

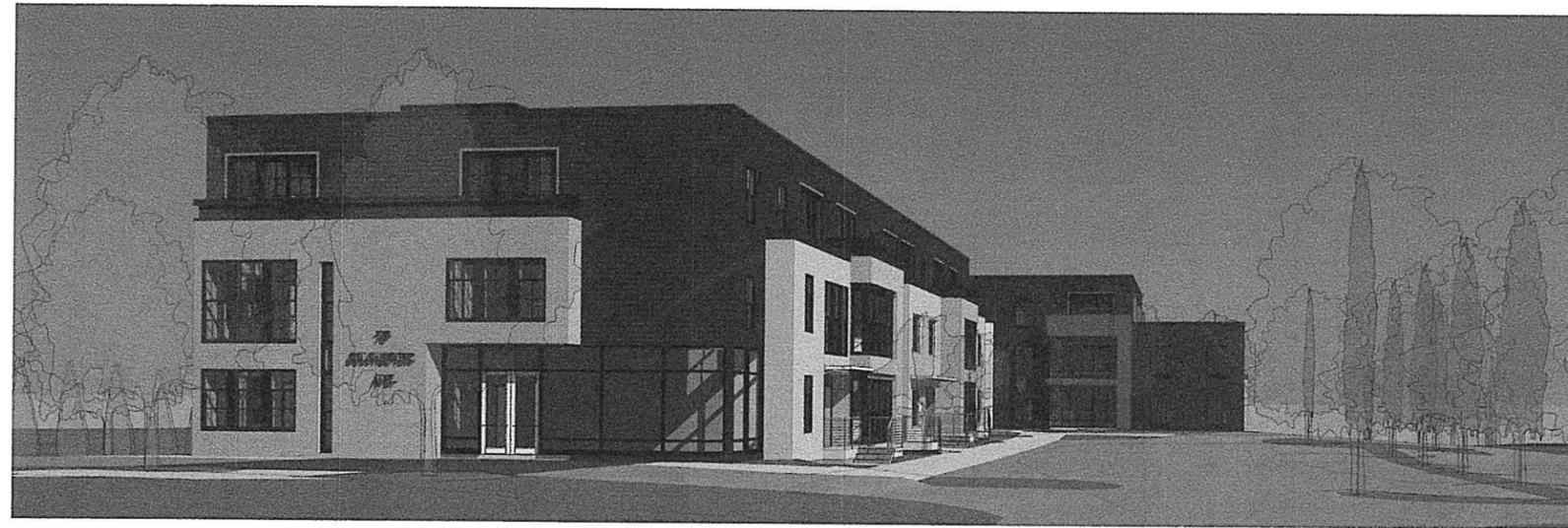
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COLCHESTER AVENUE HOUSING

DEPARTMENT OF PLANNING & ZONING

BURLINGTON, VERMONT

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PROJECT DESCRIPTION:
THIS PROJECT IS A PLANNED UNIT DEVELOPMENT (PUD) WITH A MIX OF COMMERCIAL AND RESIDENTIAL USES. THE PUD WILL INCORPORATE THE EXISTING BUILDINGS AND USES AT 66, 72, 80, 94 AND 96 COLCHESTER AVENUE, 27 FLETCHER PLACE AND PROVIDE FOR THE CONSTRUCTION OF A NEW 75 UNIT RESIDENTIAL BUILDING AT 80 COLCHESTER AVENUE.

Owners/Applicants

EASTERN DEVELOPMENT CORPORATION, AGENT
C/O LAW OFFICES OF F.J. VON TURKOVICH, P.C.
ONE NATIONAL LIFE DRIVE
MONTPELIER, VT 05604
(802)-229-3431

Architect:

RABIDEAU ARCHITECTS
550 HINESBURG ROAD
SOUTH BURLINGTON, VT 05403
(802) 863-0222

Engineer:

TRUDELL CONSULTING ENGINEERS (TCE)
478 BLAIR PARK ROAD
WILLISTON, VT 05495
(802) 879-6331

USE AND INTERPRETATION OF THE DRAWINGS

- Unless otherwise noted, these Drawings are intended for preliminary planning, coordination with other disciplines or utilities, and/or approval from the regulatory authorities. They are not intended as construction drawings unless noted as such or marked approved by a regulatory authority.
- By use of these drawings for construction of the Project, the Owner represents that they have reviewed, approved, and accepted the drawings, obtained all necessary permits, and have met with all applicable parties/disciplines, including but not limited to, the Engineer and the Architect, to insure these plans are properly coordinated including, but not limited to, contract documents, specifications, owner/contractor agreements, building and mechanical plans, private and public utilities, and other pertinent permits for construction.
- Owner and Architect, are responsible for final design and location of buildings shown, including on-site measured dimensions (if) field-corrected and existing utility connections shown on these plans.
- Prior to using these plans for construction layout, the user shall contact TCE to ensure the plan contains the most current revisions.
- These Drawings are specific to the Project and are not transferable. As instruments of service, these drawings, and copies thereof, furnished by TCE are its exclusive property. Changes to the drawings may only be made by TCE. If errors or omissions are discovered, they shall be brought to the attention of TCE immediately.
- It is the User's responsibility to ensure this copy contains the most current revisions. If unsure, please contact TCE.

BEFORE USING THESE PLANS ENSURE THAT YOU HAVE THE LATEST REVISION

LAST REVISED:	09/15/16 PRELIMINARY APPLICATION
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TCE PROJECT NO: 16-077



TRUDELL CONSULTING ENGINEERS
478 BLAIR PARK ROAD | WILLISTON, VERMONT 05495
802.879.6331 | WWW.TCEVT.COM



LEGEND

SITE	LINE			SITE	SYMBOL		
	EXISTING	PROPOSED	REMOVED/ABANDONED		EXISTING	PROPOSED	REMOVED/ABANDONED
PAVED DRIVE OR ROAD				SGH			
GRAVEL DRIVE OR ROAD				UTILITIES			
PAVED DRIVE OR ROAD WITH CURB				SEWER, STORM OR TELEPHONE MANHOLE (3/4\"/>			

LEGEND NOTE:

SOME INFORMATION MAY BE PROVIDED BY OTHERS AND COULD BE SHOWN WITH A DIFFERENT SYMBOL NOT SHOWN ON THIS LEGEND. HOWEVER, THEY ARE LABELED ON RESPECTIVE PLANS. IN SOME CASES A CHANGE IN SCALE OR PRINTER CAN ALTER INFORMATION TO NOT SHOW AN EXACT MATCH ON THIS LEGEND. IF ANY QUESTIONS EXIST CONTACT THE ENGINEER TO CLARIFY. ADDITIONAL LEGEND INFORMATION IS SUPPLIED SEPARATELY ON EROSION CONTROL PLANS AND SOME SURVEY PLATS.

PARCEL INFORMATION:

66 COLCHESTER AVE.
BURLINGTON PROPERTY ID NO. 045-4-016-000
SPAN 114-035-16367

66 COLCHESTER AVENUE, LLC
66 COLCHESTER AVE.
BURLINGTON, VT 05401

72 COLCHESTER AVE.
BURLINGTON PROPERTY ID NO. 045-4-017-000
SPAN 114-035-16368

VON TURKOVICH, EDWARD B AND VON TURKOVICH, MICHELE A
41 BREWER PKWY.
S. BURLINGTON, VT 05403

80 COLCHESTER AVE.
BURLINGTON PROPERTY ID NO. 045-4-018-000
SPAN 114-035-16396

MILLER, RANDALL J.; VON TURKOVICH, EDWARD B.; VON TURKOVICH, FRANCIS J.
C/O JERICHO MANAGEMENT COMPANY, LLC
ONE NATIONAL LIFE DR.
MONTPELIER, VT 05604

94 COLCHESTER AVE.
BURLINGTON PROPERTY ID NO. 045-4-019-000
SPAN 114-035-16370

MILLER, RANDALL J.; VON TURKOVICH, EDWARD B.; VON TURKOVICH, FRANCIS J.
C/O JERICHO MANAGEMENT COMPANY, LLC
ONE NATIONAL LIFE DR.
MONTPELIER, VT 05604

96 COLCHESTER AVE.
BURLINGTON PROPERTY ID NO. 045-4-020-000
SPAN 114-035-16371

CLIFFORD, PATRICK P, MD; BLAKE, TIMOTHY R, MD; BLAKE, KIMBERLY D, MD; LACROIX, JOHN JR., MD; LACROIX, DALE JEAN, MD

96 COLCHESTER AVE.
BURLINGTON, VT 05401

27 FLETCHER PLACE
BURLINGTON PROPERTY ID NO. 046-2-006-000
SPAN 114-035-16672

VON TURKOVICH, EDWARD B.; VON TURKOVICH, FRANCIS J.; 72 COLCHESTER AVENUE, LLC
C/O JERICHO MANAGEMENT COMPANY, LLC
ONE NATIONAL LIFE DR.
MONTPELIER, VT 05604

49 FLETCHER PLACE
BURLINGTON PROPERTY ID NO. 045-4-023-000
SPAN 114-035-16374

REID, NANCY
49 FLETCHER PL.
BURLINGTON, VT 05401

RECORD DRAWING REQUIREMENTS:

- A CLEAN SET OF UP TO DATE RECORD DRAWINGS IS TO BE AVAILABLE FOR REVIEW ON SITE AT ALL TIMES. FOR JOBS LASTING MORE THAN 4 WEEKS A REVIEW OF THE RECORD DRAWINGS WILL BE DONE BY THE ENGINEER EVERY 2 WEEKS AND COMMENTS OR DEFICIENCIES MAY BE PROVIDED.
- TIES TO ALL BENDS, VALVES, JOINTS, CONNECTIONS AND DESIGN FEATURES SHALL BE PROVIDED. TIES SHALL BE PULLED FROM EASILY LOCATABLE PERMANENT ABOVE GROUND FEATURES THAT ARE VISIBLE YEAR AROUND SUCH AS BUILDING CORNERS, HYDRANTS, SEWER AND STORM DRAIN COVERS THAT WILL BE CLEAR IN WINTER, UTILITY POLES, ETC. REFRAIN FROM PROVIDING TIES WITH ACUTE ANGLES. TIES SHOULD BE PULLED AT ANGLES AS CLOSE TO 90 DEGREES AS POSSIBLE. TIES WITH ANGLE TOO ACUTE MAY BE REJECTED.
- RECORD INFORMATION NEEDS TO BE PROVIDED ON THE APPROPRIATE DESIGN PLANS ON A WEEKLY BASIS. RECORD INFORMATION REGARDING TCE DESIGN ITEMS PLACED ON INAPPROPRIATE DESIGN PLANS WILL NOT BE ACCEPTED.
- IF ENGINEERING SERVICES FOR BI-WEEKLY REVIEW OF RECORD INFORMATION HAVE NOT BEEN OBTAINED FOR THE PROJECT ALL RECORD INFORMATION FOR TCE DESIGN ITEMS SHALL BE PROVIDED TO TCE WITHIN 7 BUSINESS DAYS OF THE COMPLETION OF THE WORK.
- PLANS SUBMITTED AT THE END OF THE PROJECT SHALL BE REVIEWED FOR COMPLETENESS. ALL REQUIREMENTS LISTED ABOVE APPLY.
- IF DESIGN FEATURES WERE INSTALLED EXACTLY PER THE DESIGN PLANS TIES TO THE FEATURE ARE STILL REQUIRED TO BE PROVIDED BY THE CONTRACTOR FOR THE OWNERS USE. ANY FEATURE NOT INDICATED AS DIFFERENT IN RED WILL BE CONSIDERED TO BE EXACTLY PER DESIGN.
- RECORD INFORMATION SHALL INCLUDE BOTH VERTICAL AND HORIZONTAL LOCATIONS. THIS INCLUDES BUT IS NOT LIMITED TO FINISHED FLOOR ELEVATIONS, RIMS AND INVERTS OF STRUCTURES AND PIPING, INVERTS AT CROSSINGS, ETC.
- ANY UTILITIES ENCOUNTERED THAT ARE NOT SHOWN ON THE PLANS SHALL BE ADDED TO THE PLANS WITH APPROPRIATE TIES.
- TIES SHALL INCLUDE ALL UTILITIES INSTALLED BY CONTRACTOR WHICH INCLUDE BUT ARE NOT LIMITED TO SEWER, WATER, STORM, ELECTRIC, CABLE, TELEPHONE, GAS, ETC.
- RECORD DRAWINGS SHALL BE SUPPLIED ON BOTH HARD COPY AND ELECTRONIC DATA. ELECTRONIC DATA SHALL BE COMPUTER-AIDED DESIGN (CAD) FILES INCLUDING NATIVE FILE FORMATS (DWG).
- THE CONTRACTOR SHALL SUBMIT ON A WEEKLY BASIS PROJECT PHOTOGRAPHS. THE INFORMATION WILL BE SUBMITTED TO THE ENGINEER IN ELECTRONIC FORMAT WITH EACH PICTURE BEING LABELED BY DATE, LOCATION AND ACTIVITY. AT A MINIMUM THE CONTRACTOR WILL SUBMIT PICTURES OF ALL THRUST BLOCKS, CONNECTIONS TO EXISTING FACILITIES AND STRUCTURES BEFORE AND AFTER BACKFILL. PROVIDE AUXILIARY LIGHTING AS REQUIRED TO PRODUCE CLEAR, WELL LIT PHOTOGRAPHS WITHOUT OBSCURING SHADOWS. THE CONTRACTOR SHALL MAINTAIN ONE CHECK SET OF PHOTOGRAPHS AT THE SITE FOR REFERENCE. UPON REQUEST THE CONTRACTOR SHALL PROVIDE PICTURES OF VARIOUS AREAS DEEMED NECESSARY BY THE ENGINEER OR OWNER.
- CERTIFICATIONS BY THE ENGINEER AND SUCCESSFUL TEST RESULTS DO NOT RELIEVE THE CONTRACTOR OF FULL COMPLIANCE WITH THE DESIGN PLANS, SPECIFICATIONS AND PERMITS SHOULD A DEFICIENCY BE DISCOVERED AFTER SAID CERTIFICATION OR TESTING.

EPSC LEGEND

	PROJECT AREA		STABILIZED CONSTRUCTION ENTRANCE
	PHASE LIMIT		SEDIMENT TRAP
	BARRIER TAPE		FIBER ROLL
	SILT FENCE		TEMPORARY VEGETATED DIVERSION SWALE
	SOIL STOCK PILE		
	STONE CHECK DAM		
	LEFT PROJECTION		

PROJECT INFORMATION:

- OWNER OF RECORD: R. MILLER & E. F. VON TURKOVICH
80 COLCHESTER AVE.
BURLINGTON, VERMONT 05401
TAX ID: 045-4-018
PARCEL SIZE: 1.09 AC
- ZONING DISTRICT: INSTITUTIONAL

CONSTRUCTION NOTES FOR CONTRACTOR & CLIENT/OWNER:

- CONTRACT DOCUMENTS: THESE PLANS WERE PREPARED BY TRUPELL CONSULTING ENGINEERS (TCE) AND ARE INTENDED TO BE USED IN CONJUNCTION WITH THE STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT, FC-700 PREPARED BY THE ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE (EJCDC), LATEST EDITION. COPIES ARE AVAILABLE AT WWW.NSPE.ORG/EJCDC.
- UNDERGROUND IMPROVEMENTS: THE LOCATION OF EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS SHOWN ARE ASSUMED BASED ON RESEARCH, UTILITY PLANS PROVIDED BY OTHERS, AND/OR SURFACE EVIDENCE AVAILABLE AND WERE OBTAINED IN A MANNER CONSISTENT WITH THE ORDINARY STANDARD OF PROFESSIONAL CARE AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR THE DESIGN ENGINEER.
- DIFFERING SUBSURFACE OR PHYSICAL CONDITIONS: IF CONTRACTOR BELIEVES THAT ANY SUBSURFACE OR PHYSICAL CONDITION AT OR CONTIGUOUS TO THE SITE THAT IS UNCOVERED OR REVEALED EITHER: (1) IS OF SUCH A NATURE AS TO ESTABLISH THAT ANY "TECHNICAL DATA" ON WHICH CONTRACTOR RELIED IS MATERIALLY INACCURATE; OR (2) IS OF SUCH A NATURE AS TO REQUIRE A CHANGE IN THE PLANS/CONTRACT DOCUMENTS; OR (3) DIFFERS MATERIALLY FROM THAT SHOWN OR INDICATED IN THE PLANS/CONTRACT DOCUMENTS; OR (4) IS OF AN UNUSUAL NATURE, AND DIFFERS MATERIALLY FROM CONDITIONS ORDINARILY ENCOUNTERED AND GENERALLY RECOGNIZED AS INHERENT IN WORK OF THE CHARACTER PROVIDED FOR IN THE PLANS/CONTRACT DOCUMENTS; THEN CONTRACTOR SHALL PROMPTLY AFTER BECOMING AWARE THEREOF AND BEFORE FURTHER DISTURBING THE SUBSURFACE OR PHYSICAL CONDITIONS OR PERFORMING ANY WORK IN CONNECTION THEREWITH (EXCEPT IN AN EMERGENCY), NOTIFY OWNER AND ENGINEER ABOUT SUCH CONDITION. CONTRACTOR SHALL NOT FURTHER DISTURB SUCH CONDITION OR PERFORM ANY WORK IN CONNECTION THEREWITH (EXCEPT AS AFORESAID) UNTIL RECEIPT OF WRITTEN ORDER TO DO SO. ALL PARTIES INVOLVED (OWNER, ENGINEER, ARCHITECT AND MUNICIPALITY IF APPLICABLE) SHALL AGREE UPON HOW TO PROCEED AND ANY RELATED COST IMPLICATIONS.
- UTILITIES: PRIVATE AND PUBLIC UTILITIES SUCH AS ELECTRIC, TELEPHONE, GAS, CABLE, FIBER OPTIC, ETC. ARE THE RESPONSIBILITY OF THE RESPECTIVE UTILITY COMPANY. ANY INFORMATION SHOWN BY TCE SHOULD BE CONSIDERED PRELIMINARY (USUALLY TO ASSIST WITH PERMITTING), FINAL DESIGN, CONSTRUCTION AND MAINTENANCE ARE THE RESPONSIBILITY OF RESPECTIVE UTILITY COMPANIES. COMPLIANCE WITH EASEMENTS AND REGULATIONS (STATE AND LOCAL) ARE THE RESPONSIBILITY OF RESPECTIVE UTILITY COMPANY.
- DISSAFE: IN ACCORDANCE WITH VERMONT STATE LAW (VERA TITLE 30 CHAPTER 84 AND PSB RULE 3.000) THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT DISSAFE SYSTEMS, INC. "DISSAFE" AT LEAST 48 HOURS, EXCLUDING SATURDAYS, SUNDAYS, AND LEGAL HOLIDAYS, BUT NOT MORE THAN 30 DAYS BEFORE COMMENCING EXCAVATION ACTIVITIES, EXCEPT IN AN EMERGENCY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRE-MARKING THE SITE AND MAINTAINING DESIGNATED MARKINGS. FOR MORE INFORMATION ON DISSAFE REQUIREMENTS SEE WWW.DISSAFE.COM.
- JOB SITE SAFETY: NEITHER THE PROFESSIONAL ACTIVITIES OF TRUPELL CONSULTING ENGINEERS (TCE), NOR THE PRESENCE OF TCE OR ITS EMPLOYEES AND SUB CONSULTANTS AT A CONSTRUCTION SITE, SHALL RELIEVE THE GENERAL CONTRACTOR AND ANY OTHER ENTITY OF THEIR OBLIGATIONS, DUTIES AND RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR COORDINATING ALL PORTIONS OF THE WORK OF CONSTRUCTION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND ANY HEALTH OR SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES. TCE AND ITS PERSONNEL HAVE NO AUTHORITY TO EXERCISE ANY CONTROL OVER ANY CONSTRUCTION CONTRACTOR OR OTHER ENTITY OR THEIR EMPLOYEES IN CONNECTION WITH THEIR WORK OR ANY HEALTH OR SAFETY PRECAUTIONS. THE CLIENT AGREES THAT THE GENERAL CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SITE SAFETY, AND WARRANTS THAT THIS INTENT SHALL BE MADE EVIDENT IN THE CLIENT'S AGREEMENT WITH THE GENERAL CONTRACTOR. THE CLIENT ALSO AGREES THAT THE CLIENT, TCE AND TCE'S CONSULTANTS SHALL BE INDIVIDUALLY AND SHALL BE MADE ADDITIONALLY INSURED UNDER THE GENERAL CONTRACTOR'S GENERAL LIABILITY INSURANCE POLICY.
- CODES AND STANDARDS COMPLIANCE: TCE SHALL EXERCISE USUAL AND CUSTOMARY PROFESSIONAL CARE IN ITS EFFORTS TO COMPLY WITH CODES, STANDARDS, REGULATIONS AND ORDINANCES IN EFFECT. THE OWNER ACKNOWLEDGES THAT SUCH REQUIREMENTS MAY BE SUBJECT TO VARIOUS AND CONTRADICTORY INTERPRETATIONS. TCE, THEREFORE, WILL USE REASONABLE PROFESSIONAL EFFORTS AND JUDGMENT TO INTERPRET APPLICABLE REQUIREMENTS AS THEY APPLY TO THE PROJECT. TCE, HOWEVER, CANNOT AND DOES NOT WARRANT OR GUARANTEE THAT THE PROJECT WILL COMPLY WITH ALL INTERPRETATIONS OF SUCH REQUIREMENTS.
- CONSTRUCTION OBSERVATION: TCE MAY VISIT THE PROJECT AT APPROPRIATE INTERVALS DURING CONSTRUCTION TO BECOME GENERALLY FAMILIAR WITH THE PROGRESS AND QUALITY OF THE CONTRACTOR'S WORK AND TO DETERMINE IF THE WORK IS PROCEEDING IN GENERAL ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE OWNER HAS NOT RETAINED TCE TO MAKE DETAILED INSPECTIONS OR TO PROVIDE EXHAUSTIVE OR CONTINUOUS PROJECT REVIEW AND OBSERVATION SERVICES. TCE DOES NOT GUARANTEE THE PERFORMANCE OF, AND SHALL NOT HAVE RESPONSIBILITY FOR, THE ACTS OR OMISSIONS OF ANY CONTRACTOR, SUB-CONTRACTOR, SUPPLIER OR ANY OTHER ENTITY FURNISHING MATERIALS OR PERFORMING ANY WORK ON THE PROJECT. TCE SHALL NOT SUPERVISE, DIRECT OR HAVE CONTROL OVER THE CONTRACTOR'S WORK NOR HAVE ANY RESPONSIBILITY FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF THE CONTRACTOR. IF THE OWNER DESIRES MORE EXTENSIVE PROJECT OBSERVATION OR FULL-TIME PROJECT REPRESENTATION, THE OWNER SHALL REQUEST SUCH SERVICES BE PROVIDED BY TCE AS ADDITIONAL SERVICES.
- UTILITIES SHOWN ARE APPROXIMATE AND DO NOT NECESSARILY REPRESENT ALL UTILITIES LOCATED ON OR ADJACENT TO THE AREA SURVEYED. THE CONTRACTOR SHALL FIELD VERIFY ALL UTILITY CONFLICTS. ALL DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER.
- ALL EXISTING UTILITIES NOT INCORPORATED INTO THE FINAL DESIGN ARE TO BE REMOVED OR ABANDONED AS INDICATED ON THE PLANS.
- THE CONTRACTOR SHALL MAINTAIN AS-BUILT PLANS (WITH TIES) FOR ALL UNDERGROUND UTILITIES. THESE PLANS SHALL BE SUBMITTED TO THE OWNER AT THE COMPLETION OF THE PROJECT.
- THE CONTRACTOR SHALL REPAIR/RESTORE ALL DISTURBED AREAS (ON OR OFF THE SITE) AS A DIRECT OR INDIRECT RESULT OF THE CONSTRUCTION.
- ALL GRASSED AREAS SHALL BE MAINTAINED UNTIL FULL VEGETATION IS ESTABLISHED.
- MAINTAIN ALL TREES OUTSIDE OF CONSTRUCTION LIMITS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK NECESSARY FOR COMPLETE AND OPERABLE FACILITIES AND UTILITIES.
- IN ADDITION TO THE REQUIREMENTS SET IN THESE PLANS AND SPECIFICATIONS, THE CONTRACTOR SHALL COMPLETE THE WORK IN ACCORDANCE WITH ALL PERMIT CONDITIONS, LOCAL PUBLIC WORKS STANDARDS AND ALL CONSTRUCTION SAFETY REGULATIONS.
- ANY DEWATERING NECESSARY FOR THE COMPLETION OF THE NETWORK SHALL BE CONSIDERED AS PART OF THE CONTRACT, AND SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- IF THERE ARE ANY CONFLICTS OR INCONSISTENCIES WITH THE PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR VERIFICATION BEFORE WORK CONTINUES ON THE ITEMS IN QUESTION.
- ALL SYSTEM COMPONENTS (TANKS, PIPES, JOINTS) SHALL BE WATERTIGHT.
- CONTRACTOR TO ADJUST ANY POTABLE WATER LINE CROSSINGS AND CONSULT WITH ENGINEER TO MEET REQUIREMENTS SHOWN ON THE DETAIL SHEET "WATER/SEWER CROSSING" DETAIL.
- SEWER LATERAL CONNECTIONS ARE SOMETIMES NOT SHOWN FOR CLARITY. CONTRACTOR TO CONSULT WITH ENGINEER AND SUPPLY BENDS, CLEANOUTS, ETC. AS NECESSARY TO FACILITATE PROPER CONNECTION BETWEEN FOUNDATION WALL AND SEWER MAIN LINE.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH ALL RELEVANT PARTIES (INCLUDING, BUT NOT LIMITED TO OWNER, ARCHITECT AND UTILITY COMPANIES) TO DETERMINE FINAL LAYOUT AND DESIGN.
- DESIGN AND CONSTRUCTION OF PEDESTRIAN WALKS, RAMPS AND DECKS BETWEEN BUILDINGS AND PARKING LOTS IS PROVIDED BY THE ARCHITECT AND INCORPORATED INTO THE BUILDING DESIGN.
- ALL CURB STOP VALVES TO BE INSTALLED WITH ACCESS COVER AT FINISHED GRADE.
- ALL WATER LINE TAPS SHALL BE LIVE TAPS; EXISTING WATER LINE MUST REMAIN IN SERVICE DURING CONNECTION, UNLESS INDICATED OTHERWISE.
- ROOF DOWNSPOUT CAN CONNECT TO ROOF DRAIN MANIFOLD (RD) AS DETERMINED BY ARCHITECT AND OWNER. THIS CONNECTION PIPE IS INCLUDED AS PART OF THE DESIGN PLAN BUT NOT SHOWN TO ALLOW FLEXIBILITY IN LOCATION AS NEEDED.
- THRUST BLOCKS FOR PRESSURE LINES NOT SHOWN FOR CLARITY. PROVIDE THRUST BLOCKS AT ALL BENDS, TEE AND REDUCES. PROJECT ENGINEER TO OBSERVE ALL THRUST BLOCKS PRIOR TO BACKFILL.
- WATER MAIN OPERATED AT HIGH PRESSURE. ALL BUILDINGS SHALL CONFIRM STATIC INTAKE PRESSURE AND PROVIDE PRESSURE-REDUCING VALVES AS DEEMED APPROPRIATE BY THE MECHANICAL ENGINEER (OR ARCHITECT).
- CONTRACTOR TO SUPPLY DAYLIGHT PIPING FOR FOOTING DRAINS WITHIN CONSTRUCTION LIMITS. THE EXACT LOCATION MAY NOT BE CRITICAL. COORDINATE WITH OWNER AND PROJECT ENGINEER.
- FOOTING DRAINS AROUND BUILDING MAY BE SHOWN (BECAUSE IT IS WITHIN THE 5' ZONE AROUND BUILDING). FOOTING DRAINS AND PIPE TO DAYLIGHT SHALL BE INCLUDED EVEN IF NOT SHOWN. DAYLIGHT PIPE LOCATION TO SHALE MAY NOT BE CRITICAL SO LONG AS IT DOES NOT CREATE ANY CONTACT WITH OTHER UTILITIES, OR IMPACT ENVIRONMENTALLY SENSITIVE AREAS SUCH AS WETLANDS.
- SEWER CONNECTIONS TO EXISTING MANHOLES SHALL INCLUDE WATERTIGHT CONNECTIONS. REFORMING INVERT TO PROVIDE SMOOTH FLOW STREAM AND TESTING TO ENSURE STRUCTURE IS WATERTIGHT. IF AN EXISTING MANHOLE IS FOUND NOT TO BE WATERTIGHT IT SHALL BE EXPOSED AND REPAIRED ON THE OUTSIDE, PRIOR TO CONNECTING TO EXISTING MANHOLES. SUBMIT SHOP DRAWINGS ON CORE LOCATION, ANY REQUIRED PIPING (FOR DROP MANHOLES) AND CHANGES TO INVERT FORM.
- FINAL RIMS OF SEWER MANHOLES AND WATER VALVES SHALL BE CONFIRMED AND COORDINATED WITH FINAL SITE GRADING. MINOR ADJUSTMENTS FROM DESIGN GRADES MAY BE REQUIRED BY OWNER OR ENGINEER AND SHALL BE INCLUDED.
- ROCK REMOVAL WORK FOR BUILDERS UNDER 2.5 CUBIC YARDS IS INCLUDED AS PART OF EXCAVATION. ANY ROCK REMOVAL FOR 2.5 CUBIC YARDS OR GREATER SHALL BE TESTED AS LEDGE REMOVAL. THIS SHOULD BE REVIEWED AND AGREED UPON BY OWNER PRIOR TO CONDUCTING ROCK REMOVAL.
- THE GENERAL CONTRACTOR IS REQUIRED TO CONFORM TO THE STRICTEST INTERPRETATION OF THE CONTRACT DRAWINGS, SPECIFICATION, PERMITS AND CONSTRUCTION CONTRACT. ALL EARTH MATERIAL RECEIVED OR DISPOSED FROM OUTSIDE SOURCES SHALL COMPLY WITH APPLICABLE PERMITS AND REGULATIONS. SHOP DRAWING SUBMITTALS SHALL INCLUDE CONTRACTOR'S CERTIFICATION STATEMENT OF COMPLIANCE AND COPIES OF RELEVANT PERMITS FOR OUTSIDE SOURCES.
- CONTRACTOR SHALL PAY FOR ALL REQUIRED TESTING. THIS SHALL INCLUDE BUT IS NOT LIMITED TO: SOIL TESTING, COMPACTION TESTING, SIEVE ANALYSIS, CONCRETE TESTING, ASPHALT PENETRATION TESTING, BACTERIOLOGICAL TESTING FOR WATER AND OTHER TESTING AS PART OF STANDARD PRACTICE FOR A CONSTRUCTION PROJECT OF THIS NATURE, UNLESS INDICATED OTHERWISE AND APPROVED BY THE OWNER.

