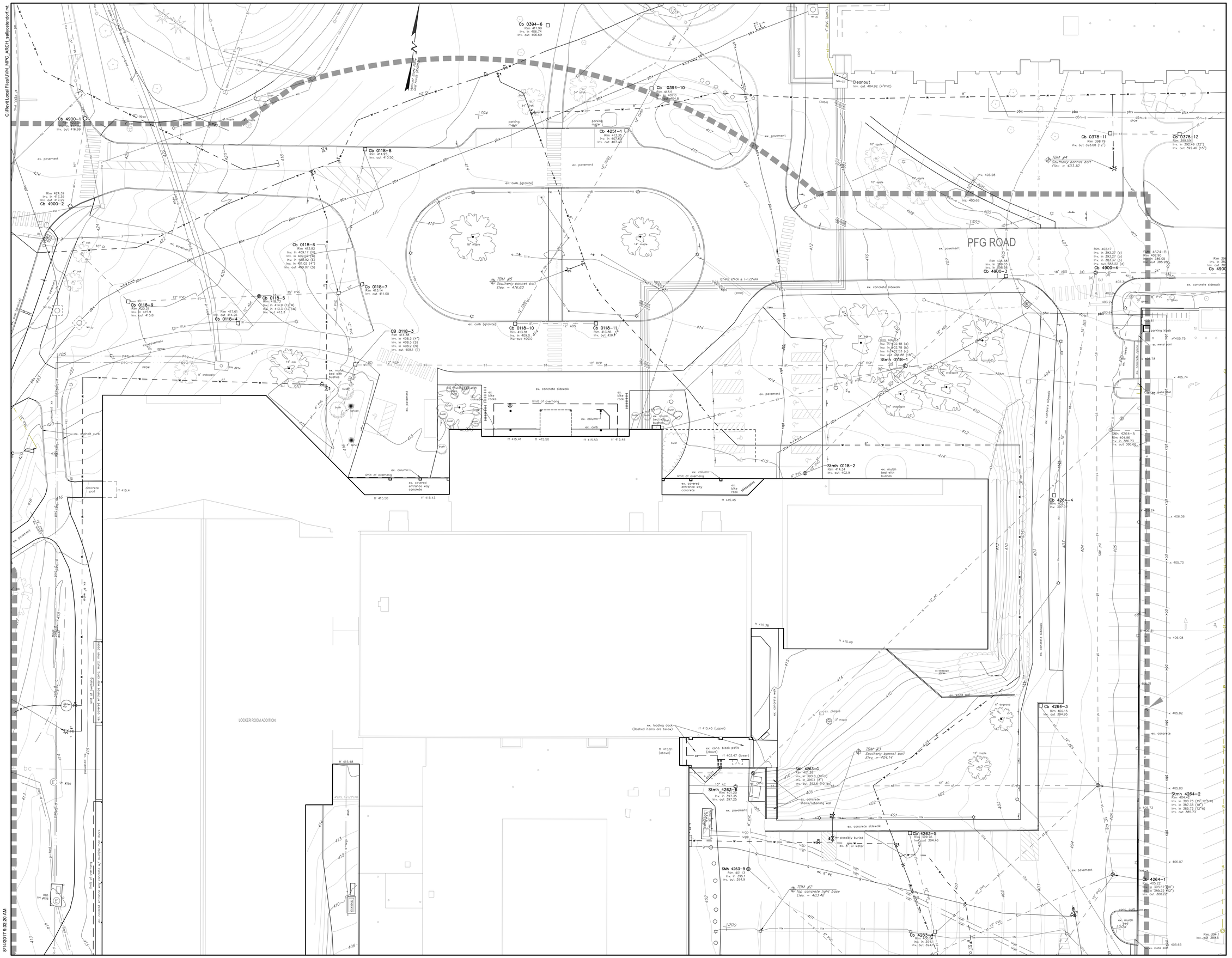

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Drawing Title:

EXISTING CONDTIONS PLAN

Project No.: 005353.00 Checked by: C

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PATRICK MULTIPURPOSE
97 SPEAR ST
0121

PATRICK GYMNASIUM
97 SPEAR ST
0118

GUTTERSON FIELD HOUSE
147 SPEAR ST
0119

RECREATION & FITNESS CENTER
147 SPEAR ST
0123

LOCKER ROOM ADDITION

DAVIS RD

Design location of Verizon Equipment Platform

Design location of above grade propane tank.

ex. metal stairs

ex. metal stairs

ex. concrete sidewalk

ex. concrete wall

ex. concrete stairs/retaining wall

ex. concrete sidewalk

ex. pavement

ex. concrete curb

ex. concrete sidewalk

ex. riprap stone

limit of overhang

ex. cedar hedge

ex. bike rack

ex. fence/screening

ex. concrete pad (AC units)

ex. mulch bed

ex. metal post

ex. plaque

ex. landscape stone

ex. wood edge

ex. concrete

ex. 2" PE

ex. possibly buried 6" D.I. water

ex. 8" D.I. water

ex. 2" PE

ex. 6" PVC

ex. 12" PVC

ex. 8" PVC

ex. 4" PVC

ex. 10" AC

ex. 12" AC

ex. 6" PVC

ex. 8" PVC

ex. 12" PVC

ex. 6" PVC

ex. 12" PVC

ex. 12" PVC

ex. 12

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PATRICK MULTIPURPOSE
97 SPEAR ST
0121

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97 SPEAR ST
0118

PATRICK GYMNASIUM
97 SPEAR ST
0120

GUTTERSON FIELD HOUSE
147 SPEAR ST
0119

RECREATION & FITNESS CENTER
147 SPEAR ST
0123

LOCKER ROOM ADDITION

DAVIS RD

Fill sewer pipe with flowable fill.

Cut and cap existing waterline after new waterline has successfully passed all testing requirements

Salvage all lightpoles, typical

Cap sewer pipe

Transplant existing memorial tree and relocate plaque. See Landscape Plans

Remove and dispose of storm pipe

Remove and dispose of storm structure

Remove and dispose of sanitary sewer structure

Remove and Dispose of Underground Fuel Oil Tank. See Mechanical Plans and Specifications.

Remove Gas Meter (Coordinate with Vermont Gas)

Coordinate Temporary Loading and Trash Removal Operations with Owner

Remove and dispose of sanitary sewer pipes

Remove and dispose of abandoned water lines

New building outline. See Demolition Notes for demolition requirements within the new building footprint.

Salvage Existing Boulders, Typical

Protect Existing Generator During Construction

Remove Existing Concrete Pad

Sawcut Pavement

See Architectural and Structural Plans for Building Demolition Requirements, Typical

Remove and dispose of sanitary sewer pipe

Cut and Cap Waterline

Salvage Existing Brick Pavers, Typical

Remove steel post and beam assembly

Remove Curb and Walk

Salvage all lightpoles, typical

Remove catch basin and cap existing storm pipe

See Electrical Plans for Demolition requirements for existing power under the new building.

Remove and dispose of existing hydrant

See Plumbing Plans for waterline demolition requirements

Coordinate gas meter shutdown and meter removal with Vermont Gas Systems

Maintain existing storm connections. See Plumbing Plans for design within 5 ft of the building.

Salvage and remove existing light pole. Dispose of concrete base, typical.

(REMOVE)

(SALVAGE)

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KEY PLAN

Drawing Title:

CIVIL SITE DEMOLITION PLAN

Project No.: 005353.00 Checked by: C

C0300

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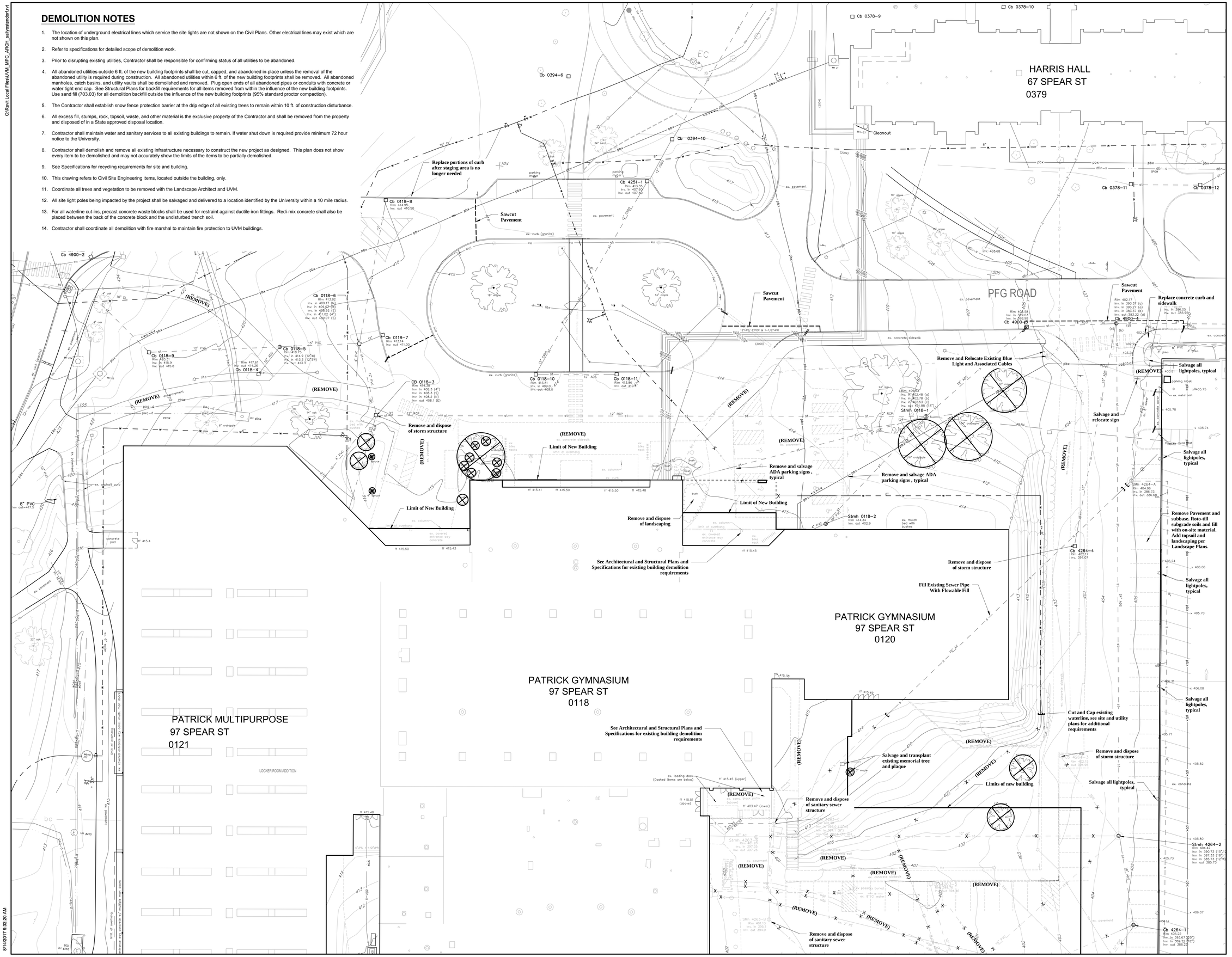
DEMOLITION NOTES

1. The location of underground electrical lines which service the site lights are not shown on the Civil Plans. Other electrical lines may exist which are not shown on this plan.
2. Refer to specifications for detailed scope of demolition work.
3. Prior to disrupting existing utilities, Contractor shall be responsible for confirming status of all utilities to be abandoned.
4. All abandoned utilities outside 6 ft. of the new building footprints shall be cut, capped, and abandoned in-place unless the removal of the abandoned utility is required during construction. All abandoned utilities within 6 ft. of the new building footprints shall be removed. All abandoned manholes, catch basins, and utility vaults shall be demolished and removed. Plug open ends of all abandoned pipes or conduits with concrete or water tight end cap. See Structural Plans for backfill requirements for all items removed from within the influence of the new building footprints. Use sand fill (703.03) for all demolition backfill outside the influence of the new building footprints (95% standard proctor compaction).
5. The Contractor shall establish snow fence protection barrier at the drip edge of all existing trees to remain within 10 ft. of construction disturbance.
6. All excess fill, stumps, rock, topsoil, waste, and other material is the exclusive property of the Contractor and shall be removed from the property and disposed of in a State approved disposal location.
7. Contractor shall maintain water and sanitary services to all existing buildings to remain. If water shut down is required provide minimum 72 hour notice to the University.
8. Contractor shall demolish and remove all existing infrastructure necessary to construct the new project as designed. This plan does not show every item to be demolished and may not accurately show the limits of the items to be partially demolished.
9. See Specifications for recycling requirements for site and building.
10. This drawing refers to Civil Site Engineering items, located outside the building, only.
11. Coordinate all trees and vegetation to be removed with the Landscape Architect and UVM.
12. All site light poles being impacted by the project shall be salvaged and delivered to a location identified by the University within a 10 mile radius.
13. For all waterline cut-ins, precast concrete waste blocks shall be used for restraint against ductile iron fittings. Redi-mix concrete shall also be placed between the back of the concrete block and the undisturbed trench soil.
14. Contractor shall coordinate all demolition with fire marshal to maintain fire protection to UVM buildings.


HARRIS HALL
67 SPEAR ST
0379
PATRICK GYMNASIUM
97 SPEAR ST
0120
PATRICK GYMNASIUM
97 SPEAR ST
0118
PATRICK MULTIPURPOSE
97 SPEAR ST
0121
LOCKER ROOM ADDITION
PFG ROAD
Replace portions of curb after staging area is no longer needed
Sawcut Pavement
Remove and dispose of storm structure
Remove and dispose of landscaping
Limit of New Building
Remove and salvage ADA parking signs , typical
Remove and Relocate Existing Blue Light and Associated Cables
Salvage and relocate sign
Salvage all lightpoles, typical
Remove Pavement and subbase. Roto-till subgrade soils and fill with on-site material. Add topsoil and landscaping per Landscape Plans.
Replace concrete curb and sidewalk
See Architectural and Structural Plans and Specifications for existing building demolition requirements
Fill Existing Sewer Pipe With Flowable Fill
Cut and Cap existing waterline, see site and utility plans for additional requirements
Salvage and transplant existing memorial tree and plaque
Remove and dispose of sanitary sewer structure
Limits of new building
(REMOVE)
Cb 0394–6
Cb 0394–10
Cb 0378–9
Cb 0378–10
Cb 0378–11
Cb 0378–12
Cb 4251–1
Cb 0118–8
Cb 0118–6
Cb 0118–7
Cb 0118–5
Cb 0118–9
Cb 0118–4
CB 0118–3
Cb 0118–10
Cb 0118–11
Cb 4900–2
Cb 4900–1
Cb 4900–4
Cb 4900–5
Stmh 0118–1
Stmh 0118–2
SMh 4264–A
Cb 4264–4
Cb 4264–3
Stmh 4264–2
Cb 4264–1
SMh 4263–B
Cleanout
8" PVC
concrete pad
ex. pavement
ex. curb (granite)
ex. concrete sidewalk
ex. asphalt curb
ex. metal post
ex. concrete
ex. bollard
ex. column
ex. covered entrance way
ex. building
ex. loading dock (Dashed items are below)
limit of overhang
limit of overlang
limit of overlang
ex. concrete entrance way
ex. mulch bed with bushes
ex. concrete entrance way with multi step doors
ex. concrete entrance way with multi step doors
ex. concrete entrance way concrete w/ multiple step doors
ex. concrete entrance way concrete w/ multiple step doors
ex. concrete entrance way concrete w/ multiple

Erosion Prevention and Sediment Control Notes

1. Contractor shall be responsible for complying with all State and Local erosion prevention and sediment control standards and permit requirements during construction.

2. **This project is subject to the permit conditions for an Individual Construction Stormwater Permit. The Contractor shall be the On-site Coordinator for the project and shall be responsible for all required inspections (minimum weekly and after any storm event that produces a discharge), turbidity readings, maintenance, and reporting. The On-Site Plan Coordinator shall be required to provide a turbidity meter for the project.**

3. The limit of disturbance shall be clearly defined by Contractor's surveyor prior to clearing. Erosion and sediment control devices shall be established to trap sediment on site.

4. Clearing and grubbing shall not begin until disturbance limits and sediment controls are in place. All roots, stumps and deleterious materials shall be removed from the site. The Contractor shall minimize the amount of disturbed land at any given time.

5. All erosion control shall be placed as shown on the drawings or as ordered by the Engineer. The Contractor shall maintain the erosion control measures until the Engineer is satisfied that permanent ground cover is established and that further measures are not required. It shall be the responsibility of the Contractor to employ appropriate erosion control as shown on these drawings and any other measures as necessary to trap sediment on site. Refer to permit maintenance and inspection requirements.

6. All areas of disturbance shall be permanently or temporarily stabilized as soon as possible and within 48 hours of final grading. All areas of disturbance shall be at least temporarily stabilized daily during winter construction unless the following exceptions apply:
   a. Stabilization is not required if earthwork is to continue in the area in the next 24 hours and there is no precipitation forecast in the next 24 hours.
   b. Stabilization is not required if the work is occurring in a self-contained excavation (i.e. no outlet) with a depth of 2 ft. or greater (e.g. house foundation excavation, utility trenches). Stabilization measures shall include mulch and netting, erosion control matting, crushed stone, gravel, or pavement.

6. Unless specifically indicated on the plans acceptable methods of stabilization shall include:
   – STRAW Mulching – 2 tons per acre. Only STRAW mulch is allowed. Approximately 2" uniform thickness. Only allowed on relatively flat areas with minimum upslope watershed. Mulch must be properly secured with netting to prevent material from being blown away by wind (windthrow).
   – Hydroseeding* – Applied at the manufacturer's recommended application rate. Contractor shall provide evidence of proper application rate. Hydroseeding must be accompanied by erosion control matting in areas of concentrated flow.
   – Erosion control matting – S75BN matting must be applied to all slopes 3:1 (H:V) or greater (unless otherwise indicated).
   – Crushed stone or crushed gravel – Typically used for temporary access roads and construction staging areas.

7. The Contractor shall use water for dust control.

8. The Contractor shall provide inlet protection around all catch basins (existing or new) that collect construction site stormwater runoff. At a minimum, MarshMat coir inlet filters shall be installed over all catch basin grates. Additional inlet control shall be installed as identified on the plans or as warranted during construction. Inlet protection must be maintained until final stabilization has been reached.

9. A stabilized construction entrance (See Detail) shall be installed and maintained at all construction access locations if construction vehicles travel off the existing hardscape. Contractor shall be responsible for installing crushed stone to provide stable areas for construction vehicle traffic, staging, and storage. The Contractor is responsible for providing and maintaining sufficient stone to prevent rutting and sediment tracking.

10. Any paved roads used by construction vehicles shall be swept daily, or at a greater frequency, if dirt or gravel is tracked from the site. The swept debris shall be immediately removed from face of curb if applicable.

11. All temporary erosion and sediment control measures shall be removed within 30 days after final stabilization or after the measures are no longer needed, unless otherwise authorized.

12. All sediment removed from sediment control practices shall be placed in an approved soil disposal area.

13. All areas that do not have established vegetation by October 15th must be stabilized in accordance with the Winter Stabilization requirements outlined in the Low Risk Site Handbook. See Details.

14. After permanent seeding the Contractor shall be responsible for watering to ensure adequate vegetative growth.

15. The location of temporary construction fencing and the temporary access shown on the plan are for schematic purposes only. The Contractor shall be responsible for providing all necessary temporary construction fencing, temporary roads, staging areas, etc., necessary to complete the work.

16. Water from dewatering activities that flows off site must be clear. Turbid, or visibly discolored water must not be pumped into storm sewers.

17. Contractor shall sign on as the Co-Permittee for the State of Vermont Erosion Prevention and Sediment Control permit for the project.

18. The erosion prevention and sediment control practices shown on these plans are the minimum required for the project. The Contractor shall employ as many best management practices as necessary to prevent soil from leaving the construction site. If evidence is found of sediment tracking or eroded soil leaving the construction site, the Engineer may direct Site Contractor to implement additional best management practices at no additional cost to Owner.

19. Contractor shall call Jenna Olson at 540-1748 or email (jolson@burlingtonvt.gov) at least 24 hours prior to initiating earth disturbance and submit name, cell phone number, and email contact information of the erosion control coordinator for the project.

    The perimeter of the site and all BMPs will be inspected at the end of each workday to ensure that sediment will not leave the site. If sediment has traveled beyond the site boundary, it shall be swept up or otherwise removed and deposited on-site in an upgradient area at the end of each workday.

Legend

- Inlet Protection
- New Storm Line/Manhole/Basin
- Existing Storm Line/Catch Basin/manhole
- Existing Contours
- Chain-link Fence
- Temporary Silt Fence
- Crushed Stone Stabilization
- Erosion Control Matting

0' 40' 80' 160' 240'

Bar Scale 1" = 40'

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During Construction, Grade Staging Area to Drain and Prevent Ponding.

Provide temporary power to Job Trailers during construction. See Electrical for requirements.

Maintain Temporary Silt Fence

Install 8" Thick Stone Stabilized Staging Areas Where Construction Vehicle Traffic is Anticipated. Limits of Stone is Shown for Schematic Purposes Only. Contractor is Responsible for all Stone Necessary for Proper Stabilization.

Install and Maintain Stabilized Construction Entrances, Typical.

Remove Tree. Replace at the End of Construction.

Install and Maintain Stabilized Construction Entrances, Typical.

Install New Gate

Remove and Replace Existing Curb at the End of Construction

Maintain Stabilized Construction Entrances, Typical.

Construction Fence

Install New Gate

Install and Maintain Temporary Silt Fence

Provide temporary power to Job Trailers during construction. See Electrical for requirements.

During construction, Grade Staging Area to Drain and Prevent Ponding.

At a minimum install coir inlet filters over all catch basins that collect construction related runoff

Install 8" Thick Stone Stabilized Staging Areas Where Construction Vehicle Traffic is Anticipated. Limits of Stone is Shown for Schematic Purposes Only. Contractor is Responsible for all Stone Necessary for Proper Stabilization.

Install New Gate

Construction Fence

Install and Maintain Stabilized Construction Entrances, Typical.

After Backfilling Against Building Foundation, Install 8" Thick Crushed Stone (10'-20' wide) to Stabilize Areas Where Construction Vehicle Traffic is Anticipated

Install 8" Thick Stone Stabilized Staging Areas Where Construction Vehicle Traffic is Anticipated. Limits of Stone is Shown for Schematic Purposes Only. Contractor is Responsible for All Stone Necessary for Proper Stabilization.

For Catch Basins Located Within Construction Disturbance Limits Install Stone Lined Sump Inlet Protection, Typical. See Detail.

Remove sidewalk and create temporary 2 ft. deep stone sediment trap for dewatering

Exposed Soil Shall be Temporarily Stabilized Within 14 Days. See Notes 5 and 6.

Install Stone Lined Sump Inlet Protection, Typical. See Detail.

Install new gate

For Catch Basins Located Within Construction Disturbance Limits Install Stone Lined Sump Inlet Protection, Typical. See Detail.

Install 8" thick stone stabilized staging areas where construction vehicle traffic is anticipated. Limits of stone is minimum anticipated and is shown for schematic purposes only. Contractor is responsible for all stone necessary for proper stabilization.

Install straw wattles prior to earth disturbanc

Install and Maintain stabilized construction entrances, typical.

Install and Maintain Temporary Silt Fence

Install new gate

HARRIS/MILLIS COMMONS
67 SPEAR ST
0378

HARRIS HALL
67 SPEAR ST
0379

PATRICK GYMNASIUM
97 SPEAR ST
0120

PATRICK GYMNASIUM
97 SPEAR ST
0118

PATRICK MULTIPURPOSE
97 SPEAR ST
0121

GUTTERSON FIELD HOUSE
147 SPEAR ST
0119

RECREATION & FITNESS CENTER
147 SPEAR ST
0123

GUTTERSON PA
GARAGE
95 SPEAR
0124

UNIVERSITY HEIGHTS RD

DAVIS RD

PFG ROAD

South Burlington

The University of Vermont

University of Verm
Multipurpose Cent

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Pearson and Associates
Associate Electrical Engineer
174 Thomas Lane
Stowe, VT 05672
(802) 253-9607

NOT FOR CONSTRUCTION

No.	Description	Da
-	Burlington DRB	12 AP
-	DD Pricing Set	23 MA
-	DD Progress Set	02 MA
-	Supplemental SD Set	03 NO
-	SD Pricing Set	25 AU

KEY PLAN

Drawing Title:

Erosion Prevention & Sediment Control Pla Preconstruction

Project No.: 005353.00 Checked by:

C0400

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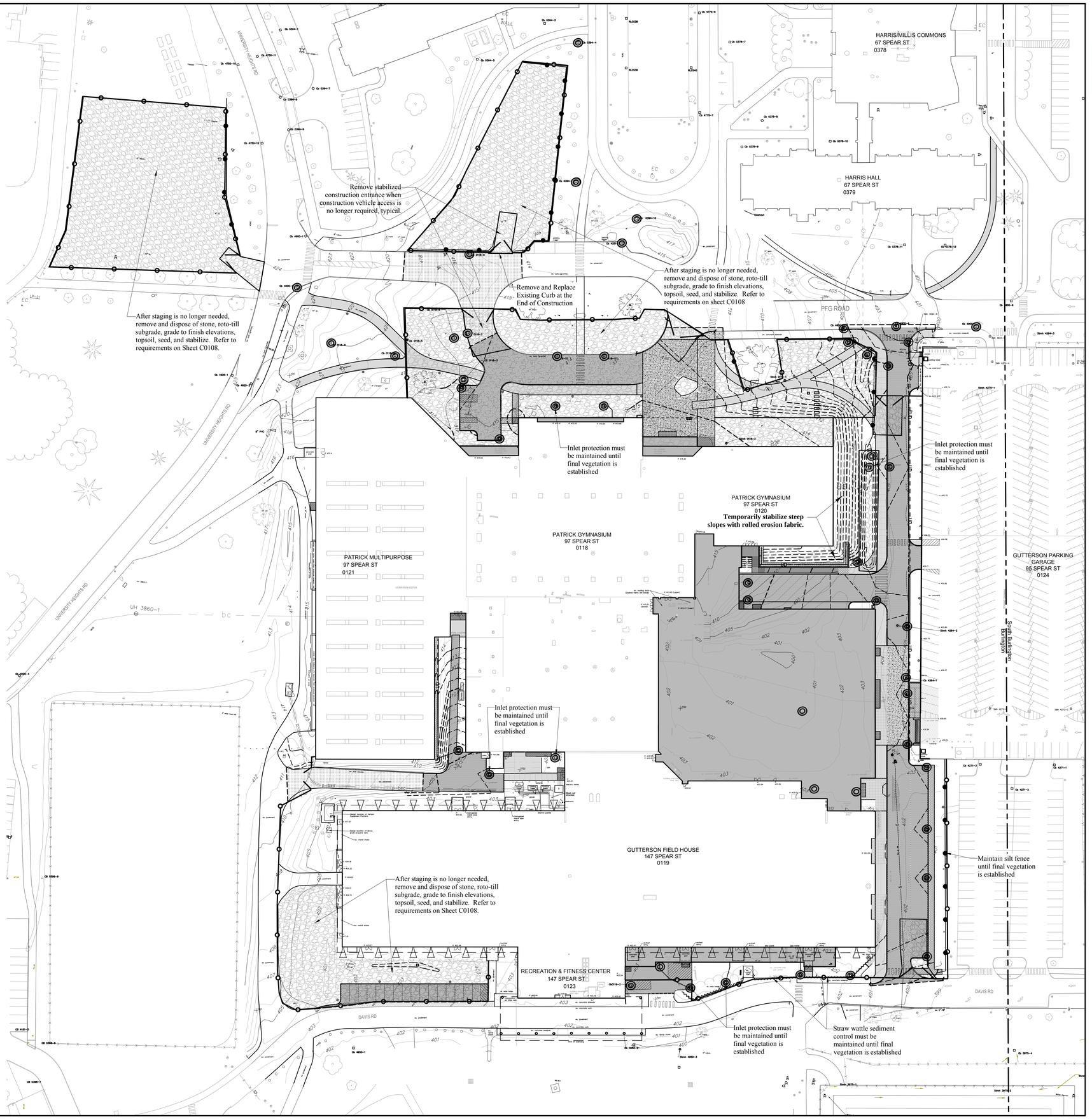

Erosion Prevention & Sediment Control Notes

1. *Refer to plan sheet C0400 for Legend and Notes.*
2. *For utility trench work outside the limits of the primary construction site or in areas where silt fence is impractical, excavated soil shall be either stockpiled on the uphill side of the trench, removed from site, or moved to a properly protected temporary stockpile location.*
3. *All areas that are relying on vegetation as winter stabilization must be seeded and mulched by September 15th. After September 15th, all areas must be stabilized by temporary measures. Areas hydroseeded after September 15th will require additional mulch, hydroseed (Flexterra HP Growth Media, or approved equal) or erosion control matting if final stabilization is not reached by October 15th.*
4. *Contractor is responsible for all construction fencing around project limits.*
5. *If Landscape Contractor is different than Site Contractor then the Landscape Contractor shall submit a Co-Permittee Notice of Addition form to the Watershed Management Division.*
6. *Landscape Contractor shall coordinate construction activities with the Site Contractor to ensure:*
   a. Exposed soils, that were previously disturbed, are stabilized daily, or meet the exceptions listed on Sheet C0400.
   b. Final graded areas are to be topsoiled, seeded and stabilized within 48 hours.
7. *All vegetated areas steeper than 5:1 (H:V) shall be stabilized with North American Green S75BN, or approved equal, erosion control matting.*
8. *Inlet protection at catch basins shall be maintained until upslope drainage area has reached full vegetation establishment.*
12. *Silt fence or other down slope sediment control measures shall be maintained until final vegetation is established.*
13. *All temporary erosion and sediment control measures shall be removed within 30 days after final stabilization or after the measures are no longer needed, unless otherwise authorized.*
14. *Orange barrier tape shall be installed along the edges of all new sidewalks until final vegetation stabilization has established.*

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(802) 777-3198

Pearson and Associates
Associate Electrical Engineer
174 Thomas Lane
Stowe, VT 05672
(802) 253-9607

NOT FOR CONSTRUCTION

No.	Description	Da
-	Burlington DRB	12 APR
-	DD Pricing Set	23 MA
-	DD Progress Set	02 MA
-	Supplemental SD Set	03 NO
-	SD Pricing Set	25 AUG

KEY PLAN

Drawing Title:

Erosion Prevention & Sediment Control Pla Stabilization

Project No.: 005353.00 Checked by:

C0401

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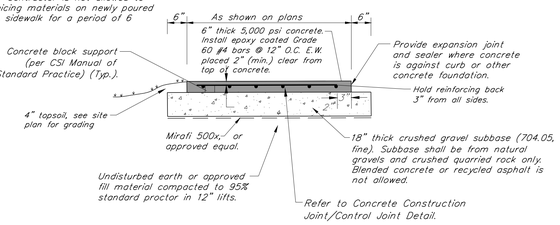
Concrete shall be wet cured for a minimum of 7 days with water and HydraCure 516, or approved equal, wet curing covers. Curing cover needs to be "secured" to prevent tripping hazard by pedestrian use.

All concrete used in the construction of Multi-Use Concrete shall be made with Portland cement. The concrete shall meet section 541 of the State of Vermont Standard Specifications for Construction, have 28 day compressive strength of 5,000 psi, and meet the following mix design.

Max. water-cement ratio (lb./lb.)	0.44
Min. cement factor (lbs/C.Y.)	705
Entrained air content (%)	5 – 7
Slump (inches, before adding HRWR)	2 – 4

Use air entrained agent conforming to ASTM C260 with 5–7% total air. Use high range water reducing agent conforming to ASTM C494 in all concrete.

Note:
Owner or Contractor is not allowed to place deicing materials on newly poured concrete sidewalk for a period of 6 months.



New Multi-Use Concrete Sidewalk Detail

To be used for concrete sidewalk that is not heavy duty and that is wider than 6'.

N.T.S.

Concrete Slab

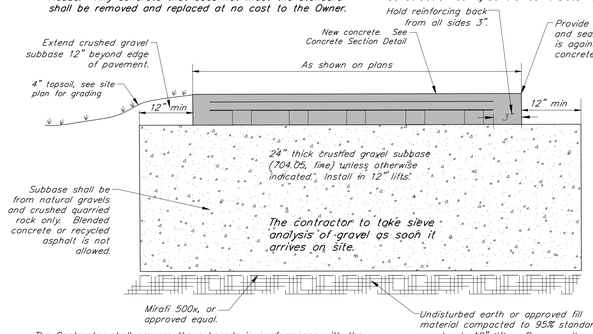
- Broom finish concrete
- Construction joints shall be spaced max. 24' in all directions. See New Concrete Construction Joint Detail.
- See Site Plan for construction joint layout.
- Tool finish control joints 1–1/2" depth at intervals equal to width of sidewalk. Contractor is responsible for providing appropriately sized tooling trowel.
- Apply 2 coats of Chemstop WB siloxane/silane water repellant to all concrete surfaces, per the manufacturer's specifications. Product shall be applied after 7 day curing is complete.
- Concrete construction and curing shall conform to section 618.03 of the current VAOT Standard Specifications for Construction

Concrete shall be installed in alternating pours at construction joints. Continuous pours through construction joints is not allowed. Refer to Concrete Construction Joint/Control Joint Detail.

Travel over gravel with any vehicle tracking soil prior to placement of pavement is prohibited.

If gravel is contaminated after placement, the Contractor shall be responsible removal of all contaminated gravel and paying for all recommended sieve analysis as determined by the Engineer.

Contractor shall pour and finish one section of concrete pad/walk for approval by Owner and Engineer. Concrete shall match the quality and appearance of the concrete at the east entrance to the Gutterson Field House. Any concrete that does not meet the standard shall be removed and replaced at no cost to the Owner.



The Contractor shall prepare the subgrade in conformance with the design grades then, in the presence of the Engineer, shall proof roll the subgrade with a loaded tandem dump truck. Conditions may require the removal of unsuitable material and placement of additional subbase. The Owner must approve any work involved with the removal of unsuitable material and placement of additional subbase.

Subbase Section

All concrete used in the construction of Heavy Duty Concrete shall be made with Portland cement. The concrete shall meet section 541 of the State of Vermont Standard Specifications for Construction, have 28 day compressive strength of 5,000 psi, and meet the following mix design.

Max. water-cement ratio (lb./lb.)	0.44
Min. cement factor (bags/C.Y.)	7.5
Entrained air content (%)	5 – 7
Slump (inches, before adding HRWR)	2 – 4

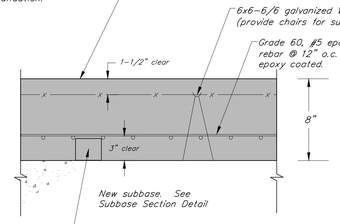
Use air entrained agent conforming to ASTM C260 with 5–7% total air. Use high range water reducing agent conforming to ASTM C494 in all concrete.

Concrete shall be installed in alternating pours at construction joints. Refer to Concrete Construction Joint/Control Joint Detail (CD-1)

Concrete Notes

- Broom finish concrete
- Construction joints shall be spaced as shown on the Site Plans (max. 20' in all directions). See Site Plan for layout.
- Sawcut control joints 1–1/2" depth at intervals equal to width of sidewalk.
- Apply 2 coats of Chemstop WB siloxane/silane water repellant to all concrete surfaces, per the manufacturer's specifications. Product shall be applied after 7 day curing is complete.
- Concrete construction and curing shall conform to section 618.03 of the current VAOT Standard Specifications for Construction

Note:
Owner or Contractor is not allowed to place deicing materials on newly poured concrete sidewalk for a period of 6 months.



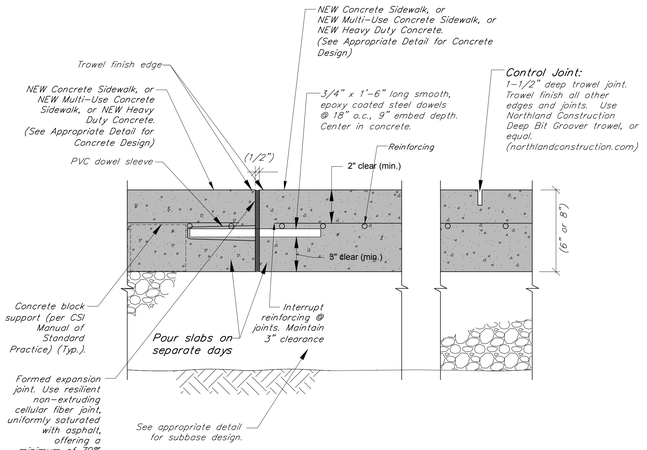
Concrete Section

Travel over gravel with any vehicle tracking soil prior to placement of pavement is prohibited.

If gravel is contaminated after placement, the Contractor shall be responsible removal of all contaminated gravel and paying for all recommended sieve analysis as determined by the Engineer.

New Heavy Duty Concrete Detail

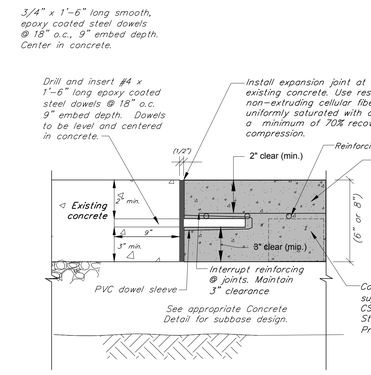
N.T.S.



New Concrete Construction Joint/Control Joint Detail

Contractor to use this pinning detail to pin NEW concrete to NEW concrete (walk to walk, walk to buildings, walk to retaining walls, stairs, etc).

N.T.S.



Construction Joint Detail for Connection to Existing Concrete

Contractor to use this pinning detail to pin NEW concrete to EXISTING concrete (walk to walk, walk to buildings, walk to retaining walls, stairs, etc).

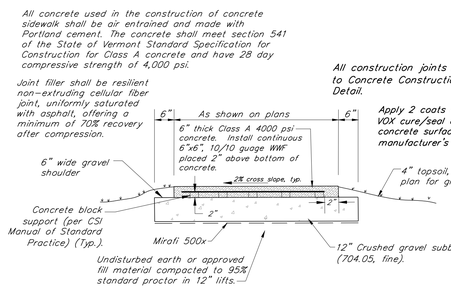
N.T.S.

All concrete used in the construction of concrete sidewalk shall be air entrained and made with Portland cement. The concrete shall meet section 541 of the State of Vermont Standard Specification for Construction for Class A concrete and have 28 day compressive strength of 4,000 psi.

Joint filler shall be resilient non-extruding cellular fiber joint, uniformly saturated with asphalt, offering a minimum of 70% recovery after compression.

All construction joints shall be doweled. Refer to Concrete Construction Joint/Control Joint Detail.

Apply 2 coats of Euclid Everclear VOX cure/seal compound to all concrete surfaces, per the manufacturer's specifications.



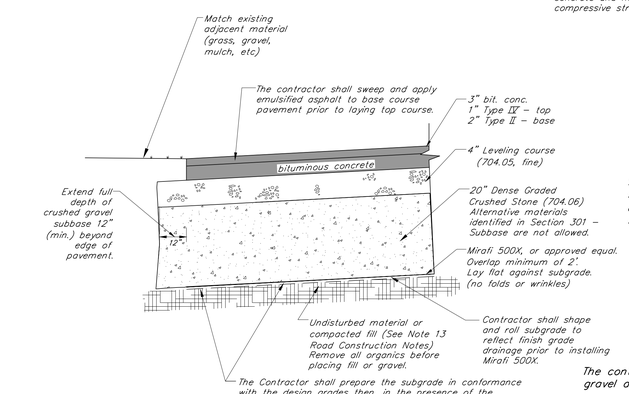
New Concrete Sidewalk Detail

(For Concrete Walks 6ft. Wide or Less)

N.T.S.

Concrete Notes

- Broom finish concrete
- Construction joints shall be spaced max. 24' in all directions. See Concrete Construction Joint Detail.
- Score control joints 1–1/2" depth at intervals equal to width of sidewalk. Contractor is responsible for providing appropriately sized tooling trowel.
- Apply 2 coats of Euclid Everclear VOX cure/seal compound to all concrete surfaces, per the manufacturer's specifications.
- Concrete construction and curing shall conform to section 618.03 of the current VAOT Standard Specifications for Construction



Subbase material shall be placed and compacted in 12" maximum lifts.

The contractor to take sieve analysis of gravel as soon it arrives on site.

Travel over gravel with any vehicle tracking soil prior to placement of pavement is prohibited.

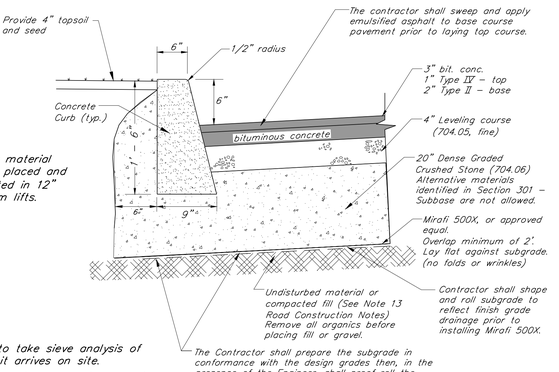
If gravel is contaminated after placement, the Site Contractor shall be responsible removal of all contaminated gravel and paying for all recommended sieve analysis as determined by the Engineer.

Without Concrete Curb

N.T.S.

Concrete Curb

- Broom finish concrete
- All joints to be tool finished
- Expansion/contraction joints every 20' with 1/2" joint filler.
- Score 1/3 total depth at 10' intervals
- Apply 2 coats of Euclid Everclear VOX cure/seal compound to all concrete surfaces, per the manufacturer's specifications.



Subbase material shall be placed and compacted in 12" maximum lifts.

The contractor to take sieve analysis of gravel as soon it arrives on site.

Travel over gravel with any vehicle tracking soil prior to placement of pavement is prohibited.

If gravel is contaminated after placement, the Site Contractor shall be responsible removal of all contaminated gravel and paying for all recommended sieve analysis as determined by the Engineer.

With Concrete Curb

When Polyethylene Expansion Joint Filler is installed, fill "strip off" space with Sikaflex–1c, SL joint sealant. Ensure that final depth of sealant after curing will be ¼" below finished concrete surface.

Install Polyethylene Expansion Joint Filler, Deck–O–Foam, or equal, with 1/2" removable strip when concrete sidewalk is adjacent to back of curb.

Adjacent surface material varies – See Site Plans

1/4" per ft. or as designed on Site Plan

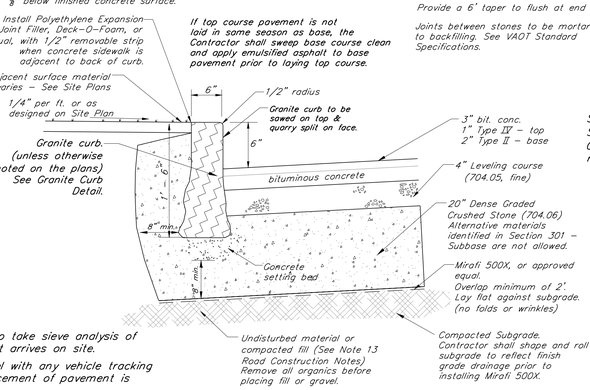
Granite curb. (unless otherwise noted on the plans) See Granite Curb Detail.

If top course pavement is not laid in same season as base, the Contractor shall sweep base course clean and apply emulsified asphalt to base pavement prior to laying top course.

** All granite curb shall be cut to radii shown on plans. Small straight tangent sections of granite curb is not acceptable.*

Provide a 6" taper to flush at end of curb.

Joints between stones to be mortared prior to backfilling. See VAOT Standard Specifications.



See Granite Curb Section Detail (Sheet C0601) for additional requirements

Subbase material shall be placed and compacted in 12" maximum lifts.

The Contractor shall prepare the subgrade in conformance with the design grades then, in the presence of the Engineer, shall proof roll the subgrade with a loaded tandem dump truck. Conditions may require the removal of unsuitable material and placement of additional subbase. The Owner must approve any work involved with the removal of unsuitable material and placement of additional subbase.

With Granite Curb

Typical Road Cross Section Detail

N.T.S.

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University of Vermont
Multipurpose Center

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NOT FOR CONSTRUCTION

No.	Description	Date
-	Burlington DRB Set	12 APR
-	DD Pricing Set	23 MA
-	DD Progress Set	02 MA
-	Supplemental SD Set	03 NO
-	SD Pricing Set	25 AU

N

KEY PLAN

Drawing Title:

CIVIL DETAILS

Project No.: 005353.00 Checked by:

C0600

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Construction Notes

The Contractor will be responsible for all construction of water main, storm and sanitary sewer systems as shown on the plans. The Contractor will be responsible for all necessary adapters, fittings, etc. to make connections to the existing and proposed units. The Contractor shall be responsible for all work shown or implied on the plans and/or referenced in the specifications and permits. The Contractor shall submit, for approval by the Engineer, all types of materials and products used.

General Water System Notes:

1. **The Contractor shall coordinate all work on the water supply system with the Owner, Burlington Water Department and the Civil Engineer. All water installation work and water distribution materials must comply with the current Burlington Water Department (BWD) specifications.**
2. These plans provide design and details of water main beyond 5 ft. outside the building. The Site Contractor shall be responsible for extending the waterline to the plumbing and/or fire system connection within the building. See Plumbing Engineer and/or Fire Protection plans for scope, design and specifications within 5 ft. of the building.
3. Contractor shall provide all necessary fittings and appurtenances to complete the waterline construction work. This includes temporary fittings and gauges necessary to safely complete the flushing activities required prior to making connections with building plumbing.
4. The project shall be constructed, completed, maintained, and operated in accordance with the approved plans. No changes shall be made in the project with out the written approval of the appropriate BWD supervisor or Engineer. A copy of the final approved plans shall be submitted to the department prior to construction of the water system improvements.
5. The BWD shall be notified in advance to inspect all mechanical joints fittings, main line taps, appurtenances, thrust blocks, water line crossings, and testing prior to occurrence or backfilling.
6. All domestic services and fire sprinkler systems that are connected to the public water system shall be protected with a backflow prevention assembly, and an appropriate thermal expansion system. The Mechanical Contractor shall coordinate approved backflow prevention with the BWD.

Water Main (Applies to new domestic water mains and services) (See also Fire Service Main Notes)

1. The pipe for water main shall be CL52 ductile iron. Ductile iron fittings shall conform to AWWA C110, 350 pounds working pressure. Valves shall be manufactured to meet all requirements of AWWA specification C509 or C515. Four-inch and six-inch pipe shall have no less than 2 brass wedges installed at each joint. Eight-inch and 10" pipe shall have no less than 3 wedges installed at each joint.
2. All pipe shall be installed in accordance with AWWA C600. The pipe shall be kept free of foreign matter and debris during installation. When the process of pipe laying has stopped, any open ends of pipe shall be plugged. There shall be a minimum of 6'-0" (1.82 m) cover over all pipe and service lines. Any pipe deflection shall not exceed fifty (50%) percent of recommended manufacturer's maximum deflection. Backfill materials and procedures shall be as detailed on the drawings. The Contractor shall be responsible for any and all sheeting and/or shoring necessary to comply with OSHA – VOSHA regulations.
3. The testing of the water main shall consist of the testing of all installed pipe, services and hydrants in accordance with AWWA C600. The testing shall consist of a pressure test and leakage test. All testing shall be done with potable water and in the presence of the Engineer, and representatives from the City of Burlington Water Department. The pressure test consists of maintaining a minimum internal pipe pressure of 200 psi (140,620 kg/m^2) for two (2) hours. The testing allowance shall be defined as the maximum quantity of makeup water that is added into a pipeline undergoing hydrostatic pressure testing, or any valved section thereof, in order to maintain pressure within +/- 5 psi of the specified test pressure (after the pipeline has been filled with water and the air has been expelled). No pipe installation will be accepted if the quantity of makeup water is greater than that determined by the following formula:

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

L = testing allowance (makeup water), in gallons per hour
S = Length of pipe tested, in feet
D = Nominal pipe diameter, in inches
P = average test pressure during the hydrostatic test, in pounds per square inch (gauge)

4. Chlorinating of the system shall be accomplished after the water main has been successfully pressure tested and thoroughly flushed. Disinfecting shall be in accordance with AWWA C-651. The disinfecting process shall be deemed acceptable only after two consecutive sets of acceptable samples, taken from the flushed and disinfected main 24 hours apart, shows no evidence of bacteriological contamination. For proper disinfection use minimum 25 mg/l chlorine concentration for 24 hours. The concentration must remain above 10 mg/l. Tablet disinfecting is not acceptable.
5. The water main shall be thoroughly flushed with a minimum flow velocity of 2.5 ft/s to flush foreign materials out of the valves and hydrants. Prior to flushing, the Contractor shall contact the Owner, Fire Department in the municipality, the District Water Supply company, and the Engineer.

Fire Service Main

1. The pipe for water main shall be CL52 ductile iron. Ductile iron fittings shall conform to AWWA C110, 350 pounds working pressure. Valves shall be manufactured to meet all requirements of AWWA specification C509 or C515.
2. All pipe shall be installed in accordance with AWWA C600. The pipe shall be kept free of foreign matter and debris during installation. When the process of pipe laying has stopped, any open ends of pipe shall be plugged. There shall be a minimum of 6'-0" cover over all pipes and service lines. Any pipe deflection shall not exceed fifty (50%) percent of recommended manufacturer's maximum deflection. Backfill materials and procedures shall be as detailed on the drawings. The Contractor shall be responsible for any and all sheeting and/or shoring necessary to comply with OSHA – VOSHA regulations.
3. The testing of the water main shall consist of the testing of all installed pipe, services and hydrants in accordance with NFPA 24. The testing shall consist of a pressure test and leakage test. All testing shall be done with potable water and in the presence of the Engineer. The pressure test consists of maintaining a minimum internal pipe pressure of 200 psi (140,620 kg/m^2) for two (2) hours. The amount of leakage at the joints shall not exceed 2 qt/hr per 100 gaskets or joints, irrespective of pipe diameter. If the pressure drops more than 5 psi (3515 kg/m^2) in the first hour, this constitutes failure of the test for the particular section of pipe. Failure of any test section will necessitate repair and/or replacement of the failed section.
4. Chlorinating of the system shall be accomplished after the water main has been successfully pressure tested and thoroughly flushed. Disinfecting shall be in accordance with AWWA C-651. The disinfecting process shall be deemed acceptable only after two samples of water from the flushed disinfected main, taken 24 hours apart, shows no evidence of bacteriological contamination. Use minimum 25 mg/l chlorine concentration for 24 hours. The concentration must remain above 10 mg/l. Tablet disinfecting is not acceptable.
5. Acceptable water main flushing requirements are provided below. Prior to flushing, the Contractor shall contact the Owner, Fire Department in the municipality, the District Water Supply company, and the Engineer.

