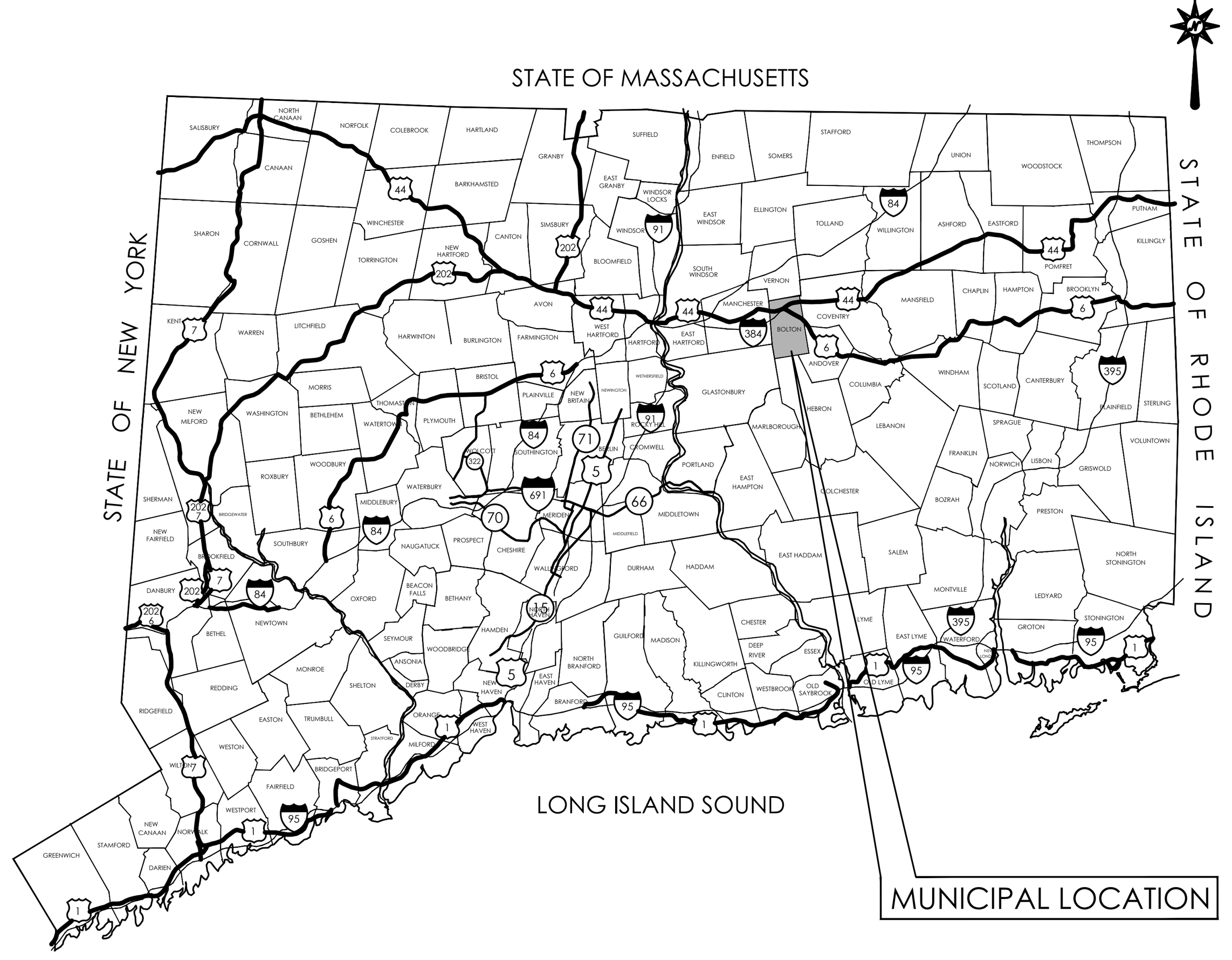


STATE OF CONNECTICUT

LOCATION MAP

N.T.S.

LAND DEVELOPMENT PLANS FOR PLANNING AND ZONING SPECIAL PERMIT APPLICATION

PROPOSED RETAIL DEVELOPMENT

1100 BOSTON TURNPIKE
BOLTON, CONNECTICUT

VICINITY MAP

SCALE: 1"=800'

PREPARED FOR:

GARRETT HOMES, LLC
59 FIELD STREET
TORRINGTON, CT 06790

PREPARED BY:

BL Companies
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING

100 CONSTITUTION PLAZA, 10TH FLOOR
HARTFORD, CONNECTICUT 06103
(860) 249-2200
(860) 249-2400 Fax

CONTENTS

CAD FILE: CV200203201

BOLTON PLANNING AND ZONING COMMISSION, BOLTON, CT

DATE APPROVED ______ DATE OF EXPIRATION ______

______________________ CHAIRMAN

THE STATUTORY FIVE-YEAR PERIOD FOR COMPLETION OF ALL PHYSICAL IMPROVEMNTS EXPIRES ON ______

FOR PERMITTING PURPOSES ONLY
NOT RELEASED FOR CONSTRUCTION

DEVELOPER:

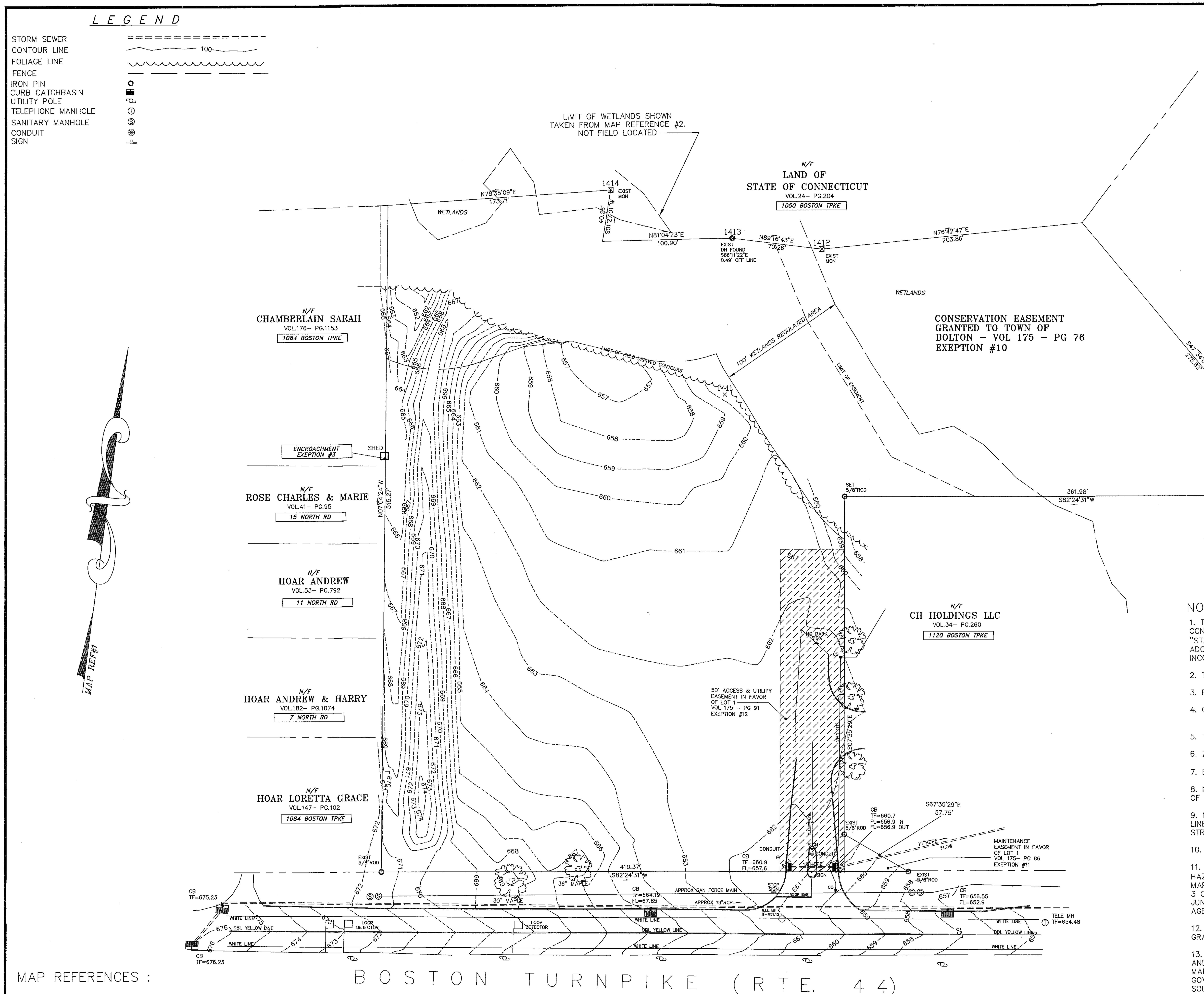
GARRETT HOMES, LLC
59 FIELD STREET
TORRINGTON, CT 06790

OWNER:

1100 BOSTON TRUNPIKE LLC
C/O JOEL ROSENLICHT
483 MIDDLE TURNPIKE WEST, SUITE 102
MANCHESTER, CT 06040

DATES

ISSUE DATE: APRIL 2, 2021
REVISION: MAY 5, 2021 (REVISED PER TOWN COMMENTS)



LEGEND
STORM SEWER
CONTOUR LINE
FOLIAGE LINE
FENCE
IRON PIN
CURB CATCHBASIN
UTILITY POLE
TELEPHONE MANHOLE
SANITARY MANHOLE
CONDUIT
SIGN
LIMIT OF WETLANDS SHOWN TAKEN FROM MAP REFERENCE #2. NOT FIELD LOCATED
N/F LAND OF STATE OF CONNECTICUT VOL.24– PG.204
1050 BOSTON TPKE
N/F CHAMBERLAIN SARAH VOL.176– PG.1153
1084 BOSTON TPKE
CONSERVATION EASEMENT GRANTED TO TOWN OF BOLTON – VOL 175 – PG 76 EXEPTION #10
N/F THE MISSIONARY SOCIETY FOR THE DIOCESE OF CONNECTICUT VOL.34– PG.260
1150 BOSTON TPKE
ENCROACHMENT EXEPTION #3
N/F ROSE CHARLES & MARIE VOL.41– PG.95
15 NORTH RD
N/F HOAR ANDREW VOL.53– PG.792
11 NORTH RD
N/F HOAR ANDREW & HARRY VOL.182– PG.1074
7 NORTH RD
N/F HOAR LORETTA GRACE VOL.147– PG.102
1084 BOSTON TPKE
N/F CH HOLDINGS LLC VOL.34– PG.260
1120 BOSTON TPKE
50' ACCESS & UTILITY EASEMENT IN FAVOR OF LOT 1 VOL 175 – PG 91 EXEPTION #12
MAINTENANCE EASEMENT IN FAVOR OF LOT 1 VOL 175– PG 86 EXEPTION #11
100' WETLANDS REGULATED AREA
WETLANDS
N78°35'09"E 173.71'
N81°04'23"E 100.90'
N89°16'43"E 70.26'
N76°42'47"E 203.86'
361.98' S82°24'31"W
S67°35'29"E 57.75'
410.37' S82°24'31"W
MAP REF#4
BOSTON TURNPIKE (RTE. 44)

LEGAL DESCRIPTION – 1100 BOSTON TURNPIKE:

COMMENCING AT AN EXISTING 5/8" ROD IN THE NORTHERLY HIGHWAY LINE OF RT 44 ALSO KNOWN AS BOSTON TURNPIKE, MARKING THE SOUTHEAST CORNER OF THE PROPERTY BEING DESCRIBED HEREIN AND THE SOUTHWEST CORNER OF LAND NOW OR FORMALLY OF CH HOLDINGS LLC; THENCE ALONG THE NORTHERLY HIGHWAY LINE OF SAID BOSTON TURNPIKE S82°24'31"W, 410.30' TO AN EXISTING 5/8" ROD MARKING THE SOUTHEASTERN CORNER OF LAND NOW OR FORMERLY OF LORETTA GRACE HOAR AND THE SOUTHWESTERLY CORNER OF LAND BEING DESCRIBED HEREIN; THENCE ALONG LANDS OF HARRY AND ANDREW HOAR, ANDREW HOAR, MARIE AND CHARLES ROSE, AND SARAH CHAMBERLIN PARTLY BY EACH N07°04'24"W, 515.27 TO A POINT MARKING NORTHEAST CORNER OF LAND NOW OR FORMERLY OF SARAH CHAMBERLAIN AND THE NORTHWEST CORNER OF LAND BEING DESCRIBED HEREIN; THENCE ALONG THE SOUTHERLY LINE OF LAND NOW OR FORMERLY OF STATE OF CONNECTICUT THE FOLLOWING FIVE COURSES:

N78°35'09"E, 173.71, S01°27'01"W, 40.26', N81°04'23"E, 100.90', N89°16'43"E, 70.26', N76°42'47"E, 203.86, TO A POINT MARKING THE NORTHWEST CORNER OF LAND NOW OR FORMERLY OF MISSIONARY SOCIETY FOR THE DIOCESE AND THE NORTHEAST CORNER OF LAND BEING DESCRIBED HEREIN; THENCE ALONG LAND OF SAID MISSIONARY FOR THE DIOCESE OF CONNECTICUT S47°34'01"E, 275.82', TO A POINT MARKING THE NORTHEAST CORNER OF SAID CH HOLDING LLC; THENCE ALONG SAID CH HOLDINGS LLC S82°24'31"W, 361.98, TO A POINT MARKING THE NORTHWEST CORNER OF SAID CH HOLDING LLC, THENCE ALONG SAID CH HOLDING LLC S07°35'29"E, 261.01', TO AN EXISTING ⅝" ROD; THENCE CONTINUING ALONG CH HOLDING LLC S67°35'29"E, 57.75', TO THE POINT AND PLACE OF BEGINNING CONTAINING 236,912.34 OR 5.44 ACRES.

MAP REFERENCES :

1. "LOT SPLIT PLAN & EASEMENT PLAN – PREPARED FOR – 1100 BOSTON TURNPIKE, LLC – 1100 BOSTON TURNPIKE – BOLTON, CT – MAP 05 LOT 81 – ZONE: RMUZ", scale 1" = 40', dated 7–18–17, revised to 9–28–17 and prepared by J R Russo & Associates LLC, Surveyors – Engineers.

2. 'AS-BUILT PLAN – BOLTON COMETIC & FAMILY DENTISTRY – 1120 BOSTON TURNPIKE – BOLTON, CT – MAP 05 LOT 81–1 ZONE: RMUZ", scale 1" = 20', dated 7–24–18 and prepared by JR Russo & Associates, LLD Surveyors – Engineers

3. "CONNECTICUT – STATE HIGHWAY DEPARTMENT – RIGHT OF WAY MAP – TOWN OF BOLTON – HARTFORD–WILLIMANTIC ROAD – FROM THE COVENTRY TOWN LINE – WESTERLY ABOUT 6,300 FEET – ROUTES U.S. 6 & U.S. 44", scale 1" = 40', dated Oct. 31, 1935 and prepared by Connecticut State Highway Department

4. " SOME LAND – OF THE ESTATE OF – ALBERT N. SKINNER – TOWN OF BOLTON CONN." – scale 1"=50'. dated Nov. 20, 1968 and prepared by Everett O. Gardner L.S 4349

NOTES:

1. THIS SURVEY HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20–300b–20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INCORPORATED ON SEPTEMBER 26, 1996.

2. TYPE OF SURVEY = PROPERTY SURVEY

3. BOUNDARY DETERMINATION CATEGORY = DEPENDENT RE–SURVEY

4. OWNERS OF RECORD –
   1100 BOSTON TURNPIKE LLC (Vol. 141– Pg 790)

5. TOTAL AREA – 236912 S.F. or 5.439 Ac.

6. ZONE – RMUZ

7. ELEVATIONS BASED ON NAVD 88 DATUM (MAP REFERENCE #2)

8. NO EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION OF BUILDING ADDITIONS OBSERVED,

9. NO INFORMATION OF PROPOSED CHANGES IN STREET RIGHT OF WAY LINES HAS BEEN MADE AVAILABLE TO SURVEYOR. NO EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS OBSERVED.

10. NO WETLAND DELINEATION OBSERVED

11. PROPERTY LIES WITHIN FLOOD ZONE X – AREA OF MINIMAL FLOOD HAZARD, AS SHOWN ON MAP ENTITLED "FIRM – FLOOD INSURANCE RATE MAP – TOWN OF BOLTON, CONNECTICUT– TOLLAND COUNTY – PANEL 1 OF 3 COMMUNITY PANEL NUMBER 090109 0001 B WITH AN EFFECTIVE DATE OF JUNE 1 1981 AND PREPARED BY FEDERAL EMERGENCY MANAGEMENT AGENCY.

12. REFER TI VOL 72 – PG 443 FOR POSSIBLE EFFECTS OF SPECIAL PERMIT GRANTED ON APRIL 4, 1990 – EXEPTION #9

13. UNDERGROUND UTILITIES, STRUCTURE AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES OR GOVERNMENTAL AGENCIES, FROM PAROLE TESTIMONY AND FROM OTHER SOURCES. THESE LOCATIONS ARE APPROXIMATE AND OTHER SUCH FEATURES MAY EXIST UNKNOWN TO DUFOUR SURVEYING ASSOCIATES. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1–800–922–4455

FIRST AMERICAN TITLE INSURANCE COMPANY – COMMITMENT FOR TITLE INSURANCE :
COMMITMENT No. CT5142976 – DATED JANUARY 8, 2021
CERTIFIED TO:
CALITO DEVELOPMENT LLC
FIRST AMERICAN TITLE INSURANCE COMPANY

THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, JOINTLY ESTABISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES TABLE A ITEMS 2,3,4,5,8,11,13,16,17,18 AND 19.

SCHEDULE B, PART II, EXCEPTIONS:
1. NON–SURVEY ISSUE
2. NON SURVEY ISSUE
3. PLOTTED
4. NON SURVEY ISSUE
5. NON SURVEY ISSUE
6. NON SURVEY ISSUE
7. NON SURVEY ISSUE
8. NON SURVEY ISSUE
9. PLOTTED – NOTE 12
10. PLOTTED
11. PLOTTED
12. PLOTTED

FIELD WORK WAS COMPLETED ON FEBRUARY 17, 2021

DATE: 3/31/2021 CARMINE J. MATRASCIA – LS#70219

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON. THIS MAP AND SURVEY WERE PREPARED IN ACCORDANCE WITH THE STANDARDS OF A CLASS A–2 & T–2 SURVEY AS DEFINED IN THE CODE OF PRACTICE FOR STANDARDS OF ACCURACY OF SURVEYS AND MAPS, ADOPTED SEPT. 26, 1996 AS AMENDED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INCORPORATED.

CARMINE J. MATRASCIA – L.S. #70219
NOT VALID WITHOUT EMBOSSED SEAL

DUFOUR SURVEYING LLC

REVISED 3/31/2021 : ADD WETLANDS LIMITS
REVISED 3/22/2021 : CORRECTED ZONE RMUZ

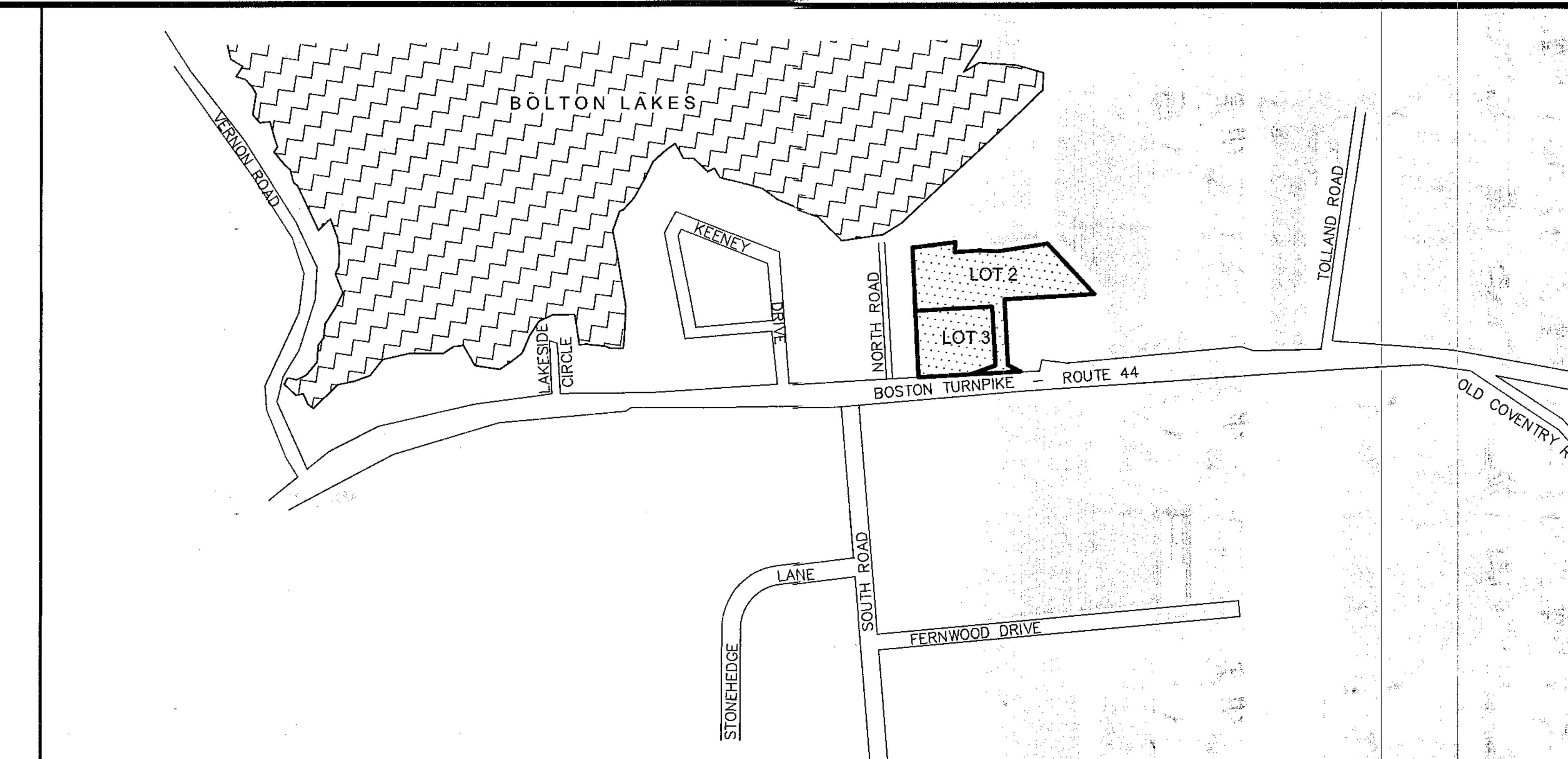
ALTA/NSPS LAND TITLE SURVEY		
PREPARED FOR: CALITO DEVELEOPMENT, LLC		
1100 BOSTON TPKE, RTE 44, BOLTON, CT		
SCALE: 1" = 40'	APPROVED: CARMINE J. MATRASCIA – L.S. #70219	
DATE: 02–18–2021	JOB NO.: 21–05	FILE NO.: \21–05
DUFOUR SURVEYING LLC 575 NORTH MAIN STREET BRISTOL, CONNECTICUT 860–314–0502 860–738–0222		

LEGEND

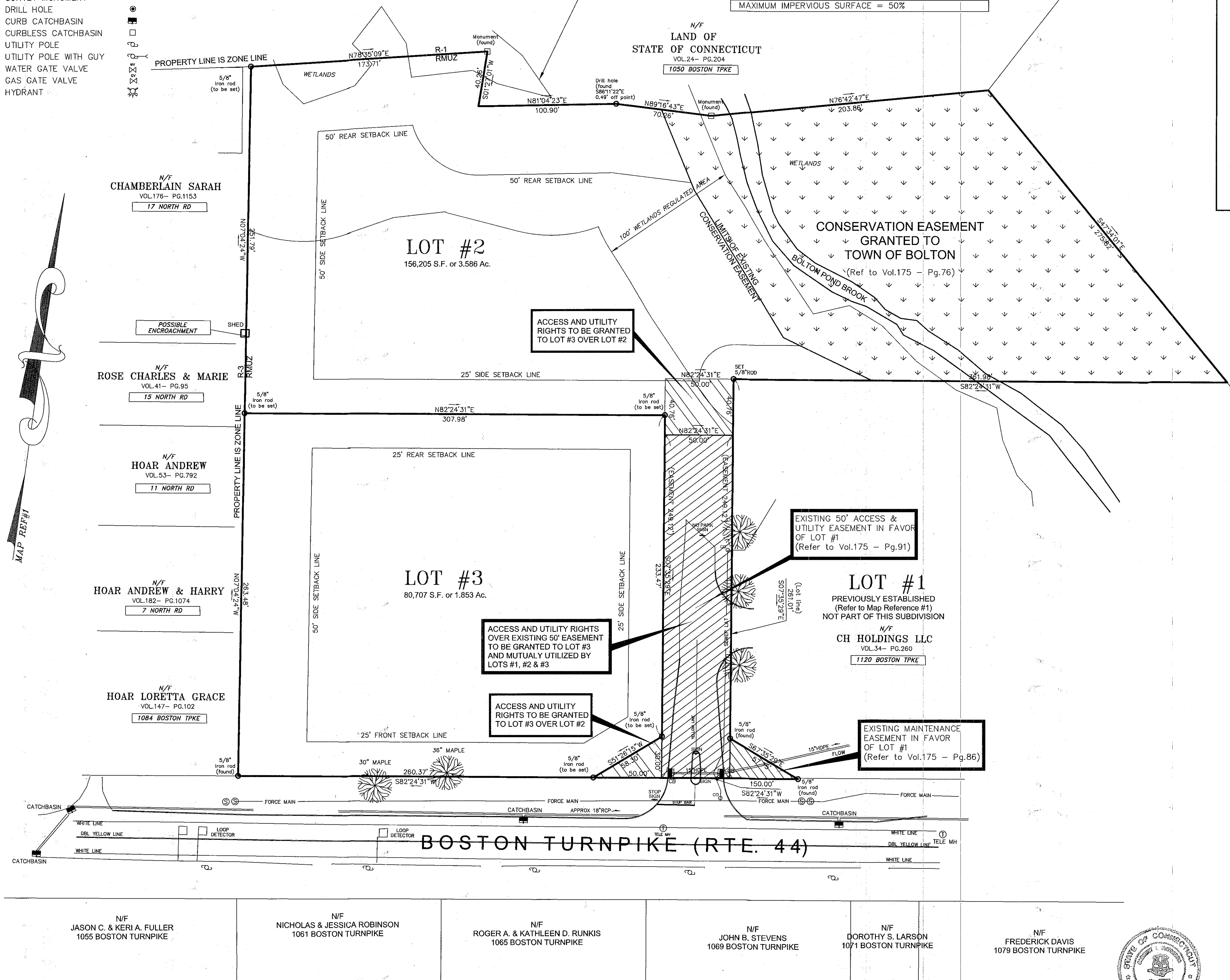
STONE WALL	
SANITARY SEWER	
ELECTRIC LINE	
PROPANE LINE	
FENCE	
STORM SEWER	
CONTOUR LINE	
FOLIAGE LINE	
IRON PIN	
SURVEY MONUMENT	
DRILL HOLE	
CURB CATCHBASIN	
CURBLESS CATCHBASIN	
UTILITY POLE	
UTILITY POLE WITH GUY	
WATER GATE VALVE	
GAS GATE VALVE	
HYDRANT	

ZONING REQUIREMENTS

ZONE – RMUZ
MINIMUM LOT AREA = 80,000 S.F.
MINIMUM LOT WIDTH = 150'
MINIMUM SETBACKS – FRONT = 25' SIDE = 25' (50' WHEN ABUTTING RESIDENTIAL ZONE) REAR = 25' (50' WHEN ABUTTING RESIDENTIAL ZONE)
MINIMUM LANDSCAPE AREA = 30%
MAXIMUM BUILDING HEIGHT = 35' or 2.5 STORIES
MINIMUM FLOOR AREA – 600 S.F.(GROUND FLOOR)
MAXIMUM LOT COVERAGE = 25%
MAXIMUM IMPERVIOUS SURFACE = 50%



LOCATION MAP
1" = 500'±



LIMIT OF WETLANDS SHOWN TAKEN FROM MAP REFERENCE #2. NOT FIELD LOCATED
PROPERTY LINE IS ZONE LINE
N78°35'09"E
173.71'
R-1
RMUZ
WETLANDS
N81°04'23"E
100.90'
N89°16'43"E
70.76'
N76°42'47"E
203.86'
N/F
LAND OF
STATE OF CONNECTICUT
VOL.24– PG.204
1050 BOSTON TPKE
50' REAR SETBACK LINE
N/F
CHAMBERLAIN SARAH
VOL.176– PG.1153
17 NORTH RD
LOT #2
156,205 S.F. or 3.586 Ac.
100' WETLANDS REGULATED AREA
LIMIT OF EXISTING CONSERVATION EASEMENT
CONSERVATION EASEMENT
GRANTED TO
TOWN OF BOLTON
(Ref to Vol.175 – Pg.76)
BOLTON POND BROOK
N/F
THE MISSIONARY SOCIETY FOR THE
DIOCESE OF CONNECTICUT
VOL.34– PG.260
1150 BOSTON TPKE
POSSIBLE ENCROACHMENT
SHED
ACCESS AND UTILITY RIGHTS TO BE GRANTED TO LOT #3 OVER LOT #2
N/F
ROSE CHARLES & MARIE
VOL.41– PG.95
15 NORTH RD
25' SIDE SETBACK LINE
R-3
RMUZ
N82°24'31"E
307.98'
N82°24'31"E
50.00'
S82°24'31"W
N/F
HOAR ANDREW
VOL.53– PG.792
11 NORTH RD
PROPERTY LINE IS ZONE LINE
25' REAR SETBACK LINE
EXISTING 50' ACCESS & UTILITY EASEMENT IN FAVOR OF LOT #1
(Refer to Vol.175 – Pg.91)
LOT #3
80,707 S.F. or 1.853 Ac.
LOT #1
PREVIOUSLY ESTABLISHED
(Refer to Map Reference #1)
NOT PART OF THIS SUBDIVISION
N/F
CH HOLDINGS LLC
VOL.34– PG.260
1120 BOSTON TPKE
N/F
HOAR ANDREW & HARRY
VOL.182– PG.1074
7 NORTH RD
ACCESS AND UTILITY RIGHTS OVER EXISTING 50' EASEMENT TO BE GRANTED TO LOT #3 AND MUTUALY UTILIZED BY LOTS #1, #2 & #3
50' SIDE SETBACK LINE
25' SIDE SETBACK LINE
N/F
HOAR LORETTA GRACE
VOL.147– PG.102
1084 BOSTON TPKE
ACCESS AND UTILITY RIGHTS TO BE GRANTED TO LOT #3 OVER LOT #2
EXISTING MAINTENANCE EASEMENT IN FAVOR OF LOT #1
(Refer to Vol.175 – Pg.86)
25' FRONT SETBACK LINE
30" MAPLE
36" MAPLE
260.37'
S82°24'31"W
150.00'
S82°24'31"W
FORCE MAIN
CATCHBASIN
BOSTON TURNPIKE (RTE. 44)
MAP REF#1
N/F
JASON C. & KERI A. FULLER
1055 BOSTON TURNPIKE
N/F
NICHOLAS & JESSICA ROBINSON
1061 BOSTON TURNPIKE
N/F
ROGER A. & KATHLEEN D. RUNKIS
1065 BOSTON TURNPIKE
N/F
JOHN B. STEVENS
1069 BOSTON TURNPIKE
N/F
DOROTHY S. LARSON
1071 BOSTON TURNPIKE
N/F
FREDERICK DAVIS
1079 BOSTON TURNPIKE

MAP REFERENCES :

1. "LOT SPLIT PLAN & EASEMENT PLAN - PREPARED FOR - 1100 BOSTON TURNPIKE, LLC - 1100 BOSTON TURNPIKE - BOLTON, CT - MAP 05 LOT 81 - ZONE: RMUZ", scale 1" = 40', dated 7-18-17, revised to 9-28-17 and prepared by J R Russo & Associates LLC, Surveyors - Engineers.

2. "AS-BUILT PLAN - BOLTON COMETIC & FAMILY DENTISTRY - 1120 BOSTON TURNPIKE - BOLTON, CT - MAP 05 LOT 81-1 ZONE: RMUZ", scale 1" = 20', dated 7-24-18 and prepared by JR Russo & Associates, LLD Surveyors - Engineers

3. "CONNECTICUT - STATE HIGHWAY DEPARTMENT - RIGHT OF WAY MAP - TOWN OF BOLTON - HARTFORD-WILLIMANTIC ROAD - FROM THE COVENTRY TOWN LINE - WESTERLY ABOUT 6,300 FEET - ROUTES U.S. 6 & U.S. 44", scale 1" = 40', dated Oct. 31, 1935 and prepared by Connecticut State Highway Department

4. " SOME LAND - OF THE ESTATE OF - ALBERT N. SKINNER - TOWN OF BOLTON CONN." - scale 1"=50'. dated Nov. 20, 1968 and prepared by Everett O. Gardner L.S 4349

NOTES:

1. THIS SURVEY HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INCORPORATED ON SEPTEMBER 26, 1996.

2. TYPE OF SURVEY = PROPERTY SURVEY

3. BOUNDARY DETERMINATION CATEGORY = DEPENDENT RE-SURVEY

4. OWNERS OF RECORD -
1100 BOSTON TURNPIKE LLC (Vol. 141- Pg 790)

5. TOTAL AREA - 236912 S.F. or 5.439 Ac.

6. ZONE - RMUZ

7. PROPERTY LIES WITHIN FLOOD ZONE X - AREA OF MINIMAL FLOOD HAZARD, AS SHOWN ON MAP ENTITLED "FIRM - FLOOD INSURANCE RATE MAP - TOWN OF BOLTON, CONNECTICUT- TOLLAND COUNTY - PANEL 1 OF 3 COMMUNITY PANEL NUMBER 090109 0001 B WITH AN EFFECTIVE DATE OF JUNE 1 1981 AND PREPARED BY FEDERAL EMERGENCY MANAGEMENT AGENCY.

8. UNDERGROUND UTILITIES, STRUCTURE AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES OR GOVERNMENTAL AGENCIES, FROM PAROLE TESTIMONY AND FROM OTHER SOURCES. THESE LOCATIONS ARE APPROXIMATE AND OTHER SUCH FEATURES MAY EXIST UNKNOWN TO DUFOUR SURVEYING ASSOCIATES. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455

ALL CONSTRUCTION OF PUBLIC FACILITIES REQUIRED FOR THIS SUBDIVISION SHALL BE COMPLETED WITHIN FIVE YEARS AFTER THE APPROVAL OF THIS SUBDIVISION PLAN AND THIS FIVE YEAR PERIOD EXPIRES ON: ____________

APPROVED BY THE BOLTON PLANNING COMMISSION

CHAIRMAN / SECRETARY ____________ DATE: ____________

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

REVISED 3/31/2021 : PER STAFF COMMENTS

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON. THIS MAP AND SURVEY WERE PREPARED IN ACCORDANCE WITH THE STANDARDS OF A CLASS A-2 SURVEY AS DEFINED IN THE CODE OF PRACTICE FOR STANDARDS OF ACCURACY OF SURVEYS AND MAPS, ADOPTED SEPT. 26, 1996 AS AMENDED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INCORPORATED.

CARMINE J. MATRASCIA - L.S. #70219
NOT VALID WITHOUT EMBOSSED SEAL

DUFOUR SURVEYING LLC

2 - LOT SUBDIVISION PLAN

PREPARED FOR: CALITTO DEVELOPMENT LLC	
1100 BOSTON TURNPIKE, ROUTE 44, BOLTON, CONNECTICUT	
SCALE: 1" = 40'	APPROVED: CARMINE J. MATRASCIA - L.S. #70219
DATE: 03-18-2021	JOB NO.: 21-05 / FILE NO.: \21-05

DUFOUR SURVEYING LLC
575 NORTH MAIN STREET
BRISTOL, CONNECTICUT
860-314-0502 860-738-0222

ZONING INFORMATION

LOCATION: BOLTON, TOLLAND COUNTY, CONNECTICUT					
ZONE: RURAL MIXED USE ZONE (RMUZ)					
USE: RETAIL (PERMITTED BY SPECIAL PERMIT)					
ITEM #	ITEM	REQUIREMENTS	PROPOSED LOT 3	FUTURE LOT 2	VARIANCE
1	MINIMUM LOT AREA	80,000 S.F.	80,707 S.F. (1.85 AC.)	82,061 S.F. (1.88 AC.) [2]	NO
2	MINIMUM LOT WIDTH	NONE REQUIRED	308 FEET	560 FEET	NO
3	MINIMUM LOT FRONTAGE	150 FEET	260.4 FEET	150 FEET	NO
4	MINIMUM FRONT SETBACK	NONE REQUIRED	71.9 FEET	343 FEET	NO
5	MINIMUM SIDE SETBACK	25 FEET (50 FEET) [1]	72.8 FEET	118.6 FEET	NO
6	MINIMUM REAR SETBACK	25 FEET (50 FEET) [1]	51.4 FEET	89.3 FEET	NO
7	MAXIMUM BUILDING HEIGHT	35 FEET/2.5 STORIES	25.6 FEET	<35 FEET/2.5 STORIES	NO
8	MAXIMUM BUILDING COVERAGE	25 PERCENT	13.2 PERCENT	12.2 PERCENT	NO
9	MAXIMUM IMPERVIOUS COVERAGE	50 PERCENT	39.9 PERCENT	33.5 PERCENT	NO

[1] MINIMUM SIDE AND REAR SETBACKS – 50 FEET WHEN ABUTTING A RESIDENTIAL DISTRICT
[2] LOT AREA FOR LOT 2 DOES NOT INCLUDE ACCESS STRIP, CONSERVATION EASEMENT, OR WETLAND AREAS.

PARKING INFORMATION

ITEM #	ITEM	REQUIREMENTS	PROPOSED LOT 3	FUTURE LOT 2	VARIANCE
1	BUILDING SIZE	600 S.F.	10,640 S.F.	10,000 S.F.	NO
2	PARKING REQUIRED	RETAIL: MINIMUM – 2 SPACES PER 1,000 S.F. OF GFA (10,640/10,000 S.F.) MINIMUM REQUIRED = 22 / 20 SPACES MAXIMUM – 5 SPACES PER 1,000 S.F. OF GFA (10,640/10,000 S.F.) MAXIMUM ALLOWED = 54 / 50 SPACES	33 SPACES	49 SPACES	NO
3	MINIMUM HANDICAPPED PARKING SPACES REQUIRED	2 SPACES	2 SPACES	2 SPACES	NO
4	MINIMUM PARKING DIMENSIONS	9 FEET X 18 FEET	9 FEET X 20 FEET	9 FEET X 18 FEET	NO
5	MINIMUM LOADING DIMENSIONS	10 FEET X 25 FEET X 14 FEET	33 FEET X 71 FEET X > 14 FEET	10 FEET X 25 FEET X > 14 FEET	NO
6	MINIMUM AISLE WIDTH	22 FEET – 2-WAY 11 FEET – 1-WAY	30 FEET – 2-WAY	24 FEET – 2-WAY	NO
7	MINIMUM FRONT SETBACK	50 FEET [3]	50.5 FEET	273.4 FEET	NO
8	MINIMUM SIDE SETBACK	NONE REQUIRED [3]	77.1 FEET	66.7 FEET	NO
9	MINIMUM REAR SETBACK	NONE REQUIRED [3]	5.3 FEET	124 FEET	NO
10	BICYCLE PARKING REQUIRED	1 BICYLE PARKING SPACE PER 25 PARKING STALLS (2 REQUIRED)	2 BICYCLE PARKING SPACES	2 BICYCLE PARKING SPACES	NO

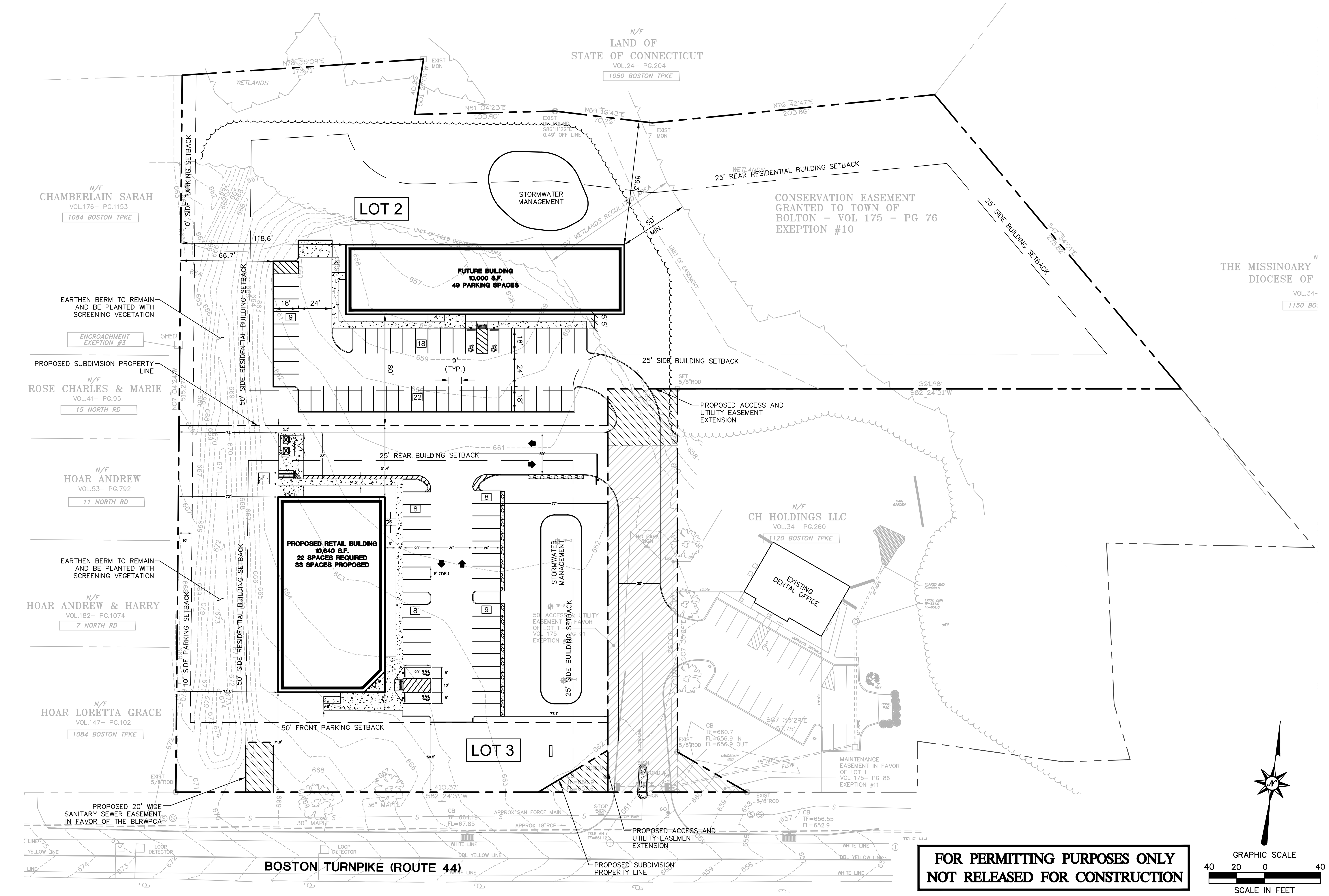
[3] 10 FEET LANDSCAPED BUFFER STRIP REQUIRED WHERE ABUTTING A RESIDENCE DISTRICT

SITE PLAN LEGEND

PROPERTY LINE

EXISTING EASEMENT AREA

PROPOSED EASEMENT AREA



GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

FOR PERMITTING PURPOSES ONLY
NOT RELEASED FOR CONSTRUCTION

BOLTON PLANNING AND ZONING COMMISSION, BOLTON, CT

DATE APPROVED ____ DATE OF EXPIRATION ____

____ CHAIRMAN

THE STATUTORY FIVE-YEAR PERIOD FOR COMPLETION OF ALL PHYSICAL IMPROVEMENTS EXPIRES ON ____

Architecture
Engineering
Environmental
Land Surveying

BL Companies

100 Constitution Plaza
10th Floor
Hartford, CT 06103
(860) 249-2200
(860) 249-2400 Fax

PROPOSED RETAIL DEVELOPMENT
1100 BOSTON TURNPIKE
BOLTON, CONNECTICUT

REVISIONS

No.	Date	Desc.
1	03/05/2021	REVISED PER TOWN COMMENTS

Designed	C.J.L.
Drawn	C.J.L.
Reviewed	K.M.M.
Scale	1"=40'
Project No.	2002032
Date	04/02/2021
CAD File:	MP200203201

Title
MASTER PLAN

Sheet No.
MP-1

SITE WORK GENERAL NOTES

1. THESE PLANS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT FOR CONSTRUCTION.

2. ALL CONSTRUCTION SHALL COMPLY WITH THE PROJECT SPECIFICATION MANUAL; CLIENT CORPORATION STANDARDS, MUNICIPALITY STANDARDS AND SPECIFICATIONS, CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS, 2010 ADA STANDARDS, AND STATE BUILDING CODE IN THE ABOVE REFERENCED INCREASING HIERARCHY. IF SPECIFICATIONS ARE IN CONFLICT, THE MORE STRINGENT SPECIFICATION SHALL APPLY. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE OSHA, FEDERAL, STATE AND LOCAL REGULATIONS.

3. REFER TO OTHER PLANS BY OTHER DISCIPLINES, DETAILS AND PROJECT MANUAL FOR ADDITIONAL INFORMATION. THE CONTRACTOR SHALL VERIFY ALL SITE AND BUILDING CONDITIONS IN THE FIELD AND CONTACT THE CIVIL ENGINEER AND ARCHITECT IF THERE ARE ANY QUESTIONS OR CONFLICTS REGARDING THE CONSTRUCTION DOCUMENTS AND/OR FIELD CONDITIONS, SO THAT APPROPRIATE REVISIONS CAN BE MADE PRIOR TO BIDDING. ANY CONFLICT BETWEEN THE DRAWINGS AND SPECIFICATIONS SHALL BE CONFIRMED WITH THE OWNER'S CONSTRUCTION MANAGER PRIOR TO BIDDING.

4. DO NOT INTERRUPT EXISTING UTILITIES SERVICING FACILITIES OCCUPIED AND USED BY THE OWNER OR OTHERS DURING OCCUPIED HOURS EXCEPT WHEN SUCH INTERRUPTIONS HAVE BEEN AUTHORIZED IN WRITING BY THE OWNER AND THE LOCAL MUNICIPALITIES. INTERRUPTIONS SHALL ONLY OCCUR AFTER ACCEPTABLE TEMPORARY SERVICE HAS BEEN PROVIDED.

5. THE CONTRACTOR SHALL ABIDE BY ALL OSHA, FEDERAL, STATE, AND LOCAL REGULATIONS WHEN OPERATING CRANES, BOOMS, HOISTS, ETC. IN CLOSE PROXIMITY TO OVERHEAD ELECTRIC LINES. IF CONTRACTOR MUST OPERATE EQUIPMENT CLOSE TO ELECTRIC LINES, CONTACT POWER COMPANY TO MAKE ARRANGEMENTS FOR PROPER SAFEGUARDS. ANY UTILITY COMPANY FEES SHALL BE PAID FOR BY THE CONTRACTOR.