CONSTRUCTION PHASE:

LISTED BELOW IS A BRIEF SUMMARY OF CONSTRUCTION PHASE REQUIREMENTS. THIS LIST IS NOT INTENDED TO BE ALL-INCLUSIVE. CONSTRUCTION SPECIFICATIONS, PERMIT REQUIREMENTS AND SUBSEQUENT CONTRACTUAL AGREEMENTS FROM PARTIES INVOLVED SHALL PREVAIL.

PRE-CONSTRUCTION

- OWNER TO ESTABLISH SCOPE OF SERVICES WITH PROJECT ENGINEER(S)
- OWNER TO IDENTIFY WORK SCOPE AND SCHEDULE
- UPON OWNER REQUEST, ASSIST WITH CONTRACTOR BID AND SELECTION PROCESS
- FINALIZE PLANS FOR CONSTRUCTION READINESS INCLUDING SPECIFICATIONS
- MEETING BETWEEN OWNER, ENGINEER(S), CONTRACTOR(S), ARCHITECT(S), REGULATORY AUTHORITIES AND OTHER PERTINENT PARTIES TO REVIEW AND DISCUSS THE WORK

PRE-CONSTRUCTION MEETING

- CONTRACTOR TO IDENTIFY SUBCONTRACTORS
- CONTRACTOR TO ESTABLISH SCHEDULE
- CONTRACTOR TO DESIGNATE RESPONSIBLE PERSONNEL
- CONFIRM PROCEDURE FOR RFIs, CHANGE ORDERS, EXTRAS AND PAY REQUESTS
- CONTRACTOR TO SUBMIT SHOP DRAWINGS
- CONTRACTOR TO OUTLINE SAFETY, SECURITY, AND WORKING HOURS
- CONTRACTOR OR OWNER TO IDENTIFY TESTING COMPANY

CONSTRUCTION PHASE

- INITIAL CONTROL SUPPLIED BY OWNER AND CONTRACTOR RESPONSIBLE FOR LAYOUT
- OWNER TO PROVIDE PROJECT ENGINEER TO OBSERVE CONSTRUCTION PERIODICALLY, DURING CRITICAL PHASES AND TESTING
- WEEKLY JOB MEETINGS DURING CONSTRUCTION
- OWNER TO PROVIDE PROJECT ENGINEER TO REVIEW AND DISCUSS PLANS, ANSWER QUESTIONS, RESPOND TO CHANGES AND OTHER BUSINESS COMMON TO CONSTRUCTION SERVICES
- OBSERVE TESTS AND COLLECT RESULTS
- OWNER AND CONTRACTOR TO COMPLY WITH PERMITS

TRUPELL CONSULTING ENGINEERS
418 BLAIR ST.
BURLINGTON, VT 05401
Tel: 802-249-1111
Fax: 802-249-1112
www.truconsult.com

Revision No. Description

PRICE
SEP 2
DEPARTI
PLANNING

Use of these Drawings
1. Unless otherwise noted, these drawings are preliminary plans. They are not intended to be used for construction. They are not intended to be used for construction. They are not intended to be used for construction.

2. By use of these drawings, the Owner represents and accepts the drawings, and has no liability for any errors or omissions. The attention of TCE is drawn to the fact that the drawings are preliminary and subject to change without notice.

3. Owner and Architect location of buildings is minimum five (5) feet from utility connection.

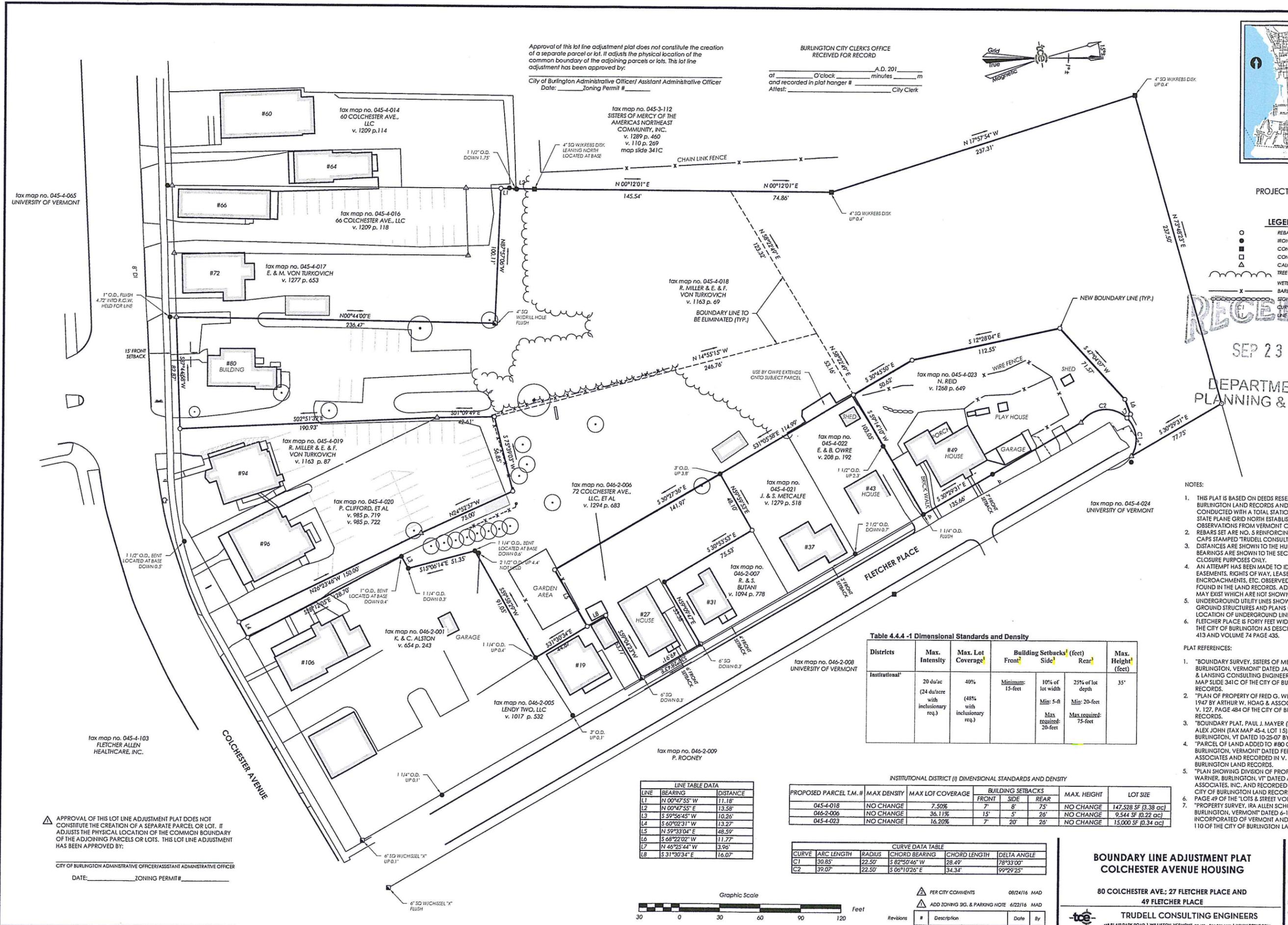
4. Prior to using these drawings, the user shall contact TCE to ensure these plans do not conflict with current revisions.

5. These Drawings are for informational use only. They are not intended to be used for construction. They are not intended to be used for construction.

Project Title: **Colchester H Burlington**

Sheet Title: **Leger**

Date: _____
Scale: _____
Project Number: _____
Drawn By: _____
Project Engineer: _____
Approved By: _____
Field Book: _____



Approval of this lot line adjustment plat does not constitute the creation of a separate parcel or lot. It adjusts the physical location of the common boundary of the adjoining parcels or lots. This lot line adjustment has been approved by:

City of Burlington Administrative Officer/ Assistant Administrative Officer
 Date: _____ Zoning Permit # _____

BURLINGTON CITY CLERK'S OFFICE
 RECEIVED FOR RECORD

of _____ O'clock _____ A.D. 201 _____
 minutes _____ m
 and recorded in plat hanger # _____
 Attest: _____ City Clerk



PROJECT

- LEGEND**
- REBAR
 - IRON
 - CONN.
 - CONN.
 - CALC.
 - TREE I
 - WETL.
 - BARB.
 - STON.
 - CURV.
 - LINE I

RECEIVED
 SEP 23
 DEPARTMENT OF PLANNING & DEVELOPMENT

- NOTES:**
- THIS PLAT IS BASED ON DEEDS RECORDED IN BURLINGTON LAND RECORDS AND CONDUCTED WITH A TOTAL STATION STATE PLANE GRID NORTH ESTABLISHED OBSERVATIONS FROM VERMONT CAPS STAMPED TRUDELL CONSULTING ENGINEERS. DISTANCES ARE SHOWN TO THE HUB BEARINGS ARE SHOWN TO THE SECTION CLOSURE PURPOSES ONLY.
 - AN ATTEMPT HAS BEEN MADE TO IDENTIFY EASEMENTS, RIGHTS OF WAY, LEASE ENCROACHMENTS, ETC. OBSERVED FOUND IN THE LAND RECORDS. ADJACENT PROPERTY WHICH ARE NOT SHOWN UNDERGROUND UTILITY LINES SHOW GROUND STRUCTURES AND PLANS (LOCATION OF UNDERGROUND LINE FLETCHER PLACE IS FORTY FEET WIDE THE CITY OF BURLINGTON AS DESCRIBED IN VOLUME 74 PAGE 435).

- PLAT REFERENCES:**
- "BOUNDARY SURVEY, SISTERS OF MERCY OF THE SISTERS OF MERCY OF THE AMERICAS NORTH-EAST COMMUNITY, INC. DATED JANUARY 1947 BY ARTHUR W. HOAG & ASSOCIATES, INC. AND RECORDED IN VOLUME 127, PAGE 484 OF THE CITY OF BURLINGTON LAND RECORDS.
 - "PLAN OF PROPERTY OF FRED G. WELLS, JR. DATED 10-25-07 BY TRUDELL CONSULTING ENGINEERS AND RECORDED IN VOLUME 110 OF THE CITY OF BURLINGTON LAND RECORDS.
 - "PLAN SHOWING DIVISION OF PROPERTY OF PROP. WARNER, BURLINGTON, VT DATED 1947 BY ARTHUR W. HOAG & ASSOCIATES, INC. AND RECORDED IN VOLUME 127, PAGE 484 OF THE CITY OF BURLINGTON LAND RECORDS.
 - "PROPERTY SURVEY, IRA ALLEN SCHUCHMAN & ASSOCIATES, INC. DATED 6-11-11 INCORPORATED OF VERMONT AND RECORDED IN VOLUME 110 OF THE CITY OF BURLINGTON LAND RECORDS.

This plat meets the requirements of 27 V.S.A. 1403.

(Signature)

APPROVAL OF THIS LOT LINE ADJUSTMENT PLAT DOES NOT CONSTITUTE THE CREATION OF A SEPARATE PARCEL OR LOT. IT ADJUSTS THE PHYSICAL LOCATION OF THE COMMON BOUNDARY OF THE ADJOINING PARCELS OR LOTS. THIS LOT LINE ADJUSTMENT HAS BEEN APPROVED BY:

CITY OF BURLINGTON ADMINISTRATIVE OFFICER/ ASSISTANT ADMINISTRATIVE OFFICER
 DATE: _____ ZONING PERMIT # _____

Table 4.4.4 -1 Dimensional Standards and Density

Districts	Max. Intensity	Max. Lot Coverage	Building Setbacks (feet)			Max. Height (feet)
			Front	Side	Rear	
Institutional ¹	20 du/ac (24 du/acre with inclusionary req.)	40% (48% with inclusionary req.)	Minimum: 15-foot	10% of lot width Min: 5-ft Max required: 20-foot	25% of lot depth Min: 20-foot Max required: 75-foot	35'

INSTITUTIONAL DISTRICT (I) DIMENSIONAL STANDARDS AND DENSITY

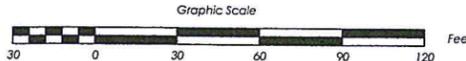
PROPOSED PARCEL T.M. #	MAX DENSITY	MAX LOT COVERAGE	BUILDING SETBACKS			MAX. HEIGHT	LOT SIZE
			FRONT	SIDE	REAR		
045-4-018	NO CHANGE	7.50%	7'	8'	75'	NO CHANGE	147,528 SF (3.38 ac)
046-2-006	NO CHANGE	36.11%	15'	5'	26'	NO CHANGE	9,544 SF (0.22 ac)
045-4-023	NO CHANGE	16.20%	7'	20'	26'	NO CHANGE	15,000 SF (0.34 ac)

CURVE DATA TABLE

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH	DELTA ANGLE
C1	30.85'	22.50'	S 82°50'46" W	28.49'	78°33'00"
C2	39.07'	22.50'	S 06°10'26" E	34.34'	99°29'25"

LINE TABLE DATA

LINE	BEARING	DISTANCE
L1	N 00°47'55" W	11.18'
L2	N 00°47'55" E	13.58'
L3	S 59°56'45" W	10.26'
L4	S 60°02'31" W	13.27'
L5	N 59°33'04" E	48.59'
L6	S 68°22'02" W	11.77'
L7	N 46°25'44" W	3.96'
L8	S 31°30'34" E	16.07'

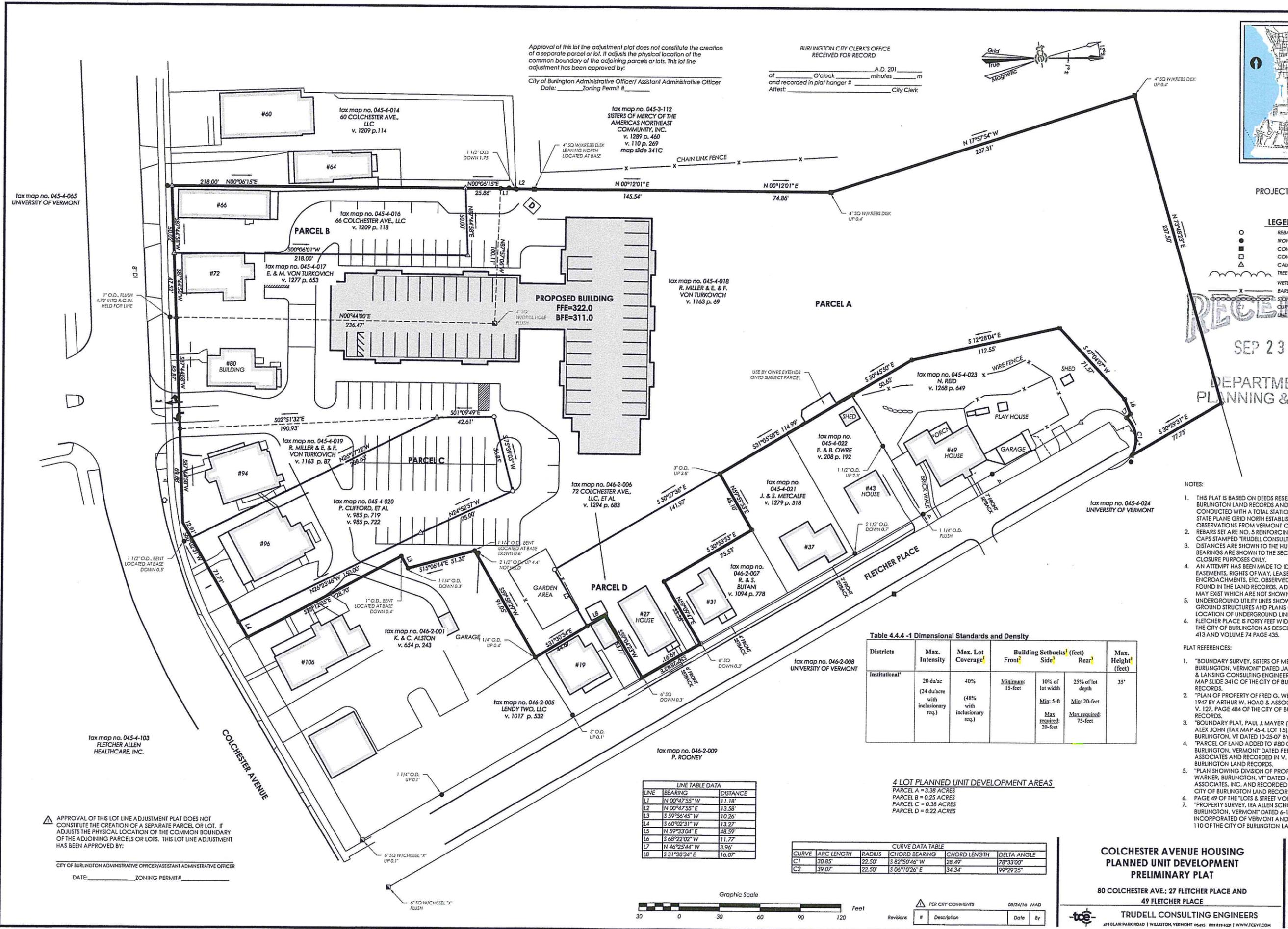


PER CITY COMMENTS 08/24/16 MAD
 ADD ZONING SIG. & PARKING NOTE 6/22/16 MAD

**BOUNDARY LINE ADJUSTMENT PLAT
 COLCHESTER AVENUE HOUSING**

80 COLCHESTER AVE.; 27 FLETCHER PLACE AND
 49 FLETCHER PLACE

TRUDELL CONSULTING ENGINEERS
 478 BLAIR ROAD | WILKINSON, VERMONT 05495 | 802.879.6331 | WWW.TCEVT.COM



Approval of this lot line adjustment plat does not constitute the creation of a separate parcel or lot. It adjusts the physical location of the common boundary of the adjoining parcels or lots. This lot line adjustment has been approved by:

City of Burlington Administrative Officer/ Assistant Administrative Officer
Date: _____ Zoning Permit # _____

BURLINGTON CITY CLERK'S OFFICE
RECEIVED FOR RECORD

of _____ O'clock _____ A.D. 201 _____
minutes _____ m
and recorded in plat hanger # _____
Attest: _____ City Clerk

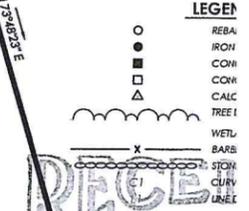


This plat meets the requirements of 27 V.S.A. 1403.