Underground piping, from the water supply to the system riser, and lead-in connections to the system riser shall be completely flushed before the connection is made to downstream fire protection system piping.

The flushing operation shall be continued for a sufficient time to ensure thorough cleaning.

The minimum rate of flow shall be not less than one of the following:

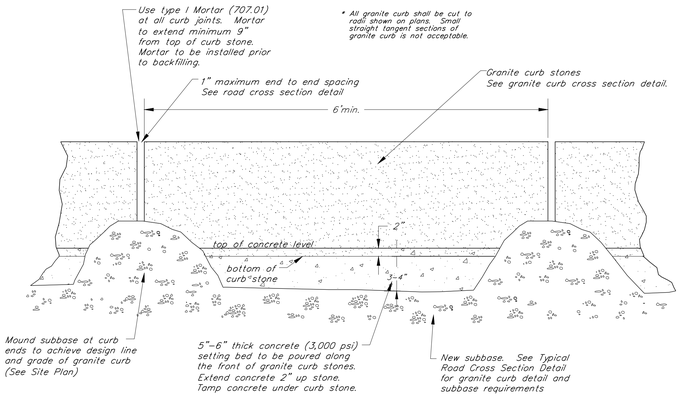
(1) Hydraulically calculated water demand flow rate of the system, including any hose requirements. (provided by the mechanical/sprinkler consultant)

(2) Flow necessary to provide a velocity of 10 ft/sec (3.1 m/sec) in accordance with the table below.

(3) Maximum flow rate available to the system under fire conditions.

Flow Required to Produce a Velocity of 10 ft/sec (3 m/s) in Pipes

Pipe Size		Flow Rate	
in.	mm	gpm	L/min
4	102	390	1,476
6	152	880	3,331
8	203	1,560	5,905
10	254	2,440	9,235
12	305	3,520	13,323

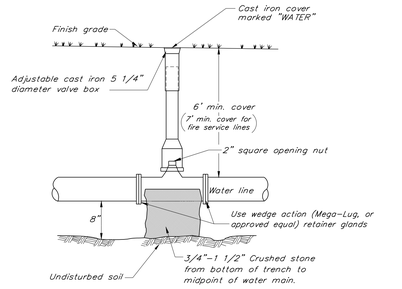


Typical Granite Curb Section Detail

N.T.S.

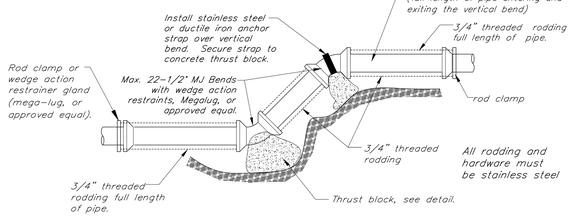
*The Contractor shall confirm all valve * specifications with Municipality before ordering.

1. Gate valves shall be meet all requirements of A.W.W.A. C509 and C515 Standards (latest edition). Valves with mechanical joints of sizes as required on the plans.
2. All valves shall be of cast or ductile iron body and shall be coated with fusion bonded epoxy complying with AWWA C-550 and be NSF 61 approved. Valve shall have manufacturer's name, pressure rating, and manufacture date cast on the body.
3. All valves shall include non-rising stem, high strength bronze stem and nut, 100% coated wedge, "O" Ring Stem Seals above and below the thrust collar, a 2" square operating nut, mechanical joint ends, and corrosion resistant stainless steel body bolts and nuts.
4. City of Burlington gate valves shall open clockwise (right) and be designed for a minimum working pressure of 200 psi.
5. Valves shall be equipped with a two piece, sliding type cast iron valve box for a minimum 6 ft. of cover material.



Typical Resilient Wedge Gate Valve

N.T.S.



Notes:

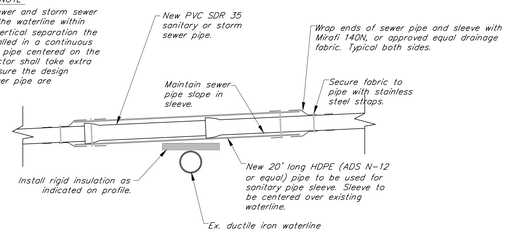
1. See thrust block detail for additional information.
2. Prior to pouring thrust blocks, all fittings are to be wrapped with 4 mil. polyethylene

Vertical Bend Thrust Block Restraint Detail

N.T.S.

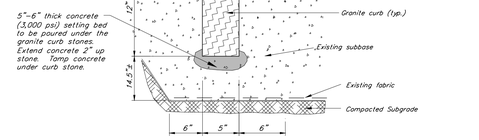
SEWER CROSSING NOTE

For all sanitary sewer and storm sewer pipes that cross the waterline within the required 18" vertical separation the pipe shall be installed in a continuous 20 ft. long sleeve pipe centered on the waterline. Contractor shall take extra precautions to ensure the design grades of the sewer pipe are maintained.



Sewer Pipe Sleeve Detail

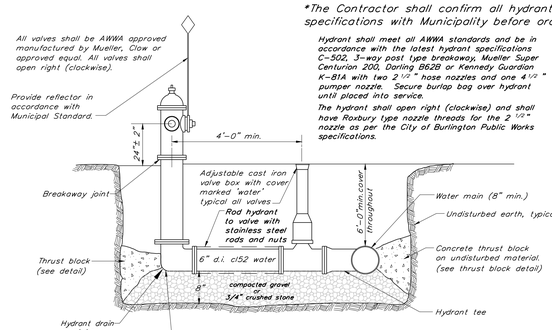
n.t.s.



Flush Granite Curb

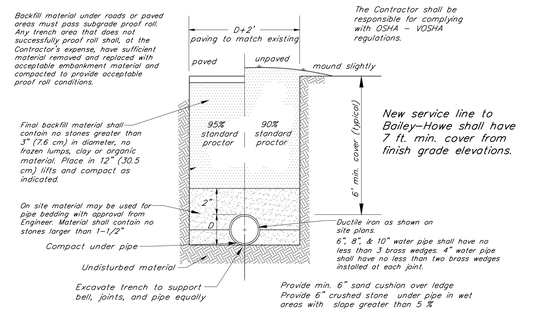
N.T.S.

*The Contractor shall confirm all hydrant * specifications with Municipality before ordering.



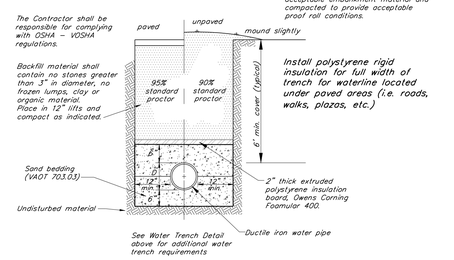
Typical Hydrant

(City of Burlington)
N.T.S.



Typical Water Trench Detail

N.T.S.

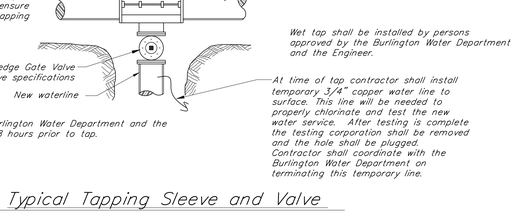


Insulation shall be Owens Corning Rigid Foam Insulation: Foamular 400. Insulation shall be 2" thick, supplied in 2'x 8' or 4'x8' pieces with square edges. Compressive strength shall be a minimum of 40 pounds per square inch.

INSULATION INSTALLATION: The Contractor must prepare the sand bed so that all projections that interfere with placement of insulation boards are to be removed, formed to fit around or as specified by the engineer. The contractor may not move equipment onto foam until the first 12" minimum, of gravel has been placed.

Typical Insulated Water Trench

N.T.S.



Typical Tapping Sleeve and Valve

N.T.S.

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No.	Description	Date
-	Burlington DRB Set	12 APR
-	DD Pricing Set	23 MAR
-	DD Progress Set	02 MAR
-	Supplemental SD Set	03 NOV
-	SD Pricing Set	25 AUG

N

KEY PLAN

Drawing Title:

CIVIL DETAILS

Project No.: 005353.00 Checked by:

C0601

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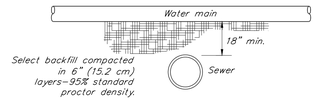
NOTES:

1. The location of sewer mains in relation to water mains shall be in accordance with the "Recommended Standards for Sewage Works" so-called Ten State Standards and Water Supply Rules.
2. Sanitary sewers shall be laid at least 10 feet horizontally from any existing or proposed water main. The distance shall be measured edge to edge. If this distance cannot be obtained variance shall be approved by the ANR Drinking Water & Groundwater Protection Division.
3. 18" separation shall be maintained whether water is over or under sewer. If this distance cannot be obtained then a solid 20 ft. long pipe sleeve may be installed centered on the crossing. This may only be done with approval from the Engineer.



Sewer / Water Separation Detail

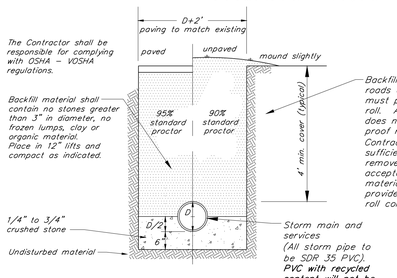
N.T.S.

Sanitary Testing Requirements

1. All sewer lines and manholes shall be thoroughly tested by the Contractor in accordance with the Environmental Protection Rules (09/29/07).
2. All sanitary manholes shall be vacuum tested in the presence of the Engineer. The structure shall be tested prior to backfill with the lowest seam exposed. Test procedures and pressure shall be determined jointly by the local approval agency and the Engineer. Failure of any vacuum test shall necessitate repair and/or replacement of the structure and retest. Water testing manholes is not acceptable.
3. All sanitary mains shall be air tested in the presence of the Engineer. At a minimum, the test pressure shall be 4 pounds per square inch at the highest point along the test for 4 minutes.
4. Utility Testing. The Contractor shall be responsible for scheduling sanitary testing at a minimum of 24 hours prior to the test. Based on availability of Engineer's staff, the Engineer shall accommodate the testing schedule within 24 hours of the Contractor requested test date/time.
5. The Contractor shall immediately contact the Engineer if pre-scheduled testing and/or water/sewer construction is canceled. If Contractor does not contact Engineer and Engineer visits the site, the Contractor shall be responsible for Engineer's fees/mileage for site visit.

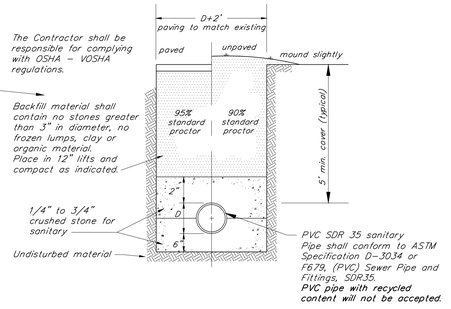
PVC SDR 35 pipe shall not be installed when the temperature drops below 32° F or goes above 100° F unless prior approval is obtained from the Engineer. Extra care is required when handling PVC pipe during cold weather. PVC pipe shall not be stored outside and exposed to prolonged periods of sunlight as pipe discoloration and reduction in pipe impact strength will occur. If PVC pipe is to be stored on site for 1 month or longer it shall be covered with canvas or other opaque material.

All new storm and sanitary extending from structures shall be laid with a pipe laser to elevation and slope as shown on the plans.



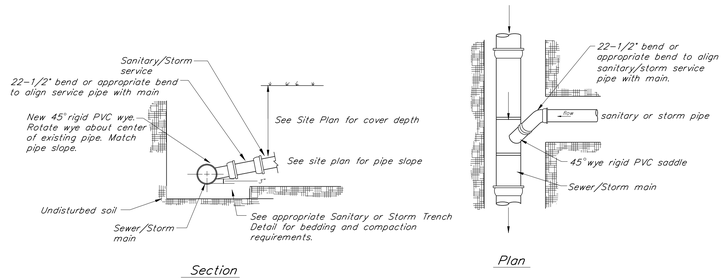
Typical Storm Trench Detail

N.T.S.



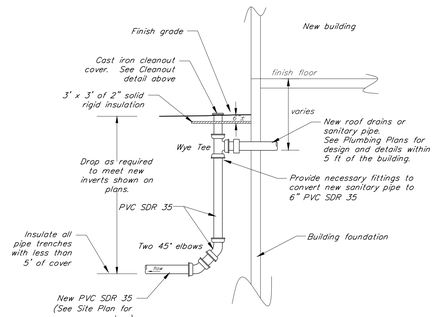
Typical Sanitary Trench Detail

N.T.S.



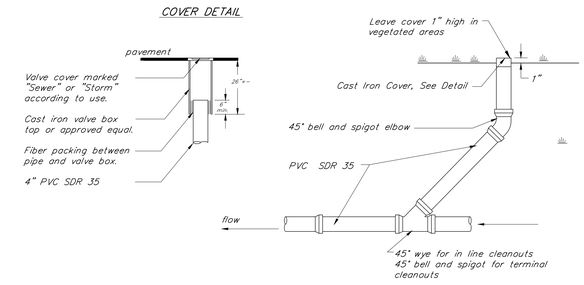
In-line Sewer/Storm Connection Detail

N.T.S.



Drop Outlet Plumbing Connection Detail

N.T.S.



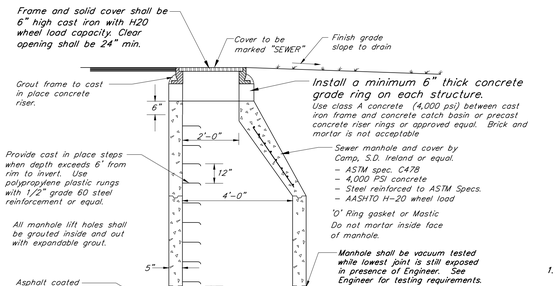
Storm/Sanitary Sewer Cleanout Detail

N.T.S.

Testing and Contractor Coordination Requirements

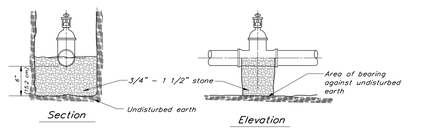
(applies to water and sanitary sewer)

1. All water lines and sewer lines shall be thoroughly tested by the Contractor in accordance with the Environmental Protection Rules (09/29/07), and the Chapter 21 Water Supply Rules (the more stringent rule shall apply).
2. All private or municipal waterlines shall be tested by the Contractor in accordance with the procedures outlined in AWWA C600 and/or NFPA 24.
3. No water main shall be closer than ten (10) feet to any sanitary sewer or sanitary manhole and five (5) feet to any catch basin or storm sewer line. Provide minimum of 18" vertical separation between water main and storm/sanitary sewer crossing.
4. The Contractor shall be responsible for construction as-builts to service locations, and any water main fittings. As-builts shall be recorded in accordance with the outlined procedures.
5. **The Contractor shall be responsible for contacting Engineer at least 24 hours prior to starting construction on any portion of the exterior water or sanitary systems. This notification requirement shall continue to the completion of the water and sanitary systems.**
6. Utility Testing. The Contractor shall be responsible for scheduling water and sanitary testing, with the Engineer and the Municipality Public Works Department, at a minimum of 24 hours prior to the test. Based on availability of Engineer's staff, the Engineer shall accommodate the testing schedule within 24 hours of the Contractor requested test date/time.
7. The Contractor shall pre-test water for 2 hours. The Contractor shall notify Engineer immediately if pre-test failed.
8. The Contractor shall immediately contact the Engineer if pre-scheduled testing and/or water/sewer construction is canceled. If Contractor does not contact Engineer and Engineer visits the site, the Contractor shall be responsible for Engineer's fees/mileage for site visit.
9. The Contractor shall coordinate water construction with the City of Burlington. The Contractor shall leave thrust blocks and other required sections of new line exposed until City has inspected and approved it.



Typical Precast Sewer Manhole

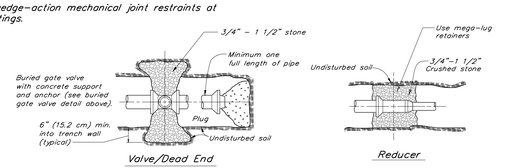
N.T.S.

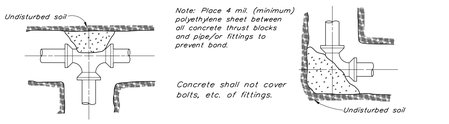


Anchorage of Valves

Note

1. A thrust block shall be installed at all water main bends, end caps, and tees.
2. Precast thrust blocks are NOT acceptable.
3. Redi-mix concrete (2,500 psi min) must be used for thrust blocks. Sacrete is NOT acceptable.
4. Use wedge-action mechanical joint restraints at all fittings.



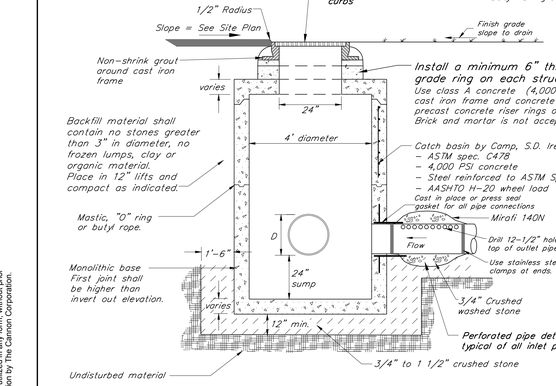


Minimum Area of Bearing Surface of Concrete Thrust Block (in square feet)

3"				4"				6"				8"				12"				SOIL CONDITION	SAFE BEARING LOAD(PSF)
ENDS & TEES	VALVES 90° ELB.	REDUC 45° ELB.	22.5° ELB.	ENDS & TEES	VALVES 90° ELB.	REDUC 45° ELB.	22.5° ELB.	ENDS & TEES	VALVES 90° ELB.	REDUC 45° ELB.	22.5° ELB.	ENDS & TEES	VALVES 90° ELB.	REDUC 45° ELB.	22.5° ELB.	ENDS & TEES	VALVES 90° ELB.	REDUC 45° ELB.	22.5° ELB.		
0.5	0.5	0.5	0.5	0.5	1.0	0.5	0.5	1.0	1.5	1.0	0.5	2.0	2.5	1.5	1.0	4.0	5.5	3.0	1.5	Sound shale	10,000
1.0	1.0	1.0	0.5	1.5	2.0	1.0	0.5	3.0	4.0	2.0	1.0	4.5	6.5	3.5	2.0	10.0	14.0	7.5	4.0	Cemented gravel & sand	4,000
1.0	1.0	1.0	0.5	2.0	2.5	1.5	1.0	3.5	5.0	3.0	1.5	6.0	8.5	5.0	2.5	13.0	18.5	10.0	5.0	Coarse & fine compact sand	3,000
1.5	2.5	1.5	1.0	2.5	3.5	2.0	1.0	5.5	7.5	4.0	2.0	9.0	13.0	7.0	3.5	20.0	27.5	15.0	8.0	Medium clay (can be spaded)	2,000
3.0	4.5	2.5	1.5	5.0	7.0	4.0	2.0	10.5	15.0	8.0	4.0	18.0	25.0	14.0	7.0	39.0	55.0	30.0	15.0	Soft clay	1,000
Maximum water pressure = 200 PSI (140,620 kg/m^2)																					

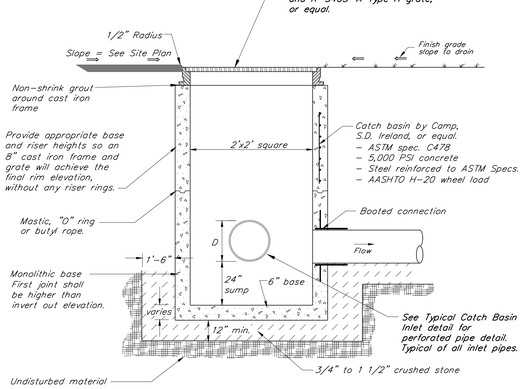
Thrust Block Details

N.T.S.



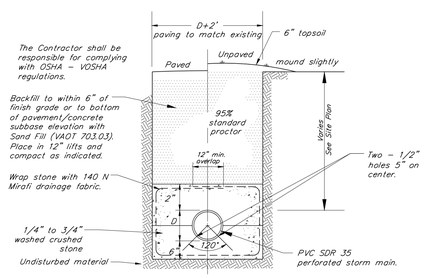
Typical Catch Basin Inlet

N.T.S.



Typical Drop Inlet Detail

N.T.S.



Typical Underdrain Trench Detail

N.T.S.

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NOT FOR CONSTRUCTION

No.	Description	Da
-	Burlington DRB Set	12 AP
-	DD Pricing Set	23 MA
-	DD Progress Set	02 MA
-	Supplemental SD Set	03 NO
-	SD Pricing Set	25 AU

N

KEY PLAN

Drawing Title:

CIVIL DETAILS

Project No.: 005353.00 Checked by:

C0602

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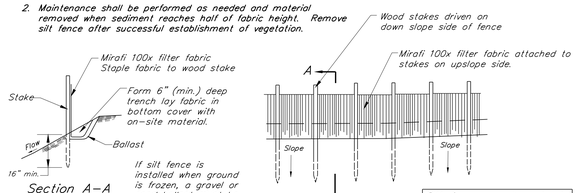
Straw wattles may be used as as substitute for silt fence for areas approved by the Engineer.

NOTE:
1. *Contractor shall be responsible for the installation, maintenance, and removal of silt fence in all locations shown on the plans.*
2. *Maintenance shall be performed as needed and material removed when sediment reaches half of fabric height. Remove silt fence after successful establishment of vegetation.*



If silt fence is installed when ground is frozen, a gravel or sand ballast must be used.

Silt fence spacing chart	
Slope	silt fence spacing
5% to 10%	50 ft. or less
10% to 20%	25 ft. or less
> 20%	15 ft. or less

Typical Temporary Silt Fence

N.T.S.

Road Construction Notes

(All references to road shall apply to parking areas as well.)

1. *New road shall be constructed to the line and grade shown on the drawings. The road and utility locations shall be as typically detailed unless otherwise shown.*
2. *All road and parking construction shall be completed in accordance with the Vermont Agency of Transportation "Standard Specifications for Construction" 2011, hereafter called Vermont Highway Specifications, specifications found on these plans, and project specifications. In case of conflict, the more stringent specification shall apply as determined by the Engineer.*
3. *The Contractor shall follow Vermont Highway Specifications (2011) Section 203.11 for placing and spreading embankments.*
4. *Fill material for road embankment shall meet Note #13 below and be approved by the Engineer. Fill shall be placed in 12" lifts, wetted and compacted with satisfactory compaction equipment to 95% of maximum density (Standard Proctor).*
5. *Road in fill sections shall be placed and compacted a minimum of 3 feet above top of any utility to be installed before trench is excavated for pipe placement. In trenches and cut sections, the Contractor shall provide all necessary sheeting, shoring and bracing to maintain compliance with all OSHA/VOSHA regulations.*
6. *Methods for construction of subgrade shall conform to Vermont Highway Specifications (2011) 203.12 or as determined by the Engineer.*
7. *Any subgrade or subbase disturbed by Contractor, or rendered unsuitable by construction machinery, shall be removed and replaced with approved granular backfill at the Contractor's expense. The subgrade shall be compacted to attain at least 95% of the maximum density (Standard Proctor) before placing road or embankment materials.*
8. *The Owner will pay for on site soils testing (compaction, sieve, and proctor). The Contractor shall pay for failing tests. The Contractor is fully responsible for coordinating all testing/inspections. Contractor shall provide minimum 24 hour notice to testing agency prior to placement of any item to be tested.*
9. *Sand borrow and cushion shall conform to Vermont Highway Specifications (2011) 703.03. Granular borrow shall conform to the Vermont Highway Specifications 703.04.*
10. *Gravel subbase for pavement shall conform to Vermont Highway Specifications (2011) 704.05, coarse. Substitute materials identified in VAOT Specifications Section 301 — Subbase are not allowed.*
11. *Leveling course shall conform to Vermont Highway Specifications (2011) 704.05, fine grading. Shoulders shall conform to Section 704.12, Aggregate for Shoulders.*
12. *Bituminous concrete pavement shall conform to Vermont Highway Specifications (2011) Section 404 and 406. Binder course shall be Type I + II, and finish wearing course shall be Type III, IV, or as detailed.*
13. *Embankment fill for all impervious areas, EXCLUDING BUILDINGS, shall be a sieve specification as follows:*

Sieve	% Finer
4"	100
2"	85–100
#4	60–100
#200	30 maximum

14. *Dense graded crushed stone, crushed gravel and sand borrow shall not be contaminated by work. Construction traffic shall not travel over exposed areas of this material.*
15. *Contractor is responsible for all pavement markings (ie. parking striping, handicap markings, stop bars, etc.) shown or implied on the Plans.*
    - *Paint for pavement markings shall be Hydrophast Waterborne Traffic Paint by Franklin Paint Company. It shall be reflective, VOC compliant fast drying, 100% acrylic waterborne traffic paint. Paint for stop bars and crosswalks shall be white all other line striping shall be yellow. Confirm paint color with UVM Parking & Transportation prior to application.*
    - *Traffic paint shall be applied with a uniform thickness and at a rate such that no pavement is visible after drying. Additional paint application will be required if underlying pavement is visible.*

Winter Construction Requirements (October 15th - April 15th)

1. *For areas to be stabilized with vegetative cover, seeding shall be completed no later than September 15th to ensure adequate growth and cover.*
2. *If seeding is not completed by September 15th, additional non-vegetative protection must be used to stabilize the site for the winter period. This includes the use of Erosion Control Matting or netting of a heavy mulch layer.*
3. *Where mulch is used for temporary stabilization it must be applied at double the standard rate, or a minimum of 3 inches with an 80%-90% cover.*
4. *Stabilized Construction Entrances shall be enlarged to provide for snow stockpiling.*
5. *Limits of disturbance shall be moved or replaced to reflect any revised boundaries of winter work.*
6. *The site shall be managed to provide adequate snow storage and control of meltwater. Cleared snow shall be stored down slope of all areas of disturbance and out of stormwater treatment structures.*
7. *A minimum 25 foot buffer shall be maintained from perimeter controls such as silt fence.*
8. *Drainage structures must be kept open and free of snow and ice dams.*
9. *Silt fence and other practices requiring earth disturbance must be installed ahead of frozen ground.*
10. *To ensure cover of disturbed soil in advance of a melt event, areas of disturbed soil must be stabilized at the end of each work day, with the following exceptions:*
    - *If no precipitation within 24 hours is forecast and work will resume in the same disturbed area within 24 hours, daily stabilization is not necessary.*
    - *Disturbed areas that collect and retain runoff, such as house foundation or open utility trenches.*
11. *Prior to stabilization, snow or ice must be removed to less than 1 inch thickness.*
12. *Use stone to stabilize areas such as the perimeter of buildings under construction or where construction vehicle traffic is anticipated. Stone paths should be 10-20 feet wide to accommodate vehicular traffic.*

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North American Green S75BN

Material Content

Straw	100% (.50 lbs/sq.yd.) (.27 kg/m2)
Netting	Leno woven, 100% biodegradable jute fiber
Weight	approximately 1.64 lbs/1000 s.f.
Thread	Biodegradable

Installed as per manufacturer's specifications.

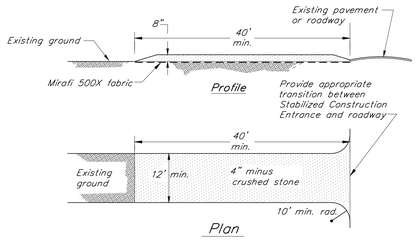
Material Specifications

Erosion control blanket shall be a machine-produced mat of 100% agricultural straw.

The blanket shall be of consistent thickness with the straw evenly distributed over the entire area of the mat. The blanket shall be covered on the top side with natural fiber netting having an approximate 1/2" X 1/2" mesh and be sewn together with biodegradable thread.

Straw erosion control blanket shall be S75BN as manufactured by North American Green, Inc. (812-867-6632) or equivalent. Erosion control blanket shall have the following properties:

Erosion Control Matting



Note:

- *Contractor shall be responsible for the installation, maintenance, and removal of a stabilized construction entrance at each construction entrance for the project. The Construction Stabilized Entrance and its continued maintenance shall be a minimum measure to prevent tracking of sediment off-site.*
- *Contractor to use Mirafi 500x under stone for temporary construction roads.*
- *Stabilized construction entrances shall be repaired when voids are 80% filled with sediment. Repair shall include adding additional 4" minus crushed stone and/or removal of contaminated stone.*

THIS DETAIL TO BE USED FOR ALL TEMPORARY STONE STABILIZATION AREAS IDENTIFIED ON THE PLANS

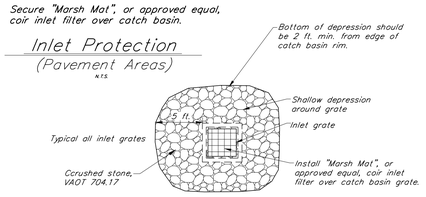
Temporary Stabilized Construction Entrance & Staging Areas

N.T.S.

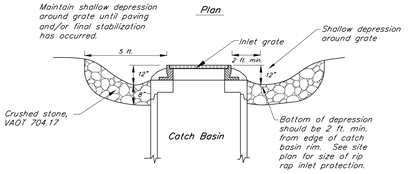
Secure "Marsh Mat", or approved equal, coir inlet filter over catch basin.

Inlet Protection (Pavement Areas)

N.T.S.



Maintain shallow depression around grate until paving and/or final stabilization has occurred.



Stone Lined Sump Inlet Protection

N.T.S.

Soil and Seeding Notes

Refer to Post Construction Soil Restoration Plan for additional requirements

1. *Topsoil shall have a minimum 4" depth unless additional depth is specified on the Civil or Landscape plans. Topsoil shall be natural, fertile, friable soil representative of local productive soil and free of clay lumps, stones, subsoil or other foreign matter larger than 1/2 inch diameter, not frozen or muddy. Acidity pH shall range from 5.5 to 7 and shall contain 4% organic material as a minimum. Samples of topsoil are to be given to UVM Physical Plant's Ground Manager for inspection before approval. All testing costs will be paid by Contractor.*
2. *The Contractor shall have a soil analysis performed on the topsoil (UVM soil testing lab 656-3030). The results of soil analysis shall be provided to the UVM Physical Plant Grounds Manager for approval. The soil analysis must state:*
    a. *Percentages of organic matter, inorganic matter (silt, clay, and sand), deleterious materials, and pH levels.*
    b. *Sieve analysis and mineral and plant nutrient content of topsoil.*
    c. *Test for herbicide contamination and provide report certifying that no herbicides are present.*
    d. *State quantities of nitrogen, phosphorous, and potash nutrients and any limestone, aluminum sulfate, or other soil amendments to be added to produce satisfactory topsoil.*
    e. *Topsoil shall meet the following gradation:*

Sieve Sizes:	Percentage Passing:
1 inch	100%
1/2 inch	95-100%
No. 4	75-100%
No. 10	60-100%
No. 200	10-60%

3. *Commercial fertilizer shall be a complete plant food containing nitrogen (50% organic) phosphoric acid and potash. Soil tests will indicate composition required.*
4. ***Hydro seeding and tocifier is the required practice for turf establishment.*** *Specifications are:*

Seed: UVM #1 mix using 6 lbs per 1,000 square feet.

71.46% Min. Futura 3000 PER RYE GRASS	Germ: 90%
14.81% Min. Dynasty TALL FESCUE	Germ: 90%
9.74% Min. CREEPING RED FESCUE	Germ: 90%
3.32% Max. CROP	
1.61% Max. INERT	
0.06% Max. WEED	

Hydroseed Additives:
Fertilizer: 19-19-19 75 lbs per 1,000 gallons of water
Lime: 100 lbs. per 1,000 gallons of water
Mulch: 300 lbs. per 1,000 gallons of water.
Tacifer: 5 lbs. per 1,000 gallons of water.

Manufacturer's tag shall be given to Physical Plant's Ground Manager prior to seeding for approval.

5. ***Areas having soil compaction as a result of construction shall be roto-tilled prior to seeding.***
6. *If hand seeding, only straw mulch is to be used and secured by netting either organic or inorganic. If inorganic is used, it must be removed before the first mowing.*
7. *Starter fertilizer shall be applied at the manufacturer's suggested rate at the time of seeding. Fertilizer application will not be allowed in sensitive areas and adjacent to drainage ways as determined by the Engineer.*
8. *Watering is to be done by the Contractor and is to last for the duration of the warranty period to maintain proper growth. UVM will supply the water, but all apparatus necessary to apply the water must be furnished by the Contractor (i.e. hoses, sprinklers, etc.).*
9. *Staking of all topsoiled areas to control foot traffic will be required. Unless otherwise specified, acceptable staking materials will be grade stakes and twine or string with flagging attached for visibility.*
10. *A guarantee through the first mowing is required with any sparse or bare areas larger than 1 sq. ft. to be redone.*
11. *The Contractor is responsible for the first mowing. After the first mowing and prior to the University taking responsibility for the lawn areas the Contractor and the Grounds Manager shall meet to inspect the vegetation establishment*
12. *Contractor is responsible for all topsoil to complete the project as shown. If existing volume of topsoil is inadequate, the Contractor, at no cost to the Owner, shall purchase offsite approved topsoil as necessary.*

Grounds Restoration

1.0 GENERAL
1.1 All renovation and new construction must repair any damaged grass or landscaped areas to pre-construction conditions.

1.2 Damage caused to grounds due to contractor negligence or due to construction traffic shall be restored at the cost of the contractor. Damage shall be reported to the Grounds Office immediately after event @ (802) 656-3866.

1.3 Topsoil shall have a minimum of 4 inches of depth unless additional depth is specified on the plans. See Soil & Seeding Notes.

1.4 Seed: UVM #1 mix shall be used. See Soil & Seeding Notes.

1.5 Fertilizer: See Soil & Seeding Notes.

1.6 Grade evenly with walkways, curbs and lamppost bases.

Construction Limit Barriers

- *Temporary chain-linked construction fence shall be used to delineate construction limits where practical or where directed in the Contract Documents.*
- *Orange construction fence or snow fence shall be used to demarcate short-term construction activities as well as around the drip line of any existing trees to remain.*
- *3" thick orange polyester mesh webbing may also be used to demarcate construction limits except within 50 feet of any stream, lake, pond or wetland. For this project, polyester mesh webbing should not be used in areas that are proximate to pedestrian or vehicular traffic.*

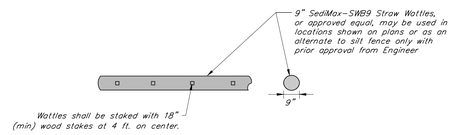
Tree Protection & Landscape Clearing

1. *All renovation and new construction must address tree protection and selective clearing. Since the University of Vermont has many memorial plantings, the protection of these specimens must be planned for and documented. The procedures shall be discussed, diagrammed, and implemented by the appropriate committee. The Physical Plant's Ground Manager shall have final say on a program's acceptance.*
2. *Prior to any construction activity the General Contractor shall meet with the Grounds Manager to review the staging and protection plan for the adjacent landscaping.*
3. *Damage caused to specimens due to contractor negligence shall be replaced at the cost of the contractor. Damage shall be reported to the Grounds Office immediately after event @ (802) 656-3866. Replacement value and condition of each specimen is to be determined by the Physical Plant's Grounds Manager.*
4. *All trees within the designated construction zone shall be protected by no less than 4' high plastic fencing at the drip line completely encompassing the tree. No storage of building materials shall be allowed within tree protection fencing.*
5. *All trees within 30' of the construction zone shall be protected by no less than 4' high plastic fencing at the drip line.*
6. *If equipment is allowed by the Grounds Manager to pass over a tree's root zone, then a minimum of 8" of wood chips shall be laid and maintained by the contractor.*
7. *If tree pruning is necessary, the Contractor shall contact the Grounds Manager (802-656-3866) to perform the necessary pruning*
8. *During excavation, if root impact is unavoidable and therefore approved by the Grounds Manager, any root system encountered which is 1" in diameter or larger will be pruned by authorized personnel only. ANA standards for root pruning shall be followed.*
9. *Where an existing tree meets new landscaping, grade topsoil at a depth of 6" (six inches) from the drip line to 0" (zero inches) at the base of the tree.*

Construction Notes

1. *The methods and materials of construction shall conform to the latest standards of the City of Burlington and the State of Vermont. All work shall be in conformance with all permits and approvals issued for the project. In case of conflict, the more stringent specification shall apply as directed by Engineer. All work shall be done in a workmanlike manner and completed in the time specified by Owner.*
2. *The Contractor shall be responsible for all work and materials shown and required to make the job complete. These drawings do not show every fitting or appurtenance. Materials shall be as specified on the drawings. Manufacturer's product specifications shall be submitted for all materials to the Engineer for approval prior to installation.*
3. *The location and size of existing underground utilities is not warranted to be exact or complete. The Contractor shall field locate all utilities and shall contact the affected utility company, the Engineer and the City of Burlington prior to making any hook ups. The Contractor shall be solely responsible for all existing utilities and their uninterrupted services. All off-site backfill, sheeting and shoring, dewatering, clearing and grubbing, erosion control, dust control, traffic control, grading, and all incidentals shall be included as part of the required work.*
4. *Repair of all disturbed areas, grading, seeding, mulching, repair of roads and curbs, paving, and other incidentals are included as part of the required work. All disturbed areas shall be loamed and mulched until permanent ground cover is established.*
5. *The Contractor shall verify all horizontal control and temporary bench marks before use.*
6. *The workers and public shall be protected by the Contractor from any and all hazards connected with the construction work. Open trenches, materials, or equipment within the working limits are to be guarded by the use of adequate barricades or flaggers. All barricades left in position overnight are to be properly lighted. Kerosene pots are not acceptable. When work narrows the usable pavement, flaggers shall be employed to aid the flow of traffic so that there will be no undue delays. The Contractor shall be held responsible for the safety of all workers and the general public and all damages to property occurring from or upon the work occasioned by negligence or shall be held responsible for the safety of all workers and the general public and all damages to property occurring from or upon the work occasioned by negligence or day or night within the working area. All work shall be in conformance to OSHA regulations, Title 19, Parts 1926.651 and 1926.652, and applicable to VOSHA regulations.*
7. *Contractor shall contact Dig Safe prior to any excavation.*
8. *All new storm and sanitary extending from structures shall be laid with a pipe laser to elevation and slope as shown on the plans.*
9. *The Contractor shall sawcut all existing pavement to be removed. The Contractor shall minimize the pavement area disturbance. Contractor shall be responsible for all pavement repair and restoration necessary to complete the work.*
10. *The Contractor shall be responsible for all construction layout.*
11. *Temporary silt fence shall be erected prior to any clearing or construction. Fencing may be erected in phases, but in no case shall construction of clearing proceed fencing. Special areas may be designated by the Owner for preservation of existing trees. These areas shall be the Contractor's responsibility to insure no damage is done to designated trees.*
12. *Existing plantings are located in general areas as shown on the plans. Contractor shall protect plantings scheduled to remain so as not to damage these or their root systems.*
13. *Contractor shall comply with all permits and approvals issued for this project.*
14. *Contractor shall sign on as the Co-Permittee for the State of Vermont Erosion Prevention and Sediment Control permit for the project.*
15. *Slope stability upon unsaturated soil conditions. If during construction saturated soils are encountered, contact the Engineer immediately.*

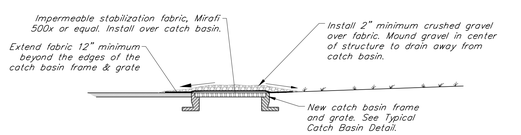
NOTE:
1. *Contractor shall be responsible for the installation, maintenance, and removal of straw wattles in all locations shown on the plans.*
2. *Maintenance shall be performed as needed and material removed when sediment reaches half of product height. Remove wattle after successful establishment of vegetation.*



Typical Straw Wattle Sediment Control

N.T.S.

NOTE: *This detail to be used only when inlet protection is not practical and only with prior approval from the Engineer.*



Temporary Impermeable Catch Basin Cover Detail

N.T.S.

The University of Vermont

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Multipurpose Center

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NOT FOR CONSTRUCTION

No.	Description	Date
-	Burlington DRB Set	12 APR
-	DD Pricing Set	23 MAR
-	DD Progress Set	02 MAR
-	Supplemental SD Set	03 NOV
-	SD Pricing Set	25 AUG

N

KEY PLAN

Drawing Title:

CIVIL DETAILS

Project No.: 005353.00 Checked by:

C0603

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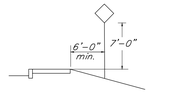
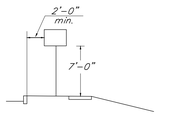
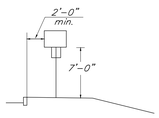




IF SUFFICIENT CLEARANCE IS NOT AVAILABLE BETWEEN CURB AND SIDEWALK MOUNT SIGN BEHIND SIDEWALK AS SHOWN AT TOP. CHECK FOR ADEQUATE R.O.W..

IF A SECONDARY SIGN IS MOUNTED BELOW ANOTHER SIGN, THE MINIMUM CLEARANCE MAY BE REDUCED BY ONE FOOT.



Sign Placement Detail

Signage & Pavement Markings

All signage and pavement marking include all necessary items to make product complete. All labor, materials, equipment and construction for signage and markings shall comply with AOT specifications. The location of each sign is shown on the plan or will be identified by the Owner or Engineer.

ROAD/PARKING SIGNS

Description	Specification	# Signs	Size
Handicap Parking Only	R7-8	24	12" x 18"
UVM Service Vehicle Parking		15	12" x 18"

Provide 2" square galvanized steel sign posts posts. Bottom of all signs to be 7 feet above nearest adjacent curb or pavement elevation.

SIGN MATERIALS:
THE SIGN BASE MATERIALS USED FOR REGULATORY SIGNS MAY BE ANY OF THE FOLLOWING OF THE MINIMUM THICKNESS NOTED.

		24" X 12"		
		24" X 24"		
		24" X 30"		
	12" X 18"	24" X 36"	36" X 48"	
	18" X 24"	30" X 24"	48" X 60"	
FLAT SHEET ALUMINUM	0.060"	0.080"	0.100"	

ALL PANELS SHALL HAVE RETROREFLECTIVE BACKGROUNDS

ALL SIGN POSTS SHALL BE SQUARE TUBE GALVANIZED STEEL PLACED IN GALVANIZED STEEL ANCHORS

SIGN POST NOTES

1. ALL SQUARE TUBE STEEL POSTS AND ANCHORS SHALL BE FORMED INTO A SIZE AND SHAPE IN SUCH A MANNER THAT NEITHER FLASH NOR WELD SHALL INTERFERE WITH THE TELESCOPING PROPERTIES, NOR DAMAGE THE GALVANIZING.
2. ANCHORS MAY BE DRIVEN OR SET INTO A DUG HOLE AND BACKFILLED. IF DRIVEN, A DRIVING CAP SHALL BE USED. THE DUG HOLE INSTALLATION METHOD SHALL BE UTILIZED IN AREAS WITH POOR SOIL CONDITIONS OR AS DIRECTED BY THE ENGINEER. BACKFILL SHALL BE COMPACTED AS DIRECTED BY THE ENGINEER.
3. THE TOPS OF SIGN POSTS SHALL BE AT OR NEAR THE TOP OF SIGN. THE POST SHALL NOT EXTEND ABOVE THE TOP OF SIGN.
4. SIGN POSTS SHALL BE INSTALLED A MINIMUM OF ONE FOOT BELOW GROUND, INSIDE THE ANCHOR. THE LENGTH OF ANCHOR EXPOSED ABOVE GROUND SHALL NOT EXCEED FOUR INCHES.

CONSTRUCTION STAKEOUT NOTES

The Contractor shall be responsible for all construction stakeout for the project. The Engineer shall provide the Contractor an AutoCAD R2000 drawing of the site design. The drawing will include horizontal and vertical survey control. Additional survey control will be the responsibility of the Contractor.

1. The Contractor shall be responsible for using proper survey equipment and having properly trained personnel to use this information. Any Contractor that does not have proper equipment or personnel shall subcontract the work to a competent consultant.
2. The horizontal control datum may be based on a coordinate system that is unique for this project. Project north may not refer to astronomic or magnetic north.
3. The Contractor shall check the integrity of survey control points by occupying a control point checking distance to back sight and checking distance and angle to another control point prior to any construction stakeout. The contractor shall not proceed with stakeout if either measured distances or angles do not match calculated values.
4. Graphical images of infrastructure in the AutoCAD drawing may not be in an accurate representation of its size. It is the Contractor's responsibility to verify size and shape of all items to be staked out.
5. After completion of radial stakeout with the survey transit, the Contractor shall check each stakeout point as necessary to verify the horizontal and vertical position of the point and that it is correct in relationship to the rest of the project.
6. The Contractor shall complete all construction stakeout to an accuracy of 0.1 feet (excluding building stakeout).

AS-BUILT (RECORD) DRAWINGS

The Contractor shall be responsible for providing the Owner with an as-built (record) utility site drawing that meets the specifications below:

1. Drawing shall be in AutoCAD V14 format (20 megabyte drawing). The civil design AutoCAD file drawing shall be used as the base for the as-built drawing. All information added to the base AutoCAD drawing shall be drafted in accordance with the Utility Record Drawing Drafting Standards shown on this plan.

2. The Contractor shall continue to update as-built drawing throughout the project. The as-built drawing shall be updated so that at any time in the project, infrastructure installed is located, plotted and drafted in the as-built drawing within 2 weeks of installation.

The Contractor shall copy the as-built drawing to the Engineer weekly during construction. The drawing shall include as-built survey shots including elevation and description of shot. The as-built survey shots shall be placed on a separate layer from the line work and shall be designated by date as AB-SHOT-XX-XX-XX (date). (for example, an as-built waterline topo shot shall be on a layer titled (AB-SHOT-01-08-08).

3. The Contractor shall utilize survey equipment able to locate infrastructure at the desired accuracy listed below. Footing drains and underdrains are exempt from the as-built requirements if they are constructed in accordance with the plans. Stormwater collection pipes for footing drains or underdrains must be survey located and included in the Record Drawing.

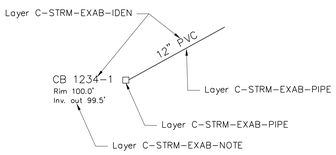
Utility	Horizontal Tolerance	Vertical Tolerance
Storm manhole/cb – rims/inverts/sumps Storm cleanout – invert Storm pipe – change slope/bend Storm pipe – building invert	1'	0.1'
Sanitary manhole – rims/inverts Sanitary cleanout – invert Sanitary pipe – change slope/bend Sanitary pipe – building invert	1'	0.1'
Water pipe – top pipe (every 36' max) Water pipe – building invert Water bends/tees/reducers/fittings/valves – top pipe	1'	0.1'
PBX – top concrete (every 36' max.) PBX – trench x-section (number and type conduit, encasement detail, conduit length, run direction) PBX manhole – rim, inverts, sump	1'	0.1'
Electric-Primary – change slope/bend Electric-Primary – top concrete (every 36' max.) Electric-Primary – trench x-section (number and type conduit, encasement detail)	1'	0.1'
Electric-Secondary – change slope/bend Electric-Secondary – top concrete (every 36' max.) Electric-Secondary – trench x-section (number and type, encasement detail)	1'	0.1'
Gas – top pipe (every 36' max.) Gas – tees/valves – top pipe	1'	0.1'
Steam/Condensate – all piping – top pipe (every 36' max.) Steam/Condensate – top concrete Steam/Chilled Water manholes – rim/inverts/sump Steam – expansion loops – at bends – top pipe	1'	0.1'
Chilled Water – all piping – top pipe (every 36' max.) Chilled Water – change slope/bend Chilled Water – top concrete protection slab	1'	0.1'
Fuel Oil – all piping – top pipe (every 36' max.) Fuel Oil – change slope/bend Fuel Tank – rim, invert, sump	1'	0.1'
Other – Contractor shall be responsible for locating and identifying all existing utilities that are exposed in the process of installing new utilities.	1'	0.1'

Site Lighting – Contractor shall be responsible for providing to the Owner a "mark-up" plan showing the layout of the site lighting conduit from light pole to light pole. If unforeseen site conditions require site lighting conduits to deviate from a predictable light pole to light pole path, the Contractor shall be responsible for providing "as-built" topographic shots in accordance with the standards for Electric-Secondary above.