6. THE CONTRACTOR SHALL PROVIDE AS-BUILT RECORD DRAWINGS OF ALL CONSTRUCTION (INCLUDING UNDERGROUND UTILITIES AND STORMWATER SYSTEM) TO THE OWNER AT THE END OF CONSTRUCTION.

7. THE ARCHITECT OR ENGINEER IS NOT RESPONSIBLE FOR SITE SAFETY MEASURES TO BE EMPLOYED DURING CONSTRUCTION. THE ARCHITECT AND ENGINEER HAVE NO CONTRACTUAL DUTY TO CONTROL THE SAFEST METHODS OR MEANS OF THE WORK, JOB SITE RESPONSIBILITIES, SUPERVISION OR TO SUPERVISE SAFETY AND DOES NOT VOLUNTARILY ASSUME ANY SUCH DUTY OR RESPONSIBILITY.

8. THE CONTRACTOR SHALL COMPLY WITH CFR 29 PART 1926 FOR EXCAVATION, TRENCHING, AND TRENCH PROTECTION REQUIREMENTS.

9. INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE SYSTEMS HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY COMPANY AND MUNICIPAL OR COUNTY OR STATE RECORD MAPS AND/OR FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE SYSTEMS ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UNDERGROUND AND OVERHEAD UTILITIES AND STORM DRAINAGE SYSTEMS INCLUDING SERVICES. PRIOR TO DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL CONTACT [CT CALL BEFORE YOU DIG (CBYD)] [CT (800) 922-4455] OR AT 811 AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS. THE CONTRACTOR SHALL EMPLOY THE USE OF A UTILITY LOCATING COMPANY TO PROVIDE SUBSURFACE UTILITY ENGINEERING CONSISTING OF DESIGNATING UTILITIES AND STORM PIPING ON PRIVATE PROPERTY WITHIN THE CONTRACT LIMIT AND CONSISTING OF DESIGNATING AND LOCATING WHERE PROPOSED UTILITIES AND STORM PIPING CROSS EXISTING UTILITIES AND STORM PIPING WITHIN THE CONTRACT LIMITS.

10. DO NOT SCALE DRAWINGS. DIMENSIONS GOVERN OVER SCALED DIMENSIONS.

11. IF PLANS AND OR SPECIFICATIONS ARE IN CONFLICT, THE MOST COSTLY SHALL APPLY.

12. ALL CONTRACTORS AND SUBCONTRACTORS SHALL OBTAIN COMPLETE DRAWING PLAN SETS FOR BIDDING AND CONSTRUCTION. PLAN SETS OR PLAN SET ELECTRONIC POSTINGS SHALL NOT BE DISASSEMBLED INTO PARTIAL PLAN SETS FOR USE BY CONTRACTORS AND SUBCONTRACTORS OF INDIVIDUAL TRADES. IT SHALL BE THE CONTRACTOR'S AND SUBCONTRACTOR'S RESPONSIBILITY TO OBTAIN COMPLETE PLAN SETS OR COMPLETE PLAN SET ELECTRONIC POSTINGS FOR USE IN BIDDING AND CONSTRUCTION.

13. ALL NOTES AND DIMENSIONS DESIGNATED "TYPICAL" APPLY TO ALL LIKE OR SIMILAR CONDITIONS THROUGHOUT THE PROJECT.

14. CONTRACTOR(S) TO TAKE AND VERIFY ALL DIMENSIONS AND CONDITIONS OF THE WORK AND BE RESPONSIBLE FOR COORDINATION OF SAME. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO START OF WORK.

15. BL COMPANIES WILL PREPARE FINAL CONSTRUCTION DOCUMENTS SUITABLE FOR BIDDING AND CONSTRUCTION. PROGRESS SETS OF THESE DOCUMENTS ARE NOT SUITABLE FOR THOSE PURPOSES. IF CLIENT ELECTS TO SOLICIT BIDS OR ENTER INTO CONSTRUCTION CONTRACTS UTILIZING CONSTRUCTION DOCUMENTS THAT ARE NOT YET FINAL, CONSULTANT SHALL NOT BE RESPONSIBLE FOR ANY COSTS OR DELAY ARISING AS A RESULT.

16. NO CONSTRUCTION OR DEMOLITION SHALL BEGIN UNTIL APPROVAL OF THE FINAL PLANS IS GRANTED BY ALL GOVERNING AND REGULATORY AGENCIES.

17. THE OWNER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY ZONING PERMITS REQUIRED BY GOVERNMENT AGENCIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT AND OBTAIN FROM COUNTY SOURCES ALL CONSTRUCTION PERMITS, INCLUDING ANY STATE DOT PERMITS, SEWER AND WATER CONNECTION PERMITS, AND ROADWAY CONSTRUCTION PERMITS. THE CONTRACTOR SHALL POST ALL BONDS, PAY ALL FEES, PROVIDE PROOF OF INSURANCE AND PROVIDE TRAFFIC CONTROL NECESSARY FOR THIS WORK EXCEPT CTDOT ENCROACHMENT PERMIT BOND.

18. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL PRODUCTS AND MATERIALS PER PLANS AND SPECIFICATIONS TO THE OWNER AND CIVIL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY TO THE SITE. ALLOW A MINIMUM OF 14 WORKING DAYS FOR REVIEW.

19. THE CONTRACTOR SHALL FOLLOW THE SEQUENCE OF CONSTRUCTION NOTES PROVIDED ON THE SEDIMENT AND EROSION CONTROL PLAN.

20. THE CONTRACTOR SHALL REFERENCE ARCHITECTURAL PLANS FOR EXACT DIMENSIONS AND CONSTRUCTION DETAILS OF BUILDING, AND THE RAISED CONCRETE SIDEWALKS, LANDINGS, RAMPS, AND STAIRS.

21. SHOULD ANY UNCHARTED OR INCORRECTLY CHARTED, EXISTING PIPING OR OTHER UTILITY BE UNCOVERED DURING EXCAVATION, CONSULT THE CIVIL ENGINEER IMMEDIATELY FOR DIRECTIONS BEFORE PROCEEDING FURTHER WITH WORK IN THIS AREA.

22. ALL SITE DIMENSIONS ARE REFERENCED TO THE FACE OF CURBS OR EDGE OF PAVING AS APPLICABLE UNLESS OTHERWISE NOTED. ALL BUILDING DIMENSIONS ARE REFERENCED TO THE OUTSIDE FACE OF THE STRUCTURE.

23. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC DEVICES FOR PROTECTION OF VEHICLES AND PEDESTRIANS CONSISTING OF DRUMS, BARRIERS, SIGNS, LIGHTS, FENCES, TEMPORARY WALKWAYS, TRAFFIC CONTROLLERS AND UNIFORMED TRAFFIC OFFICERS AS REQUIRED OR AS ORDERED BY THE ENGINEER OR AS REQUIRED BY THE LOCAL GOVERNING AUTHORITIES OR AS REQUIRED BY PERMIT STIPULATIONS OR AS REQUIRED BY THE OWNER. CONTRACTOR SHALL MAINTAIN ALL TRAFFIC LANES AND PEDESTRIAN WALKWAYS FOR USE AT ALL TIMES UNLESS WRITTEN APPROVAL FROM THE APPROPRIATE GOVERNING AGENCY IS GRANTED.

24. TRAFFIC CONTROL SIGNAGE SHALL CONFORM TO THE STATE DOT STANDARD DETAIL SHEETS AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. SIGNS SHALL BE INSTALLED PLUMB WITH THE EDGE OF THE SIGN 2' OFF THE FACE OF THE CURB, AND WITH 7' VERTICAL CLEARANCE UNLESS OTHERWISE DETAILED OR NOTED.

25. REFER TO DETAIL SHEETS FOR PAVEMENT, CURBING, AND SIDEWALK INFORMATION.

26. THE CONTRACT LIMIT IS THE PROPERTY LINE UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE CONTRACT DRAWINGS.

27. THE CONTRACTOR SHALL SUBMIT A SHOP DRAWING OF THE PAVEMENT MARKING PAINT MIXTURE PRIOR TO STRIPING.

28. PAVEMENT MARKING KEY:

 4" SYDL 4' SOLID YELLOW DOUBLE LINE
 4" SYL 4" SOLID YELLOW LINE
 4" SWL 4" SOLID WHITE LINE
 12" SWSB 12" SOLID WHITE STOP BAR
 4" BWL 4" BROKEN WHITE LINE 10' STRIPE 30' SPACE

29. PARKING SPACES SHALL BE STRIPED WITH 4" SWL; HATCHED AREA SHALL BE STRIPED WITH 4"SWL AT A 45° ANGLE, 2' ON CENTER. HATCHING, SYMBOLS, AND STRIPING FOR HANDICAPPED SPACES SHALL BE PAINTED WHITE AND BLUE. OTHER MARKINGS SHALL BE PAINTED WHITE OR AS NOTED.

30. ALL PARKING SPACES AND HATCHED AREAS SHALL HAVE TWO COATS OF PAVEMENT MARKINGS APPLIED TO STRIPING.

31. PAVEMENT MARKINGS SHALL BE HOT APPLIED TYPE IN ACCORDANCE WITH STATE DOT SPECIFICATIONS, UNLESS WHERE EPOXY RESIN PAVEMENT MARKINGS ARE INDICATED.

32. THE CONTRACTOR SHALL RESTORE ANY UTILITY STRUCTURE, DRAINAGE STRUCTURE, PIPE, UTILITY, PAVEMENT, CURBS, SIDEWALKS, LANDSCAPED AREAS, SWALE, PAVEMENT MARKINGS, OR SIGNAGE DISTURBED DURING DEMOLITION AND/OR CONSTRUCTION TO THEIR ORIGINAL CONDITION OR BETTER, AS APPROVED BY THE CIVIL ENGINEER, AND TO THE SATISFACTION OF THE OWNER AND COUNTY.

33. EXISTING BOUNDARY AND TOPOGRAPHY IS BASED ON DRAWING TITLED "ATLA/NSPS LAND TITLE SURVEY" SCALE 1"=40', DATED 2021/02/18, BY DUFOUR SURVEYING LLC.

34. ALTERNATIVE METHODS AND PRODUCTS OTHER THAN THOSE SPECIFIED MAY BE USED IF REVIEWED AND APPROVED BY THE OWNER, CIVIL ENGINEER, AND APPROPRIATE REGULATORY AGENCY PRIOR TO INSTALLATION DURING THE BIDDING PROCESS.

35. CTDOT ENCROACHMENT PERMIT SHALL BE OBTAINED BY CONTRACTOR WHO SHALL PAY ALL FEES, PROVIDE PROOF OF INSURANCE AND PROVIDE TRAFFIC PROTECTION NECESSARY FOR THE WORK. THE OWNER SHALL POST CTDOT ENCROACHMENT PERMIT BOND.

36. AN EROSION CONTROL BOND IS REQUIRED TO BE POSTED BY THE CONTRACTOR BEFORE THE START OF ANY ACTIVITY ON OR OFF SITE. THE AMOUNT OF THE EROSION CONTROL BOND WILL BE DETERMINED BY THE AUTHORITY HAVING JURISDICTION.

37. NO PART OF THE PROJECT PARCEL IS LOCATED WITHIN ANY FEMA DESIGNATED FLOOD HAZARD AREAS.

38. THERE ARE NO WETLANDS LOCATED ON THE SITE AS INDICATED BY INLAND WETLANDS PERMIT #2017-00 AND J.R. RUSSO & ASSOCIATES MAPPING AND VISUAL OBSERVATIONS.

39. 12" SWSB (STOP BAR) AND 4" SYDL AND SWL PAVEMENT MARKINGS LOCATED IN DRIVEWAYS AND IN STATE HIGHWAY SHALL BE EPOXY RESIN TYPE ACCORDING TO CONNDOT SPECIFICATIONS.

40. FIRE LANES SHALL BE ESTABLISHED AND PROPERLY DESIGNATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FIRE DISTRICT FIRE MARSHAL.

41. THE CONTRACTOR SHALL REMOVE CONFLICTING PAVEMENT MARKINGS IN THE ROADWAY BY METHOD APPROVED BY THE AUTHORITY HAVING JURISDICTION OR DOT AS APPLICABLE FOR THE LOCATION OF THE WORK.

42. ALL ADA DESIGNATED PARKING STALLS, ACCESS AISLES AND PEDESTRIAN WALKWAYS SHALL CONFORM TO THE CURRENT VERSION OF THE AMERICANS WITH DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN AND ANSI STANDARDS AND AS MAY BE SUPERCEDED BY THE STATE BUILDING CODE.

43. CONSTRUCTION OCCURRING ON THIS SITE SHALL COMPLY WITH NFPA 241 STANDARD FOR SAFEGUARDING CONSTRUCTION, ALTERATION AND DEMOLITION OPERATIONS, AND CHAPTER 16 OF NFPA 1 UNIFORM FIRE CODE.

44. ALL BUILDINGS, INCLUDING FOUNDATION WALLS AND FOOTINGS AND BASEMENT SLABS INDICATED ON THE DEMOLITION PLAN ARE TO BE REMOVED FROM THE SITE. CONTRACTOR SHALL SECURE ANY PERMITS, PAY ALL FEES AND PERFORM CLEARING AND GRUBBING AND DEBRIS REMOVAL PRIOR TO COMMENCEMENT OF GRADING OPERATIONS.

45. SEDIMENT AND EROSION CONTROLS AS SHOWN ON THE SEDIMENT AND EROSION CONTROL PLAN AND/OR DEMOLITION PLAN SHALL BE INSTALLED BY THE DEMOLITION CONTRACTOR PRIOR TO START OF DEMOLITION AND CLEARING AND GRUBBING OPERATIONS.

46. REMOVE AND DISPOSE OF ANY SIDEWALKS, FENCES, STAIRS, WALLS, DEBRIS AND RUBBISH REQUIRING REMOVAL FROM THE WORK AREA IN AN APPROVED OFF SITE LANDFILL, BY AN APPROVED HAULER. HAULER SHALL COMPLY WITH ALL REGULATORY REQUIREMENTS.

47. THE CONTRACTOR SHALL SECURE ALL PERMITS FOR HIS DEMOLITION AND DISPOSAL OF HIS DEMOLITION MATERIAL TO BE REMOVED FROM THE SITE. THE CONTRACTOR SHALL POST BONDS AND PAY PERMIT FEES AS REQUIRED. BUILDING DEMOLITION CONTRACTOR SHALL BE RESPONSIBLE FOR PERMITS AND DISPOSAL OF ALL BUILDING DEMOLITION DEBRIS IN AN APPROVED OFF-SITE LANDFILL.

48. ASBESTOS OR HAZARDOUS MATERIAL, IF FOUND ON SITE, SHALL BE REMOVED BY A LICENSED HAZARDOUS MATERIAL ABATEMENT CONTRACTOR.

49. THE CONTRACTOR SHALL PREPARE ALL MANIFEST DOCUMENTS AS REQUIRED PRIOR TO COMMENCEMENT OF DEMOLITION.

50. THE CONTRACTOR SHALL CUT AND PLUG, OR ARRANGE FOR THE APPROPRIATE UTILITY PROVIDER TO CUT AND PLUG ALL SERVICE PIPING AT THE STREET LINE OR AT THE MAIN, AS REQUIRED BY THE UTILITY PROVIDER, OR AS OTHERWISE NOTED OR SHOWN ON THE CONTRACT DRAWINGS. ALL SERVICES MAY NOT BE SHOWN ON THIS PLAN. THE CONTRACTOR SHALL INVESTIGATE THE SITE PRIOR TO BIDDING TO DETERMINE THE EXTENT OF SERVICE PIPING TO BE REMOVED, CUT OR PLUGGED. THE CONTRACTOR SHALL PAY ALL UTILITY PROVIDER FEES FOR ABANDONMENTS AND REMOVALS.

51. THE CONTRACTOR SHALL PROTECT ALL IRON PINS, MONUMENTS AND PROPERTY CORNERS DURING DEMOLITION AND CONSTRUCTION ACTIVITIES. ANY CONTRACTOR DISTURBED PINS, MONUMENTS, AND OR PROPERTY CORNERS, ETC. SHALL BE RESET BY A LICENSED LAND SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.

52. THE DEMOLITION CONTRACTOR SHALL STABILIZE THE SITE AND KEEP EROSION CONTROL MEASURES IN PLACE UNTIL THE COMPLETION OF HIS WORK OR UNTIL THE COMMENCEMENT OF WORK BY THE SITE CONTRACTOR, WHICHEVER OCCURS FIRST, AS REQUIRED OR DEEMED NECESSARY BY THE ENGINEER OR OWNER'S REPRESENTATIVE. THE SITE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE MAINTENANCE OF EXISTING EROSION AND SEDIMENTATION CONTROLS AND FOR INSTALLATION OF ANY NEW SEDIMENT AND EROSION CONTROLS AS PER THE SEDIMENT AND EROSION CONTROL PLAN, AT THAT TIME.

53. THE CONTRACTOR SHALL PUMP OUT BUILDING FUEL AND WASTE OIL TANKS (IF ANY ARE ENCOUNTERED) AND REMOVE FUEL TO AN APPROVED DISPOSAL AREA BY A LICENSED WASTE OIL HANDLING CONTRACTOR IN STRICT ACCORDANCE WITH STATE REQUIREMENTS.

54. IF IMPACTED OR CONTAMINATED SOIL IS ENCOUNTERED BY THE CONTRACTOR, THE CONTRACTOR SHALL SUSPEND EXCAVATION WORK OF IMPACTED SOIL AND NOTIFY THE OWNER AND/OR OWNER'S ENVIRONMENTAL CONSULTANT PRIOR TO PROCEEDING WITH FURTHER WORK IN THE IMPACTED SOIL LOCATION UNTIL FURTHER INSTRUCTED BY THE OWNER AND/OR OWNER'S ENVIRONMENTAL CONSULTANT.

55. EXISTING WATER SERVICES SHALL BE DISCONNECTED AND CAPPED AT MAIN IN ACCORDANCE WITH THE REQUIREMENTS OF THE POTABLE WELL AUTHORITY. REMOVE EXISTING ONSITE WATER PIPING TO BE ABANDONED TO RIGHT OF WAY LINE UNLESS OTHERWISE SHOWN ON DEMOLITION PLANS OR AS REQUIRED BY THE POTABLE WELL AUTHORITY TO BE REMOVED TO MAIN.

56. EXISTING SANITARY LATERAL SHALL BE PLUGGED WITH NON-SHRINK GROUT AT CURB LINE OR AT MAIN CONNECTION IN ACCORDANCE WITH THE SANITARY UTILITY PROVIDER REQUIREMENTS. REMOVE EXISTING LATERAL PIPING FROM SITE UNLESS OTHERWISE SHOWN ON DEMOLITION PLANS OR AS REQUIRED BY THE SANITARY UTILITY PROVIDER.

57. DOMESTIC GAS SERVICES SHALL BE CAPPED AND SERVICE LINES PURGED OF RESIDUAL GAS IN ACCORDANCE WITH THE GAS UTILITY PROVIDER REQUIREMENTS. WORK TO BE COORDINATED BY AND PAID FOR BY THE CONTRACTOR. REMOVE EXISTING SERVICE PIPING ON SITE. ANY PROPANE TANKS SHALL BE PURGED OF RESIDUAL GAS BY PROPANE SUPPLIER. CONTRACTOR SHALL COORDINATE THIS WORK AND PAY NECESSARY FEES.

58. THE CONTRACTOR SHALL PROVIDE DISCONNECT NOTIFICATION TO THE MUNICIPALITY ENGINEERING DEPARTMENT, TELECOMMUNICATIONS UTILITY PROVIDER, GAS UTILITY PROVIDER, ELECTRIC UTILITY PROVIDER, SANITARY UTILITY PROVIDER, AND POTABLE WELL AUTHORITY AT LEAST THREE WEEKS PRIOR TO BEGINNING DEMOLITION.

59. THE CONTRACTOR IS RESPONSIBLE FOR SECURING A DEMOLITION PERMIT FROM THE MUNICIPALITY BUILDING DEPARTMENT AND MUST FURNISH THE REQUIRED APPLICATION MATERIAL AND PAY ALL FEES.

60. BACK FILL DEPRESSIONS, FOUNDATION HOLES AND REMOVED DRIVEWAY AREAS IN LOCATIONS NOT SUBJECT TO FURTHER EXCAVATION WITH SOIL MATERIAL APPROVED BY THE OWNER'S GEOTECHNICAL ENGINEER AND COMPACT, FERTILIZE, SEED AND MULCH DISTURBED AREAS NOT SUBJECT TO FURTHER SITE CONSTRUCTION. DEMOLISHED BUILDING FOUNDATION AREA AND BASEMENT IF PRESENT TO BE BACKFILLED WITH GRAVEL FILL OR MATERIAL SPECIFIED IN THE PROJECT GEOTECHNICAL REPORT IN LIFT THICKNESS SPECIFIED IN THE GEOTECHNICAL REPORT. COMPACT TO 95% MAX. DRY DENSITY PER ASTM D1557 AT MOISTURE CONTENT SPECIFIED IN GEOTECHNICAL REPORT AND EARTHWORK SPECIFICATION. EMPLOY WATERING EQUIPMENT FOR DUST CONTROL.

61. THE CONTRACTOR SHALL REPAIR PAVEMENTS BY INSTALLING TEMPORARY AND PERMANENT PAVEMENTS IN PUBLIC RIGHTS OF WAYS AS REQUIRED BY LOCAL GOVERNING AUTHORITIES AND THE MUNICIPALITY AND PER PERMIT REQUIREMENTS DUE TO DEMOLITION AND PIPE REMOVAL ACTIVITIES.

62. THE CONTRACTOR SHALL CUT AND REMOVE AT LUMINARE AND SIGN LOCATIONS ANY PROTRUDING CONDUITS TO 24" BELOW GRADE. THE CONTRACTOR SHALL REMOVE ALL CABLE AND CONDUCTORS FROM REMAINING LIGHTING AND SIGNING CONDUITS TO BE ABANDONED. ANY REMAINING LIGHTING TO REMAIN IN PLACE SHALL BE RECIRCUITED OR REWIRED AS NECESSARY TO REMAIN IN OPERATION.

63. NO WORK ON THIS SITE SHALL BE INITIATED BY THE CONTRACTOR UNTIL A PRE-CONSTRUCTION MEETING WITH OWNER AND THE CIVIL ENGINEER IS PERFORMED. THE CONTRACTOR SHOULD BE AWARE OF ANY SITE INFORMATION AVAILABLE SUCH AS GEOTECHNICAL AND ENVIRONMENTAL REPORTS. THE CONTRACTOR SHALL HAVE CBYD MARK OUTS OF EXISTING UTILITIES COMPLETED PRIOR TO MEETING.

64. THE CONTRACTOR SHALL ARRANGE FOR AND INSTALL TEMPORARY OR PERMANENT UTILITY CONNECTIONS WHERE INDICATED ON PLAN OR AS REQUIRED. MAINTAIN UTILITY SERVICES TO BUILDINGS OR TO SERVICES TO REMAIN. CONTRACTOR TO COORDINATE WITH UTILITY PROVIDERS FOR INSTALLATION AND PAY UTILITY PROVIDER FEES.

65. THE CONTRACTOR SHALL NOT COMMENCE DEMOLITION OR UTILITY DISCONNECTIONS UNTIL AUTHORIZED TO DO SO BY THE OWNER.

66. THE CONTRACTOR OR DEMOLITION CONTRACTOR SHALL INSTALL TEMPORARY SHEETING OR SHORING AS NECESSARY TO PROTECT EXISTING AND NEW BUILDINGS, STRUCTURES AND UTILITIES DURING CONSTRUCTION AND DEMOLITION. SHEETING OR SHORING SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER, LICENSED IN THIS STATE AND EVIDENCE OF SUCH SUBMITTED TO THE OWNER PRIOR TO INSTALLATION.

67. NO SALVAGE SHALL BE PERMITTED UNLESS PAID TO THE OWNER AS A CREDIT.

68. ANY EXISTING POTABLE WELL AND ANY EXISTING SEPTIC TANKS/ABSORPTION AREAS SHALL BE ABANDONED AND REMOVED PER THE DEEP AND HEALTH CODE REQUIREMENTS.

69. THE EXISTING DRIVEWAYS SHALL REMAIN OPEN FOR NORMAL BUSINESS OPERATIONS UNTIL COMPLETION AND OCCUPATION OF THE NEW BUILDING.

70. THE CONTRACTOR SHALL PRESERVE EXISTING VEGETATION WHERE POSSIBLE AND/OR AS NOTED ON DRAWINGS. REFER TO SEDIMENT AND EROSION CONTROL PLAN FOR LIMIT OF DISTURBANCE AND EROSION CONTROL NOTES.

71. TOPSOIL SHALL BE STRIPPED AND STOCKPILED ON SITE FOR USE IN FINAL LANDSCAPING.

72. SUBGRADE SHALL BE FORMED WITH REMOVAL AND REPLACEMENT OF FILL AND REMOVAL AND REPLACEMENT OF UNSUITABLE AND SOFT SUBGRADE MATERIAL AS REQUIRED BY THE GEOTECHNICAL ENGINEER. SEE GEOTECHNICAL REPORT AND EARTHWORK SPECIFICATIONS FOR FURTHER DESCRIPTION.

73. THE CONTRACTOR SHALL COMPACT FILL IN LIFT THICKNESS PER THE GEOTECHNICAL REPORT UNDER ALL PARKING, BUILDING, DRIVE, AND STRUCTURE AREAS TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557 (MODIFIED PROCTOR TEST), OR AS REQUIRED BY THE GEOTECHNICAL ENGINEER.

74. UNDERDRAINS SHALL BE ADDED, IF DETERMINED NECESSARY IN THE FIELD BY THE OWNER/GEOTECHNICAL ENGINEER, AFTER SUBGRADE IS ROUGH GRADED.

75. VERTICAL DATUM IS NAVD 88.

76. CLEARING LIMITS SHALL BE PHYSICALLY MARKED IN THE FIELD AND APPROVED BY THE MUNICIPALITY'S AGENT PRIOR TO THE START OF WORK ON THE SITE.

77. PROPER CONSTRUCTION PROCEDURES SHALL BE FOLLOWED ON ALL IMPROVEMENTS WITHIN THIS PARCEL SO AS TO PREVENT THE SILTING OF ANY WATERCOURSE OR WETLANDS IN ACCORDANCE WITH THE REGULATIONS OF THE CT DEEP AND THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, LATEST EDITION. IN ADDITION, THE CONTRACTOR SHALL STRICTLY ADHERE TO THE SEDIMENT AND EROSION CONTROL PLAN CONTAINED HEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE TO POST ALL BONDS AS REQUIRED BY THE LOCAL MUNICIPALITIES, OR SOIL CONSERVATION DISTRICT WHICH WOULD GUARANTEE THE PROPER IMPLEMENTATION OF THE PLAN.

78. ALL SITE WORK, MATERIALS OF CONSTRUCTION, AND CONSTRUCTION METHODS FOR EARTHWORK AND STORM DRAINAGE WORK SHALL CONFORM TO THE SPECIFICATIONS AND DETAILS AND APPLICABLE SECTIONS OF THE PROJECT SPECIFICATIONS MANUAL. OTHERWISE THIS WORK SHALL CONFORM TO THE STATE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS AND PROJECT GEOTECHNICAL REPORT IF THERE IS NO PROJECT SPECIFICATIONS MANUAL. ALL FILL MATERIAL UNDER STRUCTURES AND PAVED AREAS SHALL BE PER THE ABOVE STATED APPLICABLE SPECIFICATIONS, AND/OR PROJECT GEOTECHNICAL REPORT, AND SHALL BE PLACED IN ACCORDANCE WITH THE APPLICABLE SPECIFICATIONS UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL ENGINEER. MATERIAL SHALL BE COMPACTED IN LIFT THICKNESSES PER THE PROJECT GEOTECHNICAL REPORT TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 1557 AT MOISTURE CONTENT INDICATED IN PROJECT GEOTECHNICAL REPORT.

79. ALL DISTURBANCE INCURRED TO MUNICIPAL AND STATE PROPERTY DUE TO CONSTRUCTION SHALL BE RESTORED TO ITS PREVIOUS CONDITION OR BETTER, TO THE SATISFACTION OF THE MUNICIPALITY AND STATE AS APPLICABLE FOR THE LOCATION OF THE WORK.

80. ALL CONSTRUCTION WITHIN A DOT RIGHT OF WAY SHALL COMPLY WITH ALL DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS.

81. THE UTILITY PLAN DETAILS SITE INSTALLED PIPES UP TO 5' FROM THE BUILDING FACE. REFER TO DRAWINGS BY ARCHITECT FOR BUILDING CONNECTIONS. SITE CONTRACTOR SHALL SUPPLY AND INSTALL PIPE ADAPTERS AS NECESSARY AT BUILDING CONNECTION POINT OR AT EXISTING UTILITY OR PIPE CONNECTION POINT.

82. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE ELEVATION AND LOCATION OF ALL UTILITIES BY VARIOUS MEANS PRIOR TO BEGINNING ANY EXCAVATION. TEST PITS SHALL BE DUG AT ALL LOCATIONS WHERE PROPOSED SANITARY SEWERS AND WHERE PROPOSED STORM PIPING WILL CROSS EXISTING UTILITIES, AND THE HORIZONTAL AND VERTICAL LOCATIONS OF THE UTILITIES SHALL BE DETERMINED. THE CONTRACTOR SHALL CONTACT THE CIVIL ENGINEER IN THE EVENT OF ANY DISCOVERED OR UNFORESEEN CONFLICTS BETWEEN EXISTING AND PROPOSED SANITARY SEWERS, STORM PIPING AND UTILITIES SO THAT AN APPROPRIATE MODIFICATION MAY BE MADE.

83. UTILITY CONNECTION DESIGN AS REFLECTED ON THE PLAN MAY CHANGE SUBJECT TO UTILITY PROVIDER AND GOVERNING AUTHORITY STAFF REVIEW.

84. THE CONTRACTOR SHALL ENSURE THAT ALL UTILITY PROVIDERS AND GOVERNING AUTHORITY STANDARDS FOR MATERIALS AND CONSTRUCTION METHODS ARE MET. THE CONTRACTOR SHALL PERFORM PROPER COORDINATION WITH THE RESPECTIVE UTILITY PROVIDER.

85. THE CONTRACTOR SHALL ARRANGE FOR AND COORDINATE WITH THE RESPECTIVE UTILITY PROVIDERS FOR SERVICE INSTALLATIONS AND CONNECTIONS. THE CONTRACTOR SHALL COORDINATE WORK TO BE PERFORMED BY THE VARIOUS UTILITY PROVIDERS AND SHALL PAY ALL FEES FOR CONNECTIONS, DISCONNECTIONS, RELOCATIONS, INSPECTIONS, AND DEMOLITION UNLESS OTHERWISE STATED IN THE PROJECT SPECIFICATIONS MANUAL AND/OR GENERAL CONDITIONS OF THE CONTRACT.

86. ALL EXISTING PAVEMENT WHERE UTILITY PIPING IS TO BE INSTALLED SHALL BE SAW CUT. AFTER UTILITY INSTALLATION IS COMPLETED, THE CONTRACTOR SHALL INSTALL TEMPORARY AND/OR PERMANENT PAVEMENT REPAIR AS DETAILED ON THE DRAWINGS OR AS REQUIRED BY THE OWNER HAVING JURISDICTION.

87. ALL PIPES SHALL BE LAID ON STRAIGHT ALIGNMENTS AND EVEN GRADES USING A PIPE LASER OR OTHER ACCURATE METHOD.

88. SANITARY LATERAL SHALL MAINTAIN (10' MIN. HORIZONTAL 1.5' VERTICAL MIN.) SEPARATION DISTANCE FROM WATER LINES, OR ADDITIONAL PROTECTION MEASURES WILL BE REQUIRED WHERE PERMITTED, WHICH SHALL INCLUDE CONCRETE ENCASEMENT OF PIPING UNLESS OTHERWISE DIRECTED BY THE UTILITY PROVIDERS AND CIVIL ENGINEER.

89. RELOCATION OF UTILITY PROVIDER FACILITIES SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY PROVIDER.

90. THE CONTRACTOR SHALL COMPACT THE PIPE BACKFILL IN 8" LIFTS ACCORDING TO THE PIPE BEDDING DETAILS. TRENCH BOTTOM SHALL BE STABLE IN HIGH GROUNDWATER AREAS. A PIPE FOUNDATION SHALL BE USED PER THE TRENCH DETAILS AND IN AREAS OF ROCK EXCAVATION.

91. CONTRACTOR TO PROVIDE STEEL SLEEVES AND ANNULAR SPACE SAND FILL FOR UTILITY PIPE AND CONDUIT CONNECTIONS UNDER FOOTINGS.

92. BUILDING UTILITY PENETRATIONS AND LOCATIONS ARE SHOWN FOR THE CONTRACTOR'S INFORMATION AND SHALL BE VERIFIED WITH THE BUILDING MEP, STRUCTURAL, AND ARCHITECTURAL DRAWINGS AND WITH THE OWNER'S CONSTRUCTION MANAGER.

93. ALL UTILITY CONSTRUCTION IS SUBJECT TO INSPECTION FOR APPROVAL PRIOR TO BACKFILLING, IN ACCORDANCE WITH THE APPROPRIATE UTILITY PROVIDER REQUIREMENTS.

94. A ONE-FOOT MINIMUM VERTICAL CLEARANCE BETWEEN WATER, GAS, ELECTRICAL, AND TELEPHONE LINES AND STORM PIPING SHALL BE PROVIDED. A SIX-INCH MINIMUM CLEARANCE SHALL BE MAINTAINED BETWEEN STORM PIPING AND SANITARY SEWER WITH A CONCRETE ENCASEMENT. AN 18-INCH TO 6-INCH VERTICAL CLEARANCE BETWEEN SANITARY SEWER PIPING AND STORM PIPING SHALL REQUIRE CONCRETE ENCASEMENT OF THE PROPOSED PIPING.

95. GRAVITY SANITARY SEWER PIPING AND PRESSURIZED WATERLINES SHALL BE LOCATED IN SEPARATE TRENCHES AT LEAST 10 FEET APART WHENEVER POSSIBLE. WHEN INSTALLED IN THE SAME TRENCH, THE WATER PIPE SHALL BE LAID ON A TRENCH BENCH AT LEAST 18 INCHES ABOVE THE TOP OF THE SANITARY SEWER PIPE AND AT LEAST 12 INCHES (PREFERABLY 18 INCHES) FROM THE SIDE OF THE SANITARY SEWER PIPE TRENCH.

96. SITE CONTRACTOR SHALL PROVIDE ALL BENDS, FITTINGS, ADAPTERS, ETC., AS REQUIRED FOR PIPE CONNECTIONS TO BUILDING STUB OUTS, INCLUDING ROOF/FOOTING DRAIN CONNECTIONS TO ROOF LEADERS AND TO STORM DRAINAGE SYSTEM.

97. MANHOLE RIMS AND CATCH BASIN GRATES SHALL BE SET TO ELEVATIONS SHOWN. SET ALL EXISTING MANHOLE RIMS AND VALVE COVERS TO BE RAISED OR LOWERED FLUSH WITH FINAL GRADE AS NECESSARY.

98. SITE CONTRACTOR SHALL COORDINATE INSTALLATION OF CONDUIT AND CABLES FOR SITE LIGHTING WITH THE BUILDING ELECTRICAL CONTRACTOR.

99. CONTRACTOR SHALL COORDINATE INSTALLATION FOR ELECTRICAL SERVICES TO PYLON SIGNS AND SITE LIGHTING WITH THE BUILDING ELECTRICAL CONTRACTOR.

100. THE CONTRACTOR SHALL ARRANGE AND COORDINATE WITH UTILITY PROVIDERS FOR WORK TO BE PERFORMED BY UTILITY PROVIDERS. THE CONTRACTOR SHALL PAY ALL UTILITY FEES UNLESS OTHERWISE STATED IN THE PROJECT SPECIFICATION MANUAL AND GENERAL CONDITIONS, AND REPAIR PAVEMENTS AS NECESSARY.

101. ELECTRIC, AND TELECOMMUNICATIONS SERVICES SHALL BE INSTALLED UNDERGROUND FROM THE SERVICE POLE INDICATED ON THE SITE UTILITIES PLAN. THE CONTRACTOR SHALL PROVIDE AND INSTALL AND BACKFILL (2) 4" PVC CONDUITS FOR TELECOMMUNICATIONS SERVICE, (2) 4" PVC CONDUITS FOR ELECTRIC SERVICE PRIMARY, PVC CONDUITS FOR ELECTRICAL SECONDARY PER BUILDING ELECTRICAL PLANS, (SCHEDULE 80 UNDER PAVEMENT, SCHEDULE 40 IN NON PAVEMENT AREAS). SERVICES MAY BE INSTALLED IN A COMMON TRENCH WITH 12" CLEAR SPACE BETWEEN. MINIMUM COVER IS 36" ON ELECTRIC CONDUITS, AND 24" ON TELECOMMUNICATIONS CONDUITS. SERVICES SHALL BE MARKED WITH MAGNETIC LOCATOR TAPE AND SHALL BE BEDDED, INSTALLED, AND BACKFILLED IN ACCORDANCE WITH ELECTRIC UTILITY PROVIDER, AND TELECOMMUNICATIONS COMPANY STANDARDS. GALVANIZED STEEL ELECTRICAL CONDUIT SHALL BE USED AT POLE AND TRANSFORMER LOCATIONS. INSTALL HANDHOLES AS REQUIRED TO FACILITATE INSTALLATION AND AS REQUIRED BY UTILITY PROVIDER. INSTALL TRAFFIC LOAD QUALIFIED HANDHOLES IN VEHICULAR AREAS. INSTALL CONCRETE ENCASEMENT ON PRIMARY ELECTRIC CONDUITS IF REQUIRED BY ELECTRIC UTILITY PROVIDER.

102. ALL WATER LINES TO HAVE A MINIMUM COVER OF 3'-6". ALL LINES SHALL BE BEDDED IN 6" SAND AND INITIALLY BACKFILLED WITH 12" SAND.

103. ALL WATER MAINS, WATER SERVICES AND SANITARY SEWER LATERALS SHALL CONFORM TO THE APPLICABLE POTABLE WELL AUTHORITY SPECIFICATIONS, AND TO THE APPLICABLE SANITARY SEWER PROVIDER SPECIFICATIONS, AS WELL AS TO OTHER APPLICABLE INDUSTRY CODES (AWWA), CTDPH, AND PROJECT SPECIFICATIONS FOR POTABLE WATER SYSTEMS, AND FOR SANITARY SEWER SYSTEMS.

104. THE CONTRACTOR SHALL MAINTAIN ALL FLOWS AND UTILITY CONNECTIONS TO EXISTING BUILDINGS WITHOUT INTERRUPTION UNLESS/UNTIL AUTHORIZED TO DISCONNECT BY THE OWNERS, THE CIVIL ENGINEER, UTILITY PROVIDERS AND GOVERNING AUTHORITIES.

105. THE CONTRACTOR MAY SUBSTITUTE MASONRY STRUCTURES FOR PRECAST STRUCTURES IF APPROVED BY THE CIVIL ENGINEER AND ALLOWED BY THE GOVERNING AUTHORITY ENGINEER OR OTHER GOVERNING AUTHORITY.

106. PIPING SHALL BE LAID FROM DOWNGRADIENT END OF PIPE RUN IN AN UPGRADIENT DIRECTION WITH BELL END FACING UPGRADE IN THE DIRECTION OF PIPE LAYING.

107. ALL RCP SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-76; ALL RCP SHALL BE CLASS IV UNLESS OTHERWISE SHOWN. JOINTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-443.

108. MANHOLE SECTIONS AND CONSTRUCTION SHALL CONFORM TO ASTM C-478.

109. HIGH DENSITY POLYETHYLENE (HDPE) STORM SEWER 12" OR GREATER IN DIAMETER SHALL BE HI-Q SURE-LOK 10.8 PIPE AS MANUFACTURED BY HANCOR INC. OR APPROVED EQUAL. HDPE PIPE SHALL HAVE SMOOTH INTERIOR AND CORRUGATED EXTERIOR AND SHALL MEET THE REQUIREMENTS OF AASHTO M294, TYPE S. PIPE SECTIONS SHALL BE JOINED WITH BELL-AND-SPIGOT JOINT MEETING THE REQUIREMENTS OF AASHTO M294. THE BELL SHALL BE AN INTEGRAL PART OF THE PIPE AND PROVIDE A MINIMUM PULL-APART STRENGTH OF 400 POUNDS. THE JOINT SHALL BE WATERTIGHT ACCORDING TO THE REQUIREMENTS OF ASTM D3212. GASKETS SHALL BE MADE OF POLYISOPRENE MEETING THE REQUIREMENTS OF ASTM F477. ALTERNATIVE HDPE PIPE MAY BE USED IF APPROVED BY THE ENGINEER AND OWNER'S CONSTRUCTION MANAGER PRIOR TO ORDERING.

110. HIGH DENSITY POLYETHYLENE (HDPE) STORM SEWER LESS THAN 12" IN DIAMETER SHALL BE HI-Q PIPE AS MANUFACTURED BY HANCOR INC. OR APPROVED EQUAL. HDPE PIPE SHALL HAVE SMOOTH INTERIOR AND CORRUGATED EXTERIOR AND SHALL MEET THE REQUIREMENTS OF AASHTO 252, TYPE S. PIPE SECTIONS SHALL BE JOINED WITH COUPLING BANDS OR EXTERNAL SNAP COUPLERS COVERING AT LEAST 2 FULL CORRUGATIONS ON EACH END OF THE PIPE. SILT-TIGHT (GASKET) CONNECTIONS SHALL INCORPORATE A CLOSED SYNTHETIC EXPANDED RUBBER GASKET. MEETING THE REQUIREMENTS OF AASHTO D1056 GRADE 2A2. GASKETS SHALL BE INSTALLED ON THE CONNECTION BY THE PIPE MANUFACTURER. ALTERNATIVE HDPE PIPE MAY BE USED IF APPROVED BY THE ENGINEER AND OWNER'S CONSTRUCTION MANAGER PRIOR TO ORDERING.

111. COPPER PIPE SHALL BE TYPE K TUBING WITH COMPRESSION FITTINGS.

112. GAS PIPE MATERIAL SHALL BE PER GAS COMPANY REQUIREMENTS.

113. POLYVINYL CHLORIDE PIPE (PVCP) FOR SANITARY PIPING SHALL HAVE BUILT-IN RUBBER GASKET JOINTS. PVCP SHALL CONFORM TO ASTM D3034 (SDR35) WITH COMPRESSION JOINTS AND MOLDED FITTINGS. PVCP SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS, ASTM D2321 AND MANUFACTURER'S RECOMMENDED PROCEDURE.

114. PVC WATER MAIN PIPING SHALL CONFORM TO AWWA C900.

DEFINITIONS

MUNICIPALITY SHALL MEAN TOWN OF BOLTON

COUNTY SHALL MEAN TOLLAND COUNTY

STATE SHALL MEAN CONNECTICUT

POTABLE WELL AUTHORITY SHALL MEAN EASTERN HIGHLANDS HEALTH DISTRICT

SANITARY UTILITY PROVIDER SHALL MEAN BOLTON LAKES REGIONAL WATER POLLUTION CONTROL AUTHORITY

GAS UTILITY PROVIDER SHALL MEAN PROPANE TANK PROVIDER

TELECOMMUNICATIONS UTILITY PROVIDER SHALL MEAN FRONTIER COMMUNICATIONS OF CONNECTICUT

ELECTRIC UTILITY PROVIDER SHALL MEAN EVERSOURCE ENERGY - ELECTRIC DISTRIBUTION

BOLTON PLANNING AND ZONING COMMISSION, BOLTON, CT

DATE APPROVED ________ DATE OF EXPIRATION ________

________________________ CHAIRMAN

THE STATUTORY FIVE-YEAR PERIOD FOR COMPLETION OF ALL PHYSICAL IMPROVEMENTS EXPIRES ON ________

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NOT RELEASED FOR CONSTRUCTION

5/4/2021, CLHEUREUX, G:\JOBS20\20\2002032\DWG\GN200203201.DWG,GN-1 24X36.