(Signature)

APPROVAL OF THIS LOT LINE ADJUSTMENT PLAT DOES NOT CONSTITUTE THE CREATION OF A SEPARATE PARCEL OR LOT. IT ADJUSTS THE PHYSICAL LOCATION OF THE COMMON BOUNDARY OF THE ADJOINING PARCELS OR LOTS. THIS LOT LINE ADJUSTMENT HAS BEEN APPROVED BY:

CITY OF BURLINGTON ADMINISTRATIVE OFFICER/ASSISTANT ADMINISTRATIVE OFFICER
DATE: _____ ZONING PERMIT # _____



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DEPARTMENT OF PLANNING & DEVELOPMENT

- NOTES:
1. THIS PLAT IS BASED ON DEEDS RESEARCH BURLINGTON LAND RECORDS AND CONDUCTED WITH A TOTAL STATION STATE PLANE GRID NORTH ESTABLISH OBSERVATIONS FROM VERMONT CONTROL POINTS.
 2. REBAR SET ARE NO. 5 REINFORCING CHAIRS STAMPED TRUDELL CONSULTING DISTANCES ARE SHOWN TO THE HUB BEARINGS ARE SHOWN TO THE SECTION CLOSURE PURPOSES ONLY.
 3. AN ATTEMPT HAS BEEN MADE TO IDENTIFY EASEMENTS, RIGHTS OF WAY, LEASE ENCROACHMENTS, ETC. OBSERVED FOUND IN THE LAND RECORDS. ADDITIONAL EASEMENTS WHICH ARE NOT SHOWN UNDERGROUND UTILITY LINES SHOW GROUND STRUCTURES AND PLANS (LOCATION OF UNDERGROUND LINE FLETCHER PLACE IS FORTY FEET WIDE THE CITY OF BURLINGTON AS DESCRIBED IN VOLUME 74 PAGE 435).
- PLAT REFERENCES:
1. "BOUNDARY SURVEY, SISTERS OF MERCY OF BURLINGTON, VERMONT" DATED JANUARY 1947 BY ARTHUR W. HOAG & ASSOCIATES, INC. AND RECORDED IN BURLINGTON LAND RECORDS.
 2. "PLAN OF PROPERTY OF FRED G. WEEB" DATED 1947 BY ARTHUR W. HOAG & ASSOCIATES, INC. AND RECORDED IN BURLINGTON LAND RECORDS.
 3. "BOUNDARY PLAT, PAUL J. MAYER" DATED 10-25-07 BY BURLINGTON, VERMONT DATED FEBRUARY 2008 AND RECORDED IN V. 1 BURLINGTON LAND RECORDS.
 4. "PLAN SHOWING DIVISION OF PROPERTY OF WARNER, BURLINGTON, VT" DATED 1947 BY ARTHUR W. HOAG & ASSOCIATES, INC. AND RECORDED IN BURLINGTON LAND RECORDS.
 5. "PROPERTY SURVEY, IRA ALLEN SCHUCH" DATED 6-11-11 BY BURLINGTON, VERMONT DATED 6-11-11 INCORPORATED OF VERMONT AND 110 OF THE CITY OF BURLINGTON LAND RECORDS.

Table 4.4.4 -1 Dimensional Standards and Density

Districts	Max. Intensity	Max. Lot Coverage	Building Setbacks (feet)			Max. Height (feet)
			Front	Side	Rear	
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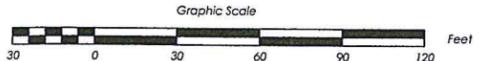
4 LOT PLANNED UNIT DEVELOPMENT AREAS
 PARCEL A = 3.38 ACRES
 PARCEL B = 0.25 ACRES
 PARCEL C = 0.38 ACRES
 PARCEL D = 0.22 ACRES

LINE TABLE DATA

LINE	BEARING	DISTANCE
L1	N 00°47'55" W	11.18'
L2	N 00°47'55" E	13.58'
L3	S 59°56'45" W	10.26'
L4	S 60°02'31" W	13.27'
L5	N 59°33'04" E	48.59'
L6	S 68°22'02" W	11.77'
L7	N 46°25'44" E	3.96'
L8	S 31°30'34" E	16.07'

CURVE DATA TABLE

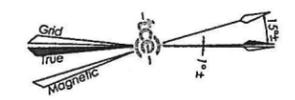
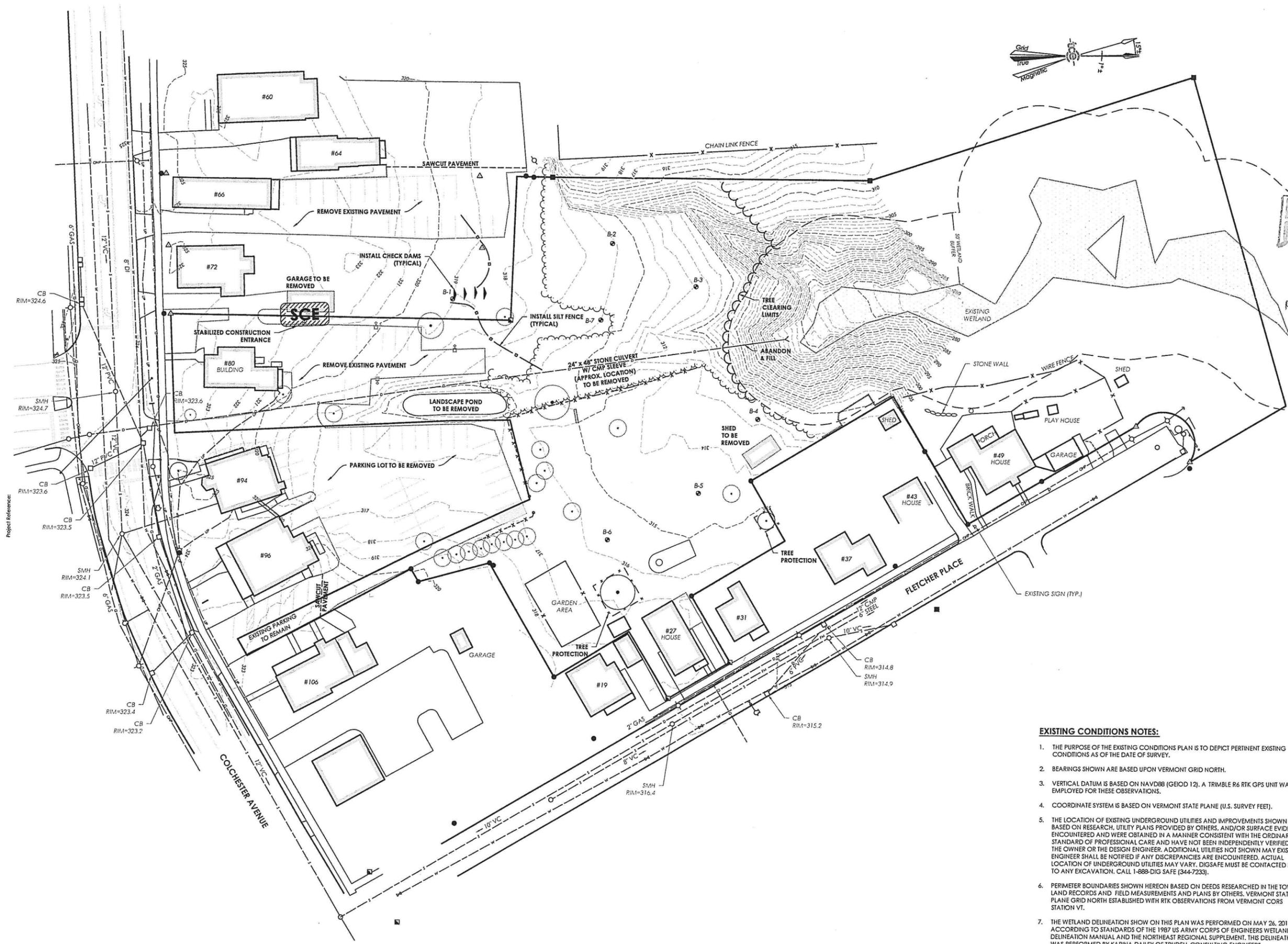
CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH	DELTA ANGLE
C1	30.85'	22.50'	S 82°50'46" W	28.47'	78°33'00"
C2	39.07'	22.50'	S 06°10'26" E	34.34'	99°29'25"



PER CITY COMMENTS

Revisions	#	Description	Date	By

COLCHESTER AVENUE HOUSING PLANNED UNIT DEVELOPMENT PRELIMINARY PLAT
 80 COLCHESTER AVE.; 27 FLETCHER PLACE AND 49 FLETCHER PLACE
 TRUDELL CONSULTING ENGINEERS
 478 BLAIR PARK ROAD | WILMINGTON, VERMONT 05495 802.879.4331 | WWW.TCEVT.COM



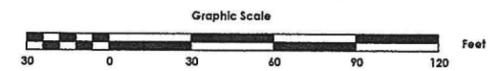
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DEPARTMENT
PLANNING &

Use of these drawings is limited to the project for which they were prepared. They are not to be used for any other project without the written consent of the engineer. The engineer is not responsible for any errors or omissions in these drawings or for any consequences arising from their use. The user of these drawings is responsible for obtaining all necessary permits and for complying with all applicable laws and regulations. The engineer is not responsible for any delays or interruptions in the construction of the project. The user of these drawings is responsible for obtaining all necessary permits and for complying with all applicable laws and regulations. The engineer is not responsible for any delays or interruptions in the construction of the project.

Project Reference:
CB RIM=324.6
SMH RIM=324.7
CB RIM=323.6
CB RIM=323.5
SMH RIM=324.1
CB RIM=323.5
CB RIM=323.4
CB RIM=323.2
SMH RIM=316.4
CB RIM=314.8
SMH RIM=314.9
CB RIM=315.2

EXISTING CONDITIONS NOTES:

1. THE PURPOSE OF THE EXISTING CONDITIONS PLAN IS TO DEPICT PERTINENT EXISTING CONDITIONS AS OF THE DATE OF SURVEY.
2. BEARINGS SHOWN ARE BASED UPON VERMONT GRID NORTH.
3. VERTICAL DATUM IS BASED ON NAVD83 (GEOID 12). A TRIMBLE R6 RTK GPS UNIT WAS EMPLOYED FOR THESE OBSERVATIONS.
4. COORDINATE SYSTEM IS BASED ON VERMONT STATE PLANE (U.S. SURVEY FEET).
5. THE LOCATION OF EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS SHOWN ARE BASED ON RESEARCH, UTILITY PLANS PROVIDED BY OTHERS, AND/OR SURFACE EVIDENCE ENCOUNTERED AND WERE OBTAINED IN A MANNER CONSISTENT WITH THE ORDINARY STANDARD OF PROFESSIONAL CARE AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR THE DESIGN ENGINEER. ADDITIONAL UTILITIES NOT SHOWN MAY EXIST. ENGINEER SHALL BE NOTIFIED IF ANY DISCREPANCIES ARE ENCOUNTERED. ACTUAL LOCATION OF UNDERGROUND UTILITIES MAY VARY. DIGSAFE MUST BE CONTACTED PRIOR TO ANY EXCAVATION. CALL 1-888-DIG SAFE (344-7233).
6. PERIMETER BOUNDARIES SHOWN HEREON BASED ON DEEDS RESEARCHED IN THE TOWN OF LAND RECORDS AND FIELD MEASUREMENTS AND PLANS BY OTHERS. VERMONT STATE PLANE GRID NORTH ESTABLISHED WITH RTK OBSERVATIONS FROM VERMONT CORS STATION VT.
7. THE WETLAND DELINEATION SHOWN ON THIS PLAN WAS PERFORMED ON MAY 26, 2016. ACCORDING TO STANDARDS OF THE 1987 US ARMY CORPS OF ENGINEERS WETLAND DELINEATION MANUAL AND THE NORTHEAST REGIONAL SUPPLEMENT. THIS DELINEATION WAS PERFORMED BY KARINA DAILEY OF TRUDELL CONSULTING ENGINEERS.



TRUDELL C
478 BLAIR ST
BURLINGTON, VT 05401

Revisions
No. Description

Project Title

Colchester
H
Burlington

Sheet Title

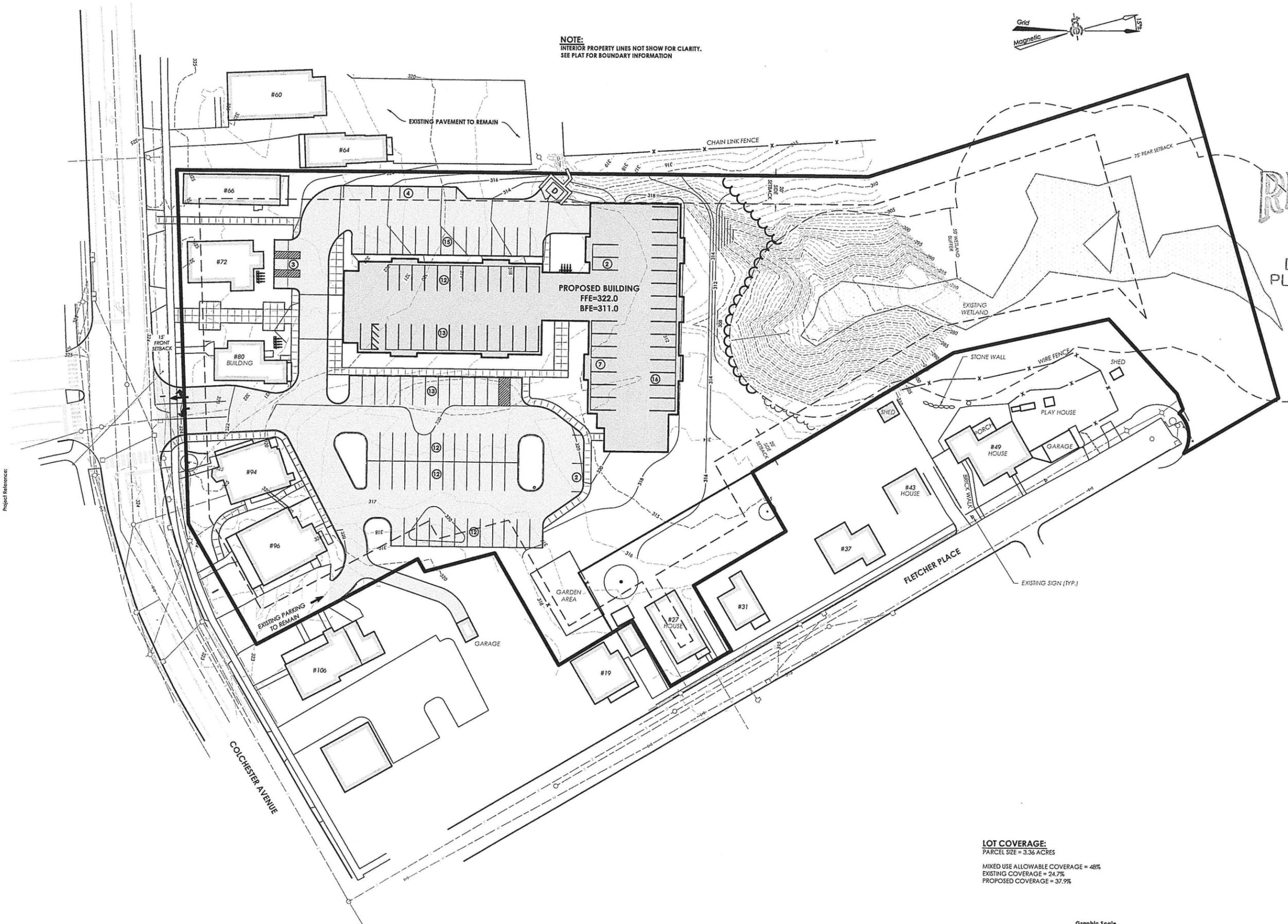
Existing & Demolition

Date:
Scale:
Project Number:
Drawn By:
Project Engineer:
Approved By:
Field Book:

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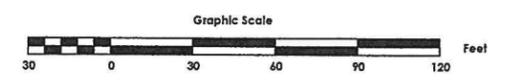
NOTE:
INTERIOR PROPERTY LINES NOT SHOW FOR CLARITY.
SEE PLAT FOR BOUNDARY INFORMATION



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PLANNING &

- 1. Use of these drawings is limited to the preliminary planning, utility, and/or approval. They are not intended as such or marked as such.
- 2. By use of these drawings the Owner represents and accepted the conditions, and have no including but not limited to insure these plans are not limited to, control owner/contractor or plans, private and public for construction.
- 3. Owner and Architect location of buildings a minimum five (5) feet find utility connector.
- 4. Prior to using these drawings contact TCE to current revisions.
- 5. These Drawings are transferable. As instructed, furnish copies thereof, furnish changes to the drawings or omissions are the attention of TCE.
- 6. It is the User's responsibility to use most current revisions.

LOT COVERAGE:
PARCEL SIZE = 3.36 ACRES
MIXED USE ALLOWABLE COVERAGE = 48%
EXISTING COVERAGE = 24.7%
PROPOSED COVERAGE = 37.9%



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TRUDELL C
478 BLAIR ST

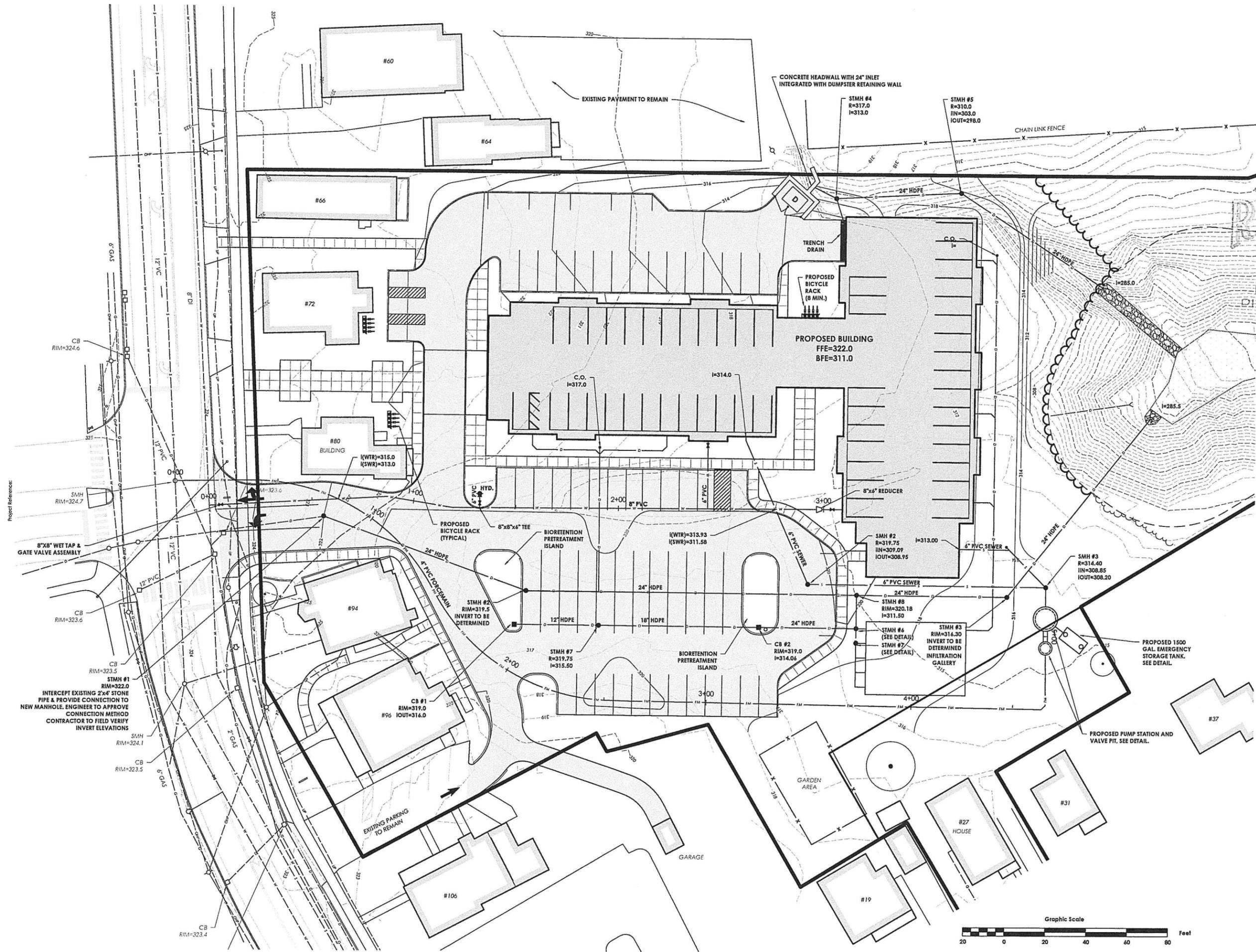
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Project Engineer:
Approved By:
Field Book:





Project Reference:

8"X8" WET TAP & GATE VALVE ASSEMBLY

STMH #1
RIM=322.0
INTERCEPT EXISTING 2x4" STONE PIPE & PROVIDE CONNECTION TO NEW MANHOLE. ENGINEER TO APPROVE CONNECTION METHOD. CONTRACTOR TO FIELD VERIFY INVERT ELEVATIONS

SMH RIM=324.1

CB RIM=323.5

SMH RIM=324.7

CB RIM=324.6

SMH RIM=323.6

CB RIM=323.6

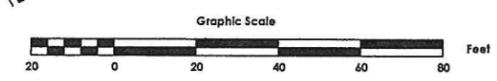
SMH RIM=323.5

CB RIM=323.5

SMH RIM=323.4

CB RIM=323.4

CB RIM=323.4



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TRUPELL C
478 BLAIR

Revisions
No. Description

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SEP 2
DEPARTI
PLANNING

- Use of these drawings is limited to the preliminary planning utility, and/or upon they are not intended as such or marked as such.
- By use of these drawings the Owner represents and accepts the responsibility for the design, and has no liability for any errors or omissions in the drawings or omissions on the part of the contractor or any other party.
- Owner and Architect location of buildings; minimum five (5) feet final utility connection.
- Prior to using these drawings, the user shall contact TCE for current revisions.
- These drawings are transferable. As such, copies thereof, furnished to the contractor or any other party, shall be the responsibility of the user and shall not be used for any other purpose without the written consent of the engineer.

Project Title

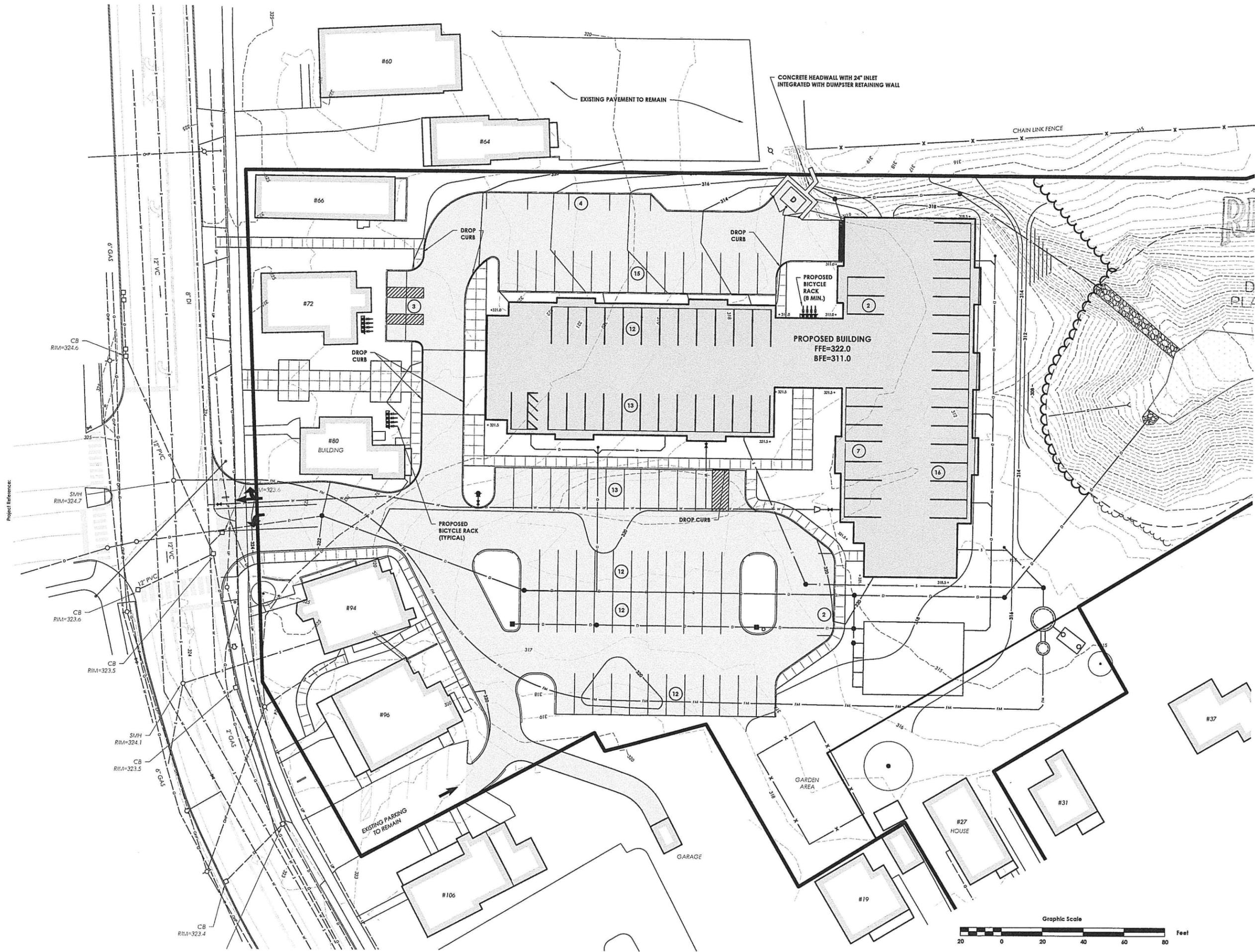
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Date:
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Project Number:
Drawn By:
Project Engineer:
Approved By:
Field Book:

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Project Reference:

CB
RIM=324.6

SMH
RIM=324.7

CB
RIM=323.6

CB
RIM=323.5

SMH
RIM=324.1

CB
RIM=323.5

CB
RIM=323.4

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PLANNING &

- Use of These Drawings
1. Unless otherwise noted, these drawings are preliminary planning, utilities, and/or approval. They are not intended as such or marked as such.
 2. By use of these drawings, the Owner represents and accepts the design, permits, and have no liability including but not limited to insure these plans, not limited to, control owner/contractor operations, permits and public construction.
 3. Owner and Architect location of buildings, minimum five (5) feet find utility connection.
 4. Prior to using these drawings, contact TCE for current revisions.
 5. These Drawings are transferable. As instructed, copies thereof, furnish changes to the drawings or omissions are the attention of TCE.
 6. It is the User's responsibility to review the most current revisions.