ACAD Layer Naming Convention

X–XXXX–XXXX– XXXX
| | | | Identifier
| | | Minor Group
| | Major Group
Discipline Code

Discipline Codes:
B – Background (x-ref) (by WM Group only)
C – Civil
E – Electrical
M – Mechanical
S – Site
T – Telecommunications
U – Controls
X – Other



DRAFTING EXAMPLE

Major Group Codes:
B – Background (x-ref) (by WM Group only)
BASE Roads, parking lots, walks, general
BLDG Building

C – Civil
NGAS Natural Gas
SSWR Sanitary Sewer
STRM Storm Sewer
WATR Domestic Water

E – Electrical
PPOW Primary Power Distribution
SPOW Secondary Power Distribution
EPOW Emergency Power
LITE Lighting

M – Mechanical
CHWR Chilled Water
FOIL Fuel Oil and Tanks
STEM Steam, Condensate
COGN Future Cogen Conduits

T – Telecommunications
PBX PBX
TELE Telephone

U – Controls
EMCM Emergency Communication
BC Building Controls
SECU Security/Fire

C) Minor Group Codes:
IDEN Street names, etc.
PKNG Parking Spaces
WATER Streams, Ponds (Spear St. Only)
UVM1 UVM building
NUVM Non UVM building
EXAP Existing Approximate (Typical for all Utilities)
EXAP Existing "AS-BUILT" (Typical for all Utilities)

UTILITY	IDENTIFIER	COLOR CODE
STORM WATER	STRM	47
SANITARY SEWER	SSWR	94
NATURAL GAS	NGAS	20
WATER	WATR	170
STEAM/CONDENSATE	HPS,LPS PCR,HPR	10
CHILLED WATER	CHW,CW	130
FUEL OIL PIPING/TANKS	FO	210
PRIMARY POWER DISTRIB.	PPOW	10
SECONDARY POWER DISTRIB.	SPOW	10
EMERGENCY POWER	EPOW	210
LIGHTING	LITE	130
EMERGENCY COMMUNICATION	EMCM	170
BUILDING CONTROLS	BC	94
SECURITY/FIRE	SEC	90
PBX	PBX	20
COGEN CONDUITS	COG	48
TELEPHONE	TELE	130

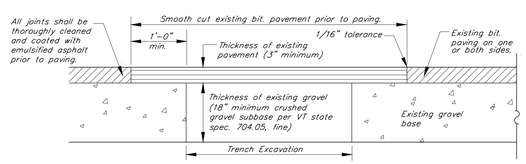
Identifier Codes:
PIPE Pipe (Actual pipe either active or abandoned)
CNDT Conduit (Actual conduit/bank either active or abandoned)
IDEN Identification (Manhole/pipe/conduit labels)
NOTE Notes (Notes as required – 1"=30' scale)
HTCH Hatching (UVM & non-UVM building hatching) (Background ONLY)

Symbols (i.e. manholes, hydrants, handholes, valves, etc.) should appear on PIPE/CNDT layer. (Others as needed)

2.) ACAD Standards

A) TEXT STYLE:
FOR GENERAL TEXT USE: "UVM-GENTEXT" STYLE
FONT: SIMPLEX
FONT SIZE (IDENTIFIER LAYER): 3.50 (MODEL SPACE)
FONT SIZE (NOTES LAYER ONLY): 2.50 (MODEL SPACE)
JUSTIFY: BOTTOM OR TOP CENTER
ORIENTATION: LEFT TO RIGHT OR BOTTOM TO TOP
FORMAT: ENGINEERING

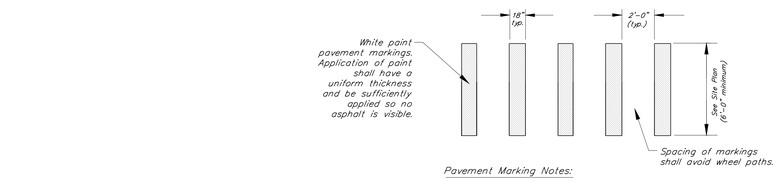
B) LINE STYLE:
EXISTING – ACTIVE:
LINETYPE: CONTINUOUS
LINETYPE SCALE: 1.000
(examples) 8"HPS
EXISTING – ABANDONED:
LINETYPE: DASHED2
LINETYPE SCALE: 0.35
(examples) 4"NG-abon
W=0.01"
1/2"=W=.08pt



1. Set up and maintain signs and other safety control devices.
2. Reshape hole and patch area by cutting with a concrete saw into square or rectangular shape and cut side faces vertically. Reshape downward solid material and around hole to sound pavement.
3. Backfill trench in 6" lifts and compact each lift to 95% of maximum density of optimum moisture content as determined by ASTM D698 standard proctor.
4. Remove all loose material and thoroughly sweep the hole area clean of mud and standing water.
5. Apply liquid asphalt tack to vertical faces in a uniform manner. Do not puddle tack coat on bottom of hole.
6. Fill top of hole with type IV bituminous concrete and compact in lifts no more than 2" thick. Each lift should be thoroughly compacted with a vibratory plate compactor or a portable roller. Experience has shown that 15 to 20 passes with a vibratory roller and mix temperature above 250°F (121°C) are necessary to ensure good compaction. Hand tamp should only be used for small areas (less than 1 s.f.)
7. Clean up area. Do not leave excess fill or excavated material on the pavement. Remove safety signs.

Replacement of Existing Road Subbase and Bituminous Pavement

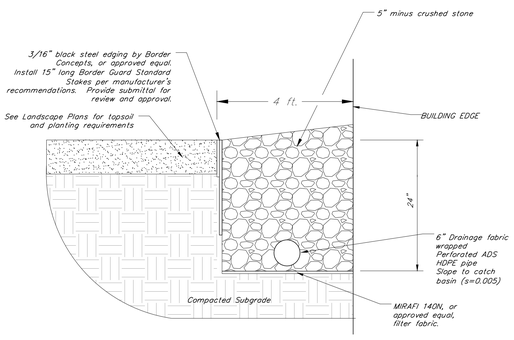
N.T.S.



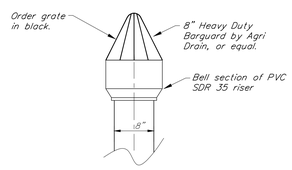
Pavement Marking Notes:
1. All markings shall meet the requirements for the Manual of Uniform Traffic Control Devices (section 3B.17) and Vermont Pavement Marking Placing Guidelines.
2. Painted crosswalk markings shall be reflective white non-chlorinated water based paint (Hydraphast Waterborne Traffic Paint) by Franklin Paint Company, or approved equal.

Crosswalk Pavement Marking Detail

N.T.S.

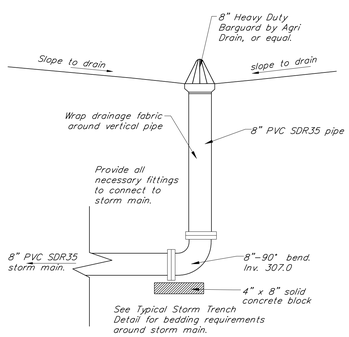


Stone Drip Edge



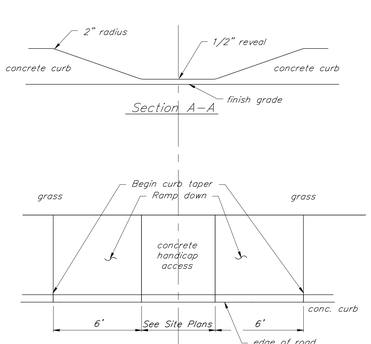
Yard Drain Cover Detail

N.T.S.



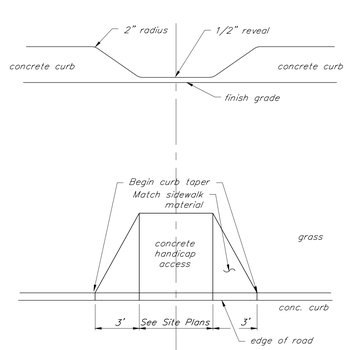
Yard Drain Detail

N.T.S.



Concrete Curb Taper – 6'

N.T.S.



Concrete Curb Taper – 3'

N.T.S.

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No.	Description	Date
-	Burlington DRB Set	12 APR
-	DD Pricing Set	23 MAR
-	DD Progress Set	02 MAR
-	Supplemental SD Set	03 NOV
-	SD Pricing Set	25 AUG

N

KEY PLAN

Drawing Title:

CIVIL DETAILS

Project No.: 005353.00 Checked by:

C0604

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97 Spear St, Burlington, VT 05405

005353.00
Burlington Design Review Board Submission
April 12, 2018
VOLUME 1

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DRAWING INDEX

SHEET NUMBER	SHEET NAME
VOLUME 1	
00 - GENERAL	
G0000.1	COVER SHEET - VOLUME 1
20 - CIVIL	
C0100	OVERALL CIVIL SITE PLAN
C0101	CIVIL SITE & UTILITY PLAN
C0102	CIVIL SITE & UTILITY PLAN
C0103	CIVIL SITE & UTILITY PLAN
C0104	CIVIL SITE & UTILITY PLAN
C0105	CIVIL SITE & UTILITY PLAN
C0106	CIVIL SITE & UTILITY PLAN
C0107	CIVIL SITE & UTILITY PLAN
C0108	POST CONSTRUCTION SOIL RESTORATION PLAN
C0200	OVERALL EXISTING CONDITIONS PLAN
C0201	EXISTING CONDITIONS PLAN
C0202	EXISTING CONDITIONS PLAN
C0300	CIVIL SITE DEMOLITION PLAN
C0301	CIVIL SITE DEMOLITION PLAN
C0400	EROSION PREVENTION & SEDIMENT CONTROL PLAN PRECONSTRUCTION
C0401	EROSION PREVENTION & SEDIMENT CONTROL PLAN STABILIZATION
C0600	CIVIL DETAILS
C0601	CIVIL DETAILS
C0602	CIVIL DETAILS
C0603	CIVIL DETAILS
C0604	CIVIL DETAILS
25 - LANDSCAPE	
L100	LAYOUT & MATERIALS PLAN
L300	PLANTING PLAN
L400	LANDSCAPE DETAILS
L500	SITE LIGHTING PLAN & PHOTOMETRIC STUDY
L600	EVENT CIRCULATION DIAGRAM
40 - ARCHITECTURAL	
A0105	ROOF OVERALL PLAN
A0305	OVERALL ELEVATIONS
A0311	EXTERIOR ELEVATIONS
A0312	EXTERIOR ELEVATIONS
A0313	EXTERIOR ELEVATIONS
A0314	EXTERIOR ELEVATIONS
A0315	EXTERIOR ELEVATIONS
A0350	BUILDING SECTIONS
A0351	BUILDING SECTIONS
A0352	BUILDING SECTIONS

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LUMINAIRE SCHEDULE

Qty	Label	Arrangement	Lum. Lumens	Lum. Watts	LLF	BUG Rating	Description
7	A1	SINGLE	3999	72	0.748	B3-U3-G2	LUMEC L70-65W4YLED4K-ES-LE3, RELOCATED DECORATIVE PEDESTRIAN FIXTURE, ON 10' POLE
6	A2	SINGLE	3691	72	0.850	B1-U3-G2	LUMEC L70-65W4YLED4K-ES-PCFC-LE3, RELOCATED,EX. DECORATIVE VEH. FIXTURE, MOUNTED ON EX. 12' POLE
7	A2b	SINGLE	3691	72	0.850	B1-U3-G2	LUMEC L70-65W4YLED4K-ES-PCFC-LE3, RELOCATED, EX. DECORATIVE PED. FIXTURE, MOUNTED ON NEW 12' POLE
9	B1	SINGLE	3999	72	0.748	B3-U3-G2	LUMEC L70-65W4YLED4K-ES-LE5, NEW DECORATIVE PEDESTRIAN FIXTURE, ON 10' POLE
1	B2	SINGLE	3691	72	0.850	B1-U3-G2	LUMEC L70-65W4YLED4K-ES-PCFC-LE3, NEW DECORATIVE VEHICULAR FIXTURE, MOUNTED ON 12' POLE
8	D	SINGLE	3999	72	0.748	B3-U3-G2	LUMEC L70-65W4YLED4K-ES-LE5, EX. PARKING LOT FIXTURE
23	E1	SINGLE	3999	72	0.748	B3-U3-G2	LUMEC L70-65W4YLED4K-ES-LE5, EX. DECORATIVE FIXTURE, ON 10' POLE
53	E2	SINGLE	3999	72	0.748	B3-U3-G2	LUMEC L70-65W4YLED4K-ES-LE5, EX. VEHICULAR FIXTURE, ON 12' POLE
4	F	SINGLE	131	10	0.850	N.A.	LUMEC RDS80-VOLT-GRE-DX W/ 10W LED LAMP
14	WP1	SINGLE	2751	25.5	0.850	B1-U0-G1	LUMARK XTOR3B-15K WALL MTD W/ MTD @ VARYING HEIGHTS
33	WP2	SINGLE	2503	20.8	0.850	B1-U0-G1	RAB WPLED25N WALL MTD @ VARYING HEIGHTS
57	WP3	SINGLE	2138	21.3	0.850	B0-U0-G1	BURNELL LWC2-14L-4K-D35-3 WALL MTD @ VARYING HEIGHTS
8	WP4	SINGLE	2005	23.3	0.850	B1-U0-G1	CREE SEC-EDG-3M-MW-G2-E-UL-SV-350-40K WALL MTD @ VARYING HEIGHTS

EXISTING BOLLARD LIGHT FIXTURE, TYPE F, TYP.

RELOCATED PEDESTRIAN POST-TOP LIGHT FIXTURE, TYPE A1, TYP.

PROPOSED PEDESTRIAN POST-TOP LIGHT FIXTURE, TYPE B1, TYP.

EXISTING PEDESTRIAN POST-TOP LIGHT FIXTURE TO REMAIN, TYPE E, TYP.

EXISTING VEHICULAR POST-TOP LIGHT FIXTURE TO REMAIN, TYP.

RELOCATED VEHICULAR POST-TOP LIGHT FIXTURE, TYPE A2, TYP.

RELOCATED PEDESTRIAN POST-TOP LIGHT FIXTURE ON NEW VEHICULAR POLE (12'), TYPE A2b, TYP.

EXISTING VEHICULAR PARKING LOT LIGHT FIXTURE, TYPE D, TYP.

PROPOSED VEHICULAR POST-TOP LIGHT FIXTURE, TYPE B2, TYP.

LEGEND

- 0.1 FC
- 0.2 FC
- 0.5 FC
- 1.0 FC
- 2.0 FC

32 0 32 64
SCALE OF FEET

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No.	Description	Da
-	BURLINGTON DESIGN REVIEW BOARD SUBMISSION	12 A
-	DD PRICING SET	23 M
-	DD PROGRESS SET	2 MA
-	SUPPLEMENTAL SD SET	3 NO
-	SD PRICING SET	25 A

Drawing Title:

SITE LIGHTING PLAN PHOTOMETRIC STUD

Project No.: 005353.00 Checked by:

L500

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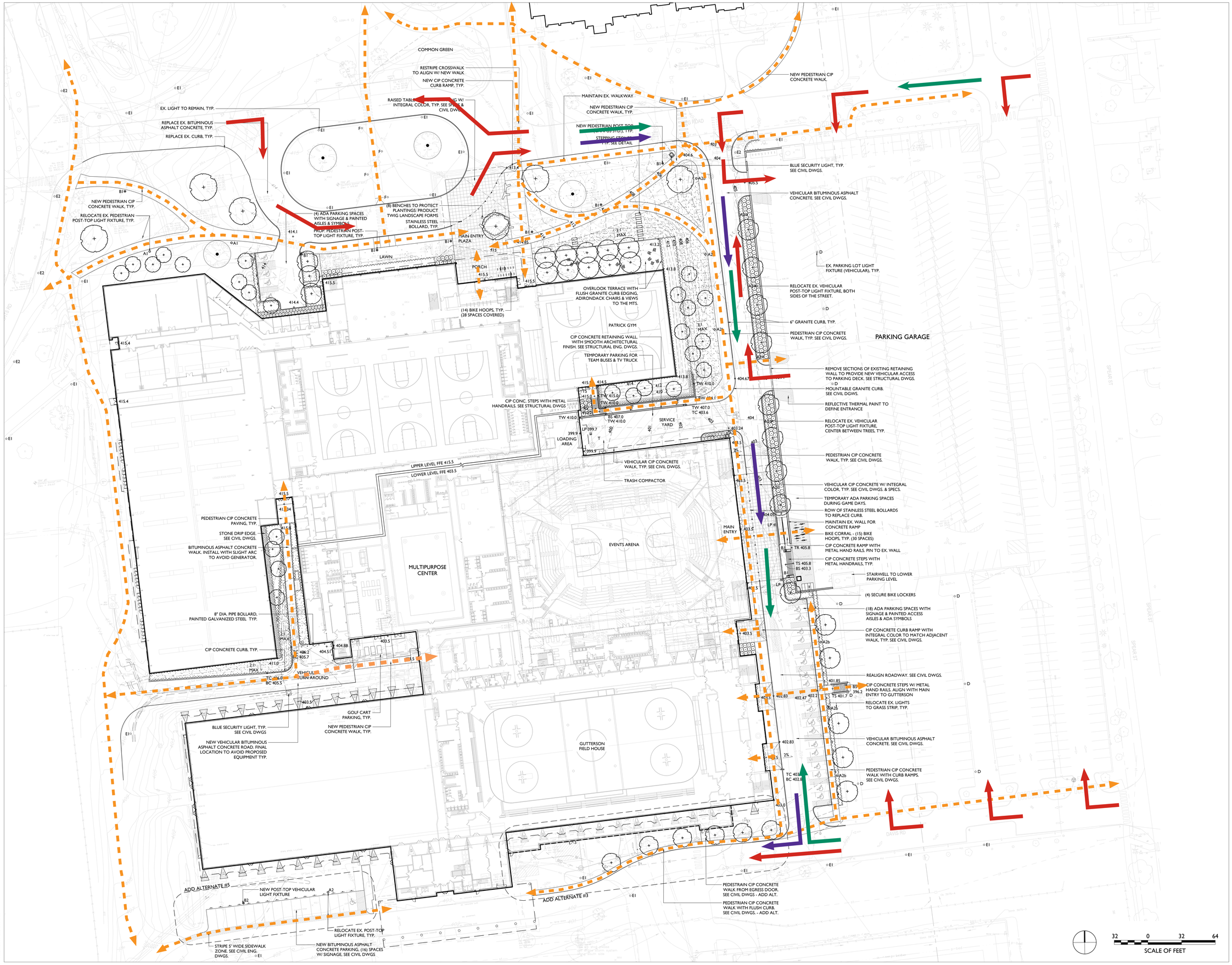

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NOT FOR CONSTRUCTION

CIRCULATION LEGEND

- SHUTTLE BUS
- ADA VEHICLES
- PRIVATE VEHICLES
- PEDESTRIAN

No.	Description	Date
-	BURLINGTON DESIGN REVIEW BOARD SUBMISSION	12 APR 2018
-	DD PRICING SET	23 MAR 2018
-	DD PROGRESS SET	2 MAR 2018
-	SUPPLEMENTAL SD SET	3 NOV 2017
-	SD PRICING SET	25 AUG 2017

Drawing Title:

EVENT CIRCULATION DIAGRAM

Project No.: 005353.00 Checked by: JH

L600

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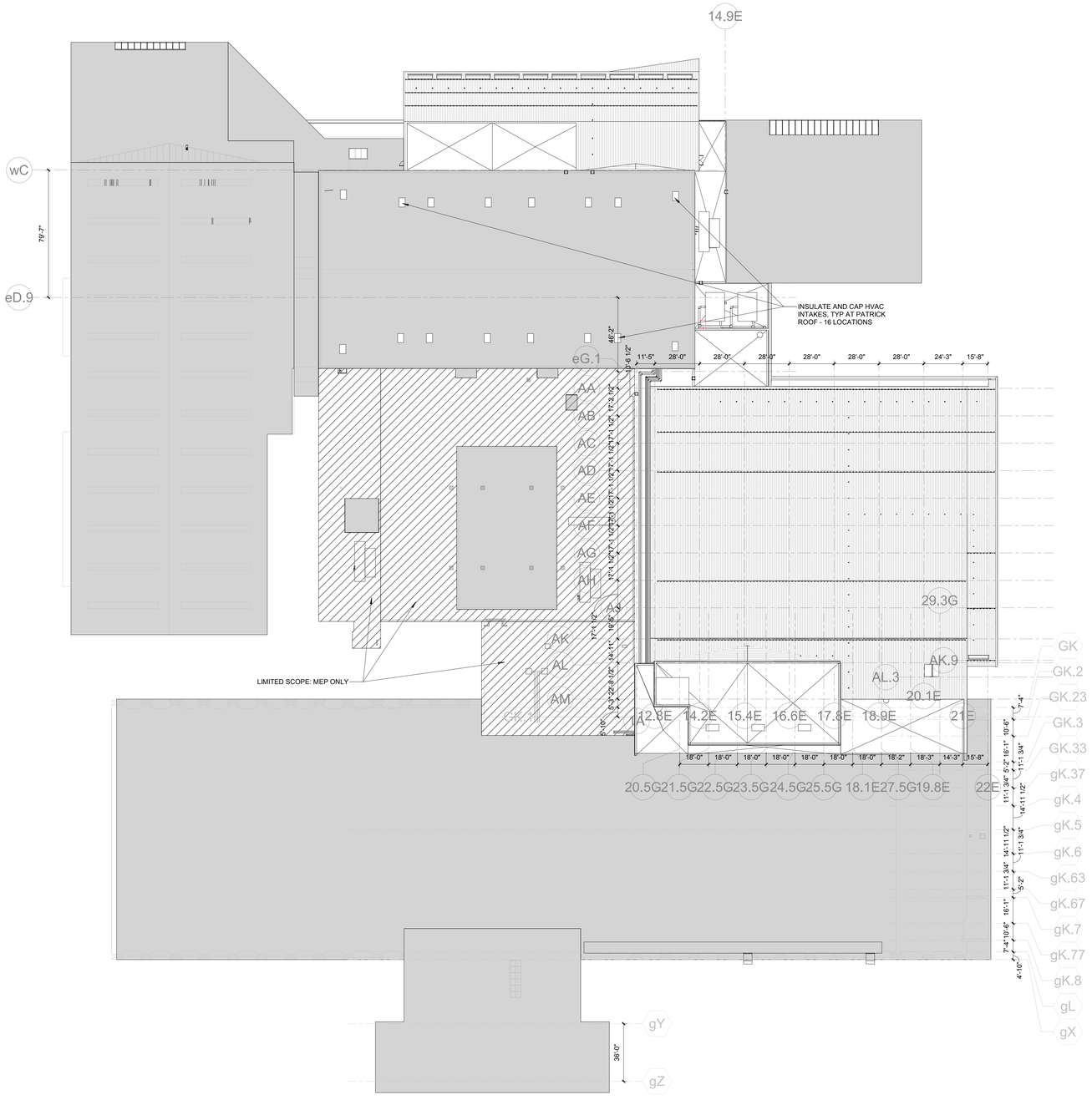
PLAN NOTES

1. SEE SHEETS A0300 - A0302 FOR EXTERIOR WALL AND ROOF ASSEMBLIES AND DETAILS
2. SEE SHEETS A1001 - A1002 FOR INTERIOR PARTITION TYPES.

INDICATES AREAS NOT IN CONTRACT

INDICATED AREAS WITH LIMITED SCOPE



1 ROOF OVERALL PLAN
1/32" = 1'-0"

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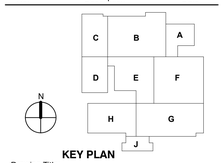
-	Burlington Design Review Board Submission	12 APR 2018
-	DD Pricing Set	23 MAR 2018
-	DD Progress Set	02 MAR 2018
-	Supplemental SD Set	03 NOV 2017
-	SD Pricing Set	25 AUG 2017

No.	Description	Date



KEY PLAN

Drawing Title:

ROOF OVERALL PLAN

Project No.: 005353.00 Checked by: Checker

A0105

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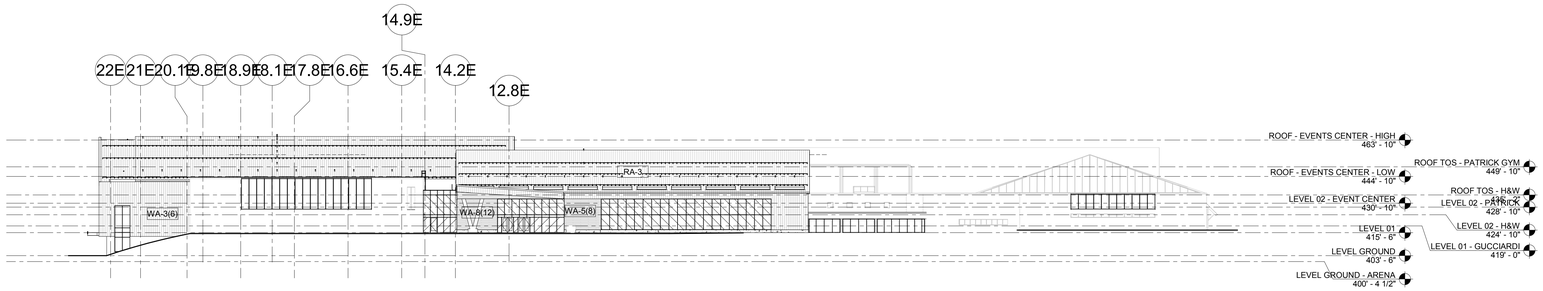
EXTERIOR MATERIALS LEGEND

	WA-1(6)	BRICK ON CFMF
	WA-2(8)	BRICK ON CMU
	WA-3(6) WA-6(6)	PROFILED METAL PANEL ON CFMF
	WA-4(8) WA-4(12)	PROFILED METAL PANEL ON CMU
	WA-5(0) WA-5(2.5) WA-5(8)	PROFILED METAL PANEL ON EXISTING BACKUP
	WA-7(6)	PHENOLIC WALL PANEL ON CFMF
	WA-8(12)	PHENOLIC WALL PANEL ON CMU
	WA-9(0)	PHENOLIC WALL PANEL ON EXISTING BACKUP
	WA-10(6)	EPDM ON CFMF

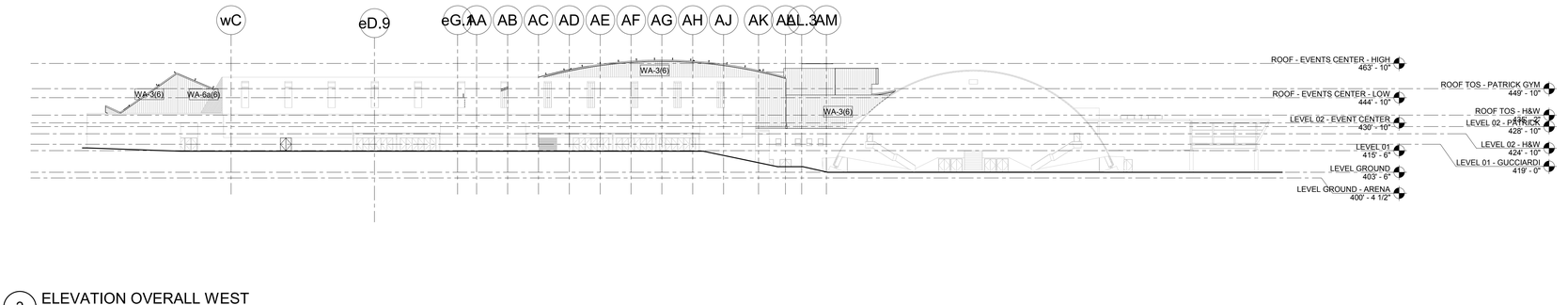
FOR OPAQUE WALLS, (#) INDICATES CFMF SIZE:
WA-XX(6) = 6" CFMF
WA-XX(8) = 8" CFMF

FOR CMU WALLS, (#) INDICATES NOMINAL CMU SIZE:
WA-XX(8) = 8" NOM CMU
WA-XX(12) = 12" NOM CMU

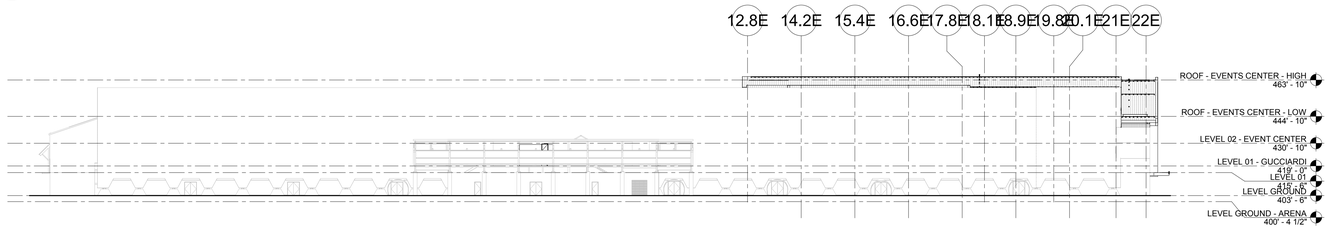
1. SEE SHEETS FOR A0300 - A0302 FOR EXTERIOR WALL AND ROOF ASSEMBLIES AND DETAILS



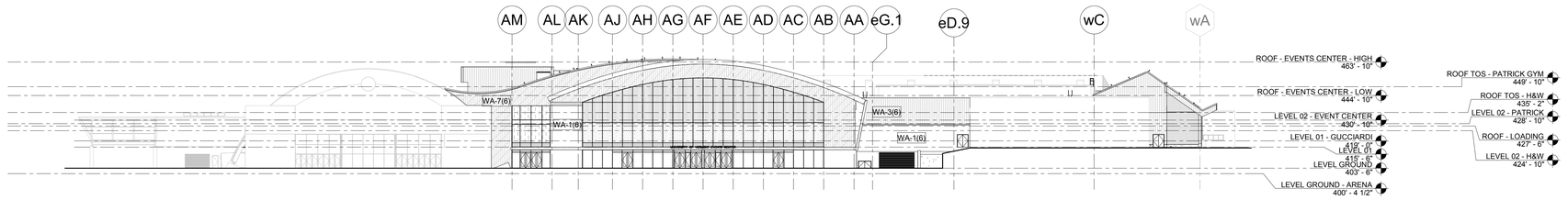
4 ELEVATION OVERALL NORTH
1/32" = 1'-0"



3 ELEVATION OVERALL WEST
1/32" = 1'-0"



2 ELEVATION OVERALL SOUTH
1/32" = 1'-0"



1 ELEVATION OVERALL EAST
1/32" = 1'-0"

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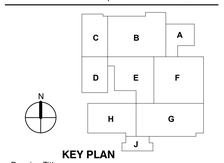

KEY PLAN

Drawing Title:

OVERALL ELEVATIONS

Project No.: 005353.00 Checked by: Checker

A0305

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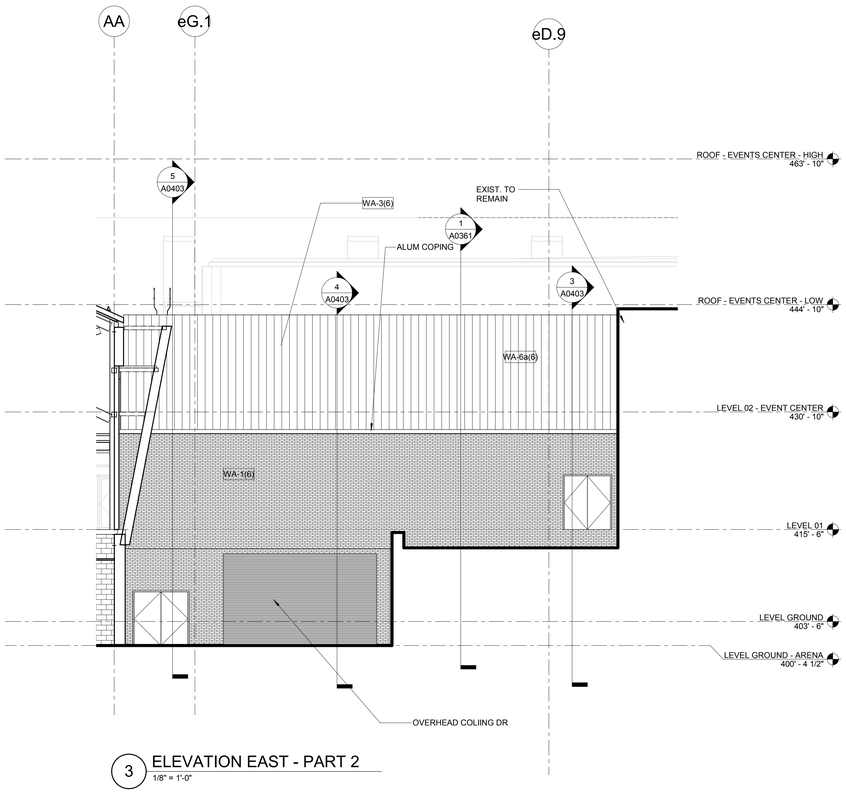
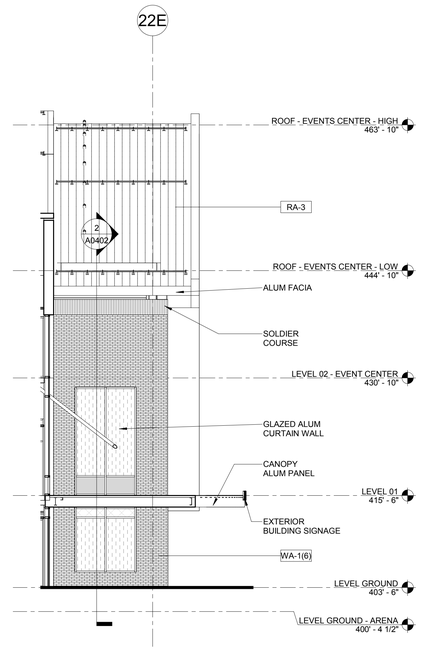
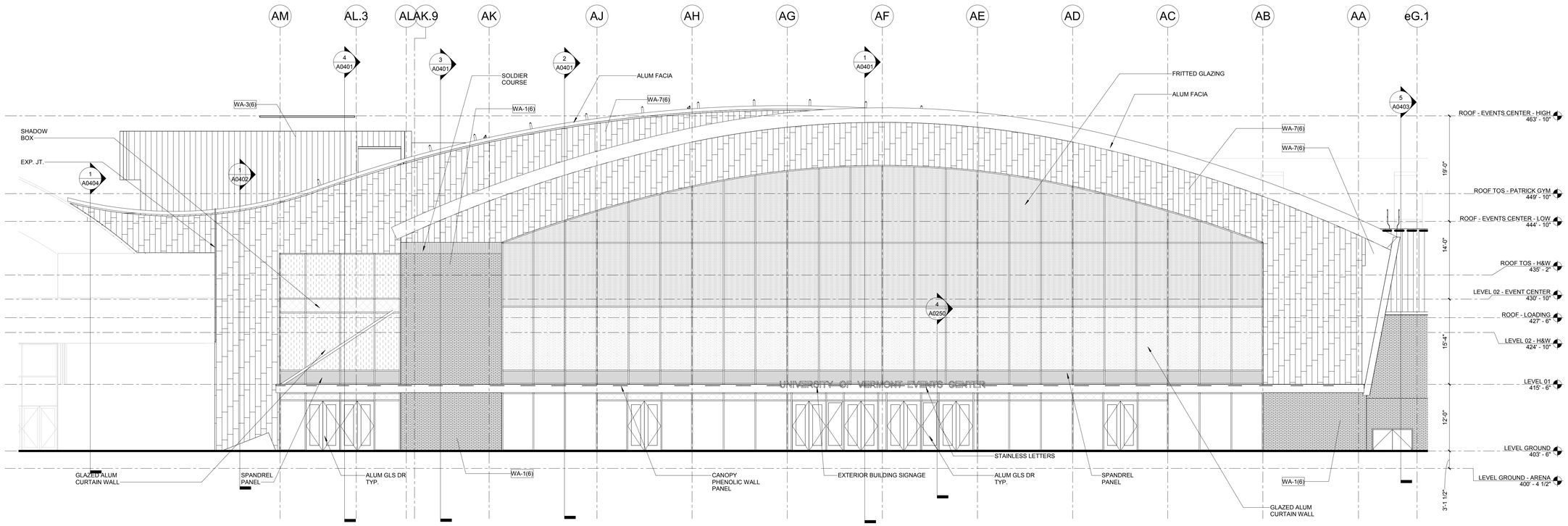


3 ELEVATION EAST - PART 2
1/8" = 1'-0"



2 SOUTH ELEVATION PARTIAL - ARENA
1/8" = 1'-0"

EXTERIOR GLAZING TYPES		
	GL-1	1" INSULATING GLASS UNIT, TINTED
	GL-2	1" INSULATING GLASS UNIT, CLEAR
	GL-3	1" INSULATING GLASS UNIT, TEMPERED, TINTED
	GL-4	1" INSULATING GLASS UNIT, TEMPERED, CLEAR
	GL-5	1" INSULATING GLASS UNIT, 20% CERAMIC FRIT, TINTED
	GL-6	1" INSULATING GLASS UNIT, 40% CERAMIC FRIT, TINTED
	GL-7	1" INSULATING GLASS UNIT, SHADOWBOX, TINTED
	GL-8	1" SPANDREL PANEL
	GL-9	TRANSLUCENT INSULATED WALL SYSTEM



1 ELEVATION EAST - PART 1
1/8" = 1'-0"

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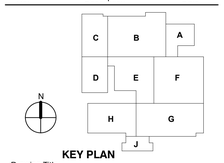

KEY PLAN

Drawing Title:

EXTERIOR ELEVATIONS

Project No.: 005353.00 Checked by: Checker

A0311

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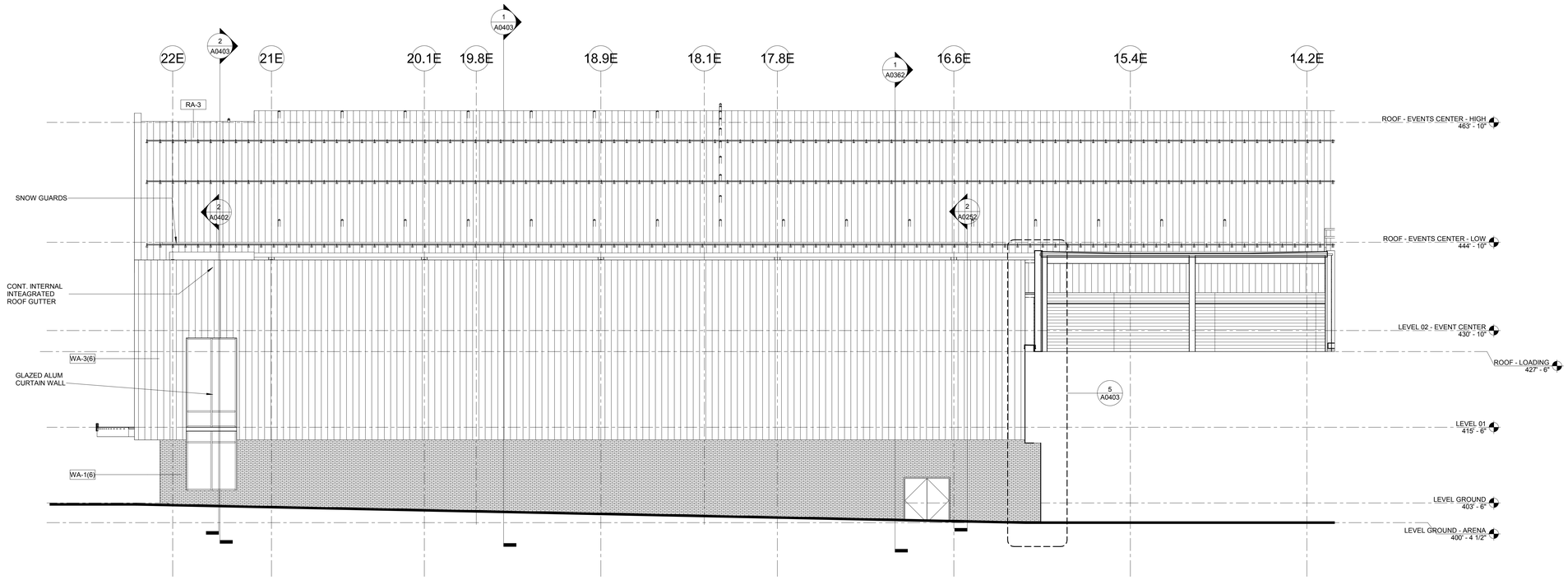
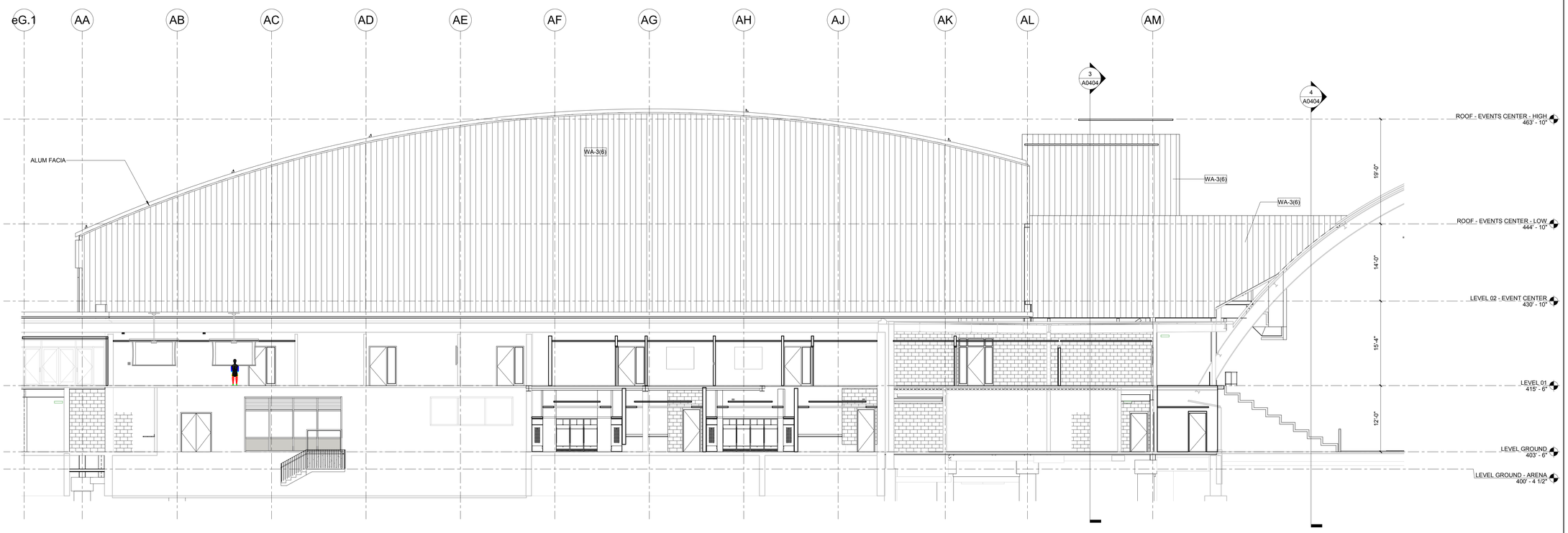


2 ELEVATION EVENT CENTER NORTH PARTIAL
1/8" = 1'-0"



1 ELEVATION WEST EVENT CTR
1/8" = 1'-0"

EXTERIOR GLAZING TYPES

	GL-1	1" INSULATING GLASS UNIT, TINTED
	GL-2	1" INSULATING GLASS UNIT, CLEAR
	GL-3	1" INSULATING GLASS UNIT, TEMPERED, TINTED
	GL-4	1" INSULATING GLASS UNIT, TEMPERED, CLEAR
	GL-5	1" INSULATING GLASS UNIT, 20% CERAMIC FRIT, TINTED
	GL-6	1" INSULATING GLASS UNIT, 40% CERAMIC FRIT, TINTED
	GL-7	1" INSULATING GLASS UNIT, SHADOWBOX, TINTED
	GL-8	1" SPANDREL PANEL
	GL-9	TRANSLUCENT INSULATED WALL SYSTEM

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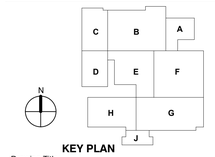

KEY PLAN

Drawing Title:

EXTERIOR ELEVATIONS

Project No.: 005353.00 Checked by: Checker

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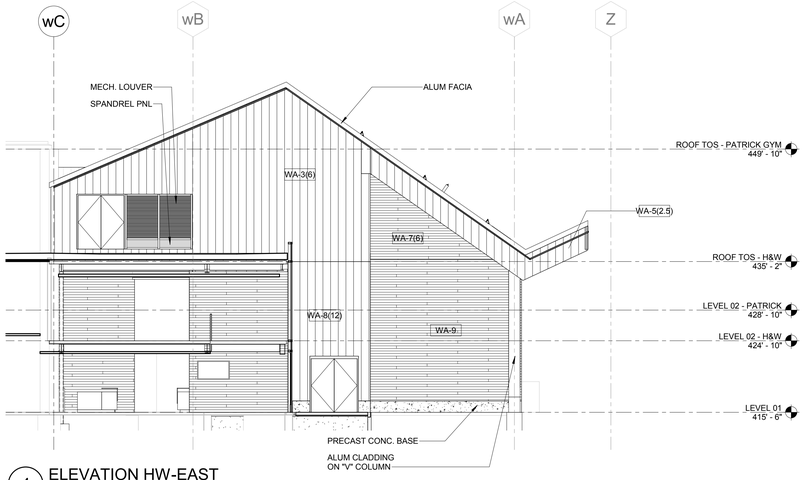
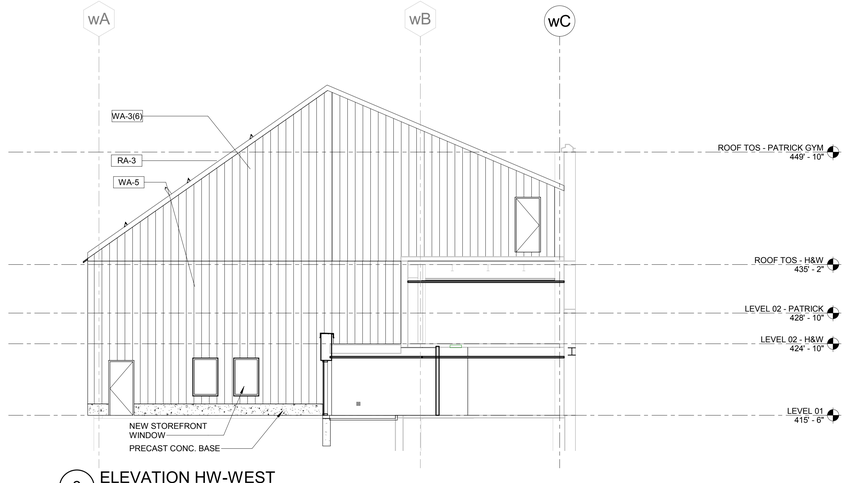
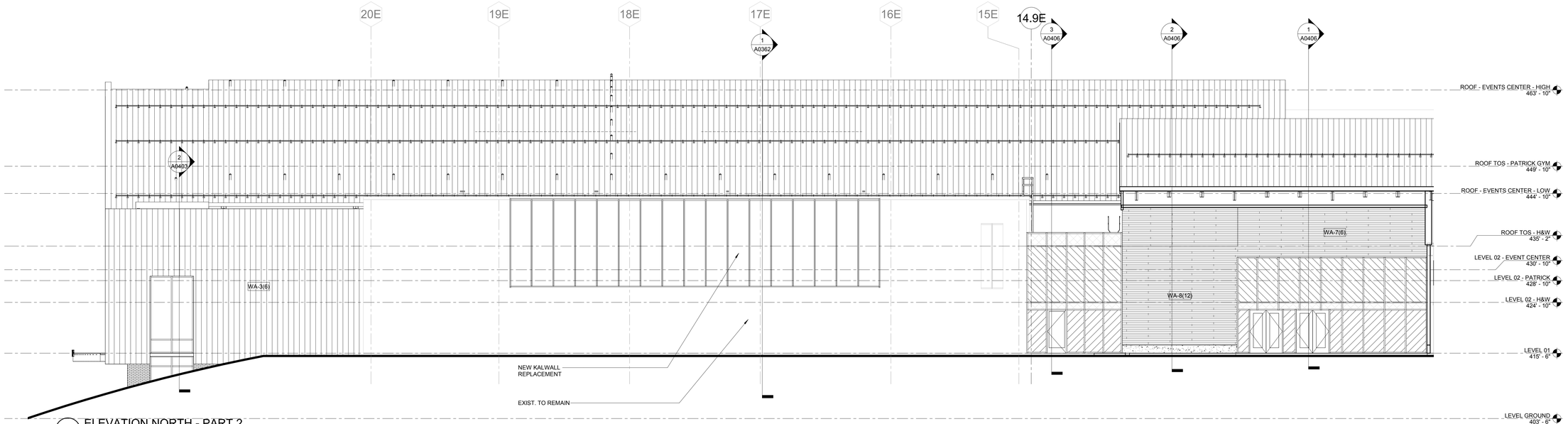


4 ELEVATION HW-EAST
1/8" = 1'-0"

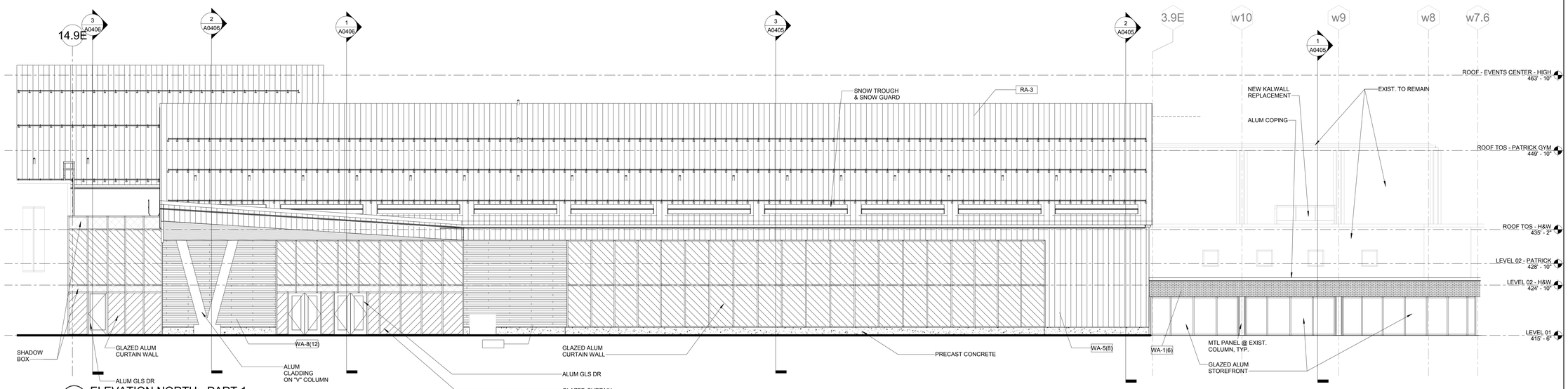


3 ELEVATION HW-WEST
1/8" = 1'-0"

EXTERIOR GLAZING TYPES		
	GL-1	1" INSULATING GLASS UNIT, TINTED
	GL-2	1" INSULATING GLASS UNIT, CLEAR
	GL-3	1" INSULATING GLASS UNIT, TEMPERED, TINTED
	GL-4	1" INSULATING GLASS UNIT, TEMPERED, CLEAR
	GL-5	1" INSULATING GLASS UNIT, 20% CERAMIC FRIT, TINTED
	GL-6	1" INSULATING GLASS UNIT, 40% CERAMIC FRIT, TINTED
	GL-7	1" INSULATING GLASS UNIT, SHADOWBOX, TINTED
	GL-8	1" SPANDREL PANEL
	GL-9	TRANSLUCENT INSULATED WALL SYSTEM



2 ELEVATION NORTH - PART 2
1/8" = 1'-0"



1 ELEVATION NORTH - PART 1
1/8" = 1'-0"

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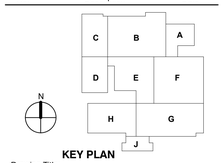

KEY PLAN

Drawing Title:

EXTERIOR ELEVATIONS

Project No.: 005353.00 Checked by: Checker

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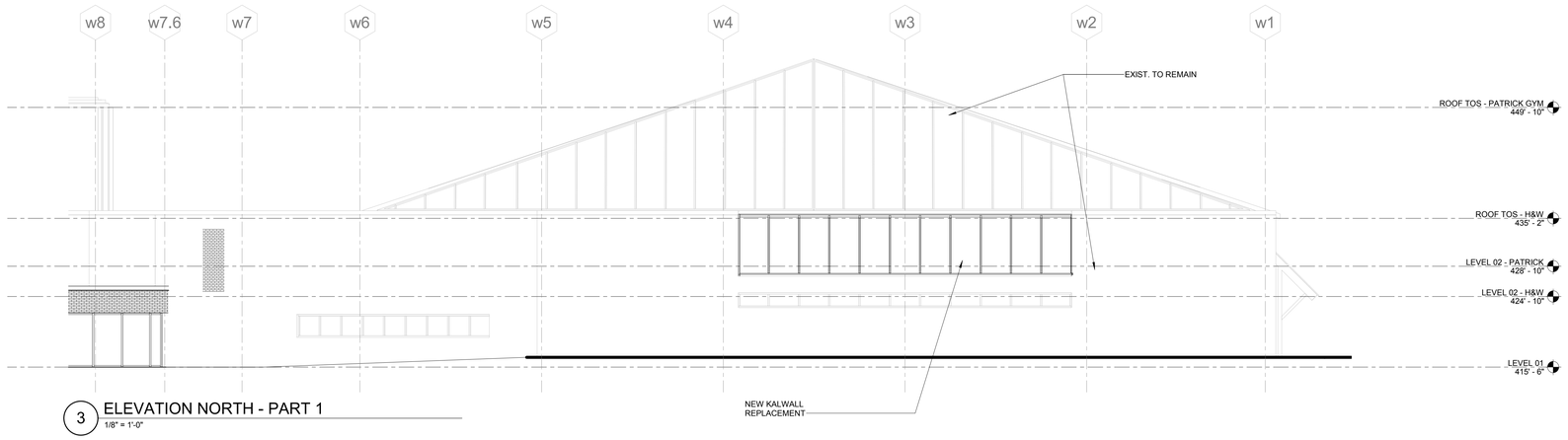
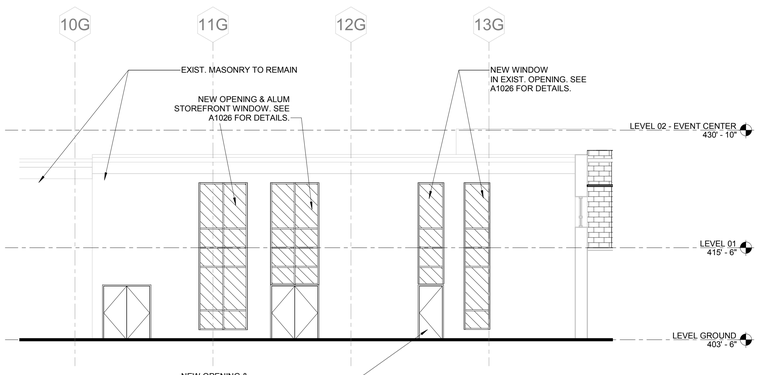
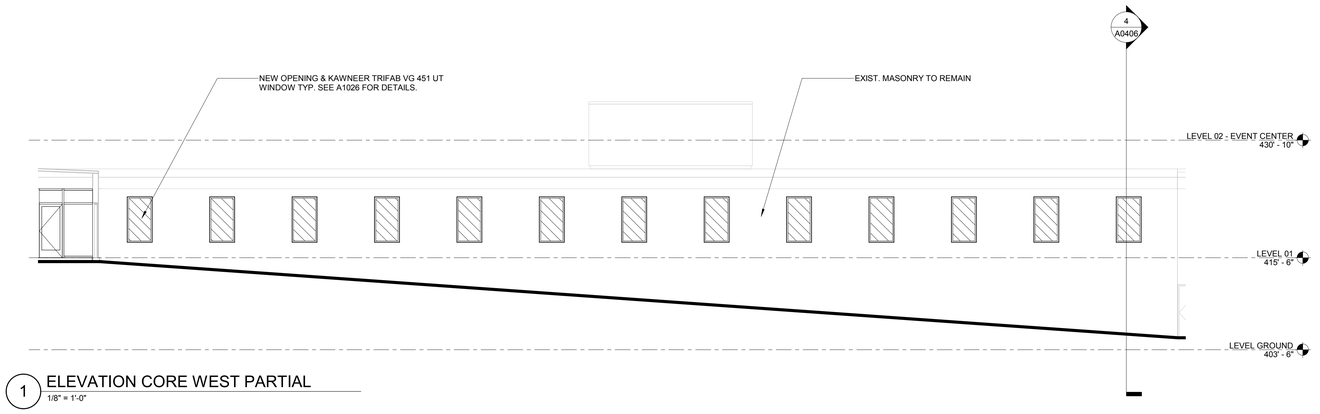
EXTERIOR GLAZING TYPES		
	GL-1	1" INSULATING GLASS UNIT, TINTED
	GL-2	1" INSULATING GLASS UNIT, CLEAR
	GL-3	1" INSULATING GLASS UNIT, TEMPERED, TINTED
	GL-4	1" INSULATING GLASS UNIT, TEMPERED, CLEAR
	GL-5	1" INSULATING GLASS UNIT, 20% CERAMIC FRIT, TINTED
	GL-6	1" INSULATING GLASS UNIT, 40% CERAMIC FRIT, TINTED
	GL-7	1" INSULATING GLASS UNIT, SHADOWBOX, TINTED
	GL-8	1" SPANDREL PANEL
	GL-9	TRANSLUCENT INSULATED WALL SYSTEM



3 ELEVATION NORTH - PART 1
1/8" = 1'-0"



2 ELEVATION CORE SOUTH PARTIAL
1/8" = 1'-0"



1 ELEVATION CORE WEST PARTIAL
1/8" = 1'-0"

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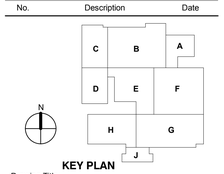

KEY PLAN

Drawing Title:

EXTERIOR ELEVATIONS

Project No.: 005353.00 Checked by: Checker

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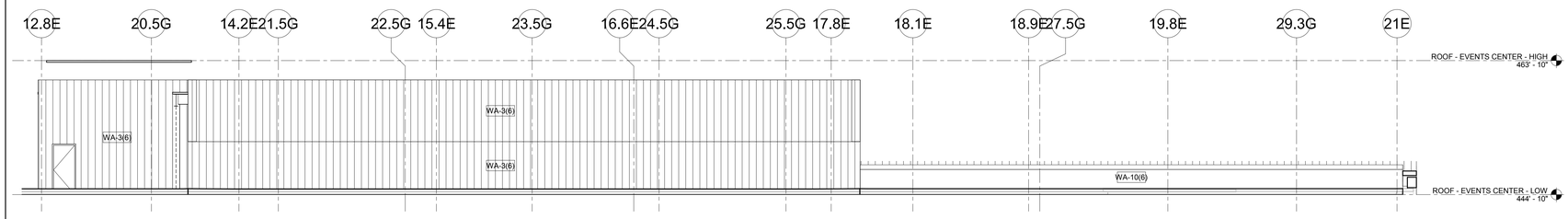
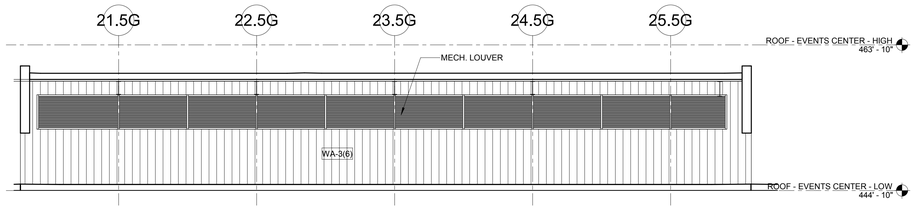
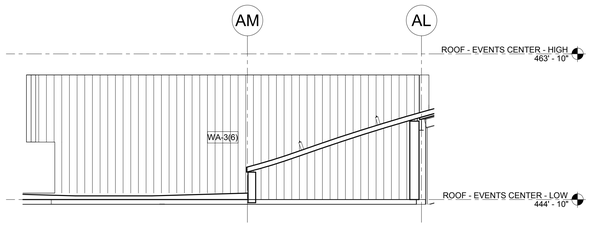


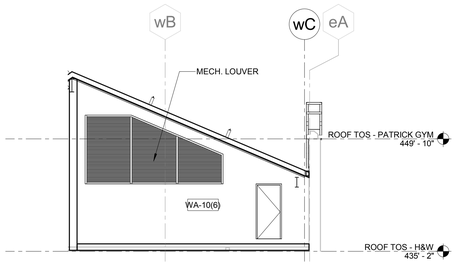
7 EVENT CTR PENTHOUSE NORTH ELEVATION
1/8" = 1'-0"



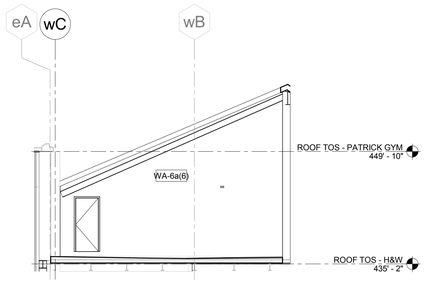
6 EVENT CTR PENTHOUSE LOUVER ELEVATION
1/8" = 1'-0"



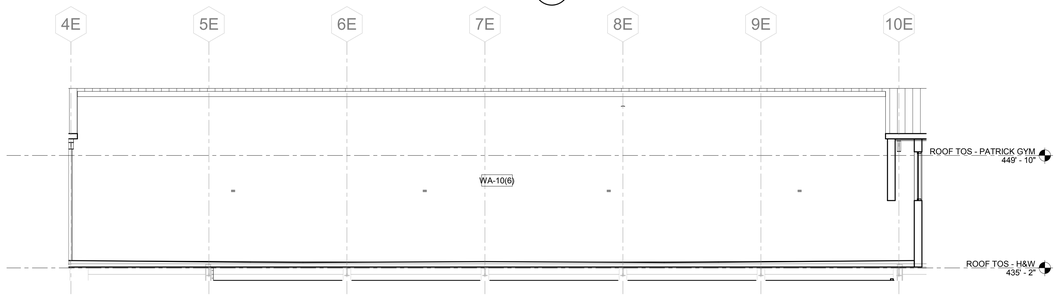
4 EVENT CTR PENTHOUSE EAST ELEVATION
1/8" = 1'-0"



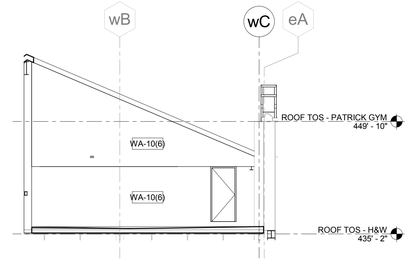
2 HW ROOF LOUVER ELEVATION
1/8" = 1'-0"



5 HW ROOF WEST ELEVATION
1/8" = 1'-0"



3 HW ROOF NORTH ELEVATION
1/8" = 1'-0"



1 HW ROOF EAST ELEVATION
1/8" = 1'-0"

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-	Burlington Design Review Board Submission	12 APR 2018
-	DD Pricing Set	23 MAR 2018

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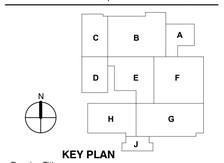

KEY PLAN

Drawing Title:

EXTERIOR ELEVATIONS

Project No.: 005353.00 Checked by: Checker

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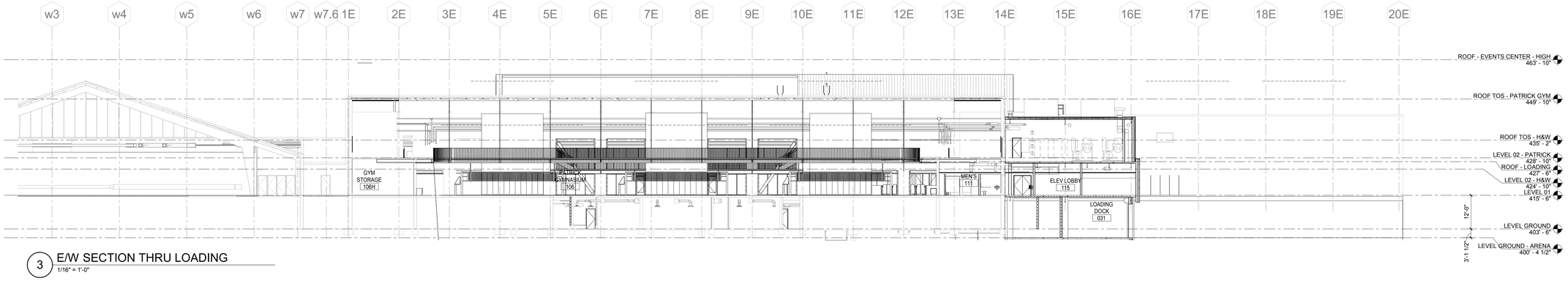
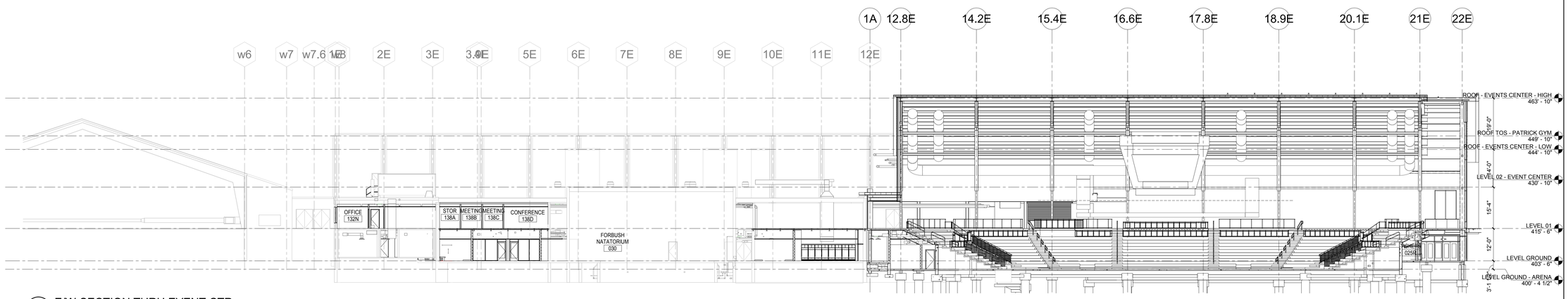


3 E/W SECTION THRU LOADING
1/16" = 1'-0"



2 E/W SECTION THRU EVENT CTR
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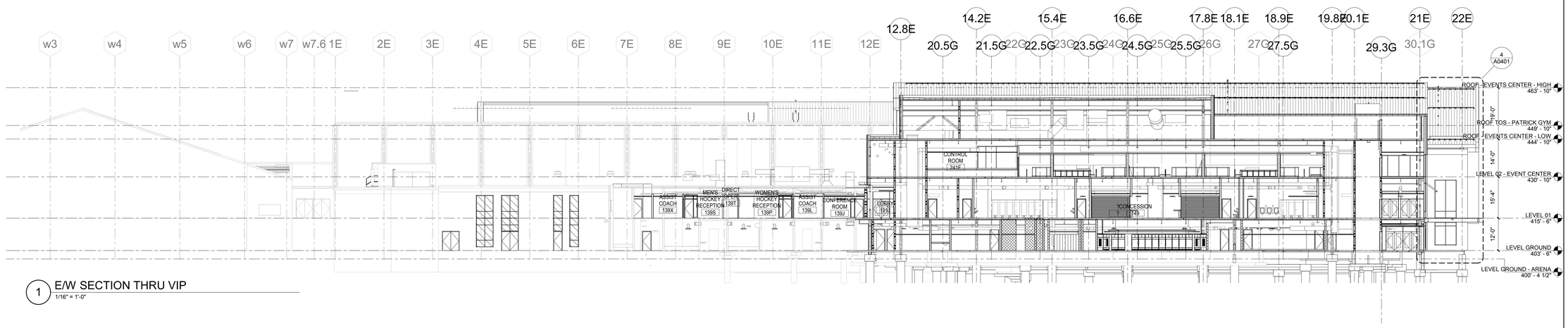

1 E/W SECTION THRU VIP
1/16" = 1'-0"

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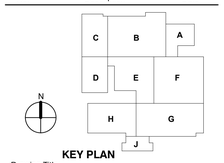
-	DD Progress Set	02 MAR 2018
-	Supplemental SD Set	03 NOV 2017
-	SD Pricing Set	25 AUG 2017

No.	Description	Date



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BUILDING SECTIONS

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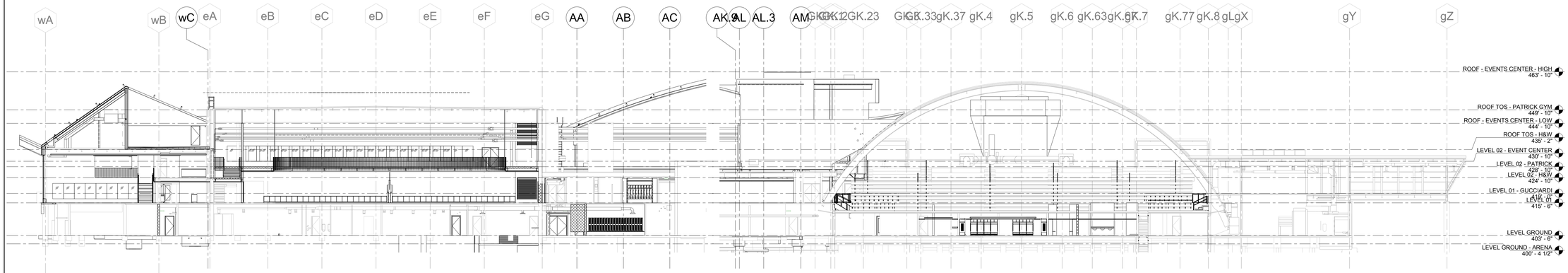
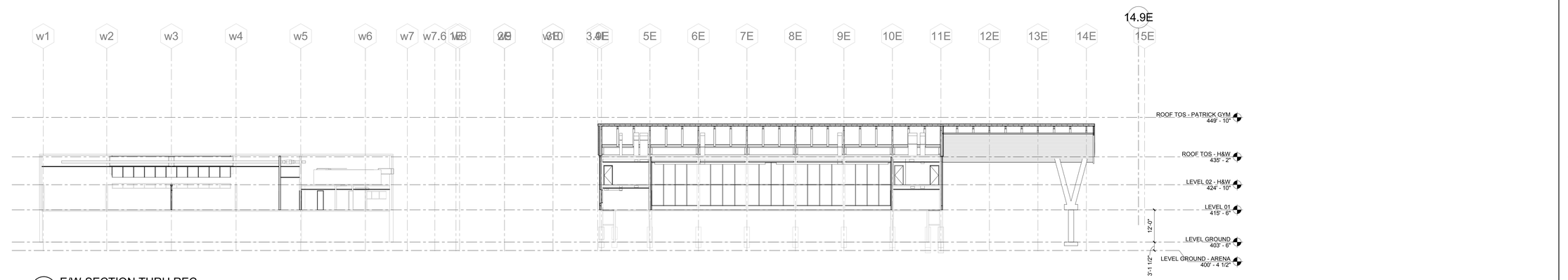
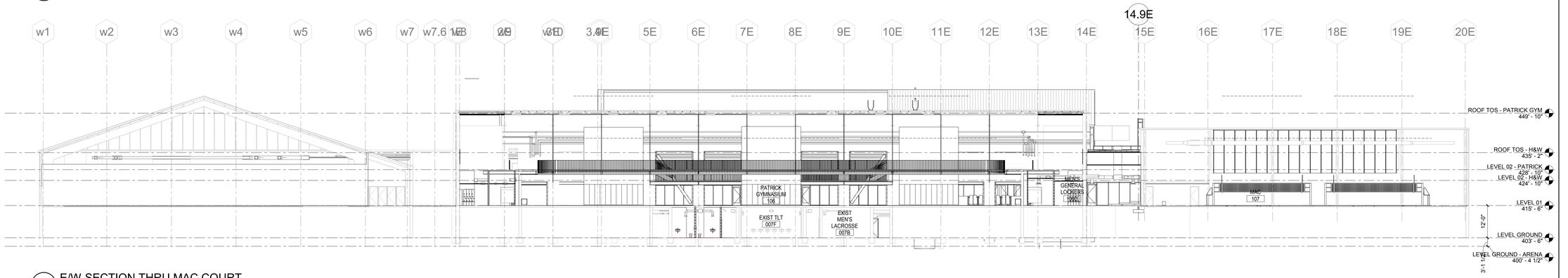


3 N/S SECTION THRU PATRICK GYM
1/16" = 1'-0"



2 E/W SECTION THRU REC
1/16" = 1'-0"



1 E/W SECTION THRU MAC COURT
1/16" = 1'-0"

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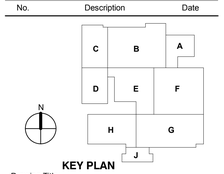

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BUILDING SECTIONS

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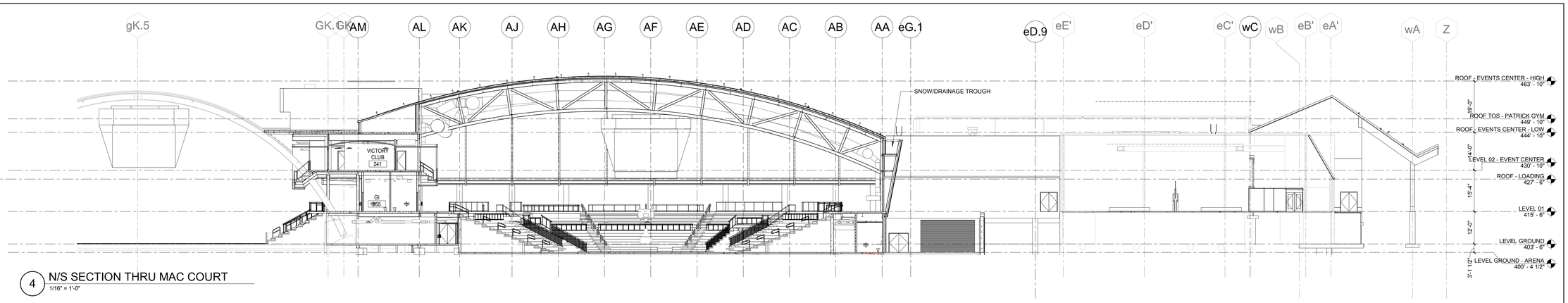
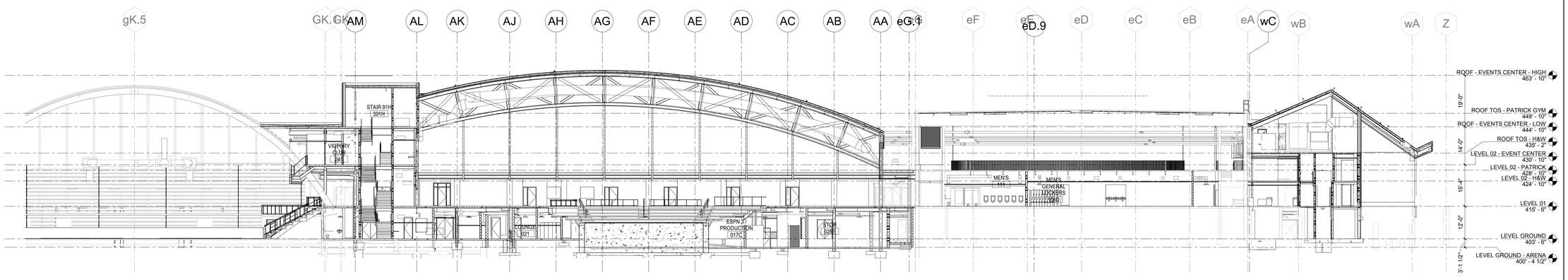


4 N/S SECTION THRU MAC COURT
1/16" = 1'-0"



3 N/S SECTION THRU EVENT CTR
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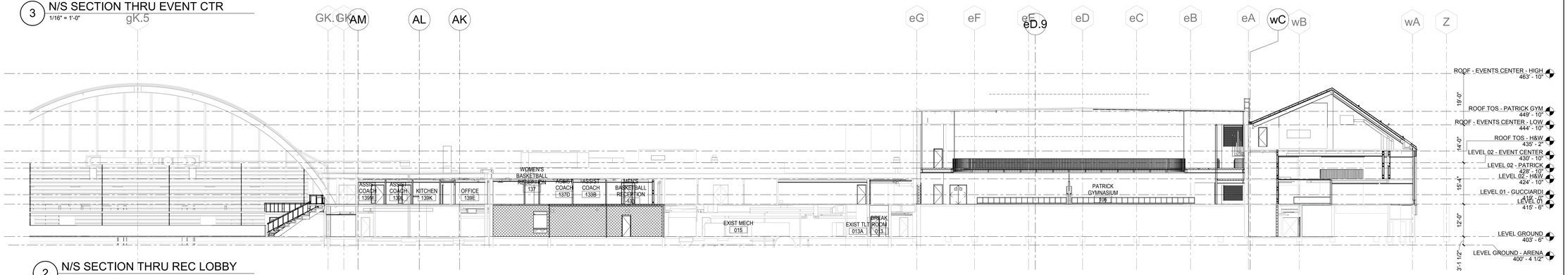
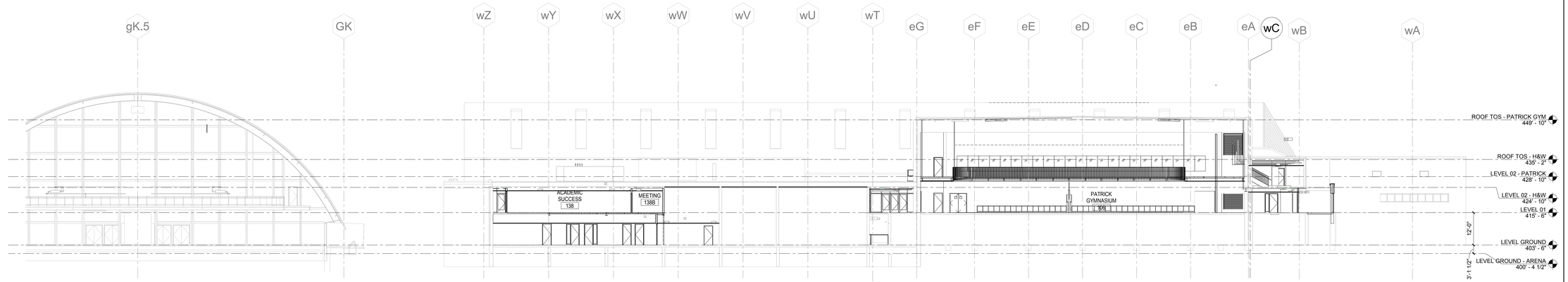


2 N/S SECTION THRU REC LOBBY
1/16" = 1'-0"



1 N/S SECTION THRU REC
1/16" = 1'-0"

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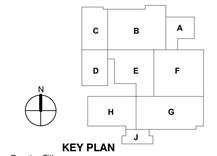

KEY PLAN

Drawing Title:

BUILDING SECTIONS

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TWIG

Product Data Sheet

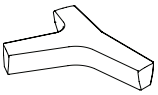
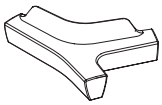
Twig is a modular bench system made of reinforced concrete. The freestanding three-armed pieces create branch-like formations, and the gently curved back offers a comfortable resting point. A series of joined benches become meeting places in public spaces or borders that connect paved and green spaces.

Bench

- TWIG is a modular bench made of reinforced cast stone.
- Bench is available backed or backless.
- TWIG's weight allows for a freestanding installation.
- TWIG is offered in acid-etched/waterproofed finish, and comes in Grey, Black, White, and Beige.

Material

- Reinforced Cast Stone is cast stone that is poured and cast over a stainless steel bar cage built to fit within the walls of the mold.
- Reinforced Cast Stone makes it possible to cast thinner, irregularly shaped forms while retaining appropriate strength.
- The colors of Escofet cast stone products are neutral, muted and earth-toned and are derived from the aggregates used in casting.
- No color is added in manufacture and no color is applied to finished products.
- The color range of every Escofet cast stone product is predetermined by the formulation used in its manufacture.
- Cast stone products do not require any specific maintenance during their estimated lifespan of more than 30 years. Water absorption and freeze-thaw cycles can cause weathering, a reproduction of the process that takes place in natural rock.
- Escofet applies a waterproof finish to its products to protect against this process.
- Escofet cast stone products are large and heavy.
- Shipping, receiving,staging and installing these pieces is more akin to handling large statuary or pre-fabricated architectural elements.
- See installation guide for important information.

	DEPTH	LEGHTH	HEIGHT	PRODUCT WEIGHT
	76"	93"	18"	3,850 lb
	76"	76"	31"	4,188 lb

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TWIG

Product Data Sheet

Product Warranty

- ESCOFET warrants the durability of its product to Landscape Forms for a period of five (5) years from the date of invoice.
- The warranty covers the repair or replacement of the product or components at no charge.
- Notwithstanding, this warranty does not cover damages to ESCOFET products resulting from unloading; handling; installation; abuse; exposure to paint, liquids or corrosives; or any other damage not attributable to ESCOFET.
- The warranty shall also be void if ESCOFET products are tampered with, handled, removed or modified by persons not authorized by ESCOFET; or if the product has not been properly maintained by the customer.

To Specify

- To order, specify TWIG, backed or backless, and standard color.
- Benches are freestanding.
- See materials/color sheet for Escofet's standard color options.

Designed by Alexander Lotersztain

Visit landscapeforms.com for more information. Specifications are subject to change without notice.
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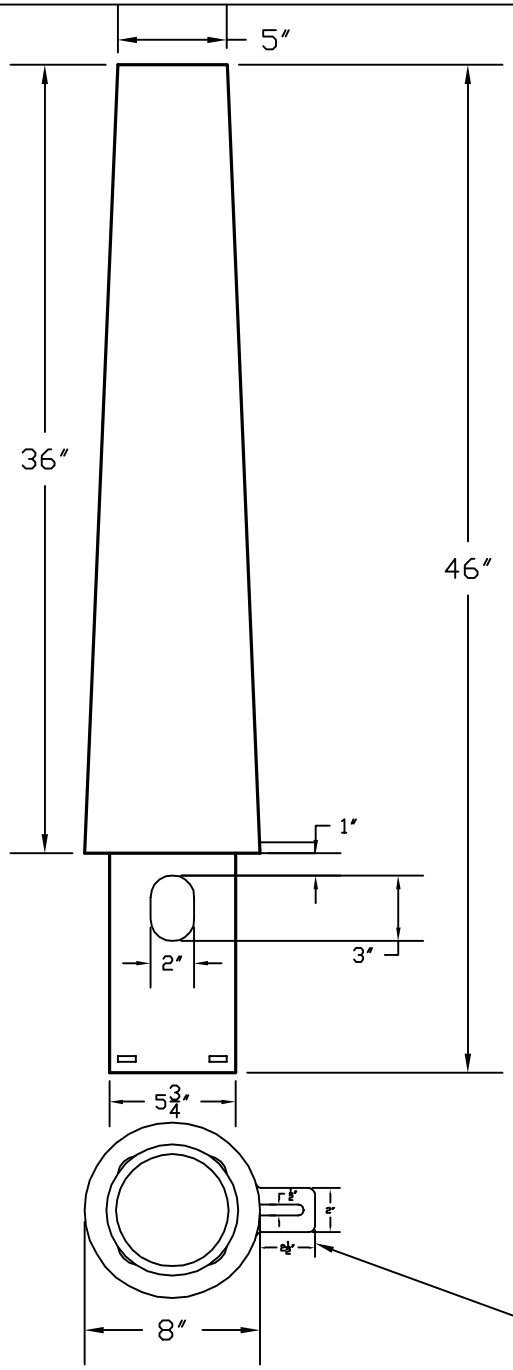

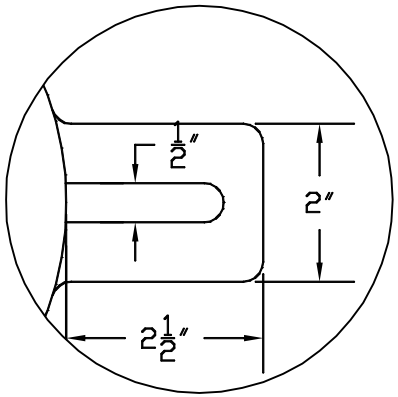

optional lock tab for removable bollards

9020
METRO
Bollard

Hollow cast bollard with 7/16" minimum wall thickness.

Available in cast gray iron or cast aluminum

Bollard has option for lock tab for use with Ironsmith Receiver to allow removal.

Finish: Can be provided finished to designer specifications

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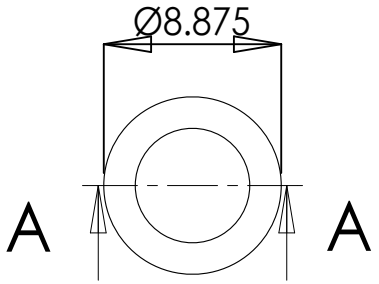
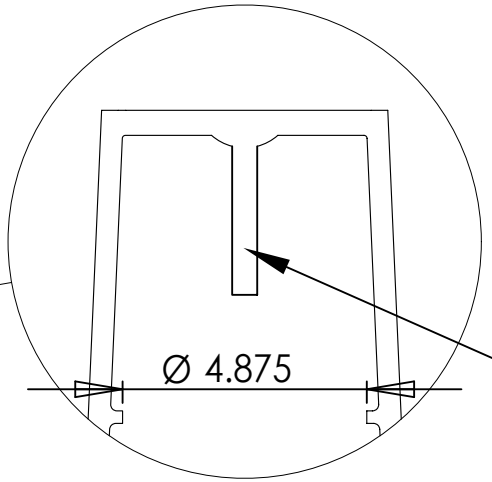
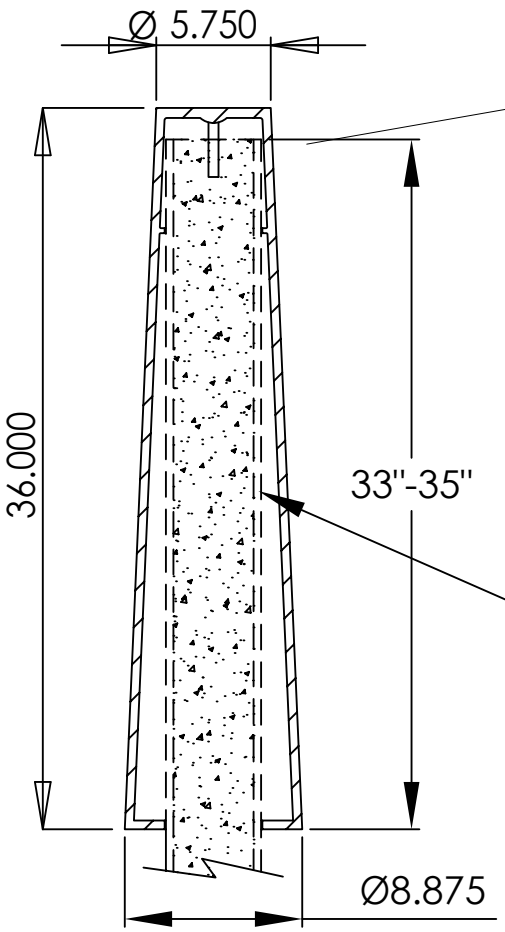


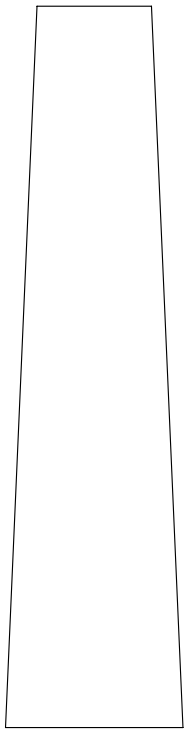
DETAIL B
SCALE 1 : 4



1/2" rebar to be embedded in concrete filled pipe.



4" Concrete Filled Pipe (Not Included)



SECTION A-A

9020-4C

Metro Cap Bollard

For installation over concrete filled 4" Pipe.

Cast from Gray Iron, Aluminum, or Bronze. Made from 100% Recycled Materials.

33" Minimum / 35" Maximum Pipe Height above grade

Finish: Unfinished, or
Black Dip, or
Enamel Paint, or
Polyurethane Paint, or
Powder Coat.
Zinc undercoat available.

Specify finish and color.

Weight:
Iron= 100 Lb/ 45.6 Kg
Aluminum= 38 Lb/ 17.3Kg

DO NOT SCALE DRAWING

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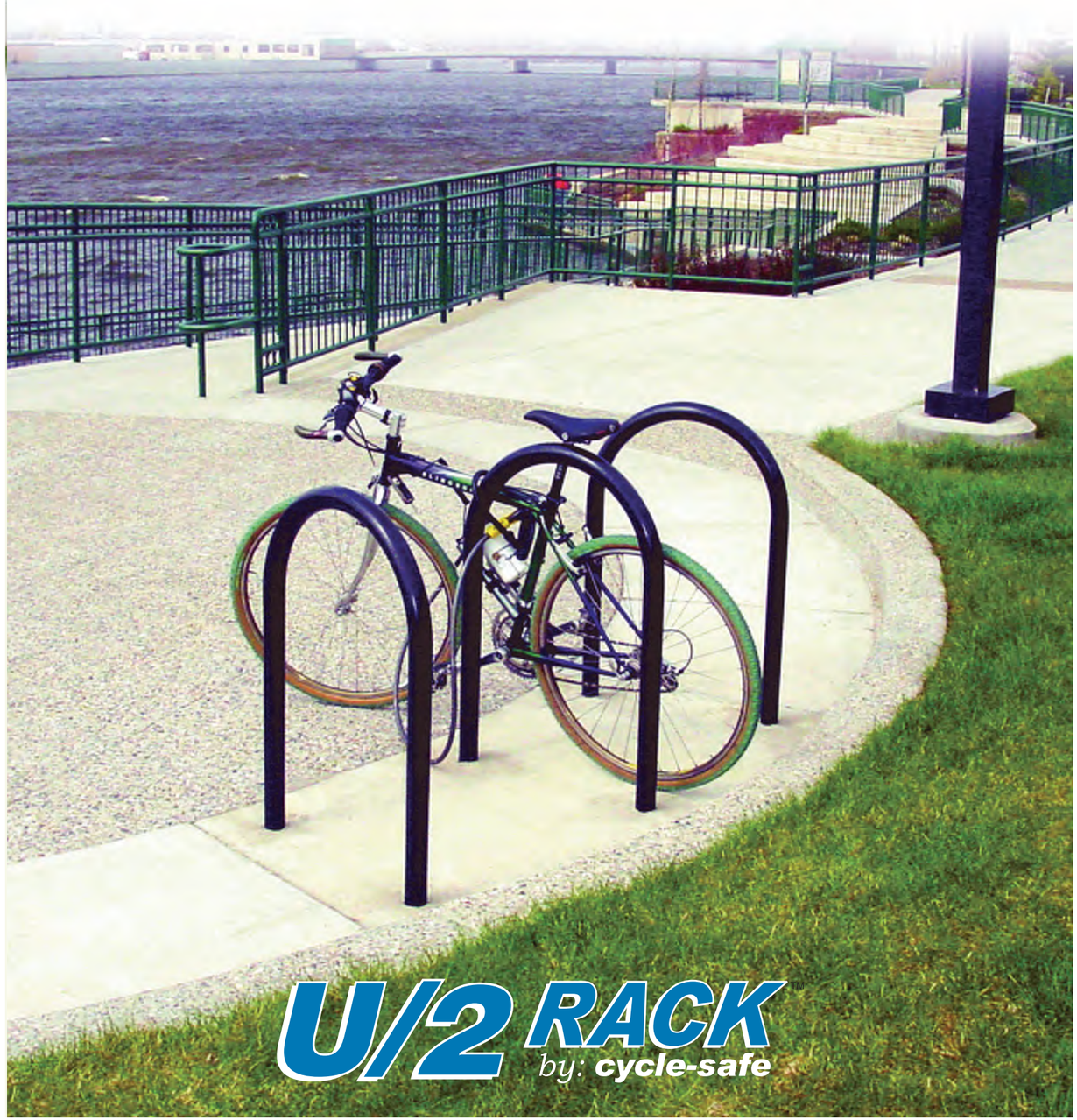
CycleSafe®

SECURE BICYCLE PARKING

Cycle-Safe Maintenance-Free U/2™ Bike Racks



U/2 RACK™ by: cycle-safe

Durable and Maintenance-Free

Cycle-Safe® inverted U/2 bicycle racks provide leading edge coating technology and offer the best solution for short-term bicycle parking. The one-bend bike rack design accommodates two bicycles per rack and is widely regarded as the recommended standard for space efficiency and bicycle protection. Cycle-Safe bike racks are completely coated with a thick, rubberized plastisol coating over schedule 40 steel pipe for maximum corrosion resistance, impact resistance, and protection of bicycle finish. This combination has proven to resist rust, scratches and dents better than any other finish.

Superior Design for Better Safety

Cycle-Safe U/2 racks provide lean to support with more stability for the bicycle frame than front wheel holders or ribbon type racks which do not support the bike frame in two places. The clean lines of the One-Bend inverted-U rack design are safer for pedestrian traffic with bikes parked securely in a uniform fashion. U/2 racks accommodate more bicycles per square foot to increase bike parking capacity. Bicycle racks are typically installed directly into a slab which results in additional strength and permanence to bolster user confidence. Bicycle frame should be secured to the rack with a standard U lock for optimal security.

Aesthetically Pleasing

The Cycle-Safe U/2 rack is symmetrically designed to resemble the commonly used “U” locks and are aesthetically pleasing to blend with any environment. All racks leave the bicycle vulnerable to theft of components and vandalism, bike lockers are the preferred choice for protection and security. Coating performance of all metal racks vary widely, the best long term solution is a thick jacketed plastisol coating as provided by Cycle-Safe. Our standard U/2 rack finish is a black plastisol coating, or TGIC polyester powder coat finishes are available in a variety of custom colors. Cycle Safe offers the best finishes that maintain quality that an owner can depend on for years.

In-ground Installation

Model	M U/2 In Ground	U/2 W/Cross Bar
U/2	12700G	12700GB

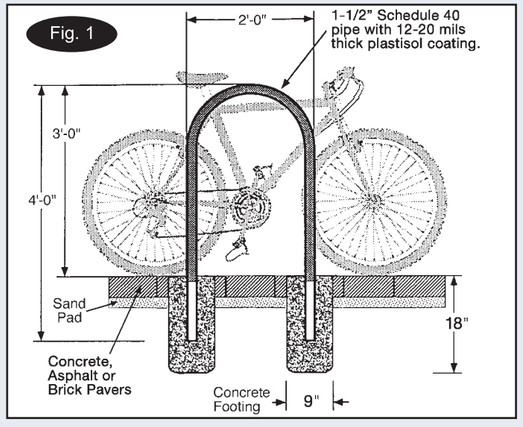
Inverted U/2 Rack, IN-GROUND/ 2 Bicycle Capacity

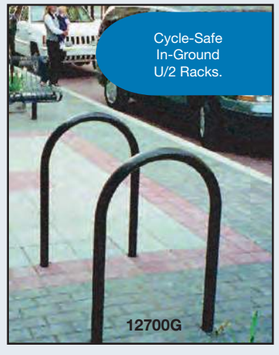
Recommended installation methods for in-ground style rack: If installing on existing concrete, Cycle-Safe® U/2 Bike Racks can be anchored with a non-shrink grout poured into a 4” or 6” diameter by 12” deep core drilled holes. In-ground installations for new improved surfaces 9” Sonotube forms can be put in place to create 18” footings. U/2 inverted-U racks come in optional square pipe or in two-bend configurations.

Download Specifications & Images at
www.cyclesafe.com

In-ground Installation

This is the standard for new construction and the most secure type of inverted-U installation. Existing concrete surface may be core drilled with a 3”-4” hole saw and filled with quikcrete or a construction adhesive.





Surface Mount Installation

Model	U/2 Surface	U/2 W/Cross Bar
U/2	12700S	12700SB

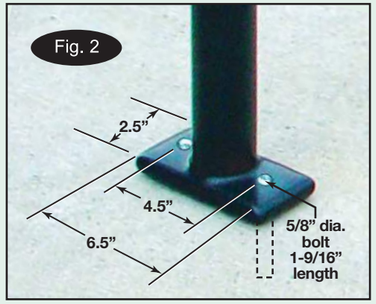


Fig. 3

3/8” SS drop in anchor for 3/8” x 1” SS anchor bolt

Drop in Anchor

Inverted U/2 Rack, SURFACE-MOUNT / 2 Bicycle Capacity

Recommended Installation:

Cycle-Safe Surface mount U/2 Bike Racks can be anchored with tamper resistant concrete anchor screws and a Drop in anchor system (figure 3). All inverted-U racks come with optional square pipe.

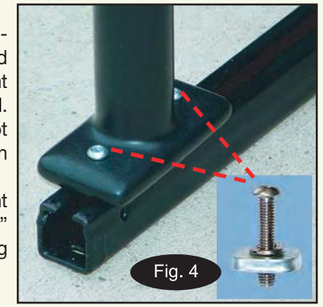
Rail-Mount Installation

Model	Six foot C-Rails
U/2 Rail	12700SR

NOTE: The Rails and Surface-Mount (12700S) inverted-U racks are included.

Inverted U/2 Rack, RAIL-MOUNT / 2 Bicycle Capacity

The Cycle-Safe Rail-Mount inverted-U modular design can be placed in areas where permanent anchoring is not desired. Simply use the 6 foot C-rail and place racks on top, securing with supplied tamper resistant hardware, 3/8” x 1-1/2” SS screw with clamping nut. (see fig. 4)



Rail-Mount Inverted-U/2 Rack

The Rail-Mount inverted-U option creates a portable rack system. It can be placed at any location and moved for cleaning snow or debris. This versatile rack system can be furnished with additional rails to create longer rows. Rails can be anchored with tamper resistant concrete anchor systems. (see fig. 3)

The Rail-Mount option can be used with standard one-bend, Vintage Rack styles, two-bend or optional square pipe models.

U/2 Square In Ground	U/2 Square Surface
12810G	12810S

Cycle-Safe Maintenance-Free U/2 Bike Racks

Cycle-Safe U/2 Racks Are The Standard:

Cycle-Safe bicycle racks are designed to provide safety for users and to fit into any urban environment. The Cycle-Safe engineering team has developed three variations for installation to accommodate your needs: In-ground, Surface-Mount, or Rail-Mount.

How to Specify Bike Racks

Bicycle rack part (indicate model and installation type), as manufactured by Cycle-Safe, Inc.

- 1-1/2" SCHD. 40 PIPE (2" O. D.), bent in the shape of an inverted "U" to a 24" outside radius of standing 36" high.
- Coating to be black plastisol rubberized applying 12-20 mils thick jacket.
- Standard Color-Black
- Texture-regular grain
- Gloss-semi-gloss (optional textured)
- Tensile Strength-1800 PSI min.
- Resistance to abrasion
- Salt Spray Resistance to >2000 hours
- Hardness (Shore D) ASTMD 2240 – Results 52
- Custom colors available with TGIC polyester powder coat finishes upon request
- Installation Options: In-ground (G), Surface-Mount (S), Rail-Mount (R)

Visit our Web site for information and images...
www.cyclesafe.com

Download complete specifications for each rack in Word format.

MEMBER SINCE 2000

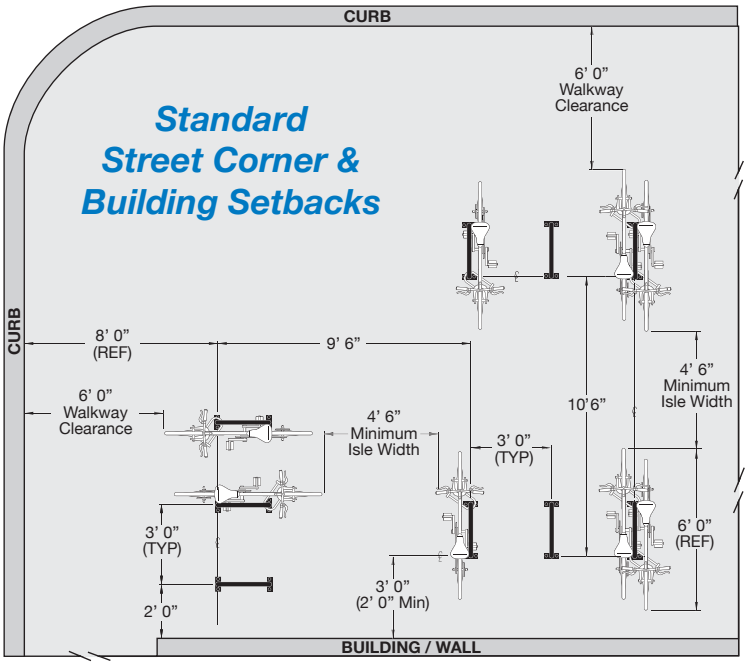
MADE IN U.S.A.

Cycle-Safe also manufacturers bike lockers and a wide range of bicycle locker accessories.
Please call or visit our web site for details. www.cyclesafe.com

Installation Layouts & Space Requirements:

Based on recommendations from the Association of Pedestrian and Bicycle Professionals and over 26 years in the bike parking industry, the following diagrams show typical configurations and space allowances for installations of multiple bike racks.

The minimum space between each rack is 3'0", more if possible to allow for ease of access. Aisles separate the rows of racks, with a minimum between aisles to be 4'-6", to allow for one person to walk one bike. In high traffic areas, the recommended aisle width is 6'-0". Aisle widths are measured tip to tip of bike tires between the rows of racks. Six feet should be allowed for each row of parked bicycles. Conventional upright bicycles are just less than 72 inches long, with handlebar widths varying from 22"-27" and can be easily accommodated with these recommended spacings.