Xref (s): : (DETATCH Upon Opening) EAT_Revisions ; BD200203201

Architecture
Engineering
Environmental
Land Surveying

BL Companies

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10th Floor
Hartford, CT 06103
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(860) 249-2400 Fax

STATE OF CONNECTICUT
LICENSED PROFESSIONAL ENGINEER

PROPOSED RETAIL DEVELOPMENT
1100 BOSTON TURNPIKE
BOLTON, CONNECTICUT

REVISIONS		
No.	Date	Desc.
1.	05/05/2021	REVISED PER TOWN COMMENTS

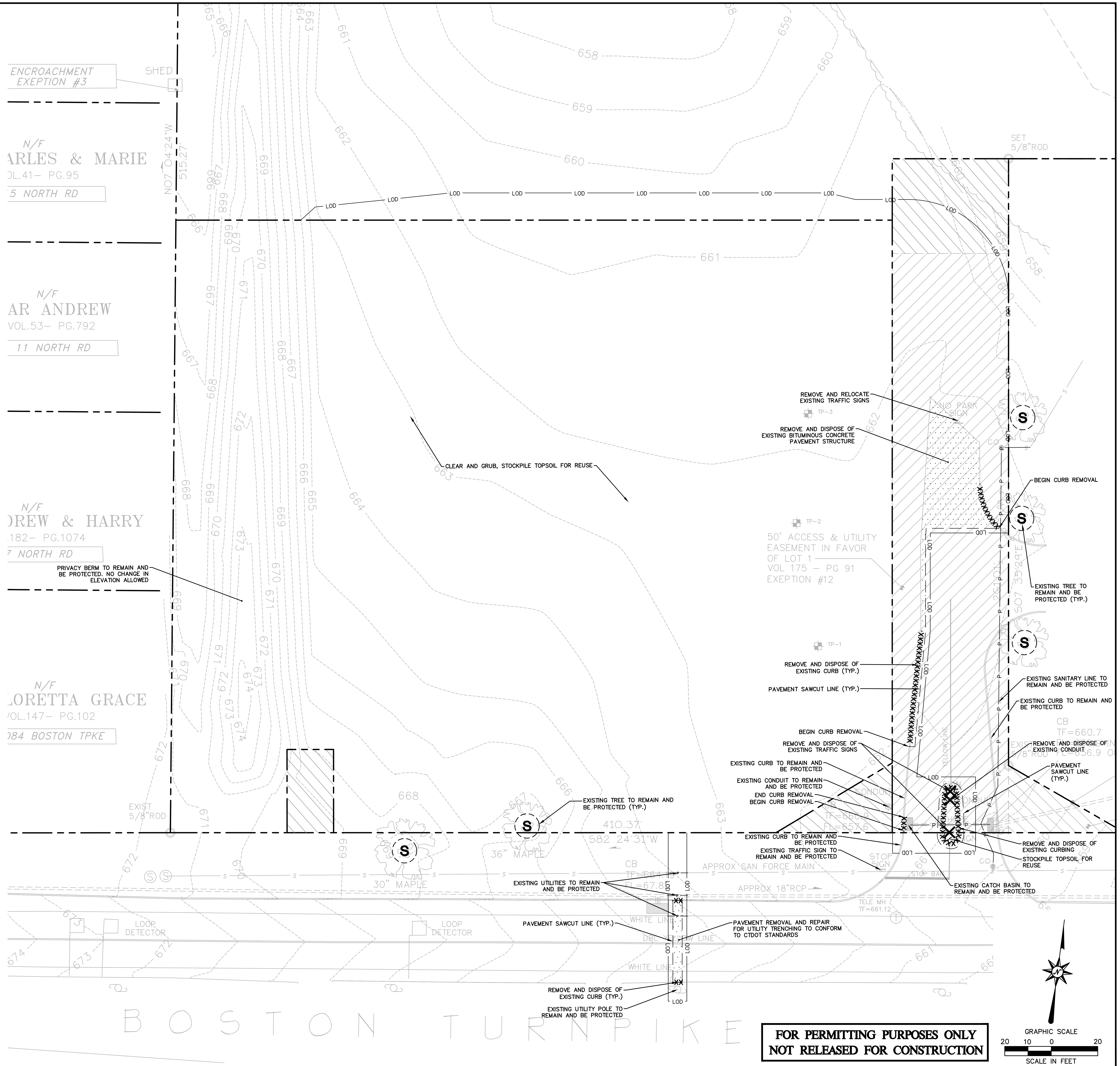
Designed	S.E.L.
Drawn	S.E.L.
Reviewed	K.M.M.
Scale	NONE
Project No.	2002032
Date	04/02/2021
CAD File:	GN200203201

Title
GENERAL NOTES

Sheet No.
GN-1

DEMOLITION LEGEND

(line)	PROPERTY LINE
LOD	LIMIT OF DISTURBANCE AND SITEWORK CONTRACT LIMIT LINE
(line)	SAWCUT LINE
XXXXXXXXXXXXXXXXXX	REMOVE AND DISPOSE OF CURB, FENCE, ETC.
P — P	PROTECT EXISTING UTILITY LINE
(symbol)	LIMIT OF TREE AND VEGETATION CLEARING
X	REMOVE AND DISPOSE OF SIGN, HYDRANT, FIXTURE, ETC.
(hatch)	REMOVE AND DISPOSE OF EXISTING BITUMINOUS CONCRETE PAVEMENT STRUCTURE
(symbol)	REMOVE AND DISPOSE OF EXISTING TREE AND STUMP
S	PROTECT EXISTING TREE TO REMAIN



ENCROACHMENT EXEPTION #3
SHED
N/F
ARLES & MARIE
OL.41- PG.95
5 NORTH RD
N/F
AR ANDREW
VOL.53- PG.792
11 NORTH RD
N/F
DREW & HARRY
.182- PG.1074
7 NORTH RD
N/F
LORETTA GRACE
VOL.147- PG.102
084 BOSTON TPKE
PRIVACY BERM TO REMAIN AND BE PROTECTED, NO CHANGE IN ELEVATION ALLOWED
CLEAR AND GRUB, STOCKPILE TOPSOIL FOR REUSE
SET 5/8"ROD
EXIST 5/8"ROD
50' ACCESS & UTILITY EASEMENT IN FAVOR OF LOT 1 VOL 175 - PG 91 EXEPTION #12
REMOVE AND RELOCATE EXISTING TRAFFIC SIGNS
REMOVE AND DISPOSE OF EXISTING BITUMINOUS CONCRETE PAVEMENT STRUCTURE
BEGIN CURB REMOVAL
EXISTING TREE TO REMAIN AND BE PROTECTED (TYP.)
REMOVE AND DISPOSE OF EXISTING CURB (TYP.)
PAVEMENT SAWCUT LINE (TYP.)
EXISTING SANITARY LINE TO REMAIN AND BE PROTECTED
EXISTING CURB TO REMAIN AND BE PROTECTED
BEGIN CURB REMOVAL
REMOVE AND DISPOSE OF EXISTING TRAFFIC SIGNS
REMOVE AND DISPOSE OF EXISTING CONDUIT
PAVEMENT SAWCUT LINE (TYP.)
EXISTING CURB TO REMAIN AND BE PROTECTED
EXISTING CONDUIT TO REMAIN AND BE PROTECTED
END CURB REMOVAL
BEGIN CURB REMOVAL
EXISTING TREE TO REMAIN AND BE PROTECTED (TYP.)
410.37'
582 24'31"W
36" MAPLE
30" MAPLE
EXISTING CURB TO REMAIN AND BE PROTECTED
EXISTING TRAFFIC SIGN TO REMAIN AND BE PROTECTED
REMOVE AND DISPOSE OF EXISTING CURBING
STOCKPILE TOPSOIL FOR REUSE
EXISTING CATCH BASIN TO REMAIN AND BE PROTECTED
EXISTING UTILITIES TO REMAIN AND BE PROTECTED
APPROX SAN FORCE MAIN
APPROX 18"RCP
TELE MH TF=661.12
PAVEMENT SAWCUT LINE (TYP.)
PAVEMENT REMOVAL AND REPAIR FOR UTILITY TRENCHING TO CONFORM TO CTDOT STANDARDS
LOOP DETECTOR
LOOP DETECTOR
WHITE LINE
WHITE LINE
REMOVE AND DISPOSE OF EXISTING CURB (TYP.)
EXISTING UTILITY POLE TO REMAIN AND BE PROTECTED
BOSTON TURNPIKE
GRAPHIC SCALE
20 10 0 20
SCALE IN FEET

FOR PERMITTING PURPOSES ONLY
NOT RELEASED FOR CONSTRUCTION

BOLTON PLANNING AND ZONING COMMISSION, BOLTON, CT

DATE APPROVED ________ DATE OF EXPIRATION ________

________________________________ CHAIRMAN

THE STATUTORY FIVE-YEAR PERIOD FOR COMPLETION OF ALL PHYSICAL IMPROVEMENTS EXPIRES ON ________

BL Companies
Architecture Engineering Environmental Land Surveying
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10th Floor
Hartford, CT 06103
(860) 249-2200
(860) 249-2400 Fax

PROPOSED RETAIL DEVELOPMENT
1100 BOSTON TURNPIKE
BOLTON, CONNECTICUT

REVISIONS No.	Date	Desc.
1	05/05/2021	REVISED PER TOWN COMMENTS

Designed	S.E.L.
Drawn	S.E.L.
Reviewed	K.M.M.
Scale	1"=20'
Project No.	2002032
Date	04/02/2021
CAD File:	DM200203201

Title
DEMOLITION PLAN

Sheet No.
DM-1

ZONING INFORMATION

LOCATION: BOLTON, TOLLAND COUNTY, CONNECTICUT				
ZONE: RURAL MIXED USE ZONE (RMUZ)				
USE: RETAIL (PERMITTED BY SPECIAL PERMIT)				
ITEM #	ITEM	REQUIREMENTS	PROPOSED	VARIANCE
1	MINIMUM LOT AREA	80,000 S.F.	80,707 S.F. (1.85 AC.)	NO
2	MINIMUM LOT WIDTH	NONE REQUIRED	308 FEET	NO
3	MINIMUM LOT FRONTAGE	150 FEET	260.4 FEET	NO
4	MINIMUM FRONT SETBACK	NONE REQUIRED	71.9 FEET	NO
5	MINIMUM SIDE SETBACK	25 FEET (50 FEET) [1]	72.8 FEET	NO
6	MINIMUM REAR SETBACK	25 FEET [1]	51.4 FEET	NO
7	MAXIMUM BUILDING HEIGHT	35 FEET/2.5 STORIES	25.6 FEET	NO
8	MAXIMUM BUILDING COVERAGE	25 PERCENT	13.2 PERCENT	NO
9	MAXIMUM IMPERVIOUS COVERAGE	50 PERCENT	39.9 PERCENT	NO

[1] MINIMUM SIDE AND REAR SETBACKS – 50 FEET WHEN ABUTTING A RESIDENTIAL DISTRICT

PARKING INFORMATION

ITEM #	ITEM	REQUIREMENTS	PROPOSED	VARIANCE
1	BUILDING SIZE	600 S.F.	10,640 S.F.	NO
2	PARKING REQUIRED	RETAIL: MINIMUM – 2 SPACES PER 1,000 S.F. OF GFA (10,640 S.F.) MINIMUM REQUIRED = 22 SPACES MAXIMUM – 5 SPACES PER 1,000 S.F. OF GFA (10,640 S.F.) MAXIMUM ALLOWED = 54 SPACES	33 SPACES	NO
3	MINIMUM HANDICAPPED PARKING SPACES REQUIRED	2 SPACES	2 SPACES	NO
4	MINIMUM PARKING DIMENSIONS	9 FEET X 18 FEET	9 FEET X 20 FEET	NO
5	MINIMUM LOADING DIMENSIONS	10 FEET X 25 FEET X 14 FEET	33 FEET X 71 FEET X > 14 FEET	NO
6	MINIMUM AISLE WIDTH	22 FEET – 2-WAY 11 FEET – 1-WAY	30 FEET – 2-WAY	NO
7	MINIMUM FRONT SETBACK	50 FEET [2]	50.5 FEET	NO
8	MINIMUM SIDE SETBACK	NONE REQUIRED [2]	77.1 FEET	NO
9	MINIMUM REAR SETBACK	NONE REQUIRED [2]	5.3 FEET	NO
10	BICYCLE PARKING REQUIRED	1 BICYCLE PARKING SPACE PER 25 PARKING STALLS (2 REQUIRED)	2 BICYCLE PARKING SPACES	NO

[2] 10 FEET LANDSCAPED BUFFER STRIP REQUIRED WHERE ABUTTING A RESIDENCE DISTRICT

SITE PLAN LEGEND

- PROPERTY LINE
- LOD — LIMIT OF DISTURBANCE AND SITEWORK CONTRACT LIMIT LINE
- SAWCUT LINE
- PROVIDE AND INSTALL CONCRETE PAVEMENT STRUCTURE, REINFORCED CONCRETE SIDEWALK, OR MONOLITHIC CONCRETE CURB AND SIDEWALK
- PROVIDE AND INSTALL FULL DEPTH HEAVY DUTY BITUMINOUS CONCRETE PAVEMENT STRUCTURE
- PROVIDE AND INSTALL FULL DEPTH STANDARD DUTY BITUMINOUS CONCRETE PAVEMENT STRUCTURE
- PROVIDE AND INSTALL SIGN

SIGN LEGEND

SIGN NO.	C-DOT NO.	LEGEND
A	31-0552Z	STOP 30"
B	31-0629	(handicapped parking sign)
C	31-0648	VAN ACCESSIBLE

NOTE:
1. HANDICAPPED SIGNS TO BE INSTALLED IN PIPE BOLLARDS (SEE DETAIL). ALL HANDICAP SIGNAGE TO CONFORM TO LATEST BUILDING CODE.
2. SIGNS INSTALLED IN THE STATE RIGHT-OF-WAY MUST BE INSTALLED IN ACCORDANCE WITH THE DEPARTMENT'S TYPICAL DETAIL SHEETS (I.E. HEIGHT, BREAKAWAY POSTS, ETC.)

BOLTON PLANNING AND ZONING COMMISSION, BOLTON, CT

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____ CHAIRMAN

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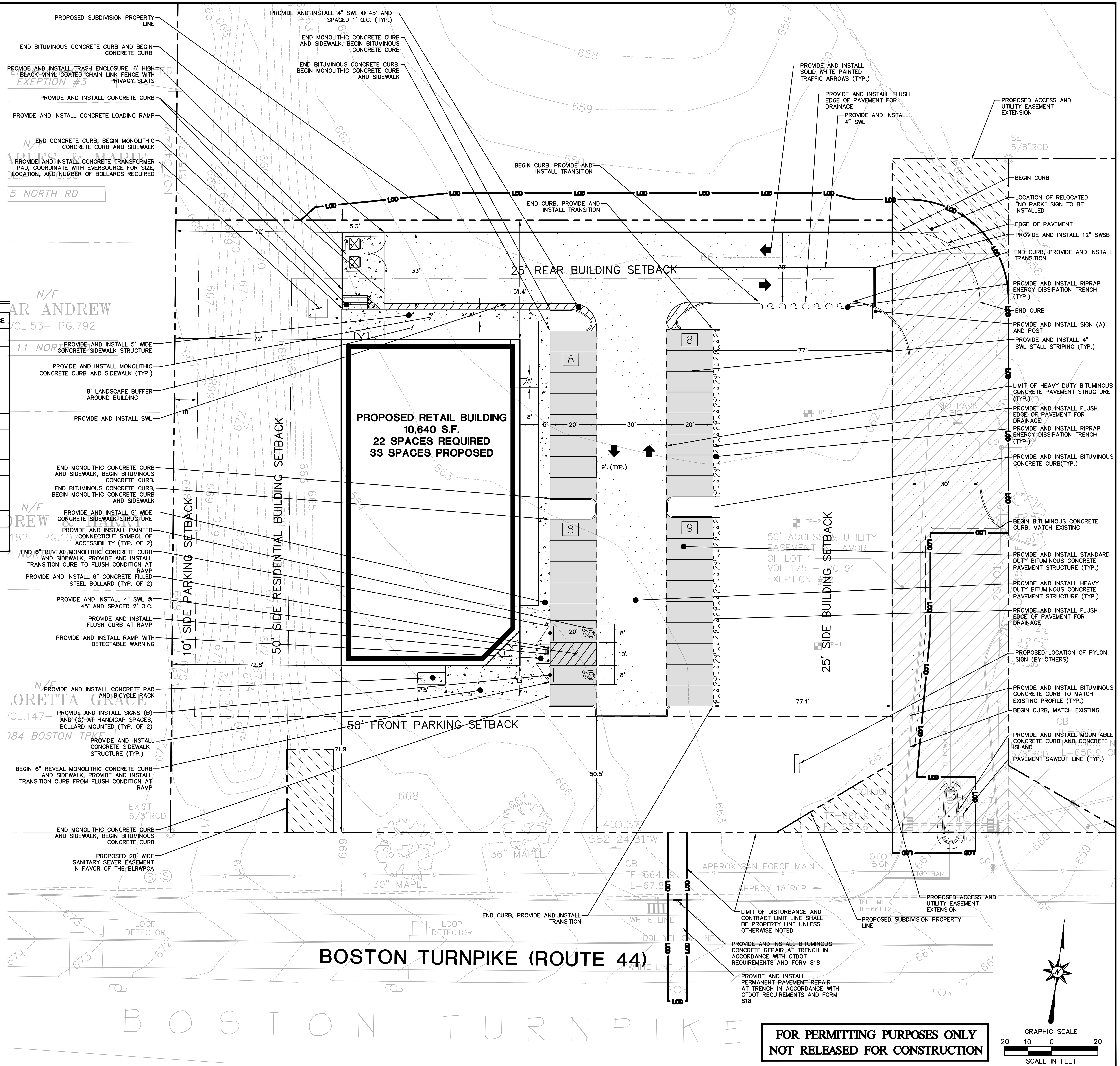

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STATE OF CONNECTICUT — KIMBERLY M. MASKUS — No. 0026028 — LICENSED PROFESSIONAL ENGINEER

PROPOSED RETAIL DEVELOPMENT
1100 BOSTON TURNPIKE
BOLTON, CONNECTICUT

REVISIONS

No.	Date	Desc.
1.	05/05/2021	REVISED PER TOWN COMMENTS

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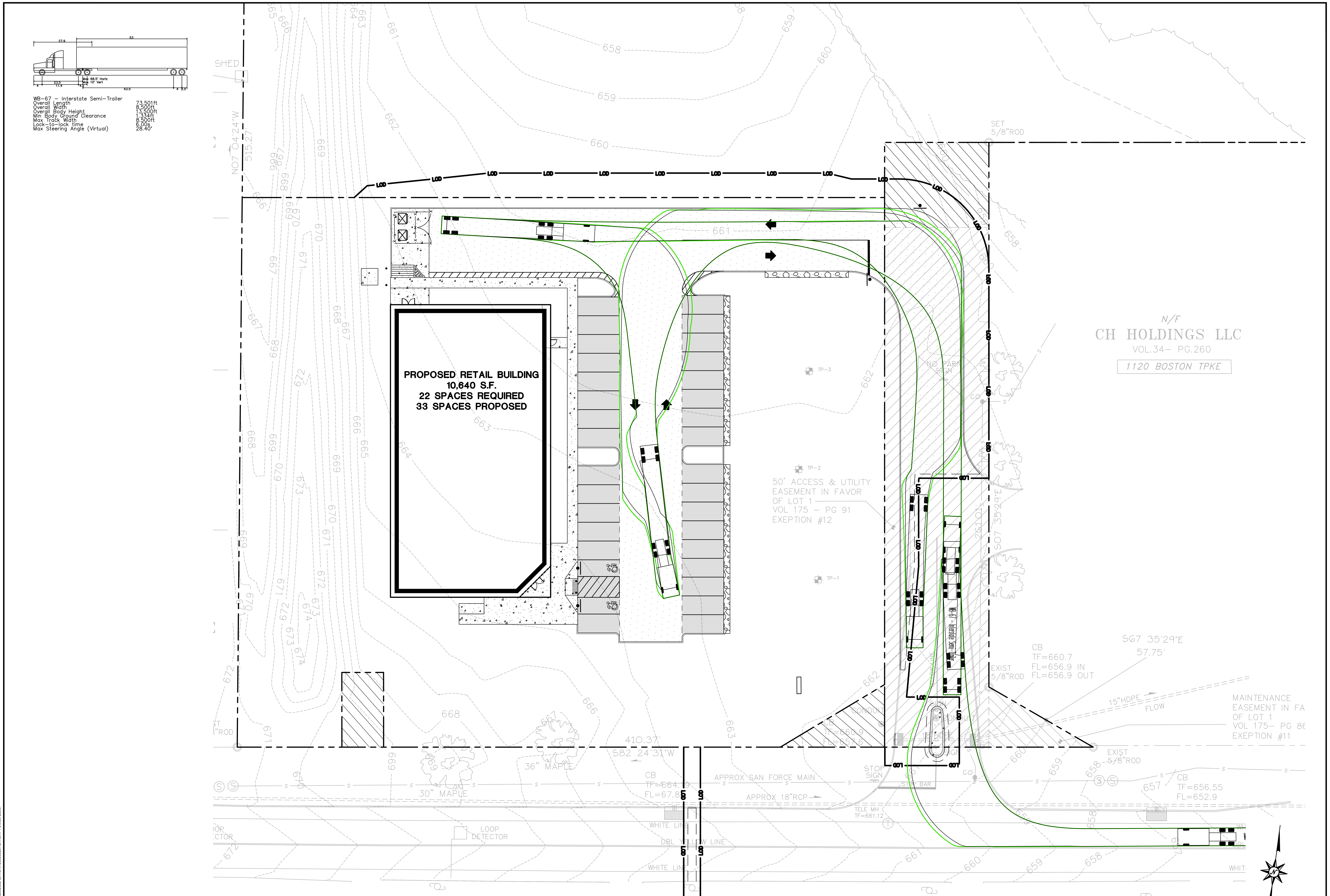
Drawn	S.E.L.
Reviewed	K.M.M.
Scale	1"=20'
Project No.	2002032
Date	04/02/2021
CAD File:	SP200203201

Title
SITE PLAN

Sheet No.
SP-1

Xref (s): : BD200203201 : XY200203201 : XC200203201



BOLTON PLANNING AND ZONING COMMISSION, BOLTON, CT

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BOLTON, CONNECTICUT

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Project No.	2002032
Date	04/02/2021
CAD File:	TT200203201

Title
TRUCK TURNING PLAN - WB-67

Sheet No.
TT-1

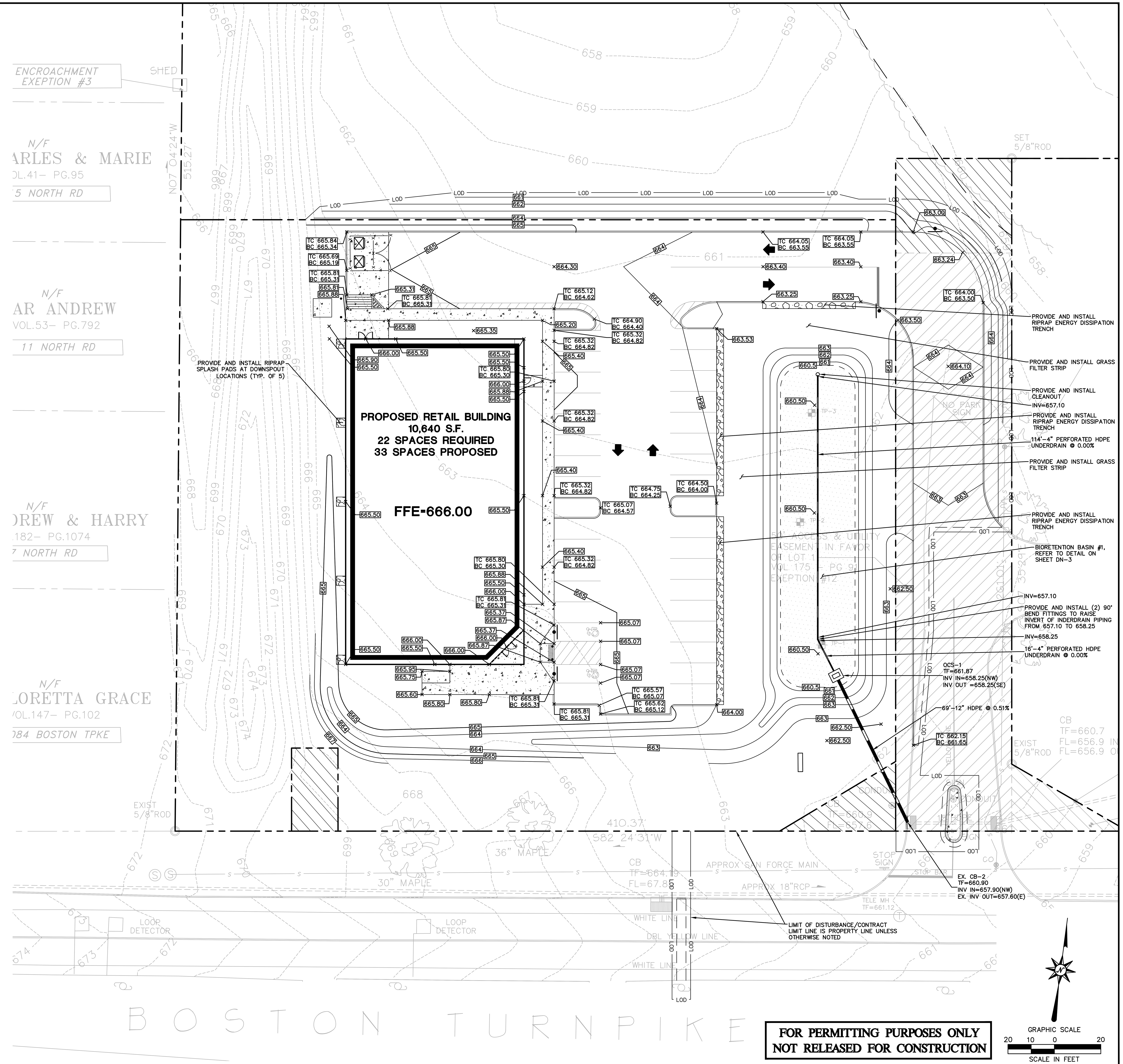
Xref (s): ; BD200203201 ; XY200203201 ; XC200203201

GRADING AND DRAINAGE LEGEND

	PROPERTY LINE
LOD	LIMIT OF DISTURBANCE AND SITEWORK CONTRACT LIMIT LINE
	SAWCUT LINE
	STORM LINE
	MANHOLE
	CATCH BASIN
100	PROPOSED CONTOUR LINE
×100.00	PROPOSED SPOT GRADE

SPOT GRADE ABBREVIATIONS

BC	BOTTOM OF CURB
TC	TOP OF CURB
BW	BOTTOM OF WALL
TW	TOP OF WALL
MEX	MEET EXISTING CONDITION



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BOLTON PLANNING AND ZONING COMMISSION, BOLTON, CT

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1100 BOSTON TURNPIKE
BOLTON, CONNECTICUT

REVISIONS

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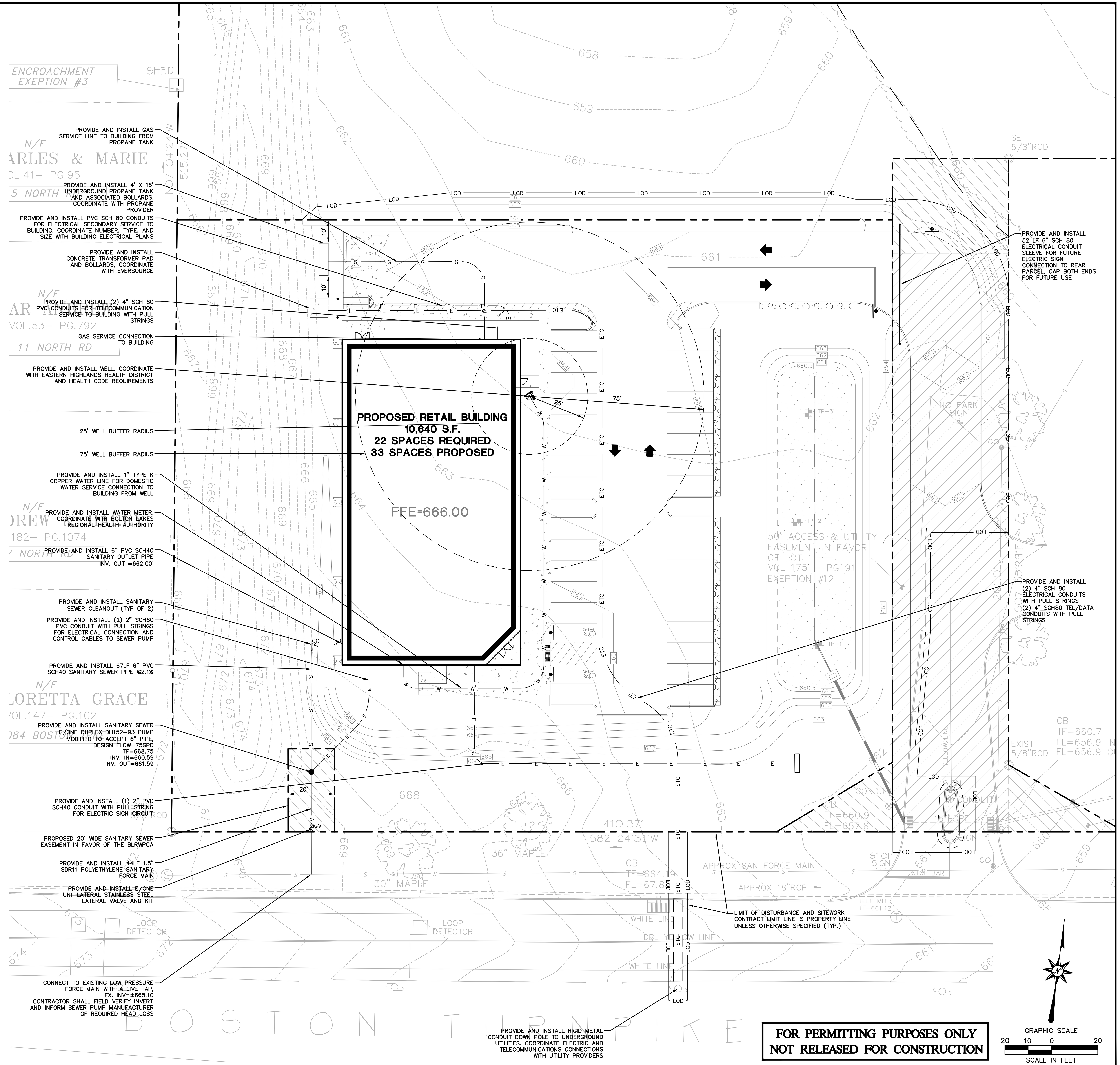
Reviewed	K.M.M.
Scale	1"=20'
Project No.	2002032
Date	04/02/2021
CAD File:	GD200203201

Title
GRADING AND DRAINAGE PLAN

Sheet No.
GD-1

SITE UTILITIES LEGEND

— — - — —	PROPERTY LINE
—— LOD ——	LIMIT OF DISTURBANCE AND SITEWORK CONTRACT LIMIT LINE
— — — — —	SAWCUT LINE
—— E —— E ——	ELECTRIC LINE
—— G —— G ——	GAS LINE
—— W —— W ——	WATER LINE
—— S —— S ——	SANITARY SEWER LINE
—— SFM ——	SANITARY SEWER FORCE MAIN
—— T —— T ——	TELECOMMUNICATIONS LINE
—— ETC ——	ELECTRIC AND TELECOMMUNICATIONS LINE
▬ ▬ ▬	STORM LINE



ENCROACHMENT EXEPTION #3
SHED
N/F
ARLES & MARIE
OL.41- PG.95
5 NORTH
N/F
AR
VOL.53- PG.792
11 NORTH RD
N/F
DREW
182- PG.1074
7 NORTH RD
N/F
LORETTA GRACE
VOL.147- PG.102
084 BOST
PROVIDE AND INSTALL GAS SERVICE LINE TO BUILDING FROM PROPANE TANK
PROVIDE AND INSTALL 4' X 16' UNDERGROUND PROPANE TANK AND ASSOCIATED BOLLARDS, COORDINATE WITH PROPANE PROVIDER
PROVIDE AND INSTALL PVC SCH 80 CONDUITS FOR ELECTRICAL SECONDARY SERVICE TO BUILDING, COORDINATE NUMBER, TYPE, AND SIZE WITH BUILDING ELECTRICAL PLANS
PROVIDE AND INSTALL CONCRETE TRANSFORMER PAD AND BOLLARDS, COORDINATE WITH EVERSOURCE
PROVIDE AND INSTALL (2) 4" SCH 80 PVC CONDUITS FOR TELECOMMUNICATION SERVICE TO BUILDING WITH PULL STRINGS
GAS SERVICE CONNECTION TO BUILDING
PROVIDE AND INSTALL WELL, COORDINATE WITH EASTERN HIGHLANDS HEALTH DISTRICT AND HEALTH CODE REQUIREMENTS
25' WELL BUFFER RADIUS
75' WELL BUFFER RADIUS
PROVIDE AND INSTALL 1" TYPE K COPPER WATER LINE FOR DOMESTIC WATER SERVICE CONNECTION TO BUILDING FROM WELL
PROVIDE AND INSTALL WATER METER, COORDINATE WITH BOLTON LAKES REGIONAL HEALTH AUTHORITY
PROVIDE AND INSTALL 6" PVC SCH40 SANITARY OUTLET PIPE INV. OUT =662.00'
PROVIDE AND INSTALL SANITARY SEWER CLEANOUT (TYP OF 2)
PROVIDE AND INSTALL (2) 2" SCH80 PVC CONDUIT WITH PULL STRINGS FOR ELECTRICAL CONNECTION AND CONTROL CABLES TO SEWER PUMP
PROVIDE AND INSTALL 67LF 6" PVC SCH40 SANITARY SEWER PIPE @2.1%
PROVIDE AND INSTALL SANITARY SEWER E/ONE DUPLEX DH152-93 PUMP MODIFIED TO ACCEPT 6" PIPE, DESIGN FLOW=75GPD TF=668.75 INV. IN=660.59 INV. OUT=661.59
PROVIDE AND INSTALL (1) 2" PVC SCH40 CONDUIT WITH PULL STRING FOR ELECTRIC SIGN CIRCUIT
PROPOSED 20' WIDE SANITARY SEWER EASEMENT IN FAVOR OF THE BLRWPCA
PROVIDE AND INSTALL 44LF 1.5" SDR11 POLYETHYLENE SANITARY FORCE MAIN
PROVIDE AND INSTALL E/ONE UNI-LATERAL STAINLESS STEEL LATERAL VALVE AND KIT
CONNECT TO EXISTING LOW PRESSURE FORCE MAIN WITH A LIVE TAP, EX. INV=±665.10 CONTRACTOR SHALL FIELD VERIFY INVERT AND INFORM SEWER PUMP MANUFACTURER OF REQUIRED HEAD LOSS
PROPOSED RETAIL BUILDING
10,640 S.F.
22 SPACES REQUIRED
33 SPACES PROPOSED
FFE=666.00
25'
75'
10'
20'
N 07°04'21" W 515.27'
661
50' ACCESS & UTILITY EASEMENT IN FAVOR OF LOT 1 VOL 175 - PG 91 EXEPTION #12
NO PARK SIGN
TP-1
TP-2
TP-3
SET 5/8"ROD
EXIST 5/8"ROD
CB TF=660.7 FL=656.9 FL=656.9
CB TF=660.9 FL=657.6
CB TF=664.1 FL=67.8
PROVIDE AND INSTALL 52 LF 6" SCH 80 ELECTRICAL CONDUIT SLEEVE FOR FUTURE ELECTRIC SIGN CONNECTION TO REAR PARCEL, CAP BOTH ENDS FOR FUTURE USE
PROVIDE AND INSTALL (2) 4" SCH 80 ELECTRICAL CONDUITS WITH PULL STRINGS (2) 4" SCH80 TEL/DATA CONDUITS WITH PULL STRINGS
410.37'
S82°24'31"W
36" MAPLE
30" MAPLE
APPROX SAN FORCE MAIN
APPROX 18"RCP
STOP SIGN
STOP BAR
TELE MH TF=661.12
LIMIT OF DISTURBANCE AND SITEWORK CONTRACT LIMIT LINE IS PROPERTY LINE UNLESS OTHERWISE SPECIFIED (TYP.)
WHITE LINE
DBL YELLOW LINE
LOOP DETECTOR
LOOP DETECTOR
BOSTON TURNPIKE
PROVIDE AND INSTALL RIGID METAL CONDUIT DOWN POLE TO UNDERGROUND UTILITIES, COORDINATE ELECTRIC AND TELECOMMUNICATIONS CONNECTIONS WITH UTILITY PROVIDERS
GRAPHIC SCALE
20 10 0 20
SCALE IN FEET

FOR PERMITTING PURPOSES ONLY
NOT RELEASED FOR CONSTRUCTION

BOLTON PLANNING AND ZONING COMMISSION, BOLTON, CT

DATE APPROVED ____ DATE OF EXPIRATION ____

________________ CHAIRMAN

THE STATUTORY FIVE-YEAR PERIOD FOR COMPLETION OF ALL PHYSICAL IMPROVEMENTS EXPIRES ON ________

5/4/2021, CLHEUREUX, G:\JOBS20\20\2002032\DWG\SU200203201.DWG

Xref (s): BD200203201 ; XY200203201 ; XC200203204 ; XC200203201 ; XC200203202

Architecture
Engineering
Environmental
Land Surveying

BL Companies

100 Constitution Plaza
10th Floor
Hartford, CT 06103
(860) 249-2200
(860) 249-2400 Fax

STATE OF CONNECTICUT · KIMBERLY M. ... · No. 0026020 · LICENSED · PROFESSIONAL ENGINEER

PROPOSED RETAIL DEVELOPMENT
1100 BOSTON TURNPIKE
BOLTON, CONNECTICUT

REVISIONS

No.	Date	Desc.
1.	05/05/2021	REVISED PER TOWN COMMENTS

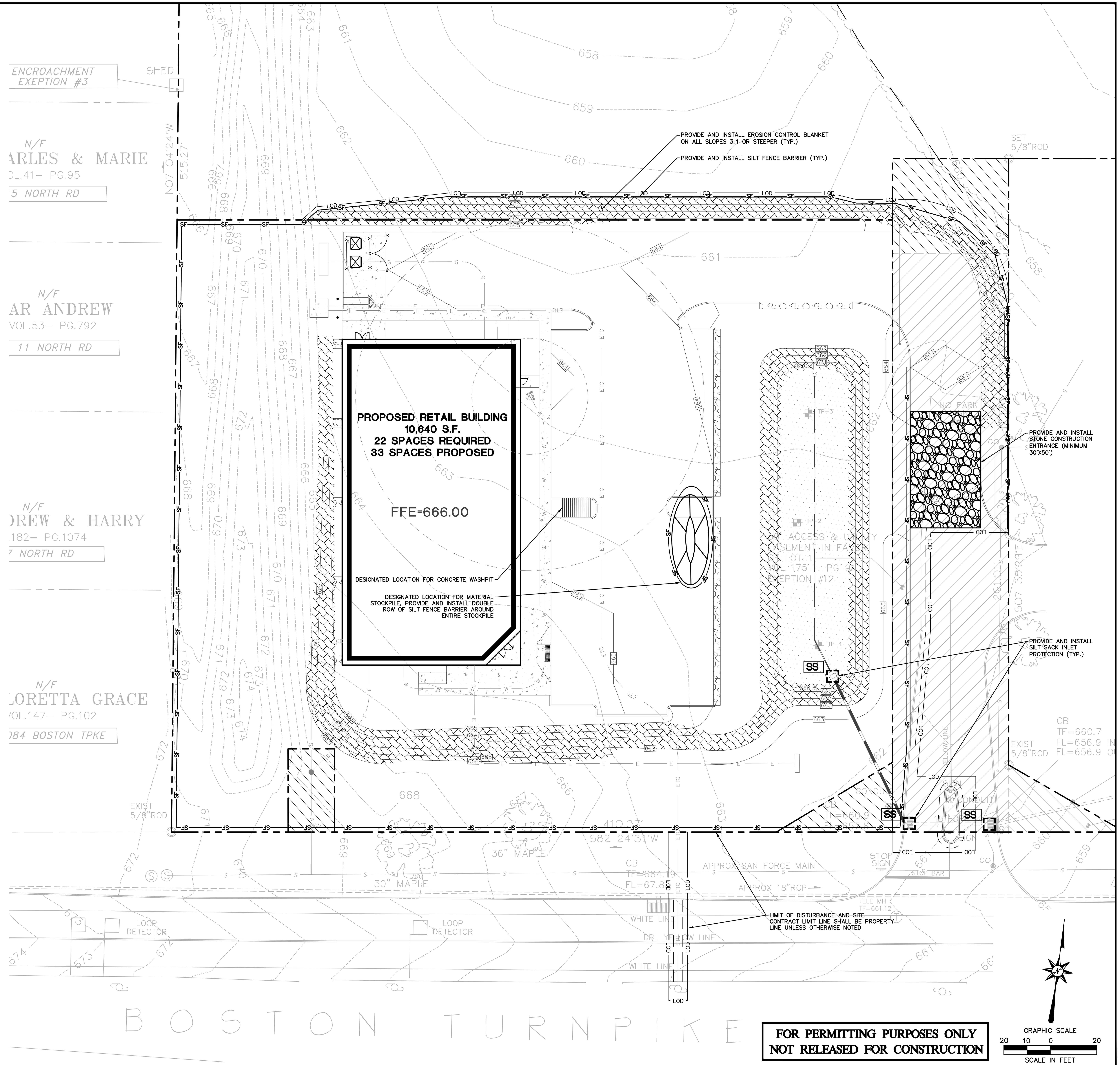
Designed	S.E.L.
Drawn	S.E.L.
Reviewed	K.M.M.
Scale	1"=20'
Project No.	2002032
Date	04/02/2021
CAD File:	SU200203201

Title
SITE UTILITIES PLAN

Sheet No.
SU-1

EROSION CONTROL LEGEND

Symbol	Description
——— - - ———	PROPERTY LINE
——— LOD ———	LIMIT OF DISTURBANCE AND SITEWORK CONTRACT LIMIT LINE
— — — — —	SAWCUT LINE
—SF——SF—	SILT FENCE BARRIER
SS	SILT SACK INLET PROTECTION
	CONCRETE WASH PIT
	TEMPORARY MATERIAL STOCKPILE
	EROSION CONTROL BLANKET
	CONSTRUCTION ENTRANCE



PROPOSED RETAIL BUILDING
10,640 S.F.
22 SPACES REQUIRED
33 SPACES PROPOSED
FFE=666.00
PROVIDE AND INSTALL EROSION CONTROL BLANKET ON ALL SLOPES 3:1 OR STEEPER (TYP.)
PROVIDE AND INSTALL SILT FENCE BARRIER (TYP.)
PROVIDE AND INSTALL STONE CONSTRUCTION ENTRANCE (MINIMUM 30'X50')
PROVIDE AND INSTALL SILT SACK INLET PROTECTION (TYP.)
DESIGNATED LOCATION FOR CONCRETE WASHPIT
DESIGNATED LOCATION FOR MATERIAL STOCKPILE, PROVIDE AND INSTALL DOUBLE ROW OF SILT FENCE BARRIER AROUND ENTIRE STOCKPILE
LIMIT OF DISTURBANCE AND SITE CONTRACT LIMIT LINE SHALL BE PROPERTY LINE UNLESS OTHERWISE NOTED
ENCROACHMENT EXEPTION #3
SHED
N/F
ARLES & MARIE
OL.41- PG.95
5 NORTH RD
AR ANDREW
VOL.53- PG.792
11 NORTH RD
DREW & HARRY
182- PG.1074
7 NORTH RD
LORETTA GRACE
VOL.147- PG.102
084 BOSTON TPKE
EXIST 5/8"ROD
SET 5/8"ROD
36" MAPLE
30" MAPLE
APPROX SAN FORCE MAIN
APPROX 18"RCP
LOOP DETECTOR
WHITE LINE
DBL YELLOW LINE
STOP SIGN
STOP BAR
TELE MH TF=661.12
CB TF=660.7 FL=656.9
BOSTON TURNPIKE
GRAPHIC SCALE
20 10 0 20
SCALE IN FEET

FOR PERMITTING PURPOSES ONLY
NOT RELEASED FOR CONSTRUCTION

BOLTON PLANNING AND ZONING COMMISSION, BOLTON, CT	
DATE APPROVED	DATE OF EXPIRATION
____________ CHAIRMAN	

THE STATUTORY FIVE-YEAR PERIOD FOR COMPLETION OF ALL PHYSICAL IMPROVEMENTS EXPIRES ON ______

BL Companies
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PROPOSED RETAIL DEVELOPMENT
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BOLTON, CONNECTICUT

REVISIONS

No.	Date	Desc.
1	05/05/2021	REVISED PER TOWN COMMENTS

Designed	S.E.L.
Drawn	S.E.L.
Reviewed	K.M.M.
Scale	1"=20'
Project No.	2002032
Date	04/02/2021
CAD File:	EC200203201

Title
SEDIMENT AND EROSION CONTROL PLAN

Sheet No.
EC-1

SEDIMENT AND EROSION CONTROL NOTES

SEDIMENT & EROSION CONTROL NARRATIVE
THE SEDIMENT AND EROSION CONTROL PLAN WAS DEVELOPED TO PROTECT THE EXISTING ROADWAY AND STORM DRAINAGE SYSTEMS, ADJACENT PROPERTIES, AND ANY ADJACENT WETLAND AREA AND ANY ADJACENT WATER COURSE FROM SEDIMENT LADEN SURFACE RUNOFF AND EROSION. A CONSTRUCTION SEQUENCE IS PROVIDED TO PROVIDE SURFACE RUNOFF EROSION CONTROLS PRIOR TO THE BEGINNING OF PROJECT DEMOLITION AND/OR CONSTRUCTION.

CONSTRUCTION SCHEDULE
THE ANTICIPATED STARTING DATE FOR CONSTRUCTION IS SPRING 2021 WITH COMPLETION ANTICIPATED FALL 2021. APPROPRIATE SEDIMENT AND EROSION CONTROL MEASURES AS DESCRIBED HEREIN SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF ALL DEMOLITION OR CONSTRUCTION ACTIVITY. SCHEDULE WORK TO MINIMIZE THE LENGTH OF TIME THAT BARE SOIL WILL BE EXPOSED.

CONTINGENCY EROSION PLAN
THE CONTRACTOR SHALL INSTALL ALL SPECIFIED SEDIMENT AND EROSION CONTROL MEASURES AND WILL BE REQUIRED TO MAINTAIN THEM IN THEIR INTENDED FUNCTIONING CONDITION. THE AGENTS OF THE MUNICIPALITY OR INLAND WETLANDS COMMISSION AND/OR CIVIL ENGINEER SHALL HAVE THE AUTHORITY TO REQUIRE SUPPLEMENTAL MAINTENANCE OR ADDITIONAL MEASURES IF FIELD CONDITIONS ARE ENCOUNTERED BEYOND WHAT WOULD NORMALLY BE ANTICIPATED.