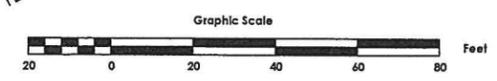
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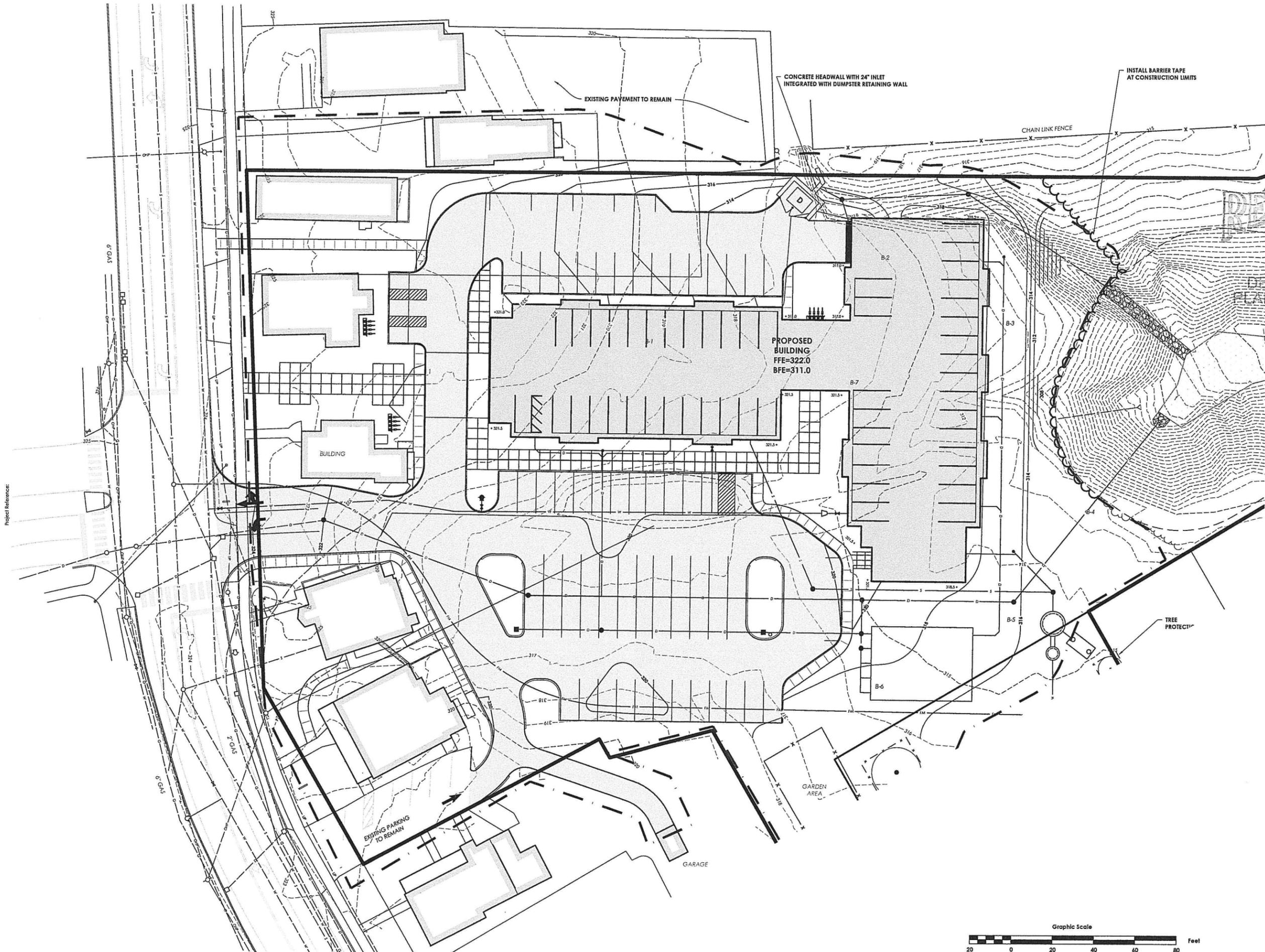
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Sheet Title:

Site
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Date:
Scale:
Project Number:
Drawn By:
Project Engineer:
Approved By:
Field Book:





Project Reference:

CONCRETE HEADWALL WITH 24" INLET
INTEGRATED WITH DUMPSTER RETAINING WALL

INSTALL BARRIER TAPE
AT CONSTRUCTION LIMITS

EXISTING PAVEMENT TO REMAIN

CHAIN LINK FENCE

PROPOSED BUILDING
FFE=322.0
BFE=311.0

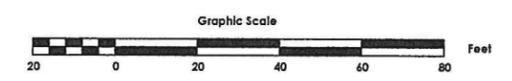
BUILDING

TREE PROTECTION

EXISTING PARKING
TO REMAIN

GARAGE

GARDEN AREA



TRUDELL CONSULTANTS
478 BLAIR

Revisions
No. Description

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DEPARTMENT OF
PLANNING & DEVELOPMENT

- 1. Use of these Drawings is limited to the preliminary planning utility, and/or approval. They are not intended as such or marked as such.
- 2. By use of these drawings, the Owner represents and accepts the responsibility, and has or shall have, including but not limited to, to insure these plans are not limited to, contractor or contractor's plans, private and public for construction.
- 3. Owner and Architect location of buildings minimum five (5) feet final utility connection.
- 4. Prior to using these drawings, the user shall contact TCE for current revisions.
- 5. These Drawings are transferable. As instructed hereof, furnish Changes to the drawings or omissions on the attention of TCE.
- 6. It is the User's responsibility to obtain the most current revision.

Project Title

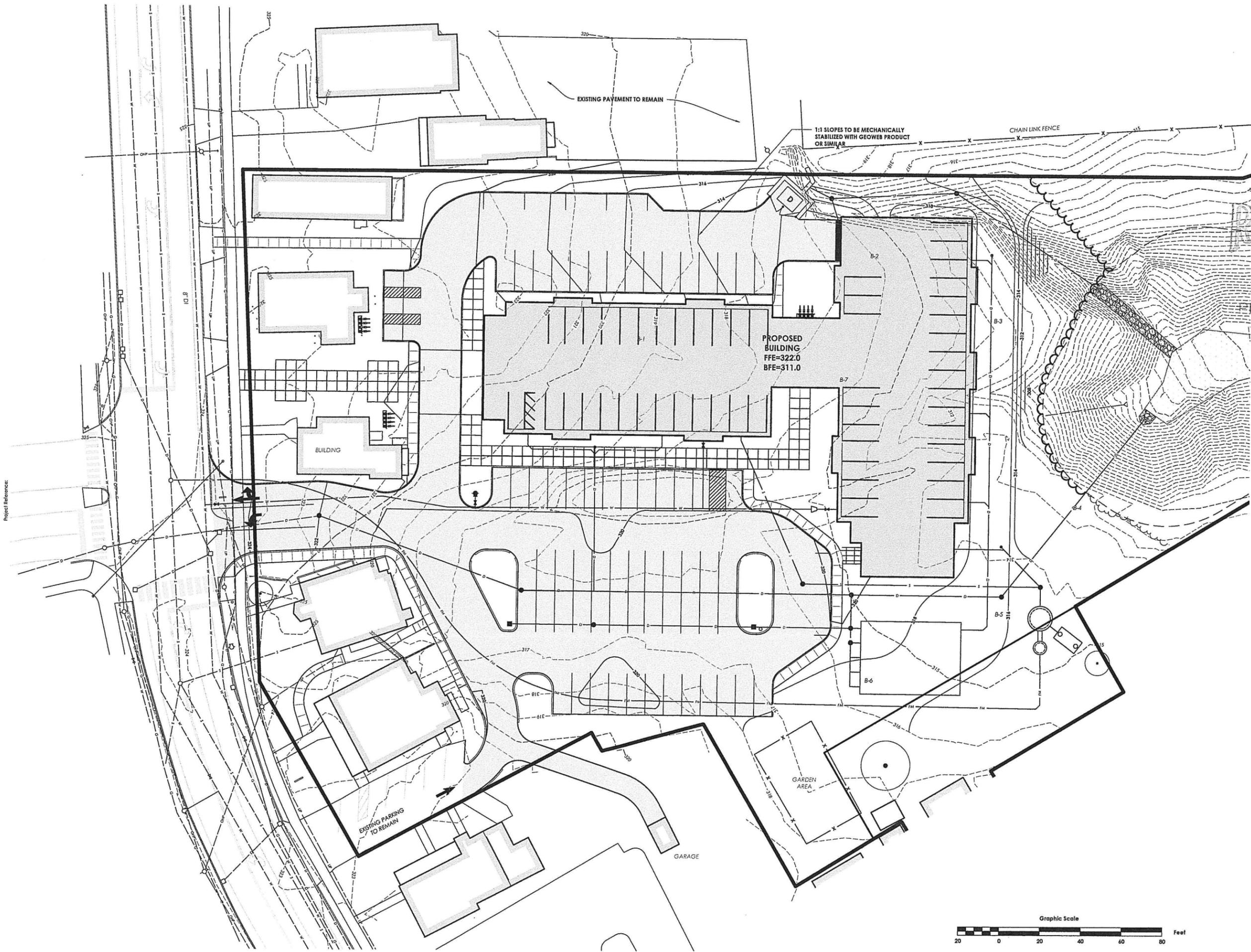
Colchester
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Sheet Title

EPSC CONSULTANTS

Date:
Scale:
Project Number:
Drawn By:
Project Engineer:
Approved By:
Field Book:





Project Reference:

t
TRUDELL C
478 BLAIR ST
BURLINGTON, VT 05401

Revisions
No. Description

RECEIVED
SEP 2 2010
DEPART
PLANNING

- Use of These Drawings:
1. Unless otherwise noted, these drawings are preliminary planning, utility, and/or approval drawings. They are not intended as such or marked as such.
2. By use of these drawings, the Owner represents and accepts the design and construction, and has the responsibility to insure these plans, not limited to, contain no errors or omissions and are suitable for construction.
3. Owner and Architect location of buildings: minimum five (5) feet from utility connection.
4. Prior to using these drawings, the User shall contact TCE for current revisions.
5. These Drawings are transferable. As first copies thereof, furnish changes to the drawings or omissions are the attention of TCE.
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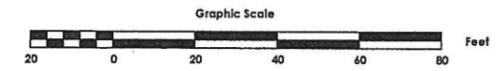
Project Title

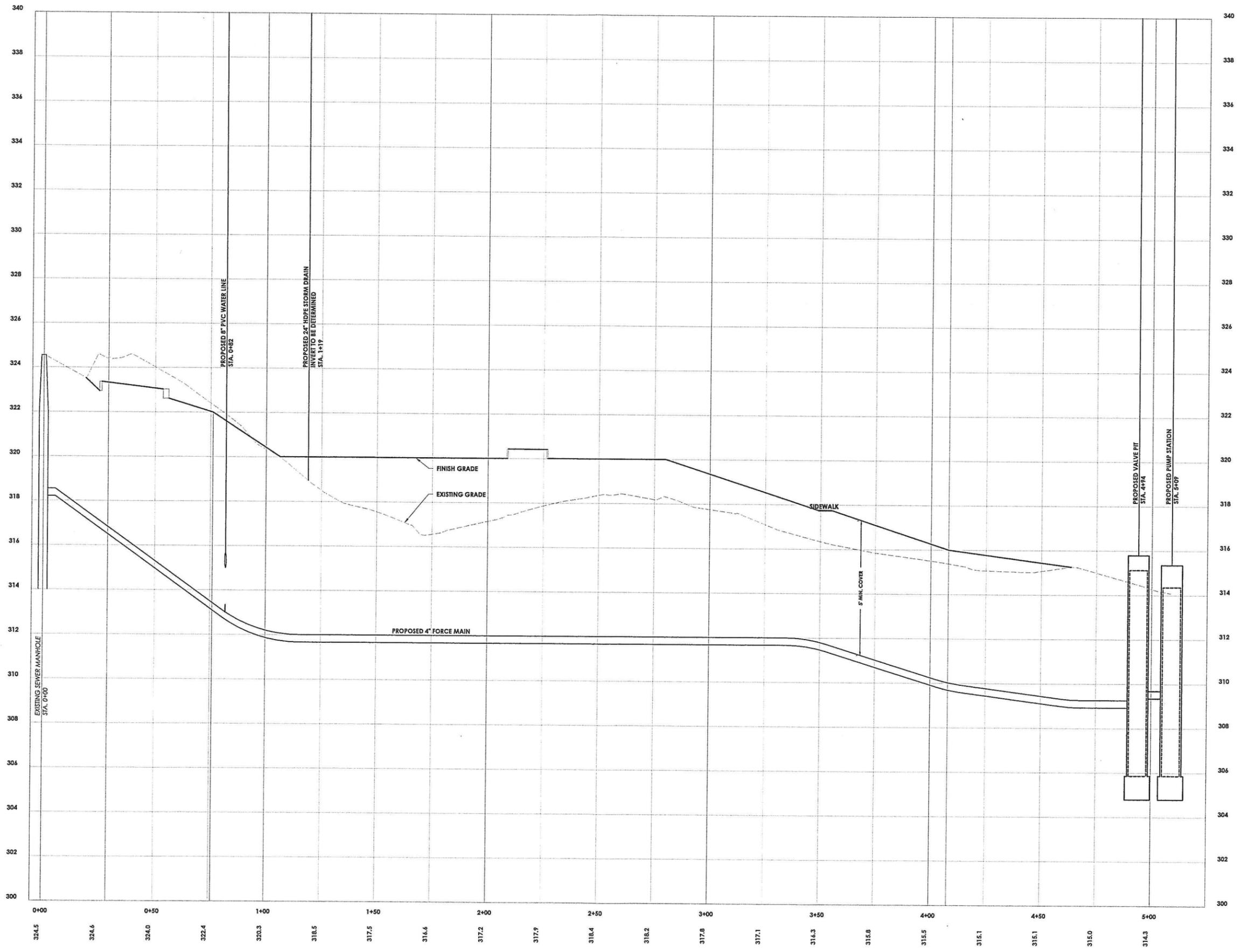
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Burlington**

Sheet Title

EPSC Station

Date:
Scale:
Project Number:
Drawn By:
Project Engineer:
Approved By:
Field Book:





4" SEWER FORCE MAIN PROFILE
 1" = 20' HORIZ.
 1" = 2' VERT.



TRUDELL C
478 BLAIR ST

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No. Description

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SEP 2

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PLANNING

1. Use of these drawings is preliminary planning, utility, and/or other. They are not intended as such or marked as such.
2. By use of these drawings, the Owner represents and accepts the design, and has included but not limited to these plans, not limited to, construction, private and public, for construction.
3. Owner and Architect location of buildings: minimum five (5) feet from utility connection.
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Project Title

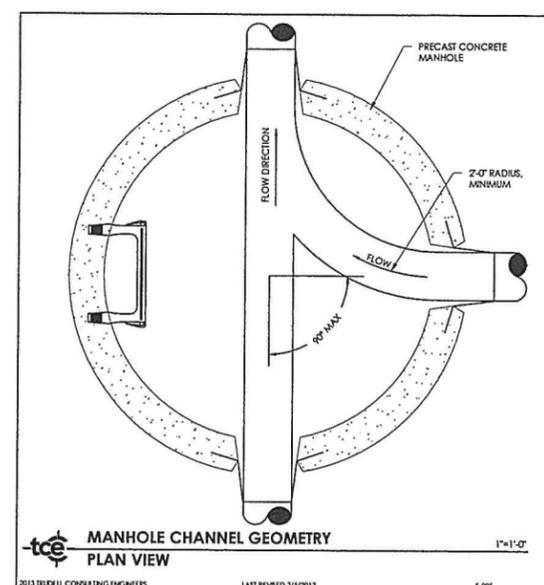
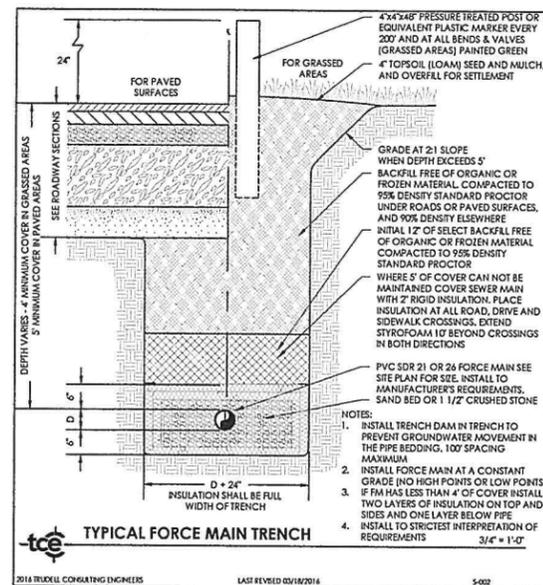
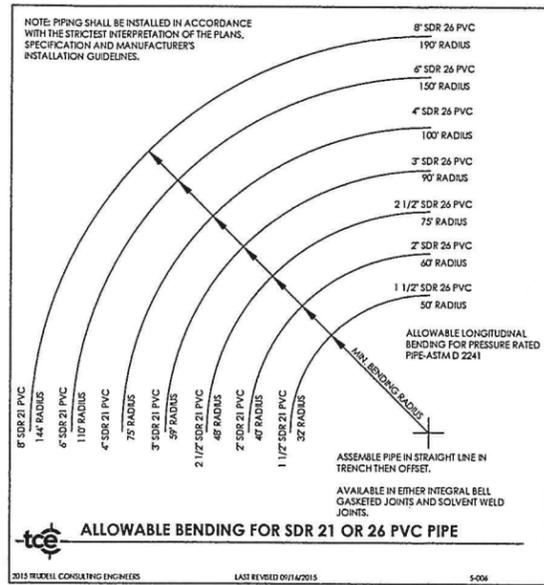
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Burlington**

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Date:
Scale:
Project Number:
Drawn By:
Project Engineer:
Approved By:
Field Book:





PRESSURE TEST

UPON COMPLETION OF CONSTRUCTION OF A FORCE MAIN, THE LINE SHALL BE PRESSURE AND LEAKAGE TESTED IN ACCORDANCE WITH THE FOLLOWING PROCEDURE:

AFTER THE PIPE HAS BEEN LAID, ALL NEWLY LAID PIPE OR ANY VALVED SECTION THEREOF SHALL BE SUBJECT TO A HYDROSTATIC PRESSURE OF AT LEAST 1.5 X THE HIGHEST WORKING PRESSURE IN THE SECTION

- TEST PRESSURE RESTRICTIONS, TEST PRESSURES SHALL:
 - NOT BE LESS THAN 50 PSI AT THE HIGHEST POINT ALONG THE TEST SECTION.
 - NOT EXCEED PIPE OR TRUST RESTRAINT DESIGN PRESSURES.
 - BE OF AT LEAST 2 (TWO) HOUR DURATION.
 - NOT VARY BY MORE THAN ± 5 PSI.
 - NOT EXCEED TWICE THE RATED PRESSURE OF THE VALVES WHEN THE PRESSURE BOUNDARY OF THE TEST SECTION INCLUDES CLOSED GATE VALVES.
- PRESSURIZATION:
 - EACH VALVED SECTION OF PIPE SHALL BE FILLED WITH WATER SLOWLY AND THE SPECIFIED TEST PRESSURE, BASED ON THE ELEVATION OF THE LOWEST POINT IN THE LINE OR SECTION UNDER TEST AND CORRECTED TO THE ELEVATION OF THE TEST GAUGE, SHALL BE APPLIED BY MEANS OF A PUMP CONNECTED TO THE PIPE.
 - AIR REMOVAL: BEFORE APPLYING THE SPECIFIED TEST PRESSURE, AIR SHALL BE EXPELLED COMPLETELY FROM THE PIPE VALVES.
 - EXAMINATION: ALL EXPOSED PIPE, FITTINGS, VALVES, AND JOINTS SHALL BE EXAMINED CAREFULLY DURING THE TEST. ANY DAMAGED OR DEFECTIVE PIPE, FITTINGS, OR VALVES, THAT ARE DISCOVERED FOLLOWING THE PRESSURE TEST SHALL BE REPAIRED OR REPLACED WITH SOUND MATERIAL AND THE TEST SHALL BE REPEATED AT NO EXPENSE TO OWNER.

LEAKAGE TEST

A LEAKAGE TEST SHALL BE CONDUCTED CONCURRENTLY WITH THE PRESSURE TESTS.

- LEAKAGE SHALL BE DEFINED AS THE QUANTITY OF WATER THAT MUST BE SUPPLIED INTO THE NEWLY LAID PIPE, OR ANY VALVED SECTION THEREOF, TO MAINTAIN PRESSURE WITHIN 5 PSI OF THE SPECIFIED TEST PRESSURE AFTER THE AIR IN THE PIPELINE HAS BEEN EXPELLED AND THE PIPE HAS BEEN FILLED WITH WATER.
- ALLOWABLE LEAKAGE: NO PIPE INSTALLATION SHALL BE ACCEPTED IF THE LEAKAGE IS GREATER THAN THAT DETERMINED BY THE FOLLOWING FORMULA:

$$L = \frac{ND \cdot P}{7.40D}$$

WHERE:

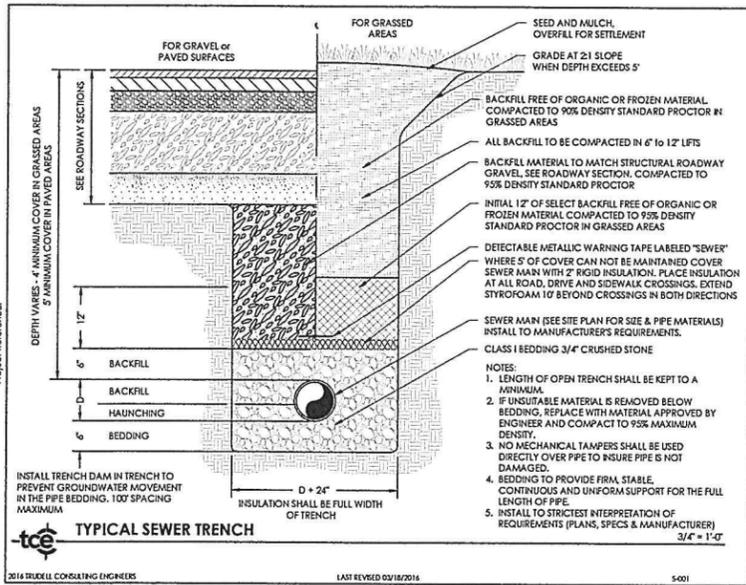
- L IS THE ALLOWABLE LEAKAGE, IN GALLONS PER HOUR;
- N IS THE NUMBER OF JOINTS IN THE LENGTH OF PIPELINE TESTED;
- D IS THE NOMINAL DIAMETER OF THE PIPE, IN INCHES; AND
- P IS THE AVERAGE TEST PRESSURE DURING THE LEAKAGE TEST, IN POUNDS PER SQUARE INCH GAUGE.

NOTE: IN THE EVENT THAT THE FORCE MAIN IS RELATIVELY SHORT (100 FEET OR LESS), THE PROJECT ENGINEER CAN UTILIZE DISCRETION IN TEST REQUIREMENTS.