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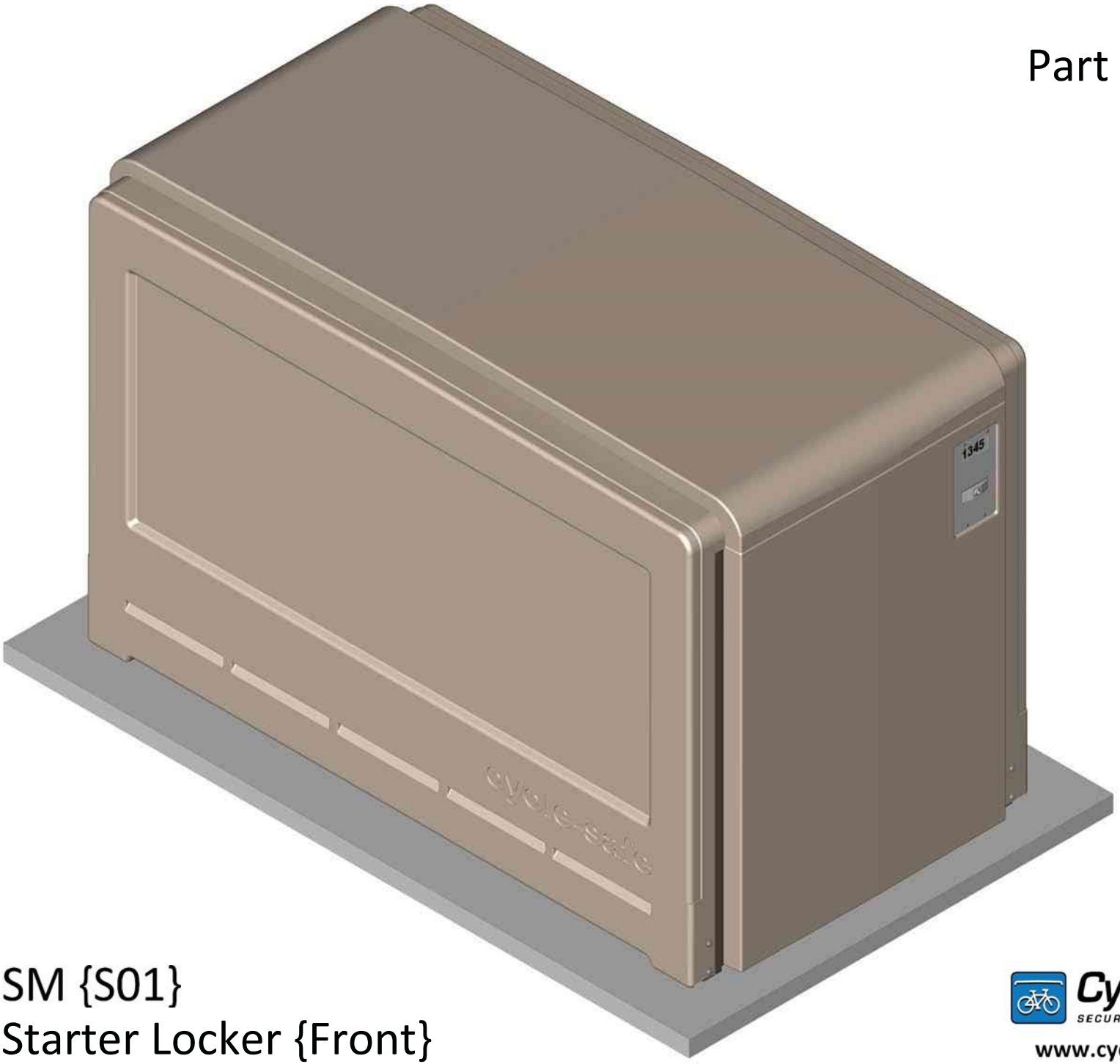
LR4.1.001-C 10.25.17

CycleSafe®
SECURE BICYCLE PARKING

info@cyclesafe.com
www.cyclesafe.com
TF (888) 950-6531
P (616) 954-9977
F (616) 954-0290

Part #10017



ProPark SM {S01}
{1-Bike} Starter Locker {Front}

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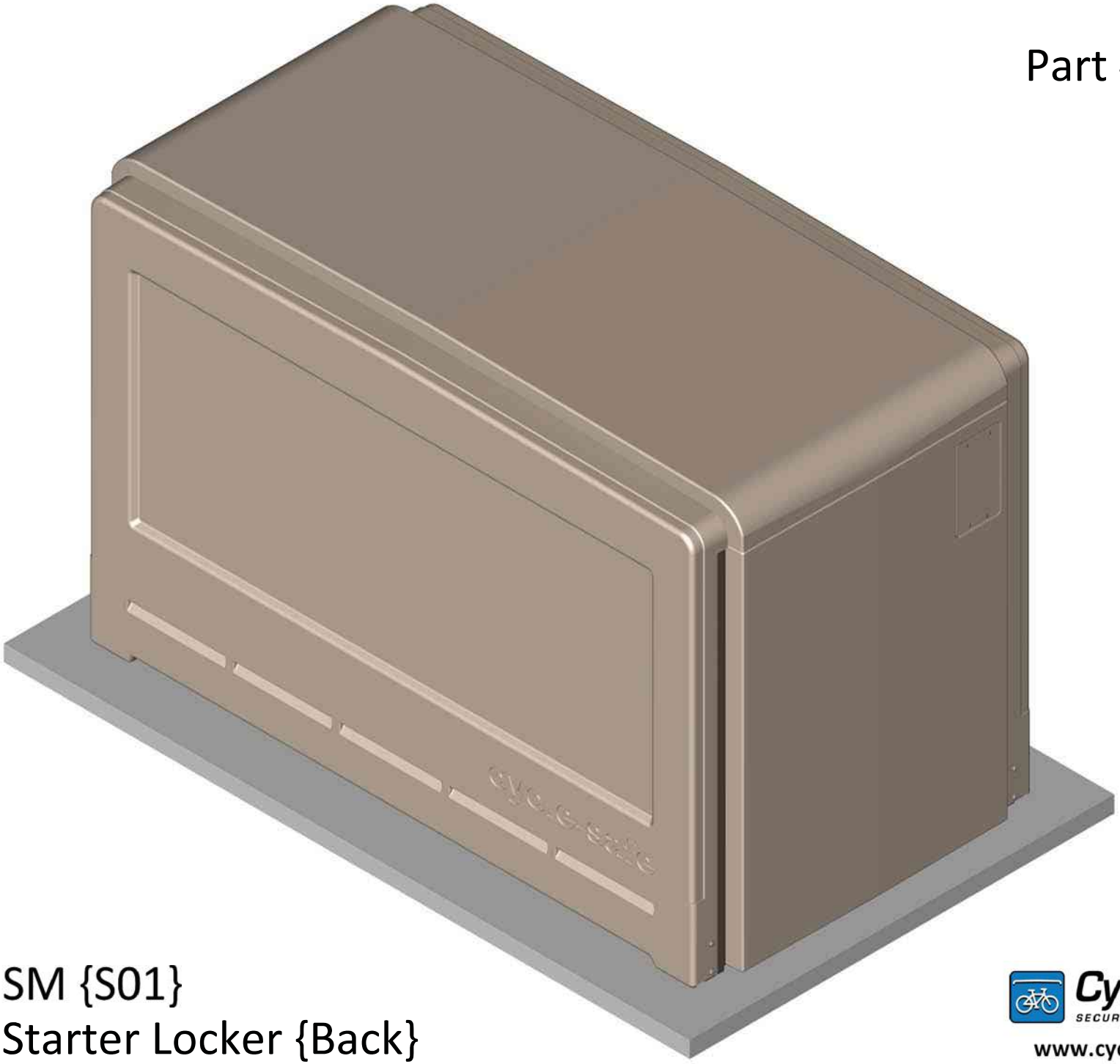
Part #10017



ProPark SM {S01}
{1-Bike} Starter Locker {Back}

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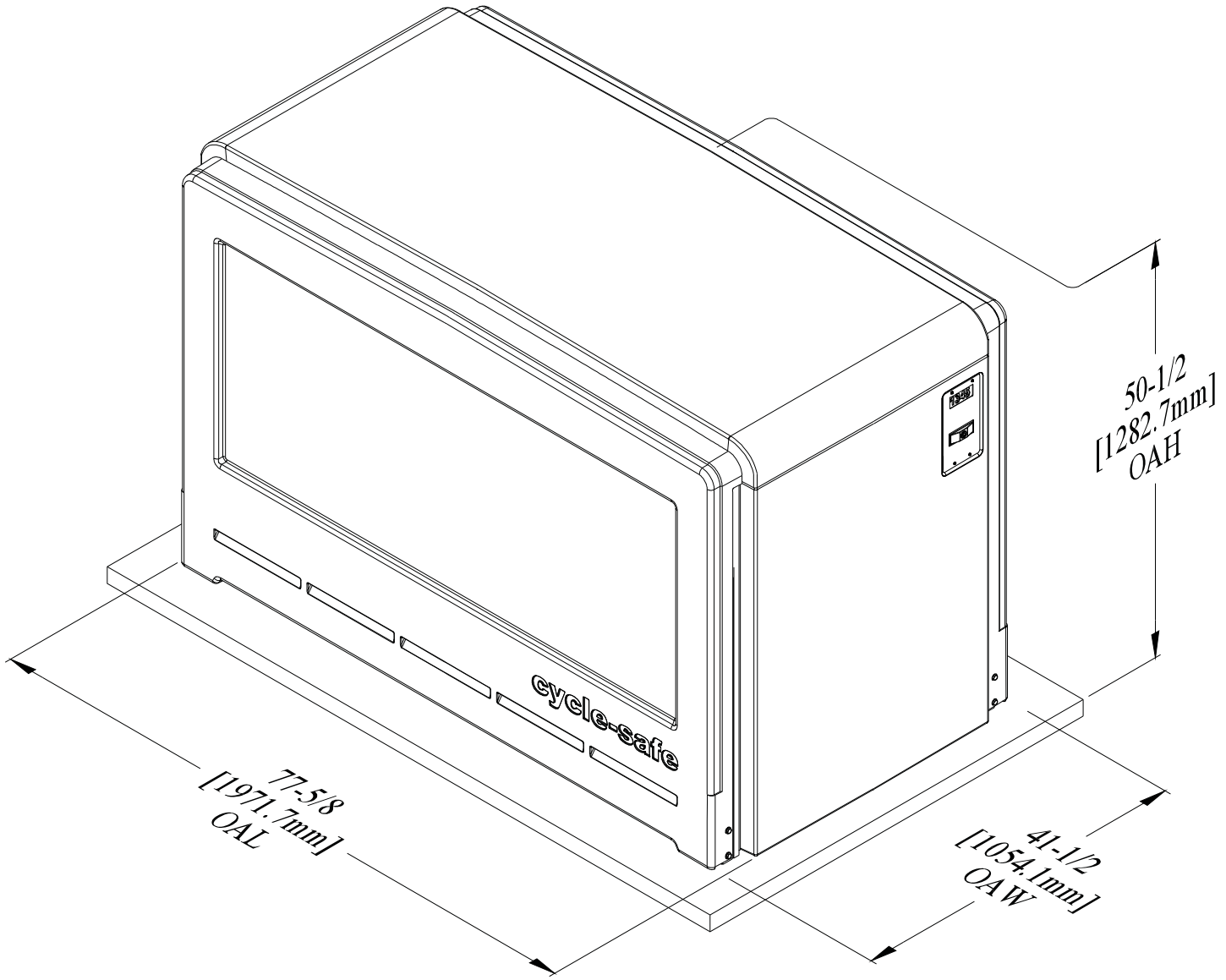
www.cyclesafe.com

Part #10017



ProPark SM {S01}
{1-Bike} Starter Locker {Dims}

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Part #10017

ProPark SM {S01}
{1-Bike} Starter Locker {Open}

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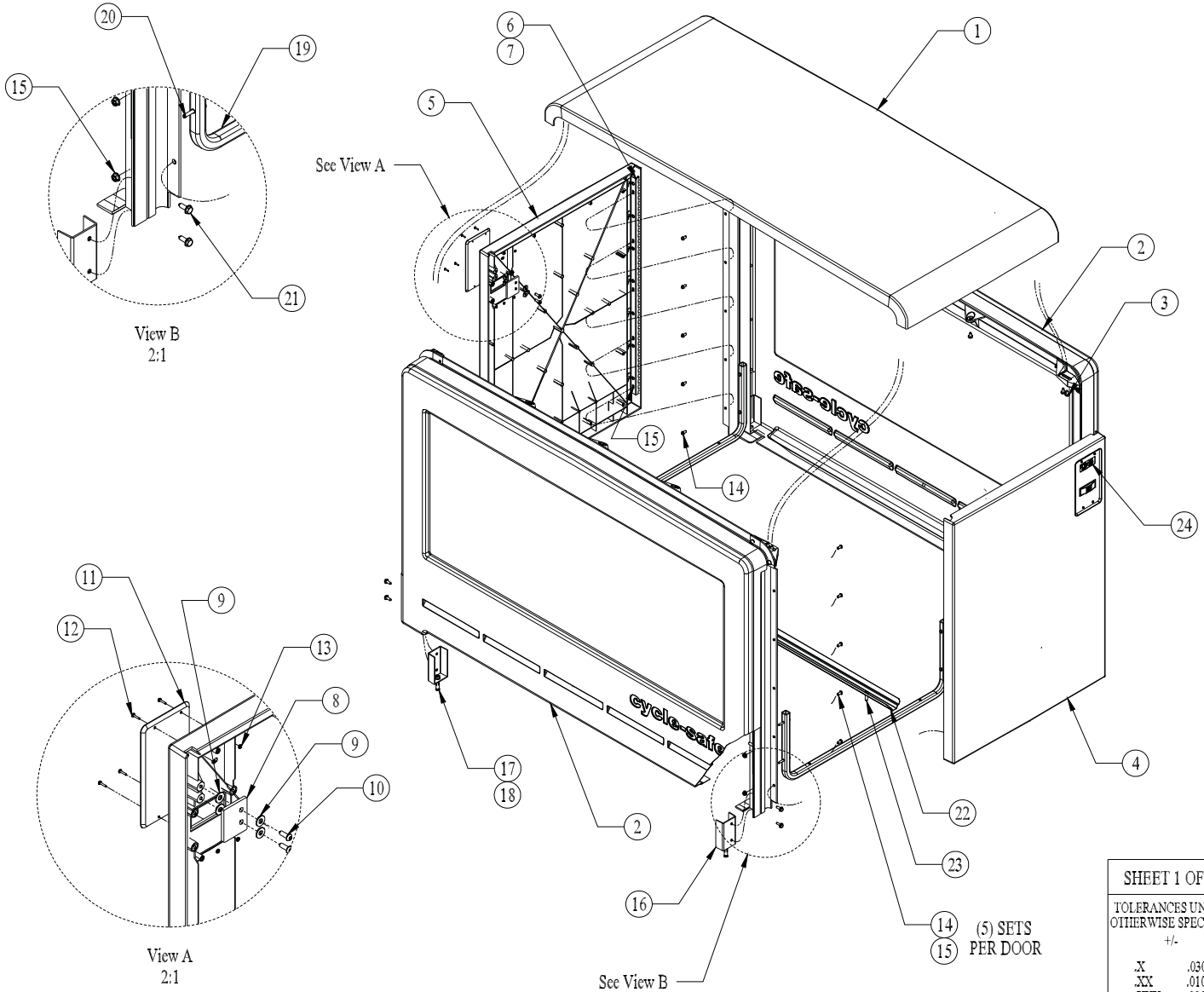
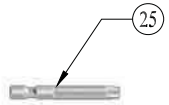


ITEM	QTY	DESCRIPTION	PART NO.
1	1	TOP PANEL	10301
2	2	END PANEL {STANDARD}	10960
3	14	5/16"-18NC x 1-1/4" LG. SHIMS	10222
4	1	DOOR {LOWER} ASSEMBLY {STANDARD}	10701
5	1	DOOR {LOWER} PANEL {STANDARD}	10700
6	1	HINGE ASSEMBLY	10706
7	7	1/4-10NC x 1/2" PHILLIPS PAN HEAD SCREW	10705
8	2	STATIONARY LATCH	10742
9	8	7/16" ID x 15/16" OD S/S FLAT WASHER	10832
10	4	5/16-18NC x 2" FLANGE HEAD SCREW {ZINC}	10833
11	1	DOOR {THICK} COVER PLATE	11702
12	4	3/16" x 3/8" x 1/2" LG. S/S POP RIVET	10928
13	4	3/16" S/S FLAT WASHER	10929
14	10	5/16-18NC x 3/4" LG. HHCS {ZINC}	10219
15	18	5-16-18NC WHIZ NUT {ZINC}	10304
16	4	LEVELING PLATE	10216
17	4	3/8-16NC x 1-7/8" ANCHOR BOLT	10211
18	4	3/8" S/S FLAT WASHER	10909
19	2	INTERIOR DOOR SUPPORT	10755
20	8	5/16-18NC x 2" LG. HHCS {ZINC}	11106
21	8	1/4-20NC x 1-1/4" LG. SELF-TAPPING SCREW	10217
22	1	BIKE TRACK	10410
23	3	3/8-16NC LAG BOLT ASSEMBLY	10415
24	1	NUMBER PLATE	10703
25	1	T40 ~ TORX BIT	10801

NOTES:

1. ALL MATERIALS MUST BE CLEAN AND FREE OF MILL LUBRICATION
2. ANY BLEMISHES OR RUST WILL NOT BE ALLOWED ON COMPLETED PRODUCTS



SHEET 1 OF 1

TOLERANCES UNLESS OTHERWISE SPECIFIED:
+/-
.X .030
.XX .010
.XXX .005
ANGLE 1/2°

REV	DESCRIPTION	DATE
A	RELEASE FOR PRODUCTION	08/31/11

PROPARK ~ SM {S01} {SINGLE-SIDED} LOCKER

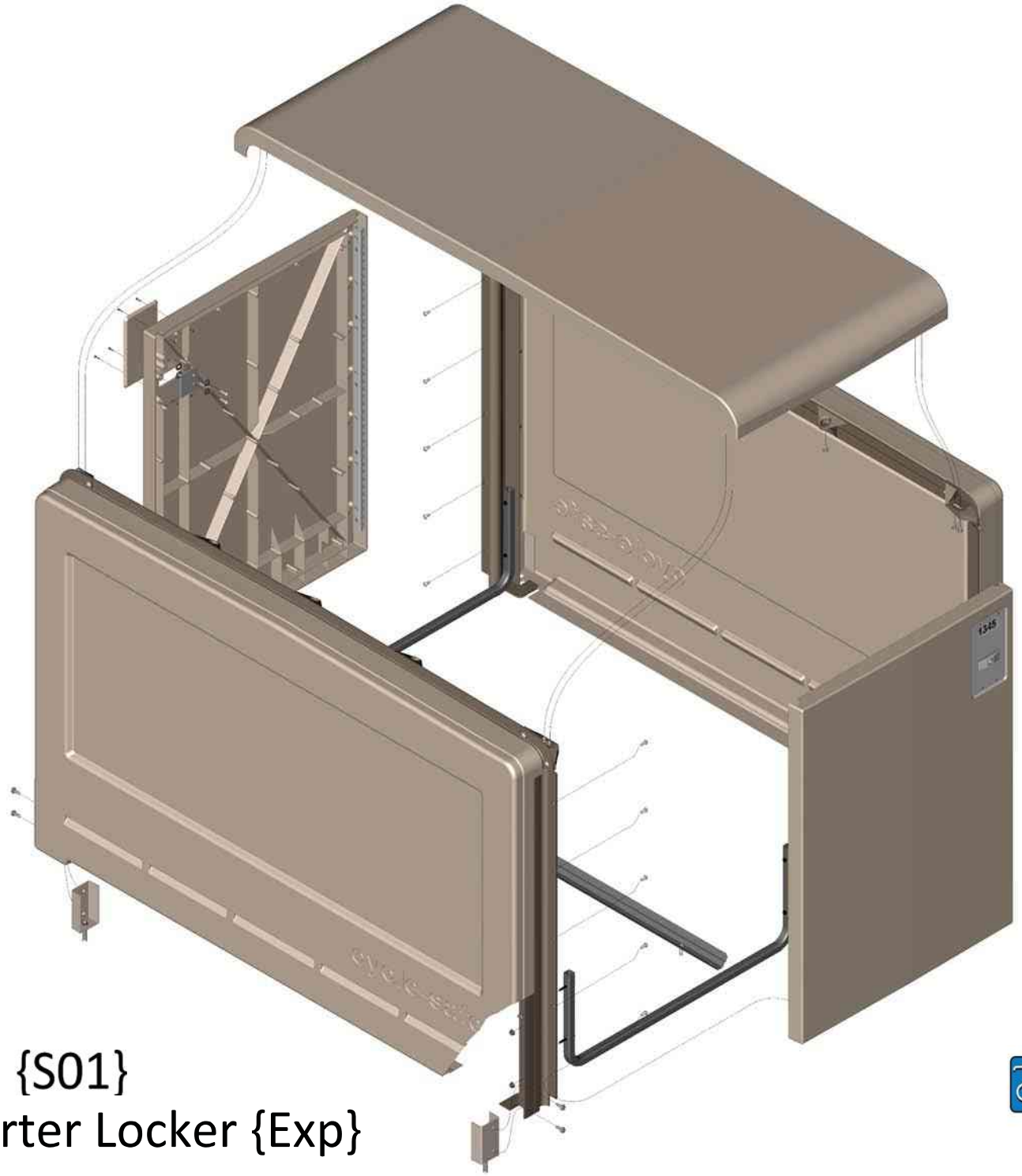
R.E.S.	08/29/11
R.E.S.	06/07/11
APPROVED	DATE

Cycle Safe
947 FOREST HILL AVE
GRAND RAPIDS, MI 49546
www.cyclesafe.com

SIZE			REV
D	{SM} LOCKER {LOWER} TIER ASSEMBLY	10017	A

10017 - {SM} LOCKER {SINGLE-SIDED} ASSEMBLY

Part #10017



ProPark SM {S01}
{1-Bike} Starter Locker {Exp}

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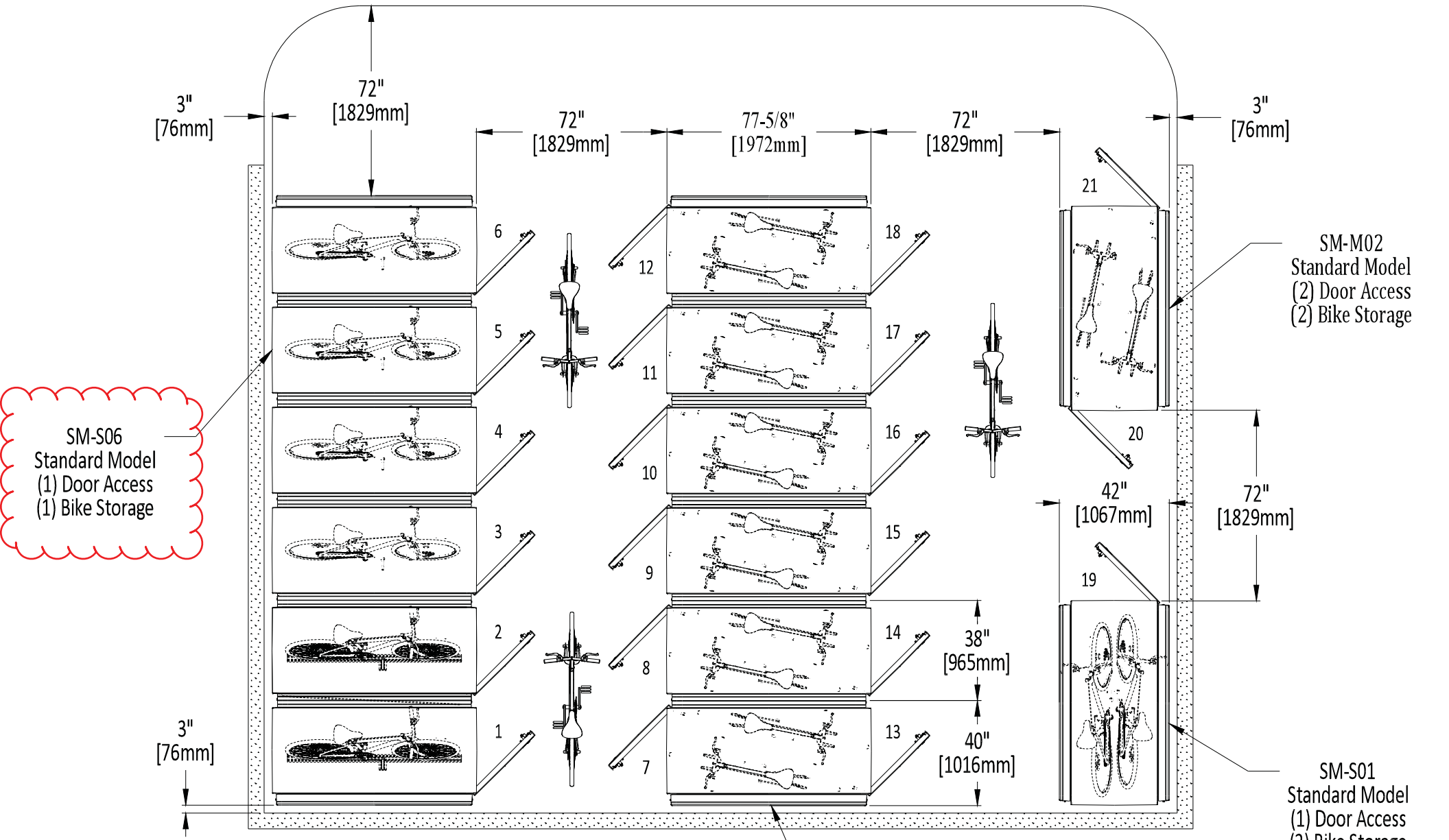
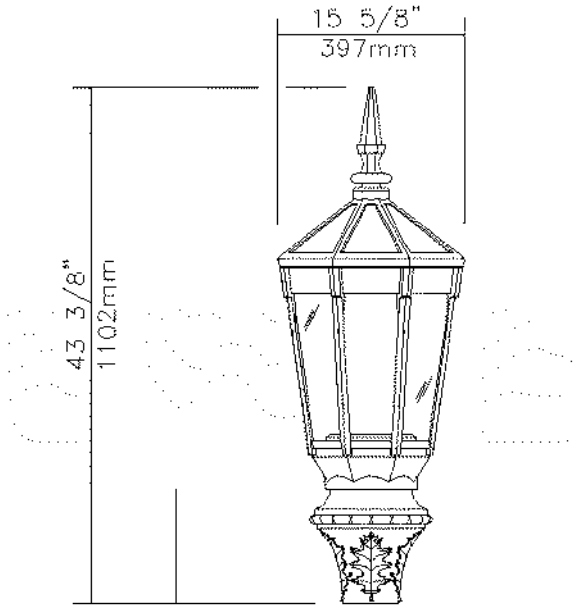


ProPark {Locker} Layout
Clearances & Capacities

CycleSafe
SECURE BICYCLE PARKING
www.cyclesafe.com

Burlington UVM HSRF (29810)



EPA: 2.7 sq ft / weight: 48 lb (21.8 kg)
Note: 3D image may not represent color or option selected.
Logos above include link, click to access.

		Type	**PL1**
Qty	**8**	Luminaire	**[L70-001]-65W48LED4K-ES-PC-FC-LE3-277-SFO-GN8TX**

Description of Components:

Finial: Decorative cast 356 aluminum, mechanically assembled.

Hood: In an octogonal tapered shape, this hood is made of a one-piece cast 356 aluminum mechanically assembled to the luminaire.

Guard: In a octogonal tapered shape, this guard is a one-piece cast 356 aluminum mechanically assembled to the fitter.

Access-Mechanism: Two-integrated hinges on hood with stopper and a captive screw shall offer access to the inside of the luminaire and to the lamp. An embedded memory-retentive gasket shall ensure weatherproofing.

Light Engine: LifeLED™ composed of 3 main components: **LED lamp / Optical System / Heat Sink**
Electrical components are RoHS compliant.

Heat Sink: Made of cast aluminum optimising the LEDs efficiency and life. Product does not use any cooling device with moving parts (only passive cooling device)

Lens: (PC-FC), Made of frosted clear polycarbonate assembled on the guard with brackets.

Lamp: LED Module (Included), LED type Philips Lumileds Rebel ES. Composed of 30 high-performance white LEDs, 40w lamp wattage. Color temperature of 4000 Kelvin nominal, 70 CRI. Operating lifespan after which the system emits 70% of its original lumen output, all of those parameters are tested for 100% of light engines. Use of a metal core board ensures greater heat transfer and longer lifespan of the light engine.

Optical System: (LE3), IES type III (asymmetrical). Shall have an individual pre-oriented acrylic lens to achieve desired distribution. Each LED shall have a protection against shut off maintaining operation of light engine.

Driver: High power factor of 90%. Electronic driver, operating range 50/60 Hz. **Auto-adjusting to a voltage between 120 and 277 volt AC rated for both application line to line or line to neutral, Class II**, THD of 20% max. Maximum ambient operating temperature from -40F(-40C) to 130F(55C) degrees. Certified in compliance to cULus requirement. Dry and damp location. Assembled on a unitized removable tray with Tyco quick disconnect plug resisting to 221F(105C) degrees.

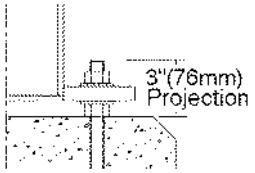
The current supplying the LEDs will be reduced by the driver if the internal driver temperature exceeds 185F(85C), as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction.

Surge Protector: Surge protector tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-Ground, Line-Neutral and Neutral-Ground, and in accordance with U.S. DOE (Department of Energy) MSSLC (Municipal Solid-State Street Lighting Consortium) model specification for LED roadway luminaires electrical immunity requirements for High Test Level 10kV / 10kA.

Fitter: (SFO), Cast 356 aluminum c/w 4 set screws 3/8-16 UNC. Slip-fits on a 4"(102mm) outside diameter x 4" (102mm) long tenon.

Burlington UVM HSRF (29810)

Base & Bolts Information



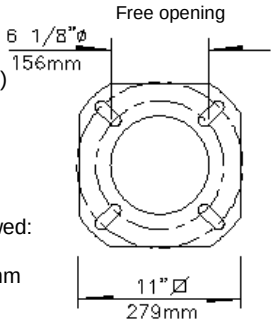
Comes with 4 steel anchor bolts, 3/4" X 17" + 3" J Type Bolts, 8 nuts and 8 washers. Important: Do not obstruct space between anchor plate and concrete base.

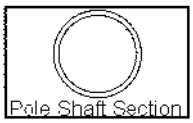
Anchor Plate

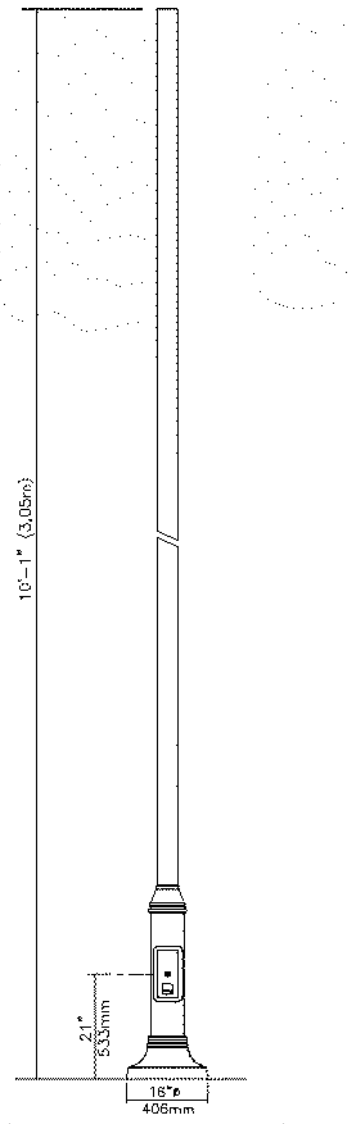
-Bolt Circle:
10 1/2" (267mm)

- Material:
Cast Aluminum

- NOTE:
Bolt Circle Allowed:
9" to 11"
229mm to 279mm







		Type	**PL1**
Qty	**8**	Pole	**AM6F-12.08-PW-VPA-GN8TX**

Description of Components:

Pole Shaft: Shall be made from a 4" (102mm) round extruded 6061-T6 aluminum tubing, having a 0.125" (3.2mm) wall thickness, welded to the pole base.

Joint Cover: Two-piece round joint cover made from cast 356 aluminum, mechanically fastened with stainless steel screws.

Pole Base: Shall be made from a 6 5/8" (168mm) round extruded 6061-T6 aluminum tubing base having a 0.135" (3.4mm) wall thickness, welded to both the bottom and top of the anchor plate.

Maintenance Opening: The pole shall have a 4 1/2" x 10" (114mm x 254mm) maintenance opening centered 21" (533mm) from the bottom of the anchor plate, complete with a weatherproof embossed aluminum cover and a copper ground lug.

Base Cover: Two piece round base cover made from cast 356 aluminum, mechanically fastened with stainless steel screws.

Pole Options: (**PW**) Wiring included without connector. Length supplied is from luminaire to the pole base with 6" (152mm) minimum exceeding from maintenance opening.
(VPA) Vandalproof screw(s), Allen-type vandalproof screw(s), with pin-in-socket tamper-resistant head.

Note: A tenon will be provided when the luminaire or bracket does not fit directly on pole shaft. Tenon not shown on the drawing.

IMPORTANT: Philips Lumec strongly recommends the installation of the complete lighting assembly with all of its accessories upon the anchoring of the pole. This will ensure that the structural integrity of the product is maintained throughout its lifetime.

Pole Weight: 21 lbs (9.5 kg)

Miscellaneous

Description of Components:

Wiring: Gauge (#14) TEW/AWM 1015 or 1230 wires, **wiring included without connector**. Length supplied is from luminaire to the pole base with 6" (152mm) minimum exceeding from maintenance opening. **Wiring will be shipped in a separate box and will be installed by others.**

Hardware: All exposed screws shall be complete with Ceramic primer-seal basecoat to reduce seizing of the parts and offers a high resistance to corrosion. All seals and sealing devices are made and/or lined with EPDM and/or silicone and/or rubber.

Finish: Color to be **dark forest green textured (GN8TX)** and in accordance with the AAMA 2603 standard. Application of polyester powder coat paint (4 mils/100 microns) with ± 1 mils/24 microns of tolerance. The Thermosetting resins provides a discoloration resistant finish in accordance with the ASTM D2244 standard, as well as luster retention in keeping with the ASTM D523 standard and humidity proof in accordance with the ASTM D2247 standard.

The surface treatment achieves a minimum of 2000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard.

LED products manufacturing standard: The electronic components sensitive to electrostatic discharge (ESD) such as light emitting diodes (LEDs) are assembled in compliance with IEC61340-5-1 and ANSI/ESD S20.20 standards so as to eliminate ESD events that could decrease the useful life of the product.

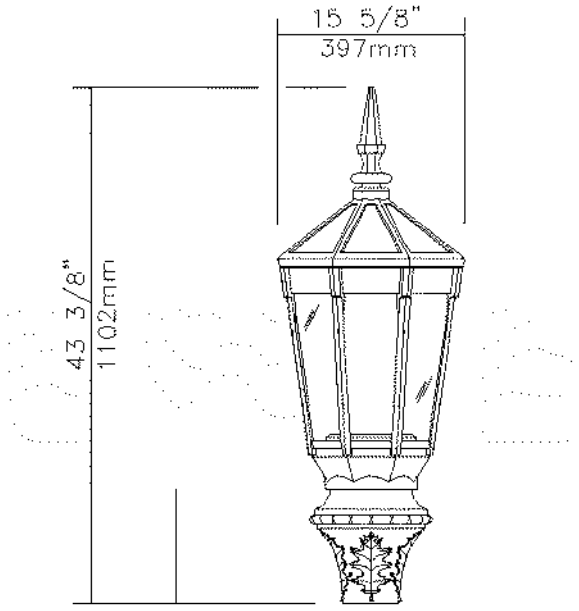
Quality Control: The manufacturer must provide a written confirmation of its ISO 9001-2008 and ISO 14001-2004 International Quality Standards Certification.

Web site information details: Click on any specific information details you need:

Paint finish / Warranties / ISO 9001-2008 Certification / ISO 14001-2004 Certification / CSA Pole Certification

PHILIPS
LUMEC

Burlington UVM HSRF (29810)



EPA: 2.7 sq ft / weight: 48 lb (21.8 kg)
Note: 3D image may not represent color or option selected.
Logos above include link, click to access.

		Type	**PL1**
Qty	**8**	Luminaire	**[L70-001]-65W48LED4K-ES-PC-FC-LE5-277-SFO-GN8TX**

Description of Components:

Finial: Decorative cast 356 aluminum, mechanically assembled.

Hood: In an octogonal tapered shape, this hood is made of a one-piece cast 356 aluminum mechanically assembled to the luminaire.

Guard: In a octogonal tapered shape, this guard is a one-piece cast 356 aluminum mechanically assembled to the fitter.

Access-Mechanism: Two-integrated hinges on hood with stopper and a captive screw shall offer access to the inside of the luminaire and to the lamp. An embedded memory-retentive gasket shall ensure weatherproofing.

Light Engine: LifeLED™ composed of 3 main components: **LED lamp / Optical System / Heat Sink**
Electrical components are RoHS compliant.

Heat Sink: Made of cast aluminum optimising the LEDs efficiency and life. Product does not use any cooling device with moving parts (only passive cooling device)

Lens: (PC-FC), Made of frosted clear polycarbonate assembled on the guard with brackets.

Lamp: LED Module (Included), LED type Philips Lumileds Rebel ES. Composed of 30 high-performance white LEDs, 40w lamp wattage. Color temperature of 4000 Kelvin nominal, 70 CRI. Operating lifespan after which the system emits 70% of its original lumen output, all of those parameters are tested for 100% of light engines. Use of a metal core board ensures greater heat transfer and longer lifespan of the light engine.

Optical System: (LE3), IES type III (asymmetrical). Shall have an individual pre-oriented acrylic lens to achieve desired distribution. Each LED shall have a protection against shut off maintaining operation of light engine.

Driver: High power factor of 90%. Electronic driver, operating range 50/60 Hz. **Auto-adjusting to a voltage between 120 and 277 volt AC rated for both application line to line or line to neutral, Class II**, THD of 20% max. Maximum ambient operating temperature from -40F(-40C) to 130F(55C) degrees. Certified in compliance to cULus requirement. Dry and damp location. Assembled on a unitized removable tray with Tyco quick disconnect plug resisting to 221F(105C) degrees.

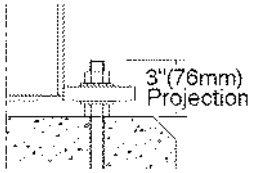
The current supplying the LEDs will be reduced by the driver if the internal driver temperature exceeds 185F(85C), as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction.

Surge Protector: Surge protector tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-Ground, Line-Neutral and Neutral-Ground, and in accordance with U.S. DOE (Department of Energy) MSSLC (Municipal Solid-State Street Lighting Consortium) model specification for LED roadway luminaires electrical immunity requirements for High Test Level 10kV / 10kA.

Fitter: (SFO), Cast 356 aluminum c/w 4 set screws 3/8-16 UNC. Slip-fits on a 4"(102mm) outside diameter x 4" (102mm) long tenon.

Burlington UVM HSRF (29810)

Base & Bolts Information



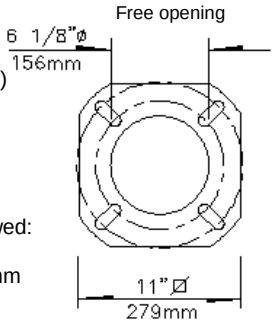
Comes with 4 steel anchor bolts, 3/4" X 17" + 3" J Type Bolts, 8 nuts and 8 washers. Important: Do not obstruct space between anchor plate and concrete base.

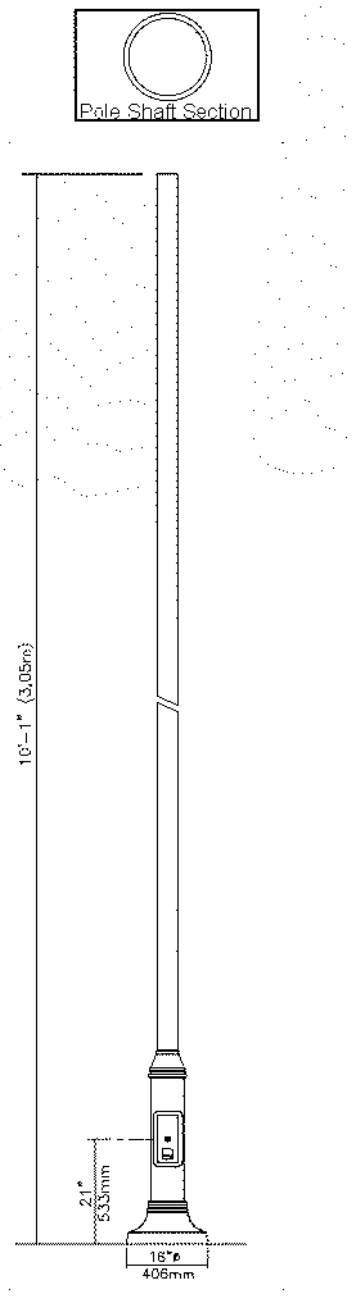
Anchor Plate

-Bolt Circle:
10 1/2" (267mm)

- Material:
Cast Aluminum

- NOTE:
Bolt Circle Allowed:
9" to 11"
229mm to 279mm





		Type	**PL1**
Qty	**8**	Pole	**AM6F-10.08-PW-VPA-GN8TX**

Description of Components:

Pole Shaft: Shall be made from a 4" (102mm) round extruded 6061-T6 aluminum tubing, having a 0.125" (3.2mm) wall thickness, welded to the pole base.

Joint Cover: Two-piece round joint cover made from cast 356 aluminum, mechanically fastened with stainless steel screws.

Pole Base: Shall be made from a 6 5/8" (168mm) round extruded 6061-T6 aluminum tubing base having a 0.135" (3.4mm) wall thickness, welded to both the bottom and top of the anchor plate.

Maintenance Opening: The pole shall have a 4 1/2" x 10" (114mm x 254mm) maintenance opening centered 21" (533mm) from the bottom of the anchor plate, complete with a weatherproof embossed aluminum cover and a copper ground lug.

Base Cover: Two piece round base cover made from cast 356 aluminum, mechanically fastened with stainless steel screws.

Pole Options: (**PW**) Wiring included without connector. Length supplied is from luminaire to the pole base with 6" (152mm) minimum exceeding from maintenance opening.
(VPA) Vandalproof screw(s), Allen-type vandalproof screw(s), with pin-in-socket tamper-resistant head.

Note: A tenon will be provided when the luminaire or bracket does not fit directly on pole shaft. Tenon not shown on the drawing.

IMPORTANT: Philips Lumec strongly recommends the installation of the complete lighting assembly with all of its accessories upon the anchoring of the pole. This will ensure that the structural integrity of the product is maintained throughout its lifetime.

Pole Weight: 21 lbs (9.5 kg)

Miscellaneous

Description of Components:

Wiring: Gauge (#14) TEW/AWM 1015 or 1230 wires, **wiring included without connector**. Length supplied is from luminaire to the pole base with 6" (152mm) minimum exceeding from maintenance opening. **Wiring will be shipped in a separate box and will be installed by others.**

Hardware: All exposed screws shall be complete with Ceramic primer-seal basecoat to reduce seizing of the parts and offers a high resistance to corrosion. All seals and sealing devices are made and/or lined with EPDM and/or silicone and/or rubber.

Finish: Color to be **dark forest green textured (GN8TX)** and in accordance with the AAMA 2603 standard. Application of polyester powder coat paint (4 mils/100 microns) with ± 1 mils/24 microns of tolerance. The Thermosetting resins provides a discoloration resistant finish in accordance with the ASTM D2244 standard, as well as luster retention in keeping with the ASTM D523 standard and humidity proof in accordance with the ASTM D2247 standard.

The surface treatment achieves a minimum of 2000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard.

LED products manufacturing standard: The electronic components sensitive to electrostatic discharge (ESD) such as light emitting diodes (LEDs) are assembled in compliance with IEC61340-5-1 and ANSI/ESD S20.20 standards so as to eliminate ESD events that could decrease the useful life of the product.

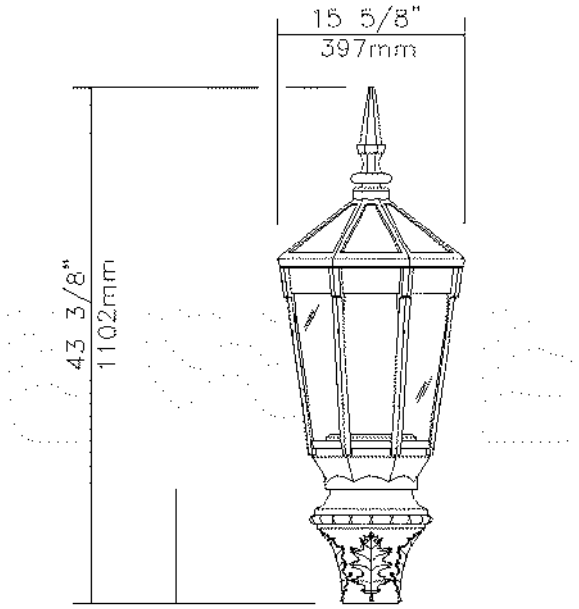
Quality Control: The manufacturer must provide a written confirmation of its ISO 9001-2008 and ISO 14001-2004 International Quality Standards Certification.

Web site information details: Click on any specific information details you need:

Paint finish / Warranties / ISO 9001-2008 Certification / ISO 14001-2004 Certification / CSA Pole Certification

PHILIPS
LUMEC

Burlington UVM HSRF (29810)



EPA: 2.7 sq ft / weight: 48 lb (21.8 kg)
Note: 3D image may not represent color or option selected.
Logos above include link, click to access.

		Type	**PL1**
Qty	**8**	Luminaire	**[L70-001]-65W48LED4K-ES-PC-FC-LE3-277-SFO-GN8TX**

Description of Components:

Finial: Decorative cast 356 aluminum, mechanically assembled.

Hood: In an octogonal tapered shape, this hood is made of a one-piece cast 356 aluminum mechanically assembled to the luminaire.

Guard: In a octogonal tapered shape, this guard is a one-piece cast 356 aluminum mechanically assembled to the fitter.

Access-Mechanism: Two-integrated hinges on hood with stopper and a captive screw shall offer access to the inside of the luminaire and to the lamp. An embedded memory-retentive gasket shall ensure weatherproofing.

Light Engine: LifeLED™ composed of 3 main components: **LED lamp / Optical System / Heat Sink**
Electrical components are RoHS compliant.

Heat Sink: Made of cast aluminum optimising the LEDs efficiency and life. Product does not use any cooling device with moving parts (only passive cooling device)

Lens: (PC-FC), Made of frosted clear polycarbonate assembled on the guard with brackets.

Lamp: LED Module (Included), LED type Philips Lumileds Rebel ES. Composed of 30 high-performance white LEDs, 40w lamp wattage. Color temperature of 4000 Kelvin nominal, 70 CRI. Operating lifespan after which the system emits 70% of its original lumen output, all of those parameters are tested for 100% of light engines. Use of a metal core board ensures greater heat transfer and longer lifespan of the light engine.

Optical System: (LE3), IES type III (asymmetrical). Shall have an individual pre-oriented acrylic lens to achieve desired distribution. Each LED shall have a protection against shut off maintaining operation of light engine.

Driver: High power factor of 90%. Electronic driver, operating range 50/60 Hz. **Auto-adjusting to a voltage between 120 and 277 volt AC rated for both application line to line or line to neutral, Class II**, THD of 20% max. Maximum ambient operating temperature from -40F(-40C) to 130F(55C) degrees. Certified in compliance to cULus requirement. Dry and damp location. Assembled on a unitized removable tray with Tyco quick disconnect plug resisting to 221F(105C) degrees.

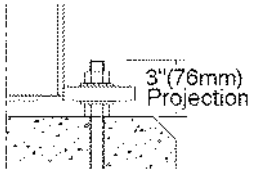
The current supplying the LEDs will be reduced by the driver if the internal driver temperature exceeds 185F(85C), as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction.

Surge Protector: Surge protector tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-Ground, Line-Neutral and Neutral-Ground, and in accordance with U.S. DOE (Department of Energy) MSSLC (Municipal Solid-State Street Lighting Consortium) model specification for LED roadway luminaires electrical immunity requirements for High Test Level 10kV / 10kA.

Fitter: (SFO), Cast 356 aluminum c/w 4 set screws 3/8-16 UNC. Slip-fits on a 4"(102mm) outside diameter x 4" (102mm) long tenon.

Burlington UVM HSRF (29810)

Base & Bolts Information



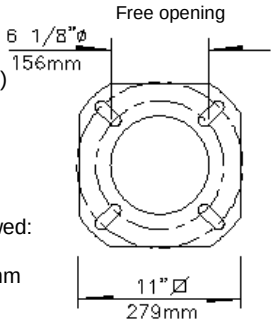
Comes with 4 steel anchor bolts, 3/4" X 17" + 3" J Type Bolts, 8 nuts and 8 washers. Important: Do not obstruct space between anchor plate and concrete base.

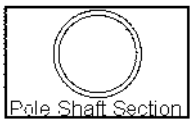
Anchor Plate

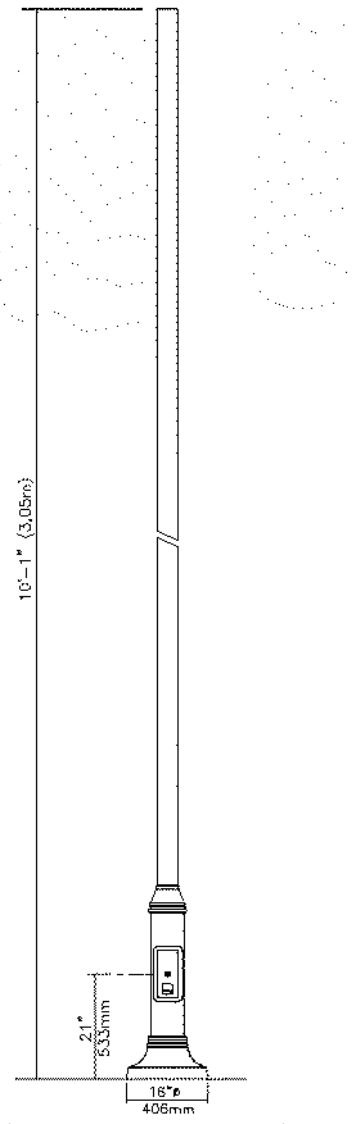
-Bolt Circle:
10 1/2" (267mm)

- Material:
Cast Aluminum

- NOTE:
Bolt Circle Allowed:
9" to 11"
229mm to 279mm







		Type	**PL1**
Qty	**8**	Pole	**AM6F-12.08-PW-VPA-GN8TX**

Description of Components:

Pole Shaft: Shall be made from a 4" (102mm) round extruded 6061-T6 aluminum tubing, having a 0.125" (3.2mm) wall thickness, welded to the pole base.