CONSTRUCTION SEQUENCE
THE FOLLOWING CONSTRUCTION SEQUENCE IS RECOMMENDED:

1. CONTACT MUNICIPALITY OR INLAND WETLANDS COMMISSION AGENT AT LEAST FORTY–EIGHT (48) HOURS PRIOR TO COMMENCEMENT OF ANY DEMOLITION, CONSTRUCTION OR REGULATED ACTIVITY ON THIS PROJECT.
2. CLEARING LIMITS SHALL BE PHYSICALLY MARKED IN THE FIELD AND APPROVED BY THE MUNICIPALITY OR INLAND WETLANDS COMMISSION AGENT PRIOR TO THE START OF WORK ON THE SITE. INSTALL TREE PROTECTION AND PERIMETER SILT FENCE.
3. CONSTRUCT STONE CONSTRUCTION ENTRANCE ANTI–TRACKING PADS AT CONSTRUCTION ENTRANCES/EXITS AND INSTALL FILTER FABRIC AROUND GRATES OF CATCH BASINS OR INSTALL SILT SACKS ON CATCH BASIN INLETS ON OFF SITE ROADS. INSTALL SILT FENCE AND OTHER EROSION CONTROL DEVICES INDICATED ON THESE PLANS AT PERIMETER OF PROPOSED SITE DISTURBANCE AND INSTALL ALL EROSION CONTROL MEASURES AND TREE PROTECTION INDICATED ON THESE PLANS. INSTALL SEDIMENT BASINS AND SEDIMENT TRAPS IF REQUIRED AT LOW AREAS OF SITE OR AS ORDERED BY THE ENGINEER OR AS SHOWN ON THESE PLANS.
4. CLEAR AND GRUB SITE. STOCKPILE CHIPS. STOCKPILE TOPSOIL. INSTALL SEDIMENT AND EROSION CONTROLS AT STOCKPILES.
5. ANY BUILDING AND SITE DEMOLITION AND REMOVAL. PAVEMENT REMOVAL.
6. INSTALL SILT FENCE, CONSTRUCT ANY DIVERSION SWALES AND SEDIMENT BASINS AND SEDIMENT TRAPS. COMMENCE INSTALLATION OF STORM DRAINAGE SYSTEM.
7. COMMENCE EARTHWORK. INSTALL ADDITIONAL SEDIMENT AND EROSION CONTROLS AS WORK PROGRESSES AND CONTINUE STORM DRAINAGE SYSTEM CONSTRUCTION, TOPSOIL AND SEED SLOPES WHICH HAVE ACHIEVED FINAL SITE GRADING.
8. CONSTRUCTION STAKING OF ALL BUILDING CORNERS, UTILITIES, ACCESS DRIVES, AND PARKING AREAS.
9. ROUGH GRADING AND FILLING OF SUBGRADES AND SLOPES.
10. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
11. BEFORE DISPOSING OF SOIL OR RECEIVING BORROW FOR THE SITE, THE CONTRACTOR MUST PROVIDE EVIDENCE THAT EACH SPOIL OR BORROW AREA HAS A SEDIMENT AND EROSION CONTROL PLAN APPROVED BY THE MUNICIPALITY AND/OR INLAND WETLANDS COMMISSION AND WHICH IS BEING IMPLEMENTED AND MAINTAINED. THE CONTRACTOR SHALL ALSO NOTIFY THE MUNICIPALITY AND/OR INLAND WETLANDS COMMISSION IN WRITING OF ALL RECEIVING SPOIL AND BORROW AREAS WHEN THEY HAVE BEEN IDENTIFIED.
12. CONTINUE INSTALLATION OF STORM DRAINAGE AS SUBGRADE ELEVATIONS ARE ACHIEVED.
13. BUILDING FOUNDATION SUBGRADE AND PAD SUBGRADE PREPARATION.
14. BUILDING FOUNDATION CONSTRUCTION. BEGIN BUILDING SUPERSTRUCTURE
15. THROUGHOUT CONSTRUCTION SEQUENCE, REMOVE SEDIMENT FROM BEHIND ANY SILT FENCES, HAY BALES AND OTHER EROSION CONTROL DEVICES, AND FROM SEDIMENT BASINS AND SEDIMENT TRAPS AS REQUIRED. REMOVAL SHALL BE ON A PERIODIC BASIS (EVERY SIGNIFICANT RAINFALL OF 0.25 INCH OR GREATER). INSPECTION OF SEDIMENT AND EROSION CONTROL MEASURES SHALL BE ON A WEEKLY BASIS AND AFTER EACH RAINFALL OF 0.25 INCHES OR GREATER. SEDIMENT COLLECTED SHALL BE DEPOSITED AND SPREAD EVENLY UPLAND ON SLOPES DURING CONSTRUCTION.
16. INSTALL SANITARY LATERAL AND UTILITIES. COMPLETE STORM DRAINAGE SYSTEM.
17. INSTALL SITE LIGHTING AND TRASH ENCLOSURE.
18. COMPLETE GRADING TO SUBGRADES AND CONSTRUCT PARKING AREA SUBGRADE.
19. CONSTRUCT CURBS, PAVEMENT STRUCTURE AND SIDEWALKS.
20. CONDUCT FINE GRADING.
21. PAVING OF PARKING AREAS AND DRIVEWAYS
22. FINAL FINE GRADING OF SLOPE AND NON–PAVED AREAS.
23. PLACE 4" TOPSOIL ON SLOPES AFTER FINAL GRADING IS COMPLETED. FERTILIZE SEED AND MULCH. SEED MIXTURE TO BE INSTALLED APRIL 15 – JUNE 1 OR AUGUST 15 – OCTOBER 1. USE EROSION CONTROL BLANKETS AS REQUIRED OR ORDERED FOR SLOPES GREATER THAN 3:1 AND AS SHOWN ON LANDSCAPE PLANS OR EROSION CONTROL PLANS. FOR TEMPORARY STABILIZATION BEYOND SEEDING DATES USE ANNUAL RYE AT 4.0 LBS/1,000 S.F. FERTILIZE WITH 10–10–10 AT 1.0 LBS. OF NITROGEN PER 1,000 S.F. AND LIME AT 100 LBS/1,000 S.F. (MAX.).
24. LANDSCAPE ISLANDS, INTERIOR NON–PAVED AREAS, AND PERIMETER AREAS.
25. INSTALL SIGNING AND PAVEMENT MARKINGS
26. CLEAN STORM DRAINAGE PIPE STRUCTURES, DETENTION SYSTEMS AND WATER QUALITY DEVICES OF DEBRIS AND SEDIMENT.
27. UPON DIRECTION OF THE MUNICIPALITY AND/OR INLAND WETLANDS COMMISSION AGENT, SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED FOLLOWING STABILIZATION OF THE SITE.

OPERATION REQUIREMENTS

CLEARING AND GRUBBING OPERATIONS
1. ALL SEDIMENT AND EROSION CONTROL MEASURES, INCLUDING THE CONSTRUCTION OF TEMPORARY SEDIMENTATION BASINS AND STONE CONSTRUCTION ENTRANCE ANTI–TRACKING PADS, WILL BE INSTALLED PRIOR TO THE START OF CLEARING AND GRUBBING AND DEMOLITION OPERATIONS.
2. FOLLOWING INSTALLATION OF ALL SEDIMENT AND EROSION CONTROL MEASURES, THE CONTRACTOR SHALL NOT PROCEED WITH GRADING, FILLING OR OTHER CONSTRUCTION OPERATIONS UNTIL THE ENGINEER HAS INSPECTED AND APPROVED ALL INSTALLATIONS.
3. THE CONTRACTOR SHALL TAKE EXTREME CARE DURING CLEARING AND GRUBBING OPERATIONS SO AS NOT TO DISTURB UNPROTECTED WETLAND AREAS OR SEDIMENT AND EROSION CONTROL DEVICES.
4. FOLLOWING THE COMPLETION OF CLEARING AND GRUBBING OPERATIONS, ALL AREAS SHALL BE STABILIZED WITH TOPSOIL AND SEEDING OR CRUSHED STONE AS SOON AS PRACTICAL.

ROUGH GRADING OPERATIONS

1. DURING THE REMOVAL AND/OR PLACEMENT OF EARTH AS INDICATED ON THE GRADING PLAN, TOPSOIL SHALL BE STRIPPED AND APPROPRIATELY STOCKPILED FOR REUSE.
2. ALL STOCKPILED TOPSOIL SHALL BE SEEDED, MULCHED WITH HAY, AND ENCLOSED BY A SILTATION FENCE.

FILLING OPERATIONS

1. PRIOR TO FILLING, ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE PROPERLY IMPLEMENTED, MAINTAINED AND FULLY INSTALLED, AS DIRECTED BY THE ENGINEER AND AS SHOWN ON THIS PLAN.
2. ALL FILL MATERIAL ADJACENT TO ANY WETLAND AREAS, IF APPLICABLE TO THIS PROJECT, SHALL BE GOOD QUALITY, WITH LESS THAN 5% FINES PASSING THROUGH A #200 SIEVE (BANK RUN), SHALL BE PLACED IN LIFT THICKNESSES NOT GREATER THAN THAT SPECIFIED IN PROJECT SPECIFICATIONS AND/OR THE PROJECT GEOTECHNICAL REPORT. LIFTS SHALL BE COMPACTED TO 95% MAX. DRY DENSITY MODIFIED PROCTOR OR AS SPECIFIED IN THE CONTRACT SPECIFICATIONS OR IN THE GEOTECHNICAL REPORT.
3. AS GENERAL GRADING OPERATIONS PROGRESS, ANY TEMPORARY DIVERSION DITCHES SHALL BE RAISED OR LOWERED, AS NECESSARY, TO DIVERT SURFACE RUNOFF TO THE SEDIMENT BASINS OR SEDIMENT TRAPS.

PLACEMENT OF DRAINAGE STRUCTURES, UTILITIES, AND BUILDING CONSTRUCTION OPERATIONS.

1. SILT FENCES SHALL BE INSTALLED AT THE DOWNHILL SIDES OF BUILDING EXCAVATIONS, MUD PUMP DISCHARGES, AND UTILITY TRENCH MATERIAL STOCKPILES. HAY BALES/STRAW BALES MAY BE USED IF SHOWN ON THE SEDIMENT AND EROSION CONTROL PLANS OR IF DIRECTED BY THE CIVIL ENGINEER.

FINAL GRADING AND PAVING OPERATIONS

1. ALL INLET AND OUTLET PROTECTION SHALL BE PLACED AND MAINTAINED AS SHOWN ON SEDIMENT AND EROSION CONTROL PLANS AND DETAILS, AND AS DESCRIBED IN SPECIFICATIONS AND AS DESCRIBED HEREIN.
2. NO CUT OR FILL SLOPES SHALL EXCEED 2:1 EXCEPT WHERE STABILIZED BY ROCK FACED EMBANKMENTS OR EROSION CONTROL BLANKETS, OR JUTE MESH AND VEGETATION. ALL SLOPES SHALL BE SEEDED, AND ANY ROAD OR DRIVEWAY SHOULDER AND BANKS SHALL BE STABILIZED IMMEDIATELY UPON COMPLETION OF FINAL GRADING UNTIL TURF IS ESTABLISHED.
3. PAVEMENT SUB–BASE AND BASE COURSES SHALL BE INSTALLED OVER AREAS TO BE PAVED AS SOON AS FINAL SUB–GRADES ARE ESTABLISHED AND UNDERGROUND UTILITIES AND STORM DRAINAGE SYSTEMS HAVE BEEN INSTALLED.
4. AFTER CONSTRUCTION OF PAVEMENT, TOPSOIL, FINAL SEED, MULCH AND LANDSCAPING, REMOVE ALL TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES ONLY AFTER ALL AREAS HAVE BEEN PAVED AND/OR GRASS HAS BEEN WELL ESTABLISHED AND THE SITE IS STABLE AND HAS BEEN INSPECTED AND APPROVED BY THE MUNICIPALITY AND/OR INLAND WETLANDS COMMISSION.

INSTALLATION OF SEDIMENTATION AND EROSION CONTROL MEASURES

I. SILTATION FENCE
A. DIG A SIX INCH TRENCH ON THE UPHILL SIDE OF THE DESIGNATED FENCE LINE LOCATION.

B. POSITION THE POST AT THE BACK OF THE TRENCH (DOWNHILL SIDE), AND HAMMER THE POST AT LEAST 1.5 FEET INTO THE GROUND.

C. LAY THE BOTTOM SIX INCHES OF THE FABRIC INTO THE TRENCH TO PREVENT UNDERMINING BY STORM WATER RUN–OFF.

D. BACKFILL THE TRENCH AND COMPACT.

II. HAY BALES/STRAW BALES
A. BALES SHALL BE PLACED IN A SINGLE ROW, LENGTHWISE, ORIENTED PARALLEL TO THE CONTOUR, WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER.

B. BALES SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED THE WIDTH OF A BALE AND THE LENGTH OF THE PROPOSED BARRIER TO A MINIMUM DEPTH OF FOUR INCHES. AFTER THE BALES ARE STAKED, THE EXCAVATED SOIL SHALL BE BACKFILLED AGAINST THE BARRIER.

C. EACH BALE SHALL BE SECURELY ANCHORED BY AT LEAST TWO (2) STAKES.

D. THE GAPS BETWEEN BALES SHALL BE WEDGED WITH STRAW TO PREVENT WATER LEAKAGE.

E. THE BARRIER SHALL BE EXTENDED TO SUCH A LENGTH THAT THE BOTTOMS OF THE END BALES ARE HIGHER IN ELEVATION THAN THE TOP OF THE LOWEST MIDDLE BALE, TO ENSURE THAT RUN–OFF WILL FLOW EITHER THROUGH OR OVER THE BARRIER, BUT NOT AROUND IT.

OPERATION AND MAINTENANCE OF SEDIMENT AND EROSION CONTROL MEASURES
I. SILTATION FENCE
A. ALL SILTATION FENCES SHALL BE INSPECTED AS A MINIMUM WEEKLY OR AFTER EACH RAINFALL. ALL DETERIORATED FABRIC AND DAMAGED POSTS SHALL BE REPLACED AND PROPERLY REPOSITIONED IN ACCORDANCE WITH THIS PLAN.

B. SEDIMENT DEPOSITS SHALL BE REMOVED FROM BEHIND THE FENCE WHEN THEY REACH A MAXIMUM HEIGHT OF ONE FOOT.

II. HAY BALES/STRAW BALES
A. ALL HAY BALE/STRAW BALE RINGS SHALL BE INSPECTED FOLLOWING EACH RAINFALL. REPAIR OR REPLACEMENT SHALL BE PROMPTLY MADE AS NEEDED.

B. DEPOSITS SHALL BE REMOVED AND CLEANED–OUT IF ONE HALF OF THE ORIGINAL HEIGHT OF THE BALES BECOMES FILLED WITH SEDIMENT.

III. SEDIMENT BASINS/SEDIMENT TRAPS
A. CONTRACTOR TO KEEP WEEKLY CHECKLIST LOGS FOR INSPECTIONS OF ALL SEDIMENT AND EROSION CONTROL DEVICES AND HAVE THEM READILY AVAILABLE ON–SITE AT ALL TIMES FOR INSPECTION BY DEEP, LOCAL AUTHORITIES OR ENGINEER.

B. ALL SEDIMENT BASINS AND/OR SEDIMENT TRAPS SHALL BE INSPECTED FOLLOWING EACH RAINFALL. REPAIR OF SLOPES SHALL BE PROMPTLY MADE AS NEEDED.

C. SEDIMENT DEPOSITS SHALL BE REMOVED FROM SEDIMENT BASINS AND/OR SEDIMENT TRAPS WHEN THEY REACH A MAXIMUM HEIGHT OF ONE FOOT UNLESS OTHERWISE INDICATED ON THE EROSION CONTROL PLANS AND DETAILS TO BE AT A SPECIFIC ELEVATION PER CLEAN OUT MARKERS.

D. SEDIMENT SHALL BE DISPOSED OF ON–SITE OR AS DIRECTED BY THE ENGINEER AND LOCAL GOVERNING OFFICIALS. SEE SEDIMENT AND EROSION CONTROL NOTES HEREIN REGARDING DISPOSAL REQUIREMENTS FOR OFF SITE SPOIL DISPOSAL.

SEDIMENT AND EROSION CONTROL PLAN
1. HAY BALE/STRAW BALE FILTERS WILL BE INSTALLED AT ALL CULVERT OUTLETS IF CULVERT OUTLETS ARE APPLICABLE TO THIS PROJECT AND SILTATION FENCE INSTALLED ALONG THE TOE OF ALL CRITICAL CUT AND FILL SLOPES.
2. CULVERT DISCHARGE AREAS WILL BE PROTECTED WITH RIP RAP CHANNELS. ENERGY DISSIPATORS WILL BE INSTALLED AS SHOWN ON THESE PLANS AND AS NECESSARY.
3. CATCH BASINS WILL BE PROTECTED WITH HAY BALE/STRAW BALE FILTERS, SILT SACKS, SILTATION FENCE, OR OTHER INLET PROTECTION DEVICES PER DETAILS, THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL ALL DISTURBED AREAS ARE THOROUGHLY STABILIZED.
4. ALL SEDIMENT AND EROSION CONTROL MEASURES WILL BE INSTALLED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, LATEST EDITION.
5. SEDIMENT AND EROSION CONTROL MEASURES WILL BE INSTALLED PRIOR TO DEMOLITION AND/OR CONSTRUCTION WHENEVER POSSIBLE.
6. ALL CONTROL MEASURES WILL BE MAINTAINED IN EFFECTIVE CONDITION THROUGHOUT THE DEMOLITION AND CONSTRUCTION PERIOD UNTIL THE SITE IS DETERMINED TO BE STABILIZED BY THE AUTHORITY HAVING JURISDICTION.
7. ADDITIONAL CONTROL MEASURES WILL BE INSTALLED DURING THE CONSTRUCTION PERIOD, IF NECESSARY OR REQUIRED OR AS DIRECTED BY THE CIVIL ENGINEER OR BY THE AUTHORITY HAVING JURISDICTION.
8. SEDIMENT REMOVED FROM EROSION CONTROL STRUCTURES WILL BE DISPOSED IN A MANNER WHICH IS CONSISTENT WITH THE INTENT AND REQUIREMENTS OF THE SEDIMENT AND EROSION CONTROL PLANS, NOTES, AND DETAILS.
9. THE CONTRACTOR IS ASSIGNED THE RESPONSIBILITY FOR IMPLEMENTING THIS SEDIMENT AND EROSION CONTROL PLAN. THIS RESPONSIBILITY INCLUDES THE INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN, NOTIFICATION OF THE MUNICIPALITY AND/OR INLAND WETLANDS COMMISSION OFFICE OR AUTHORITY HAVING JURISDICTION OF ANY TRANSFER OF THIS RESPONSIBILITY AND FOR CONVEYING A COPY OF THE SEDIMENT AND EROSION CONTROL PLAN IF THE TITLE TO THE LAND IS TRANSFERRED.

SEDIMENT AND EROSION CONTROL NOTES
1. THE SEDIMENT AND EROSION CONTROL PLAN IS ONLY INTENDED TO DESCRIBE THE SEDIMENT AND EROSION CONTROL TREATMENT FOR THIS SITE. SEE SEDIMENT AND EROSION CONTROL DETAILS AND CONSTRUCTION SEQUENCE. REFER TO SITE PLAN FOR GENERAL INFORMATION AND OTHER CONTRACT PLANS FOR APPROPRIATE INFORMATION.
2. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING THIS SEDIMENT AND EROSION CONTROL PLAN. THIS RESPONSIBILITY INCLUDES THE PROPER INSTALLATION AND MAINTENANCE OF SEDIMENT AND EROSION CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED WITH CONSTRUCTION ON THE SITE OF THE REQUIREMENTS AND OBJECTIVES OF THIS PLAN, INFORMING THE AUTHORITY HAVING JURISDICTION OR COUNTY OR INLAND WETLANDS AGENCY OF ANY TRANSFER OF THIS RESPONSIBILITY, AND FOR CONVEYING A COPY OF THE SEDIMENT & EROSION CONTROL PLAN IF THE TITLE TO THE LAND IS TRANSFERRED.
3. AN EROSION CONTROL BOND MAY BE REQUIRED TO BE POSTED WITH THE MUNICIPALITY TO ENSURE IMPLEMENTATION OF THE SEDIMENT AND EROSION CONTROL MEASURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE POSTING OF THIS BOND AND FOR INQUIRIES TO THE MUNICIPALITY FOR INFORMATION ON THE METHOD, TYPE AND AMOUNT OF THE BOND POSTING UNLESS OTHERWISE DIRECTED BY THE OWNER.
4. VISUAL SITE INSPECTIONS SHALL BE CONDUCTED WEEKLY, AND AFTER EACH MEASURABLE PRECIPITATION EVENT OF 0.25 INCHES OR GREATER BY QUALIFIED PERSONNEL, TRAINED AND EXPERIENCED IN SEDIMENT AND EROSION CONTROL, TO ASCERTAIN THAT THE SEDIMENT AND EROSION CONTROL (E&S) BMPS ARE OPERATIONAL AND EFFECTIVE IN PREVENTING POLLUTION. A WRITTEN REPORT OF EACH INSPECTION SHALL BE KEPT, AND INCLUDE:
A) A SUMMARY OF THE SITE CONDITIONS, E&S BMPS, AND COMPLIANCE; AND
B) THE DATE, TIME, AND THE NAME OF THE PERSON CONDUCTING THE INSPECTION
5. THE CONTRACTOR SHALL CONSTRUCT ALL SEDIMENT AND EROSION CONTROLS IN ACCORDANCE WITH 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, LATEST EDITION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, AND AS DIRECTED BY THE MUNICIPALITY AND/OR INLAND WETLANDS COMMISSION. THE CONTRACTOR SHALL KEEP A COPY OF THE GUIDELINES ON–SITE FOR REFERENCE DURING CONSTRUCTION.
6. ADDITIONAL AND/OR ALTERNATIVE SEDIMENT AND EROSION CONTROL MEASURES MAY BE INSTALLED DURING THE CONSTRUCTION PERIOD IF FOUND NECESSARY BY THE CONTRACTOR, OWNER, SITE ENGINEER, MUNICIPALITY AND/OR INLAND WETLANDS COMMISSION, OR GOVERNING AGENCIES. THE CONTRACTOR SHALL CONTACT THE OWNER AND APPROPRIATE GOVERNING AGENCIES FOR APPROVAL IF ALTERNATIVE CONTROLS OTHER THAN THOSE SHOWN ON THE PLANS ARE PROPOSED.
7. THE CONTRACTOR SHALL INSPECT ALL SEDIMENT AND EROSION CONTROLS BEFORE AND AFTER EACH STORM (0.25 INCHES OR GREATER RAINFALL), OR AT LEAST WEEKLY, TO VERIFY THAT THE CONTROLS ARE OPERATING PROPERLY AND MAKE REPAIRS WHERE NECESSARY.
8. THE CONTRACTOR SHALL KEEP A SUPPLY OF SEDIMENT AND EROSION CONTROL MATERIAL (ANY HAY BALES, SILT FENCE, JUTE MESH, RIP RAP, ETC.) ON–SITE FOR MAINTENANCE AND EMERGENCY REPAIRS.
9. PROTECT EXISTING TREES THAT ARE TO BE SAVED BY FENCING AT THE DRIP LINE OR AS SHOWN WITH SNOW FENCE, ORANGE SAFETY FENCE, OR EQUIVALENT FENCING. ANY LIMB TRIMMING SHOULD BE DONE BEFORE CONSTRUCTION BEGINS IN THAT AREA; FENCING SHALL BE MAINTAINED AND REPAIRED DURING CONSTRUCTION.
10. INSTALL PERIMETER SEDIMENT AND EROSION CONTROLS PRIOR TO CLEARING OR CONSTRUCTION. ALL CONSTRUCTION SHALL BE CONTAINED WITHIN THE LIMIT OF DISTURBANCE, WHICH SHALL BE MARKED WITH SILT FENCE, SAFETY FENCE, HAY BALES, RIBBONS, OR OTHER MEANS PRIOR TO CLEARING. CONSTRUCTION ACTIVITY SHALL REMAIN ON THE UPHILL SIDE OF THE SILT FENCE UNLESS WORK IS SPECIFICALLY CALLED FOR ON THE DOWNHILL SIDE OF THE FENCE.
11. ANY STONE CONSTRUCTION ENTRANCE ANTI–TRACKING PADS SHALL BE INSTALLED AT START OF CONSTRUCTION AND MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION. THE LOCATION OF THE TRACKING PADS MAY CHANGE AS VARIOUS PHASES OF CONSTRUCTION ARE COMPLETED.
12. TOPSOIL SHALL BE STRIPPED AND STOCKPILED FOR USE IN FINAL LANDSCAPING. ALL EARTH STOCKPILES SHALL HAVE HAY BALES OR SILT FENCE AROUND THE LIMIT OF PILE. PILES SHALL BE TEMPORARILY SEEDED IF PILE IS TO REMAIN IN PLACE FOR MORE THAN ONE (1) MONTH.
13. ANY SEDIMENT BASINS AND SEDIMENT TRAPS SHALL PROVIDE 134 CUBIC YARDS OF SEDIMENT STORAGE PER ACRE CONTRIBUTING TO THE BASIN. PROVIDE BASIN VOLUMES FOR ALL DISTURBANCE ON SITE.
14. COMPLY WITH REQUIREMENTS OF CGS SECTION 22A 430B, FOR STORMWATER DISCHARGE FROM CONSTRUCTION ACTIVITIES AND WITH DEEP RECORD KEEPING AND INSPECTION REQUIREMENTS.
15. ANY STONE CONSTRUCTION ENTRANCE ANTI–TRACKING PADS SHALL BE INSTALLED PRIOR TO ANY ON SITE EXCAVATION AND SHALL BE MAINTAINED DURING ALL DEMOLITION, EXCAVATION AND CONSTRUCTION ACTIVITIES.
16. MINIMIZE LAND DISTURBANCES. SEED AND MULCH DISTURBED AREAS WITH TEMPORARY MIX AS SOON AS PRACTICABLE (ONE WEEK MAXIMUM UNSTABILIZED PERIOD) USING PERENNIAL RYEGRASS AT 40 LBS PER ACRE. MULCH ALL CUT AND FILL SLOPES AND SWALES WITH LOOSE HAY AT A RATE OF 2 TONS PER ACRE. IF NECESSARY, REPLACE LOOSE HAY ON SLOPES WITH EROSION CONTROL BLANKETS OR JUTE CLOTH. MODERATELY GRADED AREAS, ISLANDS, AND TEMPORARY CONSTRUCTION STAGING AREAS MAY BE HYDROSEEDED WITH TACKIFIER.
17. MAINTAIN EXISTING PAVED AREAS FOR CONSTRUCTION STAGING FOR AS LONG AS POSSIBLE.
18. SILT FENCE AND OTHER SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH CONTRACT DRAWINGS AND MANUFACTURER'S RECOMMENDATIONS PRIOR TO WORK IN ANY UPLAND AREAS.
19. EXCAVATED MATERIAL FROM TEMPORARY SILT TRAPS MUST BE STOCKPILED ON UPHILL SIDE OF SILT FENCE.
20. INSTALL SILT FENCE ACCORDING TO MANUFACTURER'S INSTRUCTION, PARTICULARLY, BURY LOWER EDGE OF FABRIC INTO GROUND. SILT FENCE SHALL BE TENCATE ENVIROFENCE, PROPEX GEOTEX OR EQUIVALENT APPROVED BY THE CIVIL ENGINEER. FILTER FABRIC USED SHALL BE TENCATE 140N OR 170N, OR APPROVED EQUIVALENT. SEE SPECIFICATIONS FOR FURTHER INFORMATION.
21. WHERE INDICATED ON SEDIMENT AND EROSION CONTROL PLANS USE NEW HAY/STRAW BALES AND REPLACE THEM WHENEVER THEIR CONDITION DETERIORATES BEYOND REASONABLE USABILITY. STAKE BALES SECURELY INTO GROUND AND BUTT TIGHTLY TOGETHER TO PREVENT UNDERCUTTING AND BYPASSING.
22. INSTALL ANY TEMPORARY DIVERSION DITCHES, PLUNGE POOLS, SEDIMENT BASINS, SEDIMENT TRAPS, CONCRETE WASH PITS AND DEWATERING PITS AS SHOWN AND AS NECESSARY DURING VARIOUS PHASES OF CONSTRUCTION TO CONTROL RUNOFF UNTIL UPHILL AREAS ARE DETERMINED TO BE STABILIZED BY THE AUTHORITY HAVING JURISDICTION. LOCATION OF TEMPORARY SEDIMENT BASINS WILL REQUIRE REVIEW AND APPROVAL BY THE CIVIL ENGINEER AND AUTHORITY HAVING JURISDICTION.
23. DIRECT ALL DEWATERING PUMP DISCHARGE TO A SEDIMENT CONTROL DEVICE SUCH AS TEMPORARY PITS, SEDIMENT TRAP, SEDIMENT BASINS OR GRASS FILTERS WITHIN THE APPROVED LIMIT OF DISTURBANCE. DISCHARGE TO STORM DRAINAGE SYSTEM OR SURFACE WATERS FROM SEDIMENT CONTROLS SHALL BE CLEAR.
24. BLOCK THE OPEN UPSTREAM ENDS OF DETENTION BASIN/SEDIMENTATION BASIN OUTLET CONTROL ORIFICE UNTIL SITE IS STABILIZED. BLOCK END OF STORM SEWERS IN EXPOSED TRENCHES WITH BOARDS AND SANDBAGS AT THE END OF EACH WORKING DAY WHEN RAIN IS EXPECTED.
25. SWEEP AFFECTED PORTIONS OF OFF SITE ROADS ONE OR MORE TIMES A DAY (OR LESS FREQUENTLY IF TRACKING IS NOT A PROBLEM) DURING CONSTRUCTION. OTHER DUST CONTROL MEASURES TO BE USED AS NECESSARY INCLUDE WATERING DOWN DISTURBED AREAS, USING CALCIUM CHLORIDE, AND COVERING LOADS ON DUMP TRUCKS.
26. PERIODICALLY CHECK ACCUMULATED SEDIMENT LEVELS IN ANY SEDIMENT BASINS AND SEDIMENT TRAPS DURING CONSTRUCTION AND CLEAN ACCUMULATED SILT WHEN NECESSARY OR WHEN ONE FOOT OF SEDIMENT HAS ACCUMULATED OR PER SPECIFIC CLEANOUT MARKER ELEVATION. CLEAN ACCUMULATED SEDIMENT FROM CATCH BASIN SUMPS AS NECESSARY AND AS DIRECTED BY THE CIVIL ENGINEER OR OWNER'S CONSTRUCTION REPRESENTATIVE. REMOVE ACCUMULATED SEDIMENT FROM BEHIND HAY/STRAW BALES AND SILT FENCE WHEN LEVEL REACHES HALF THE HEIGHT OF THE BALE OR ONE FOOT AT SILT FENCE. DISPOSE OF SEDIMENT LEGALLY EITHER ON OR OFF SITE.
27. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
28. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG OR EQUIVALENT SEDIMENT REMOVAL FACILITY, OVER UNDISTURBED VEGETATED AREAS.
29. ALL EXCAVATED MATERIAL SHALL BE PLACED ON THE HIGH SIDE OF UTILITY AND STORM PIPE TRENCHES SO AS TO ALLOW THE TRENCH TO INTERCEPT ALL SILT LADEN RUNOFF.
30. CONTRACTOR SHALL ONLY EXCAVATE AS MUCH UTILITY AND STORM PIPE TRENCH WORK AS CAN BE COMPLETED, BACKFILLED AND STABILIZED IN ONE DAY SO AS TO LIMIT THE AMOUNT OF OPEN, DISTURBED TRENCHING.
31. ANY STOCKPILES OF STRIPPED MATERIALS ARE TO BE PERIODICALLY SPRAYED WITH WATER OR A CRUSTING AGENT TO STABILIZE POTENTIALLY WIND–BLOWN MATERIAL. HAUL ROADS BOTH INTO AND AROUND THE SITE ARE TO BE SPRAYED AS NEEDED TO SUPPRESS DUST. TRUCKS HAULING IMPORT FILL MATERIAL ARE TO BE TARPED TO AID IN THE CONTROL OF AIRBORNE DUST. DURING HIGH WIND EVENTS (20 TO 30 MPH SUSTAINED) CONSTRUCTION ACTIVITY SHALL BE LIMITED OR CEASED IF DUST CANNOT BE CONTROLLED BY WETTING.
32. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM OF 70% UNIFORM PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON–VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING OR OTHER MOVEMENTS UNLESS OTHERWISE DETERMINED BY THE AUTHORITY HAVING JURISDICTION.
33. MAINTAIN ALL PERMANENT AND TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD. UPON COMPLETION OF WORK SWEEP PARKING LOT AND REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROLS WHEN AUTHORIZED BY AUTHORITY HAVING JURISDICTION. FILE NOT (NOTICE OF TERMINATION) WITH AUTHORITY HAVING JURISDICTION RESPONSIBLE FOR REGULATING STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES PER NPDES.

STATE SPECIAL CONCERN SPECIES

1. CONTRACTOR IS RESPONSIBLE FOR HIRING A QUALIFIED HERPETOLOGIST TO WORK WITH CONSTRUCTION CREW TO ENSURE THAT TURTLES WILL NOT BE UNINTENTIONALLY KILLED DURING THE MOVING OF HEAVY EQUIPMENT, ESPECIALLY IN THE MONTH OF JUNE.
2. THE LIMIT OF DISTURBANCE SHALL BE FENCED WITH EXCLUSIONARY FENCING THAT IS SECURED AND IN CONTACT WITH THE GROUND AND AT LEAST 20INCHES HIGH. THE FENCE SHALL BE MAINTAINED BI–WEEKLY AND AFTER MAJOR WEATHER EVENTS. DO NOT USE PLASTIC NETTED OR NETTED SILT FENCE.
3. ALL STAGING AND STORAGE AREAS, OUTSIDE OF PREVIOUSLY PAVED LOCATIONS, REGARDLESS OF THE DURATION OF TIME THEY WILL BE UTILIZED, MUST BE REVIEWED TO REMOVE INDIVIDUALS AND EXCLUDE THEM FROM RE–ENTRY.
4. ALL CONSTRUCTION PERSONNEL WORKING WITHIN THE TURTLE HABITAT MUST BE APPRISED OF THE SPECIES DESCRIPTION AND THE POSSIBLE PRESENCE OF A LISTED SPECIES, AND INSTRUCTED TO RELOCATE TURTLES FOUND INSIDE WORK AREAS OR NOTIFY THE APPROPRIATE AUTHORITIES TO RELOCATE INDIVIDUALS.
5. ANY TURTLES ENCOUNTERED WITHIN THE IMMEDIATE WORK AREA SHALL BE CAREFULLY MOVED TO AN ADJACENT AREA OUTSIDE OF THE EXCLUDED AREA AND FENCING SHOULD BE INSPECTED TO IDENTIFY AND REMOVE ACCESS POINT.
6. IN AREAS WHERE SILT FENCE IS USED FOR EXCLUSION, IT SHALL BE REMOVED AS SOON AS THE AREA IS STABLE TO ALLOW FOR REPTILE AND AMPHIBIAN PASSAGE TO RESUME.
7. NO HEAVY MACHINERY OR VEHICLES MAY BE PARKED IN ANY TURTLE HABITAT.
8. SPECIAL PRECAUTIONS MUST BE TAKEN TO AVOID DEGRADATION OF WETLAND HABITATS INCLUDING ANY WET MEADOWS AND SEASONAL POOLS.
9. THE CONTRACTOR AND CONSULTING HERPETOLOGIST MUST SEARCH THE WORK AREA EACH MORNING PRIOR TO ANY WORK BEING DONE.
10. WHEN FELLING TREES ADJACENT TO BROOKS AND STREAMS PLEASE CUT THEM TO FALL AWAY FROM THE WATERWAY AND DO NOT DRAG TREES ACROSS THE WATERWAY OR REMOVE STUMPS FROM BANKS.
11. AVOID AND LIMIT ANY EQUIPMENT USE WITHIN 50 FEET OF STREAMS AND BROOKS.
12. ANY CONFIRMED TURTLE SIGHTINGS SHOULD BE REPORTED TO THE NATURAL DIVERSITY DATA BASE AT (nddbrequestdep@ct.gov) USING REPORTING FORMS FOUND ON THE NDDB WEBPAGE

BOLTON PLANNING AND ZONING COMMISSION, BOLTON, CT

DATE APPROVED ____________ DATE OF EXPIRATION ____________

______________________________ CHAIRMAN

THE STATUTORY FIVE-YEAR PERIOD FOR COMPLETION OF ALL PHYSICAL IMPROVEMENTS EXPIRES ON __________

FOR PERMITTING PURPOSES ONLY
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Architecture
Engineering
Environmental
Land Surveying

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100 Constitution Plaza
10th Floor
Hartford, CT 06103
(860) 249-2200
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PROPOSED RETAIL DEVELOPMENT
1100 BOSTON TURNPIKE
BOLTON, CONNECTICUT

REVISIONS

No.	Date	Desc.
1.	05/05/2021	REVISED PER TOWN COMMENTS

Designed	S.E.L.
Drawn	S.E.L.
Reviewed	K.M.M.
Scale	NONE
Project No.	2002032
Date	04/02/2021
CAD File:	EC200203201

Title
SEDIMENT AND EROSION CONTROL NOTES

Sheet No.
EC-2

Xref (s): : BD200203201 : XY200203201 : XC200203201 : XC200203205 : XC200203202 : XC200203204

5/4/2021, CLHEUREUX, G:\JOBS20\20\2002032\DWG\EC200203201.DWG,EC-2 24X36.

LANDSCAPE ZONING INFORMATION

LOCATION: BOLTON, TOLLAND COUNTY, CONNECTICUT				
ZONE: RURAL MIXED USE ZONE (RMUZ)				
USE: RETAIL (PERMITTED BY SPECIAL PERMIT)				
ITEM #	ITEM	REQUIREMENTS	PROPOSED	VARIANCE
1	LANDSCAPE AREA (SEC.11.J)	NO LESS THAN 30% OF AN RMUZ ZONE SHALL BE LANDSCAPED. SIDEWALKS ARE EXCLUDED FROM LANDSCAPE AREA	GREATER THAN 30% LANDSCAPED	NO
2	LANDSCAPE PARKING (SEC.15.H)	INTERIOR LANDSCAPING SHALL BE PROVIDED AT A RATE OF 20 SF PER PARKING SPACE. LANDSCAPING SHALL BE WITHIN RAISED, CURBED ISLANDS. (20 SF X 33 SPACES = 660 SF)	730 SF PROPOSED	NO
3	LANDSCAPE PARKING (SEC.15.H)	PARKING AREAS ABUTTING A RESIDENTIAL ZONE SHALL BE SCREENED BY A 10' WIDTH EVERGREEN ROW. PLANTS TO BE 4' HT AND 4' O.C. AT TIME OF PLANTING.	COMPLIES	NO
4	LANDSCAPE REQUIREMENTS (SEC.16A.3.q.3)	INTERIOR LANDSCAPE AREAS SHALL BE 100 SF MIN AND 8' WIDTH MIN.	COMPLIES	NO
5	LANDSCAPE REQUIREMENTS (SEC.16A.3.q.3)	INTERIOR AREAS SHALL HAVE 1 TREE PER 20 PARKING SPACES	COMPLIES	NO
6	LANDSCAPE REQUIREMENTS (SEC.16A.3.q.3)	PARKING PERIMETER LANDSCAPE AREA SHALL BE 5' WIDTH MIN. WITH 1 TREE PER 50 LF	COMPLIES	NO
7	LANDSCAPE REQUIREMENTS (SEC.16A.3.q.3)	TREES TO BE 3" CAL. AND 10' HT. MIN. AT TIME OF PLANTING	COMPLIES	NO
8	STREET PLANTINGS (SEC.16A.3.q.4)	LANDSCAPE ADJACENT TO STREET TO BE 30' WIDTH WITH 1 TREE PER 40' LOT LINE FRONTAGE (260 LF FRONTAGE ÷ 40 = 6.5 TREES)	5 TREES PROPOSED, 2 TREES TO REMAIN	NO
9	LANDSCAPE DESIGN (SEC.16A.3.x.3.g.10)	FOR EVERY 5 PARKING SPACES, 1 TREE SHALL BE PROVIDED (33 PARKING SPACES ÷ 5 = 6.6 TREES)	GREATER THAN 7 TREES PROVIDED	NO
10	LANDSCAPE DESIGN GUIDELINES (CH.8.1.3)	PLANT MATERIAL TO BE INDIGENOUS TO THE AREA, OR IF NOT NATIVE, THAN HARDY AND NON-INVASIVE	COMPLIES	NO
11	LANDSCAPE DESIGN GUIDELINES (CH.8.1.20&21)	ALL PLANTINGS SHALL BE GUARANTEED FOR 2 YEARS MINIMUM. A COPY OF THE GUARANTEE CONTRACT SHALL BE SUBMITTED TO THE TOWN.	SEE LANDSCAPE NOTE #4 ON SHEET LL-2	NO
12	LANDSCAPE DESIGN GUIDELINES (CH.8.1.22)	FLOWERING TREES TO BE 2"-2.5" CAL./DECIDUOUS TREES 3"-3.5" CAL./EVERGREEN TREES TO BE 5'-7' HT. MIN/DECIDUOUS SHRUBS 24" HT./EVERGREEN SHRUBS 18" HT./PERENNIALS 1 GAL. CONT.	COMPLIES	NO

LANDSCAPE PLANT SCHEDULE

KEY	QTY	BOTANICAL NAME	COMMON NAME	ROOT	SIZE AT INSTALL	SIZE AT MATURITY	COMMENTS
TREES							
AR	3	Acer rubrum 'Franksred'	RED SUNSET RED MAPLE	B&B	3" CAL. MIN.	45' x 35'	7' BRANCH HT. MIN.
AS	3	Acer saccharum	SUGAR MAPLE	B&B	3" CAL. MIN.	45' x 40'	7' BRANCH HT. MIN.
BN	3	Betula nigra 'Cully'	HERITAGE RIVER BIRCH	B&B	10' HT. MIN.	40' x 30'	MULTI-STEM
CO	4	Celtis occidentalis 'Prairie Pride'	PRAIRIE PRIDE HACKBERRY	B&B	3" CAL. MIN.	45' x 35'	7' BRANCH HT. MIN.
PG	3	Picea glauca	WHITE SPRUCE	B&B	6' HT. MIN.	50' x 15'	FULL BRANCHING TO GROUND
PS	8	Pinus strobus	EASTERN WHITE PINE	B&B	6' HT. MIN.	60' x 30'	FULL BRANCHING TO GROUND
PA	4	Platanus x acerifolia 'Morton's Circle'	EXCLAMATION! PLANETREE	B&B	3" CAL. MIN.	55' x 35'	7' BRANCH HT. MIN.
QR	3	Quercus rubra	RED OAK	B&B	3" CAL. MIN.	50' x 45'	7' BRANCH HT. MIN.
QP	3	Quercus palustris	PIN OAK	B&B	3" CAL. MIN.	55' x 40'	7' BRANCH HT. MIN.
TG	20	Thuja 'Green Giant'	GREEN GIANT ARBORVITAE	B&B	6' HT. MIN.	50' x 15'	FULL BRANCHING TO GROUND
SHRUBS							
CS	7	Cornus sericea 'Arctic Fire'	ARCTIC FIRE REDTWIG DOGWOOD	CONT.	24" HT. MIN.	3.5' x 3.5'	PLANT 4' O.C.
IG	17	Ilex glabra	INKBERRY	CONT.	4' HT. MIN.	7' x 6'	PLANT 4' O.C.
IGC	27	Ilex glabra 'Compacta'	COMPACT INKBERRY	CONT.	24" HT. MIN.	4' x 5'	PLANT 4' O.C.
MP	7	Myrica pensylvanica	BAYBERRY	CONT.	30" HT. MIN.	8' x 8'	PLANT 5' O.C.
RC	8	Rhododendron 'Cunningham's White'	CUNNINGHAM'S WHITE RHODODENDRON	CONT.	24" HT. MIN.	3' x 4'	PLANT 4' O.C.
RH	6	Rhododendron 'Lavender Princess'	LAVENDER PRINCESS RHODODENDRON	CONT.	24" HT. MIN.	4' x 5'	PLANT 4' O.C.
ORNAMENTAL GRASSES							
PV	24	Panicum virgatum 'Shenandoah'	SHENANDOAH SWITCHGRASS	CONT.	24" HT. MIN.	4' x 2'	PLANT 30" O.C.
SH	27	Sporobolus heterolepis	PRARIE DROPSEED	CONT.	12" HT. MIN.	2.5' x 2.5'	PLANT 30" O.C.
PERENNIALS AND GROUNDCOVERS							
AM	15	Aronia melanocarpa 'UCONNAM165'	LOW SCAPE MOUND CHOKEBERRY	CONT.	12" HT. MIN.	2' x 3'	PLANT 30" O.C.
CV	10	Coreopsis verticillata 'Grandiflora'	GRANDIFLORA COREOPSIS	CONT.	8" HT. MIN./ 1 GAL. CONT.	2.5' x 2.5'	PLANT 30" O.C.
RF	16	Rudbeckia fulgida 'Goldstrum'	BLACK-EYED SUSAN	CONT.	8" HT. MIN./ 1 GAL. CONT.	2.5' x 2.5'	PLANT 30" O.C.

NOTES:

1) ALL SUBSTITUTIONS MUST RECEIVE APPROVAL FROM THE LANDSCAPE ARCHITECT PRIOR TO DELIVERY TO SITE.

2) PROVIDE AND INSTALL ALL PLANTS SHOWN ON THE PLANTING PLAN DRAWINGS; THE QUANTITIES IN THE PLANT LIST ARE PROVIDED FOR THE CONTRACTOR'S CONVENIENCE ONLY. IF DISCREPANCIES OCCUR, THE LARGER QUANTITY SHALL APPLY.

3) IF THERE IS A DISCREPANCY BETWEEN BOTANICAL AND COMMON NAME, BOTANICAL NAME PREVAILS.