TESTING FORCE MAINS

(ENVIRONMENTAL PROTECTION RULES CH 1, EFFECTIVE 9/29/07 SECTION 1-A-05(j))

2015 TRUDELL CONSULTING ENGINEERS LAST REVISED 09/16/2015 S-001



USE CLASS D (2500 PSI) CONCRETE FOR THRUST BLOCKS. PLACE 4 MIL. POLYETHYLENE BETWEEN FITTING AND THRUST BLOCK. PLACE THRUST BLOCK AGAINST UNDISTURBED TRENCH WALL - CONCRETE BEARING AREA ON FITTING TO BE A MINIMUM OF 1/2 SQUARE FOOT. THRUST BLOCKS BASED ON 50 PSI TEST PRESSURE IF CHANGE IN ELEVATION BETWEEN ANY 2 POINTS IN THE LINE IS GREATER THAN 1 1/2' THRUST BLOCKS WILL HAVE TO BE ENLARGED.

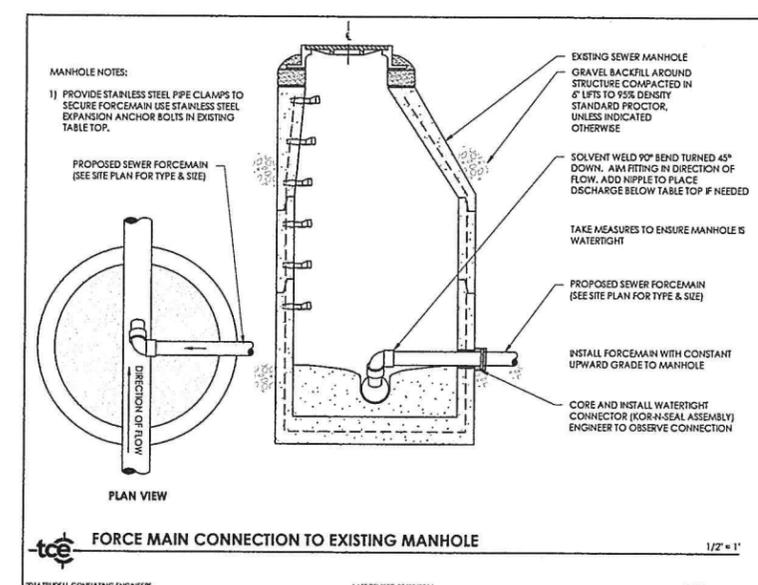
MINIMUM BEARING AREA IN SQUARE FEET ON UNDISTURBED TRENCH WALL

SOIL TYPE	SAFE BEARING LOAD LBS/FT. 2	2'		2 1/2'		3'		4'		6'	
		90°	45°	22.5°	90°	45°	22.5°	90°	45°	22.5°	
CLAY	1000	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.8	0.9	1.8
SAND	2000	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.5	2.0
GRAVEL	3000	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0
TILL	4000	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
SHALE	10000	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

NOTE: ENGINEER TO OBSERVE ALL THRUST BLOCKS PRIOR TO BACKFILL.

FORCE MAIN THRUST BLOCK SPECIFICATIONS

2015 TRUDELL CONSULTING ENGINEERS LAST REVISED 03/06/2013 S-015



AIR TESTING SEWERS

*ALL TESTING SHALL BE PERFORMED IN THE PRESENCE OF THE TOWN ENGINEER OR PUBLIC WORKS DEPARTMENT AND TRUDELL CONSULTING ENGINEERS (TCE). CONTRACTOR SHALL PRE-TEST SUCCESSFULLY PRIOR TO CONTACTING ENGINEER. THE PRE-TEST IS TO ENSURE PASSING RESULTS PRIOR TO OFFICIAL TESTING OBSERVATION.

- TEST THE GRAVITY SEWER BY A PRESSURIZED AIR TEST BETWEEN CONSECUTIVE MANHOLES. PLUG ALL OPENINGS OF THE TEST SECTION AND CONNECT THE AIR CONTROL EQUIPMENT TO THE TAPPED END.
- SUPPLY AIR SLOWLY TO THE PIPE UNTIL REACHING A CONSTANT PRESSURE OF 4 PSI GREATER THAN THE AVERAGE PRESSURE OF ANY GROUNDWATER. THROTTLE THE AIR SUPPLY SO THAT THE PRESSURE REMAINS ABOVE 3.0 PSI FOR AT LEAST 5 MINUTES TO ALLOW TEMPERATURE STABILIZATION IN THE PIPE. MONITOR PRESSURE WITH A GAUGE HAVING A RANGE FROM 0 TO 5 PSI. THE GAUGE SHOULD HAVE MINIMUM DIVISIONS OF 0.1 PSI AND AN ACCURACY OF ± 0.04 PSI. REGULATE THE AIR PRESSURE TO PREVENT IT FROM EXCEEDING 5.0 PSI.
- AFTER STABILIZATION, ADJUST PRESSURE TO 3.5 PSI OR ABOVE AND SHUT OFF AIR SUPPLY. START THE STOP WATCH. THE TIME REQUIRED FOR THE PIPE SIZE PER UNIT LENGTH TO DROP 1 PSI MUST BE AT LEAST:

NOMINAL PIPE SIZE IN INCHES	T (TIME) MIN/100 FT.	NOMINAL PIPE SIZE IN INCHES	T (TIME) MIN/100 FT.
3	0.2	21	3.0
4	0.3	24	3.2
6	0.5	30	3.6
8	0.7	36	4.2
12	1.0	42	5.0
18	1.4	48	5.8
- IF THE SECTION OF LINE TO BE TESTED INCLUDES MORE THAN ONE PIPE SIZE, CALCULATE THE TEST TIME FOR EACH SIZE AND ADD THE TEST TIMES TO EQUAL THE TOTAL SECTION TEST TIME.
- IF THERE IS GROUND WATER ABOVE THE SEWER LINE THE AIR TEST PRESSURE WILL BE INCREASED BY 0.5 PSI FOR EACH FOOT OF WATER ABOVE THE INVERT OF THE PIPE. DIFFERENCES DUE TO AIR TEMPERATURE AND BAROMETRIC PRESSURE WILL BE CONSIDERED NEGLIGIBLE.
- IF THE TEST TIME TO DROP 1 PSI IS LESS THAN THAT REQUIRED IN THE ABOVE TABLE, THE PIPE WILL HAVE FAILED AND ADEQUATE REPAIRS AND RETESTING WILL BE REQUIRED AT NO EXPENSE TO OWNER.
- IT IS NOT NECESSARY TO HOLD THE TEST FOR THE WHOLE PERIOD WHEN IT IS CLEARLY EVIDENT THAT THE RATE OF AIR LOSS IS LESS THAN THE ALLOWABLE.

DEFLECTION TESTING SEWERS

- AFTER A FLEXIBLE PIPE SEWER, SUCH AS PVC, HAS BEEN BACKFILLED FOR 30 DAYS, A PIPE DEFLECTION TEST SHALL BE PERFORMED.
- THE TEST SHALL BE CONDUCTED USING A RIGID BALL OR MANDREL HAVING A DIAMETER EQUAL TO 92.5% OF THE PIPE DIAMETER. THIS DEVICE WILL BE PULLED THROUGH THE SEWER BY A ROPE WITHOUT THE MEANS OF MECHANICAL EQUIPMENT. THE MAXIMUM ALLOWABLE VERTICAL DEFLECTION SHALL BE 7.5%.
- IF THE BALL OR MANDREL CANNOT BE SUCCESSFULLY PULLED THROUGH THE SEWER PIPE, THOSE SECTIONS OF PIPE NOT MEETING THE DEFLECTION REQUIREMENTS SHALL BE EXCAVATED AND THE EMBEDMENT AND BACKFILL REPLACED. IF, IN THE OPINION OF THE ENGINEER, THE PIPE HAS BEEN DAMAGED, IT SHALL BE REMOVED AND REPLACED.

TESTING GRAVITY SEWERS (ENVIRONMENTAL PROTECTION RULES)

CH 1 EFFECTIVE 9/29/07 SECTION 1-A-03(K)(2)

2015 TRUDELL CONSULTING ENGINEERS LAST REVISED 02/12/2013 S-003

TESTING SEWER MANHOLES

*ALL TESTING SHALL BE PERFORMED IN THE PRESENCE OF THE TOWN ENGINEER OR PUBLIC WORKS DEPARTMENT AND TRUDELL CONSULTING ENGINEERS (TCE). CONTRACTOR SHALL PRE-TEST SUCCESSFULLY PRIOR TO CONTACTING ENGINEER. THE PRE-TEST IS TO ENSURE PASSING RESULTS PRIOR TO OFFICIAL TESTING OBSERVATION.

- EACH MANHOLE SHALL BE TESTED BY MEANS OF A WATER TEST OR VACUUM TEST PRIOR TO THE BACKFILLING OF THE STRUCTURE. IN ANY CASE THERE SHALL BE NO VISIBLE LEAKAGE INTO THE BASE OR WALLS OF A COMPLETED MANHOLE.
- AFTER THE MANHOLE HAS BEEN ASSEMBLED IN PLACE, ALL LIFTING HOLES AND EXTERIOR JOINTS SHALL BE FILLED AND PAINTED WITH AN APPROVED NON-SHRINKING MORTAR. THE TEST SHALL BE MADE PRIOR TO PLACING THE SHELF AND INVERT. IF THE GROUNDWATER TABLE HAS BEEN ALLOWED TO RISE ABOVE THE BOTTOM OF THE MANHOLE, THE ENGINEER MAY DIRECT IT TO BE LOWERED FOR THE DURATION OF THE TEST. ALL PIPES AND OTHER OPENINGS INTO THE MANHOLE SHALL BE SUITABLY PLUGGED AND THE PLUGS BRACED TO PREVENT BLOWOUT.
- IF THE CONTRACTOR ELECTS TO BACKFILL PRIOR TO WATER TESTING, FOR ANY REASON, IT SHALL BE AT HIS OWN RISK AND IT SHALL BE INCUMBENT UPON THE CONTRACTOR TO DETERMINE THE REASON FOR ANY FAILURE OF THE TEST. NO ADJUSTMENT IN THE LEAKAGE ALLOWANCE WILL BE MADE FOR UNKNOWN CAUSES SUCH AS LEAKAGE OF PLUGS, ABSORPTION, ETC. I.E. IT WILL BE ASSUMED THAT ALL LOSS OF WATER DURING THE TEST IS A RESULT OF LEAKS THROUGH THE JOINTS OR THROUGH THE CONCRETE. FURTHERMORE, THE CONTRACTOR SHALL TAKE ANY STEPS NECESSARY TO ASSURE THE ENGINEER THAT THE WATER TABLE IS BELOW THE BOTTOM OF THE MANHOLE THROUGHOUT THE TEST.
- IF THE GROUNDWATER TABLE IS ABOVE THE HIGHEST JOINT IN THE MANHOLE, AND IF THERE IS NO LEAKAGE INTO THE MANHOLE AS DETERMINED BY THE ENGINEER, SUCH A TEST CAN BE USED TO EVALUATE THE WATER TIGHTNESS OF THE MANHOLE. HOWEVER, IF THE ENGINEER IS NOT SATISFIED, THE CONTRACTOR SHALL LOWER THE WATER TABLE AND CARRY OUT THE TEST AS DESCRIBED HEREINBEFORE.
- WATER TEST: THE MANHOLE SHALL THEN BE FILLED WITH WATER TO THE TOP OF THE CONE SECTION. A PERIOD OF ONE HOUR WILL BE PERMITTED TO ALLOW FOR ABSORPTION. AT THE END OF THIS PERIOD, THE MANHOLE SHALL BE REFILLED TO THE TOP OF THE CONE MEASURING THE VOLUME OF WATER ADDED. THIS AMOUNT SHALL BE CONVERTED TO A 24 HOUR RATE AND THE LEAKAGE DETERMINED ON THE BASIS OF DEPTH. THE LEAKAGE FOR EACH MANHOLE SHALL NOT EXCEED ONE GALLON PER VERTICAL FOOT FOR A 24 HOUR PERIOD. REPAIRS BY APPROVED METHODS MAY BE MADE, AS DIRECTED BY THE ENGINEER, TO BRING THE LEAKAGE WITHIN ALLOWABLE RATE OF ONE GALLON PER FOOT PER DAY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO UNCOVER THE MANHOLE, AS NECESSARY, AND TO DISASSEMBLE, RECONSTRUCT OR REPLACE IT AS DIRECTED BY THE ENGINEER. THE MANHOLE SHALL THEN BE RETESTED.
- VACUUM TEST: THE CONTRACTOR SHALL FURNISH THE MANHOLE CONE SEAL, VACUUM PUMP, ALL NECESSARY GAUGES, HOSES, AND EQUIPMENT TO PERFORM THE TEST.
- FILL ALL LIFTING HOLES AND EXTERIOR JOINTS WITH APPROVED NON-SHRINKING MORTAR AND PLUG ALL OTHER OPENINGS INTO THE MANHOLE TO PREVENT DISPLACEMENT. THE COMPLETED MANHOLE SHALL NOT BE BACKFILLED PRIOR TO VACUUM TESTING. MANHOLES THAT HAVE BEEN BACKFILLED SHALL BE EXCAVATED TO EXPOSE THE ENTIRE EXTERIOR OR THE WATER TEST SHALL BE USED.
- INSTALL AN INFLATABLE RUBBER RING THE SIZE OF THE TOP OF THE MANHOLE BY INFLATING THE RING WITH AIR, TO A PRESSURE ADEQUATE TO PREVENT LEAKAGE OF AIR BETWEEN THE RING AND THE MANHOLE WALL.
- PUMP THE AIR OUT OF THE MANHOLE THROUGH AN OPENING IN THE TEST PLATE UNTIL A VACUUM IS CREATED INSIDE THE MANHOLE EQUAL TO 10 INCHES OF MERCURY USING AN APPROVED VACUUM GAUGE, THEN STOP THE REMOVAL OF AIR AND BEGIN THE TEST.
- THE VACUUM CAN NOT DROP BELOW 9 INCHES OF MERCURY WITHIN A 2 MINUTE TEST PERIOD. IF MORE THAN A 1 INCH DROP OCCURS WITHIN 2 MINUTES, THE MANHOLE HAS FAILED THE TEST, AND IT SHALL BE REPAIRED OR RECONSTRUCTED AND THEN RETESTED UNTIL IT PASSES AT NO EXPENSE TO OWNER.
- BACKFILL AROUND THE MANHOLE UPON SATISFACTORY TEST RESULTS.

TESTING MANHOLES (ENVIRONMENTAL PROTECTION RULES CH 1)

EFFECTIVE 9/29/07 SECTION 1-A-03(1)(8))

2015 TRUDELL CONSULTING ENGINEERS LAST REVISED 09/11/13 S-007

CONTRACTOR'S CERTIFICATION REQUIRED

PRIOR TO THE DESIGN ENGINEER CERTIFYING THAT THE INSTALLATION HAS BEEN INSTALLED IN ACCORDANCE WITH THE PERMITTED DESIGN, THE CONTRACTOR SHALL PROVIDE A CERTIFICATION THAT THE WASTEWATER SYSTEM WAS INSTALLED AND TESTED IN ACCORDANCE WITH THE APPROVED DESIGN PLANS. STATE PERMITS REQUIRE THERE SHALL BE NO DEVIATIONS FROM THE APPROVED PLANS WITHOUT PRIOR APPROVALS. THE DESIGN ENGINEER SHALL BE NOTIFIED AND ALLOWED TO OBSERVE THE CRITICAL PHASES OF CONSTRUCTION INCLUDING ANY REQUIRED TESTS. LIKEWISE, THE DESIGN ENGINEER SHALL BE NOTIFIED OF ANY DEVIATIONS FROM THE APPROVED PLANS. SINCE THE DESIGN ENGINEER DOES NOT CUSTOMARILY OBSERVE ALL PHASES OF THE WORK, OR ALL TESTING, HE MAY RELY ON THE CONTRACTOR'S CERTIFICATION AS THE BASIS FOR FINAL CERTIFICATION. THE CONTRACTOR SHALL THEREFORE SIGN AND RETURN A COPY OF THE FOLLOWING CERTIFICATION UPON COMPLETION OF THE WORK:

I HEREBY CERTIFY THAT I HAVE INSTALLED, PROPERLY TESTED, AND SUCCESSFULLY PASSED THOSE TESTS, AND THE WASTEWATER DISPOSAL AND COLLECTION SYSTEM(S) ARE BUILT IN ACCORDANCE WITH THE APPROVED DESIGN PLANS AND APPLICABLE PERMIT CONDITIONS.

CONTRACTOR NAME _____

AUTHORIZED AGENTS NAME _____

SIGNATURE _____ DATE _____

NOTE ANY DEVIATIONS FROM APPROVED PLANS HERE: _____

NOTE: THE CERTIFICATION AND THE PROJECT ENGINEER'S SUBSEQUENT CERTIFICATION DOES NOT VOID THE CONTRACTOR FROM REPAIR OR REPLACEMENT OF DISCREPANCIES DISCOVERED AT A LATER DATE. THE CONTRACTOR REMAINS RESPONSIBLE, INCLUDING CUSTOMARY GUARANTEE AND WARRANTY PERIODS.

CONTRACTOR CERTIFICATION FOR WASTEWATER SYSTEM

2015 TRUDELL CONSULTING ENGINEERS LAST REVISED 04/29/14 S-002

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- Unless otherwise noted, preliminary planning, utilities, and/or appurtenant works are not intended or such as marked on these drawings.
- By use of these drawings, the Owner represents and accepted the design, and have not including but not limited to, the design, location of buildings, minimum five (5) feet and utility connections.
- Owner and Architect location of buildings, minimum five (5) feet and utility connections.
- For use of these drawings, the user shall contact TCE to current revisions.
- These Drawings are for preliminary planning, utilities, and/or appurtenant works. As such, they are not intended to be used for construction. Changes to the drawings or omissions are the attention of TCE & it is the user's responsibility to ensure most current revisions.

Project Title: Colchester Burlington Sanitary Sewer

Sheet Title: _____

Date: _____

Scale: _____

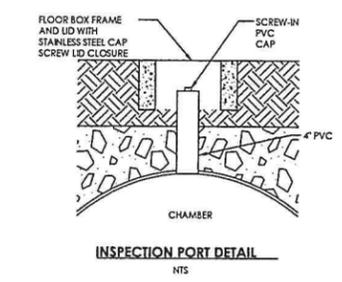
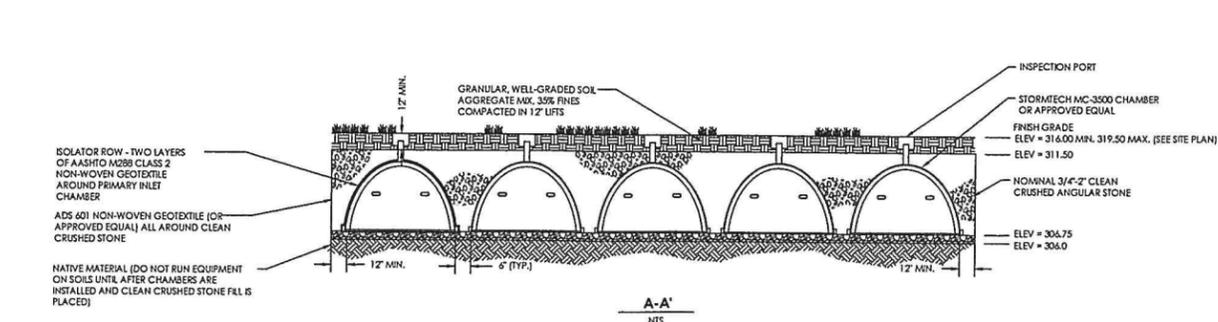
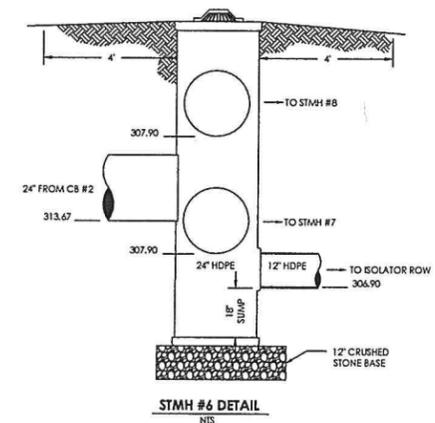
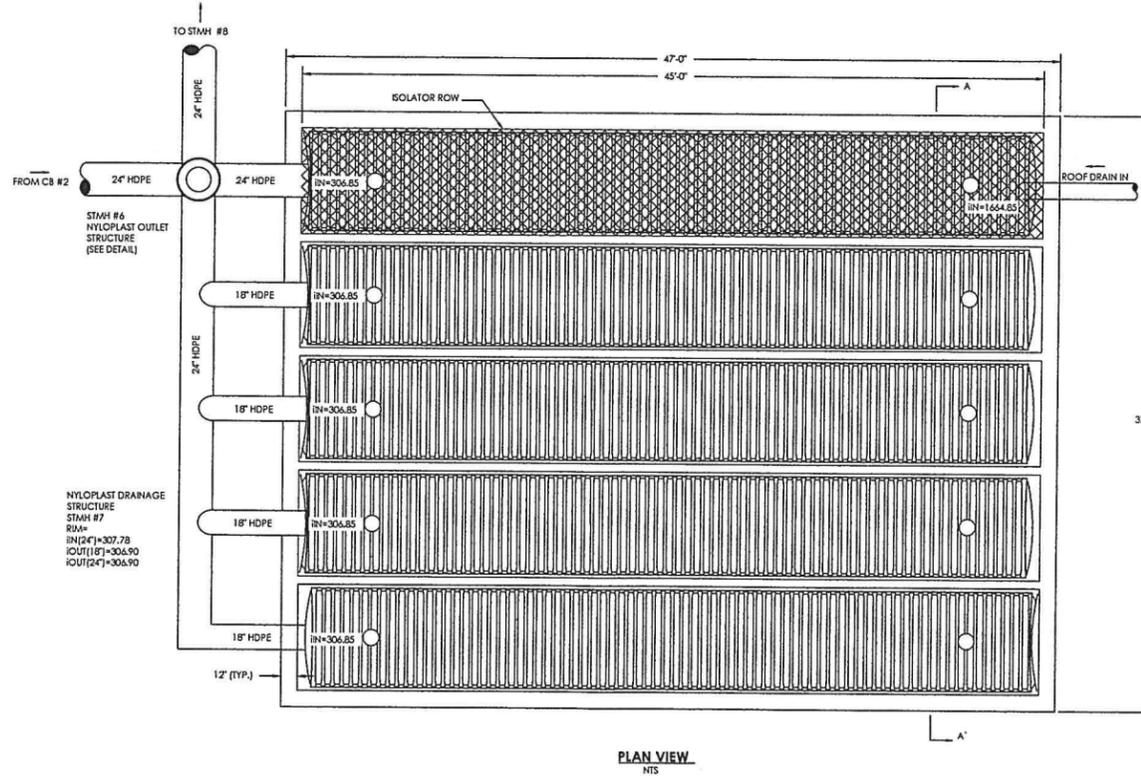
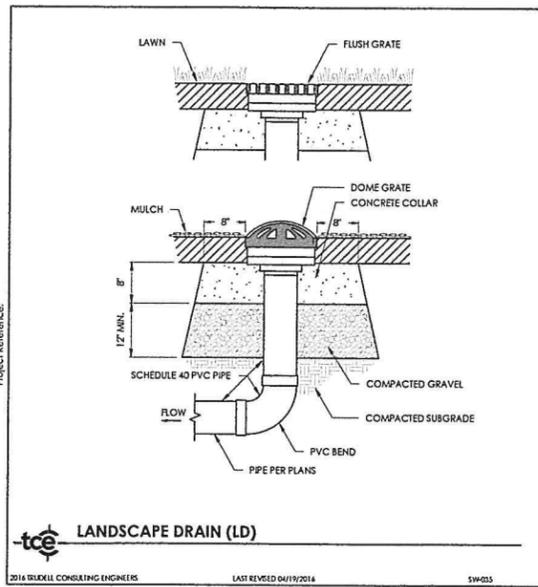
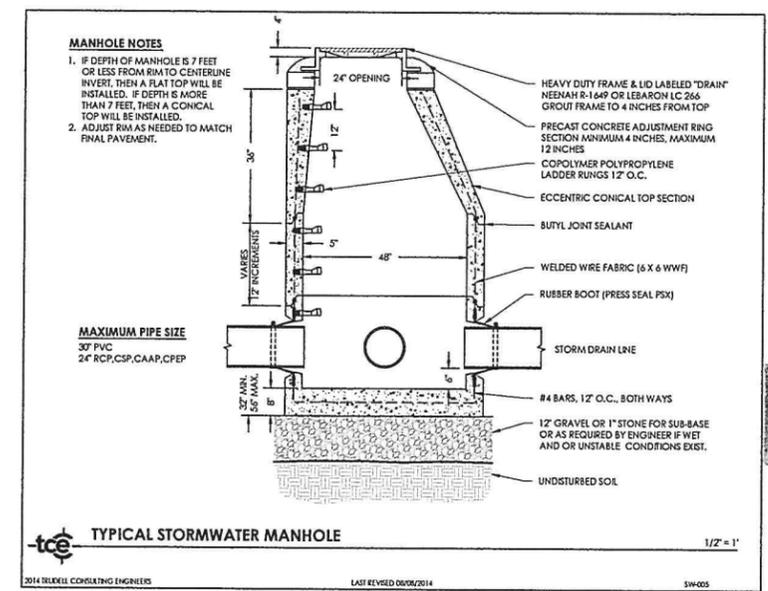
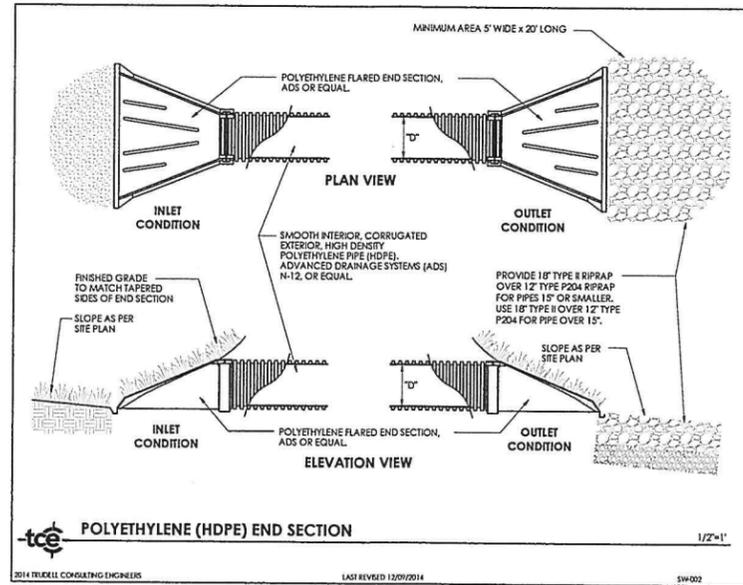
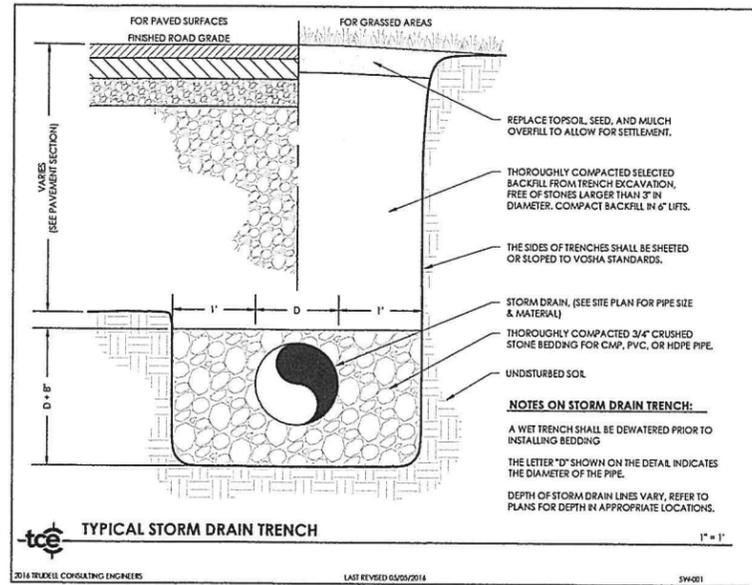
Project Number: _____