Joint Cover: Two-piece round joint cover made from cast 356 aluminum, mechanically fastened with stainless steel screws.

Pole Base: Shall be made from a 6 5/8" (168mm) round extruded 6061-T6 aluminum tubing base having a 0.135" (3.4mm) wall thickness, welded to both the bottom and top of the anchor plate.

Maintenance Opening: The pole shall have a 4 1/2" x 10" (114mm x 254mm) maintenance opening centered 21" (533mm) from the bottom of the anchor plate, complete with a weatherproof embossed aluminum cover and a copper ground lug.

Base Cover: Two piece round base cover made from cast 356 aluminum, mechanically fastened with stainless steel screws.

Pole Options: (**PW**) Wiring included without connector. Length supplied is from luminaire to the pole base with 6" (152mm) minimum exceeding from maintenance opening.
(VPA) Vandalproof screw(s), Allen-type vandalproof screw(s), with pin-in-socket tamper-resistant head.

Note: A tenon will be provided when the luminaire or bracket does not fit directly on pole shaft. Tenon not shown on the drawing.

IMPORTANT: Philips Lumec strongly recommends the installation of the complete lighting assembly with all of its accessories upon the anchoring of the pole. This will ensure that the structural integrity of the product is maintained throughout its lifetime.

Pole Weight: 21 lbs (9.5 kg)

Miscellaneous

Description of Components:

Wiring: Gauge (#14) TEW/AWM 1015 or 1230 wires, **wiring included without connector**. Length supplied is from luminaire to the pole base with 6" (152mm) minimum exceeding from maintenance opening. **Wiring will be shipped in a separate box and will be installed by others.**

Hardware: All exposed screws shall be complete with Ceramic primer-seal basecoat to reduce seizing of the parts and offers a high resistance to corrosion. All seals and sealing devices are made and/or lined with EPDM and/or silicone and/or rubber.

Finish: Color to be **dark forest green textured (GN8TX)** and in accordance with the AAMA 2603 standard. Application of polyester powder coat paint (4 mils/100 microns) with ± 1 mils/24 microns of tolerance. The Thermosetting resins provides a discoloration resistant finish in accordance with the ASTM D2244 standard, as well as luster retention in keeping with the ASTM D523 standard and humidity proof in accordance with the ASTM D2247 standard.

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LED products manufacturing standard: The electronic components sensitive to electrostatic discharge (ESD) such as light emitting diodes (LEDs) are assembled in compliance with IEC61340-5-1 and ANSI/ESD S20.20 standards so as to eliminate ESD events that could decrease the useful life of the product.

Quality Control: The manufacturer must provide a written confirmation of its ISO 9001-2008 and ISO 14001-2004 International Quality Standards Certification.

Web site information details: Click on any specific information details you need:

Paint finish / Warranties / ISO 9001-2008 Certification / ISO 14001-2004 Certification / CSA Pole Certification

PHILIPS
LUMEC

CB 1-S SIGNATURE HELP POINT®

Code Blue

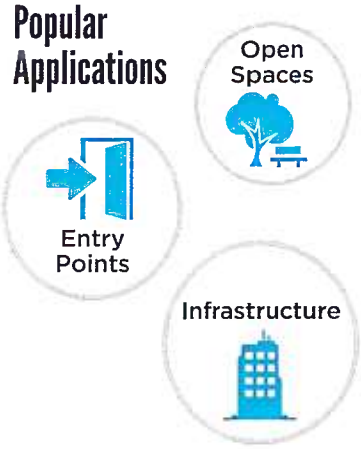
Product Description

The CB 1-s is our most-popular pedestal Help Point. Highlighted by a high intensity area light that provides added visibility, this blue light emergency tower provides direct contact with first responders and is an excellent choice for walkways, parking lots, open campus areas and more.

Standard Features

- Durable quarter-inch steel construction
- Trademarked cylindrical design
- 9 feet tall
- 12.75" diameter
- LED faceplate light

Popular Applications



Popular Upgrades

Public Address

Overhead Camera Mount

Dual Faceplates

Mounting Rings

AED Housing

Get It Customized

We know your installation is unique. From paint and graphics to height and mountings, if you dream it, we can make it. Contact Customer Service at customerservice@codeblue.com or 800-205-7186 to learn more.

© 2016 Code Blue Corporation

Technical Features

Specifications

- **Height:** 9' (274.32 cm)
- **Weight:** 330 lbs. (149.69 kg)
- **Diameter:** 12.75" (32.38 cm)
- **Material & thickness:** 0.25" steel
- **Access door:** 14" x 9.64" (35.56 x 24.49 cm)

Power

- **Standard:** 12-24V AC/DC
- **Optional:** 120, 240, 277, 347V AC
  - Hardwire
  - NightCharge²
  - PoE

Communication

- **Speakerphone Options**
  - **IP5000:** Full duplex, SIP compatible VoIP phone.
  - **IA4100:** Analog full duplex phone.
- Hardwire
- Cellular
- IP wireless

Lighting

- LED faceplate light
- Beacon/strobe
- Area light

Style

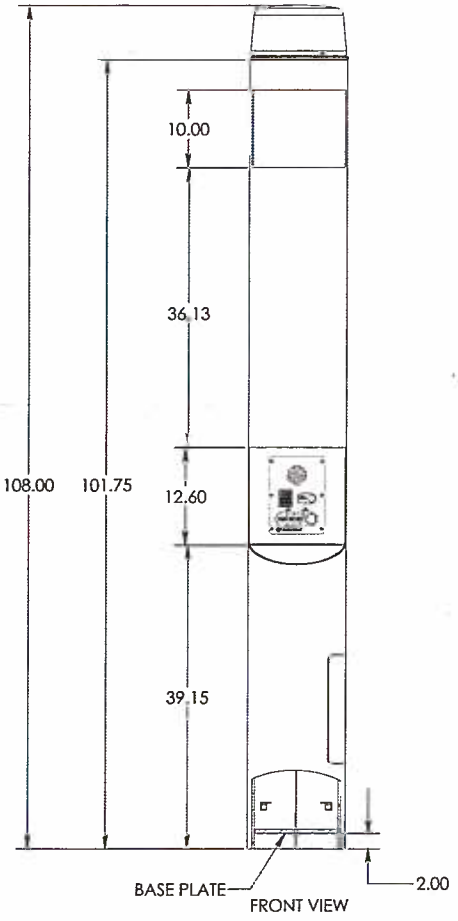
- **Standard colors:** British Racing Green, Cardinal Red, Dark Bronze, Gloss White, Gloss Black, Medium Bronze, Midnight Blue, Safety Blue, Safety Red, Safety Yellow, Tiger Orange, Bright Silver
- **Graphics text:** Assistance, Courtesy, Emergency, Police, Security, Information, Help Point
- **Graphics colors:** Black, Blue, Green, Red, White, Yellow

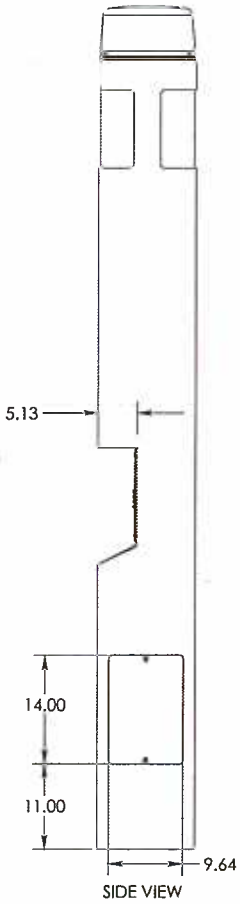
Compliance

- UL 2017
- UL 60950-1
- IP56
- NEMA 4
- ADA

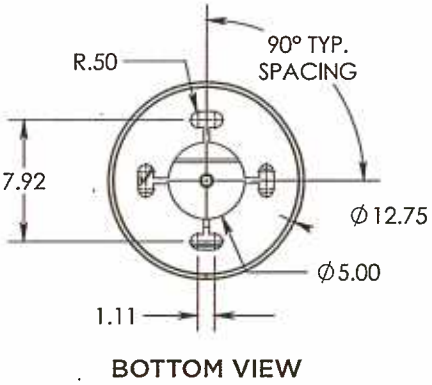
Options

- Public address speakers
- Overhead camera mount
- Temperature-controlled AED housing
- Mounting ring
- Dual faceplates





Mounting Schematics



Note: Specifications subject to change without notice or obligation on the part of Code Blue Corporation.

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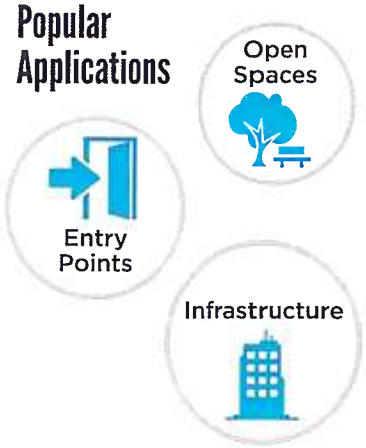
CB 2-E SIGNATURE HELP POINT®

Code Blue

Product Description

The CB 2-e is Code Blue's most popular wall-mounted Help Point. Highlighted by a high intensity LED beacon/strobe that provides high visibility and is a deterrent to potential crime, and a hands-free emergency speakerphone for direct communication with first responders, it can extend security efforts to parking decks, dorm entrances, hallways and public transit centers.

Popular Applications



Standard Features

- ✔ Durable stainless steel construction
- ✔ ADA compliant
- ✔ 12-24V AC/DC power standard

Popular Upgrades

Public Address

AED Housing

Get It Customized

We know your installation is unique. From paint and graphics to height and mountings, if you dream it, we can make it. Contact Customer Service at customerservice@codeblue.com or 800-205-7186 to learn more.

- Heights, widths, depths
- Graphics, text and logos
- Bezel text, color, design

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Technical Features

Specifications

- **Height:** 32.2" (81.79 cm)
- **Width:** 12.00" (30.48 cm)
- **Depth:** 7.88" (20.02 cm)
- **Weight:** 55 lbs. (23.59 kg)
- **Material & thickness:** 0.105" stainless steel

Power

- **Standard:** 12-24V AC/DC
- **Optional:** 120, 240, 277, 347V AC
  - Hardwire
  - PoE

Options

- Public address speaker
- Temperature-controlled AED housing

Communication

- Speakerphone Options
  - **IP5000:** Full duplex, SIP compatible VoIP phone.
  - **IA4100:** Analog full duplex phone.
- Hardwire

Lighting

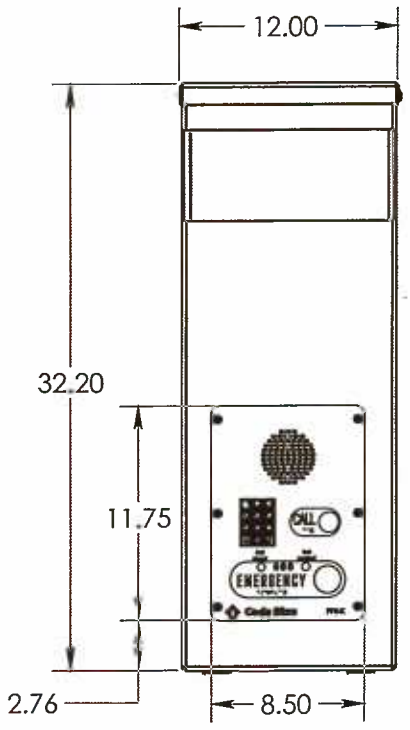
- Beacon/strobe

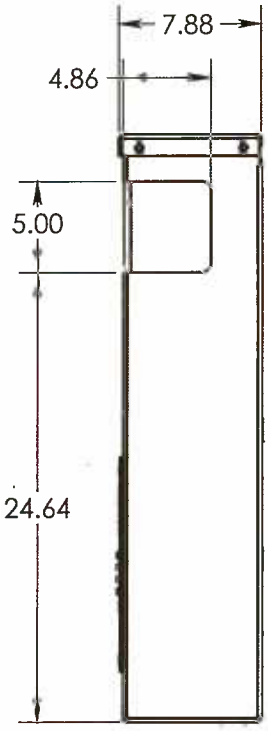
Compliance

- UL 2017
- UL 60950-1
- IP56
- NEMA 4
- ADA

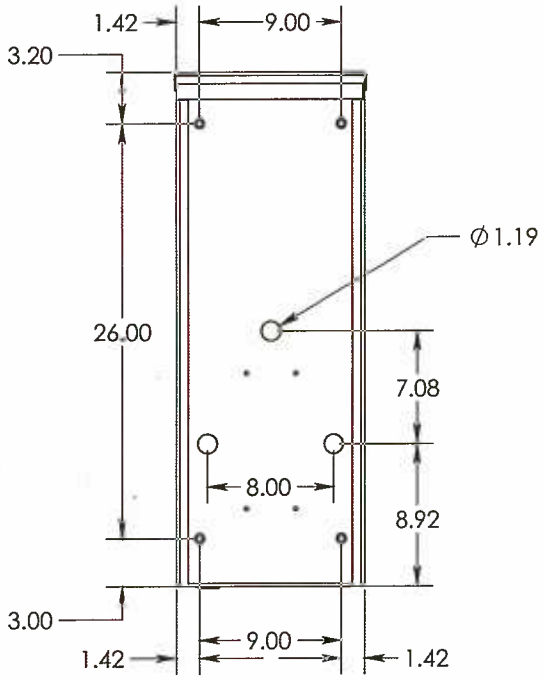
Style

- **Optional painted colors:** British Racing Green, Cardinal Red, Dark Bronze, Gloss White, Gloss Black, Medium Bronze, Midnight Blue, Safety Blue, Safety Red, Safety Yellow, Tiger Orange, Bright Silver
- **Graphics text:** Assistance, Courtesy, Emergency, Police, Security, Information, Help Point
- **Graphics colors:** Black, Blue, Green, Red, White, Yellow





Mounting Schematics



BACK VIEW

Note: Specifications subject to change without notice or obligation on the part of Code Blue Corporation.

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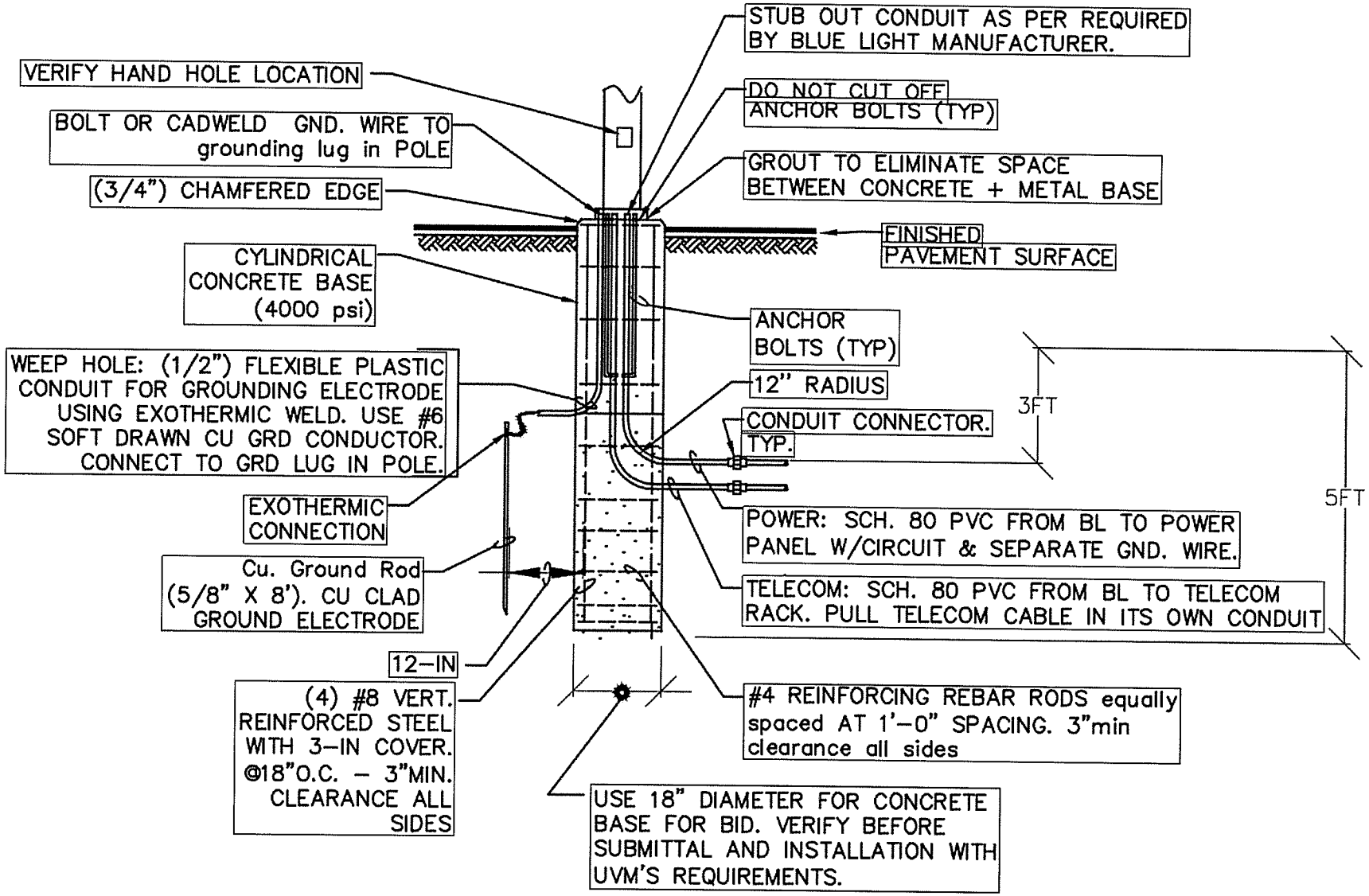


TYPICAL CONCRETE BASE EMERGENCY BLUE LIGHT

SCALE: N.T.S.

Site Location Plan
UVM Patrick Forbush Gutterson Athletic Complex, 97 Spear Street
Proposed Multipurpose Center
Burlington, Vermont

UNIVERSITY OF VERMONT
Map Produced by UVM Campus Planning Services
2013 CCRPC Orthophotography; Fugro Earthdata, Inc.

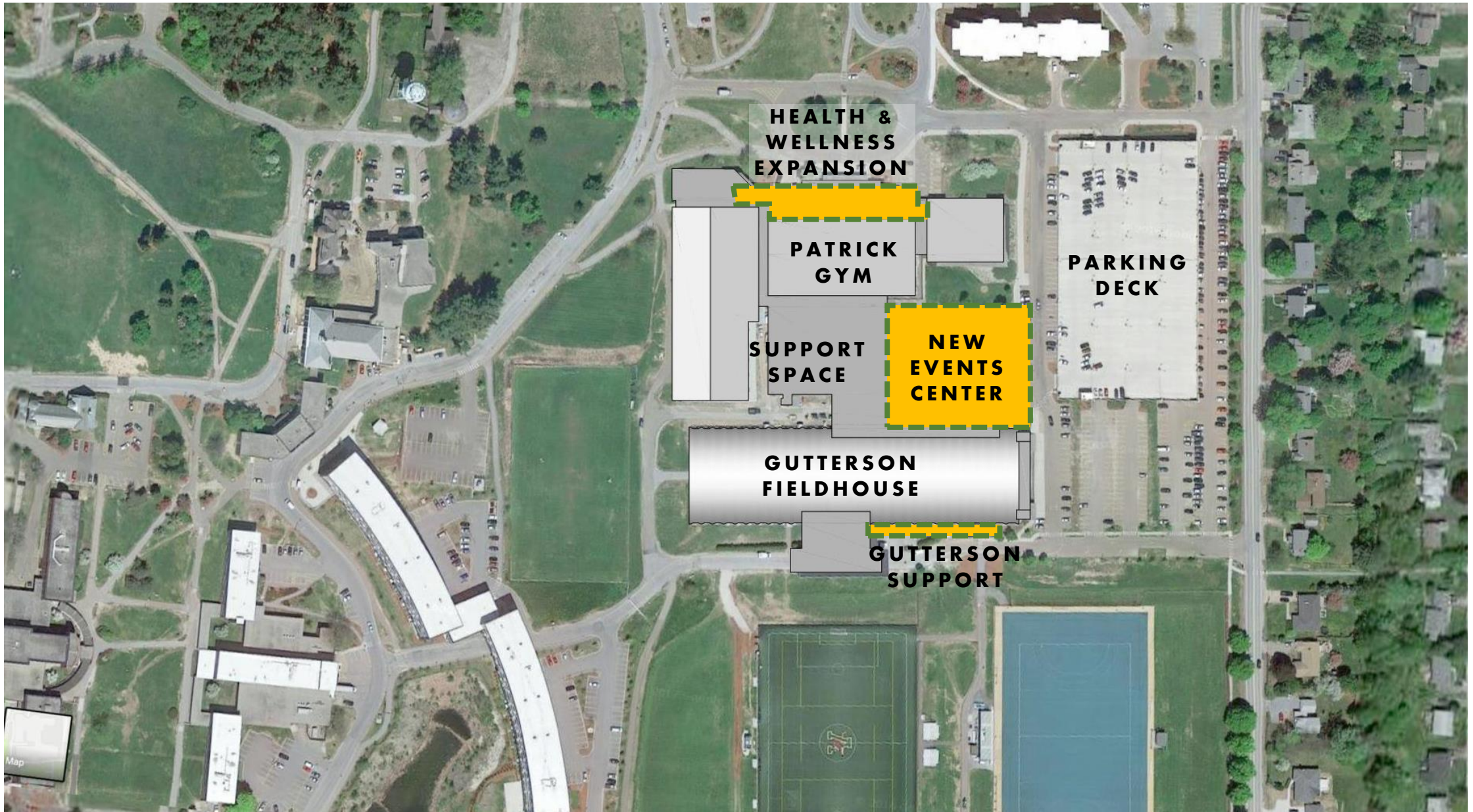
0 62.5 125 250 375 500 Feet

UVM BOUNDARY (APPROXIMATE)
BURL-S .BURL LINE

Date Saved: 4/18/2018 5:30:49 PM

Document Path: S:\cps\GIS DATA\MXD PROJECTS\TEMPLATES\2013_Lani_CCRPC_15CM COLOR.mxd

University of Vermont
Proposed Multipurpose Center & Health & Wellness Expansion



EXTERIOR PERSPECTIVE: Proposed North Entrance
Campus Health & Wellness, University of Vermont

EXTERIOR PERSPECTIVE: Proposed East Entrance (2)

Events Center, University of Vermont

University of Vermont Multipurpose Center

The University of Vermont has identified the Multipurpose Center as its highest priority facilities need at this time. The existing facilities of the Patrick Forbush Gutterson Complex (PFG Complex) includes 335,321 gross square feet (GSF). These facilities, located at 97 Spear Street, were constructed in multiple phases in 1961, 1980, 1990 and 1999. Today upgrades and/or new construction are required to meet current programming needs.

The additions will consist of a new 96,681 GSF multipurpose events center at the east side of the existing UVM PFG complex as well as a 17,331 GSF addition to the north side of the complex, as part of a Health and Wellness renovation/expansion, for a total of 119,099 GSF new space. The proposed ~3,000 seat multipurpose center will replace the existing Patrick Gym, which will be reconfigured into practice space. There will be no net addition of spectator seats. The existing traffic circulation pattern, as per the 2003 South Campus Master Transportation Plan and updated in 2009, will remain.

The landscaping plan includes an overall increase in number of trees as well as paving of informal existing paths to better facilitate pedestrian circulation.

The design team is Cannon Design, Boston, MA in association with TruexCullins, Burlington, VT.

PROGRAM NEEDS & SITE

The need to upgrade and expand UVM's facilities to better accommodate health, fitness, wellness, academics, athletics, events, and related programs has been well documented. A Board of Trustees sponsored Task Force Report was issued in 2009, and articulated principles to guide the proposed project, including:

1) Reflect and support the mission and values of the University;
2) Integrate academic components into the program;
3) In a highly student-centered way, meet the breadth and depth of wellness, recreation, fitness, athletic, and event/activities needs of UVM's active, diverse community;
4) Maximize cost savings through utilization of existing facilities and co- location of new ones;
5) Build community in an imaginative, integrated way;
6) Embody the outdoor, natural spirit of Vermont;
7) Be a model of environmental stewardship;
8) Compare well with UVM's peer institutions;
9) Assist in the recruitment, retention, and success of students, faculty, and staff;
10) Allow the intercollegiate athletic program to compete and thrive, with particular attention to the success of the "student-athlete".

The proposed project utilizes a combination of new construction and renovation to accommodate the needs of the athletic department programs.

This project will also address challenges in the existing complex:

- Opened in 1963; facilities no longer meet current athletic or recreational planning standards;
- Existing space is at or beyond full capacity;
- Majority of spaces are undersized;
- Universal accessibility is limited;
- Maintenance program has extended the lifespan of the facilities;
- Building systems have reached the end of their typical useful life;
- Wayfinding throughout complex is difficult through multiple corridors.

PROJECT GOALS

The Athletic Department encompasses the full spectrum of health, wellness, recreation and varsity sports programming. The proposed project will:

- Create an enhanced and enlarged new health/wellness zone which will increase from 15,000 GSF to 99,607 GSF;
- Create a true multipurpose center that includes health, wellness, academic, social, cultural and athletic programming elements;
- Create tangible academic support space; classrooms and study space
- Maintain two separate on-campus facilities for hockey and basketball;
- Upgrade competitive venues for hockey and basketball, including practice facility availability and improved athlete support facilities; locker rooms, training, meeting space and administrative/coaches offices
- Provide dual use of air-conditioned venues for other events; speakers, concerts, cultural events and community programs
- Renovate and upgrade existing spaces in need of systems/ safety/ circulation/ ADA/cosmetic improvements and reconfiguration
- Preserve and improve Gutterson to remain the home of UVM Hockey;
- Construct a new, properly sized multipurpose center to house academic, social, cultural and entertainment events as well as basketball practice and competition;
- Address long-standing deferred maintenance issues;
- Improve internal circulation;
- Include an efficient and significant re-use of existing space, with limited new construction.

DESIGN CONCEPT:

With a limited footprint, the design includes the following elements, while re-using and renovating existing space:

- Repurposing existing space in the north of the complex for recreation, health and wellness activities;
- Small addition to the north helps make this space more defined and usable;
- Redesign and re-use of Patrick Gym for recreation and practice games. No spectator games;
- North entry dedicated to recreation, health and wellness;

- East entries dedicated to athletic and other events, adjacent to parking;
- New multipurpose center on the east side of the complex, on the existing “horseshoe” parking lot;
- New multipurpose center will have ~ 3,000 seats, which will replace the existing ~3,000 seats at Patrick Gym;
- New multipurpose center will share entry, stairs, elevator, VIP Victory Club and other core spaces with a renovated Gutterson Field House. The two event spaces will not be used concurrently for spectator events;
- Renovation of existing interior space; improvements to interior circulation.

ARCHITECTURAL DESIGN:
The overall design of the project takes its cues from familiar UVM and Vermont forms and materials. The renovated area to the north and the new student entry is defined by a long, gabled roof and a pallet of standing seam metal, brick, a durable synthetic wood-like siding system, and metal panel rainscreen. The new Events Center is defined by an arching metal roof that unifies the new construction with the historic Gutterson Field House. Two grand stairs are clad with brick, mimicking Gutterson and providing a solid base for the curtainwall and the repeated synthetic siding above. Both areas include expanses of glass that connect the interior to scenic vistas and allow views in.

SUSTAINABLE DESIGN ELEMENTS
In support of the University’s "Environmental Design in New and Renovated Buildings" policy, it is UVM's intent to register this project with the USGBC, and to pursue, at a minimum, a LEED™ silver level certification, while striving to achieve gold level certification.

The project will be built on an existing parking lot, thereby utilizing existing impervious surface. There is a station for the new Greenride Bikeshare.

The University intends to follow the University Construction and Demolition Waste Management Program, which includes following University specifications and utilizing an online construction and demolition waste-tracking tool.

There are electric car charging spaces, located nearby at the Gutterson Garage.

LANDSCAPE
- Overall, there will be 50 additional trees over what exists today in this area.
- A new 8’ pedestrian path will lead from the north entrance to the south/east entries.
- Informal “cow paths” will be paved as necessary, to facilitate pedestrian access and circulation.

CAMPUS CONNECTIONS
This project will create a new multipurpose center, but will not add to the existing inventory of spectator seats: it will replace Patrick Gym, which will become a recreational facility. No

additional students will be added as a result of this project. No new vehicular traffic is expected to be created as a result of this project.

This project will conform with all previously permitted conditions:

- Existing traffic, circulation and parking configurations will remain, as per the 2003 South Campus Master Plan (see attached 2009 overall circulation plan);
- Special Events Protocols will continue as usual;
- Event attendance at all athletic facilities will be limited to 7,300 spectators at one time;
- This project will be in conformance with the 2014-2019 Joint Institutional Parking Management Plan, as follows:
    - 134 parking spaces will be displaced in order to build the Events Center.
    - 134 parking spaces will be transferred back to UVM affiliates from the bottom level of the Gutterson Garage, which is currently used by UVM Medical Center (UVM MC) affiliates. These UVM MC affiliates will then park remotely, off campus, or participate in any one of CATMA's TDM initiatives. They may utilize the existing UVM MC shuttle service.

- Parking, Traffic and Circulation:
    - As per the 2003 South Campus Master Transportation Plan, updated in May 2009, all traffic may enter the area from Spear Street, University Heights Road or South Prospect Street.
    - Except for the bottom tier of the Gutterson Garage and parking lot, on regular days, all traffic must exit onto Main Street, from University Heights Road.
    - Before and after games and special events, Special Events Protocols will continue as usual.
    - On game days, the roadway east of the multipurpose center would be primarily pedestrian oriented. It would be open for shuttles and ADA drop off/parking only. This would be similar to other places on campus where pedestrians and shuttle buses utilize the same roadway. All other vehicles park in the garage or elsewhere on campus and walk or shuttle in.
    - Only handicap parking spaces on the road itself, near the entrance.
    - Staff will direct traffic on game day, to enforce the limited access.
    - See excerpt from May 2009 update of the South Campus Master Transportation Plan for overall circulation, and plan illustration for internal circulation on game days.

OVERALL SIZE & SCOPE:

- 119,099 new GSF: 96,681 GSF for the Multipurpose Center and 17,331 GSF for Health & Wellness.
- Overall cost: $65,000,000.
- 58 additional bike parking spaces and 4 secure bike lockers.
- Proposed construction schedule: Spring 2019 – February 2021.
- Lot coverage for the UVM South of Main Street campus is 40.36%; this project will increase lot coverage to 40.90%.

Burlington Department of Public Works
Stormwater Program
234 Penny Lane (Water Plant)
Burlington, VT 05401
PH: 802-863-4501 Email: stormwater@burlingtontvt.gov

Standard Erosion Prevention & Sediment Control (EPSC) Plan

This questionnaire and associated EPSC plan sheets are required for projects

- on properties other than single family (R1) or duplexes (R2) that require a level II or III Certificate of Appropriateness or Major Impact zoning applications and involve 5000 sq. ft. or more of earth disturbance; or
- any activity where a zoning permit is not required but where the project involves 10,000 sq. ft. or more of earth disturbance; or
- if requested by the Stormwater Program due to project characteristics such as slope, soils or proximity to drainage structures or waterbodies.

Please note that you must submit EPSC plan and detail sheets as outlined in section A below.

All projects involving redevelopment or addition of impervious surface must submit the stormwater management screening project (attached) for evaluation or meet with the Stormwater Program to determine the stormwater management requirements for your project.

1. Project Location_____
2. Zoning Permit Address (if different from above): _____
3. Brief Project Description (i.e. building construction, subdivision, site work)

   _____

   _____

4. Owner Name:_____
5. Owner Mailing Address:_____
6. Owner Phone:_____ 6. Owner email: _____
7. Contractor Name:_____ ☐ Contractor not known at this time
8. Contractor Phone:_____ 9. Contractor Email:_____
10. Estimated Project Start Date_____ Estimated End Date_____
11. Area of Land Disturbance _____ sq. ft.
12. Total proposed (existing + new) amount of impervious: _____sq. ft.
14. Does your project require a State Construction Stormwater Permit (9020 or INDC) ? ☐Yes ☐ No
    (You will be required to submit proof of your authorization to discharge prior to initiation of earth disturbance).

A. REQUIRED PLAN SHEETS:

15. Plan sheet(s) MUST BE ATTACHED showing the following:

- ☐ Limits of disturbance
- ☐ Direction of stormwater flow on site
- ☐ Location of stockpiles (if any)
- ☐Location of sediment control BMP's (silt fence etc.)
- ☐ Location of stabilized construction entrances
- ☐ Stabilization measures
- ☐ Phasing plan (if appropriate)

*impervious = any surface off of which water runs off rather than infiltrates, including, but not limited to rooftops and paved/unpaved (gravel/packed dirt) driveways, walkways and patios

16. Detail sheet MUST BE ATTACHED and include details for all EPSC measures listed on the EPSC Plan Sheet. Additionally, notes must be included related to:

- ☐ Daily inspection of roadways and sweeping as necessary
- ☐ Dewatering measures (if applicable)
- ☐ Temporary site stabilization requirements
- ☐ Final site stabilization requirements
- ☐ Winter site stabilization (for disturbance after November 1)
- ☐ Inspection requirements

B. EPSC QUESTIONNAIRE (*See last page for typical solutions to these questions*)

A) Do you anticipate the need for any dewatering of excavations during the construction? ☐Yes ☐ No

- If yes, please indicate which plan sheet has details for how dewatering operations will be managed to prevent the discharge of sediment laden water. Sheet(s): _____

B) Will excavated soil be stockpiled on the site? ☐ Yes ☐ No If yes, show locations and EPSC measures for the stockpile on plan sheet(s)

- If no, where is the ultimate disposal of excess soil? _____

C) Do you plan to park construction vehicles on or disturb City owned property like the greenbelt area? □ Yes □ No

- If yes, tell us how you agree to repair all disturbances or damage to City owned property and provide a written approval from the City allowing construction vehicles to park on City owned property.

_____

_____

- If no, then please monitor all construction and visitor vehicles and advise all not to park on City owned property.

D) Will stockpiles or disturbed soils be present and/or exposed after Nov. 1st of any construction year? □Yes □ No

- If yes, tell us how you plan to stabilize any stockpile and/or disturbed soils.

_____

_____

_____

Do you agree to abide by the following conditions?

☐Y ☐N Applicant will call 863-4501 or email gjohnson@burlingtonvt.gov at least 24 hours prior to initiating earth disturbance and submit the name and contact (cell phone and email) of the erosion control coordinator for the project

☐Y ☐N Applicant will post the attached notice in a visible location

☐Y ☐N I acknowledge that it is the responsibility of the owner and his/her representatives to ensure that:

- o sediment does not enter surface water bodies (streams, ditches, ponds, lakes, wetlands etc.)
- o sediment does not enter City conveyance infrastructure (catch basins, sewers etc.) and
- o All sediment must be removed from the city ROW (sidewalks and roadways) by the end of each work day.

☐Y ☐N Sediment control measures will be installed prior to the initiation of earth disturbance.

☐Y ☐N During the non-winter construction season (April 15 – November 1): After an initial 14 day period of initial disturbance, temporary or permanent stabilization (mulching, erosion control matting or tarps for stockpiles, or other approved method) of exposed areas and stockpiles will occur at the end of each work day unless:

- Earthwork is to continue in the area within the next 24 hours and there is NO liquid precipitation forecast for the next 24 hours; or
- If work is occurring in a self contained excavation (no outlet) with a depth of 2 feet or greater (e.g. house foundation excavation or utility trenches.

☐Y ☐N During the winter construction period from November 1 to April 15, any new disturbance must be temporarily or permanently stabilized (mulching, erosion control matting or tarps for stockpiles, or other approved method) will occur at the end of each work day unless:

- Earthwork is to continue in the area within the next 24 hours and there is NO liquid precipitation forecast for the next 24 hours; or
- If work is occurring in a self-contained excavation (no outlet) with a depth of 2 feet or greater (e.g. house foundation excavation or utility trenches)

☐Y ☐N The perimeter of the site and all BMPs will be inspected at the end of each workday to ensure that sediment will not leave the site. If sediment has travelled beyond the site boundary, it shall be swept up or otherwise removed and deposited on-site in an upgradient area at the end of each work day.

☐Y ☐N The owner and his/her representatives shall abide by the best management practices (BMPs) indicated in this plan and conditions and in the Vermont DEC Low Risk Site Handbook for Erosion Prevention and Sediment Control (2006). Contact 802-863-4501 for a hard copy or go to the web: http://vtwaterquality.org/stormwater/docs/construction/sw_low_risk_site_handbook.pdf

☐Y ☐N If soils will be exposed after November 1st and winter construction has not been permitted the project will notify DPW prior to October 15th and ensure that sediment control is installed PRIOR to soil freezing. If the project is completed during the winter months, an additional inspection will be required to ensure that the site is buttoned up for the winter.

☐Y ☐N Within 48 hours of reaching final grading, the exposed soil will be seeded and mulched or covered with erosion control matting (for slopes steeper than 3:1 or high wind prone areas). Erosion control matting is preferred.

☐Y ☐N The owner will contact DPW to schedule a stabilization inspection when site work is finished and stabilization measures (seeding and mulching or matting) have been installed.

AGREEMENT

By filling out and signing this plan, I agree to abide by the terms and conditions outlined above. Failure to follow this plan can result in a stop work order by the City of Burlington, fines, or both.

By: ☐ Owner ☐ Contractor

Name	Signature	Date

Additional Conditions of Approval:

AN EROSION PREVENTION AND SEDIMENT CONTROL PLAN

FOR THE PROJECT AT:

_____

HAS BEEN FILED WITH THE CITY OF BURLINGTON STORMWATER MANAGEMENT PROGRAM IN ACCORDANCE WITH CHAPTER 26 OF THE BURLINGTON CODE OF ORDINANCES

THIS REQUIRES THAT MEASURES BE INSTALLED OR TAKEN TO PREVENT SEDIMENT FROM LEAVING THE SITE AND ENTERING WATERWAYS AND IMPACTING CITY INFRASTRUCTURE (RIGHT OF WAY AND STORMDRAINS)

FOR QUESTIONS OR TO REPORT SEDIMENT LEAVING THE SITE CALL 802-863-4501

This notice to be posted in full view at all times during earth disturbance. Additional conditions on attached.

Plan Approved by: _____ Date:_____

Burlington Stormwater Program

TYPICAL SOLUTIONS TO PREVENT OR CONTROL SEDIMENT AND EROSION

STOCKPILES

- Cover small stockpiles with a tarp when not being used.
- Install silt fencing or other appropriate devices around the stockpiles to filter sediment.
- Cover stockpiles with straw or other approved mulching material.
- Plan to remove any unusable material as soon as possible from the site to an approved location.
- Plant grass and mulch stockpiles that will be on site for more than 14 days.
- Cover, vegetate or install erosion matting on stockpiles that will remain disturbed over the winter.

DISTURBED AREAS

- Maintain vegetated buffers around disturbed areas.
- Install silt fencing or other appropriate device to filter sediment washing off from disturbed areas. Remember that the bottom of the silt fence must be “keyed in” (dug into ground) to work correctly.
- To prevent sediment from running off your site via your driveway (or other paved areas where you can’t install silt fence) use a row of hay bales or tube sand.
- Cover disturbed areas as soon as possible with straw or other approved mulching material. Use erosion control matting in high wind, traffic or slopes steeper than 3:1 (horizontal to vertical), and follow the manufacturer’s guidelines staple the matting down.
- Plant grass and mulch or use erosion control matting all disturbed areas that will remained exposed for more than 14 days.
- Cover, vegetate or install erosion matting on areas that will remain disturbed over the winter.
- Protect ditches, catch basins or water bodies off-site by using silt fencing, gravel check dams or other approved sediment control methods.

CONSTRUCTION VEHICLES

- Do not park construction vehicles on City owned green space. Vehicles disturb vegetation and compact the soil, thereby reducing its ability to infiltrate stormwater. Any green belt disturbance will need to be permanently stabilized with grass seed and erosion control matting.
- Prevent sediment from leaving the project by cleaning the tires of vehicles, or use clean gravel at project access points to clean tires.
- Sweep city streets, sidewalks and bikepaths daily or as needed to remove sediment transported from the project.

RESOURCES

The Vermont Handbook for Erosion Prevention and Sediment Control at:
http://vtwaterquality.org/stormwater/docs/construction/sw_low_risk_site_handbook.pdf

The City of Burlington Stormwater Program Page at
http://www.burlingtonvt.gov/DPW/Stormwater-Management

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Pearson and Associates
Associate Electrical Engineer
174 Thomas Lane
Stowe, VT 05672
(802) 253-9607

NOT FOR CONSTRUCTION

No.	Description	Date
-	DRB REQUESTED BIKE REVISIONS	25 JUN 2018
-	BURLINGTON DESIGN REVIEW BOARD SUBMISSION	12 APR 2018
-	DD PRICING SET	23 MAR 2018
-	DD PROGRESS SET	2 MAR 2018
-	SUPPLEMENTAL SD SET	3 NOV 2017
-	SD PRICING SET	25 AUG 2017

Drawing Title:

LAYOUT & MATERIALS PLAN

Project No.: 005353.00 Checked by: JH

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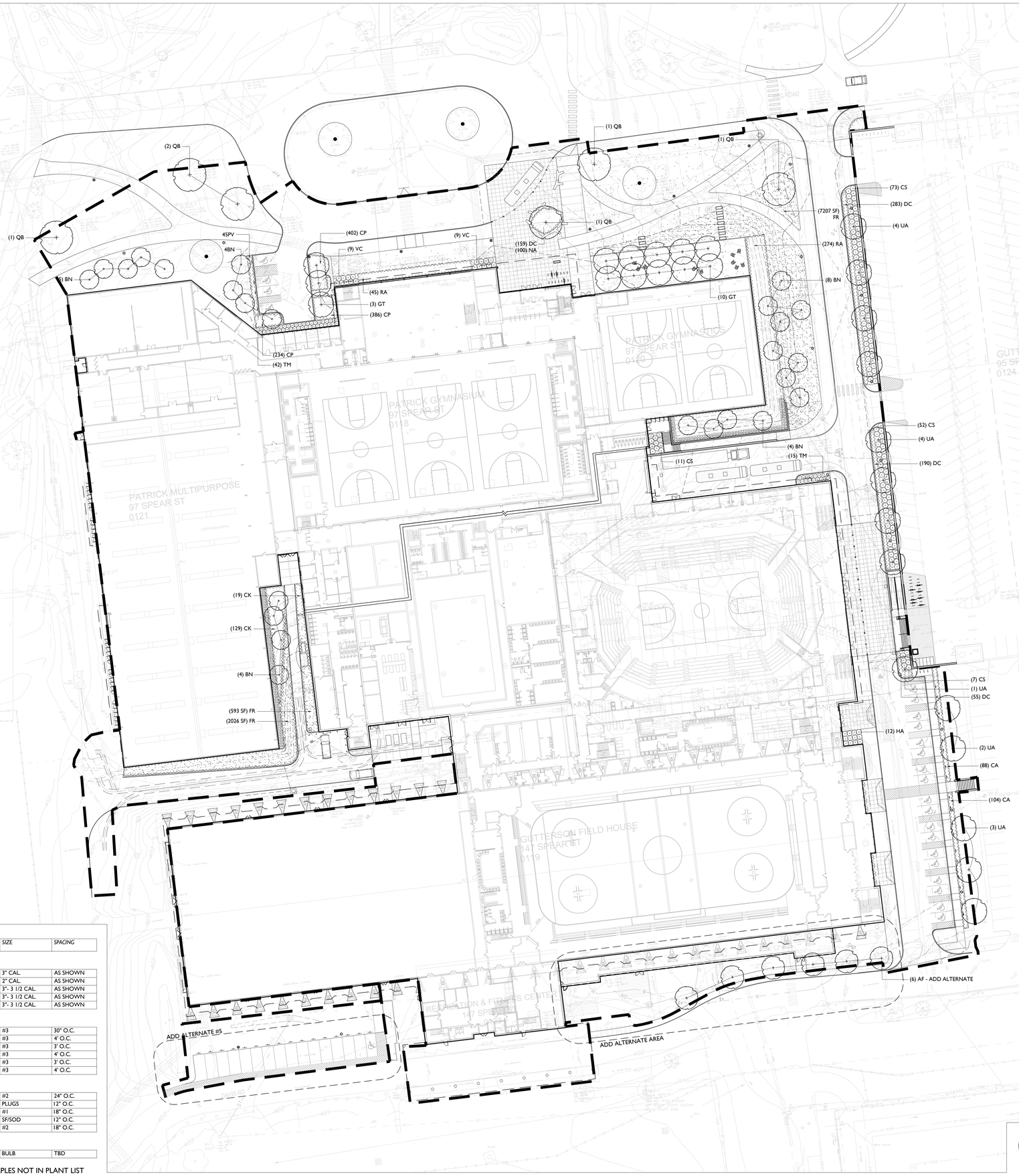

PLANT SCHEDULE

KEY	QTY.	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING
DECIDUOUS TREES					
AF	6	Acer x freemanii 'Celebration'	CELEBRATION MAPLE	3" CAL.	AS SHOWN
BN	25	Betula nigra 'Heritage'	RIVER BIRCH - SINGLE STEM	2" CAL.	AS SHOWN
GT	13	Gleditsia triacanthos inermis	THORNLESS HONEY LOCUST 'SHADEMASTER'	3"- 3 1/2 CAL.	AS SHOWN
QB	6	Quercus bicolor	SWAMP OAK	3"- 3 1/2 CAL.	AS SHOWN
UA	14	Ulmus 'Morton' ACCOLADE	ELM	3"- 3 1/2 CAL.	AS SHOWN
SHRUBS					
CK	148	Cornus sericea 'Kelseyi'	KELSEY RED TWIG DOGWOOD	#3	30" O.C.
CS	143	Cornus sericea 'Allemans'	COMPACT RED TWIG DOGWOOD	#3	4' O.C.
HA	12	Hydrangea arborescens Annabelle	ANNABELLE HYDRANGEA	#3	3' O.C.
RA	319	Rhus aromatica 'Gro-low'	FRAGRANT GRO-LOW SUMAC	#3	4' O.C.
TM	57	Taxus × media 'Taunton'	YEW	#3	3' O.C.
VC	18	Viburnum carlesii 'Baby Spice'	KOREAN SPICE VIBURNUM	#3	4' O.C.
ORNAMENTAL GRASSES					
CA	192	Calamagrostis acutiflora 'Karl Foerster'	FOERSTER'S FEATHER REED GRASS	#2	24" O.C.
CP	1022	Carex pensylvanica	PENNSYLVANIA SEDGE	PLUGS	12" O.C.
DC	687	Dechampsia cepitosa 'Golden Tau'	TUFTED HAIRGRASS	#1	18" O.C.
FR	9826	Festuca rubra	CREEPING RED FESCUE	SF/SOD	12" O.C.
PV	45	Panicum varigatum 'Shenandoah'	SWITCH GRASS	#2	18" O.C.
PERENNIALS					
NA	100	Narcissus sp.	DAFFODIL	BULB	TBD

* SEE PLAN FOR ADD ALTERNATE TREE PLANTINGS - (6) 4" CAL. CELEBRATION MAPLES NOT IN PLANT LIST

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-	SUPPLEMENTAL SD SET	3 NO
-	SD PRICING SET	25 A

Drawing Title:

PLANTING PLAN

Project No.: 005353.00 Checked by:

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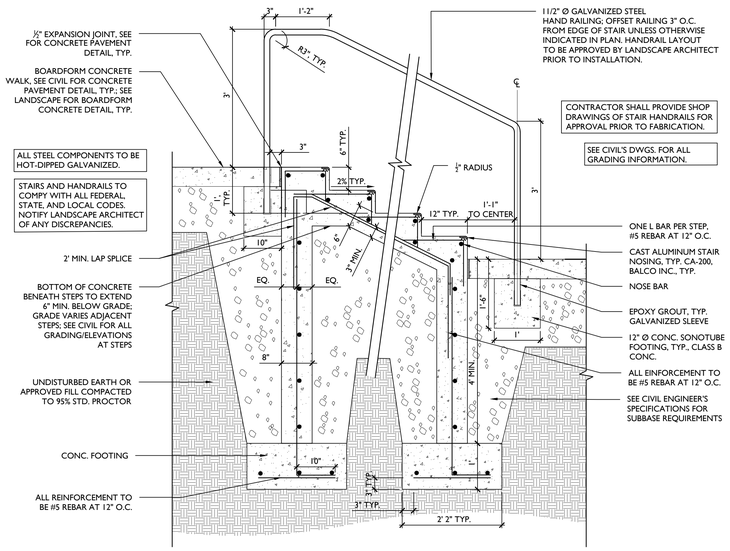
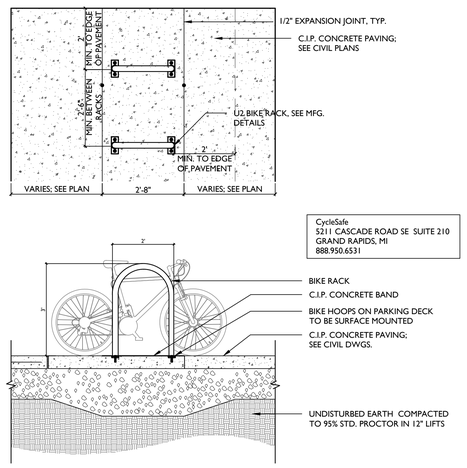
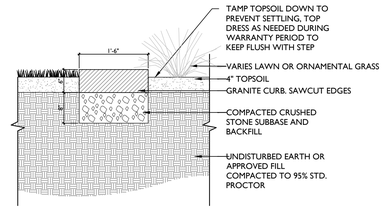


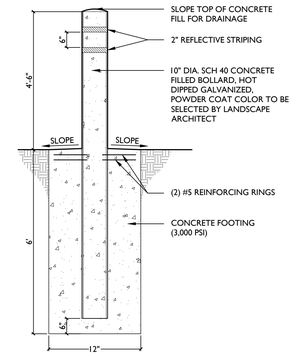
1 CIP CONCRETE STAIR
½"=1'-0"



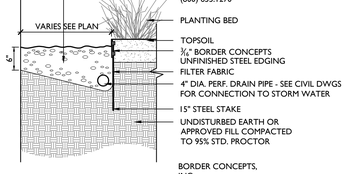
2 BIKE HOOP
½"=1'-0"



3 STEPPING STONES IN PLANTING BED
½"=1'-0"

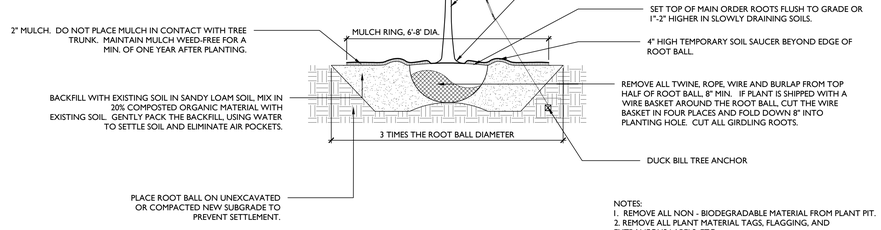


4 UTILITY BOLLARD
½"=1'-0"

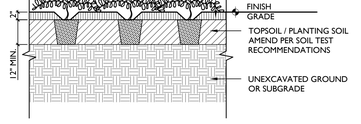


5 DRIP EDGE
½"=1'-0"

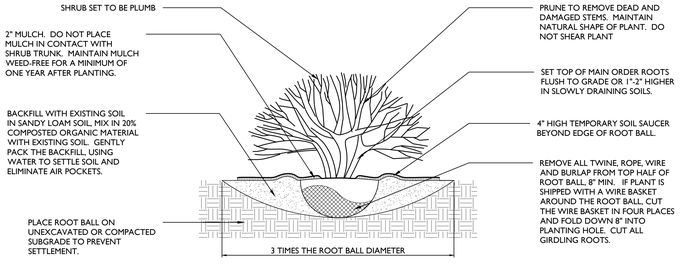
6 STEEL EDGING
½"=1'-0"



7 DECIDUOUS TREE PLANTING
½"=1'-0"



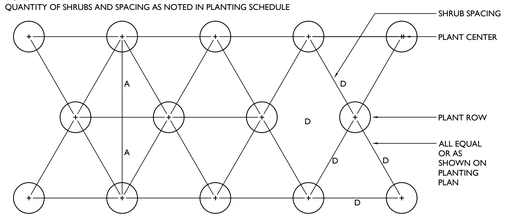
8 PERENNIAL PLANTING
½"=1'-0"



9 DECIDUOUS SHRUB PLANTING
½"=1'-0"

SPACING "D"	ROW "A"	NUMBER OF PLANTS/SQ.FT.
60" O.C.	51.96"	0.04
48" O.C	41.52"	0.07
42" O.C.	36.52"	0.10
36" O.C.	31.20"	0.12
30" O.C.	26.00"	0.18
24" O.C.	20.76"	0.28

NOTE:
QUANTITY OF SHRUBS AND SPACING AS NOTED IN PLANTING SCHEDULE



10 PLANT SPACING
½"=1'-0"

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-	SD PRICING SET	25 A

Drawing Title:

LANDSCAPE DETAILS

Project No.: 005353.00 Checked by:

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LUMINAIRE SCHEDULE

Qty	Label	Arrangement	Lum. Lumens	Lum. Watts	LLF	BUG Rating	Description
7	A1	SINGLE	3999	72	0.748	B3-U3-G2	LUMEC L70-65W4LED4K-ES-LE3, RELOCATED DECORATIVE PEDESTRIAN FIXTURE, ON 10' POLE
6	A2	SINGLE	3691	72	0.850	B1-U3-G2	LUMEC L70-65W4LED4K-ES-PCFC-LE3, RELOCATED,EX. DECORATIVE VEH. FIXTURE, MOUNTED ON EX. 12' POLE
7	A2b	SINGLE	3691	72	0.850	B1-U3-G2	LUMEC L70-65W4LED4K-ES-PCFC-LE3, RELOCATED, EX. DECORATIVE PED. FIXTURE, MOUNTED ON NEW 12' POLE
9	B1	SINGLE	3999	72	0.748	B3-U3-G2	LUMEC L70-65W4LED4K-ES-LE5, NEW DECORATIVE PEDESTRIAN FIXTURE, ON 10' POLE
1	B2	SINGLE	3691	72	0.850	B1-U3-G2	LUMEC L70-65W4LED4K-ES-PCFC-LE3, NEW DECORATIVE VEHICULAR FIXTURE, MOUNTED ON 12' POLE
8	D	SINGLE	3999	72	0.748	B3-U3-G2	LUMEC L70-65W4LED4K-ES-LE5, EX. PARKING LOT FIXTURE
23	E1	SINGLE	3999	72	0.748	B3-U3-G2	LUMEC L70-65W4LED4K-ES-LE5, EX. DECORATIVE FIXTURE, ON 10' POLE
53	E2	SINGLE	3999	72	0.748	B3-U3-G2	LUMEC L70-65W4LED4K-ES-LE5, EX. VEHICULAR FIXTURE, ON 12' POLE
4	F	SINGLE	131	10	0.850	N.A.	LUMEC RGX60-VOLT-GRE-TX W/ 10W LED LAMP
14	WP1	SINGLE	2751	25.5	0.850	B1-U0-G1	LUMARK XTOR3B-15K WALL MTD W/ MTD @ VARYING HEIGHTS
33	WP2	SINGLE	2503	20.8	0.850	B1-U0-G1	RAB WPLED20N WALL MTD @ VARYING HEIGHTS
27	WP3	SINGLE	2138	21.3	0.850	B2-U0-G1	BURNELL LWC2-14L-4K-035-3 WALL MTD @ VARYING HEIGHTS
8	WP4	SINGLE	2005	23.3	0.850	B1-U0-G1	CREE SEC-EDG-3M-MW-G2-5-UL-SV-350-40K WALL MTD @ VARYING HEIGHTS

CALCULATION SUMMARY

Label	Grid Height (ft)	Avg	Max	Min	Avg/Min	Max/Min
EXISTING SITE @ GRADE	0	0.12	12.4	0.0	N.A.	N.A.
NEW CONSTRUCTION CALC @ GRADE	0	0.77	11.4	0.0	N.A.	N.A.