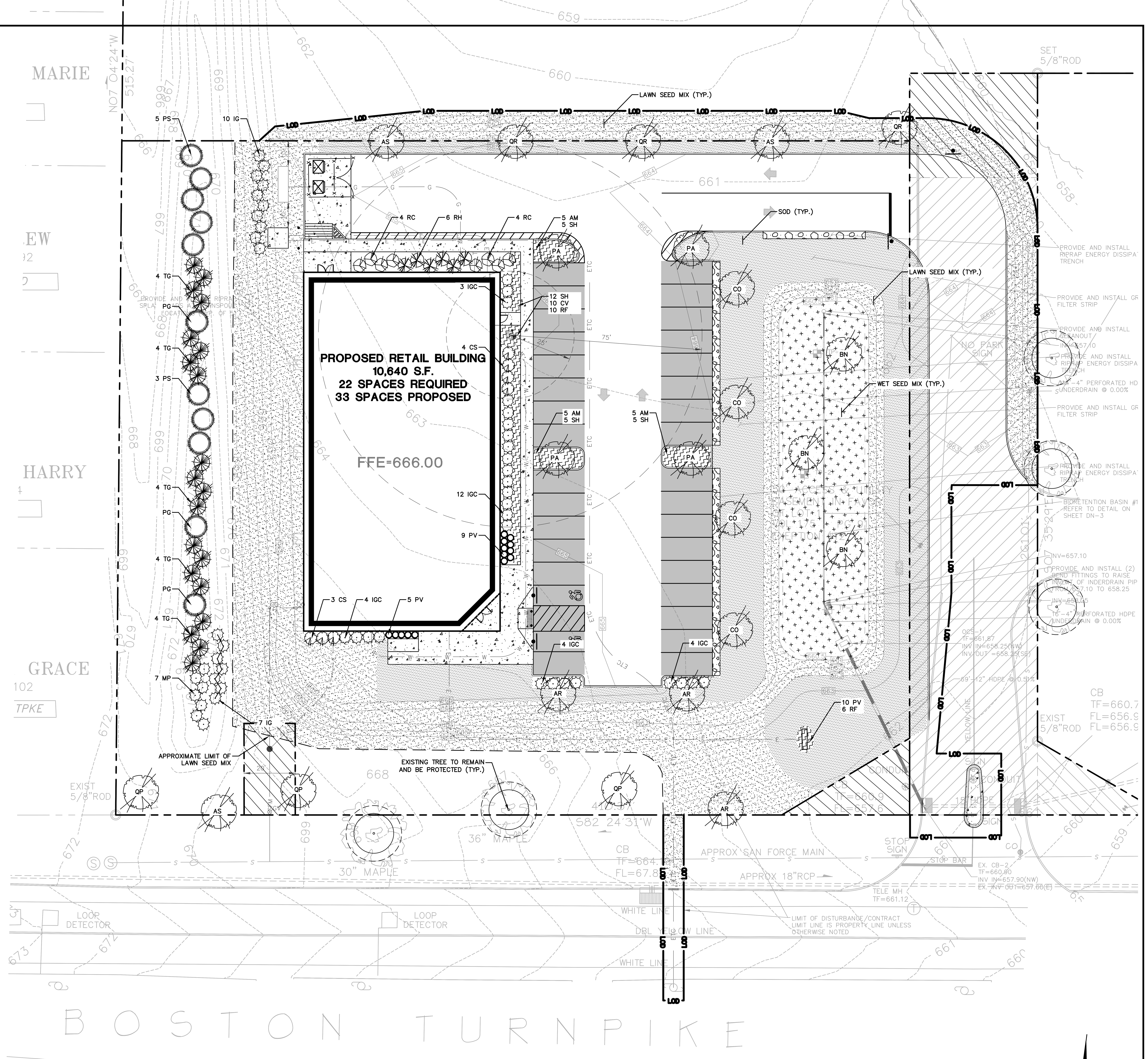
SEE SHEET LL-2 FOR LANDSCAPE NOTES AND DETAILS

BOLTON PLANNING AND ZONING COMMISSION, BOLTON, CT

DATE APPROVED ____ DATE OF EXPIRATION ____

____ CHAIRMAN

THE STATUTORY FIVE-YEAR PERIOD FOR COMPLETION OF ALL PHYSICAL IMPROVEMENTS EXPIRES ON ____



LEGEND

PATTERN	DESCRIPTION	PATTERN	DESCRIPTION	PATTERN	DESCRIPTION
	SOD (REFER TO SEED MIXES ON SHEET LL-2)		PERENNIALS/GROUNDCOVERS (REFER TO PLANT SCHEDULE THIS PAGE)		EXISTING TREE TO REMAIN AND BE PROTECTED
	LAWN SEED MIX (REFER TO SEED MIXES ON SHEET LL-2)		WET SEED MIX (REFER TO SEED MIXES ON SHEET LL-2)		APPROXIMATE LIMIT OF LAWN SEED MIX WITHIN PROPERTY INTERIOR

FOR PERMITTING PURPOSES ONLY
NOT RELEASED FOR CONSTRUCTION

GRAPHIC SCALE 20 10 0 20 SCALE IN FEET

Architecture Engineering Environmental Land Surveying
BL Companies
100 Constitution Plaza
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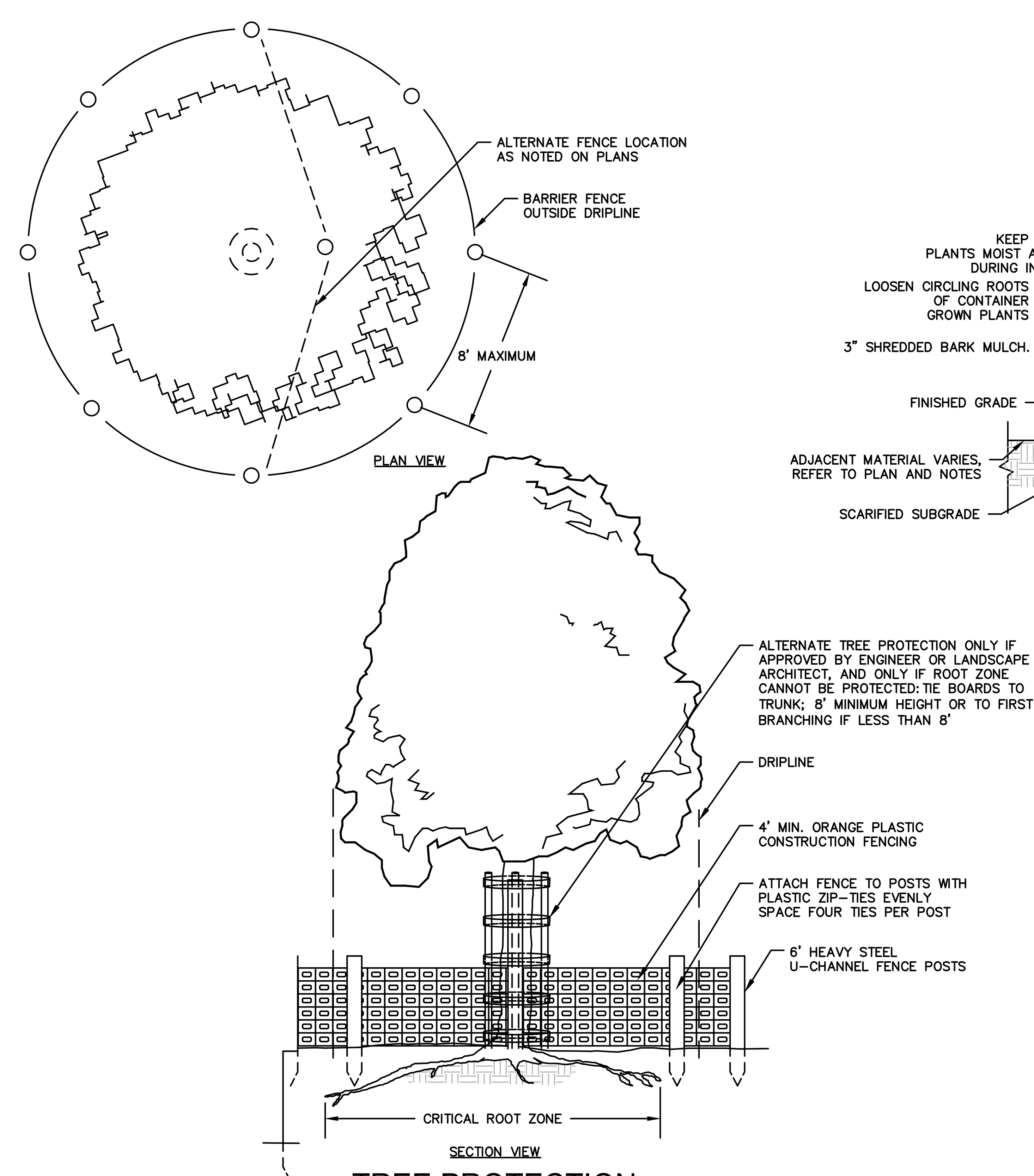
PROPOSED RETAIL DEVELOPMENT
1100 BOSTON TURNPIKE
BOLTON, CONNECTICUT

REVISIONS
No. 1 Date 03/05/2021 Desc. REVISED PER TOWN COMMENTS

Designed	L.M.W.
Drawn	L.M.W.
Reviewed	W.E.V.
Scale	1"=20'
Project No.	2002032
Date	04/02/2021
CAD File:	LL200203201

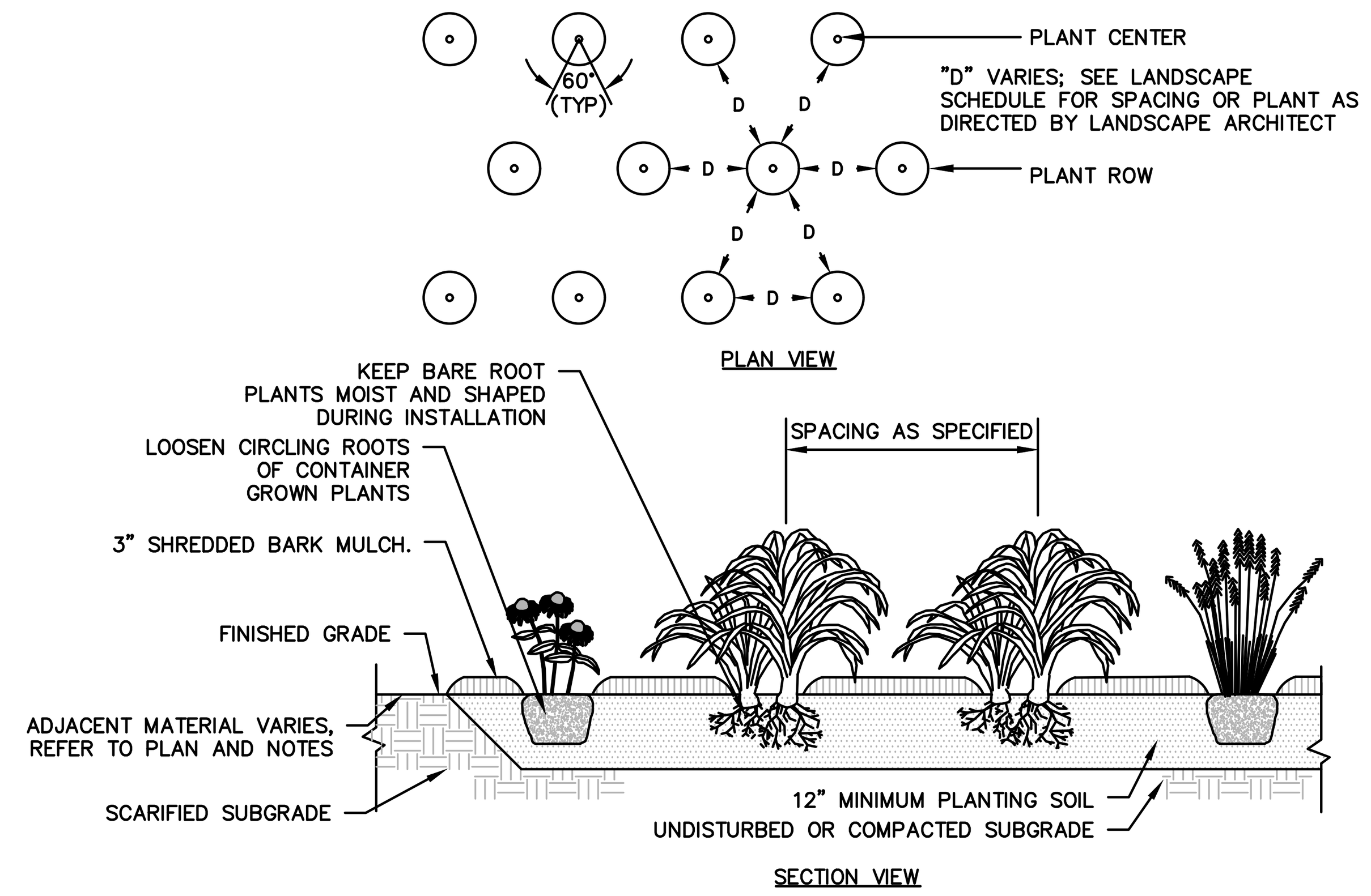
Title
LANDSCAPE PLAN

Sheet No.
LL-1



TREE PROTECTION

N.T.S



GROUNDCOVER PLANTING

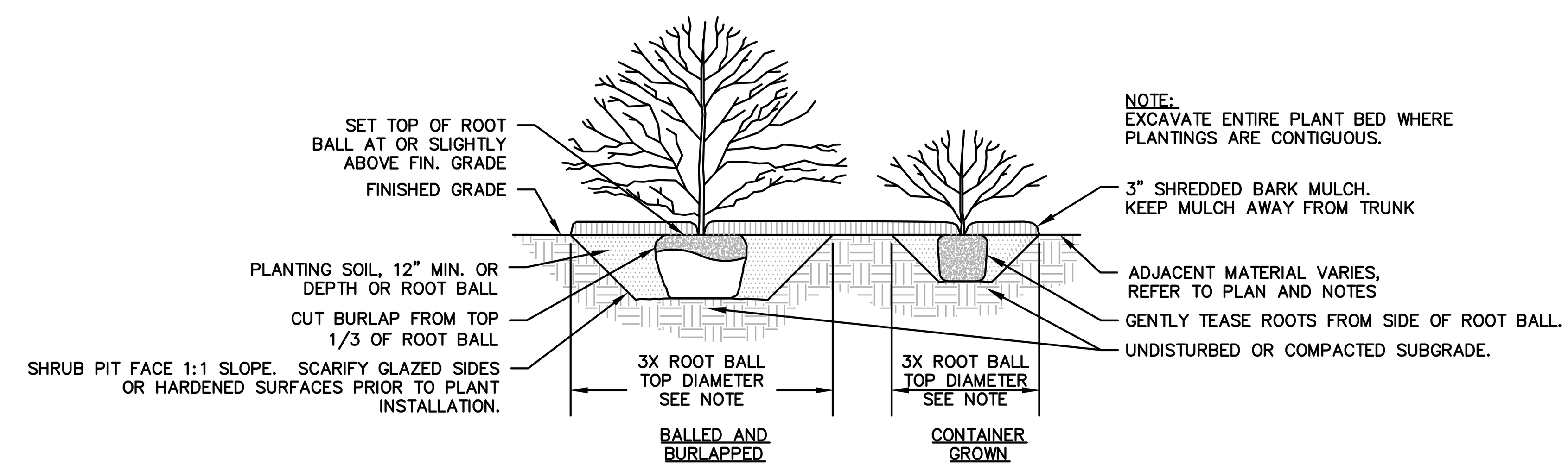
N.T.S

SEED MIX NOTES

A. LAWN SEEDING MIX:
- 15 % PERENNIAL RYEGRASS (BLEND OF 3 IMPROVED HYBRIDS)
- 25 % FINE LEAF OR CREEPING FESCUE (BLEND OF 3 IMPROVED HYBRIDS)
- 60 % KENTUCKY BLUEGRASS (BLEND OF 3 IMPROVED HYBRIDS)
- SEEDING RATE: 5 LBS/1,000 S.F.
- SEEDING DATES: AUGUST 15 – OCTOBER 1 AND APRIL 15 – JUNE 30 UNLESS OTHERWISE APPROVED BY THE OWNER OR LANDSCAPE ARCHITECT.

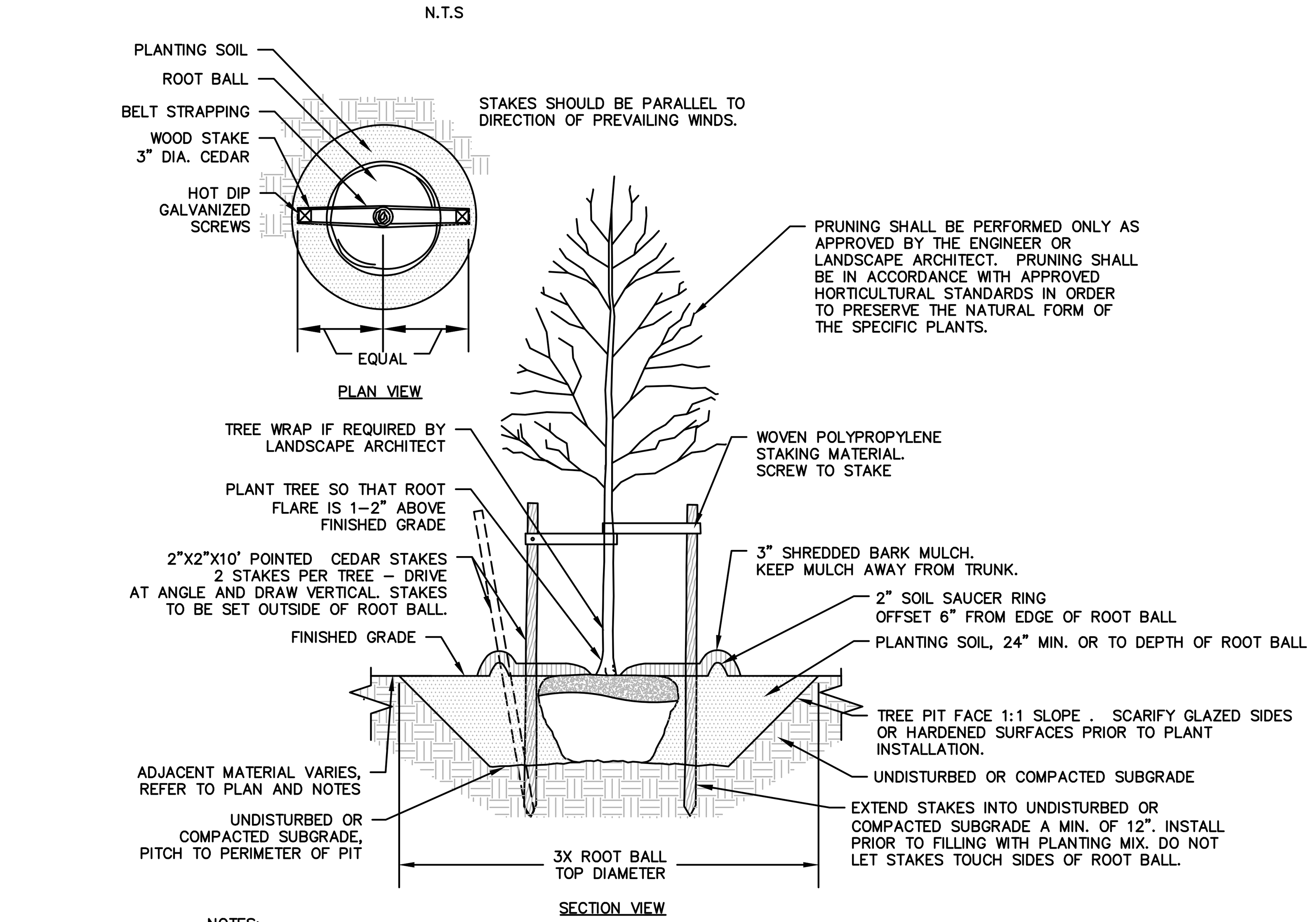
B. SOD – TUCKAHOE FESCUE TURF BY TUCKAHOE FARMS OR APPROVED EQUAL
- 45% REBEL EXEDA TURF TYPE TALL FESCUE, 45% REBEL SENTRY TURF TYPE FALL FESCUE, 10% TUCKAHOE TURF BLUEGREASS BLEND
- FERTILIZATION: PER SOIL TEST AND SOD MANUFACTURERS RECOMMENDATIONS

C. WETLAND SEED MIX –
- NEW ENGLAND WETMIX (WETLAND SEED MIX)
- NEW ENGLAND WETLAND PLANTS INC. OR APPROVED EQUAL
- SPECIES: FOX SEDGE (CAREX VULPINOIDEA), LURID SEDGE (CAREX LURIDA), BLUNT BROOM SEDGE (CAREX SCOPARIA), BLUE VERVAIN (VERBENA HASTATA), FOWL BLUEGRASS (POA PALUSTRUS), HOP SEDGE (CAREX LUPULINA), GREEN BULRUSH (SCIRPUS ATROVIRENS), CREEPING SPIKE RUSH (ELEOCHARIS PALUSTRIS), FRINGED SEDGE (CAREX CRINITA), SOFT RUSH (JUNCUS EFFUSUS), SPOTTED JOE PYE WEED (EUPATORIUM MACULATUM), RATTLESNAKE GRASS (GLYCERIA CANADENSIS), SWAMP ASTER (ASTER PUNICEUS), BLUEFLAG (IRIS VERSICOLOR), SWAMP MILKWEED (ASCLEPIAS INCARNATA), MONKEY FLOWER (MIMULUS RINGENS).
- APPLICATION RATE: 20 LBS/ACRE AT STORMWATER PONDS
- SEEDING DATES: AUGUST 15 – OCTOBER 1 AND APRIL 15 – JUNE 30 UNLESS OTHERWISE APPROVED BY THE OWNER OR LANDSCAPE ARCHITECT.



SHRUB PLANTING

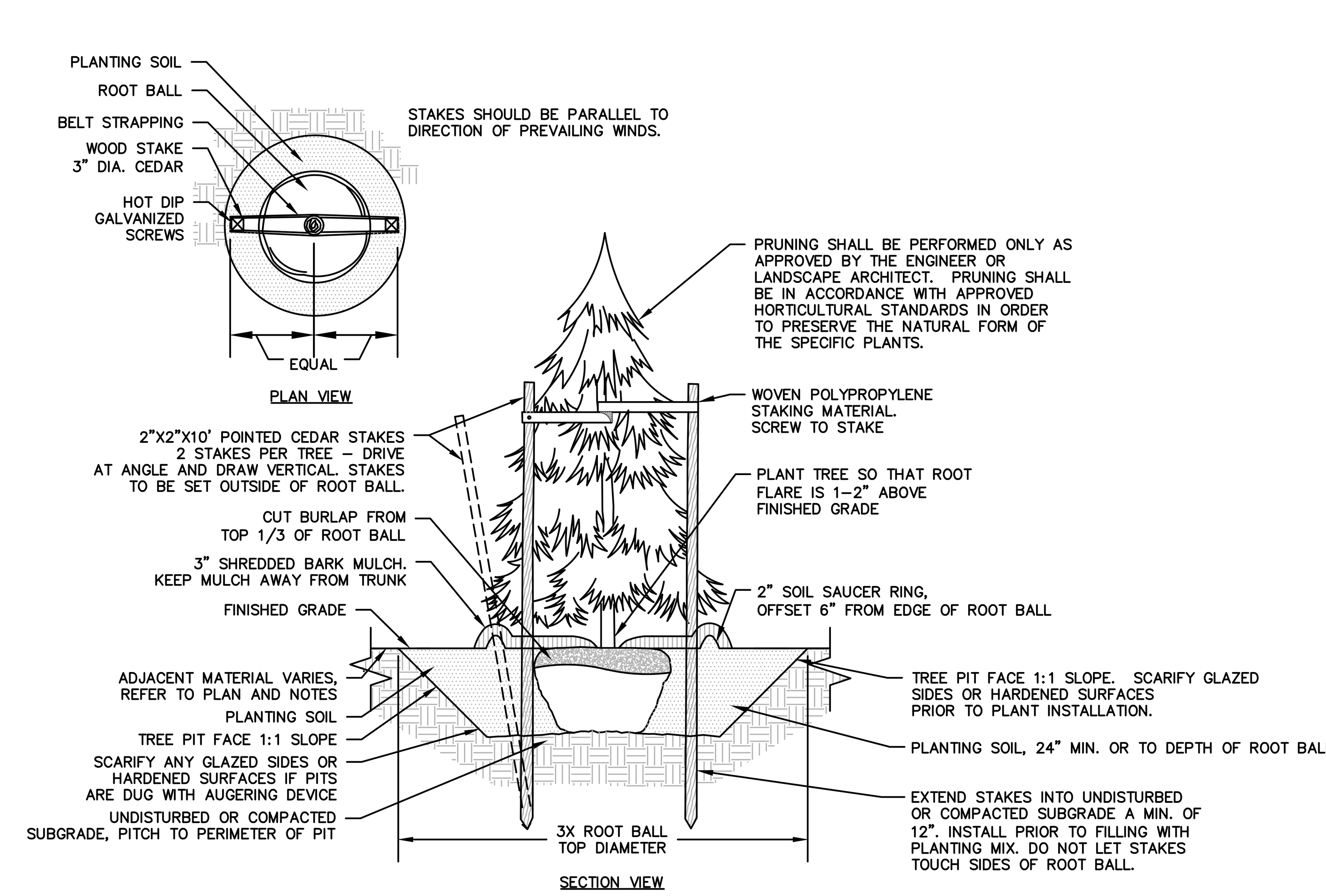
N.T.S



NOTES:
1. STAKING FOR TREES ON SLOPES SHALLOWER THAN 4:1 OR LESS THAN 3" CALIPER TO BE PERFORMED AT CONTRACTORS DISCRETION.
2. WOVEN POLYPROPYLENE STAKING MATERIAL SHALL BE DEEPROOT ARBORTIE (GREEN) OR APPROVED EQUIVALENT. MATERIAL SHALL BE LOOPED AROUND TREE THROUGH EACH OTHER, TWISTED, AND SECURED TO THE STAKE. INSTALL SPECIFIED MATERIAL IN ACCORDANCE WITH MANUFACTURER'S DIRECTIONS.
3. BEFORE IN HOLE, REMOVE BOTTOM OF CAGE. ONCE IN HOLE, REMOVE REST OF CAGE FROM ROOT BALL. REMOVE TWINE AND BURLAP FROM TOP 1/3 OF ROOT BALL – SCORE REMAINING 2/3 OF BURLAP. IF BURLAP IS SYNTHETIC OR HAS BEEN TREATED WITH ANTI-DESSICANT, COMPLETELY REMOVE IT FROM ROOT BALL.

DECIDUOUS TREE PLANTING

N.T.S



NOTES:
1. STAKING FOR TREES ON 4:1 SLOPES OR LESS TO BE PERFORMED AT CONTRACTOR'S DISCRETION.
2. WOVEN POLYPROPYLENE STAKING MATERIAL SHALL BE DEEPROOT ARBORTIE (GREEN) OR APPROVED EQUIVALENT. MATERIAL SHALL BE LOOPED AROUND TREE THROUGH EACH OTHER, TWISTED, AND SECURED TO THE STAKE. INSTALL SPECIFIED MATERIAL IN ACCORDANCE WITH MANUFACTURER'S DIRECTIONS.
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EVERGREEN TREE PLANTING

N.T.S

LANDSCAPE NOTES

1. THE LANDSCAPE PLAN AND DETAIL SHEET ARE FOR LANDSCAPING INFORMATION ONLY. REFER TO THE OTHER PLANS FOR ALL OTHER INFORMATION.

2. COORDINATE PLANT MATERIAL LOCATIONS WITH SITE UTILITIES. UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. EXERCISE CARE WHEN DIGGING IN AREAS OF POTENTIAL CONFLICT WITH UNDERGROUND OR OVERHEAD UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE DUE TO CONTRACTOR'S NEGLIGENCE AND SHALL REPLACE OR REPAIR ANY DAMAGE AT CONTRACTOR'S EXPENSE. PRIOR TO DIGGING AND INSTALLATION OF PLANT MATERIAL, THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" 72 HOURS BEFORE COMMENCEMENT OF WORK AT "(800) 922-4455" AND VERIFY ALL UTILITY SYSTEM LOCATIONS.

3. THE LOCATIONS FOR PLANT MATERIAL ARE APPROXIMATE AND ARE SUBJECT TO FIELD ADJUSTMENT DUE TO UTILITY LOCATIONS AND SITE CONDITIONS. THE CONTRACTOR SHALL ACCURATELY STAKE OUT THE LOCATIONS FOR ALL PLANTS FOR THE REVIEW, ADJUSTMENT, AND APPROVAL BY OWNER OR LANDSCAPE ARCHITECT PRIOR TO PLANTING.

4. THE CONTRACTOR SHALL GUARANTEE THAT ALL PLANTS SHALL BE HEALTHY AND FREE OF DISEASE FOR A PERIOD OF TWO YEARS AFTER SUBSTANTIAL COMPLETION AND ACCEPTANCE BY OWNER OR LANDSCAPE ARCHITECT. CONTRACTOR SHALL REPLACE ANY DEAD OR UNHEALTHY PLANTS AT CONTRACTOR'S EXPENSE. PLANT MATERIAL REPLACEMENTS SHALL BE GUARANTEED FOR TWO FULL YEARS FROM DATE OF REPLACEMENT. REPLACEMENT PLANTS SHALL BE THE SAME AS SPECIFIED FOR THE ORIGINAL PLANTING. REPLACEMENTS SHALL BE MADE AS MANY TIMES AS NECESSARY TO ENSURE HEALTHY PLANTS. FINAL ACCEPTANCE SHALL BE MADE IF ALL PLANTS MEET THE GUARANTEE REQUIREMENTS INCLUDING MAINTENANCE. MAINTENANCE RESPONSIBILITIES INCLUDE CULTIVATING, SPRAYING, WEEDING, WATERING, TIGHTENING GUYS, PRUNING, FERTILIZING, MULCHING, AND ANY OTHER OPERATIONS NECESSARY TO MAINTAIN PLANT VIABILITY. MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER PLANTING AND CONTINUE UNTIL THE END OF THE GUARANTEE PERIOD. DURING THE LANDSCAPE MAINTENANCE PERIOD (GUARANTEE) THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING OF ANY SITE CONSTRAINTS (PHYSICAL, ENVIRONMENT, ETC.) OR MAINTENANCE DEFICIENCIES THAT MAY AFFECT LANDSCAPE VEGETATION ESTABLISHMENT.

5. THE CONTRACTOR SHALL SUPPLY ALL LABOR, PLANTS, AND MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE THE WORK SHOWN ON THE DRAWINGS AND LISTED IN THE PLANT SCHEDULE. IN THE EVENT OF A DISCREPANCY BETWEEN QUANTITIES SHOWN IN THE PLANT SCHEDULE AND THOSE REQUIRED BY THE DRAWINGS, THE LARGER SHALL APPLY. ALL PLANTS SHALL BE ACCLIMATED BY THE SUPPLY NURSERY TO THE LOCAL HARDINESS ZONE AND BE CERTIFIED THAT THE PLANTING MATERIAL HAS BEEN GROWN FOR A MINIMUM OF TWO YEARS AT THE SOURCE AND OBTAINED WITHIN 200 MILES OF PROJECT SITE UNLESS OTHERWISE APPROVED BY OWNER OR LANDSCAPE ARCHITECT.

6. PLANTS SHALL HAVE TAGS THAT IDENTIFY PLANT GENUS, SPECIES, CULTIVAR (IF APPLICABLE), PLANT COMMON NAME, NAME OF SOURCE NURSERY, AND SIZE OF PLANT FOR REVIEW OF OWNER OR LANDSCAPE ARCHITECT.

7. NO PLANT SHALL BE PLACED IN THE GROUND BEFORE ROUGH GRADING HAS BEEN COMPLETED AND APPROVED BY THE OWNER OR LANDSCAPE ARCHITECT. STAKING THE LOCATION OF ALL TREES AND SHRUBS SHALL BE COMPLETED PRIOR TO PLANTING FOR APPROVAL BY THE OWNER OR LANDSCAPE ARCHITECT.

8. FINAL GRADES SHALL BLEND SMOOTHLY WITH EXISTING GRADES, AND TOP AND BOTTOM OF SLOPES SHALL BE ROUNDED.

9. ALL TREE AND SHRUB MASSINGS SHALL BE MULCHED TO A DEPTH OF 3". ANNUAL AND PERENNIAL BEDS SHALL BE MULCHED TO A DEPTH OF 2". MULCH SHALL BE UNCOLORED TRIPLE-SHREDDED HARDWOOD BARK MULCH, AGED AT LEAST 6 MONTHS.

10. IF TREE STAKING IS PROPOSED, TREE STAKING MUST BE COMPLETED THE SAME DAY AS THE TREE IS INSTALLED. ALL TREES SHALL BE STAKED OR GUYED PER DETAIL.

11. LANDSCAPE PLANTING AREAS MUST BE FREE DRAINING. PAVEMENT, COMPACTED SUBGRADE, DEAD OR DYING PLANT MATERIAL, BLASTED ROCK, STONES GREATER THAN 1" IN DIAMETER, AND ANY OTHER MATERIAL HARMFUL TO PLANT GROWTH AND DEVELOPMENT SHALL BE REMOVED FROM AREAS TO BE LANDSCAPED AS REQUIRED BY PLANTING DETAILS OR SPECIFICATIONS.

12. PLANTING SOIL:

DEPTH: PLANTING SOIL SHALL BE INSTALLED AT A MINIMUM DEPTH OF 4" OR AS NOTED IN THE LANDSCAPE DETAILS. PLANTING SOIL SHALL BE UTILIZED IN ALL PLANTING AREAS INCLUDING SEEDED AREAS.

TESTING: CONTRACTOR SHALL SUBMIT (2) SOIL SAMPLES PER SOIL STOCKPILE TO A CERTIFIED TESTING LABORATORY TO DETERMINE ACIDITY, ORGANIC CONTENT, MECHANICAL ANALYSIS, AVAILABLE NUTRIENTS (N,P,K,Ca,Mg,S,Fe,Mn,Zn,Cu,B,Al,Pb) AND NECESSARY AMENDMENTS TO SOIL. THE CONTRACTOR SHALL SUBMIT THE TEST RESULTS TO THE OWNER OR LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL. TEST RESULTS SHALL RECOMMEND AMENDMENTS THAT WILL ALTER THE SOIL CHARACTERISTICS SUCH THAT THE CHARACTERISTICS DESCRIBED BELOW ARE ACHIEVED AND THE SPECIFIED PLANTS (CONTRACTOR TO PROVIDE LIST TO TESTING LABORATORY) WILL ACHIEVE PROPER GROWTH THAT IS NEITHER DEFICIENT NOR EXCESSIVE. THE CONTRACTOR SHALL INCORPORATE THESE AMENDMENTS AT NO INCREASE IN CONTRACT PRICE.

CHARACTERISTICS: PLANTING SOIL MAY CONSIST OF EXISTING ON-SITE SOILS, AMENDED ON-SITE SOILS, OR IMPORTED SOILS MEETING THE FOLLOWING CRITERIA:

A. NOT TO CONTAIN MATERIALS HARMFUL TO PLANT LIFE, TO BE CLEAN, FERTILE, FRIABLE, AND WELL DRAINING. ALL PLANTING SOIL SHALL BE FREE OF ANY SUBSOIL EARTH CLODS, SODS, STONES OVER 1" IN ANY DIMENSION, STICKS, ROOTS, WEEDS, LITTER AND OTHER DELETERIOUS MATERIAL. PLANTING SOIL SHALL BE UNIFORM IN QUALITY AND TEXTURE.
B. PLANTING SOIL SHALL HAVE THE FOLLOWING OPTIMUM RANGES UNLESS OTHERWISE APPROVED BY THE OWNER OR LANDSCAPE ARCHITECT.

ORGANIC CONTENT	3% – 6% FOR LAWN OR GRASS AREAS.
	4% – 8% FOR TREE AND SHRUB PLANTERS.
	8%–16% FOR RETENTION OR DETENTION BASINS.
(BY LOSS OF IGNITION AT 375 C METHOD OF TESTING)	
PH	6.0 – 7.3

C. NUTRIENT LEVELS SHALL BE ACHIEVED BY THE CONTRACTOR'S ADDITION OF AMENDMENTS TO THE PLANTING SOIL TO MEET THE OPTIMUM NUTRIENT LEVELS SPECIFIED IN THE TESTING LABORATORY REPORT FOR EACH OF PLANTS TO BE INSTALLED.
D. SOIL SHALL BE COMPACTED TO A SURFACE PENETRATION RESISTANCE OF 75-125 LBS/SQ.IN.
E. SOIL MAY BE TREATED FOR WEEDS WITH PRE-EMERGENT OR POST-EMERGENT HERBICIDE, AS NEEDED AND AS APPROPRIATE FOR THE APPLICATION SEASON OR LOCATION, OR ELIMINATE GROWTH OF UNWANTED PLANT MATERIAL. APPLY HERBICIDES IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. HERBICIDE APPLICATOR MUST BE LICENSED IN THE STATE OF CONNECTICUT, AND PERFORM APPLICATIONS IN ACCORDANCE WITH LOCAL REQUIREMENTS, PERMITTING STIPULATIONS, AND ANY OTHER RESTRICTIONS INCLUDING AND IN EXCESS OF STATE AND FEDERAL REGULATIONS.
F. PROPOSED TOPSOIL SHALL MEET THE USDA SOILS TEXTURAL PERCENTAGES OF SAND, SILT, AND CLAY FOR FOLLOWING CLASSIFICATIONS:
   - LOAM
   - SANDY LOAM WHERE SAND DOES NOT EXCEED 70% AND CLAY IS NOT LESS THAN 5%.
   - SANDY CLAY LOAM WHERE SAND DOES NOT EXCEED 70% AND CLAY IS LESS THAN 28%.
G. BIORETENTION SOILS: SOIL TO BE INSTALLED IN RETENTION BASINS, PONDS, OR OTHER STORMWATER MANAGEMENT ENVIRONS SHALL MEET THE ABOVE DESCRIBED CHARACTERISTICS AND AS FOLLOWS:
   - SOIL SHALL NOT CONTAIN MORE THAN 20% CLAY AND LESS THAN 40% SILT.
   - SOIL SHALL HAVE AN INFILTRATION RATE BETWEEN 1/2" AND 3" PER HOUR.
H. MODIFICATION TO THE PLANTING SOIL CHARACTERISTICS DESCRIBED ABOVE MAY BE SUBMITTED FOR APPROVAL BY THE LANDSCAPE ARCHITECT. CONTRACTOR MUST DEMONSTRATE PROPOSED CHARACTERISTICS ARE EQUAL TO OR SUPERIOR TO THE SPECIFIED CHARACTERISTICS WITH RESPECT TO SUPPORTING PLANT GROWTH, AND STORMWATER MANAGEMENT.

12. PLANTING AMENDMENTS:
APPLY FERTILIZER AND OTHER AMENDMENTS AS RECOMMENDED FOR EACH PLANTING AREA BY SOIL ANALYSIS. APPLY AMENDMENTS IN A MANNER CONSISTENT WITH MANUFACTURER'S RECOMMENDATIONS. ANY ORGANIC AMENDMENTS SHALL HAVE A pH BETWEEN 4.5 AND 5.5 UNLESS OTHERWISE RECOMMENDED.

13. PLANT REQUIREMENTS: ALL PLANTS SHALL CONFORM IN SIZE AND GRADE TO THE AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1 (LATEST EDITION). ALL PLANTS SHALL MEET THE ADDITIONAL REQUIREMENTS SET FORTH BELOW AND IN WRITTEN SPECIFICATIONS AS APPLICABLE. ALL TREES AND SHRUBS SHALL HAVE BEEN GROWN AT A COMMERCIAL NURSERY WITHIN 200 MILES OF THE PROJECT SITE UNLESS OTHERWISE APPROVED BY OWNER OR LANDSCAPE ARCHITECT. THEY SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY. THEY SHALL BE HEALTHY, SYMMETRICAL, EVENLY AND DENSELY BRANCHED, AND DENSELY FOLIATED WHEN IN LEAF. THEY SHALL BE FREE OF BARK INJURY, DISEASE, AND INSECT PESTS. ALL TREES SHALL HAVE A STRAIGHT TRUNK WITH A SINGLE MAIN LEADER UNLESS OTHERWISE CHARACTERISTIC OF THE SPECIES OR VARIETY. THE OWNER OR LANDSCAPE ARCHITECT WILL ALLOW SUBSTITUTIONS ONLY UPON WRITTEN APPROVAL. SIZES SHALL CONFORM TO THE MEASUREMENT SPECIFIED ON THE DRAWINGS. PLANTS LARGER THAN SPECIFIED MAY BE USED IF APPROVED, BUT THE USE OF SUCH PLANTS SHALL NOT INCREASE THE CONTRACT PRICE. ALL OVERSTORY TREES PLANTED ALONG PARKING AREAS, SIDEWALKS AND PEDESTRIAN ACCESSES SHALL NOT BRANCH BELOW 7' FEET IF THE TREE CALIPER IS 3" INCHES OR GREATER. ALL PLANT MATERIALS ARE SUBJECT TO INSPECTION AND ACCEPTANCE BY THE OWNER OR LANDSCAPE ARCHITECT AT THE NURSERY SOURCE. THE CONTRACTOR SHALL COORDINATE SOURCE VISITS WITH THE LANDSCAPE ARCHITECT AND SHALL ACCOMPANY THE OWNER AND/OR LANDSCAPE ARCHITECT FOR ALL INSPECTIONS. CERTIFICATES OF COMPLIANCE WITH SPECIFICATIONS ARE REQUIRED FOR ALL PLANTS.

14. INSPECTION AND REVIEW:
ALL PLANT MATERIAL SHALL BE SUBJECT TO INSPECTION AND ACCEPTANCE BY THE OWNER OR LANDSCAPE ARCHITECT AT THE NURSERY SOURCE OR PLACE OF GROWTH. THE CONTRACTOR SHALL COORDINATE WITH THE LANDSCAPE ARCHITECT ON A SCHEDULE FOR SOURCE VISITS AND ACCOMPANY THE OWNER OR LANDSCAPE ARCHITECT FOR ALL SOURCE INSPECTIONS. CERTIFICATES OF COMPLIANCE ARE REQUIRED FOR ALL PLANT MATERIALS.
PHOTOGRAPHIC REVIEW OF PLANT MATERIAL IS ACCEPTABLE IF APPROVED BY LANDSCAPE ARCHITECT. PHOTOGRAPHS MUST BE PROVIDED IN QUANTITY AND VARIETY TO ALLOW LANDSCAPE ARCHITECT SUFFICIENT INFORMATION TO MAKE A REASONABLE DETERMINATION AS TO THE PLANTS' QUALITY. OWNER AND LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT PLANT MATERIAL DELIVERED TO THE SITE BUT PREVIOUSLY ACCEPTED IF DAMAGED OR NOT PROPERLY MAINTAINED DURING THE DELIVERY PROCESS.

15. PLANTING SEASONS (UNLESS OTHERWISE APPROVED BY THE OWNER OR LANDSCAPE ARCHITECT)

	SPRING	FALL
EVERGREEN TREES AND SHRUBS	APRIL 1 TO JUNE 15	SEPTEMBER 1 TO OCTOBER 15
DECIDUOUS TREES AND SHRUBS	APRIL 1 TO JUNE 15	SEPTEMBER 15 TO NOVEMBER 15
GROUNDCOVERS	APRIL 1 TO JUNE 15	SEPTEMBER 1 TO OCTOBER 15
PERENNIALS	MAY 15 TO JUNE 15	SEPTEMBER 1 TO OCTOBER 15
SEED MIXES	PER MANUFACTURERS RECOMMENDATIONS OR AS LISTED IN SEED MIX NOTES	

SEEDING MIXTURES: REFER TO SEED MIX NOTES. SEEDED AREA SHALL BE ACCEPTED WHEN SEED AREA ACHIEVES 90% COVERAGE.

16. ALL SLOPES STEEPER THAN 3:1 RECEIVING A SEED MIX SHALL BE COVERED WITH AN EROSION CONTROL BLANKET OF STRAW FIBER AND BIODEGRADABLE OR PHOTODEGRADABLE NETTING.

17. UNLESS OTHERWISE NOTED IN DRAWING SET, NEW TREELINES SHALL EQUAL CLEARING AND GRUBBING LIMIT FOR CONSTRUCTION.

18. ALL DISTURBED AREAS NOT OTHERWISE DEVELOPED SHALL BE SEEDED WITH THE LAWN SEED MIX.

19. ALL SHADE TREE, BUFFER YARD AND OTHER LANDSCAPING REQUIRED BY LOCAL ORDINANCE OR ZONING SHALL BE PERPETUALLY MAINTAINED BY THE PROPERTY OWNER. ANY LANDSCAPING NEEDED TO MEET AN ORDINANCE OR ZONING REQUIREMENT THAT DIES, IS REMOVED, OR IS SEVERELY DAMAGED SHALL BE REPLACED BY THE CURRENT PROPERTY OWNER AS SOON AS IS PRACTICAL CONSIDERING GROWING SEASONS, WITH A MAXIMUM OF 150 DAYS.

FOR PERMITTING PURPOSES ONLY
NOT RELEASED FOR CONSTRUCTION

BOLTON PLANNING AND ZONING COMMISSION, BOLTON, CT

DATE APPROVED ____ DATE OF EXPIRATION ____

____________________ CHAIRMAN

THE STATUTORY FIVE-YEAR PERIOD FOR COMPLETION OF ALL PHYSICAL IMPROVEMENTS EXPIRES ON ________

5/4/2021, CLHEUREUX, G:\JOBS20\20\2002032\DWG\LL200203201.DWG,LL-2 24X36 NTS.

Architecture
Engineering
Environmental
Land Surveying

BL Companies

100 Constitution Plaza
10th Floor
Hartford, CT 06103
(860) 249-2200
(860) 249-2400 Fax

PROPOSED RETAIL DEVELOPMENT
1100 BOSTON TURNPIKE
BOLTON, CONNECTICUT

REVISIONS

No.	Date	Desc.
1.	05/05/2021	REVISED PER TOWN COMMENTS

Xref (s): ; BD200203201 ; XY200203201 ; XC200203201 ; XC200203202 ; XC200203204 ; XL200203201

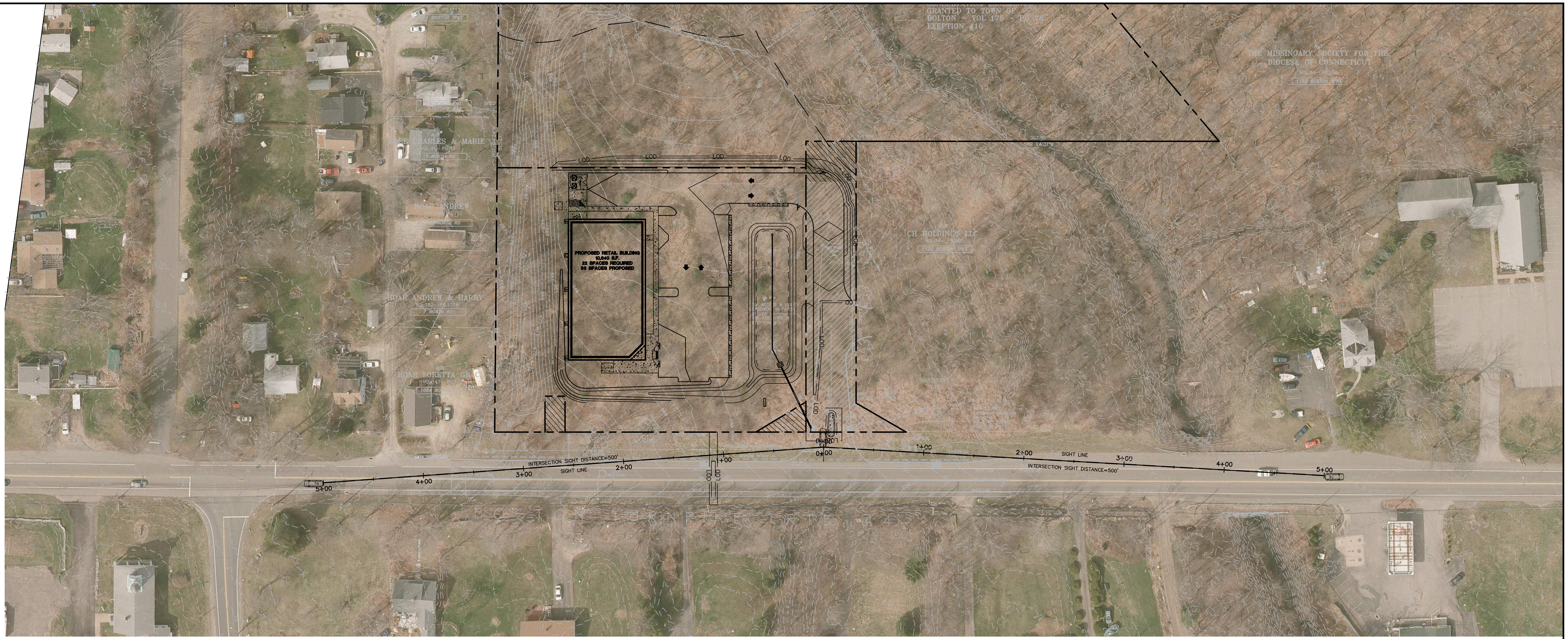
Designed	L.M.W.
Drawn	L.M.W.
Reviewed	W.E.V.
Scale	NTS
Project No.	2002032
Date	04/02/2021
CAD File:	LL200203201

Title

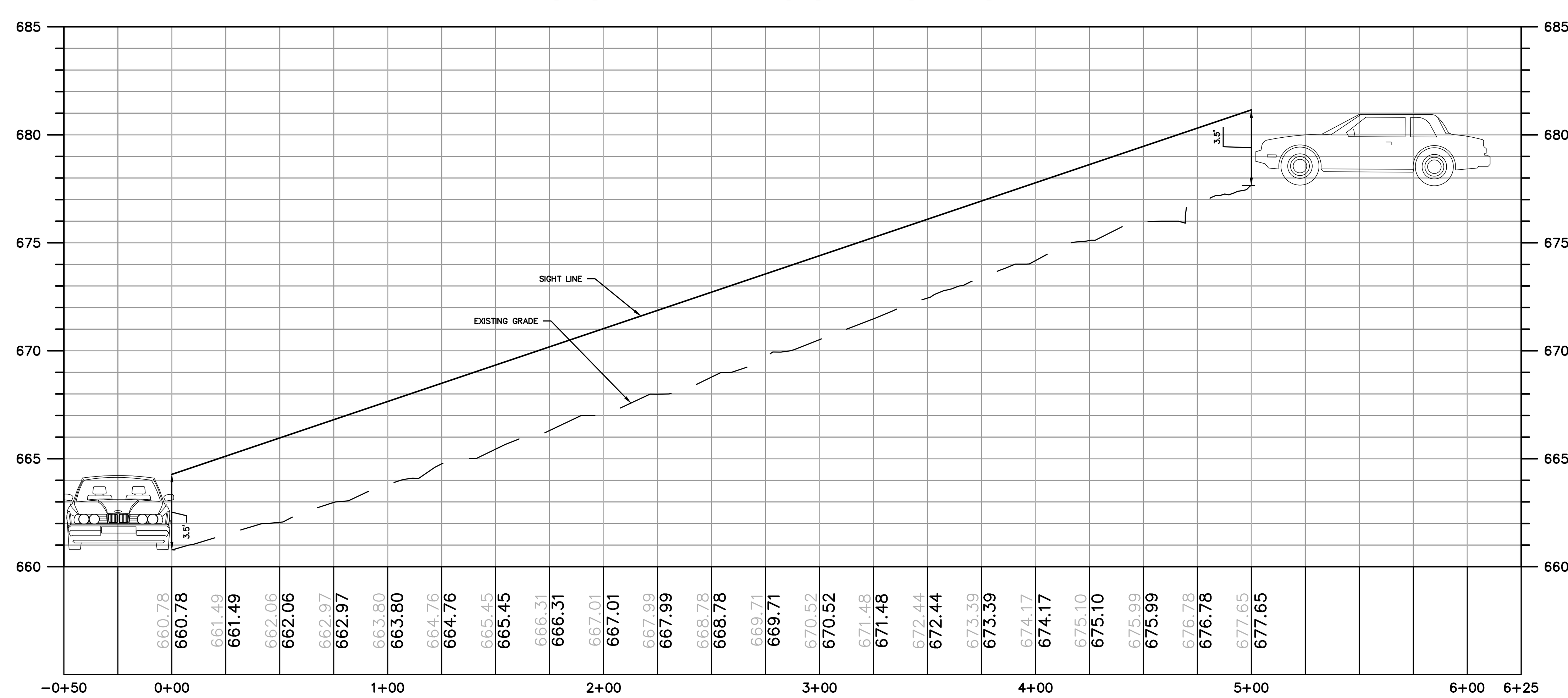
LANDSCAPE NOTES AND DETAILS

Sheet No.