Drawn By: _____

Project Engineer: _____

Approved By: _____

Field Book: _____



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TRUDELL CONSULTING ENGINEERS

Revisions
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Project Title: **Stormwater Management**

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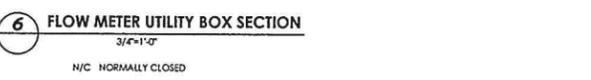
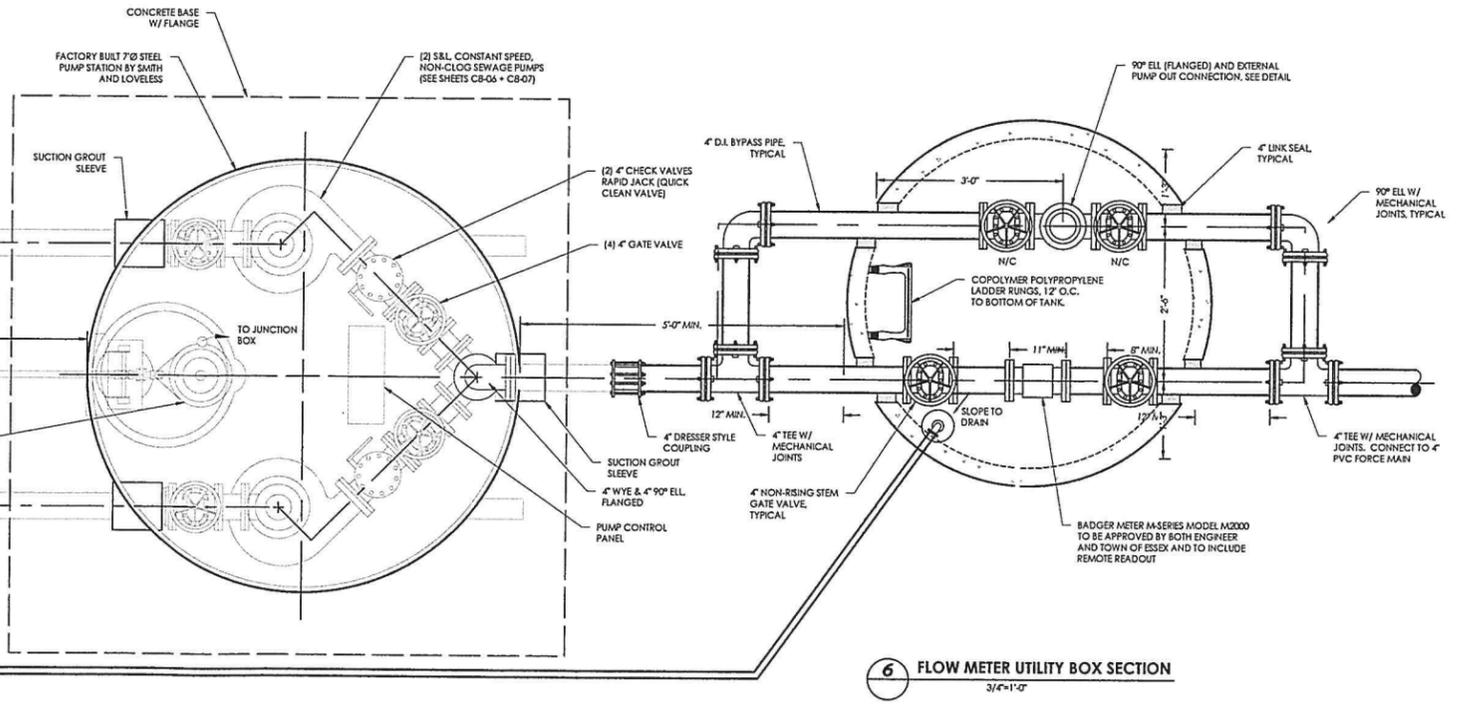
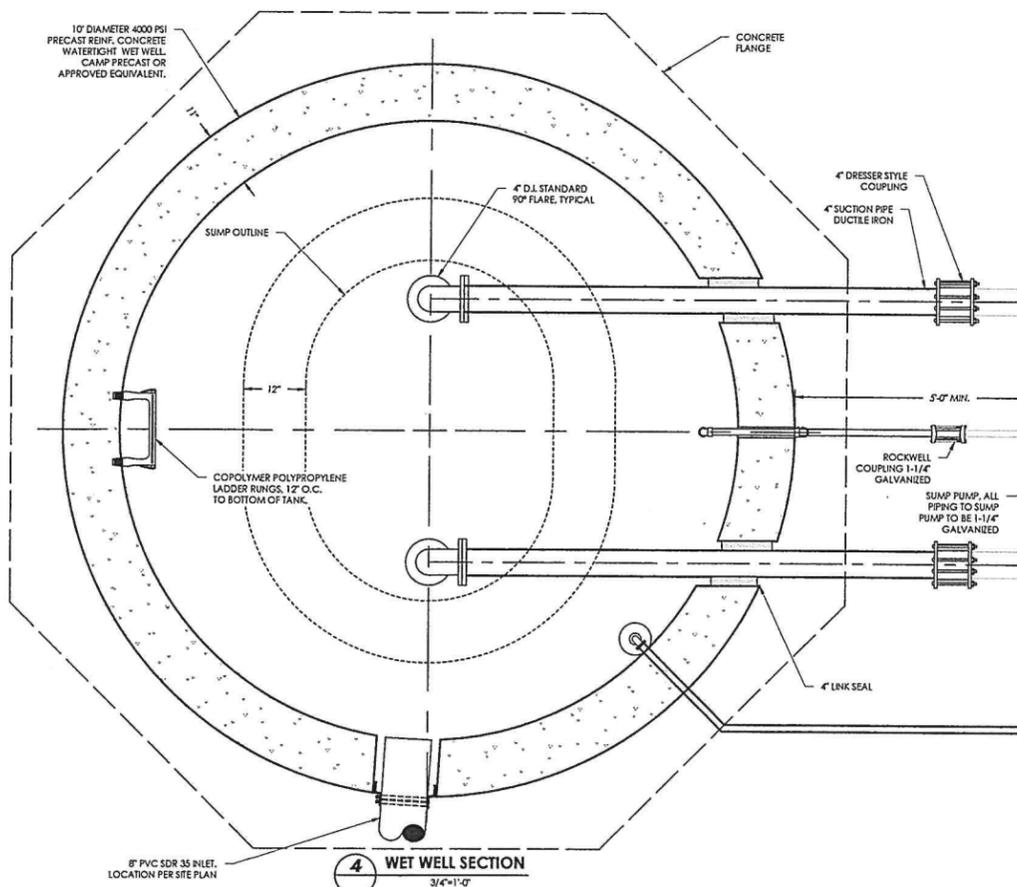
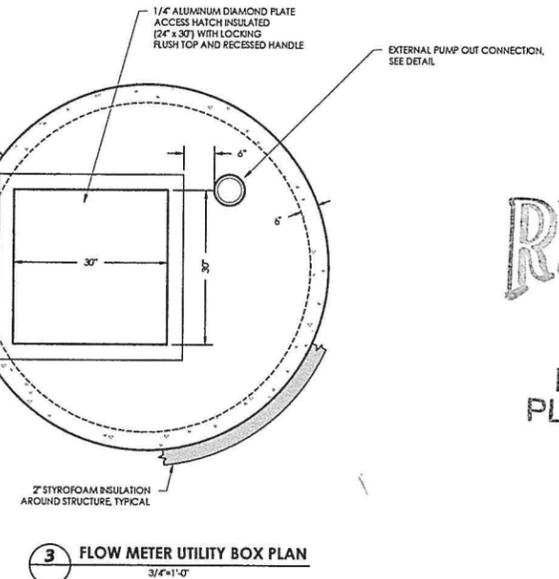
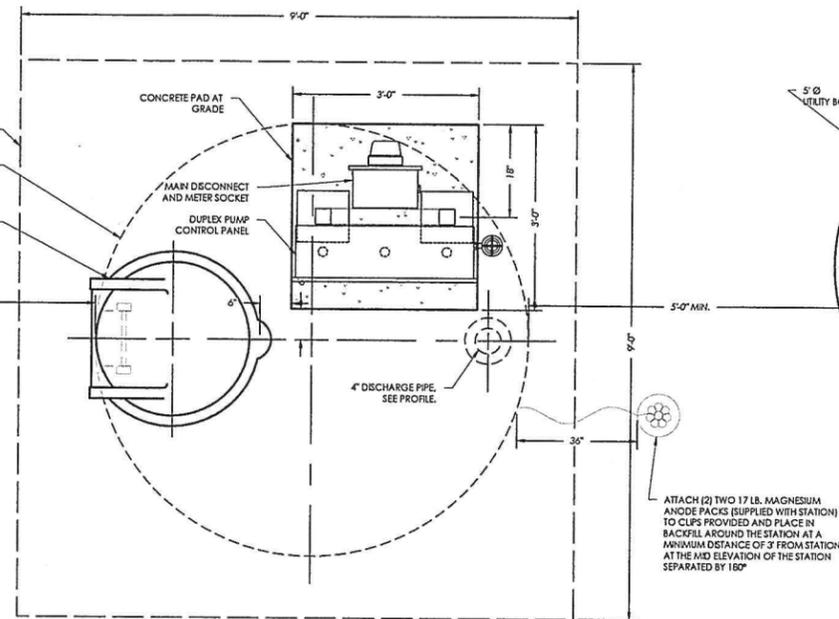
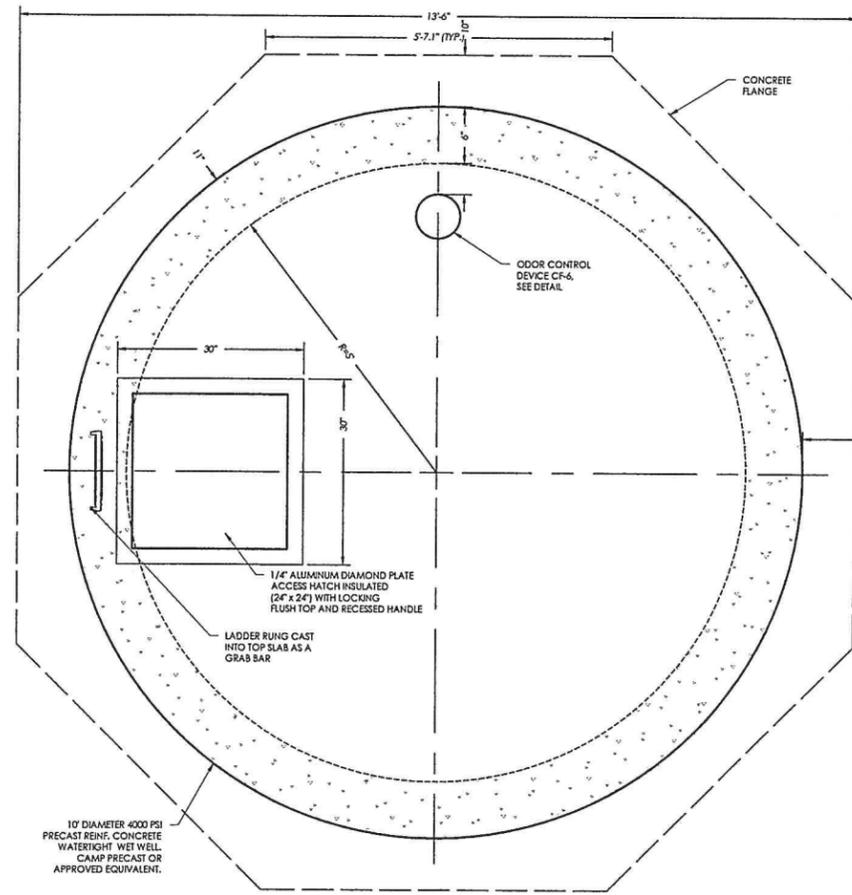
Project Number: _____

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478 BLAIR ST.
WILMINGTON, MA 01890

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- By use of these drawings, the Owner represents and accepts the design and construction of the project, and has no liability for any claims, damages, or losses, including but not limited to, those arising from the use of these drawings, or from any errors or omissions in the drawings, or from any other cause.
- Owner and Architect location of buildings: minimum five (5) feet from utility connector.
- Prior to using these drawings, the User shall contact TCE to obtain current revisions.
- These drawings are for informational purposes only. As such, copies thereof, furnished to the drawee or any other party, shall not be used for any other purpose, and the drawee or any other party shall be responsible for obtaining the attention of TCE to any current revisions.
- It is the User's responsibility to obtain the most current revisions.

Project Title

Colchester
H
Burlington

Sheet Title

Pump
View

Date:
Scale:
Project Number:
Drawn By:
Project Engineer:
Approved By:
Field Book:



CONTRACTOR'S CERTIFICATION REQUIRED

PRIOR TO THE DESIGN ENGINEER CERTIFYING THAT THE INSTALLATION HAS BEEN INSTALLED IN ACCORDANCE WITH THE PERMITTED DESIGN, THE CONTRACTOR SHALL PROVIDE A CERTIFICATION THAT THE WATER SYSTEM WAS INSTALLED AND TESTED IN ACCORDANCE WITH THE APPROVED DESIGN PLANS. STATE PERMITS REQUIRE THERE SHALL BE NO DEVIATIONS FROM THE APPROVED PLANS WITHOUT PRIOR APPROVALS. THE DESIGN ENGINEER SHALL BE NOTIFIED AND ALLOWED TO OBSERVE THE CRITICAL PHASES OF CONSTRUCTION INCLUDING ANY REQUIRED TESTS. HOWEVER, THE DESIGN ENGINEER SHALL BE NOTIFIED OF ANY DEVIATIONS FROM THE APPROVED PLANS. SINCE THE DESIGN ENGINEER DOES NOT CUSTOMARILY OBSERVE ALL PHASES OF THE WORK, OR ALL TESTING, HE MAY RELY ON THE CONTRACTOR'S CERTIFICATION AS THE BASIS FOR FINAL CERTIFICATION. THE CONTRACTOR SHALL THEREFORE SIGN AND RETURN A COPY OF THE FOLLOWING CERTIFICATION UPON COMPLETION OF THE WORK.

"I HEREBY CERTIFY THAT I HAVE INSTALLED, PROPERLY TESTED, AND SUCCESSFULLY PASSED THOSE TESTS, AND THE WATER SYSTEM(S) ARE BUILT IN ACCORDANCE WITH THE APPROVED DESIGN PLANS AND APPLICABLE PERMIT CONDITIONS."

CONTRACTOR NAME: _____

AUTHORIZED AGENT'S NAME: _____

SIGNATURE: _____ DATE: _____

NOTE ANY DEVIATIONS FROM APPROVED PLANS HERE: _____

NOTE THE CERTIFICATION AND THE PROJECT ENGINEER'S SUBSEQUENT CERTIFICATION DOES NOT VOID THE CONTRACTOR FROM REPAIR OR REPLACEMENT OF DISCREPANCIES DISCOVERED AT A LATER DATE. THE CONTRACTOR REMAINS RESPONSIBLE, INCLUDING CUSTOMARY GUARANTEE AND WARRANTY PERIODS.

CONTRACTOR'S CERTIFICATION FOR POTABLE WATER SYSTEMS

2013 TRUDELL CONSULTING ENGINEERS LAST REVISED 9/10/2013 WH-002

DISINFECTING WATER MAINS AND SYSTEMS

*ALL TESTING SHALL BE PERFORMED IN THE PRESENCE OF THE TOWN ENGINEER OR PUBLIC WORKS DEPARTMENT AND PROJECT ENGINEER (AS DESIGNATED BY OWNER).

A. PRIOR TO BEING PUT INTO SERVICE, WATER MAINS SHALL BE DISINFECTED ACCORDING TO THE LATEST EDITION OF AWWA SPECIFICATION C-651, THE TABLET METHOD IN AWWA STANDARD 651 IS NOT ACCEPTABLE.

B. THE NEW LINE SHALL BE FLUSHED AT A VELOCITY OF NOT LESS THAN 2.5 FEET PER SECOND (OPEN 2-1/2 INCH HYDRANT CONNECTION). FLUSH FOR A PERIOD DETERMINED BY THE PROJECT ENGINEER FOR THE LENGTH OF MAIN TO BE DISINFECTED.

C. CHLORINATION SHALL BE ACCOMPLISHED BY INTRODUCING A SODIUM HYPOCHLORITE SOLUTION FOR A RESIDUAL CONCENTRATION OF GREATER THAN 25 PARTS PER MILLION OF FREE CHLORINE.

D. USING A NOZZLE AT EACH END HYDRANT, CONTROL THE RATE OF FLOW INTO THE NEW MAIN AND PROPORTIONALLY FEED THE SODIUM HYPOCHLORITE SOLUTION INTO THE MAIN. AFTER THE SOLUTION HAS REACHED ALL POINTS IN THE SYSTEM, CLOSE THE VALVE SUPPLYING WATER FROM THE EXISTING MAIN AND THE END HYDRANTS. MAINTAIN THE HEAVILY CHLORINATED WATER IN THE MAIN FOR 24 HOURS DURING WHICH TIME ALL MAIN LINE VALVES SHOULD BE OPERATED. AFTER 24 HOURS THE MINIMUM CHLORINE RESIDUAL MUST BE AT LEAST 10 PARTS PER MILLION.

E. FLUSH HEAVILY CHLORINATED WATER FROM THE LINE AND REPLENISH THE LINE FOR SERVICE (USE CHLORINE DISTRIBUTORS). TAKE AND SUBMIT TWO BACTERIOLOGICAL SAMPLES (TAKEN 24 HOURS APART) OF THE WATER TO THE STATE OF VERMONT OR A STATE APPROVED TESTING LABORATORY. IF THE RESULTS ARE UNSATISFACTORY, THE DISINFECTION PROCEDURE WILL BE REPEATED UNTIL SATISFACTORY RESULTS ARE OBTAINED.

F. FINISHED WATER STORAGE STRUCTURES SHALL BE DISINFECTED IF APPLICABLE, IN ACCORDANCE WITH CURRENT AWWA STANDARD C652. TWO OR MORE SUCCESSIVE SETS OF SAMPLES, TAKEN AT 24 HOUR INTERVALS, SHALL INDICATE MICROBIOLOGICALLY SATISFACTORY WATER BEFORE THE FACILITY IS PLACED INTO OPERATION.

G. DISPOSAL OF HEAVILY CHLORINATED WATER FROM THE DISINFECTION PROCESS SHALL BE DE-CHLORINATED OR OTHERWISE HANDLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE VERMONT AGENCY OF NATURAL RESOURCES.

H. THE DISINFECTION PROCEDURE (AWWA CHLORINATION METHOD 3, SECTION 4.3 C652) WHICH ALLOWS USE OF THE CHLORINATED WATER HELD IN THE STORAGE TANK FOR DISINFECTION PURPOSES IS NOT RECOMMENDED. WHEN THAT PROCEDURE IS USED, IT IS REQUIRED THAT THE INITIAL HEAVILY CHLORINATED WATER BE PROPERLY DISPOSED IN ORDER TO PREVENT RELEASE OF WATER WHICH MAY CONTAIN VARIOUS CHLORINATED ORGANIC COMPOUNDS INTO THE DISTRIBUTION SYSTEM.

DISINFECTION OF WATER SYSTEM

2013 TRUDELL CONSULTING ENGINEERS LAST REVISED 7/13/2013 WH-003

SPRINKLER WATER SERVICE NOTES

1. SCOPE OF WORK
Install new 4 inch underground sprinkler water service connection. Work begins 5 feet from building exterior and ends with a flanged adapter connection 12 inches inside building. Flange connection to be restrained from movement by radding back to mechanical joint on a 4" 90° elbow. 90° elbow to be restrained from movement by radding back to mechanical joint on a 4 inch 45° elbow. Foundation penetration shall be sealed on the interior of building with non-shrink grout and on the exterior of the building with 4000 psi ready mix concrete to provide waterproofing. See Civil drawings and specifications for connection outside building. See Mechanical drawings and specifications for connection inside building.

2. CODES AND REGULATIONS
The equipment and installation shall be in conformity with all city, state, and federal codes, laws, and regulations as well as National Fire Protection Association Standards, as follows:
A. National Fire Protection Association Standards.
NFPA 13-2002, Installation of Sprinkler Systems.
NFPA 24-2002, Installation of Private Fire Service Mains and Their Appurtenances.
B. Boca Code (BOCA) 1999.
C. Local Building Codes.
The system design and equipment furnished shall be in accordance with the specifications herein and the applicable code requirements of municipality. The Contractor shall be held strictly responsible for any violations of codes, laws, or regulations and shall make all changes in work to conform with the above without cost to the Owner.

3. PIPING
All underground pipe and fittings shall be listed for fire protection service and comply with AWWA standards. Steel piping shall not be used. Piping shall be ductile iron class 52.

4. JOINTS
Joints shall be of an approved type.
The following apply to joints used with the various types of pipe:
AWWA C111, Rubber Gasket Joints for Ductile Iron Pressure Pipe and Fittings.
AWWA C115, Flanged Ductile Iron Pipe with Threaded Flanges.