EXISTING BOLLARD LIGHT FIXTURE, TYPE F, TYP.

LIMIT OF WORK

PROPOSED PEDESTRIAN POST-TOP LIGHT FIXTURE, TYPE B1, TYP.

RELOCATED PEDESTRIAN POST-TOP LIGHT FIXTURE, TYPE A1, TYP.

EXISTING PEDESTRIAN POST-TOP LIGHT FIXTURE TO REMAIN, TYPE E, TYP.

EXISTING VEHICULAR POST-TOP LIGHT FIXTURE TO REMAIN, TYP.

RELOCATED VEHICULAR POST-TOP LIGHT FIXTURE, TYPE A2, TYP.

RELOCATED PEDESTRIAN POST-TOP LIGHT FIXTURE ON NEW VEHICULAR POLE (12'), TYPE A2b, TYP.

EXISTING VEHICULAR PARKING LOT LIGHT FIXTURE, TYPE D, TYP.

PROPOSED VEHICULAR POST-TOP LIGHT FIXTURE, TYPE B2, TYP.

LIMIT OF WORK

LEGEND

- 0.1 FC
- 0.2 FC
- 0.5 FC
- 1.0 FC
- 2.0 FC

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NOT FOR CONSTRUCTION

No.	Description	Da
-	BURLINGTON DESIGN ADVISORY BOARD SUBMISSION	22 M
-	BURLINGTON DESIGN REVIEW BOARD SUBMISSION	12 AF
-	DD PRICING SET	23 M
-	DD PROGRESS SET	2 MA
-	SUPPLEMENTAL SD SET	3 NO
-	SD PRICING SET	25 A

Drawing Title:

SITE LIGHTING PLAN PHOTOMETRIC STUD

Project No.: 005353.00 Checked by:

L500

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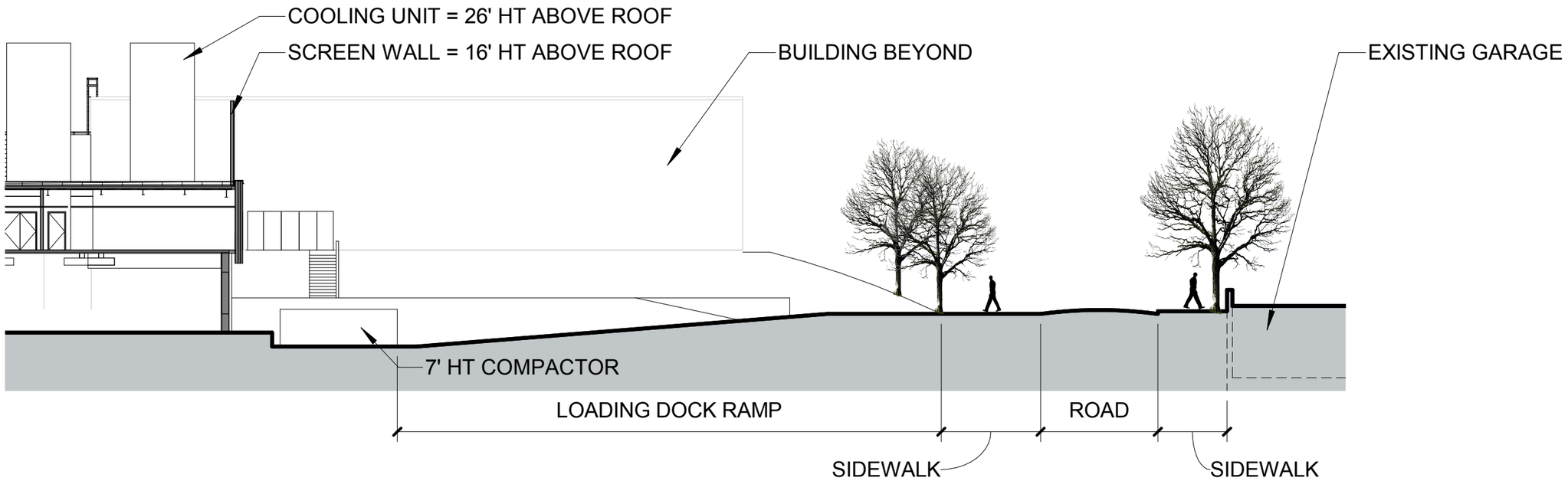
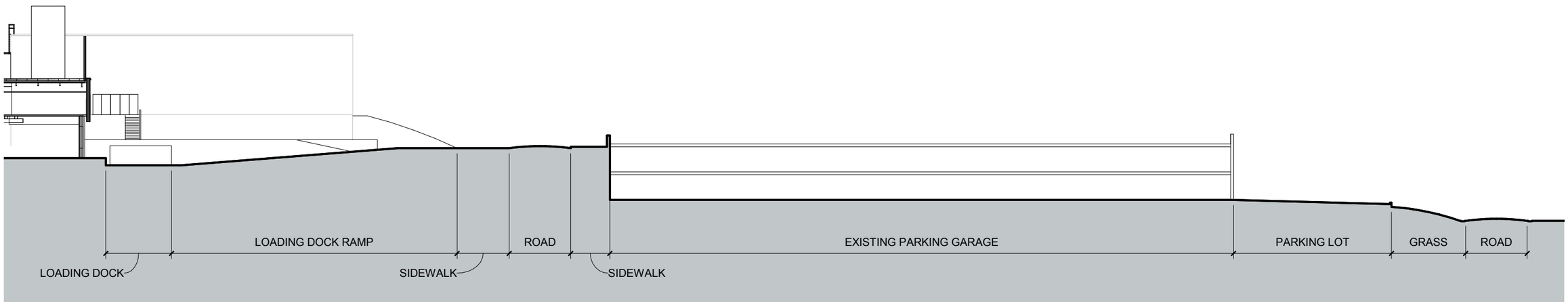


View of compactor obscured due to being at lower elevation from sidewalk and access road.



Proposed loading area not visible from Spear Street

May 21, 2018

Mr. Scott Gustin
City Planner
City of Burlington
Planning and Zoning Department
149 Church Street
Burlington, VT 05401

Scott,

I am writing to you regarding Planning and Zoning's consideration of UVM's permit application for 97 Spear Street (new multi-event center and basketball stadium in the south campus).

I am hopeful that you, as the lead City Planner on this project, and members of Planning and Zoning's DAB and DRB committees, will consider including conditions that are listed below when preparing your decision regarding UVM's request for this land use permit. The suggested conditions are necessary to:

1. Increase UVM's compliance with 2004 and 2015 land use permits in the south campus.
2. Increase UVM's compliance with city ordinances and federal highway regulations for streets adjacent to south campus;
3. Reduce adverse aesthetic, health, property and financial impacts resulting from UVM traffic on streets adjacent to the south campus.

Violation of 2004 and 2015 Land Use Permits

Currently, UVM is violating its 2004 and 2015 State of Vermont land use permits for its south campus University Heights Living Learning Center complex and Virtue Field facilities.

In State of Vermont May 25, 2004 land use permit for UVM's south campus University Heights complex (#4C0025-1), the Environmental Court included a permit condition specifying that Davis Road traffic was prohibited from exiting onto South Prospect Street. For 10 years, (2004-2015), UVM did nothing to prevent traffic from exiting onto South Prospect Street other than random and rare enforcement.

On July 22, 2015, the State of Vermont's District Environmental Commission issued a decision regarding UVM's Land Use Permit for Virtue Field (Case No.4C348-6) that repeats, reinforces, and tightens the language used in the 2004 land use permit. In the 2015 permit, the Environmental Court restated the 2004 permit condition that Davis Road is to be maintained as a one-way street into campus at its intersection with South Prospect Street. The permit also tightened previous permit language to say that egress from Davis Road onto South Prospect Street is prohibited except when directed by emergency or

higher- level security personnel in emergency or high security situations. (Quotes from this land use permit are provided as an attachment to this letter.)

The Environmental Court's 2004 and 2015 decisions did not specify how UVM is to prevent campus traffic from exiting onto South Prospect Street. Although the existing permits do not require a gate, the court expects permit applicants to take reasonable action to create compliance with conditions.

Consequently, at the time of the Virtue Field Project, UVM installed a gate on Davis Road, about 40 feet east of its intersection with South Prospect Street. When operating properly, the gate is suppose to open when a car approaches it from the South Prospect Street side, and the gate is suppose to close after the car enters campus.

Unfortunately, UVM chose a poor quality gate. For the past 3 years, the gate has often been broken (including most of the 2017-2018 academic year). When the gate is broken, it is left open and campus traffic exits onto South Prospect Street.

Enforcement is rare, random and thus ineffective. Hence, for large swaths of past 3 years, UVM has been in violation of the conditions set by the State of Vermont Environmental Commission in the referenced 2004 and 2015 Land Use Permits.

Despite South Prospect Street residents telling UVM's Lisa Kingsbury and UVM Police for 3 years that its gate is not working properly, that is left open for too long, and that cars are driving out of campus onto South Prospect Street, only in the past few weeks has UVM started to address the problem of the broken gate.

In May 2018, UVM ordered a new gate and its receipt is expected soon. UVM's interest in receiving a permit for the 97 Spear Street project is likely why UVM is addressing this long-term circulation problem. UVM recognizes that being out of compliance with earlier permit conditions is an issue when requesting a new permit.

REQUESTED CONDITIONS for 97 Spear Street Permit

Specifically, it would be very helpful to see the permit for 97 Spear Street require a functioning gate at the intersection of South Prospect and Davis Road, and no bus, truck or construction traffic on South Prospect Street south of Maple during and after the 97 Spear Street project.

Regarding the gate, please can the permit for 97 Spear Street require:

1) UVM to install and maintain a gate that is functioning at all times and prevents traffic from exiting from Davis Road onto South Prospect; (An attachment details UVM's failure to make the existing gate function properly for the past 3 years.)

2) UVM (not the city police) to man the entrance 24/7 when the gate is not operating properly. The attendant should not be a UVM student.

3) A camera installed at the gate so UVM police or maintenance can monitor whether the gate is working properly and whether repair is needed. Timely repairs and enforcement of the one-way entrance are important.

4) UVM police to ticket all drivers who drive the wrong way on the one-way section of Davis Road. Perhaps the previously mentioned camera can be positioned to capture license plate information of cars driving the wrong direction on Davis Road.

NO UVM related TRUCK TRAFFIC on South Prospect Street

5) Prohibition of all trucks going to UVM, including construction vehicles, from using South Prospect Street south of Maple Street. The 2015 land use permit for Virtue Field prohibited construction vehicles from using South Prospect Street. The 97 Spear Street permit needs to restate this condition and expand the language to specify that UVM, UVM vendor, and UVM construction traffic is always prohibited from South Prospect Street south of Maple (during and forever after the project).

This is necessary because UVM believes that the truck regulations do not pertain to South Prospect Street or UVM traffic. UVM's Lisa Kingsbury says UVM is currently keeping its trucks off of South Prospect (not consistently) as a courtesy and not as a requirement.

But city ordinance (Title 27, Section 20-43) requires vehicles weighing more than 24,000 lbs (G.V.W.) to use city defined truck routes. This ordinance is posted at city entrances on Truck Routes. South Prospect Street is not a city designated truck route. Truck routes are listed in the city ordinances and Truck Routes are sign posted throughout the city.

Furthermore, South Prospect Street, south of Maple, is city sign posted as "No Thru Trucks". All trucks entering at Davis Rd would be thru truck traffic since traffic is not allowed to exit from Davis Road to South Prospect Street. Therefore, trucks going to UVM's campus should not be using South Prospect Street south of Maple.

NO UVM BUSES on South Prospect Street south of Maple Street

(6a) UVM is silent in its permit application for 97 Spear Street as to whether the proposed construction project will affect its on-campus bus routing. A condition is needed in the permit to specify that none of UVM's on-campus buses should be diverted to South Prospect Street south of Maple Street.

(6b) Furthermore, UVM has ignored pleas from the majority of South Prospect Street residents (25 signed a petition) to remove the UVM Redstone Bus from South Prospect Street south of Maple Street. Despite this petition, UVM has not removed its Redstone bus from South Prospect Street south of Maple. This is a daily violation of city regulations regarding vehicle weight limits on streets that are not designated truck routes.

Circulation on streets surrounding the south campus are relevant to the project at 97 Spear Street, because:

- The proposed 97 Spear Street project will be used for public events as well as UVM events, and will at times lead to increased traffic going to/from campus;

- The current routing of the Redstone bus from South Prospect to Main to University Place hinders the flow of traffic on Main Street;
- The Redstone bus can serve the south campus dorm and facilities equally well by using the internal campus road (Northbound: University Heights to Main to University Place) and (Southbound: South Prospect to Main to University Heights); and this proposed route would not hinder the flow of traffic on Main Street and would remedy the adverse impacts of the Redstone bus on South Prospect Street homeowners.

UVM's strong interest in obtaining a timely permit for 97 Spear Street is a rare and important opportunity that we as a city need to leverage to remedy adverse impacts from UVM's Redstone bus on Main Street and South Prospect Street. It is a rare and timely opportunity because UVM only accommodates city requests, especially those of residents, when UVM wants a new land use permit. (Example, the need of residents to appeal the 2004 and 2015 permits to the State of Vermont Environmental Court.)

UVM's Redstone bus provides its students a short 4-city block ride: from Coolidge Hall on the Redstone campus to the buildings located at the top of main campus green. Instead of using So Prospect Street south of Main to make this trip, the Redstone bus should use UVM's on-campus road (University Heights Road), as its 3 on-campus buses do, to travel from Coolidge Hall on the Redstone Campus to the west entrance of the Davis Center, and the same bus stops in front of buildings at the top of the main campus green along University Place.

UVM's Redstone bus is offensive because it:

- Blocks 3 lanes of traffic on Main Street (one lane headed east and two lanes headed west) when turning left from Main Street and onto University Place (without a dedicated turn lane). Thus, the current routing of the Redstone bus (from South Prospect to Main Street to University Place) hinders the flow of vehicles on Main Street; which affects thousands of people driving into and out of Burlington; including rush hour traffic in both directions. From 7:40am to 5:10pm, (every 3 to 6 minutes between these hours), the Redstone bus is hindering of traffic flow on Main Street and reducing the appeal of coming to our city and its economic vitality.
- Is violating federal law regarding traffic flow on US highways. The federal government prohibits the hindering of traffic flow on US highways (US Route 2). The federal government, if made aware of this issue, can withdraw funding of road repair monies for US Rt 2 due to the Redstone bus's adverse traffic impacts.
- Drives by South Prospect Street homes 98 times a day (= every 3 to 6 minutes)
- Produces noise of 71dBA (measured by UVM at the curb); which is a health issue for So Prospect St residents. UVM bus noise is too frequent and too loud.
- Violates city street weight limit of 24,000 lbs on streets that are not designated truck routes. City regulation (Title 27, Section 20-43). The regulation exists to protect residents' life, safety and property values, and to protect streets from undue wear and tear.

- Misuses taxpayer dollars by accelerating the deterioration of the South Prospect Street's road surface. Heavy buses that circulate frequently are the worst causes of accelerated road deterioration. Even though $200K of PILOT funds is designated for road repair and other UVM infrastructure impacts, this is a tiny amount compared to city expenses resulting from UVM's use of our city infrastructure. PILOT funds need to be used wisely. Moving UVM's over-weight private bus onto UVM's south campus road would reduce city expenses for road repair.
- Emits toxic CNG particles into the air on a residential street where there are children and elderly who are more susceptible to illnesses from air pollution,
- Provides students a ride of 4-blocks, a short distance that can be walked , biked or ridden via the 3 on-campus buses.
- Is redundant in that the Redstone Campus's Coolidge Hall, the Davis Center and buildings along University Place area also served 3 on-campus buses that use the on-campus University Heights road to get from the south campus to the main campus. Students already have the option of using the 3 existing on-campus buses instead of the UVM Redstone Bus to travel between the Redstone campus and main campus green. These on-campus buses are as fast as the Redstone bus and already operate the same (and longer hours).

CONCLUSIONS:

1) It is inadequate for UVM to reference the 2003 and 2009 South Campus Master Transportation Plans when defining what the circulation should be for the project at 97 Spear Street. These UVM documents are no longer available on-line for us to reference; and are superseded by the 2015 land use permit for Virtue Field. Thus, the permit for 97 Spear Street needs to refer to the circulation conditions required by the July 22, 2015 Environmental Commission permit for Virtue Field.

2) UVM has not effectively prevented traffic from exiting onto South Prospect Street via Davis Road despite the 2004 and 2015 land use permit conditions requiring them to do so. Therefore, the permit for 97 Spear Street needs to require that UVM install and maintain a highly functional gate at the intersection of Davis Road and South Prospect Street; and that UVM man the intersection 24/7 when the gate is not operating properly or otherwise not preventing traffic from exiting onto South Prospect Street.

3) UVM needs to remove its Redstone Bus from South Prospect Street south of Maple and instead use its internal south campus road (University Heights Road) for routing between the south campus bus stops and the main campus bus stops. This will improve traffic flow on Main Street, and benefit thousands of drivers on US Highway 2, and the city as a whole, eliminate a pressing and long-term neighborhood complaint regarding UVM's Redstone bus use of South Prospect Street; and get UVM in compliance with city

ordinances regarding street weight limits and federal highway regulations regarding not blocking traffic flow.

4) UVM's own, vendor and construction vehicles need to be prohibited from using South Prospect Street, south of Maple Street during and after this project at 97 Spear Street. This would be consistent with city regulations regarding weight limits for streets that are not designated truck routes and protect residents from adverse aesthetic, health and financial impacts.

Thank you for your time and consideration.

3 YEAR HISTORY of PROBLEMS WITH EXISTING GATE

Since 2004 UVM was suppose to keep Davis Road traffic from exiting onto South Prospect Street. Only in 2015, after residents on South Prospect Street appealed UVM's permit for Virtue Field, did UVM install a gate at the intersection of Davis Road and South Prospect.

But UVM chose a poor quality gate and has not kept it operating over the past 3 years, and as a result, the traffic violations have continued. This indicates that the permit for 97 Spear Street needs tighter language than prior permits. The requested permit should require UVM to install and maintain a highly functional gate; and that the entrance be manned 24/7 when the gate is not working properly.

Evidence:

- Soon after installation of the gate in 2015, it kept breaking. In order to reduce wear and tear on the gate, UVM adjusted the timing on the gate so it stays open for about 10 minutes after a car passes through. This was an unsatisfactory remedy because a delay in the gate closing allowed traffic to exit onto South Prospect Street.

- UVM leaves the gate open for weeks at a time, not just during school breaks, but also when classes are in session. Repair work is not timely and the repairs don't last long before the gate is broken again.

- UVM acknowledges that the gate has been broken and open for most of the 2017-2018 academic year. Residents have reported traffic violations to UVM and city police; but UVM's enforcement effort is too weak to stop traffic from driving the wrong way on Davis Road in order to exit onto South Prospect Street.

Before and after the gate installation, UVM has been lackluster in its efforts to stop traffic from exiting onto South Prospect Street, which is a violation of its 2004 and 2015 permits. New permits should not be granted if UVM cannot generate high confidence that it will comply with conditions of existing permits.

QUOTES FROM VIRTUE FIELD PERMIT (#4C0348-6). July 22, 2015

Page	Item	Excerpt
6	24	"Traffic from Special Events may egress from the PFG by either University Heights Road or onto Spear Street. Exceptional Special Events can allow some egress onto Prospect Street only when directed by emergency or higher level security personnel in emergency of high level security situations otherwise egress onto South Prospect Street is prohibited."

Findings of Fact, page 6, item 19: "The traffic circulation at UVM was discussed and approved in the review of the University Heights (LUP #4C0025-1) issued on May 25, 2004. The Permits and Findings state: …. There will be no exiting from the site via Davis Road to South Prospect Street…"

Findings of Fact, page 11, item 46: "World Health Organization (WHO) Guidelines state that to avoid hearing impairment, (noise) (Leg924h) should not exceed 70dBA"

Findings of Fact, page 13, item 2: "An adverse aesthetic impact is undue <u>if any</u> of the following is true:

(1) The Project violates a clear written community standard intended to preserve the aesthetics of scenic beauty of the area [Evidence: South Prospect Street is not a city designated truck route; and thus the UVM Redstone bus, as a private bus, violates the city regulation of 24,000 lb weight limit for vehicles on streets that are not designated truck routes. This city sign is posted at the all the main entrances to the city and designated truck routes are listed in the city's code of ordinances.. Furthermore, South Prospect Street is sign posted as no-thru truck traffic.]

(2) The Project offends the sensibilities of the average person [Evidence: 25 persons signed a petition to remove the Redstone bus from South Prospect Street south of Maple). A bus driving by 98 times a day is excessive. A bus driving students 4 blocks is wasteful and not environmentally sustainable.]

(3) The Applicants failed to take generally mitigating steps which a reasonable person would take to improve the harmony of the Project with its surroundings." [Evidence: Despite permit conditions prohibiting campus traffic from exiting onto South Prospect Street, and city regulations that specify a 24,000 lb weight limit on streets that are not truck routes, UVM continues to allows its campus traffic and Redstone bus to have an undue adverse impact on South Prospect Street. In addition UVM allows construction trucks to use South Prospect unless it is expressly prohibited in the permits. This is despite the fact that there are alternative entrances into campus and South Prospect Street is sign posted as a "No Thru Truck" Street.]

Conclusion: South Prospect Street homeowners have shown they are willing to appeal UVM permit applications when Planning & Zoning and the DRB under-appreciate neighborhood concerns. Appeals lead to project delays and city legal expenses.

The city regulation regarding vehicle weight limits on streets that are not designated truck routes is sign posted throughout entrances to the city.

Example of a student's car exiting from Davis Road onto South Prospect Street.
May 2017

Department of Planning and Zoning
149 Church Street
Burlington, VT 05401
http://www.burlingtonvt.gov/PZ/
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Layne Darfler, Planning Technician

MEMORANDUM

To: Development Review Board
From: Ryan Morrison, Associate Planner
Date: July 5, 2018
RE: ZP18-1044CA/CU; 92 Cherry Lane

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

File: ZP18-1044CA/CU
Location: 92 Cherry Lane
Zone: RL **Ward**: 5S
Date application accepted: May 14, 2018
Applicant/ Owner: Donna and Sean Foley / Foley Rev Living Trust
Parking District: Neighborhood
Request: Construct a new, detached accessory structure for use as an accessory dwelling unit.

Applicable Regulations:
Appendix A (Use Table – All Zoning Districts), Article 3 (Applications, Permits, and Project Reviews), Article 4 (Zoning Maps & Districts), Article 5 (Citywide General Regulations), Article 8 (Parking)

Background:

- **Zoning Permit 91-412**; remove existing greenhouse on 12' x 12' foundation and replace with expansion of living space of same size. Materials to match existing single family home. June 1991.

Overview:
The applicant proposes to construct a new detached accessory structure for use as an accessory dwelling unit. The 18,254 sf parcel contains a single family residence.

Recommendation: **Approval**, per the following findings and conditions:

I. Findings

Appendix A:
Accessory Dwelling Unit (ADU) is a Permitted Use in the RL zoning district. However, Section 5.4.5 (b) CDO, lists three instances when accessory dwelling units are required to obtain conditional use approval. One of those instances is when there will be a new accessory structure

to accommodate the ADU, and another is when there is an increase in the dimension of a parking area. The proposal involves construction of a new accessory structure for the ADU and widening of the existing driveway to accommodate parking. As a result, conditional use review is required. **Affirmative finding.**

Article 3: Applications, Permits and Project Reviews
Part 5: Conditional Use and Major Impact Review
Section 3.5.6 Review Criteria

(a) Conditional Use Review Standards

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

1. *Existing or planned public utilities, facilities, or services are capable of supporting the proposed use in addition to the existing uses in the area;*
   The addition of one new residential unit will have minimal impact on public utilities, facilities and services. A letter of confirmation from DPW will be required to assure adequate sewer capacity. **Affirmative finding as conditioned.**

2. *The character of the area affected as defined by the purpose or purposes of the zoning district(s) within which the project is located, and specifically stated policies and standards of the Municipal Development Plan;*
   The property is within an established residential neighborhood and a residential zoning district. The RL zoning district is intended primarily for low-density residential development in the form of single detached dwellings and duplexes. This district is typically characterized by a compact and cohesive residential development pattern reflective of the respective neighborhoods' development history. The MDP provides the following support:
   - *Support the development of additional housing opportunities within the city…* (MDP, Housing Plan, Page IX-1.
   - *Support the creation of new rental and owner-occupied housing on every parcel of land in Burlington that is zoned for residential development at the number of units allowed by zoning. (*MDP, Housing Plan, Page IX-12.*)* **Affirmative finding.**

3. *The proposed use will not have nuisance impacts from noise, odor, dust, heat, and vibrations greater than typically generated by other permitted uses in the same zoning district;*
   No greater impacts are anticipated than other residential uses in the area. **Affirmative finding.**

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

This parcel fronts on Cherry Lane. With sidewalks on both sides, Cherry Lane provides adequate vehicular and pedestrian access to the surrounding neighborhood. Pine Street is within walking distance, where transit stops are available for travel in either direction. An insignificant amount of additional traffic is anticipated. **Affirmative finding.**

5. *The utilization of renewable energy resources;*
   Nothing within the application prevents the use of wind, solar, water, geothermal or other renewable energy resource. **Affirmative finding.**
   and;

6. *Any standards or factors set forth in existing City bylaws and city and state ordinances.*
   The applicant will be required to secure a state wastewater permit, and associated building and trades permits for construction of the new structure. **Affirmative finding as conditioned.**

(c) Conditions of Approval

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

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

2. *Time limits for construction.*
   There is a two-year time frame to complete the project.

3. *Hours of operation and/or construction to reduce the impact on surrounding properties.*
   Hours of operation do not apply to the proposed accessory dwelling unit. Construction hours are not specified. Typical construction hours in residential areas are Monday – Friday from 7:30 AM – 5:30 PM. Saturday construction may occur for interior work only. No work on Sunday. **Affirmative finding as conditioned.**

4. *That any future enlargement or alteration of the use return for review to the DRB to permit the specifying of new conditions,*
   The size of the proposed ADU is limited to 30% of the total habitable floor area of the building, inclusive of the ADU. Any additional physical alteration to the accessory structure, or change of use, will require review and permitting under regulations in effect at that time. **Affirmative finding as conditioned.**
   and

5. *Such additional reasonable performance standards, conditions and safeguards as it may deem necessary to implement the purposes of this chapter and the zoning regulations.*
   None identified.

Article 4: Zoning Maps and Districts
Section 4.4.5 Residential Districts

(a) Purpose
1. The Residential Low Density (RL) district is intended primarily for low-density residential development in the form of single detached dwellings and duplexes. The district is typically characterized by a compact and cohesive residential development pattern reflective of the respective neighborhood's development history.
An accessory dwelling unit to an existing single family residence is proposed. **Affirmative finding.**

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

Table 4.4.5-1 Minimum Lot Size and Frontage: RL, RL-W, RM and RM-W.
Single detached dwelling, RL Minimum 60' frontage, RL Minimum 6,000 sq ft lot size.
92 Cherry Lane is an 18,254 sq ft lot, with 85 feet of frontage. **Affirmative finding**.

Table 4.4.5-2 Base Residential Density
Not applicable per Section 5.4.5 (a) below.

Table 4.4.5-3 Residential District Dimensional Standards
Setbacks – Front yard: the average of 2 adjacent lots on both sides, +/- 5 feet. Side yard: 10% of lot width or the average of the side yard setback of 2 adjacent lots on both sides. Rear yard: 25% of lot depth, but in no event less than 20 feet. The rear yard also has a maximum setback of 75'. The new accessory structure will locate in the rear yard, behind the existing home – rendering a front yard setback inapplicable. Given the 85 ft lot width, side yard setbacks are 8.5 ft. The proposed structure will have side yard setbacks greater than 8.5 ft. And given the lot depth of 217 ft, a rear setback minimum of 54.25 ft is required. However, the applicant proposes a 40 ft rear yard setback, which in accordance with Sec. 5.2.5 (b) *Exceptions to Yard Setback Requirements*, is acceptable since the height of the structure is less than 15 ft. Accessory structures less than 15 ft in height may locate as close as 5 ft to side/rear property lines. See Sec. 5.2.5 (b) and Sec. 5.2.6 (a) below.

Maximum Lot Coverage – 35%.
Existing lot coverage totals 13.9%, and the proposal will result in a total lot coverage of 17.7%.

Maximum Height – 35 ft.
The height to the ridgeline of the accessory structure totals 19 ft (13' 6" to the midpoint). **Affirmative finding.**

(c) Permitted and Conditional Uses
An accessory dwelling unit to a single family residential property is a permitted use per Appendix A. Since the proposal involves the construction of a new accessory structure for the ADU, conditional use review is required, as per Sec. 5.4.5 (b). **Affirmative finding.**

(d) District Specific Regulations

1. *Setbacks*
   A. *Encroachment for residential driveways*
   Not applicable.

   B. *Encroachment into the Waterfront Setback*
   Not applicable.

2. *Height*
   Not applicable.

3. *Lot Coverage*
   A. *Exceptions for Accessory Residential Features*
   Not applicable.

4. *Accessory Residential Structures and Uses*
   An accessory structure and/or use as provided under Sec. 5.1.1 and 5.1.2 customarily incidental and subordinate to a principal residential use, including but not limited to private garages, carriage houses, barns, storage sheds, tennis courts, swimming pools, cabanas for swimming pools and detached fireplaces may be permitted as follows:
   - A. *Accessory Structures shall meet the dimensional requirement set forth in the district in which they are located pursuant to Sec. 4.4.5(b) of this Article and related requirements in Art 5, Part 2;*
   - B. *Any accessory structure that is seventy-five percent (75%) or greater of the ground floor area of the principle structure shall be subject to the site plan and design review provisions of Art. 3, Part 4 and the applicable standards of Art 6;*
   - C. *Private garages shall be limited to as many stalls as there are bedrooms in the dwelling to which it is accessory, provided that the ground floor area is less than seventy-five percent (75%) of the ground floor area of the principle structure;*
   - D. *The outdoor overnight storage of commercial vehicles not otherwise associated with an approved home occupation or made available for the exclusive use of the residential occupants, or the outdoor storage of more than one unregistered vehicle, shall be prohibited. Any and all vehicles shall be stored in an approved parking space; and,*
   - E. *Uncovered play structures, seasonal skating rinks, raised planting beds shall not require a zoning permit.*

   The proposed accessory structure meets the dimensional requirements of the RL zoning district, pursuant to Sec. 4.4.5 (b) and Article 5, Part 2. Subsections B-D above do not apply.
   Affirmative finding.

5. *Residential Density*
   A. *Additional Unit to multi-family*
   Not applicable.

   B. *Additions to Existing Residential Structures*
   Not applicable.

C. Residential Occupancy Limits
In all residential districts, the occupancy of any dwelling unit is limited to members of a family as defined in Article 13.
The residential occupancy provisions of the ordinance apply to primary residence, and Sec. 5.4.5 (a) – below, will apply to the accessory dwelling unit. **Affirmative finding.**

6. *Uses*
   A. Exception for Existing Neighborhood Commerical Uses
   Not applicable.

7. *Residential Development Bonuses*
   Not applicable.

Article 5: Citywide General Regulations
Part 2: Dimensional Requirements
Section 5.2.1 Existing Small Lots
Not applicable.

Section 5.2.2 Required Frontage or Access
92 Cherry Lane has 85 ft of street frontage, exceeding the 60 ft minimum frontage. **Affirmative finding.**

Section 5.2.3 Lot Coverage Requirements
The maximum lot coverage allowance in the RL zoning district is 35%. The project will result in 17.7% of total lot coverage. **Affirmative finding.**

Section 5.2.4 Buildable Area Calculation
Not applicable.

Section 5.2.5 Setbacks
(b) Exceptions to Yard Setback Requirements
(4) Accessory Structures and Parking Areas.
Accessory structures no greater than fifteen (15) feet in height... may project into a required side and rear yard setback provided they are no less than five (5) feet from a side or rear property line where such a setback is required.
The accessory structure will be 13' 6" tall (measured to the midline of the gable roof – see Sec. 5.2.6 below), and can locate at least five feet from side and rear property lines. While the structure will conform with the normal side yard setback requirement of Table 4.4.5-3 above, it will project into the required rear yard setback (54.25 ft), with a setback of 40 ft. **Affirmative finding.**

Section 5.2.6 Building Height Limits
(a) Height Measurement
2. Ending Point: Building height shall be measured to:
(b) Pitched Roof: the midpoint of the rise between the roofplate and the ridge of the highest gable of a pitched roof...

The new accessory structure will measure 19 ft to the ridge. The midpoint of the pitched roof will measure 13 ft 6 in in height. As noted above in Sec. 5.2.5 (b), with the midpoint height being less than 15 ft in height, the new structure may locate within the required rear yard setback. **Affirmative finding.**

Section 5.2.7 Density and Intensity of Development Calculations
Not applicable per Sec. 5.4.5 (a) below.

Part 4: Special Use Regulations
Section 5.4.5 Accessory Dwelling Units
(a) Accessory Units, General Standards/Permitted Uses
Where there is a primary structure on a lot which exists as an owner-occupied single family residence, one accessory dwelling unit, that is located within or appurtenant to such single family dwelling, shall be allowed as a permitted use if the provisions of this subsection are met. An accessory dwelling unit means an efficiency or one bedroom apartment that is clearly subordinate to the primary dwelling, and has facilities and provisions for independent living, including sleeping, food preparation, and sanitation. No accessory unit shall be inhabited by more than 2 adult occupants. An accessory unit shall not be counted as a dwelling unit for the purposes of density calculation.
The property is currently an owner occupied single family use. The proposed one-bedroom accessory dwelling unit will be located in an appurtenant structure. The floor plan identifies a bathroom, kitchen, living, and sleeping space. No more than 2 adult occupants can be permitted within this accessory dwelling. **Affirmative finding as conditioned.**

Additionally, there must be compliance with all the following:

1. *The property has sufficient wastewater capacity as certified by the Department of Public Works;*
   The applicant will be required to secure a letter of adequate capacity from DPW for water and sewer services. **Affirmative finding as conditioned.**

2. *The unit does not consist of more than 30 percent of the total habitable floor area of the building, inclusive of the accessory dwelling unit;*
   The main residence has 1,605 sf of habitable floor area. The proposed accessory structure will be 704 sf in size, 685 sf of which will habitable space dedicated to the ADU. By including the ADU with the habital space of the existing home, the combined habitable space totals 2,290 sf. 30% of 2,290 is 687 sf. The 685 sf ADU space is 29.9%, just under the 30% maximum allowance. **Affirmative finding.**

3. *Applicable setback and coverage requirements are met;*
   See Table 4.4.5-3 and Sec. 5.2.5 (b) above. Setback and coverage requirements are met. **Affirmative finding.**

4. *One additional parking space which may be legally allocated to the necessary unit must be provided for the accessory unit;*
   The site plan shows a total of 3 parking spaces, 2 that are required for the main residence, and 1 required for the accessory dwelling unit. **Affirmative finding.**
   and

5. *A deed or instrument for the property shall be entered into the land records by the owner containing a reference to the permit granting the accessory unit prior to the issuance of the certificate of occupancy for the unit. Such reference shall identify the permit number and note that the property is subject to the permit and its terms and conditions including owner occupancy. No certificate of occupancy shall be issued for the unit unless the owner has recorded such a notice.*
   A condition of approval will ensure this. **Affirmative finding as conditioned.**

(b) Conditional Use Approval for Accessory Units
If any of the following are also proposed, conditional use approval, as well as development review provisions of Article 6 shall be required:

1. *A new accessory structure;*
   The ADU will be locate within a new accessory structure. As a result, conditional use approval is required. **Affirmative finding.**

2. *An increase in the height of habitable floor area of the existing dwelling;*
   Not applicable.

3. *An increase in the dimensions of any parking area.*
   There will be a slight increase to the dimension of the parking area/driveway to accommodate required parking. As a result, conditional use approval is required. **Affirmative finding.**

(c) Discontinuance of Accessory Units
Approval of an accessory dwelling unit is contingent on owner occupancy of the single-family dwelling unit as a primary residence. For purposes of this section, owner occupancy means that, after the creation of the accessory unit all individuals listed on the deed for the property must reside in the primary unit or in the accessory unit. If either the primary unit or the accessory unit is no longer owner occupied as a primary residence, the approval for the accessory dwelling unit is void and the kitchen of the accessory dwelling unit must be removed within 90 days with the entirety of the property being occupied as a single unit. When an accessory unit that is the result of additional square footage and/or a new accessory structure is proposed to be removed, revised floor plans and a revised site plan shall be required to be submitted for review and approval. Furthermore, where additional square footage is added to a single family home for purposes of creating an accessory unit and the accessory unit is at any point discontinued, none of the additional square footage shall be eligible for the purposes of increasing the number of unrelated adults that may be allowed to inhabit the property.

This will be a condition of the permit. **Affirmative finding as conditioned.**

Section 5.4.8 Historic Buildings and Sites
Not applicable.

Section 5.4.9 Brownfield Remediation
Not applicable.

Part 5: Performance Standards
Section 5.5.1 Nuisance Regulations
Nothing within the application suggests non-compliance with applicable nuisance regulations and performance standards per the requirement of the Burlington Code of Ordinances.
Affirmative finding.

Section 5.5.2 Outdoor Lighting
It is assumed that the new structure will have exterior lighting, however the plans do not show light fixtures, and cut sheets have not been submitted for review. The applicant will be required to submit the required lighting information for administrative review and approval prior to the release of the zoning permit. The lighting must comply with the lighting standards of Sec. 5.5.2.
Affirmative finding as conditioned.

Section 5.5.3 Stormwater and Erosion Control
An Erosion Prevention and Sediment Control plan was submitted with the application. On May 21, 2018, the Stormwater Program Manager approved the plan. **Affirmative finding.**

Section 5.5.4 Tree Removal
Not applicable.

Article 8: Parking
Table 8.1.8-1 Minimum Off-Street Parking Requirements
Single family uses require 2 parking spaces in the Neighborhood Parking District. Section 5.4.5 (a) (4), above, sets the parking requirement of 1 space for accessory dwelling units. The site plan shows parking for 3 vehicles. **Affirmative finding.**

Section 8.1.11 Parking Dimensional Requirements
The standards in Table 8.1.11-1 below shall be used to ensure safe, adequate, and convenient access and circulation. These standards shall be adhered to except in situations where a lesser standard is deemed necessary by the DRB due to site topography, location of existing or proposed structures, lot configuration, and/or the need to preserve existing trees and mature vegetation.

Table 8.1.11-1 Minimum Parking Dimensions
The minimum parking space dimension is 8' x 18'. The applicant intends to widen the front section of driveway to 16 ft in order to accommodate two side-by-side parking spaces within the first 20 ft deep section. The driveway extends an additional 16 feet along the side of the home.

This section, which is also 9 ft wide, will accommodate the third required parking space. Overall, the driveway length for the tandem spaces is 36 ft. **Affirmative finding.**

II. Conditions of Approval

1. No more than 2 adults shall inhabit the accessory dwelling unit.
2. Any additional physical alteration or change of use to the accessory dwelling unit will require a new zoning permit, subject to regulations in effect at the time of permit application submittal.
3. **Prior to the issuance of a certificate of occupancy,** a deed or instrument for the property shall be entered into the land records by the owner containing a reference to the permit granting the accessory unit. The reference shall identify the permit number and note that the property is subject to the permit and its terms and conditions including owner occupancy.
4. If either the primary unit or the accessory unit is no longer owner occupied as a primary residence, the approval for the accessory dwelling unit is void and the kitchen of the accessory dwelling unit must be removed within 90 days with the entirety of the property being occupied as a single unit.
5. **Prior to release of the zoning permit**, the applicant shall submit revised elevation drawings showing the location of any exterior light fixtures, and provide spec sheets for those light fixtures, to staff for review and approval.
6. Construction hours shall be limited to Monday – Friday from 7:30 AM – 5:30 PM. Saturday construction may occur for interior work only. No construction activity on Sunday.
7. **Prior to release of the zoning permit,** the applicant shall secure a letter of adequate capacity from DPW for water and sewer services.
8. A state wastewater permit will be required, and is the responsibility of the applicant to secure.
9. The applicant shall secure all associated trades permits for the project.
10. The applicant/property owner is responsible for obtaining all necessary Zoning Permits and Building Permits through the Department of Public Works as well as other permit(s) as may be required, and shall meet all energy efficiency codes of the city and state as required.
11. Standard Permit Conditions 1-15.