LL-2



SIGHTLINE LOOKING RIGHT



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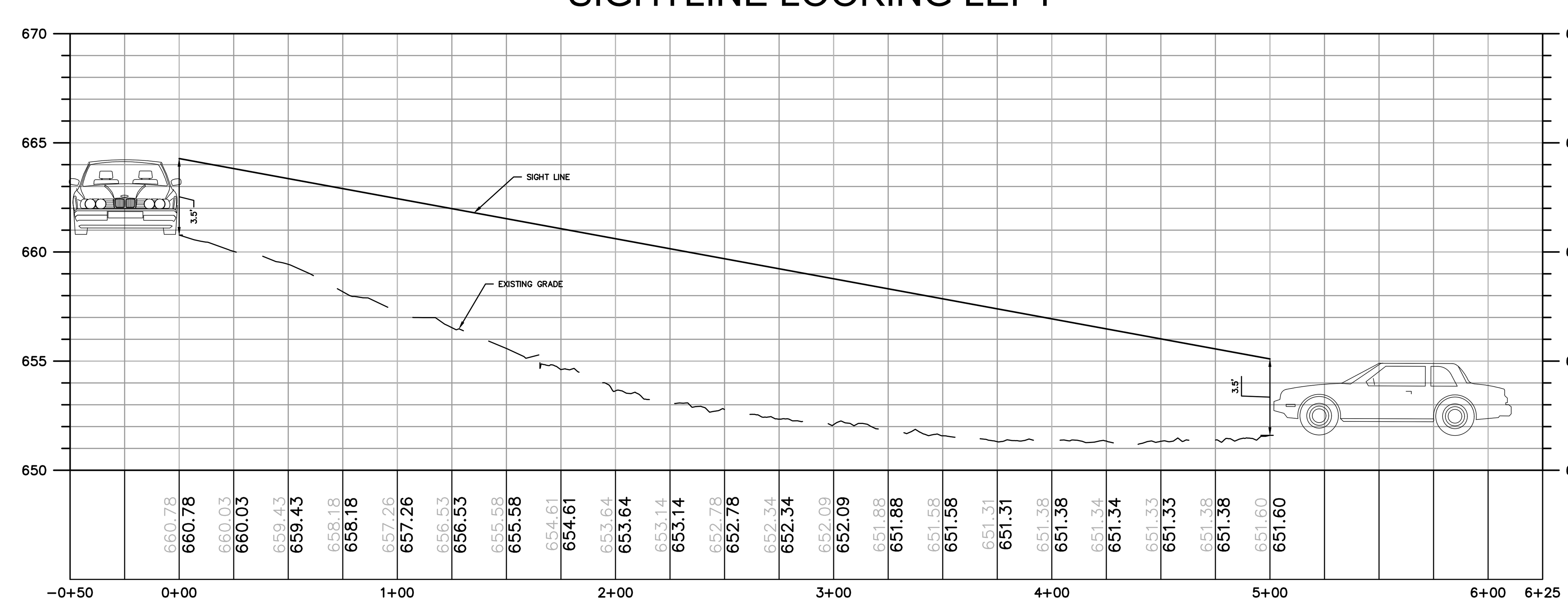


GRAPHIC SCALE

50 25 0 50

SCALE IN FEET

FOR PERMITTING PURPOSES ONLY
NOT RELEASED FOR CONSTRUCTION

BOLTON PLANNING AND ZONING COMMISSION, BOLTON, CT

DATE APPROVED ________ DATE OF EXPIRATION ________

________________________ CHAIRMAN

THE STATUTORY FIVE-YEAR PERIOD FOR COMPLETION OF ALL PHYSICAL IMPROVEMENTS EXPIRES ON ________

BL Companies
Architecture
Engineering
Environmental
Land Surveying

100 Constitution Plaza
10th Floor
Hartford, CT 06103
(860) 249-2200
(860) 249-2400 Fax

PROPOSED RETAIL DEVELOPMENT
1100 BOSTON TURNPIKE
BOLTON, CONNECTICUT

REVISIONS		
No.	Date	Desc.
1.	05/05/2021	REVISED PER TOWN COMMENTS

Designed	S.E.L.
Drawn	S.E.L.
Reviewed	K.M.M.
Scale	1"=50'
Project No.	2002032
Date	04/02/2021
CAD File:	SD200203201

Title

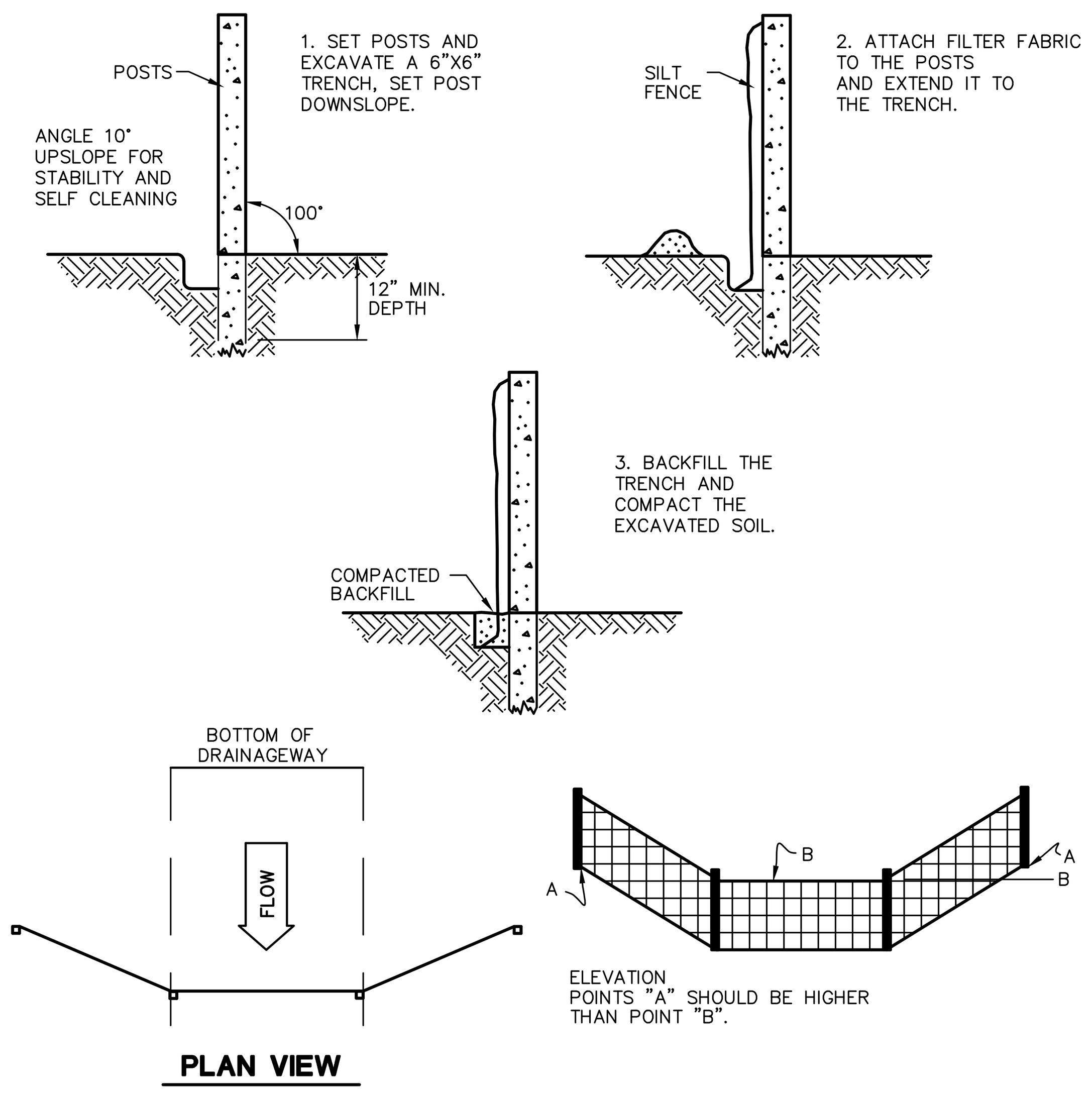
INTERSECTION SIGHT DISTANCE PLAN

Sheet No.

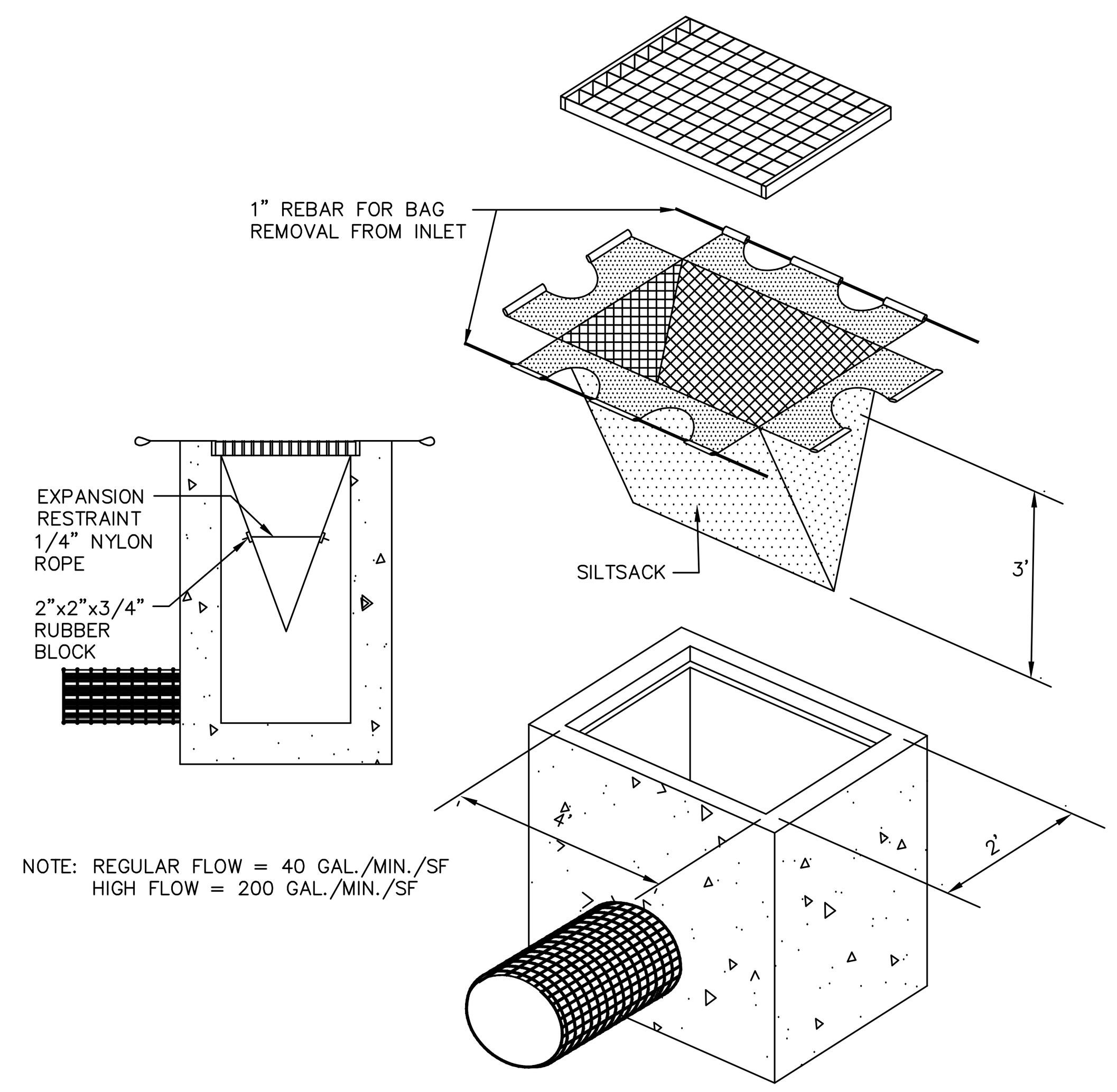
SD-1

Xref (s): ; BD200203201 ; XY200203201 ; XC200203201 ; XC200203202

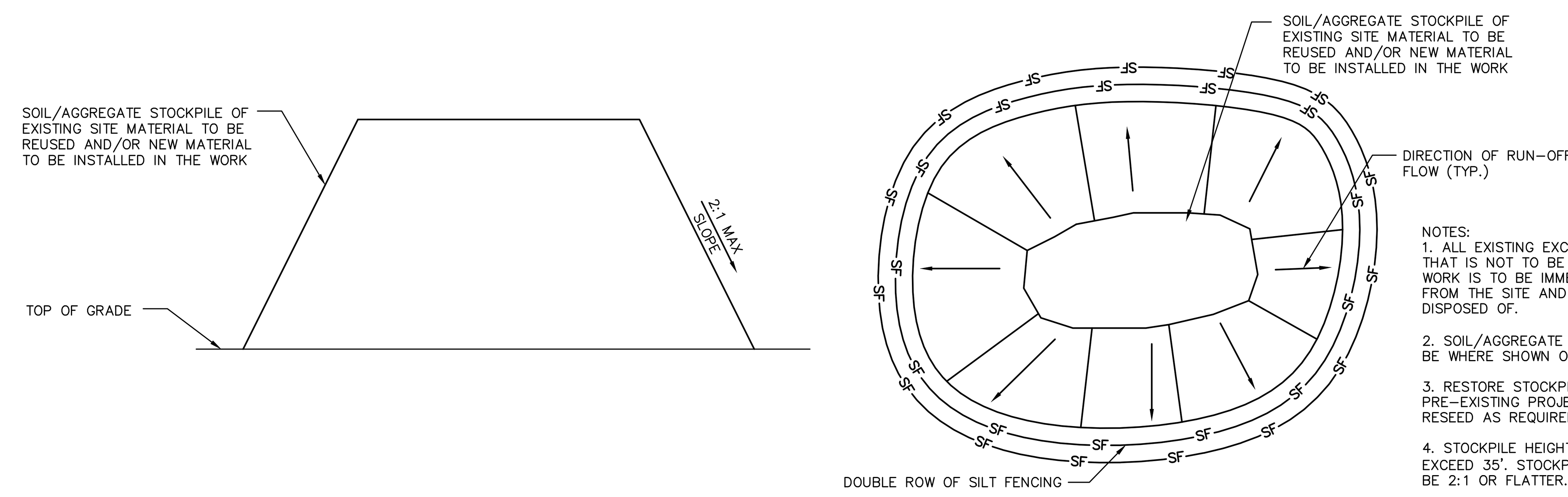
5/4/2021, CLHEUREUX, G:\JOBS20\20\2002032\DWG\SD200203201.



SILT FENCE BARRIER
N.T.S. CTEC-003



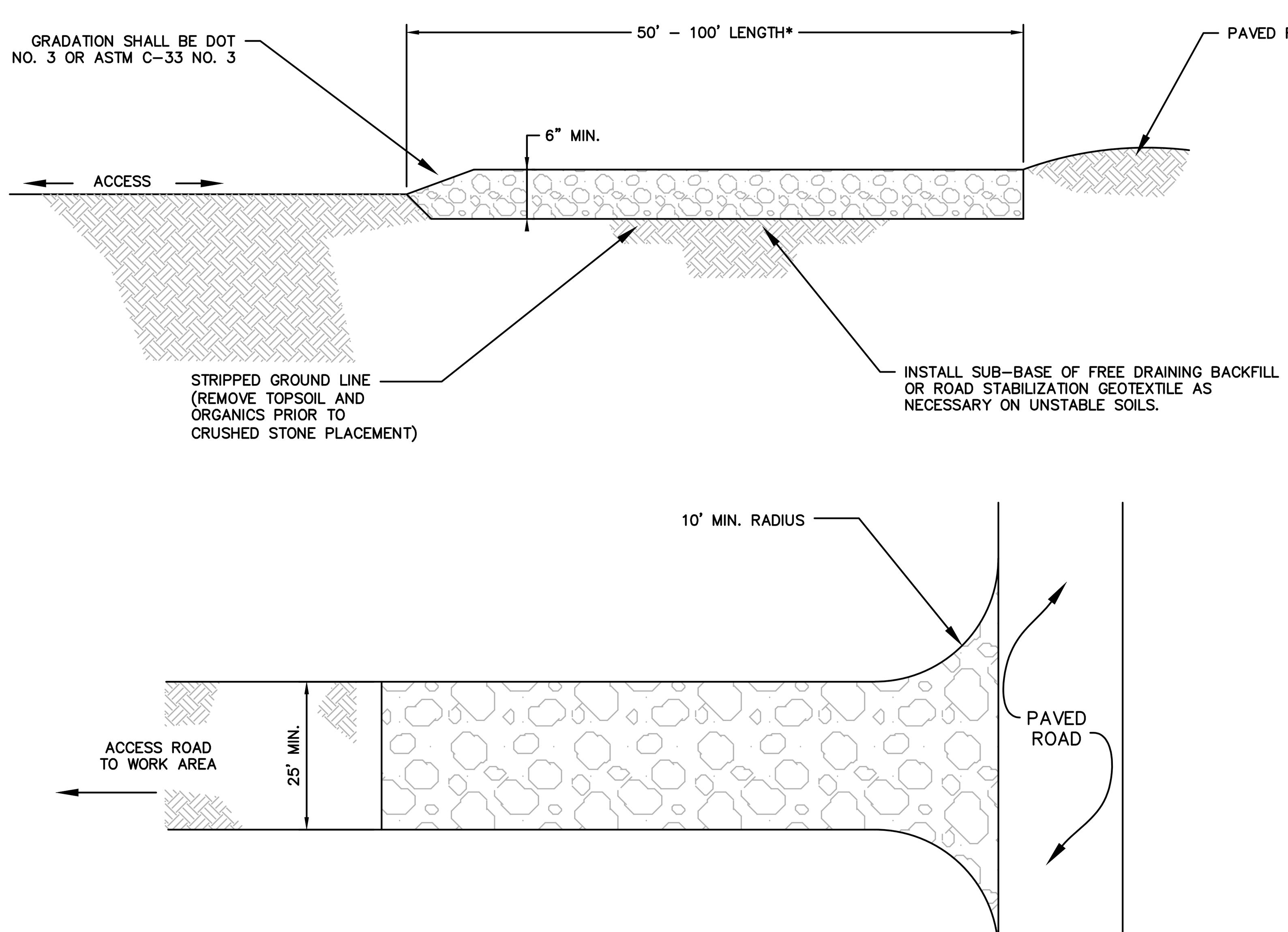
SILTSACK DETAIL
N.T.S. BLEC-005



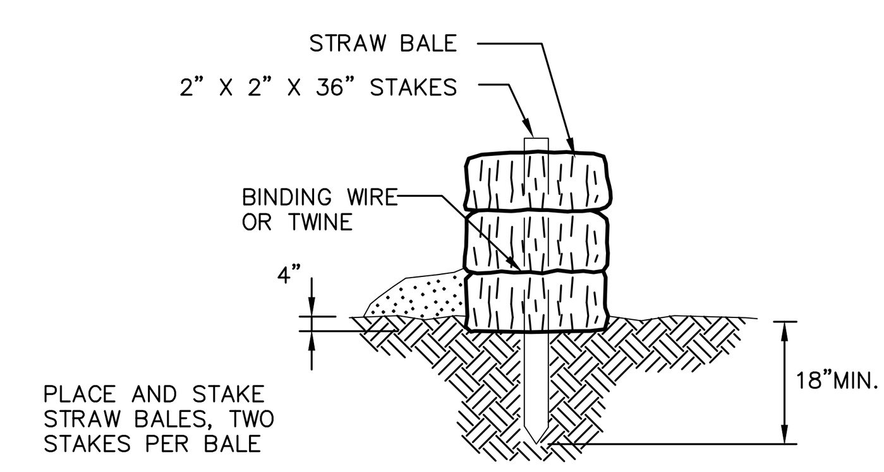
NOTES:
1. ALL EXISTING EXCAVATED MATERIAL THAT IS NOT TO BE REUSED IN THE WORK IS TO BE IMMEDIATELY REMOVED FROM THE SITE AND PROPERLY DISPOSED OF.
2. SOIL/AGGREGATE STOCKPILE SITES TO BE WHERE SHOWN ON THE DRAWINGS.
3. RESTORE STOCKPILE SITES TO PRE-EXISTING PROJECT CONDITION AND RESEED AS REQUIRED.
4. STOCKPILE HEIGHTS MUST NOT EXCEED 35'. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.

MATERIALS STOCKPILE DETAIL
N.T.S. BLEC-006

* WHERE SEDIMENTS CONTAIN LESS THAN 80% SAND, A 100 FT MINIMUM IS REQUIRED.



TYPICAL CONSTRUCTION ENTRANCE
N.T.S. CT DEEP CE-2

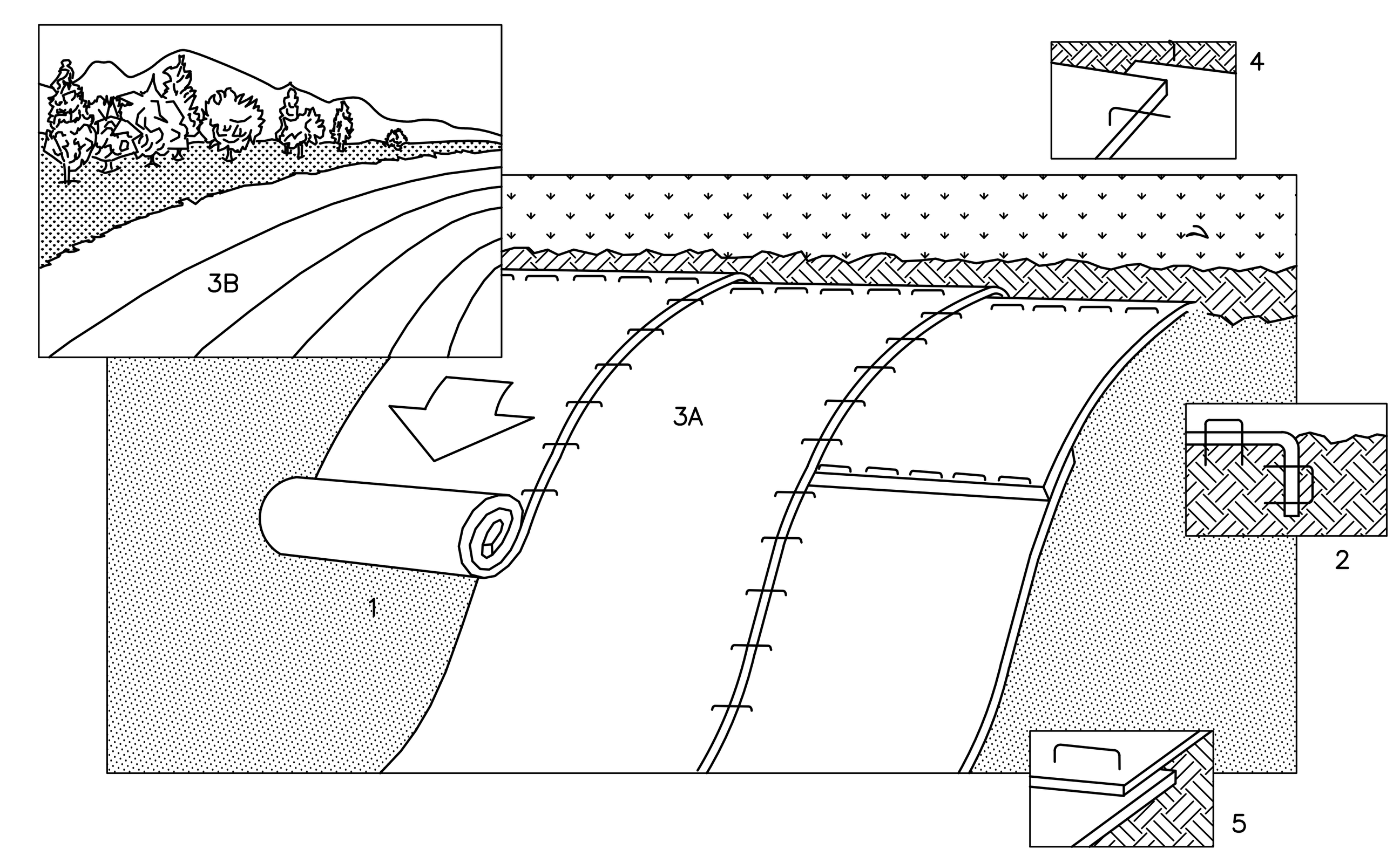


STRAW BALE BARRIERS SHOULD NOT BE USED FOR MORE THAN 3 MONTHS

SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE ABOVE GROUND HEIGHT OF THE BARRIER.

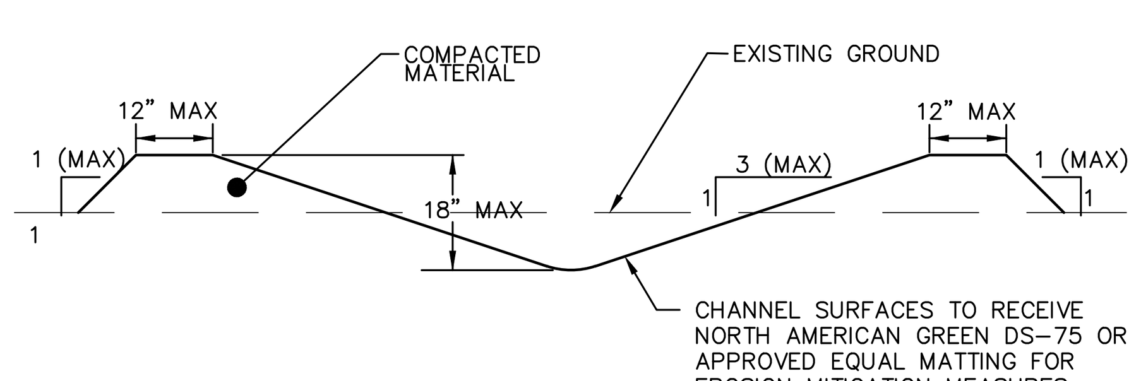
ANY SECTION OF STRAW BALE BARRIER WHICH HAS BEEN UNDERMINED OR TOPPED MUST BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET.

STRAW BALE DETAIL
N.T.S. BLEC-007

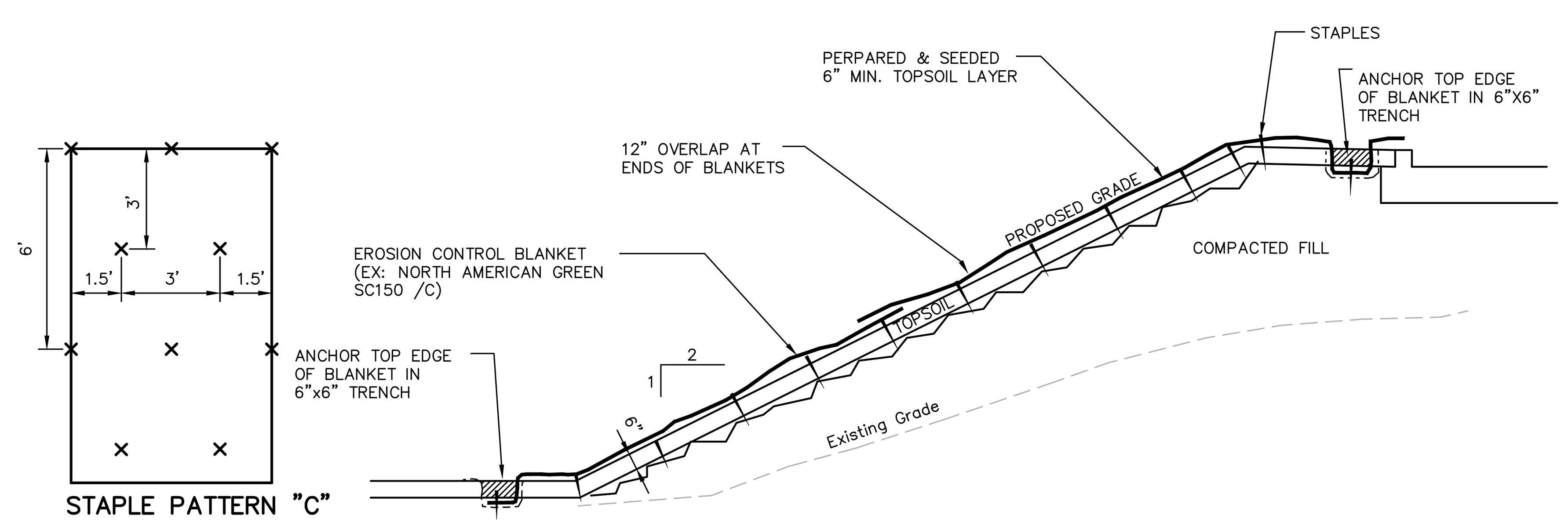


1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER,AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" OVERLAP.
5. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 4" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART.

SLOPE STABILIZATION DETAIL
N.T.S. BLEC-010



NON-ENGINEERED TEMPORARY DIVERSION DITCH DETAIL
N.T.S.



BLANKET ON FILL SLOPE
N.T.S. BLEC-009

BOLTON PLANNING AND ZONING COMMISSION, BOLTON, CT
DATE APPROVED ______ DATE OF EXPIRATION ______
______ CHAIRMAN
THE STATUTORY FIVE-YEAR PERIOD FOR COMPLETION OF ALL PHYSICAL IMPROVEMENTS EXPIRES ON ______

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Architecture
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Hartford, CT 06103
(860) 249-2200
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PROPOSED RETAIL DEVELOPMENT
1100 BOSTON TURNPIKE
BOLTON, CONNECTICUT

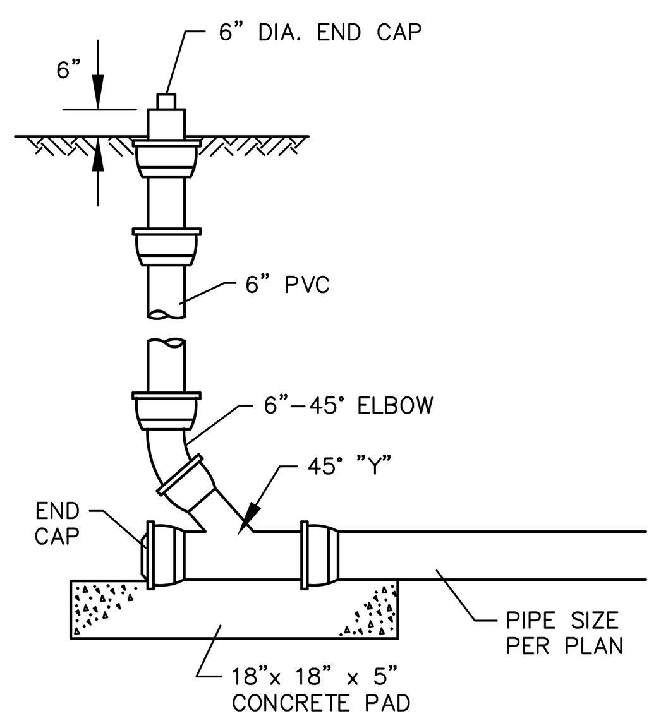
REVISIONS

No.	Date	Desc.
1	05/05/2021	REVISED PER TOWN COMMENTS

Designed	S.E.L.
Drawn	S.E.L.
Reviewed	K.M.M.
Scale	NONE
Project No.	2002032
Date	04/02/2021
CAD File:	DN200203201

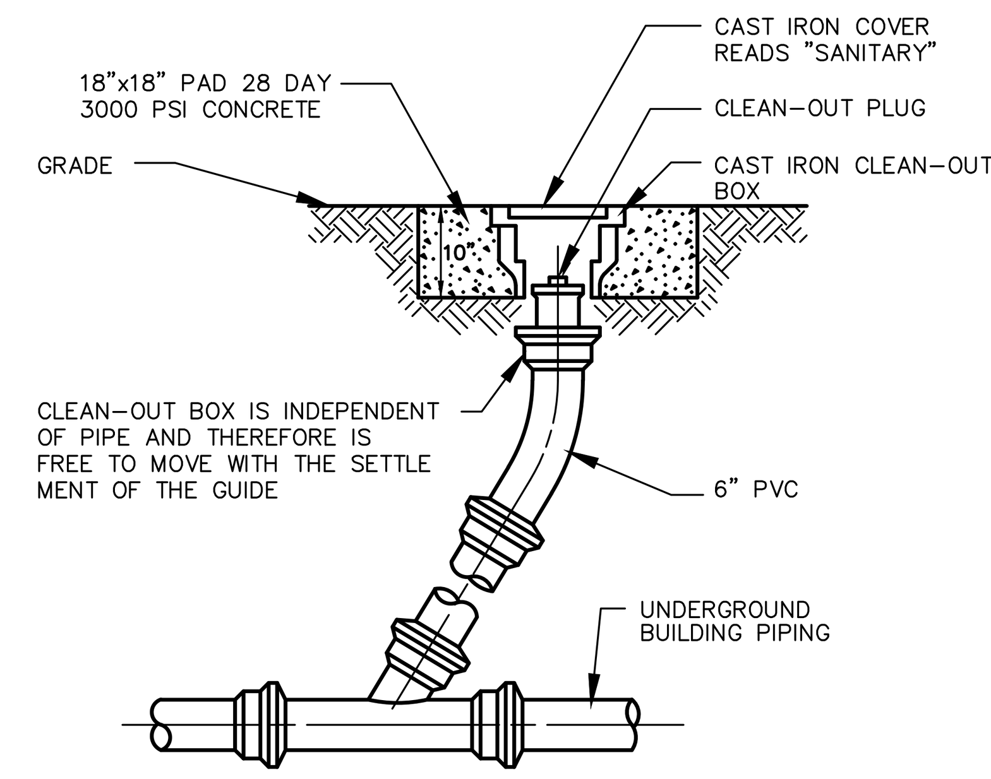
Title
DETAILS SHEET

Sheet No.
DN-1



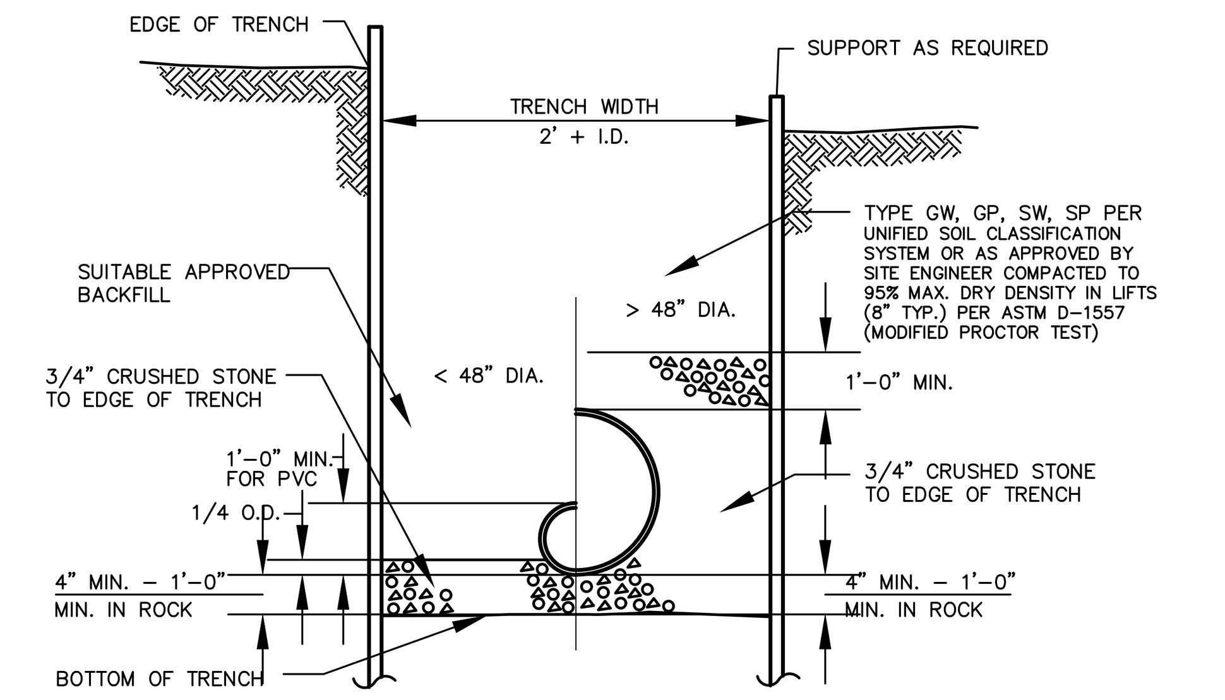
CLEANOUT IN LANDSCAPED AREA

N.T.S BLSS-007



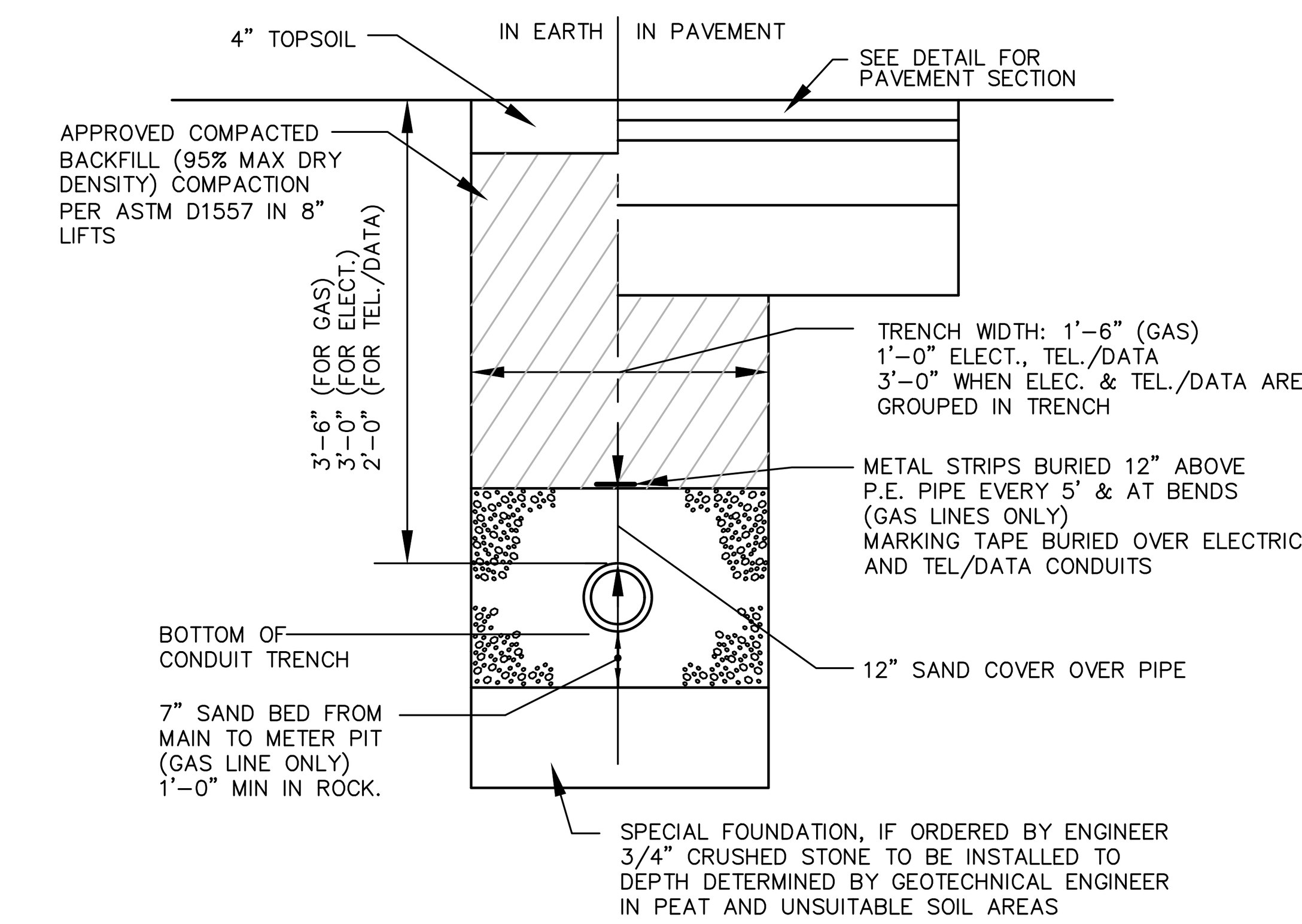
CLEANOUT IN PAVED AREA

N.T.S BLSS-008



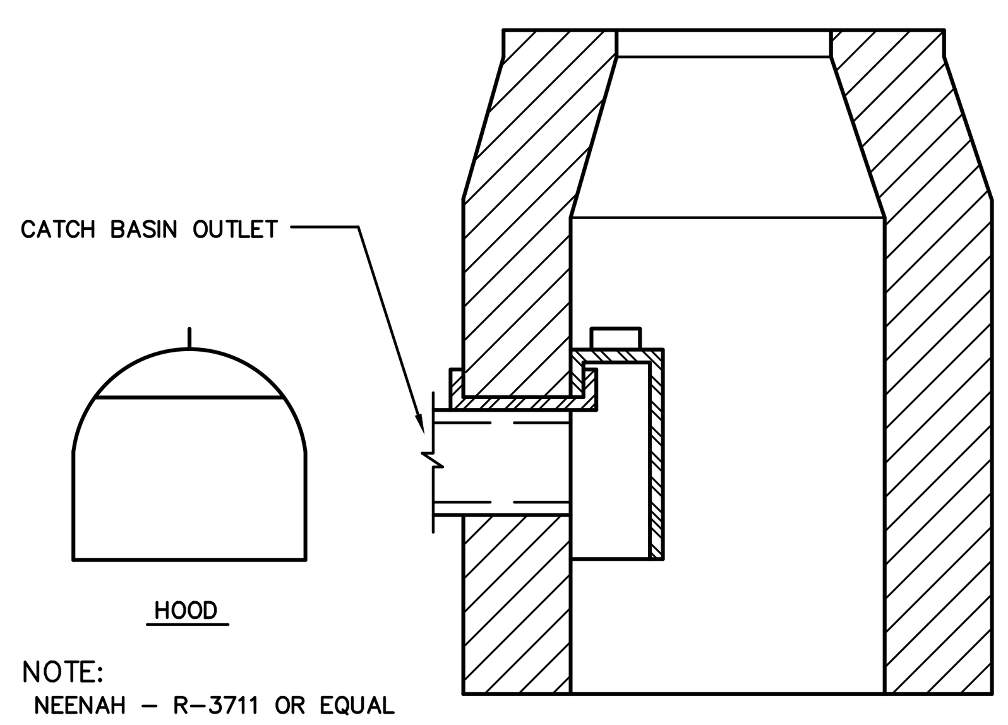
TYPICAL STORM SEWER TRENCH SECTION

N.T.S. BLDD-004



ELECTRICAL, TELEPHONE AND GAS TRENCH DETAIL

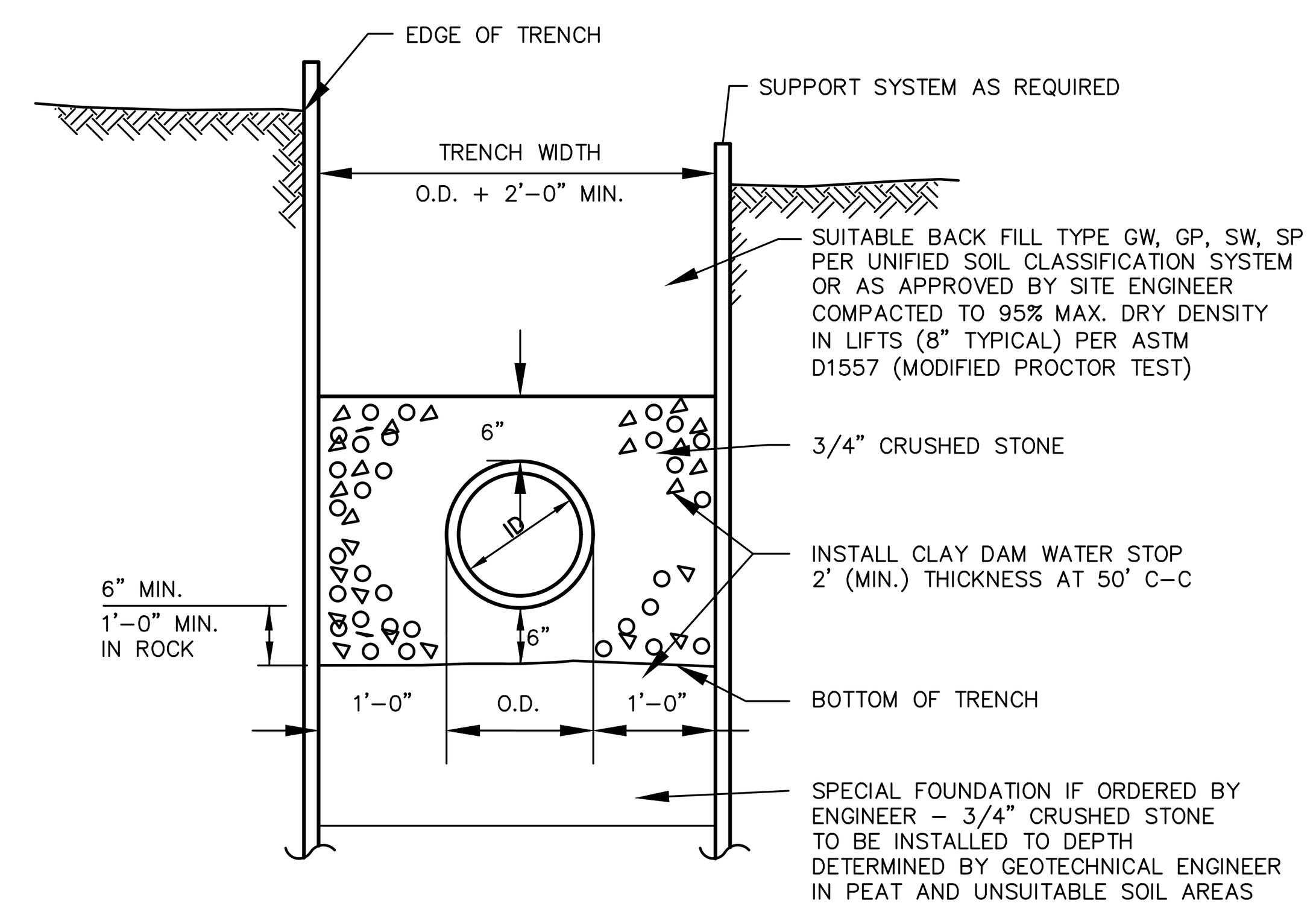
N.T.S. BLUD-001



NOTE:
NEENAH - R-3711 OR EQUAL

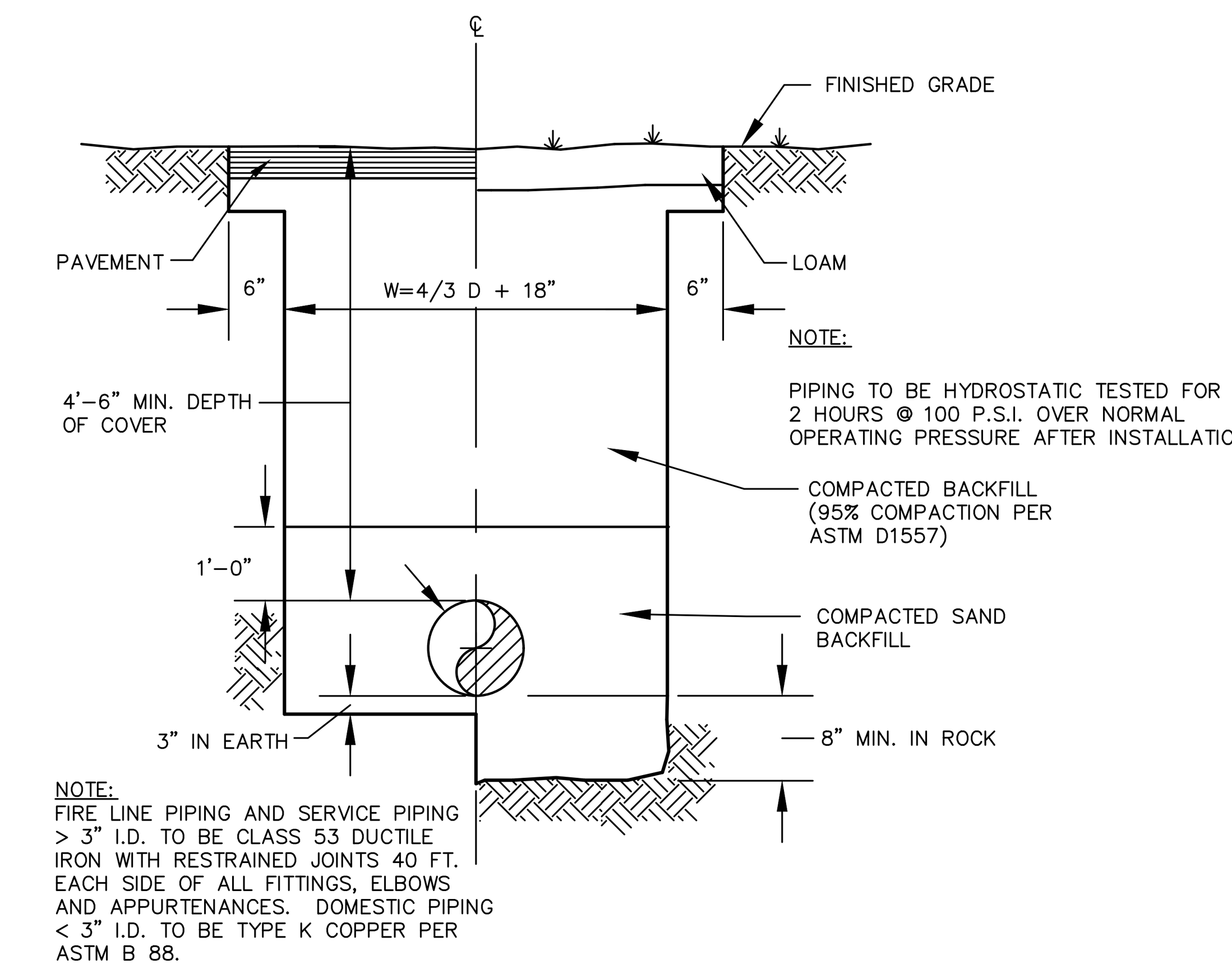
HOODED OUTLET

N.T.S.