5. FITTINGS
Fittings shall be of an approved type with joints and pressure class ratings compatible with the pipe used.
Fittings shall be ductile iron with joints to specifications of the manufacturer of the particular type of pipe. Sprinkler tees shall terminate with flange adapter connection. The following standards apply to fittings:
AWWA C110, Ductile Iron and Gray Iron Fittings, 3-in. Through 48-in., for Water and Other Liquids.

6. RESTRAINING RODS
Restraining rods shall be 3/4 inch. Threaded sections of rods shall not be formed or bent. Rods shall

COMBINED SPRINKLER & DOMESTIC WATER SERVICE NOTES

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be used in pairs. Rods shall be steel. When more than one section of rod needs to be used, rods shall be joined by approved rod couplings of malleable iron in accordance with ASTM A 197.

7. CORROSION RESISTANCE OF RESTRAINTS
After installation, rods, nuts, bolts, washers, clamps, and other restraining devices shall be cleaned and thoroughly coated with a bituminous or other acceptable corrosion-retarding material.

8. FLUSHING
See Engineering drawings for additional flushing requirements.
Lead-in connections to system risers shall be flushed thoroughly before connection is made to system piping in order to remove foreign material that might have entered the main during the course of installation or that might have been present in existing pipe. The minimum rate of flow shall be not less than the water demand rate of the system, which is determined by the system design, or not less than that necessary to provide a velocity of 10 fps whichever is greater. For all systems the flushing operations shall be continued for sufficient time to ensure thorough cleaning. When planning the flushing operations consideration shall be given to disposal of wastewater from the test. Adequate thrust restraint shall be provided during flushing and testing.

9. TESTING
See Engineering drawings for additional testing requirements.
a. The installing company shall furnish a Contractor's Material and Test Certificate for Underground Piping countersigned by the property owner or representative prior to requesting final approval from the authority having jurisdiction.
b. The trench shall be backfilled between joints before testing to prevent movement of pipe.
c. All new lead-in connections shall be tested hydrostatically at not less than 200 psi pressure for two hours, or at 50 psi in excess of the maximum static pressure when the maximum static pressure is in excess of 150 psi.
d. The amount of leakage in buried piping shall be measured at the specified test pressure by pumping from a calibrated container. For new pipe, the amount of leakage of the joints shall not exceed two quarts per hour per 100 gallons of joints irrespective of pipe diameter. See Civil Engineering drawings for additional flushing and testing requirements.
e. The amount of allowable leakage specified above shall be permitted to be increased by one fluid ounce per inch valve diameter per hour for each metal sealed valve isolating the test section.
f. Tests shall be made by the contractor in the presence of the authority having jurisdiction or the representative of the owner.
g. Additives, corrosive chemicals such as sodium silicate, lime, or other chemicals shall not be used while hydrostatically testing systems or for stopping leaks.
h. All control valves shall be fully closed and opened under system water pressure to ensure proper operation.

ACKNOWLEDGEMENT:
This information was supplied by the Architect. We have reviewed this and made minor amendments on the note and specification to customize it for Joy Peak Resort. The purpose of this plan is to provide the contractor with a detail and specification that brings the water main into the building.

TESTING WATER MAINS

*ALL TESTING SHALL BE PERFORMED IN THE PRESENCE OF THE TOWN ENGINEER OR PUBLIC WORKS DEPARTMENT IF APPLICABLE OR PRIVATE OWNER/OPERATOR AND PROJECT ENGINEER (AS DESIGNATED BY OWNER). CONTRACTOR SHALL PRE-TEST SUCCESSFULLY PRIOR TO CONTACTING PROJECT ENGINEER. THE PRE-TEST IS TO ENSURE PASSING RESULTS PRIOR TO OFFICIAL TESTING OBSERVATION.

A. AFTER THE PIPE HAS BEEN LAID AND 7 DAYS AFTER THE CONCRETE THRUST BLOCKS AND ANCHORS HAVE BEEN PLACED, THE WATER MAIN SHALL BE HYDROSTATICALLY TESTED ACCORDING TO THE LATEST EDITION OF THE AWWA SPECIFICATION C-600.

B. CONTRACTOR SHALL SUPPLY ALL NECESSARY APPARATUS TO PERFORM THE HYDROSTATIC TEST.

C. TEST PRESSURE SHALL BE 200 POUNDS PER SQUARE INCH OR 1.5 TIMES THE WORKING PRESSURE MEASURED AT OR NEAR THE HIGH POINT IN THE SYSTEM, WHICHEVER IS GREATER. TEST SHALL BE A MINIMUM OF 2 HOURS IN DURATION. TESTING ALLOWANCE SHALL BE DETERMINED AS THE QUANTITY OF MAKEUP WATER THAT MUST BE SUPPLIED INTO NEWLY LAD PIPE OR ANY VALVED SECTION THEREOF TO MAINTAIN PRESSURE WITHIN 5 PSI (34.5 kPa) OF THE SPECIFIED TEST PRESSURE AFTER THE PIPE HAS BEEN FILLED WITH WATER AND THE AIR HAS BEEN EXPULSED. TESTING ALLOWANCE SHALL NOT BE MEASURED BY A DROP IN PRESSURE IN A TEST SECTION OVER A PERIOD OF TIME. REFER TO PIPE MANUFACTURERS RECOMMENDED TESTING PROCEDURE INCLUDING PIPE STABILIZATION PRIOR TO START OF TEST.

D. THE PROJECT ENGINEER AND THE MUNICIPALITY SHALL BE CONTACTED 48 HOURS PRIOR TO TESTING.

E. ALL VALVES SHOULD BE VERIFIED AS BEING OPEN OR CLOSED AS APPROPRIATE FOR THE PORTION OF THE WATER MAIN BEING TESTED.

F. ALLOWABLE LEAKAGE SHALL BE COMPUTED BY THE FORMULA: $L = (S \times D \times \sqrt{P}) / 148,000$ WHERE L IS LEAKAGE IN GALLONS PER HOUR, S IS THE LENGTH OF PIPE TESTED IN FEET, D IS THE NOMINAL DIAMETER OF THE PIPE IN INCHES AND P IS THE AVERAGE TEST PRESSURE IN POUNDS PER SQUARE INCH DURING THE TEST.

G. REPLACE AND RETEST ANY WORK FOUND TO BE DEFECTIVE AT NO EXPENSE TO OWNER.

TESTING HYDRANTS (IF APPLICABLE)

A. AFTER TESTING THE WATER MAINS, OPEN THE HYDRANT FULLY AND FILL WITH WATER. TO PREVENT CAPS FROM BEING BLOWN OFF, VENT AIR FROM ONE OF THE CAPS WHILE IT IS BEING FILLED. WHEN ALL THE AIR HAS ESCAPED, TIGHTEN THE CAPS.

B. ALLOW THE PRESSURE TO BUILD UP TO MAIN LINE PRESSURE AND CHECK FOR LEAKAGE AT FLANGES, NOZZLES AND THE OPERATING STEM. RECORD STATIC PRESSURE IN PSI.

C. FLOW HYDRANT AND RECORD FLOW RATE IN GPM AND RESIDUAL PRESSURE IN PSI.

D. CLOSE THE HYDRANT. REMOVE ONE NOZZLE CAP AND PLACE THE PALM OF YOUR HAND OVER THE OPENING. DRAINAGE SHOULD CREATE A NOTICEABLE SUCTION. IF NO SUCTION OR HYDRANT DOESN'T HAVE DRAIN, MANUALLY PUMP WATER OUT OF BARREL.

E. AT PROJECT ENGINEER DISCRETION ASSIST WITH FLOW TESTING. ENGINEER TO RECORD STATIC AND RESIDUAL PRESSURE AS WELL AS FLOW RATE.

TESTING WATER MAINS AND HYDRANTS

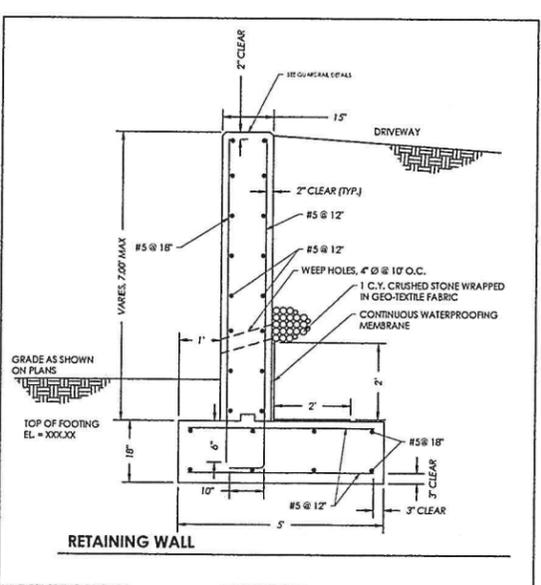
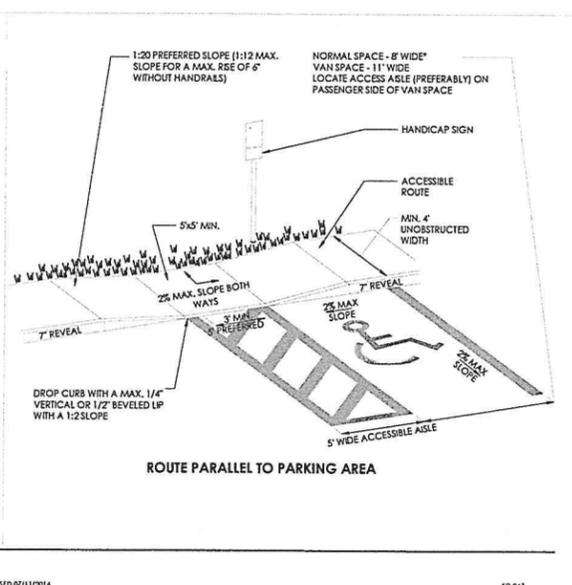
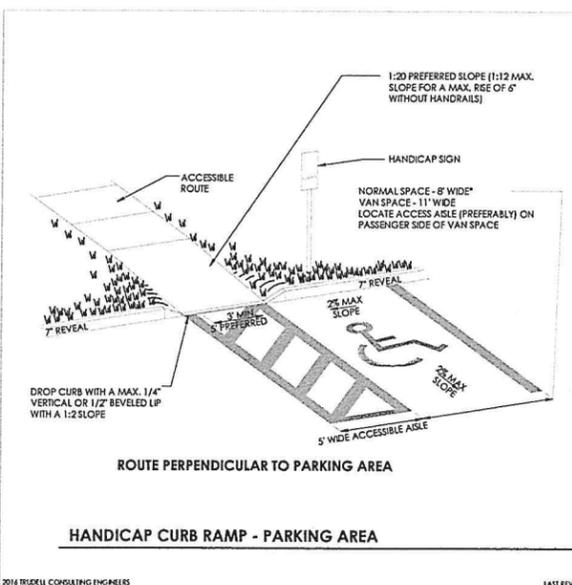
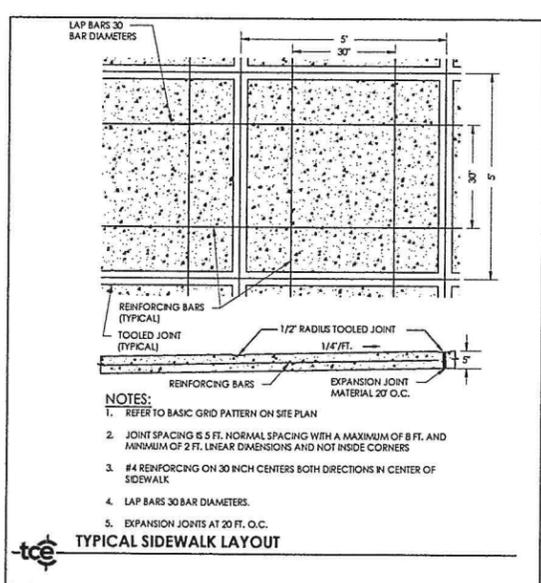
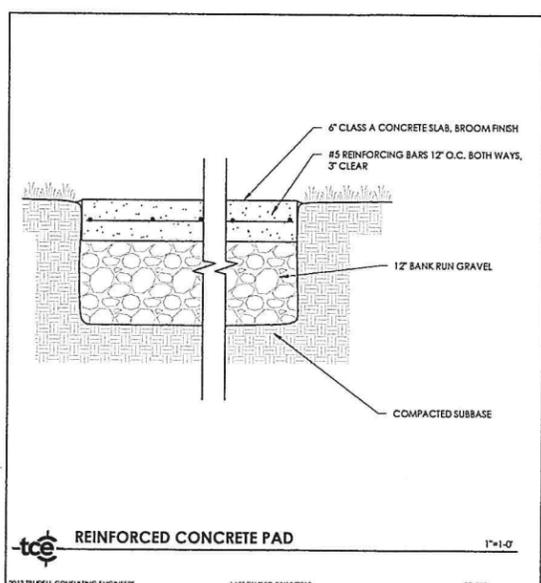
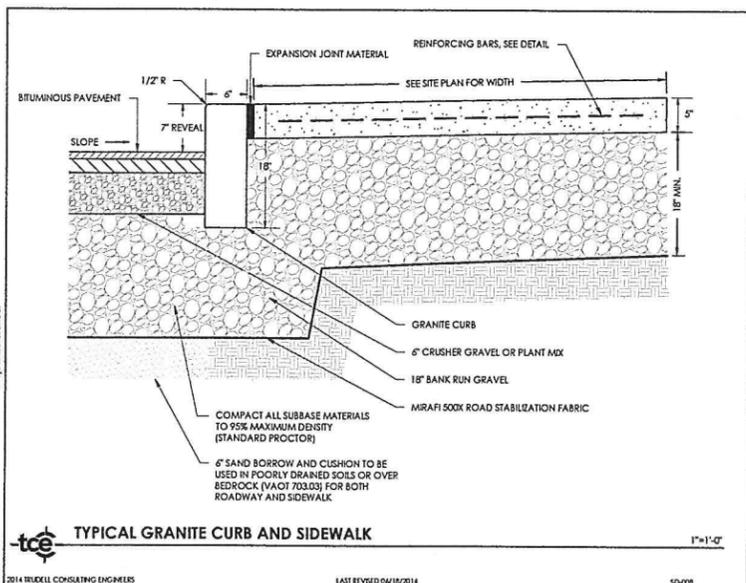
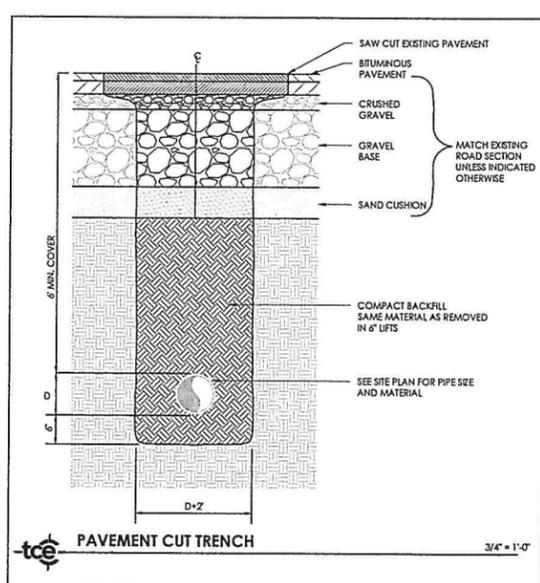
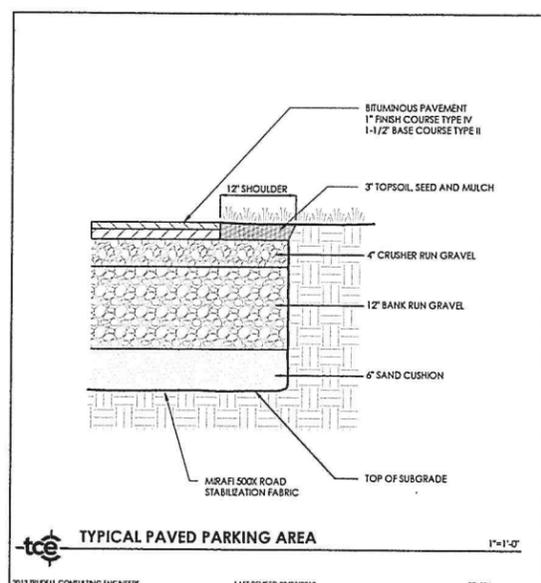
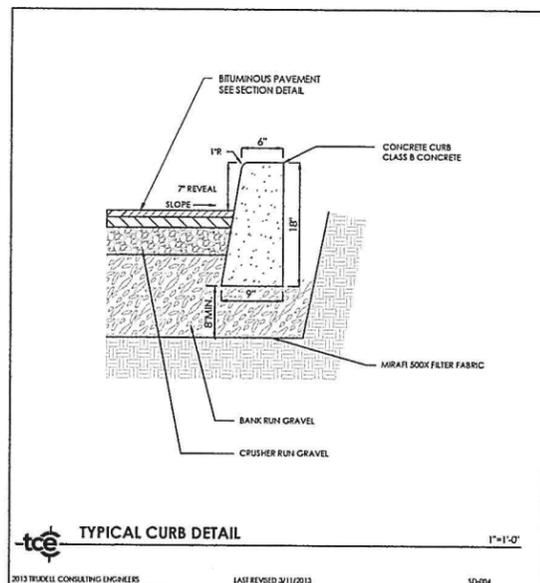
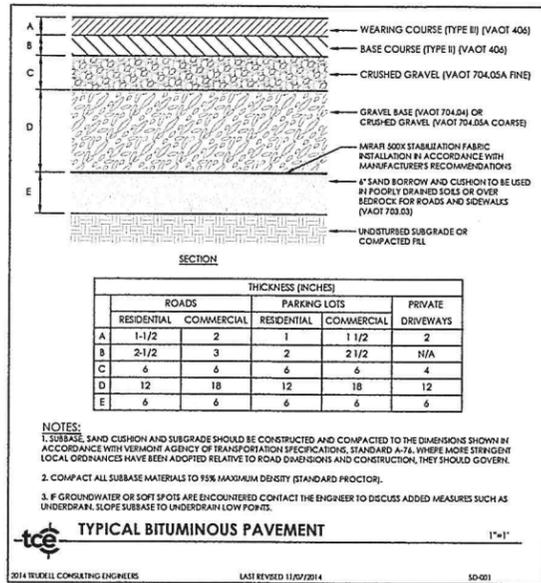
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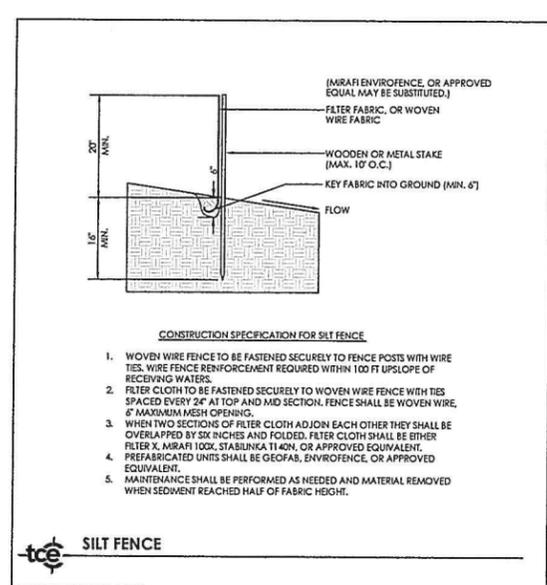
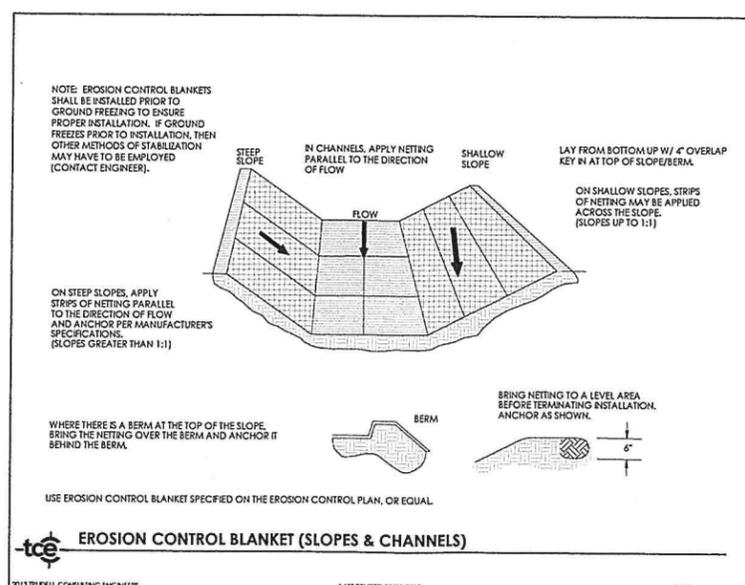
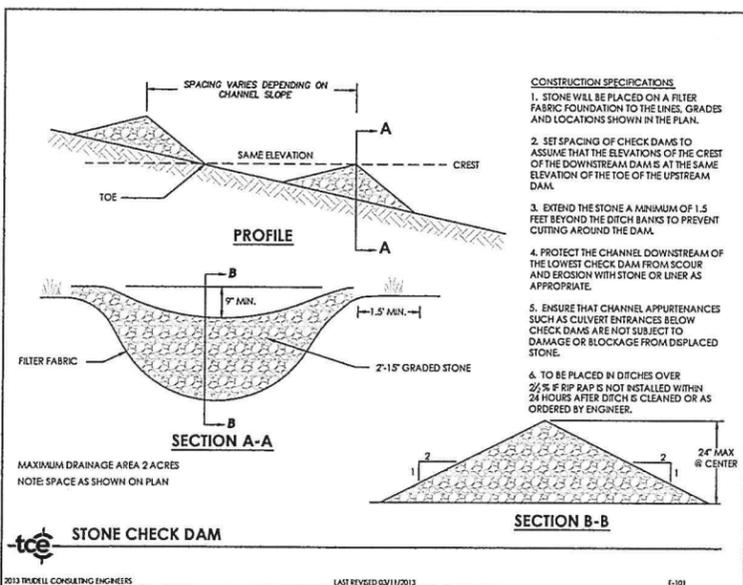
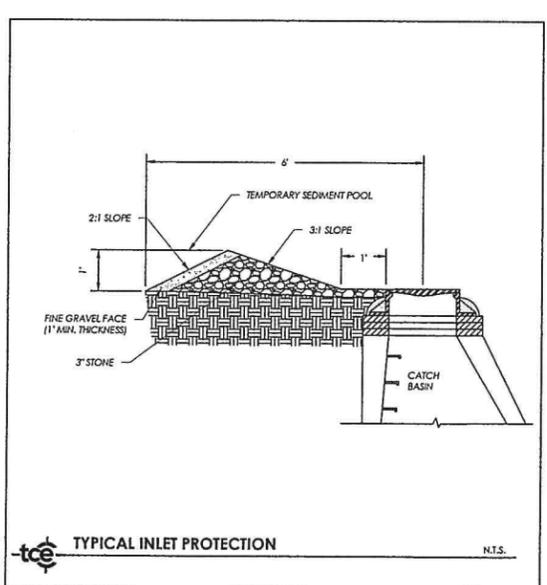
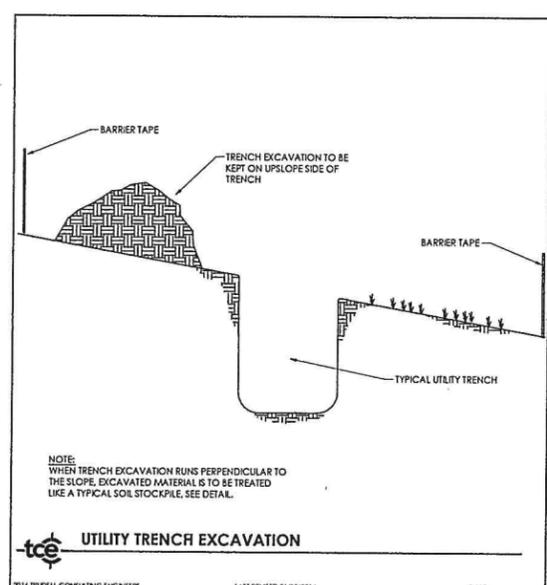
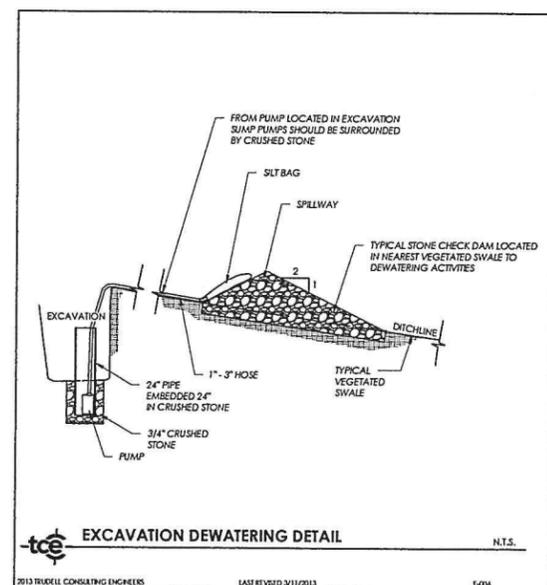
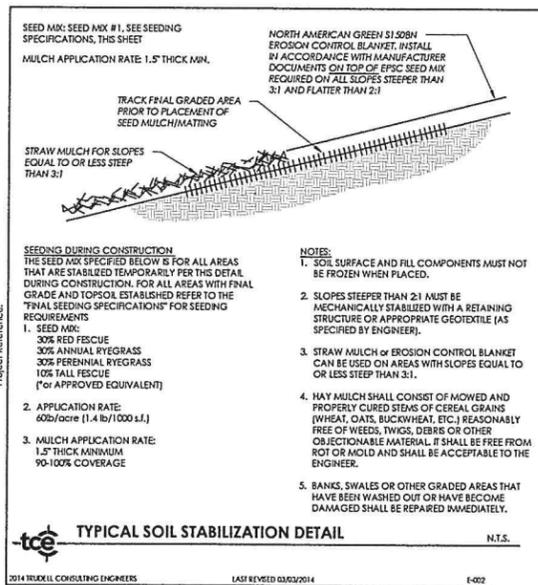
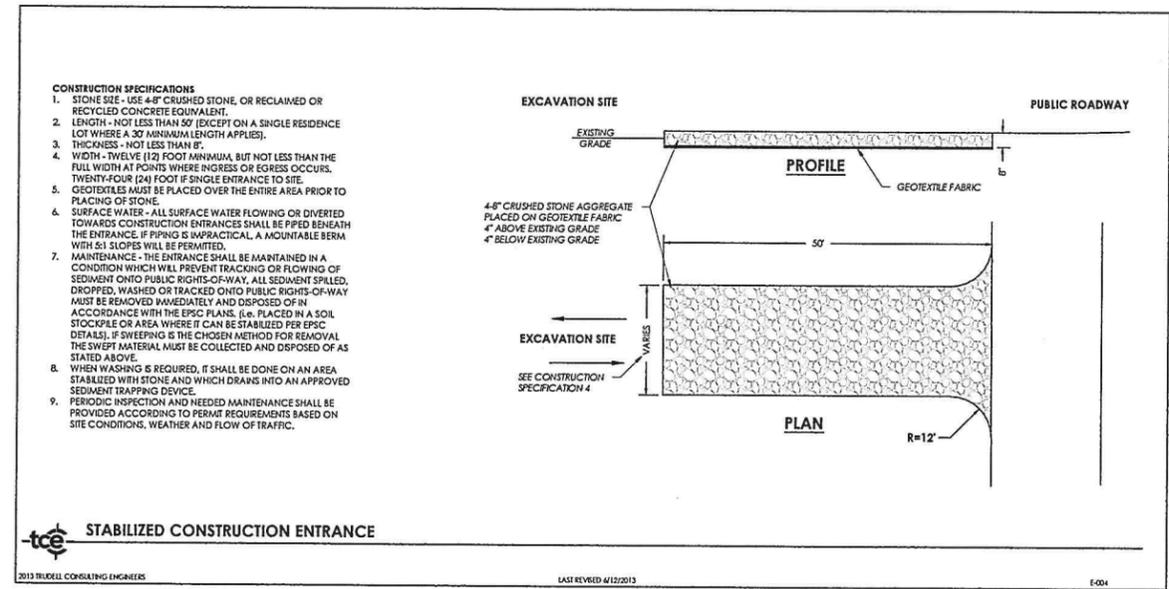
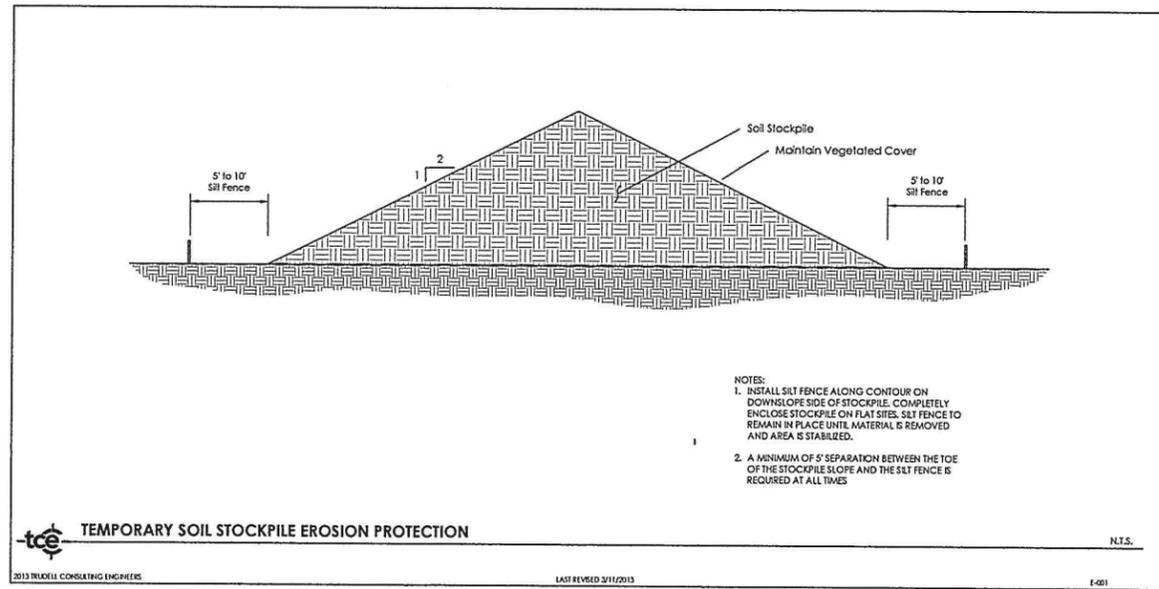
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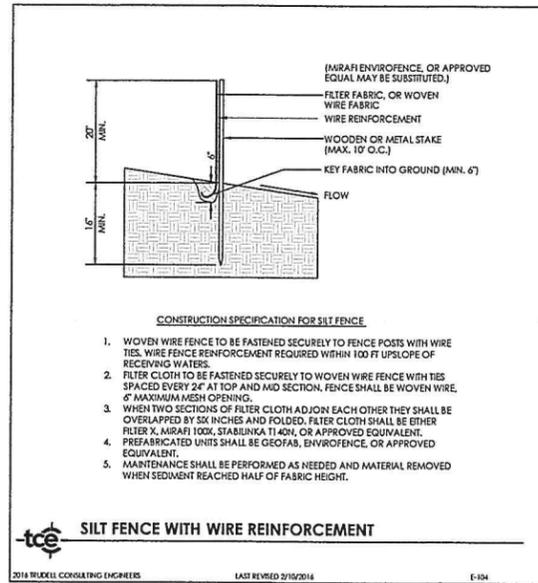
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1. AFTER THE FINISHED GRADE HAS BEEN ESTABLISHED AND THE FERTILIZER SPREAD, PLANT THE SPECIFIED SEED MIXTURE AT A RATE OF 4 POUNDS PER 1000 SQUARE FEET AND WORK FIRMLY INTO THE SOIL. APPLY SEED ON THE PREPARED SEED BED WITH APPROVED MECHANICAL SEEDERS OR HYDROSEEDING EQUIPMENT. UPON COMPLETION OF THE ABOVE PLANTING OPERATIONS, ROLL ALL AREAS WITH A WATER FILLED GARDEN ROLLER, LEAVING THE SURFACE OF ALL AREAS TRUE TO GRADE, SMOOTH, AND FREE FROM HOLLOW'S OR OTHER IRREGULARITIES. THOROUGHLY WATER ALL NEWLY PLANTED LAWNS IMMEDIATELY AFTER PLANTING, USING A FINE SPRAY.