SPAN Number 114-035-18713

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MAY 1 2023
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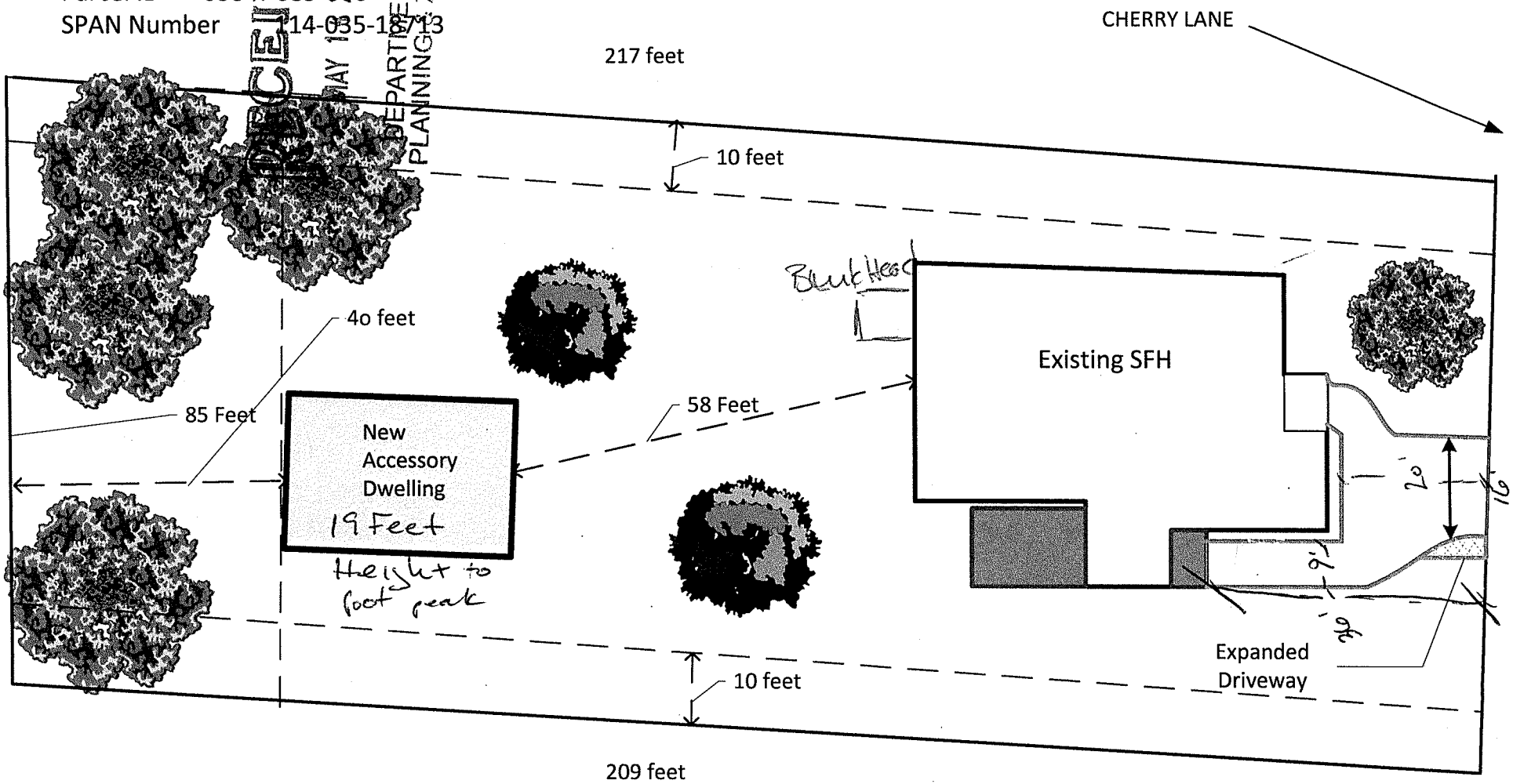
PLANNING



1ST FLOOR	1,605
OPEN PORCH	35
WOOD DECKS	294
DRIVEWAY	570
ACCESSORY DWELL	704
TOTAL	~~3,163~~ 3208
LOT Sq. Feet	18,254
LOT COVERAGE %	~~17.3%~~

+ Bluckhead 25

13.9% → ~~3188~~ 3233

→ ~~17.5~~ %

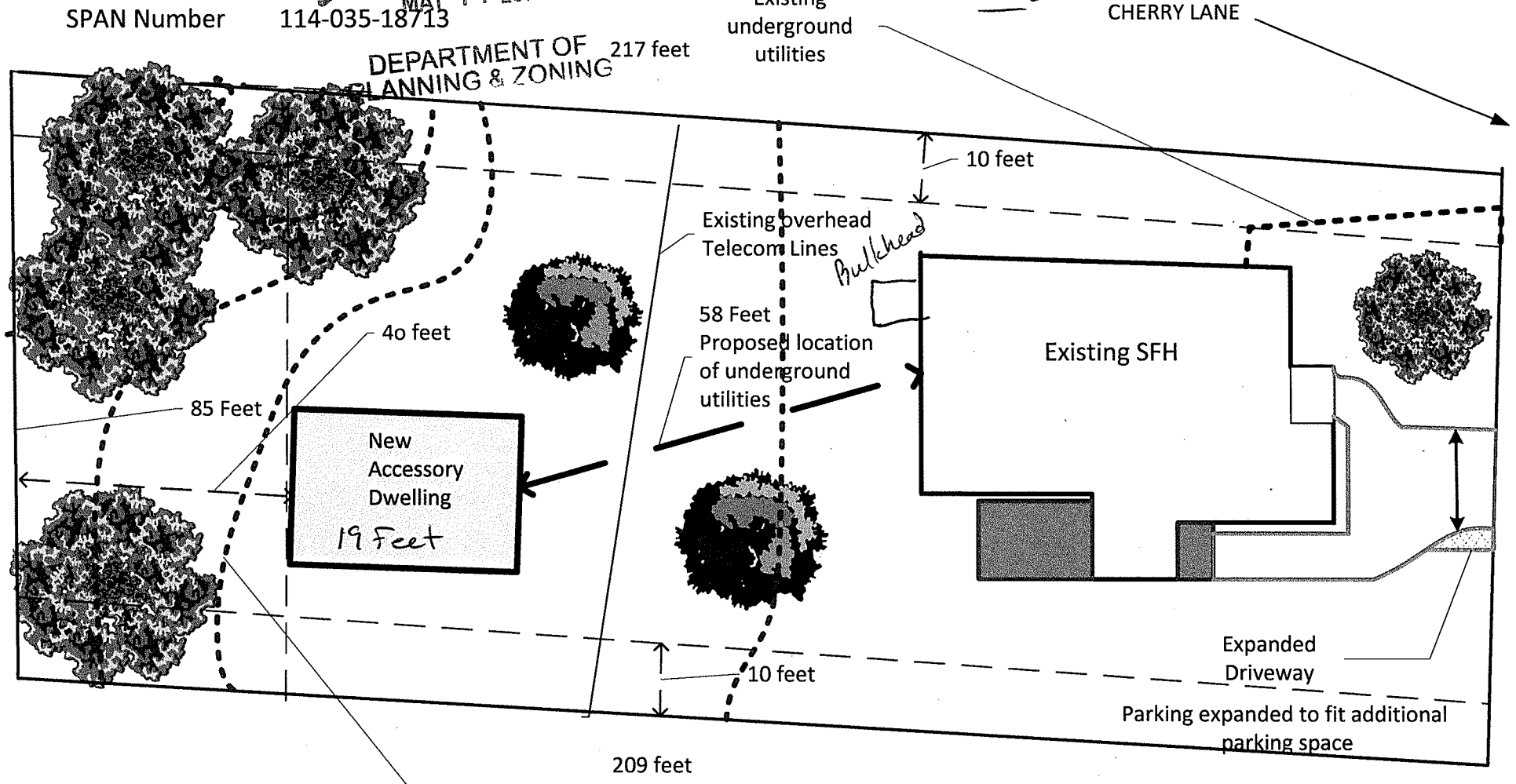
4AF

Existing lot coverage 13.9%

Proposed Lot Coverage - 17.7%

SPAN Number 114-035-18713

DEPARTMENT OF PLANNING & ZONING



1ST FLOOR	1,605
OPEN PORCH	35
WOOD DECKS	294
DRIVEWAY	570
ACCESSORY DWELL	704
TOTAL	~~3,163~~

+ bulkhead - 25

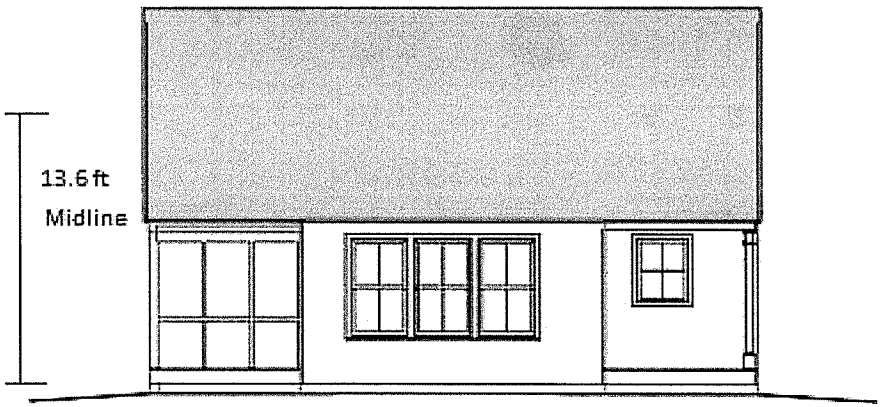
3233 SF total (after ADU)

LOT Sq. Feet	18,254
LOT COVERAGE %	~~17.3%~~

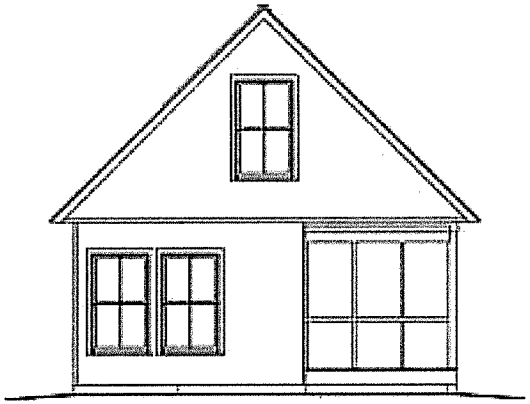
Accessory Dwelling Elevation

DEPARTMENT OF
PLANNING & ZONING

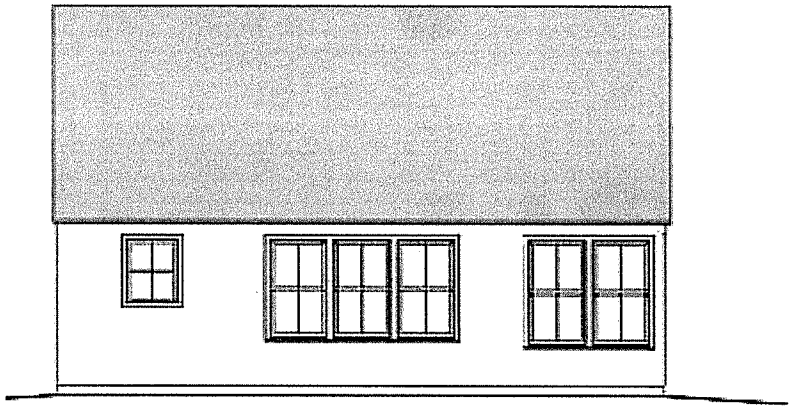
East



South



West



North

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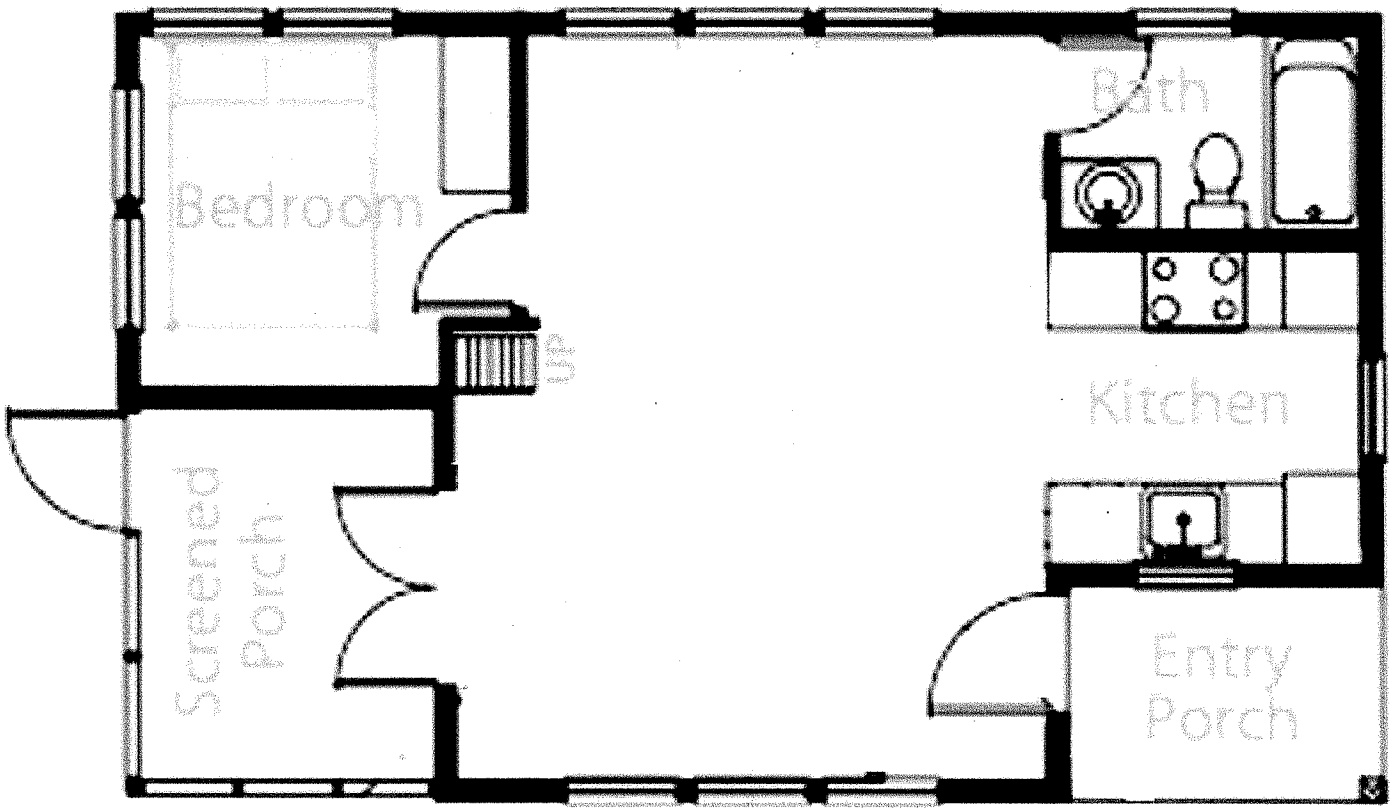
1" = 20'



1st Floor

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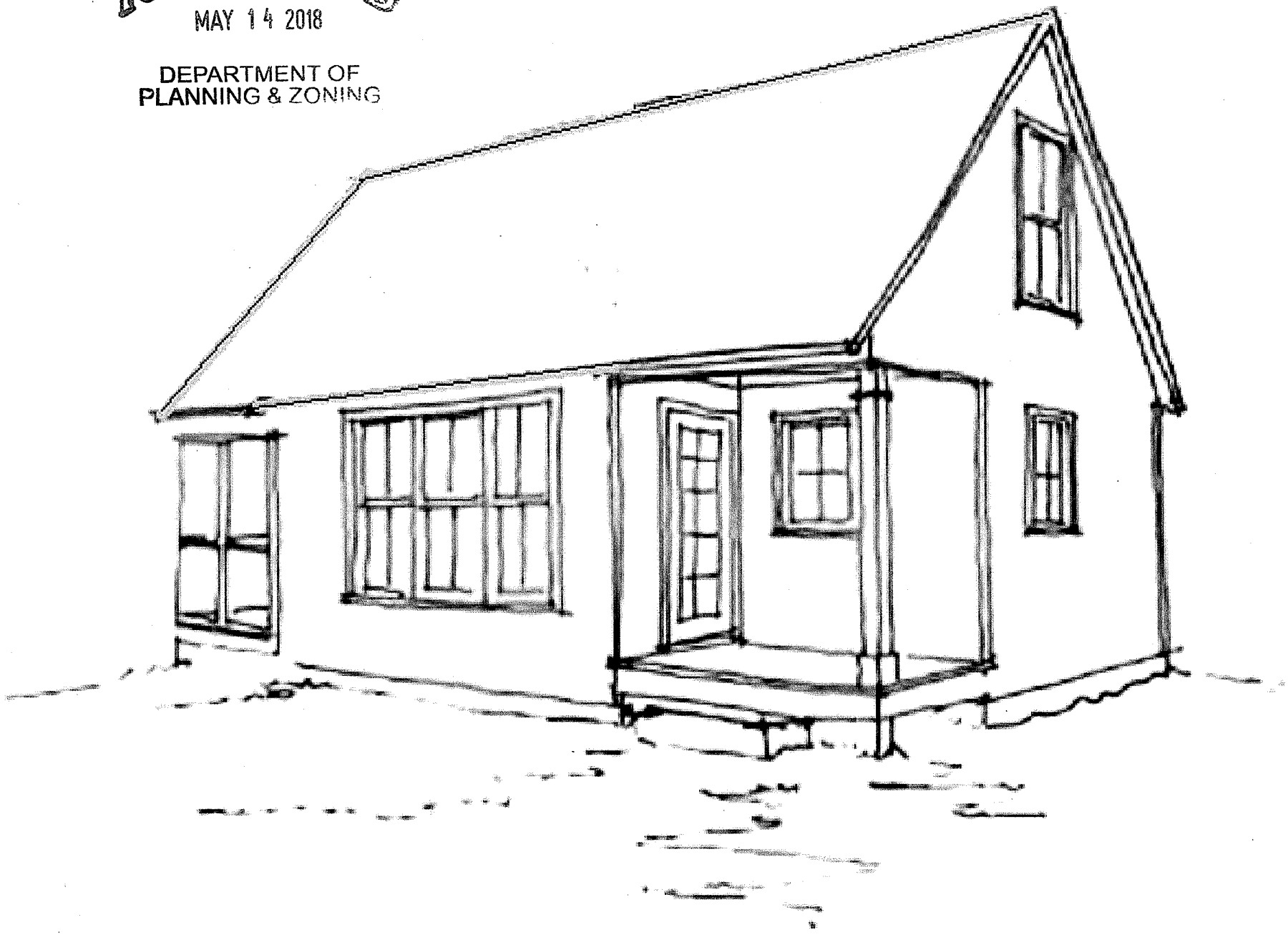

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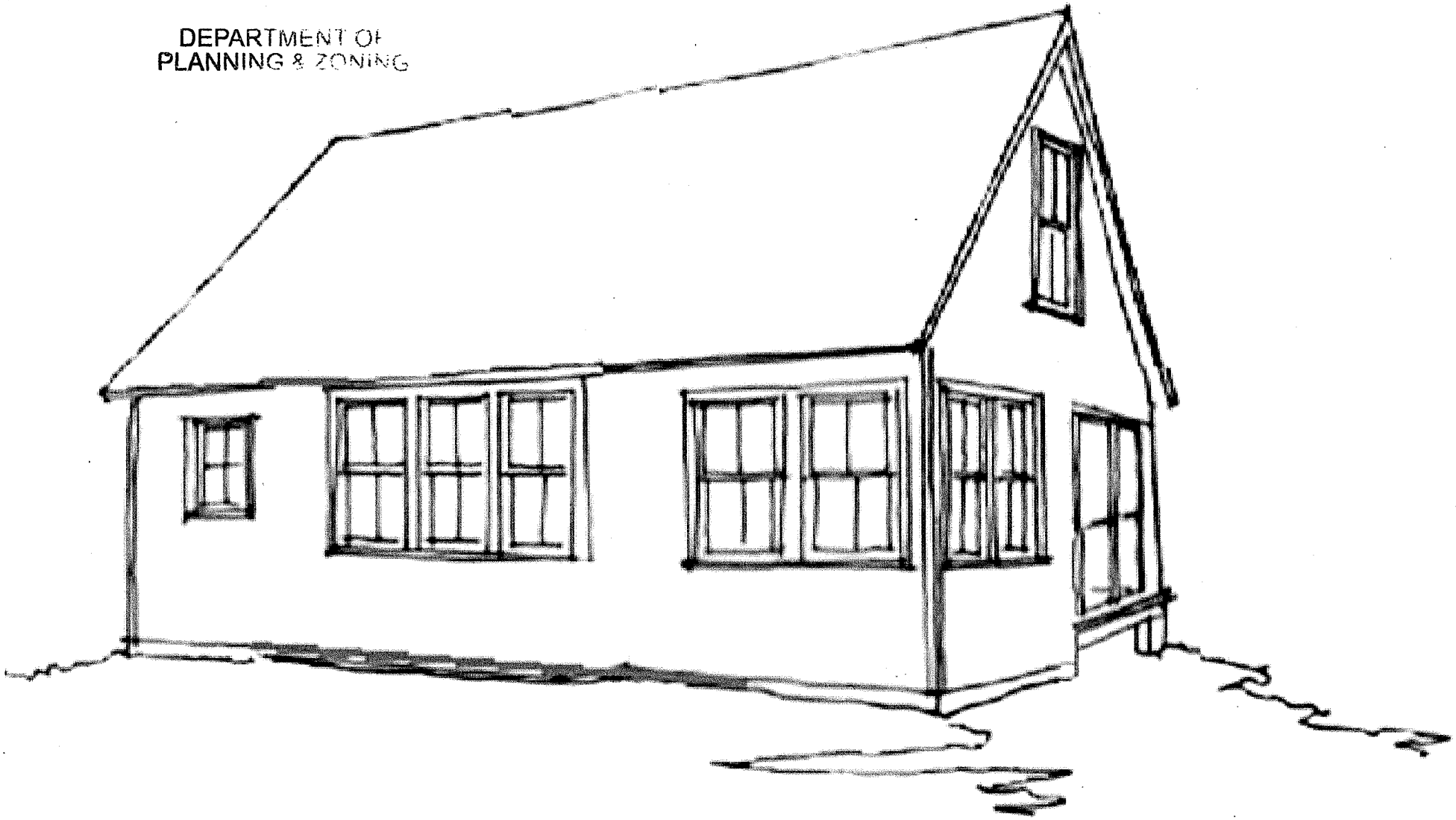

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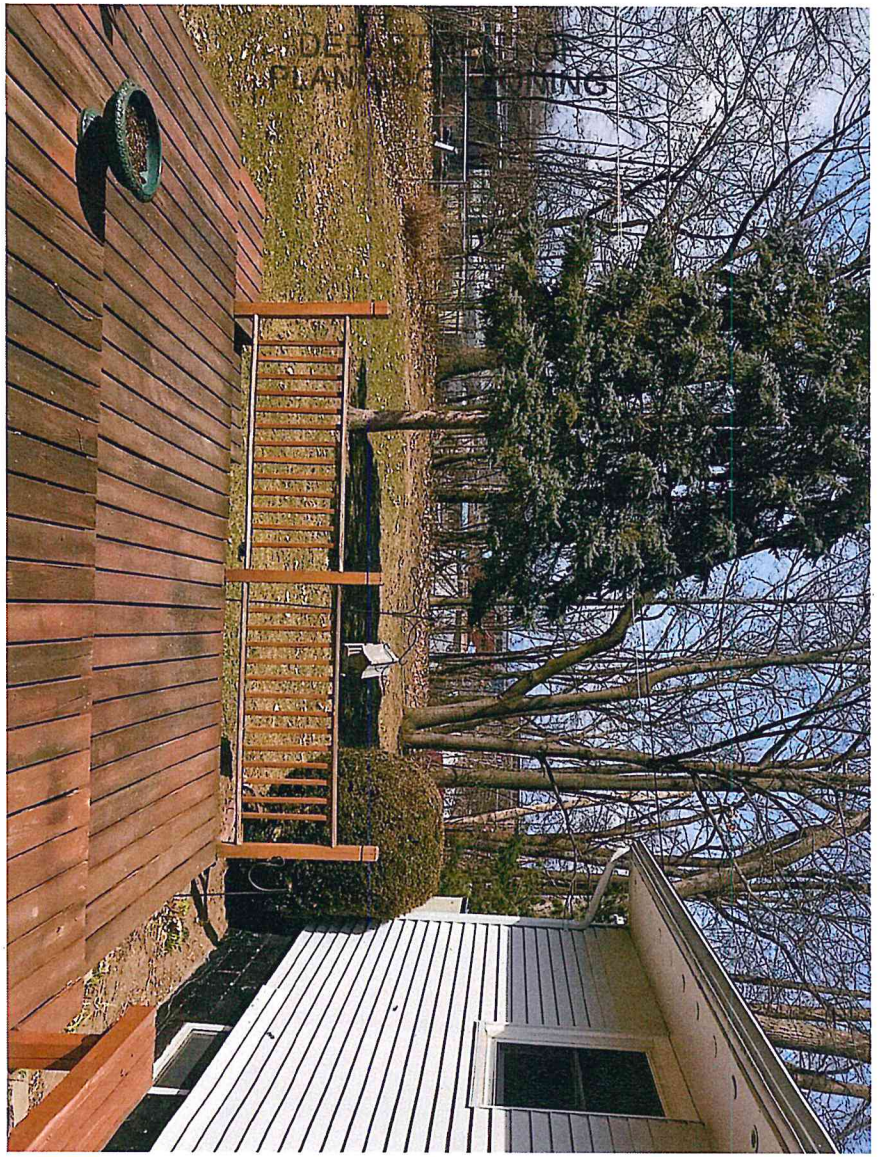


MAY 14 2018

DEPARTMENT OF PLANNING

Duncan Wisniewski ARCHITECTURE

Sara Holbrook Center
66 North Avenue
Burlington, VT 05401

June 29, 2018

PARKING MANAGEMENT PLAN

CALCULATION OF PARKING REQUIREMENT

The total parking requirement calculation is based upon segregation of uses, applying the appropriate parking requirement per use, and totaling each amount to achieve the total parking requirement.

USE	TABLE 8.1.8-1 CALCULATION	REQUIRED SPACES
Preschool/child care/after school (daytime)	1/2 employees + 1/5 children	13 employees (6.5), 59 children (11.8) 18.3
School, post-secondary (daytime and nights/weekends)	2/1000 SF	1068 SF x 2 = 2.14 spaces
Community center (nights/weekends)	3.3/1000 SF	2200 SF @ 3.3/1000 SF = 7.26

TOTAL PARKING REQUIRED

18.3 + 2.14 = 20.44 daytime (8-5) and 7.26 nights/weekends (6-11 evenings, afternoons/evenings on weekends). Since the uses do not overlap, the maximum parking requirement is the daytime use of **20** spaces (rounded down from 20.44). This number is slightly less than the original application, because total staffing for childcare will be 13, not 14 as previously thought, and total children being served will be 59, not 60, due to state licensing requirements.

TOTAL PARKING PROVIDED

As per the Site Plan, there are 15 parking spaces provided, two of which are compact spaces. Therefore, a variance of only 25% (5 spaces) is being requested.

PARKING VARIANCE RATIONALE

Background: Because the Sara Holbrook Center serves a client base that is very localized to the Old North End, it has been historically consistent in attracting staff and clients that are within walking distance of the site; in fact, the students from nearby Sustainability Academy at Barnes are escorted daily by adults to attend afterschool at the Center. While having the majority of SHC's users being walkers is not an absolute situation, it has proven to be consistent over many years.

Operation: The Center has been part of Burlington since 1937, serving over 1300 people annually. SHC is small, but mighty, and has increasingly offered a variety of services and programs with very little resources. SHC is bursting at the seams, and it isn't a lack of parking that prevents more operational effectiveness. Every morning until 12:30pm, preschool children use the current parking lot as their playground when they aren't in the classroom. Every day at 12:30pm, the preschool furniture and supplies are put into storage, and the room is set up for our older, after-school students. They, too, use the small parking lot as a playground. At any given time Monday through Friday during the academic year or summer at the Sara Holbrook Center, there are no more than three cars parked in our lot. These folks park along the side of the building, rather than in the back where the children play.

255 South Champlain Street
Burlington, VT 05401
802.864.6693

Current usage: Our current in-house staff at 66 North Avenue is comprised of nine people—the Executive Director, Associate Director, Development Associate, Preschool Director, Preschool Teacher, Preschool Assistant, After-School Director and two Afterschool Assistants. Five out of nine of these staff members walk to work. Even if there are available spots in the current lot, two out of four of the remaining staff park off-site, leaving two cars that consistently park at 66 North Avenue, Monday through Friday. One of these two staff members, especially in inclement weather, will sporadically use public transportation. There are an additional two teachers working with ELL adults through Vermont Adult Learning, who have historically parked off-site. The Preschool Director works until 3pm, while the Preschool Teacher and Assistant work until 1pm. The two Afterschool Assistants arrive at 3 PM, so the afterschool staff replaces any preschool staff parking needs.

Future usage: With expansion will come additional six staff members. Including the four of the staff who currently drive to the Old North End for work, plus the two ELL teachers who consistently park off-site, and these additional six staff members, we arrive at a need for a maximum of 12 staff parking spots. This is a high estimate, assuming the six new staff will be driving single-passenger automobiles to our site every day, which has not been the trend. What SHC has been doing has worked for decades, and the only complaint about parking is during preschool pick-up, which will be alleviated by our dedicated pick-up and drop-off area. Any on-site evening and weekend programs will not increase any needs for parking, as the slots for daytime, weekday programs will be available.

Alternative transportation options: The Sara Holbrook Center has some inherent features that reduce or manage the demand for parking currently and into the future. For instance, Green Mountain Transit operates the highest level of bus service found anywhere in their operating system on this section of North Ave. On 15-minute intervals, the North Ave bus #5 goes both northbound and southbound directly in front of the Center, and the City Loop route passes the Center at 10 minutes before the hour throughout the GMT system operating period. Finally, the Shared-Use Parking District is located adjacent to the Center both to the west and to the north, which confirms that the site has opportunities to share parking demand between related nearby land uses, and that travel to and between these uses are not be strictly single-occupancy automobile dependent.

Monitoring: The SHC agrees to monitor usage of its parking lot for a one year period after occupancy, for two times per week at random times every week to understand the various patterns of use that the lot receives. This data will be shared with P&Z after one year. The purpose of this monitoring will be to prove that this Parking Management Plan is successful; in the event there are problems, the SHC will employ alternate means to alleviate those problems, including employee incentives to use the bus or commit to year-round biking, paying for parking at the Elmwood Avenue lot, etc.

Conclusion: For all of the above reasons, the SHC has a high level of confidence, given the manner in which the Center has operated for 80 years, that the 15 spaces being proposed will satisfy the regular parking needs of staff and visitors. It is neither consistent with the mission of the Sara Holbrook Center nor good use of its limited resources to require more parking at the expense of less program space for those we serve. Staff, volunteers and visitors care deeply about the Center and its services, understanding it is operated with very limited resources and a dependence on friends and neighbors who donate time, money, food and supplies. The pattern of our parking lot usage tells us that what matters most is a space for children to play and learn, and those involved in creating that space are willing to walk miles to support the healthy development of the children being served.

255 South Champlain Street
Burlington, VT 05401
802.864.6693

Mary O'Neil

From: Mills, Andrew <amills@VHB.com>
Sent: Tuesday, July 03, 2018 9:38 AM
To: Mary O'Neil
Subject: RE: [External] Industrial Parkway
Attachments: 11585.09-Overall Site Plan.pdf; 11585.09-Site Plan.pdf

Hi Mary,

As discussed, attached please find two revised sheets for this project which update the parking counts and depict the existing and proposed handicap parking spaces. Regarding your comments on the lighting, Mike Willard has taken a at the lighting calculations and with some slight location adjustments and changing the fixtures from Type 4 to Type distribution we are able to meet the maximum of 4.0 fc on the site. Due to some vacation conflicts I do not have an updated lighting plan to share right now but if I can get it to you Thursday I will.

Please let me know if you have any further questions or comments, otherwise I will see you at the DRB hearing!

Thanks,

Andrew

Andrew Mills, P.E.
Project Manager

P 802.497.6169 | M 505.404.5388 | F 802.495.6130
www.vhb.com

\\vhb\gbl\proj\SBurlington\11585.09 GMT DTC Soils\cad\ld\Planset\11585.09-GD.dwg

AUSTIN DRIVE

HOMI

FIELD VERIFY LOCATION OF EXISTING WATER SERVICE

DRY SWALE OUTLET STRUCTURE R=155.60 INV OUT = 151.00

CLEANOUT INV = 150.00

CORE AND BOOT EXISTING STRUCTURE FOR NEW CONNECTION INV IN = 149.50

TEMPORARY SIGNAGE "NO PEDESTRIAN ACCESS"

PROPOSED DRY SWALE, SEE DETAIL

PROPOSED PRE-TREATMENT FILTER STRIP

MATCH EXISTING STA:103+35

PROPOSED DRIVE CONNECTION 1 AND 15 INDUSTRIAL PARKWAY

EXCESS EXISTING SOIL STOCK PILE TO BE RELOCATED HERE

SOLID 6" PVC TO DAYLIGHT

PROPOSED ADA PARKING STRIPING

PROPOSED UNDERGROUND TELECOM CONDUIT TO BE INSTALLED PER UTILITY OWNER'S TYPICAL DETAILS

1 INDUSTRIAL PARKWAY

REMOVE EXISTING BOLLARDS AND INSTALL NEW AT ALL DOORS (COORDINATE WITH OWNER)

FULL DEPTH DRIVEWAY RECONSTRUCTION, REFER TO C-2.00 MATCH EXISTING GRADE SEE DETAIL

PROPOSED GUARDRAIL, TYP.

PROPOSED 2' WIDE CRUSHED STONE SHOULDER, TYP.

CLEAN OUT

EXISTING URBAN SOIL STOCK PILE TO BE WASTED ON SITE PRIOR TO IMPORT OF OFFSITE MATERIALS.

EXISTING ANTENNA/PAD TO BE REMOVED

6" PVC UNDERDRAIN, SEE DETAIL

EXISTING SHED TO BE RELOCATED, COORDINATE WITH OWNER

FENCE AND CONCRETE PAD TO BE REMOVED

CAP AND WITNESS FOR FUTURE CONNECTION

SAWCUT PAVEMENT, TYP.

REFER TO PAVEMENT OVERLAY TRANSITION DETAIL

INDUSTRIAL PARKWAY

NOTE:

CONTRACTOR TO STOCKPILE EXISTING SUBBASE GRAVEL FOR ONSITE REUSE PRIOR TO IMPORT OF OFFSITE MATERIALS

Saved Tuesday, July 3, 2018 9:12:46 AM SHYMAN Plotted Tuesday, July 3, 2018 9:17:50 AM Wymon, Stephanie

vhb.com

vhb

40 IDX Dr
Building 100 Suite
South Burlington,
802.497.6100

STATE OF VERMONT
STEPHEN G. WYMON
No. 77726
LICENSED PROFESSIONAL ENGINEER

GMT Connect Drive

0 10 20

Industrial Parkway
Burlington, VT

No.	Revision	Date
1	ADA Spaces	07/02/2018

Issued for — Date

Construction — May 8, 2

Drawing Title

Site Plan

Drawing Number

C-3.

Sheet of

4

Project Number

11585.09

\\vhb\gbl\proj\SBurlington\11585.09 GMT DTC Soils\cad\ld\Planset\11585.09-OSP.dwg

Zoning Summary Chart 1 Industrial Parkway

Zoning District(S):	Enterprise - Light Manufacturing (E-LM)		
Zoning Regulation Requirements	Existing	Required	Provided
LOT AREA	3.0 Acres		3.0 Acres
FRONT YARD BUILDING SETBACK	65 Feet	5 Feet	65 Feet
SIDE YARD BUILDING SETBACK	100 Feet	0 Feet	100 Feet
REAR YARD BUILDING SETBACK	273 Feet	53 Feet	273 Feet
MAXIMUM BUILDING HEIGHT		45 Feet	
MAXIMUM BUILDING COVERAGE	15.9 %	40.0 %	15.9 %
BUILDING FOOTPRINT	20754 SF		20754 SF
BUILDING GROSS FLOOR AREA			
LOT COVERAGE	44.6 %	80% (MAX)	46.87%

Zoning Summary Chart 15 Industrial Parkway

Zoning District(S):	Enterprise - Light Manufacturing (E-LM)		
Zoning Regulation Requirements	Existing	Required	Provided
LOT AREA	4.8 Acres		4.8 Acres
FRONT YARD BUILDING SETBACK	54 Feet	5 Feet	54 Feet
SIDE YARD BUILDING SETBACK	11 Feet	0 Feet	11 Feet
REAR YARD BUILDING SETBACK	271 Feet	53 Feet	271 Feet
MAXIMUM BUILDING HEIGHT		45 Feet	
MAXIMUM BUILDING COVERAGE	22.0 %	40.0 %	22.0 %
BUILDING FOOTPRINT	45915 SF		45915 SF
BUILDING GROSS FLOOR AREA			
LOT COVERAGE	51.5 %	80% (MAX)	52.37%

Parking Summary Chart

Description	Spaces		
	Existing	Required	Provided
STANDARD SPACES		40	110
STANDARD ACCESSIBLE SPACES		0	6
TOTAL SPACES	117	40	116

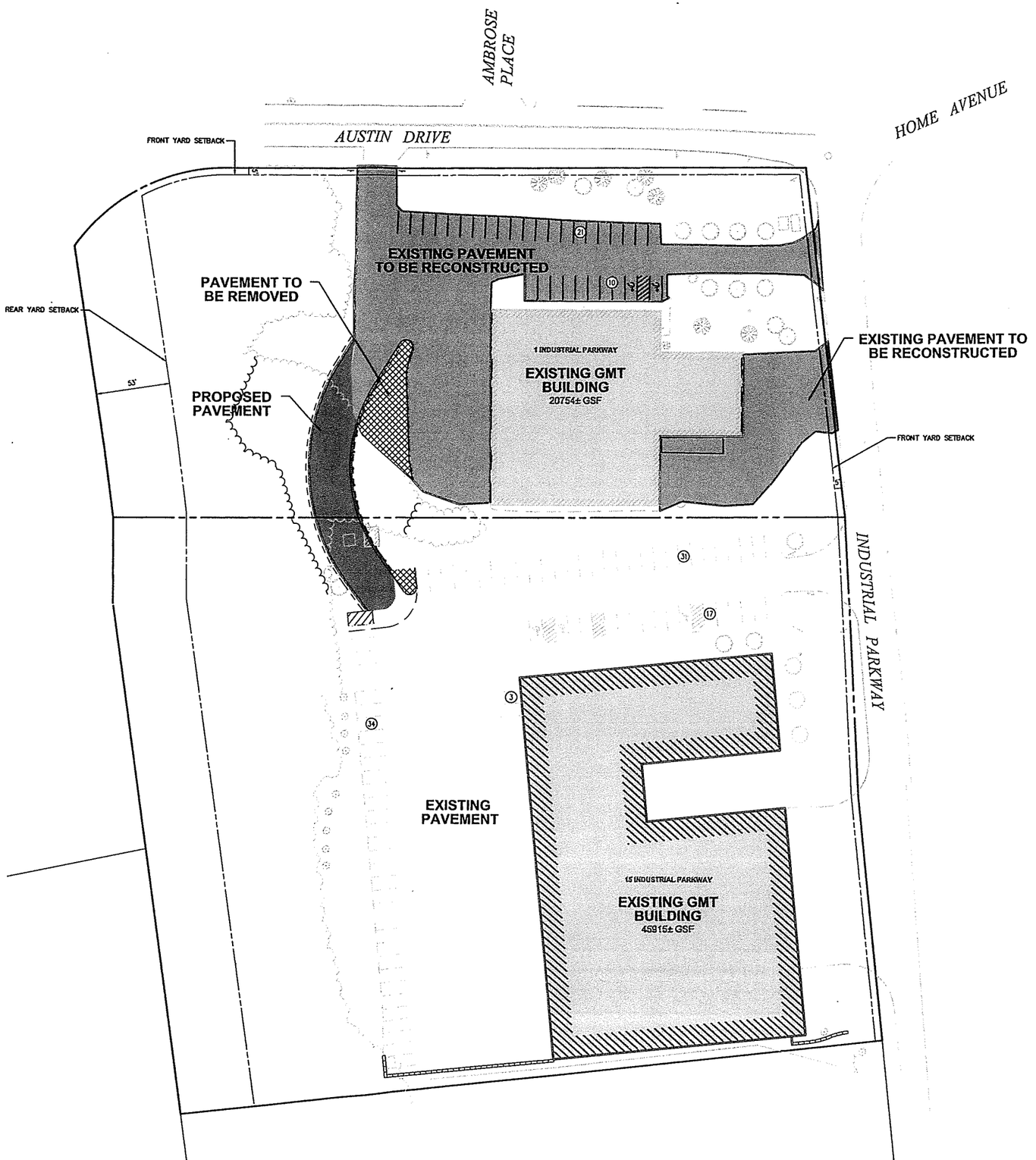
Parking Calculations

GMT BUILDING 20,756 SF x 0.75 SPACES / 3,000 SF = 5 SPACES

TOTAL PARKING REQUIRED = 5 SPACES

NOTES

1. PARKING CALCULATIONS BASED ON ASSUMPTIONS OF GENERAL OFFICE SPACE. 1 INDUSTRIAL PARKWAY = 3,782 SF AND 15 INDUSTRIAL PARKWAY = 16,113 SF.
2. PROPERTY LINES ARE APPROXIMATE BASED OFF OF AVAILABLE TAX MAP DATA.



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40 IDX Dr
Building 100 Suite
South Burlington, V
802.497.6100

GMT Connect Drive

0 20 40

Industrial Parkway
Burlington, VT

No.	Revision	Date
1	ADA Spaces	07/02/2018

SMW

Issued for: Construction — Date: May 8, 2

Drawing Title: Overall Site Plan

Drawing Number: C-2.

Sheet 3 of

Project Number

Saved Tuesday, July 3, 2018 9:05:32 AM SWYMAN Plotted Tuesday, July 3, 2018 9:06:20 AM Wyman, Stephanie

Burlington Development Review Board
149 Church Street, City Hall
Burlington, VT 05401
www.burlingtonvt.gov/pz/DRB
Telephone: (802) 865-7188
Fax (802) 865-7195

Brad Rabinowitz
Springer Harris
AJ LaRosa
Geoff Hand
Alexandra Zipparo
Samantha Tilton
Jim Drummond, (Alternate)
Zoraya Hightower, (Alternate)

BURLINGTON DEVELOPMENT REVIEW BOARD
THURSDAY July 5th, 2018, 5:00 PM
Contois Auditorium, City Hall, 149 Church St, Burlington, VT
MINUTES

Board Members Present: A. Hart, B. Rabinowitz, A.LaRosa, G.Hand, S.Tilton, S. Harris, J. Drummond (Alt.)
Board Members Absent: A.Zipparo, Z. Hightower
Staff Members Present: Scott Gustin, Mary O'Neil, Ryan Morrison, and Layne Darfler

I. Agenda

Other business: organizational meeting will be held on August 7th.
No changes to the agenda

II. Communications

Supplemental communications provided for 1 and 15 Industrial Parkway as well as 56,58, &66 North Ave

III. Minutes

Minutes from the June 19th meeting will be discussed at the deliberative

IV. Consent

1. **18-1046CA; 1 Industrial Parkway (ELM, Ward 5S) Chittenden County Transportation Authority**
   Construction of access ramp between 1 and 15 Industrial Parkway, full depth reconstruction of the existing parking lot and driveway apron and site lighting. Construction of a dry swale with overflow discharging by controlled outlet structure and stabilized outfall to municipal drainage system. (Project Manager: Mary O'Neil)
   AND
   18-1047CA; 15 Industrial Parkway (ELM, Ward 5S) Chittenden County Transportation Authority
   Construction of an access ramp between 1 and 15 Industrial Parkway, as well as full depth reconstruction of the existing parking lot and driveway apron at 1 Industrial parkway and site lighting. No changes in use; additionally the project includes the construction of a dry swale (with underdrain), with overflow discharging by controlled outlet structure and stabilized outfall to municipal drainage system. (Project Manager: Mary O'Neil)

   A.Hart: Has the applicant received and reviewed the staff comments?
   Did not receive them
   A.Hart: Any public present wish to speak about this project?
   None
   A.Hart: Do any members of the Board object to this item remaining as consent?
   None

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A.Hart: New plans were submitted in response to staffs questions regarding parking spaces
M. O'Neil: Plan was not provided with parking count but now new info has been forwarded- response has been forwarded to board; would like to change condition number 6 wording to say they shall provide parking sufficient to meet the parking requirements;
A.LaRosa: Motion to approve and adopt staff findings and recommendations with the addition of the language to change condition number 6 regarding parking spaces.
G.Hand: seconds
6-0-0

V. Public Hearing

1. 18-0899CA/MA; 56, 58 & 66 North Ave (RM, Ward 3C) Sara Holbrook Community Center

For the purpose of closing the public hearing regarding: combining three parcels and expand Sara Holbrook Community Center at 66 North Avenue, demolish a duplex and garage at 58 North Avenue, and demolish a duplex and a shed at 56 North Avenue. (Project Manager: Ryan Morrison)

A.Hart: Public Hearing was held two weeks ago, since then the Board got together to deliberate. We needed more information regarding the parking management plan.
B.Duncan: Handed out revised parking management plan
A.Hart: Are there members of the public who wish to speak about this matter? Confirmed
A.Hart: We will reopen the public hearing tonight but limit the discussion solely to questions and comments regarding the parking management plan
B.Pine: Spoke in favor of the Center; most families walk or ride bikes to the center; supports approving the parking waiver
B.Duncan: Staff had some comments and concern so we made some changes; mostly because of parking increase. Staff suggested the ESL classes be treated as community center use which requires 3.3 parking spaces. Raised parking count from 20 to 22; the idea behind it are the same. Looked closer at the actual parking, revised site plan to make compact spaces 8 x 18; decreased lot coverage by 50 sqft to get all spaces at 9 ft; showed weekday vs weekend use via power point. The 15 parking spaces shown are the outcome of the adjustments made. Discussed parking spaces sizes and options they have. Main diff is now we are looking for 7 space variance instead of 5 because of the use distinction. Reasons include the historic use, persons who bike, bus services, fact that they are only 1 property outside of the Neighborhood Mixed Use district of North St with ample parking.
A.Hart: Ryan, have you seen the new parking plan and the parking space sizes, are there any issues or concerns
R.Morrison: No concerns
A.Hart: This is a unique use and the precedent on the waiver has a lot of support and one of the things you are suggesting is coming back in a year to take another look at how its working; issue is that you're telling employees to go park somewhere else. We are not here to look at telling people to go park on the street we are looking at if there is sufficient parking on the property or not.
B.Rabinowitz: Parking off site is not really criteria for granting the waiver what is missing is that it's all anecdotal that people are using other mode of transportation but nothing saying we are encouraging people to use other modes of transportation.
B.Duncan: they would like to try it and monitor it for a year and then possibly offer bus programs and incentives.

S.Tilton: did they reach out to CATMA; it would track incentives provided and taken advantage of.
A.LaRosa: the separation of the uses makes sense and the overlap is fine; getting the parking management plan and having some commitments like being members of CATMA-bike parking etc. it's hard to do with organizations like this because of their funding so we understand that issue; there will be dedicated alleviation of congestion so I am not sure if there will be a need for conditions to the parking management plan because I don't know how you're going to operate; it's a new design for a an evolving organization parking management plan is hard to do with an ever changing facility.
A.Hart: Open public hearing up to the public with a reminder that we are only discussing the parking issues
B.Chattam: bobs plan is important because we run a very efficient program with very limited resources. Employees walk to work, board members ride bikes, incentives are a great idea we have reached out to some people; we have a van to collect some students so staff could shuttle via that bus. Asking to take into account the 80 years of history with no parking issue.
V.Senni: max of 3 cars parked in the parking lot which also double as a playground currently. We don't allow any cars in the back parking lot so the parking has never been an issue; we offer many incentives and will continue to supply those incentives; looking forward to writing grants for incentives and alleviate the parking problem which there hasn't been any issue as of yet.
A.Hart: Let's revisit in a year, if things are working that's great and if not then we will look at how do we fix it
D.Donath: never unable to find parking space; expressed need for playground for children and not a parking lot.
A.Hart: Any further questions from the Board?
Closed Public Hearing

2. **18-1044CA/CU; 92 Cherry Lane (RL, Ward 5S) Foley Living Trust**
Construction of a 675 s.f. detached accessory dwelling unit at rear of property.
(Project Manager: Ryan Morrison)

A.Hart: Has the applicant received and reviewed the staff comments?
None
A.Hart: Any public present wish to speak about this project?
None
S.Foley: opportunity to live on the property with mother allowing her to live on her property a bit longer; staff comments cover most of the info; applartment is 650 sqft meets the setbacks; tree removal section we will be under the limit but we will be removing some trees; removing 9 trees old cotton woods leaning over the building site.
A.Hart: Do any members of the Board object to this item remaining as consent?
B.Rabinowitz: trees; minor concern is there is no pathway to get to that new building – needs to be added to site plan to show path and that you resubmit the plan with that path included
A.Hart: Closed the public hearing

VI. Certificate of Appropriateness

1. **18-0929CA; 97 Spear St (I, Ward 8E) University of Vermont & State Agricultural College**
Addition of new 96,681 g.s.f. multipurpose events center at the east side of the existing UVM PFG complex; also a 17,331 g.s.f addition to the north side for Health and Wellness, for a total of 119,099 g.s.f new space. The proposed - 3000 seat

practice space. No net addition of spectator seats. Existing circulation to remain. (Project Manager: Scott Gustin)
A.Hart: Recused
B.Rabinowitz: Limited review as this is an educational institution
L.Ravin: Introduced the group working on the project. Planning to construct a multi-purpose event center and replace existing center as well enlarge and renovate existing facilities. This project has gone through much public review already; NPA's and South Burlington neighbors, technical review, DAB, and we are planning to comply with all previous permit conditions; specifically by limiting the number of spectators in the overall athletic facility because of limited parking, campus transportation plan creates a circulation plan which we will comply with which means all traffic exits from University Heights and Spear St. 2014-2019 parking management plan no additional parking spaces are being requested.
E.Hockenbury: Provided the existing facility background and the need for increases and renovations. Best solution is to create a new multi-purpose events center which will go in the existing pakring lot between the existing facilities and include a complete renovation of the field house; this would expand the student, spectator and athletic experiences; want to keep the Gutterson field house character of facility but improve the amenities. Enhances health wellness recreation campus events and athletic events on the campus and community
L.Ravin: understand that the separate application will be needed for signs; UVM is a very bike and pedestrian friendly campus – increasing bike parking and also installed a bike share station; increasing number of trees and landscaping;
R.Deane: Provide project principles, challenges, goals, site plan overview, proposed design, and site circulation plans via power point presentation.
G.Hand: On the plans you can't see the road at the far south end of the Gutterson parking lot; can you describe that parking management for that section
R.Deane: the south entrance is the exact same thing as northern entrance – no changes from current plan; existing and proposed site conditions; reflecting existing materials and masking to blend into the exiting conditions; Schedule call for construction to begin in spring 2019;
B.Rabinowitz: Clarification on the entrances
R.Deane: provided an overview on the specific entrance locations related to the users and functions.
G.Hand: Do the shuttle busses exit onto Spear St?
E.Hockenbury: essentially the shuttle will loop around the facility and exit across Main St.
A.LaRosa: Construction timeline? Will construction decrease a substantial amount of parking and does it affect the overall parking?
L.Ravin: No exact start date has been set yet
J.Baird: At this point they are planning to utilize a section of the field area for staging but if some parking is needed they will shuffle parking lots throughout the campus and can shuttle routes to accommodate the loss or need.
S.Bushor: On behalf of Councilor Adam Roof: presented questions having to do with construction- schedule truck movement in and out traffic impacts; material moving trucks will they have covers; didn't realize the hospital was vacating 150 spaces; wondering what was going to happen with that parking, where will that go? Roof asked to reduce the impact of parking surrounding there and was the university planning to change the policy on student vehicles being allowed on campus; overall was the university considering limiting or changing their policy for the ability of students to have cars on campus during the construction duration; understand access to the garage is going to be ongoing so it will be open during the entire time; both support the project. Just want more facts to understand the construction impacts. In anticipation of these questions we are requesting that UVM return to the 1 and 8 NPA to give final proposal and if they can't get answers we would request

has been a hiatus since the 1/8 NPA presentation. We don't feel UVM accommodates the handicapped needs very well, want to know if that has been addressed.
L.Ravin: there have been a lot of construction projects in that area in the last few years; this will happen after the exiting construction has been completed so there will be less impact; we have the same questions so we have a traffic study for the construction only which will show the traffic implications of the construction. There are no plans to change student car policies or parking on campus there is going to be access to the garage during construction; handicap accessibility will be increased on the east area closer to the entrance- on event days a whole circulation pattern will be used to accommodate those vehicles.
R.Deane: 18 Handicap spaces will be provided; we've done sign studies on how to reorganize the complex to make the pathways and wayfinding much clearer.
J.Baird: we will be gaining 2 lots back after the current construction wraps up so that will relieve some of that concern of parking. We lease quite a bit of parking to the hospital on the campus; when we need to we can take the spaces back
L.Ravin: We are coming before you for this project only and we have no plans to have any traffic to the multipurpose center from South Prospect St; we have done quite a few enforcement activities to enforce the entrance and exit stipulations for Spear and South Prospect, including signage, tickets, and roadway narrowing. Installed gate on South Prospect St;
G.Hand: Would recommend the enforcement trends for those problems be tracked and monitored.
B.Rabinowitz: Any further questions?
None
Closed public hearing

VII. **Adjournment 6:35pm**

Meeting was adjourned at 6:35 PM

Austin D. Hart, Chair of Development Review Board — August 7, 2018 — Date

L. Darfler, Planning Technician — July 17th 2018 — Date

Plans may be viewed in the Planning and Zoning Office, (City Hall, 149 Church Street, Burlington), between the hours of 8:00 a.m. and 4:30 p.m.
Participation in the DRB proceeding is a prerequisite to the right to take any subsequent appeal. Please note that ANYTHING submitted to the Planning and Zoning office is considered public and cannot be kept confidential. This may not be the final order in which items will be heard. Please view final Agenda, at www.burlingtonvt.gov/pz/drb/agendas or the office notice board, one week before the hearing for the order in which items will be heard.