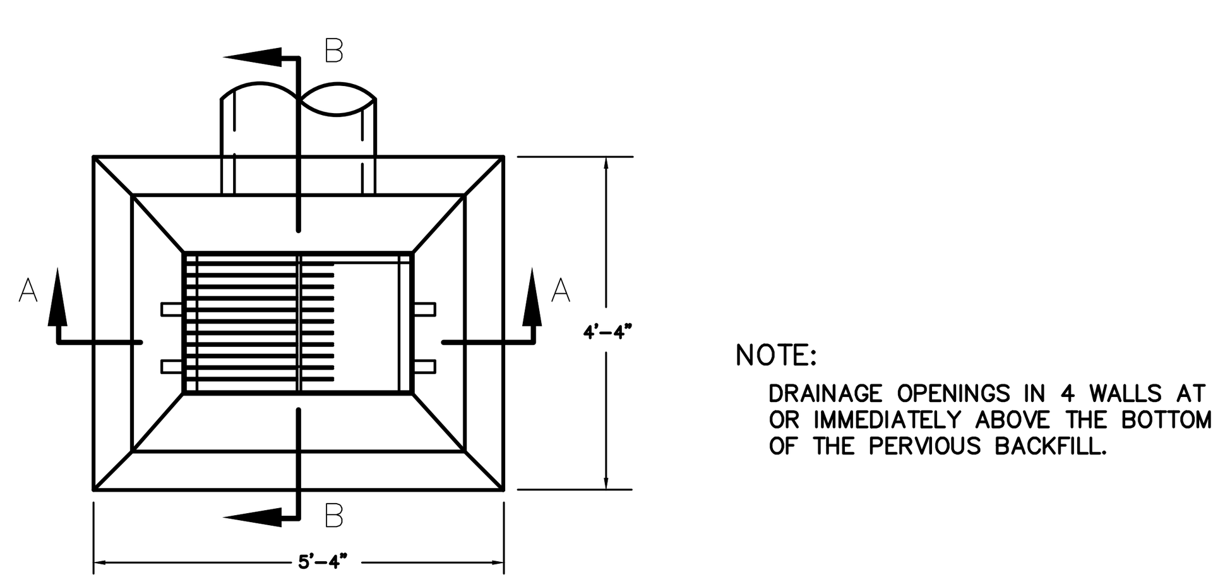
TYPICAL SANITARY SEWER TRENCH SECTION

N.T.S BLSS-010

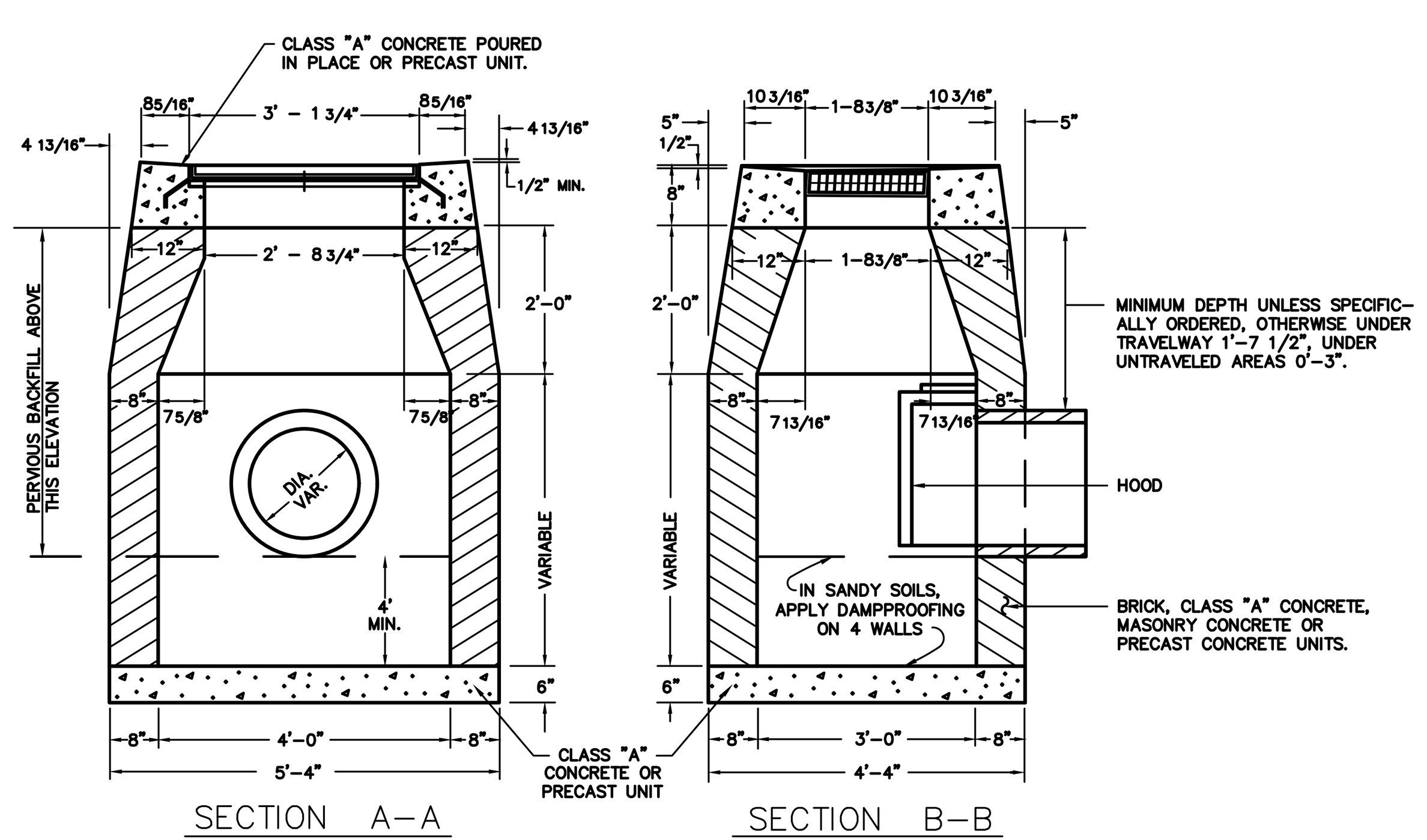


TYPICAL WATER SERVICE TRENCH DETAIL

N.T.S. BLWD-005



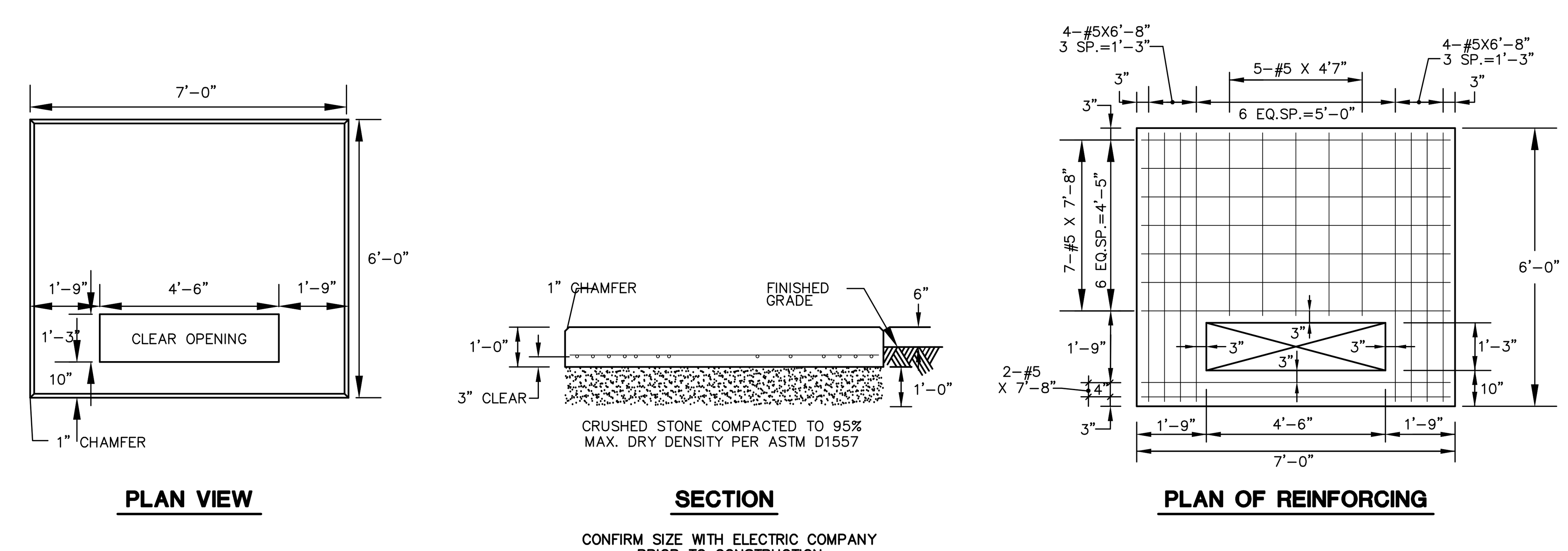
NOTE:
DRAINAGE OPENINGS IN 4 WALLS AT OR IMMEDIATELY ABOVE THE BOTTOM OF THE PERVIOUS BACKFILL.



SECTION A-A SECTION B-B

TYPE "C-L" CATCH BASIN WITH HOOD

N.T.S.



PLAN VIEW

SECTION

CONFIRM SIZE WITH ELECTRIC COMPANY PRIOR TO CONSTRUCTION

PLAN OF REINFORCING

TRANSFORMER PAD

N.T.S. BLLE-001

BOLTON PLANNING AND ZONING COMMISSION, BOLTON, CT
DATE APPROVED ______ DATE OF EXPIRATION ______
______ CHAIRMAN

THE STATUTORY FIVE-YEAR PERIOD FOR COMPLETION OF ALL PHYSICAL IMPROVEMENTS EXPIRES ON ______

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Architecture
Engineering
Environmental
Land Surveying

BL Companies

100 Constitution Plaza
10th Floor
Hartford, CT 06103
(860) 249-2200
(860) 249-2400 Fax

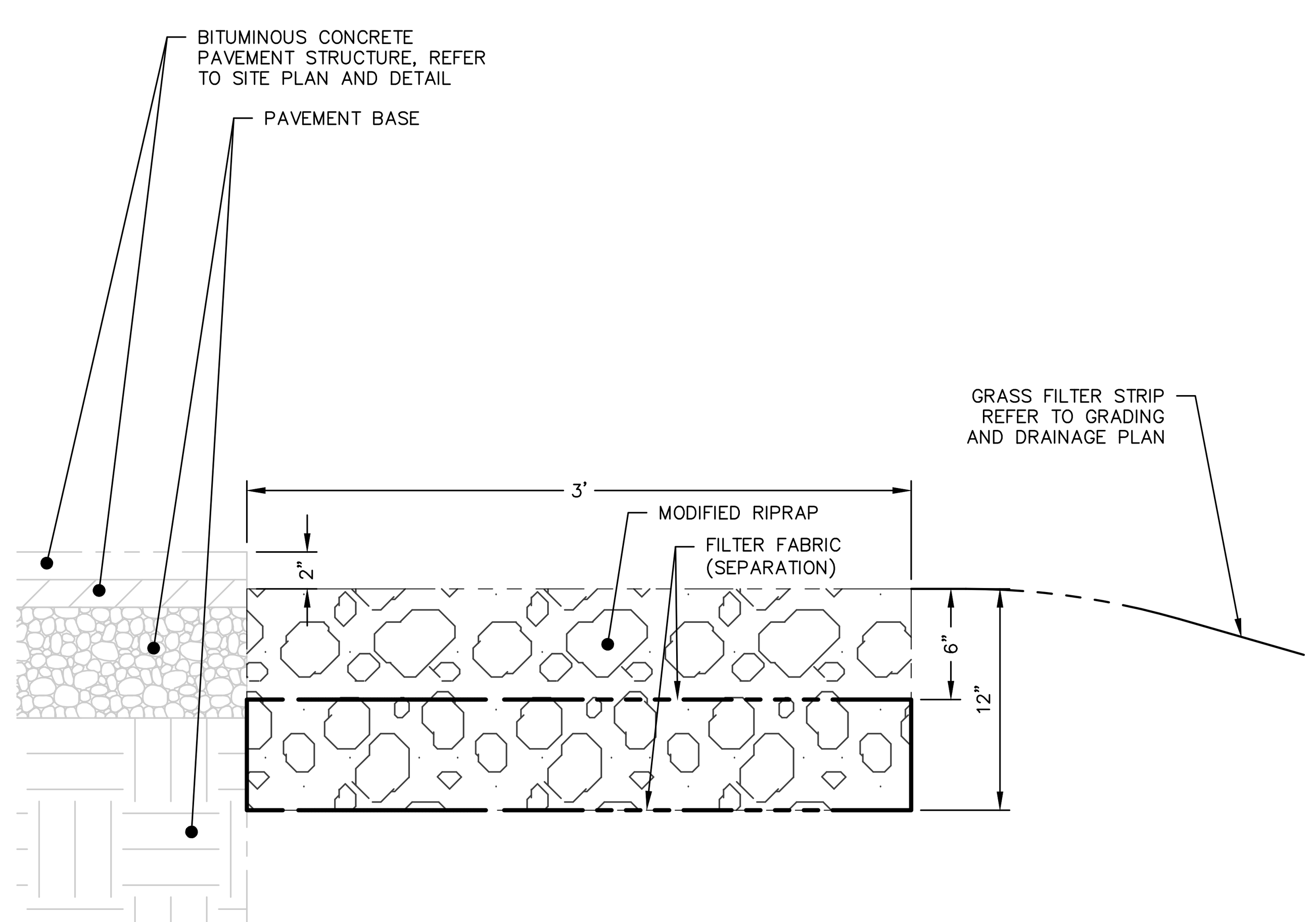
PROPOSED RETAIL DEVELOPMENT
1100 BOSTON TURNPIKE
BOLTON, CONNECTICUT

REVISIONS No.	Date	Desc.
1	05/05/2021	REVISED PER TOWN COMMENTS

Designed	S.E.L.
Drawn	S.E.L.
Reviewed	K.M.M.
Scale	NONE
Project No.	2002032
Date	04/02/2021
CAD File:	DN200203201

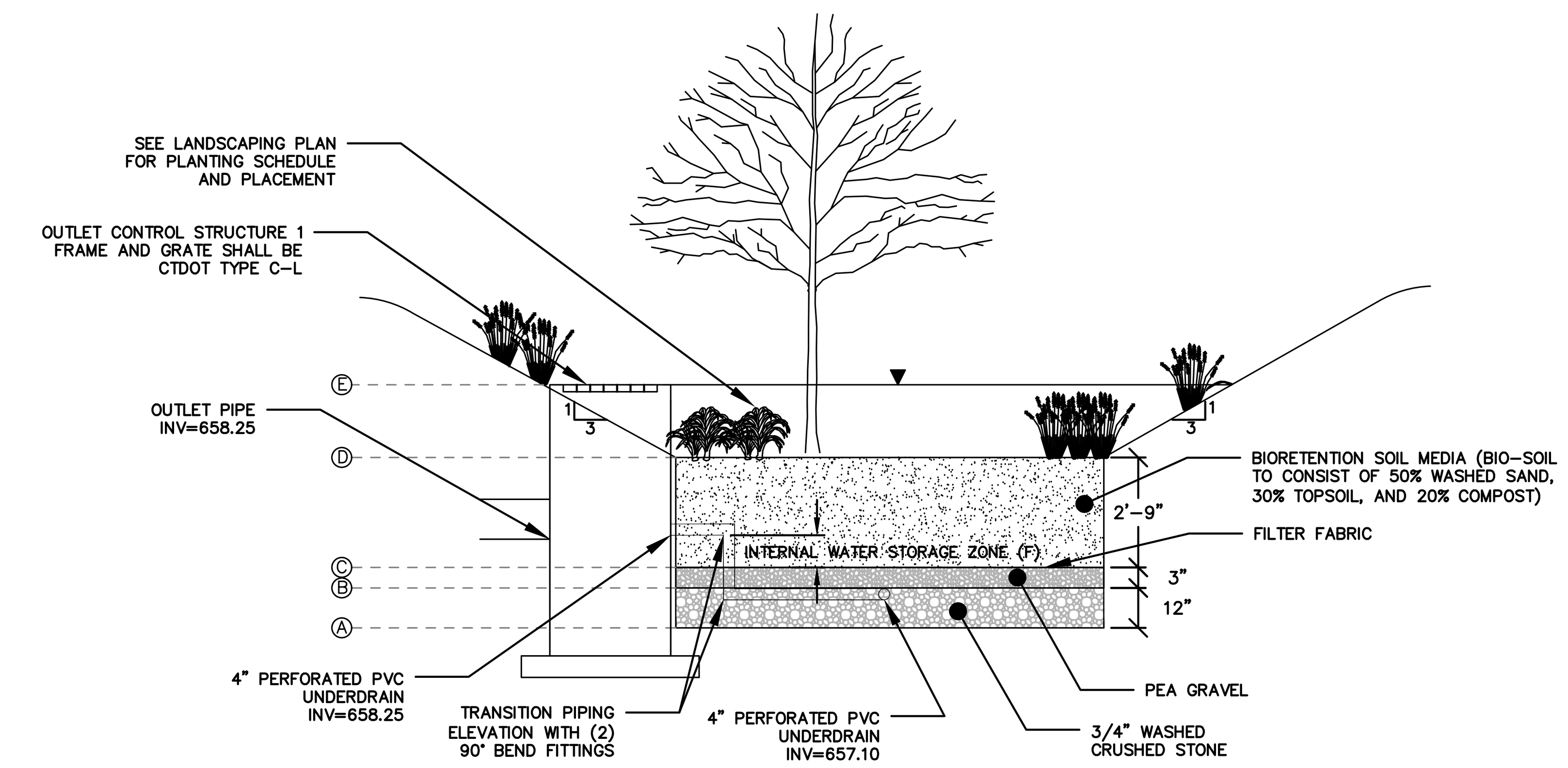
Title
DETAILS SHEET

Sheet No.
DN-2



ENERGY DISSIPATION TRENCH

N.T.S.



TYPICAL BIORETENTION BASIN SECTION

N.T.S.

	BOTTOM OF CRUSHED STONE (A)	TOP OF CRUSHED STONE/BOTTOM OF PEA GRAVEL (B)	TOP OF PEA GRAVEL/FILTER FABRIC/BOTTOM OF BIORETENTION SOIL MEDIA (C)	TOP OF BIORETENTION SOIL MEDIA (D)	WATER QUALITY VOLUME REQUIRED	WATER QUALITY VOLUME PROVIDED (E)	INTERNAL WATER STORAGE ZONE HEIGHT (F)
BIORETENTION BASIN #1	656.50 FT	657.50 FT	657.75 FT	660.50 FT	3,136 CF	661.87 FT (5,079 CF)	6"

PONDED DEPTH PER STORM EVENT (FT)	1" WATER QUALITY STORM	100YR
BIORETENTION BASIN #1	656.16	661.91

NOTES AND DESIGN REQUIREMENTS

1. THE IMPOUNDED AREA CREATED ABOVE THE BIORETENTION SOIL MEDIA HAS BEEN SIZED TO HOLD WATER QUALITY VOLUME FROM FIRST 1" RAINFALL.
2. RECHARGE WILL BE PROVIDED BY BIORETENTION BASIN.
3. THE BIORETENTION BASIN WAS DESIGNED USING RECOMMENDED INFILTRATION RATE THROUGH THE PLANTING SOIL OF 5 IN/HR.
4. THE OWNER IS RESPONSIBLE FOR MAINTENANCE OF BIORETENTION BASIN.
5. REFER TO LANDSCAPING PLAN FOR PLANT AND SEED SCHEDULE FOR BIORETENTION BASIN.
6. FILTER FABRIC – GEOTEXTILE FABRIC SHALL MEET ASTM D-751 (PUNCTURE STRENGTH –125LB); ASTM D-1117 (MULLEN BURST STRENGTH–400LB); ASTM D-1682 (TENSILE STRENGTH–300 LB).
7. A RAISED UNDERDRAIN SYSTEM IS BEING UTILIZED TO CREATE AN INTERNAL WATER STORAGE ZONE WITHIN THE BIORETENTION SOIL MEDIA. THIS CONFIGURATION WILL ALLOW FOR A 6" DEPTH OF SUBMERGED BIORETENTION SOIL TO PROVIDE ENHANCED NITROGEN REMOVAL

TYPICAL BIORETENTION BASIN DETAIL

N.T.S.

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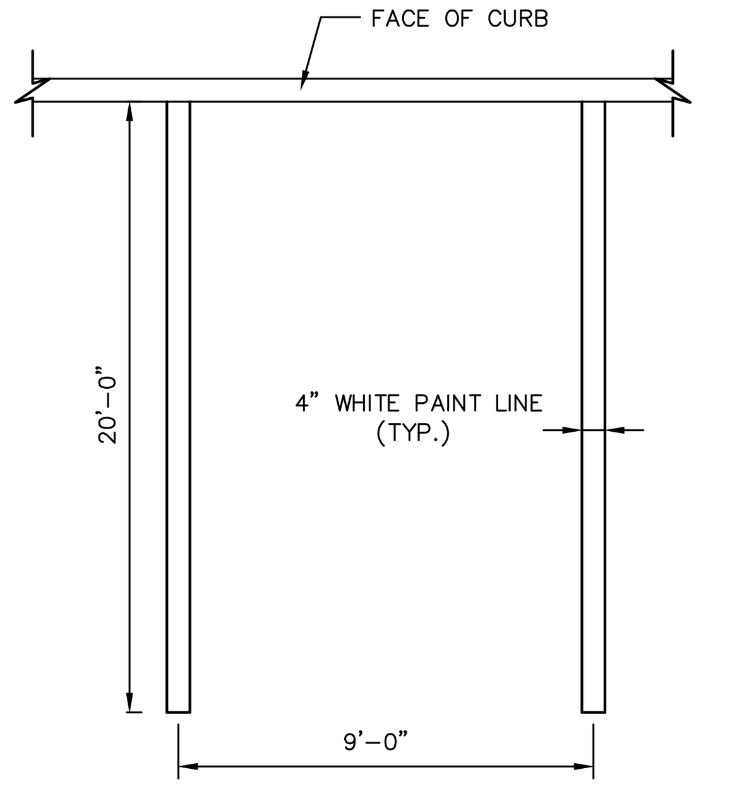
CAD File:	DN200203201

Title
DETAILS SHEET

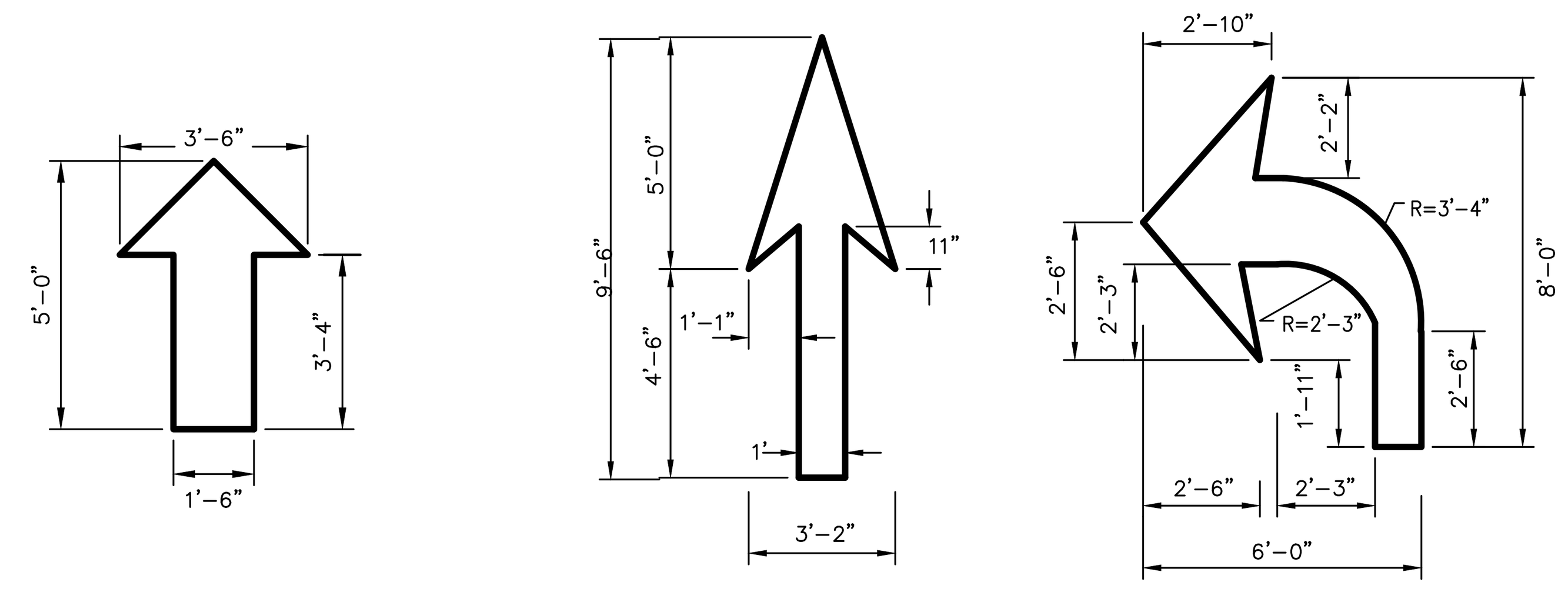
Sheet No.
DN-3



NOTE:
1. PROVIDE 2 COATS OF PAINT ON ALL SURFACES.
2. SEE PLAN FOR ACTUAL SPACE LOCATION AND DIMENSIONS.

TYPICAL PARKING SPACE DETAIL

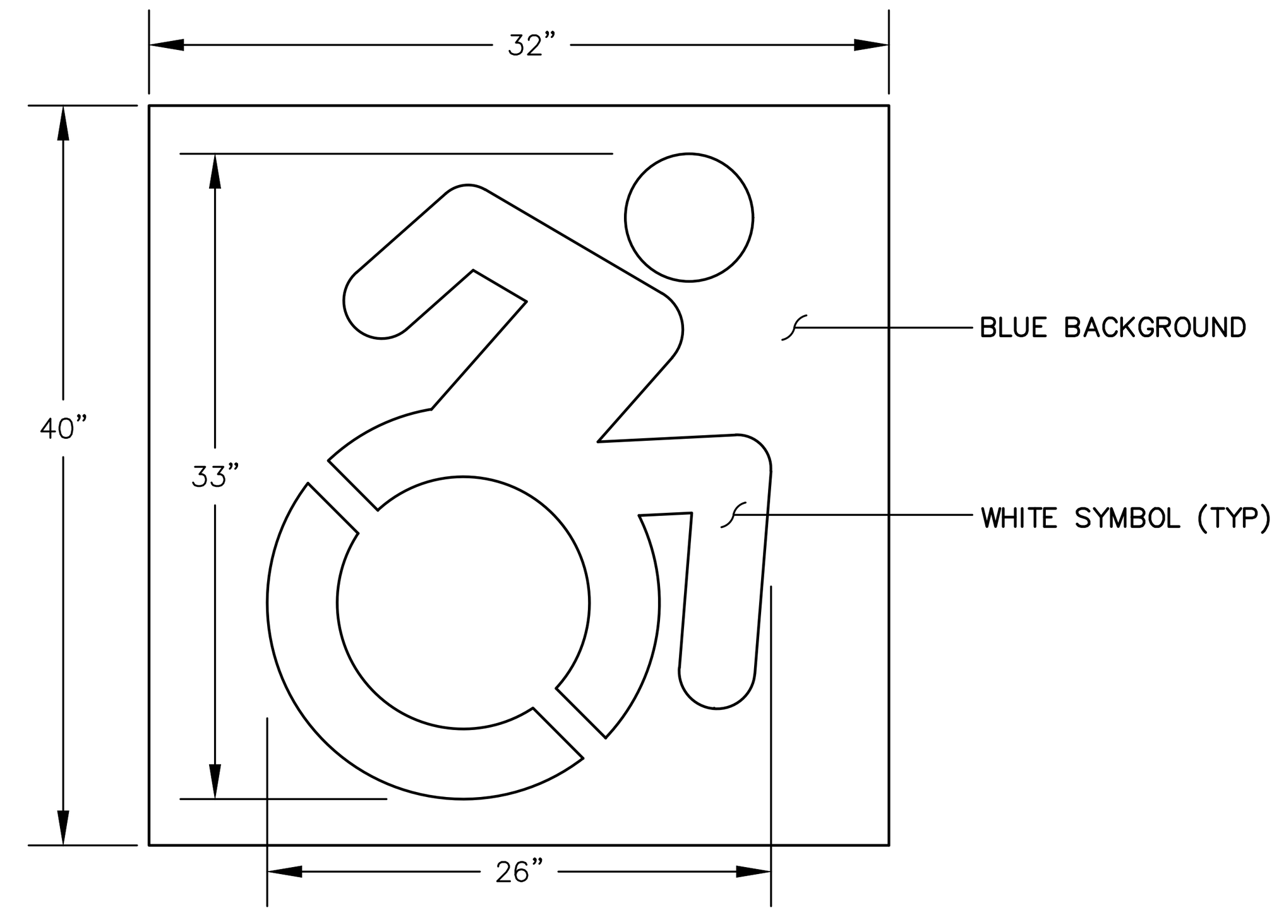
N.T.S. BLPC-003



NOTES:
1. WHITE (ARROWS TO BE CENTERED IN TRAVEL LANE)

PAINTED TRAFFIC ARROW DETAILS

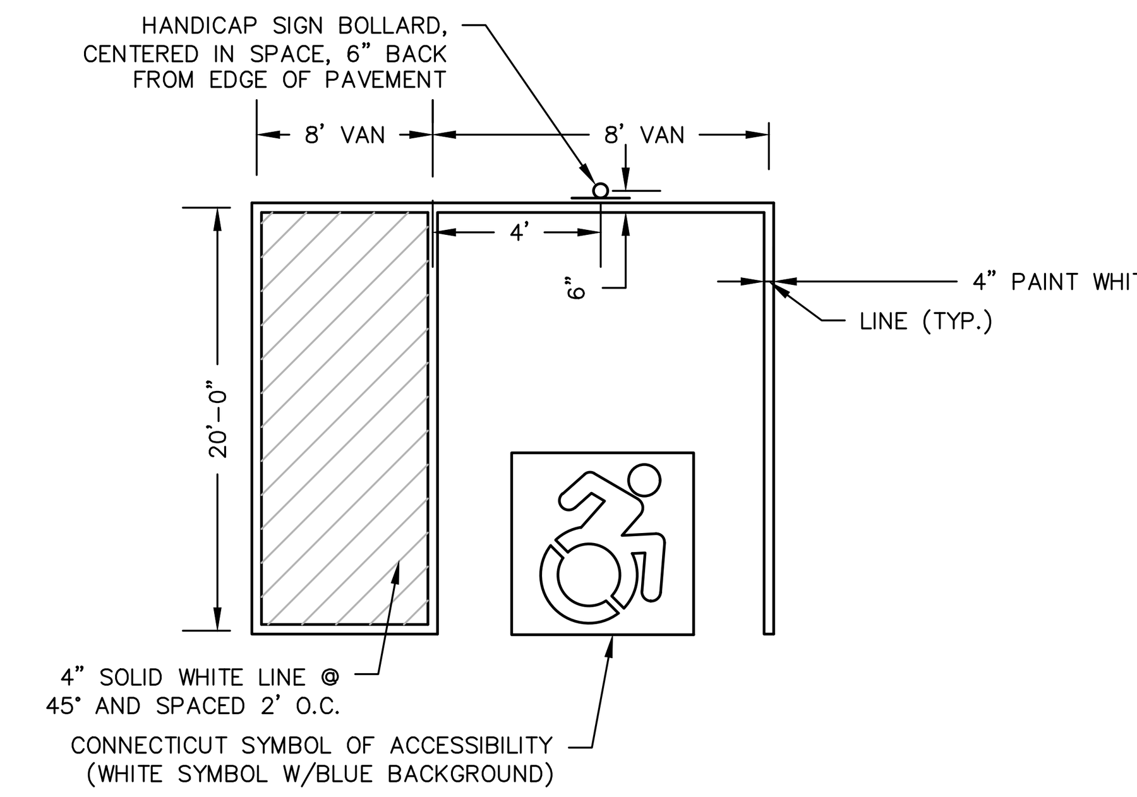
N.T.S BLPC-006



NOTE: HANDICAP SYMBOL TO ADHERE TO STATE BUILDING CODE, LATEST EDITION

CONNECTICUT SYMBOL OF ACCESSIBILITY

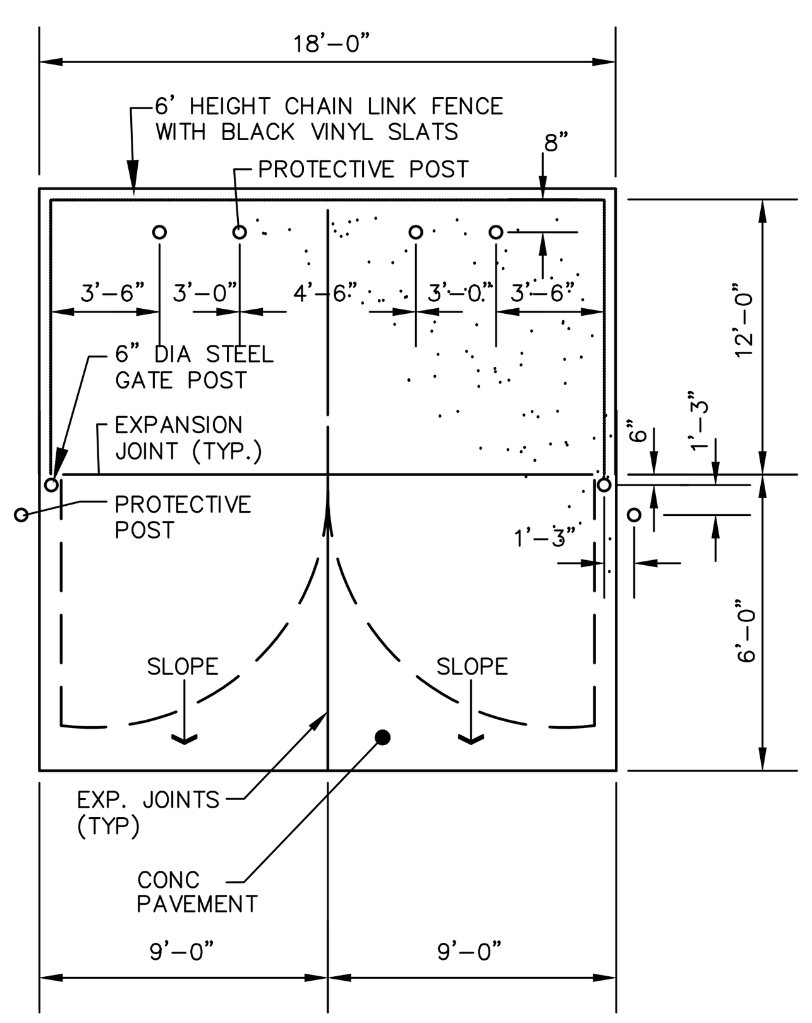
N.T.S.



NOTE:
UNIFORM FEDERAL ACCESSIBILITY STANDARDS, SECTION 4.30, & 2010 ADA

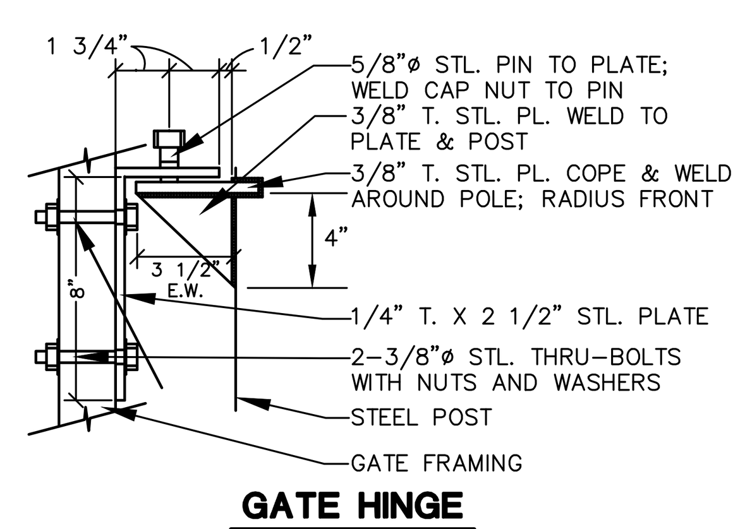
TYPICAL HANDICAP PARKING STALL LAYOUT

N.T.S



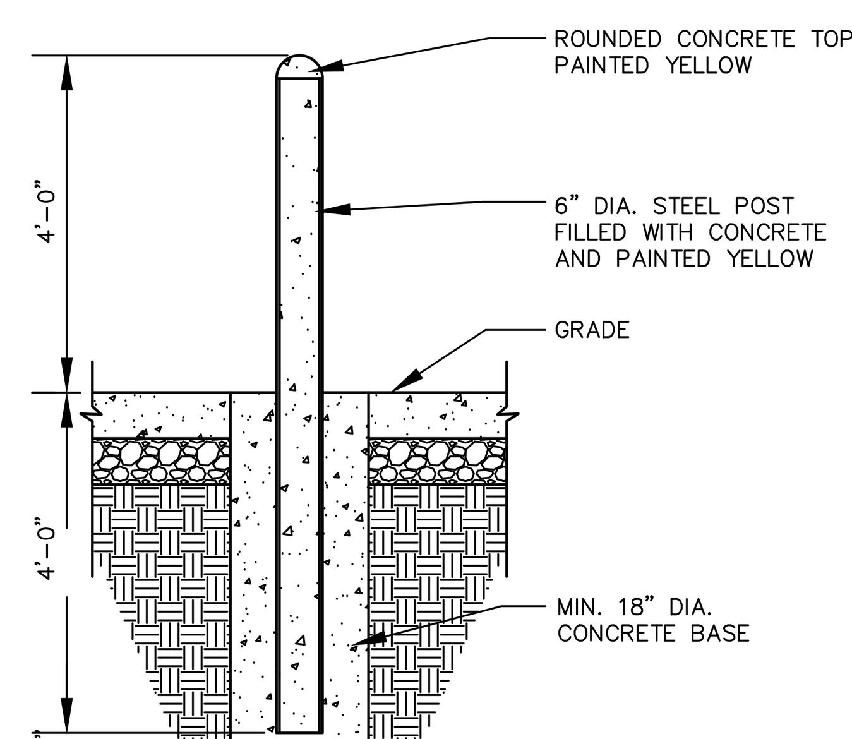
TRASH ENCLOSURE PLAN

N.T.S. BLSE-004



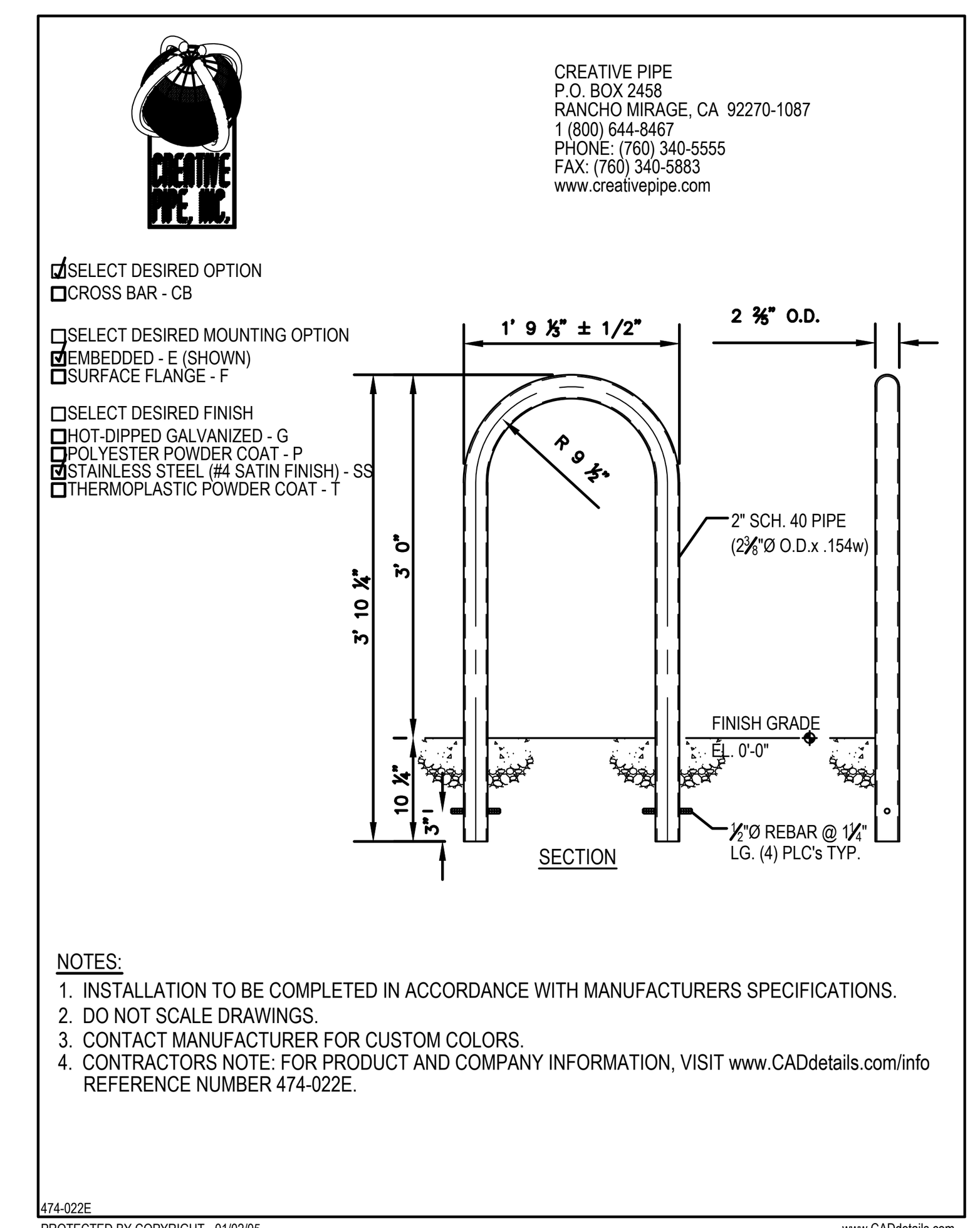
TRASH ENCLOSURE GATE (HALF SECTION)

N.T.S. BLSE-001



6" CONCRETE FILLED STEEL BOLLARD

N.T.S. BLSE-005


CREATIVE PIPE
P.O. BOX 2458
RANCHO MIRAGE, CA 92270-1087
1 (800) 644-8467
PHONE: (760) 340-5555
FAX: (760) 340-5883
www.creativepipe.com

☑ SELECT DESIRED OPTION
☐ CROSS BAR - CB

☐ SELECT DESIRED MOUNTING OPTION
☑ EMBEDDED - E (SHOWN)
☐ SURFACE FLANGE - F

☐ SELECT DESIRED FINISH
☐ HOT-DIPPED GALVANIZED - G
☐ POLYESTER POWDER COAT - P
☑ STAINLESS STEEL (#4 SATIN FINISH) - SS
☐ THERMOPLASTIC POWDER COAT - T

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. CONTACT MANUFACTURER FOR CUSTOM COLORS.
4. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION, VISIT www.CADdetails.com/info REFERENCE NUMBER 474-022E.