2. PROTECT BANKS AND SWALES, AND PREVENT OR REPAIR EROSION THAT OCCURS. BANKS, SWALES OR OTHER GRADED AREAS THAT HAVE BEEN WASHED OUT OR HAVE BECOME DAMAGED SHALL BE REPAIRED IMMEDIATELY. UNLESS APPROVAL IS GRANTED BY THE ENGINEER TO PLANT OFF SEASON, SEEDING WILL BE CONDUCTED ONLY DURING THE PERIOD FROM APRIL 15 TO JUNE 1 OR AUGUST 15 TO OCTOBER 15. SO AS NOT TO CAUSE INTERFERENCE, NO SEEDING IS TO PROCEED BEFORE OTHER PHASES OR THE WORK HAS PROGRESSED SUFFICIENTLY.

3. SEED SHALL BE FRESH, CLEAN, NEW SEED. SEED WHICH HAS BECOME WET AND/OR MOULDY WILL NOT BE ACCEPTABLE. THE FOLLOWING SEED MIXTURE SHALL BE USED:

COMMON NAME	WEIGHT (POUNDS PER ACRE)	GERMINATION
CREEPING RED FESCUE	30-40	85
KENTUCKY BLUEGRASS	30-40	80
PERENNIAL RYE	25-30	90
RED TOP	0-5	85
WHITE CLOVER	0-5	-

SEEDING

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- THE SMALLEST PRACTICAL AREA OF LAND SHALL BE EXPOSED AT ANY ONE TIME.
 - EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING OPERATIONS.
 - CONTRACTOR AND/OR OWNER (OR APPOINTED DESIGNATE) SHALL INSPECT ALL EROSION CONTROL FEATURES AT LEAST ONCE PER WEEK AND AFTER ANY STORM EVENT GENERATING RUNOFF FROM THE SITE.
 - AFTER VEGETATION HAS BEEN FULLY ESTABLISHED, THE TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED.
 - PROVIDE EROSION CONTROL MATTING ON ALL DISTURBED SLOPES WITH A PITCH OF 3:1 V OR GREATER.
 - EXCAVATION AND PIPE INSTALLATION SHALL BE AVOIDED DURING PERIODS OF SIGNIFICANT PRECIPITATION.
 - ALL SEDIMENT AND EROSION CONTROL PRACTICES AND VEGETATIVE STABILIZATION SHALL BE IN ACCORDANCE WITH THE LOW RISK SITE HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL (ANR 2006).
- EROSION CONTROL NOTES**
- 2013 TRUDELL CONSULTING ENGINEERS LAST REVISED 3/11/2013 E-103

- THE PRODUCTS LISTED BELOW (OR APPROVED EQUAL) ARE TO BE INSTALLED PER MANUFACTURERS SPECIFICATIONS AND IN THE LOCATIONS SPECIFIED ON THE PLANS AND PERMITS.
- SILT FENCE:**
- GeoFab, Envirofence, or approved equal
- EROSION CONTROL BLANKET:**
- North American Green S1500N
 - North American Green C3500N
 - North American Green P550
- FIBER ROLE:**
- North American Green Sediment Trap
- GEOSYNTHETIC FABRIC:**
- Mirafi-500X
- SILT BAGS:**
- Granite Environmental - Dewatering Bag, 15x25', 10 oz. non-woven
- EPSC PRODUCTS**
- 2013 TRUDELL CONSULTING ENGINEERS LAST REVISED 3/11/2013 E-104

- INSTALL BARRIER TAPE.
 - INSTALL CONSTRUCTION ENTRANCE AS SPECIFIED IN PHASE.
 - INSTALL SILT FENCE IN LOCATION SHOWN ON PLANS AS DETAILED.
 - STAKE OUT CONSTRUCTION, CLEAR AND GRUB.
 - STOCK PILE, PROCESS, AND DISPOSE OF TREES.
 - CONSTRUCT NECESSARY STABILIZED CONSTRUCTION ROADS, ESTABLISH DITCHLINES FROM DOWNHILL TO UPHILL, INSTALL CHECK DAMS AND EROSION CONTROL FABRIC IN DITCHLINES AS DETAILED. MAINTAIN TRAFFIC FLOW AS SHOWN.
 - CONSTRUCT SITE FEATURES.
 - VEGETATE AND STABILIZE AS NECESSARY WITHIN SEVEN DAYS.
 - RECEIVE APPROVAL FROM ON-SITE CO-ORDINATOR PRIOR TO MOVING TO NEXT PHASE.
- GENERAL CONSTRUCTION SEQUENCE**
- 2013 TRUDELL CONSULTING ENGINEERS LAST REVISED 3/11/2013 E-105

- ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY OR FINAL STABILIZATION WITHIN SEVEN DAYS OF THE INITIAL DISTURBANCE. AFTER THIS TIME, ANY DISTURBANCE IN THE AREA MUST BE STABILIZED AT THE END OF EACH WORK DAY. THE FOLLOWING EXCEPTIONS APPLY:
- STABILIZATION IS NOT REQUIRED IF WORK IS TO CONTINUE IN THE AREA WITHIN THE NEXT 24 HOURS AND THERE IS NO PRECIPITATION FORECAST FOR THE NEXT 24 HOURS.
 - STABILIZATION IS NOT REQUIRED IF THE WORK IS OCCURRING IN A SELF-CONTAINED EXCAVATION (I.E. NO OUTLET WITH A DEPTH OF 2 FEET OR GREATER (E.G. HOUSE FOUNDATION EXCAVATION, UTILITY TRENCHES))
- STABILIZATION IS TO BE ACCOMPLISHED IN ACCORDANCE WITH DETAILS SHOWN.
- STABILIZATION REQUIREMENTS**
- 2013 TRUDELL CONSULTING ENGINEERS LAST REVISED 4/9/2013 E-106

- WINTER CONSTRUCTION**
- THIS WINTER CONSTRUCTION EROSION PREVENTION AND SEDIMENT CONTROL PLAN MUST BE ADHERED FOR CONSTRUCTION BETWEEN OCTOBER 15 AND APRIL 15.
- 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 FOUNDATIONS OR OPEN UTILITY TRENCHES.
- PRIOR TO STABILIZATION, SNOW OR ICE MUST BE REMOVED TO A THICKNESS OF NO MORE THAN 1 INCH.
- MULCH USED FOR TEMPORARY STABILIZATION MUST BE APPLIED AT DOUBLE THE STANDARD RATE, OR A MINIMUM OF 3 INCHES WITH AN 80-90% COVER.
- SILT FENCE AND OTHER PRACTICES REQUIRING EARTH DISTURBANCE MUST BE INSTALLED AHEAD OF FROZEN GROUND.
- DRAINAGE STRUCTURES MUST BE KEPT OPEN AND FREE OF SNOW AND ICE DAMS.
- A MINIMUM 25 FOOT BUFFER SHALL BE MAINTAINED FROM PERIMETER CONTROLS SUCH AS SILT FENCES.
- IN AREAS OF DISTURBANCE THAT DRAIN TO A WATER BODY WITHIN 100 FEET, SILT FENCE SHALL BE REINFORCED.
- ALL AREAS THAT ARE DISTURBED DURING WINTER CONSTRUCTION SHALL BE STABILIZED BY APPLYING SEED AND MULCH AT TWICE THE NORMAL RATE AND THEN COVERED WITH STRAW MATTING.
- SNOW MANAGEMENT**
- TO ENSURE ADEQUATE STORAGE AND CONTROL OF MELTWATER, CLEARED SNOW MUST BE STOCKPILED DOWNSLOPE OF DISTURBED AREAS.
- SNOW STOCKPILES MUST BE KEPT CLEAR OF STORMWATER TREATMENT STRUCTURES. DRAINAGE STRUCTURES SHOULD BE CHECKED REGULARLY AND KEPT FREE OF SNOW AND ICE JAMS.
- REQUIREMENTS FOR WINTER CONSTRUCTION**
- 2013 TRUDELL CONSULTING ENGINEERS LAST REVISED 4/9/2013 E-107

RIP-RAP SHALL BE A WELL GRADED ROCK MIXTURE DOWN TO 1 INCH SIZE PARTICLES, SUCH THAT 50 PERCENT OF THE MIXTURE BY VOLUME SHALL BE LARGER THAN THE LEAST DIMENSION.

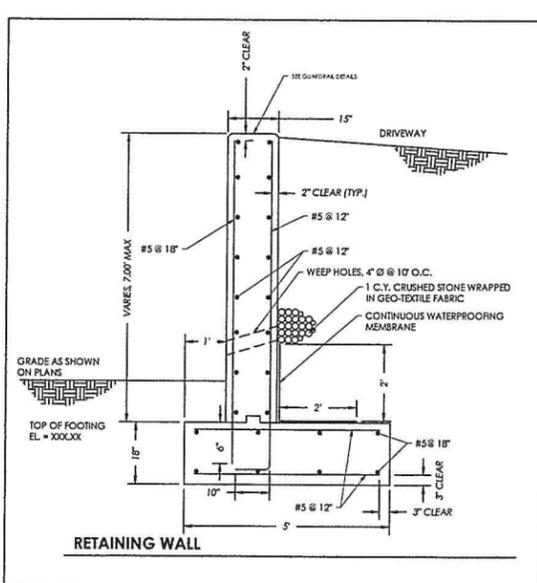
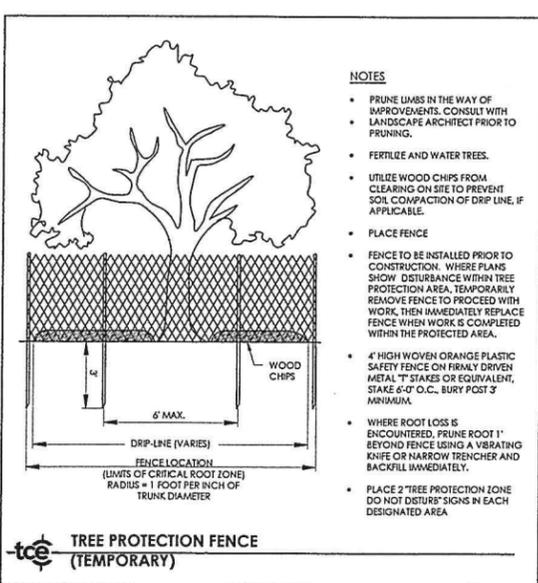
TYPE	SIZE (INCHES)	LEAST DIMENSION (50% OF VOLUMES)
P-204	1-5	2
I	1-12	4
II	2-36	12
III	3-48	16
IV	3-60	20

A WELL GRADED ROCK MIXTURE SHALL BE DEFINED AS A MIXTURE COMPOSED PRIMARILY OF THE LARGER STONE SIZES, BUT WITH A SUFFICIENT MIXTURE OF OTHER SIZES TO FILL THE PROGRESSIVELY SMALLER VOIDS BETWEEN STONES.

STONE FOR RIP-RAP SHALL BE APPROVED, ROUGH, BROKEN, QUARRY STONE WITH IRREGULAR FACES PER-MITTING PLACEMENT IN A TIGHT INTERLOCKING MANNER WITH THE SMALLER STONES FILLING VOIDS BETWEEN LARGER STONES. THE STONES SHALL BE HARD, SOUND, RESISTANT TO WATER ACTION, WEATHERING, AND SUITABLE FOR THE PURPOSE INTENDED.

RIP-RAP STABILIZATION NOTES

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final utility connectio
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Colchester Avenue Housing Development

DEPARTMENT OF
PLANNING & ZONING

Property Description. Land assemblage consisting of land parcels on Colchester Avenue and Fletcher Place in Burlington, directly across from the entrance to Medical Center Hospital of Vermont and adjoining the University of Vermont campus. The existing buildings on the sites presently contain a mix of residential, medical office and institutional (university related) office and program space uses. The property is bordered by Colchester Avenue to the South, Fletcher Place to the East, and on the North and West by the Mater Christi School campus.

Zoning. The site is located in the city's Institutional Zoning District. Multi-family housing, institutional office and program facilities (university or medical related) are among the permitted and conditional uses allowed.



Development Plan. Plan is construct two new 3-story buildings connected by a first floor walkway and lobby area. The buildings will contain 75 new apartments configured as studio and one bedroom units. Both buildings will have underground parking in the basements accessed via a driveway and ramp located on the west side of the site. Existing surface parking areas and access driveways will be combined and reconfigured as part of the plan, which will improve circulation efficiency and safety. The site enjoys direct access to a traffic light and public transportation facilities located on Colchester Avenue at the driveway

entrance to the hospital campus.

The project will incorporate extensive energy efficiency features, including proposed roof top solar collectors. All of the city's regulations for parking and bicycle storage facilities will be met, but due to the project's location, it is expected that vehicle use will be substantially lower than normal.

The existing buildings located on Colchester Ave. and Fletcher Place will remain in place. All of the Colchester Ave. properties (including properties owned by neighbors not associated with the new building development) will have access to the signalized traffic intersection.

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COLCHESTER AVENUE HOUSING

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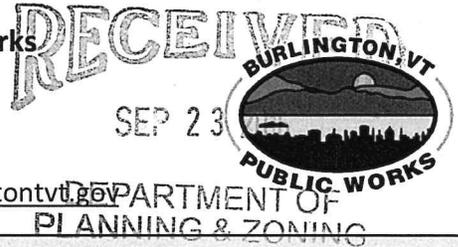
DEPARTMENT OF
PLANNING & ZONING



Burlington Department of Public Works
Stormwater Program

234 Penny Lane (Water Plant)
Burlington, VT 05401

PH: 802-863-4501 Email: stormwater@burlingtonvt.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 80 Colchester Ave
2. Zoning Permit Address (if different from above): _____
3. Brief Project Description (i.e. building construction, subdivision, site work)
Construction of new 74 unit residential building with associated parking, utilities, and other site improvements.
4. Owner Name: Eastern Development Corp. c/o Law Offices of F.J. von Turkovich
5. Owner Mailing Address: One National Life Dr Montpelier, VT 05604
6. Owner Phone: 802-229-3431 6. Owner email: fvonturkovich@fvtlaw.com
7. Contractor Name: _____ Contractor not known at this time
8. Contractor Phone: _____ 9. Contractor Email: _____
10. Estimated Project Start Date May 2017 Estimated End Date June 2018
11. Area of Land Disturbance 111,284 sq. ft.
12. Total proposed (existing + new) amount of impervious: 69,086 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
- Location of stockpiles (if any)
- Location of stabilized construction entrances
- Phasing plan (if appropriate)
- Direction of stormwater flow on site
- Location of sediment control BMP's (silt fence etc.)
- Stabilization measures

*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) Stockpile locations TBD after phasing finalization

- 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.

Disturbed areas will be stabilized/repared in accordance with the applicable details.

- 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.

Stockpiles will be stabilized in accordance with the detail provided.

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.

June 20, 2016

Frank Von Turkovich
Law Offices of F.J. von Turkovich, P.C.
One National Life Drive - M230
Montpelier, VT 05604

Subject: Miller-Von Turkovich, New Apartments, Burlington Vermont
80 Colchester Ave, Burlington, VT

Site and Soil Investigation

Dear Frank,

This memorandum is written to provide information of the necessary investigations needed on the property to determine if any contamination exists on site. First, a Phase I Environmental Site Assessment (ESA) will be needed as an overview investigation of current and historical conditions on and around the site that may have caused the site to become contaminated with hazardous materials or petroleum products. Generally, this investigation does not include any invasive work such as sampling, drilling or digging. However, if it is expected that contamination exists on the site before the Phase I ESA is conducted, it is an efficient option to have both Phase I ESA and environmental soil sampling to occur at the same time and as early as possible.

Due to the location and potential history of this project site there is concern for urban soils. Urban soils are soils that have been contaminated with hazardous materials such as arsenic, lead, or polycyclic aromatic hydrocarbons (PAHs), and used as fill soil on a secondary site. The State of Vermont passed Act 52 in June of 2015, which relates to the transportation and disposal of excavated "development soils" legally categorized as solid waste. "Development soil" is defined as:

"unconsolidated mineral and organic matter overlying bedrock that contains PAHs, arsenic, or lead in concentrations that:

- (A) exceed the relevant soil screening level for residential soil;
- (B) when managed in compliance with section 6604c, 6605, or 6605c of this title:
 - (i) pose no greater risk than the Agency-established soil screening value for the intended reuse of the property; and
 - (ii) pose no unreasonable risk to human health through a dermal, inhalation, or ingestion exposure pathway;
- (C) does not leach compounds at concentrations that exceed groundwater enforcement standards; and

(D) does not result in an exceedance of Vermont groundwater enforcement standards."

If development soils due occur in cut areas of the project site, they will need to be removed and cleaned up according to the requirements of Act 52. This would involve management plans for both the origin site and the proposed receiving site.

Due to the planning that would need to occur in the event that the project area does contain contaminated soil, we would suggest that the Phase I ESA and environmental soil sampling occur in conjunction as soon as possible. TCE has contacted Chris Koenig at Ross Environmental for an estimate on the discussed investigations, which may be reviewed as an attachment. If you have any questions or would like to move forward with this process please contact _____ at (802) 879-6331 ext. ____ or _____@tcevt.com.

Regards,

Attachments:

A. Ross Environmental Estimate