474-022E
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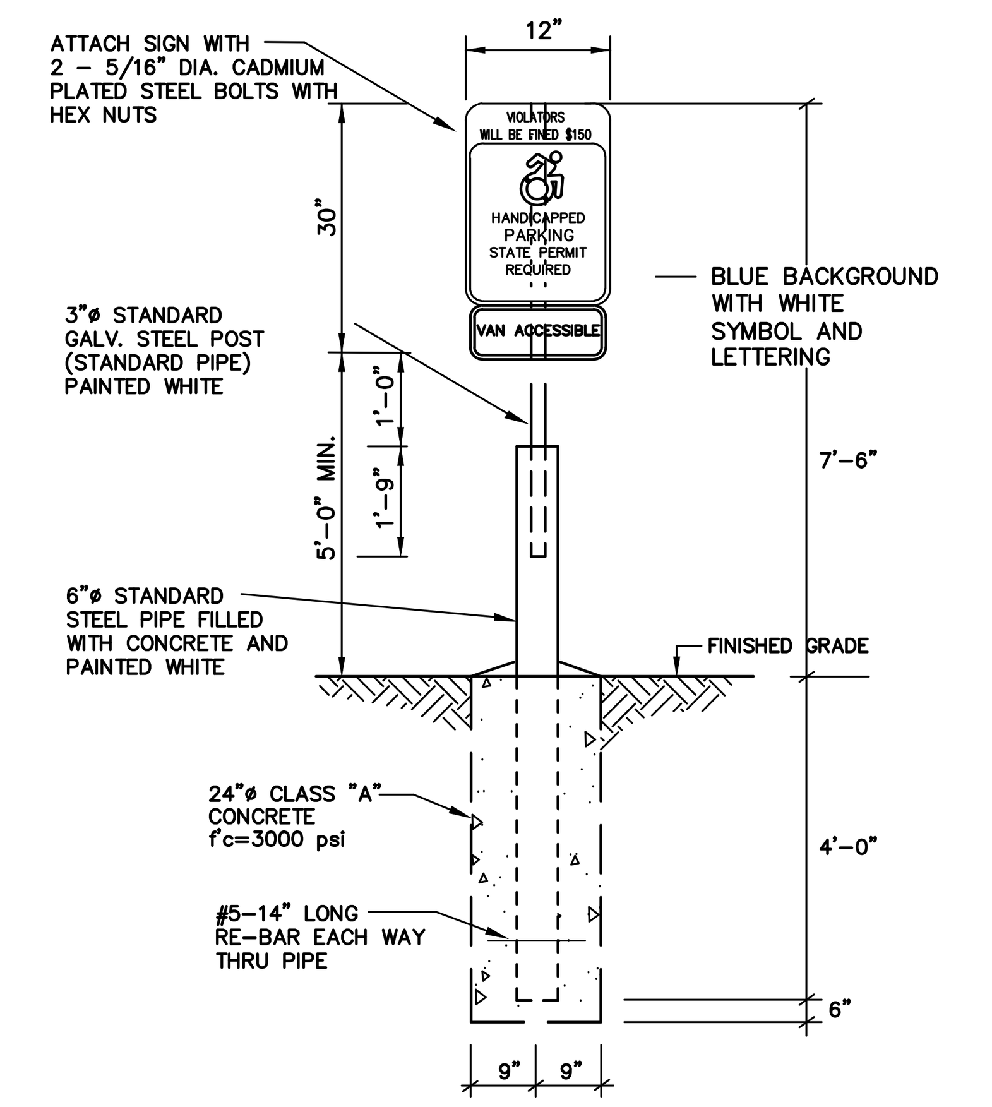
INVERTED 'U' BICYCLE RACK

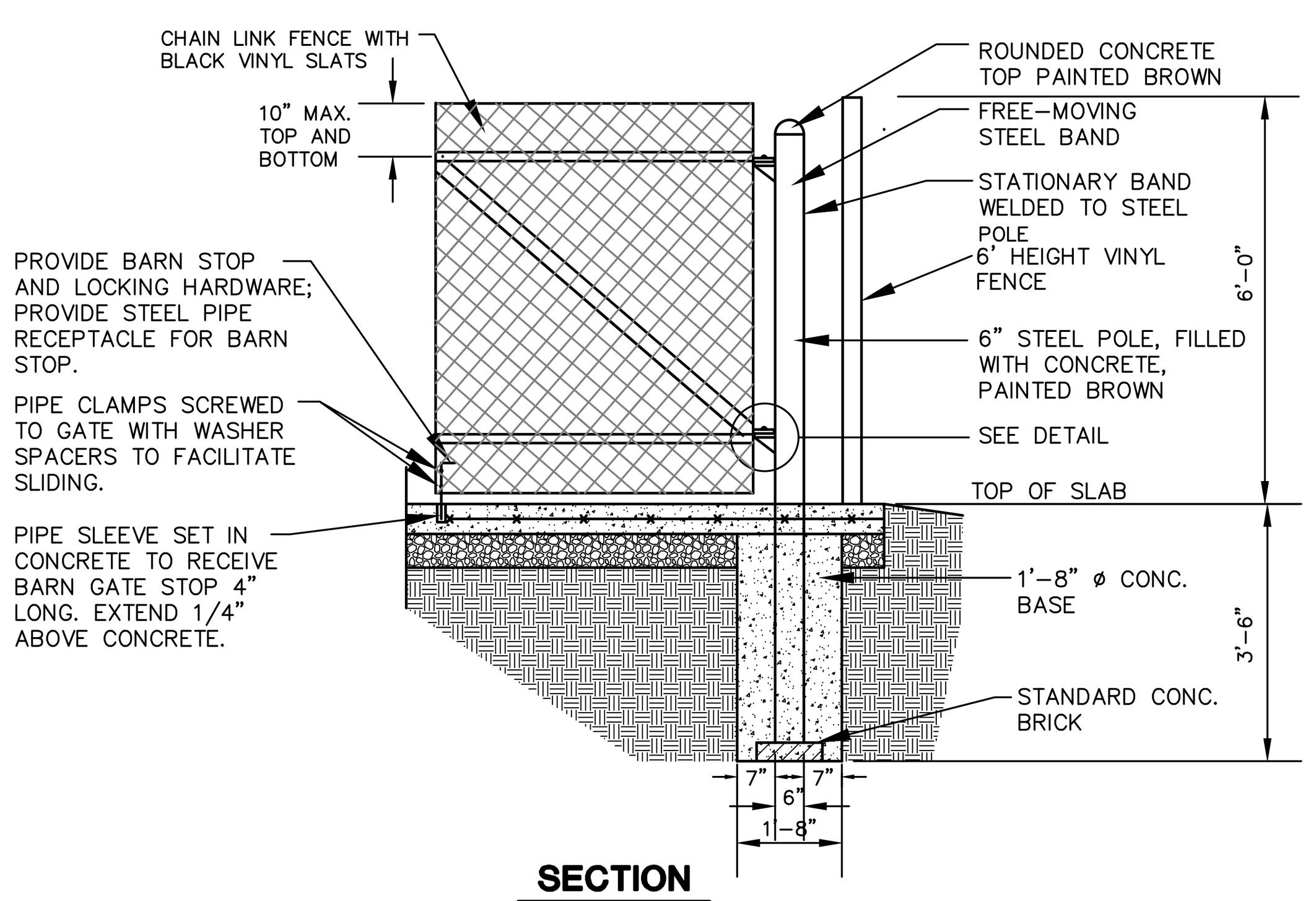
N.T.S.



NOTE: HANDICAP SYMBOL TO ADHERE TO STATE BUILDING CODE, LATEST EDITION

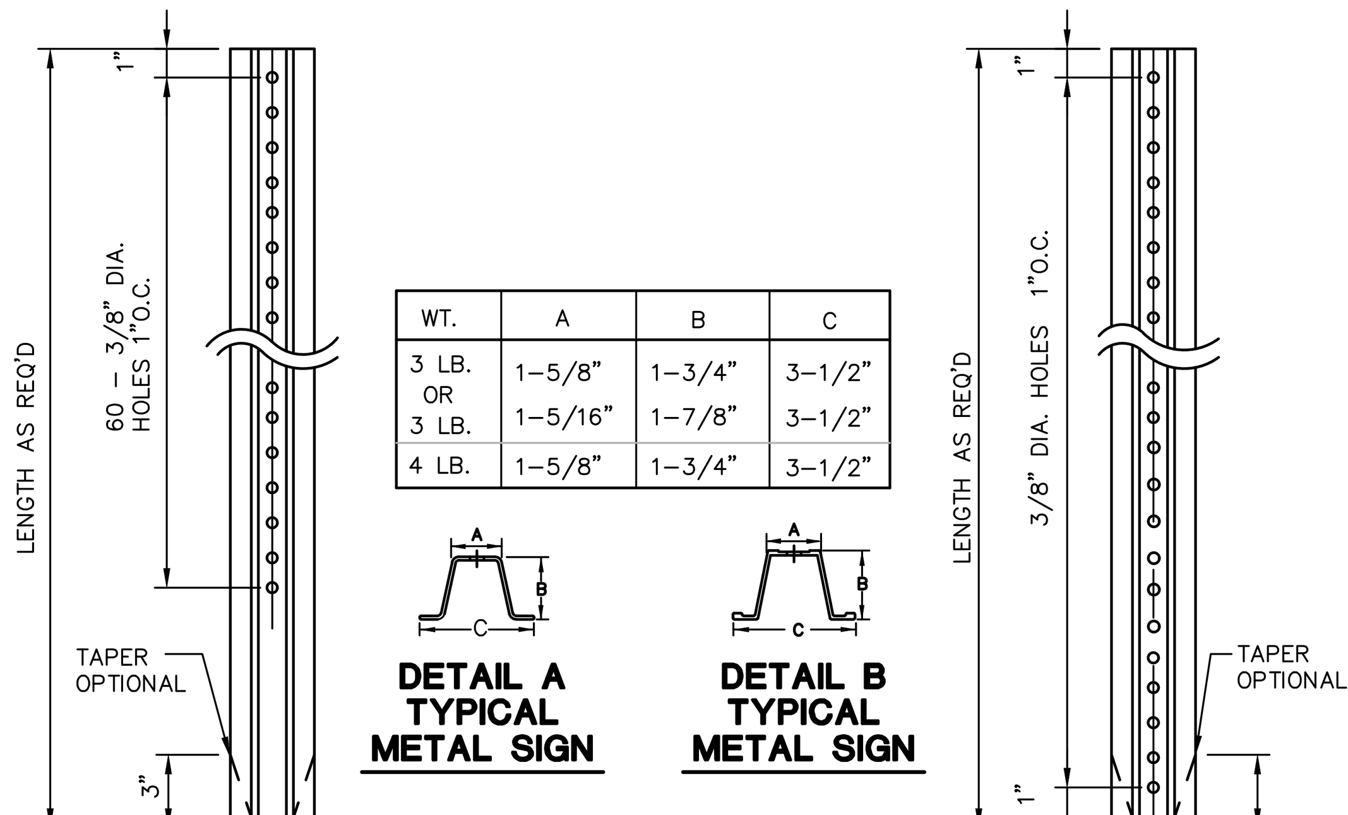
HANDICAP SIGN BOLLARD DETAIL

N.T.S



TRASH ENCLOSURE CHAIN LINK FENCE GATE

N.T.S. BLFD-001



WT.	A	B	C
3 LB.	1-5/8"	1-3/4"	3-1/2"
OR 3 LB.	1-5/16"	1-7/8"	3-1/2"
4 LB.	1-5/8"	1-3/4"	3-1/2"

DETAIL A HOLE LOCATION

DETAIL B HOLE LOCATION

NOTES:
STEEL FOR POSTS SHALL CONFORM TO THE MECHANICAL REQUIREMENTS OF ASTM A 499-81 GRADE 60 AND TO THE CHEMICAL REQUIREMENTS OF ASTM AI-76 CARBON STEEL TEE RAIL HAVING NOMINAL WEIGHT OF "91 LBS OR GREATER PER LINEAR YARD.

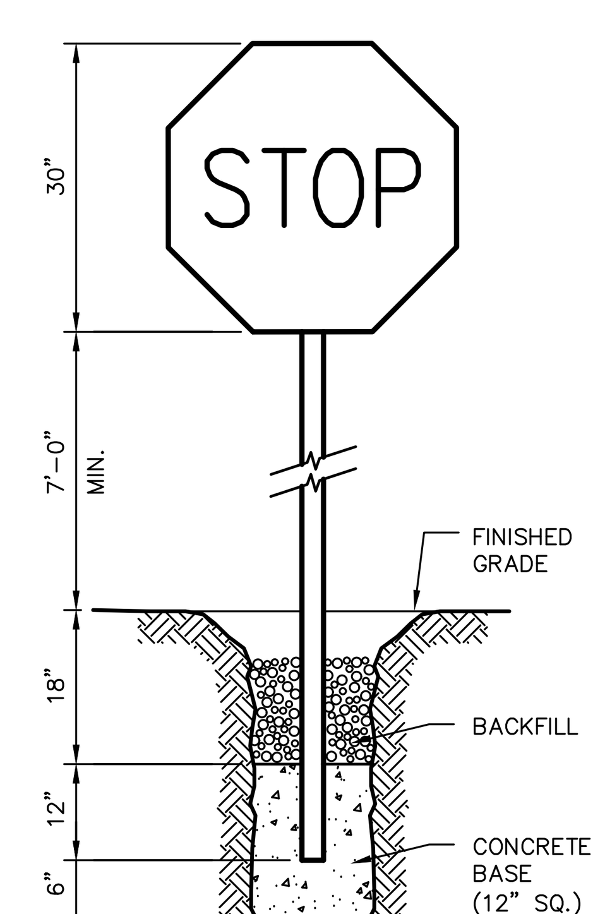
AFTER FABRICATION ALL STEEL POSTS SHALL BE GALVANIZED TO MEET THE REQUIREMENTS OF ASTM A-123.

SIGN MOUNTING HEIGHT TO BE APPROVED BY THE ENGINEER.

ALL SIGNS IN STATE ROW TO MEET CTDOT SPECIFICATIONS FOR BREAKAWAY SIGNS. SEE CTDOT STANDARD DETAIL SHEET "TYPICAL METAL SIGN POSTS AND SIGN MOUNTING DETAILS" AND CTDOT FORM 817

TYPICAL METAL SIGN POSTS

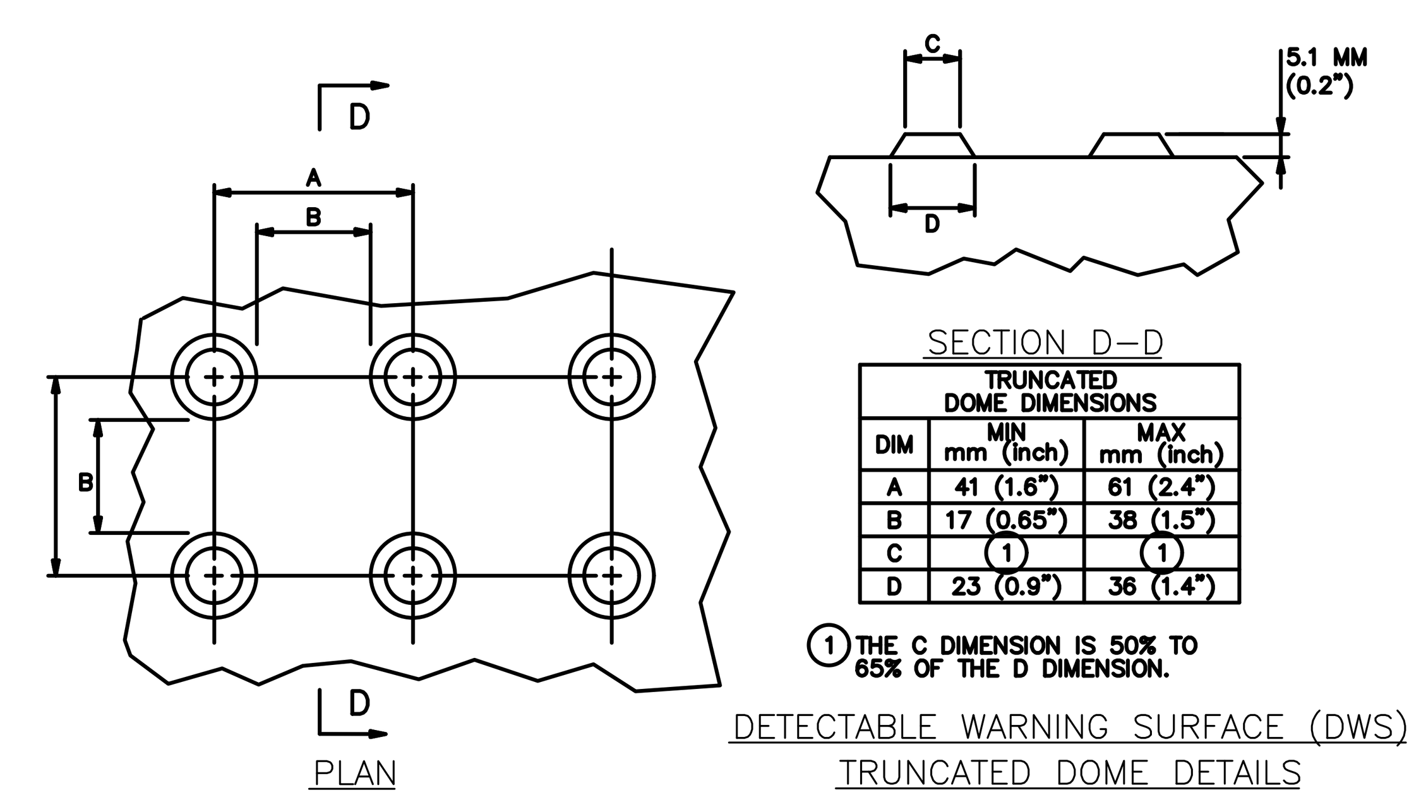
N.T.S. BLSD-001



NOTE:
CONSTRUCT SIGN IN ACCORDANCE WITH DOT SPECIFICATIONS.

STOP SIGN

N.T.S. BLSD-002



TRUNCATED DOME DIMENSIONS		
DIM	MIN mm (inch)	MAX mm (inch)
A	41 (1.6")	61 (2.4")
B	17 (0.65")	38 (1.5")
C	(1)	(1)
D	23 (0.9")	36 (1.4")

(1) THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

DETECTABLE WARNING SURFACE (DWS) TRUNCATED DOME DETAILS

1. ALIGN DETECTABLE WARNING DOMES ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN THE DOMES.
2. PROVIDE DETECTABLE WARNING SURFACES THAT CONTRAST (70%) IN LIGHT REFLECTANCE WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT OR SAFETY YELLOW.

DETECTABLE TRUNCATED DOME DETECTABLE WARNING SURFACE (DWS) AND X-SECT.

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BOLTON PLANNING AND ZONING COMMISSION, BOLTON, CT

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Architecture Engineering Environmental Land Surveying

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STATE OF CONNECTICUT — KIMBERLY ... — No. 0026020 — LICENSED PROFESSIONAL ENGINEER

PROPOSED RETAIL DEVELOPMENT

1100 BOSTON TURNPIKE
BOLTON, CONNECTICUT

REVISIONS

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1.	05/05/2021	REVISED PER TOWN COMMENTS

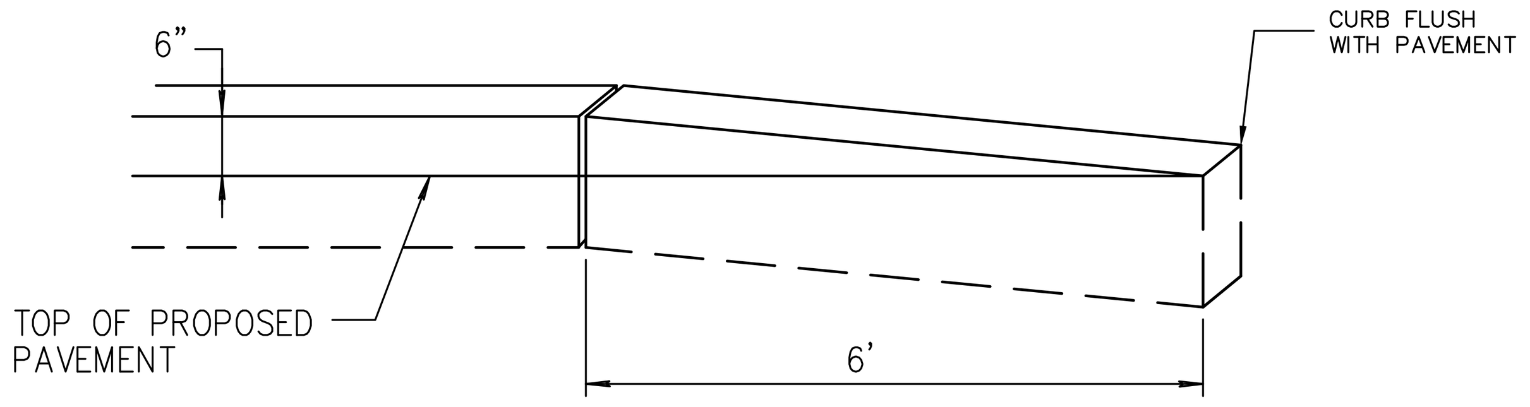
Designed	S.E.L.
Drawn	S.E.L.
Reviewed	K.M.M.
Scale	NONE
Project No.	2002032
Date	04/02/2021

CAD File: DN200203201

Title
DETAILS SHEET

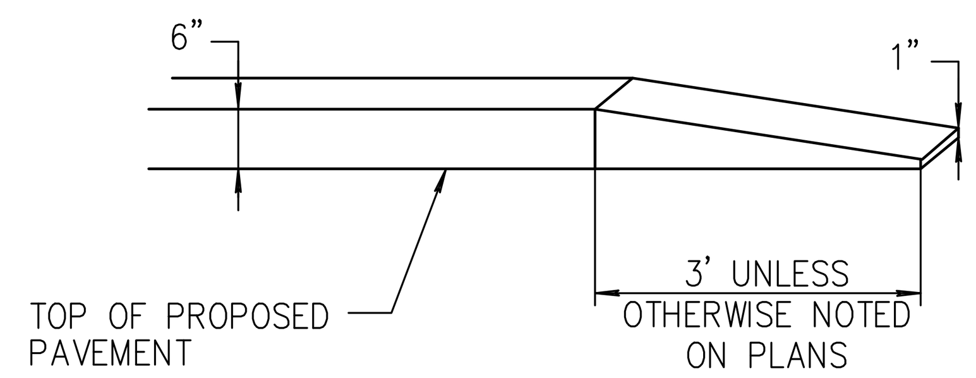
Sheet No.
DN-4

Xref (s): : (DETATCH Upon Opening) EAT_Revisions ; BD200203201



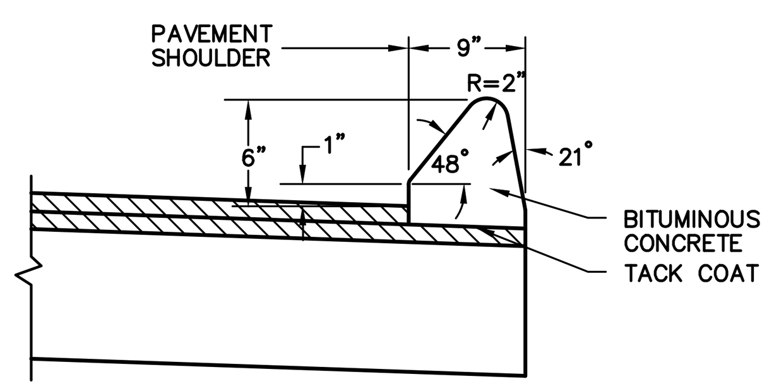
6' CONCRETE TRANSITION CURB

N.T.S.



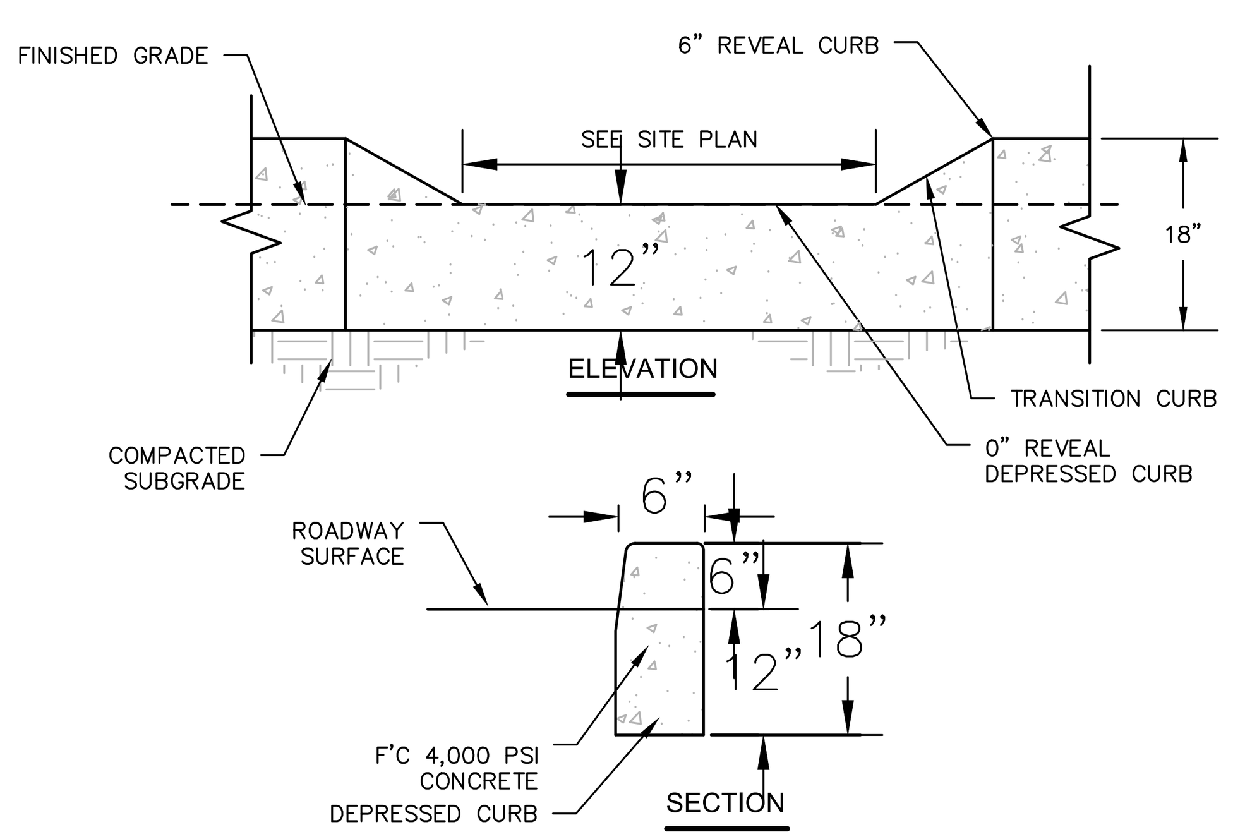
3' BITUMINOUS CONCRETE TRANSITION CURB

N.T.S.



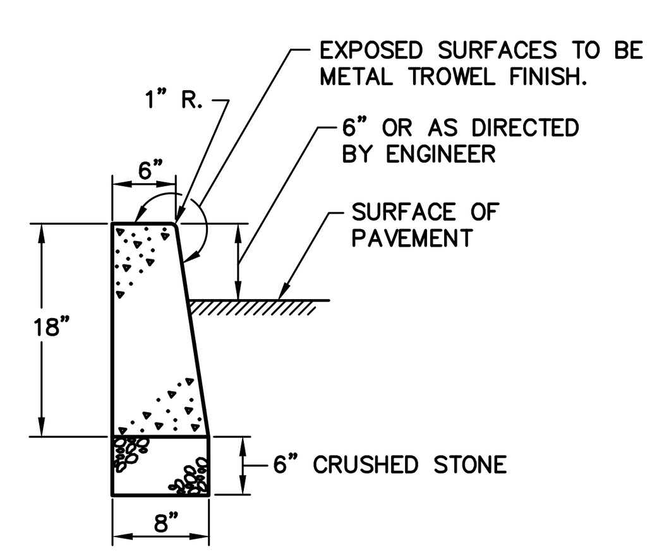
BITUMINOUS CONCRETE LIP CURBING

N.T.S.



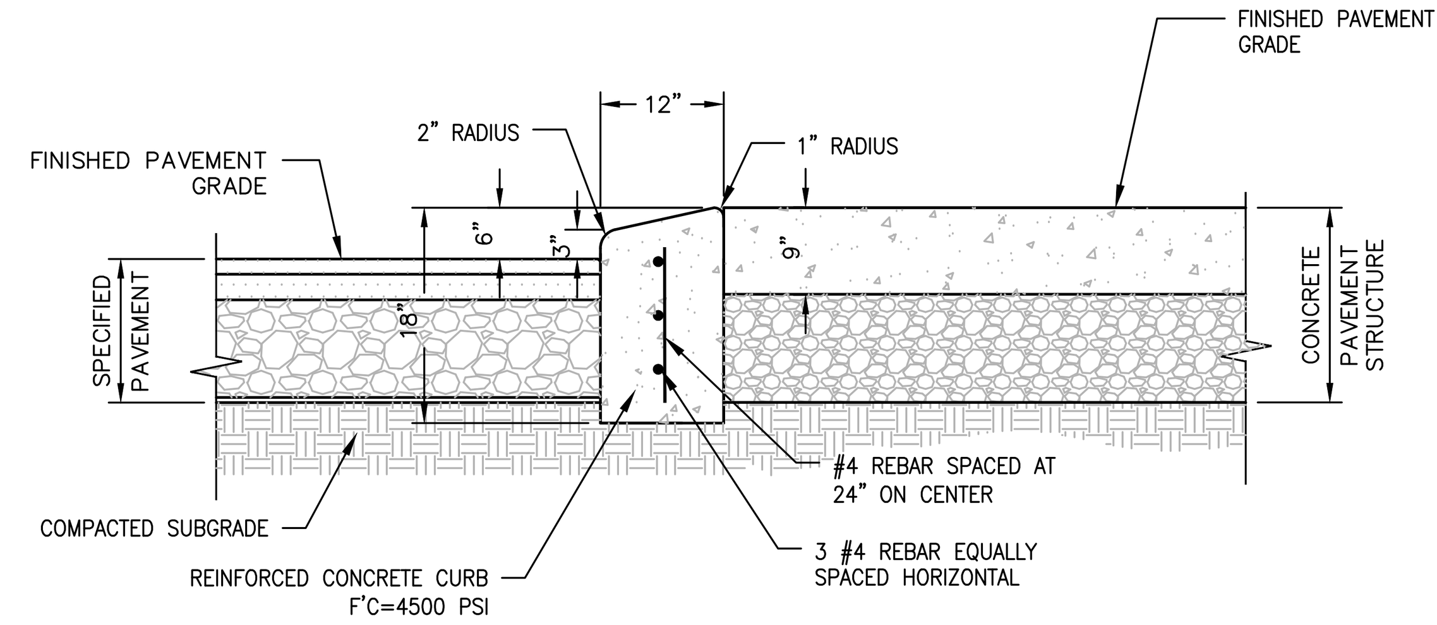
6" REVEAL DEPRESSED/ CONCRETE CURB

N.T.S.



CONCRETE CURB DETAIL

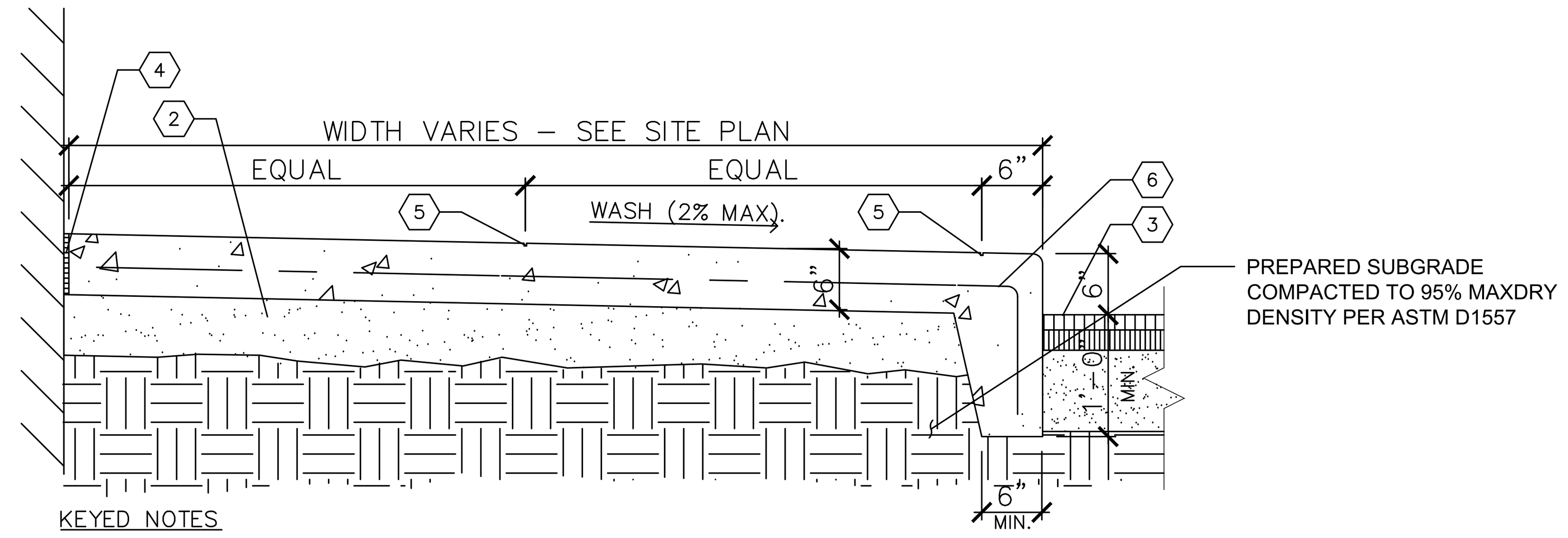
N.T.S. ZPC-014



NOTE:
CONTROL JOINTS TO BE LOCATED AT 10'-0" MAXIMUM SPACING.

MOUNTABLE CONCRETE CURB

N.T.S



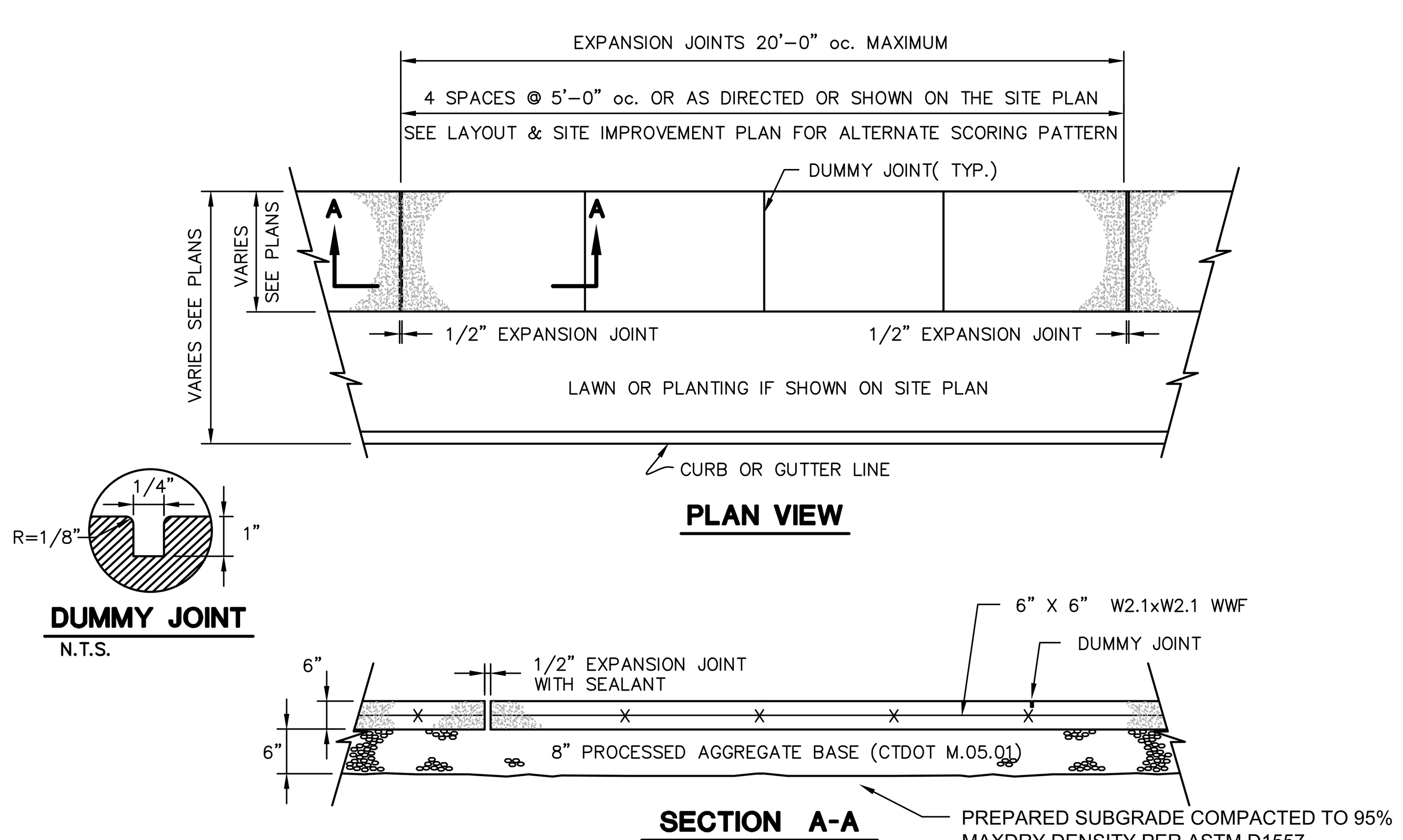
KEYED NOTES

1. N/A
2. 6" PROCESSED AGGREGATE BASE COURSE CTDOT M.05.01
3. PAVEMENT.
4. COMPRESSIBLE FILLER (3/4" MAXIMUM). CUT BACK AND PROVIDE SEALANT, TYPICAL, AT ALL JOINTS WITH FILLER.
5. 1/4" TOOLED JOINT
6. 6" X 6" W2.1 X 2.1 W.W.F.

NOTE: EXPANSION JOINT 20' O.C. MAXIMUM. 1/4" TOOL JOINT 5' O.C. OR AS DIRECTED. CONCRETE TO BE 4,000 P.S.I.

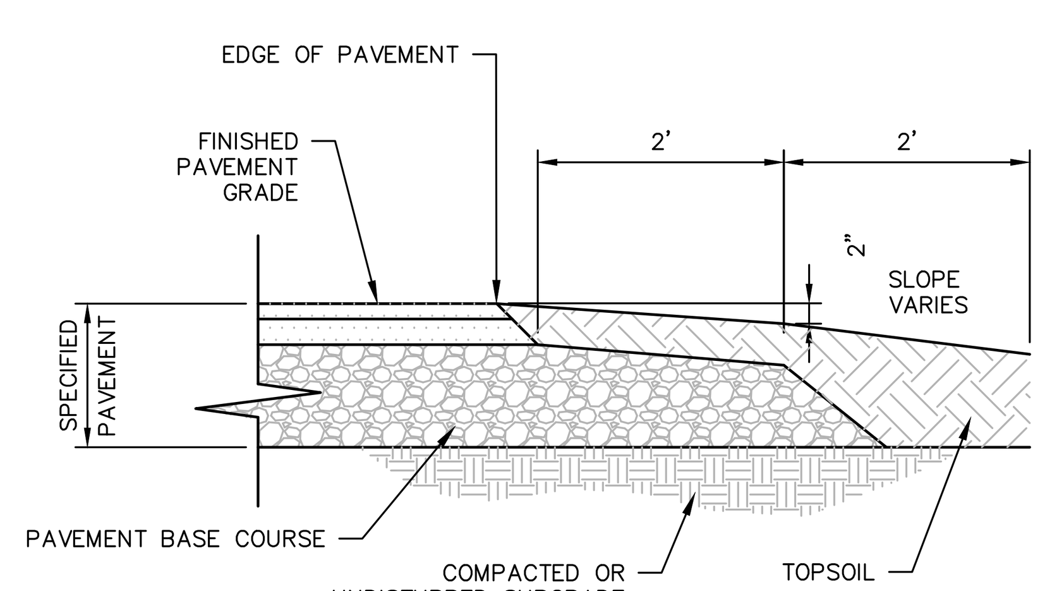
MONOLITHIC CONCRETE CURB AND SIDEWALK DETAIL

N.T.S. WAG



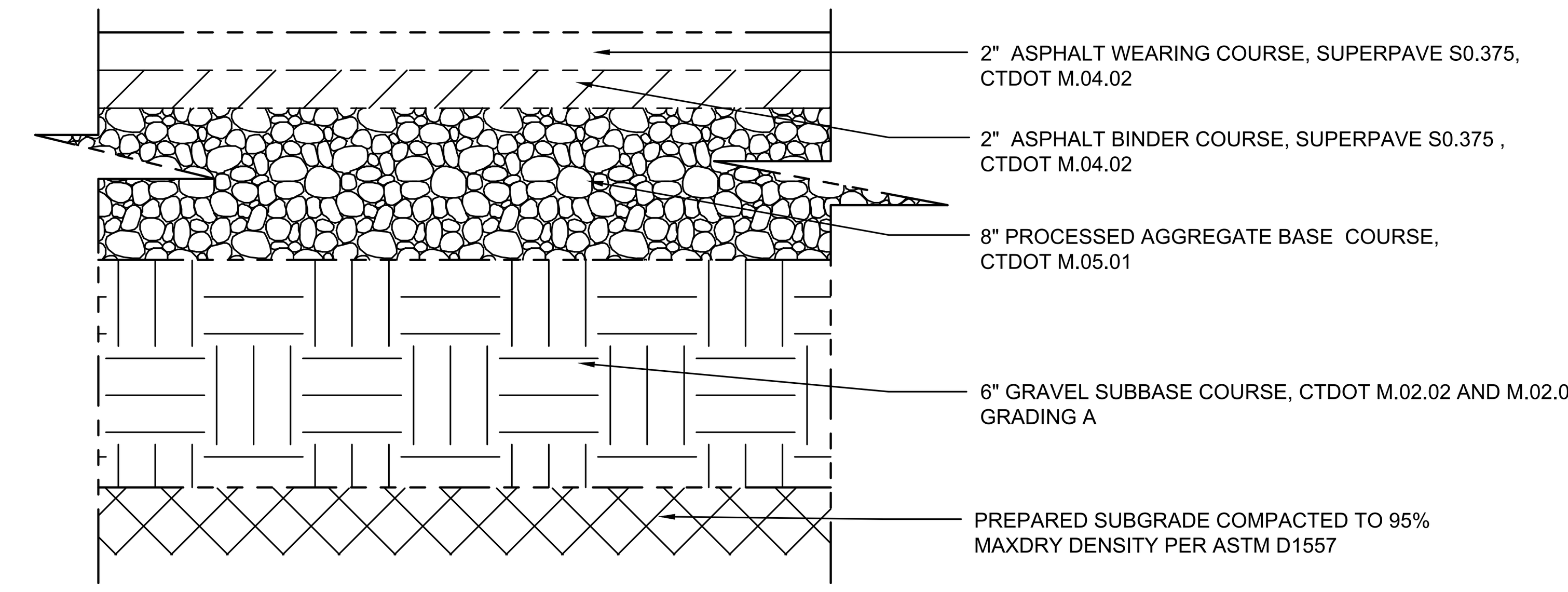
CONCRETE SIDEWALK DETAIL

N.T.S. BLSR-001



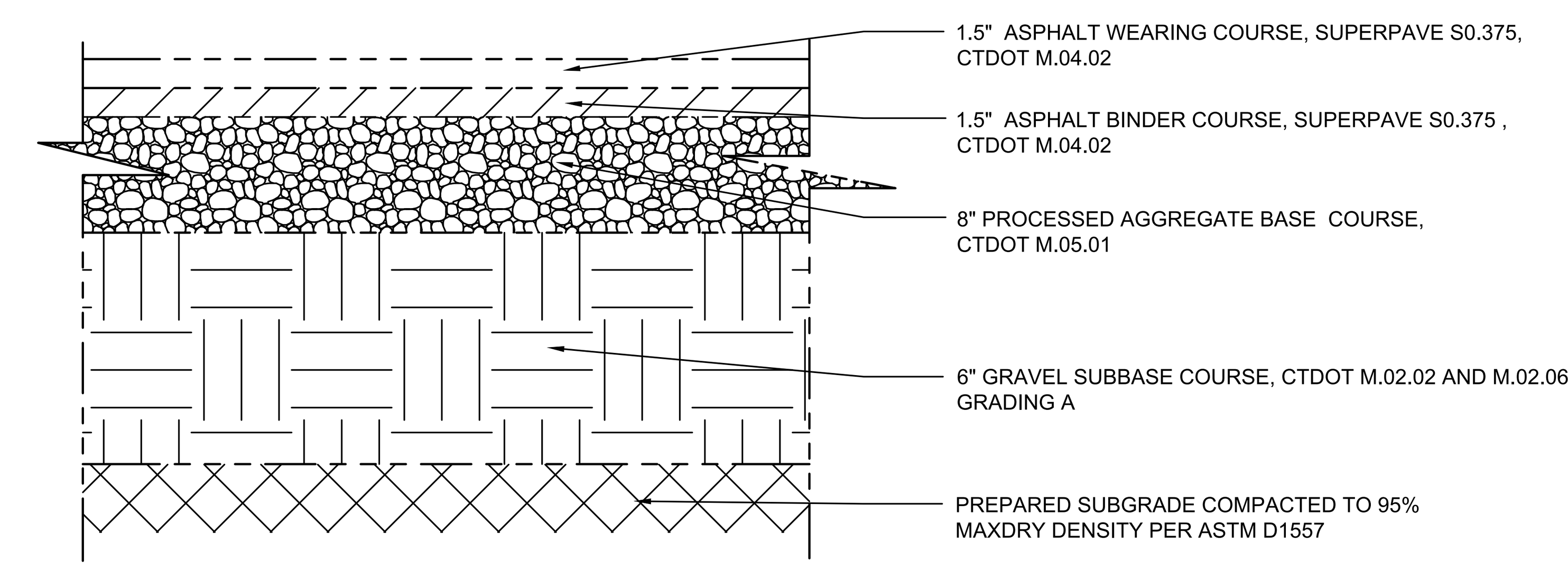
PAVEMENT END SECTION DETAIL

N.T.S



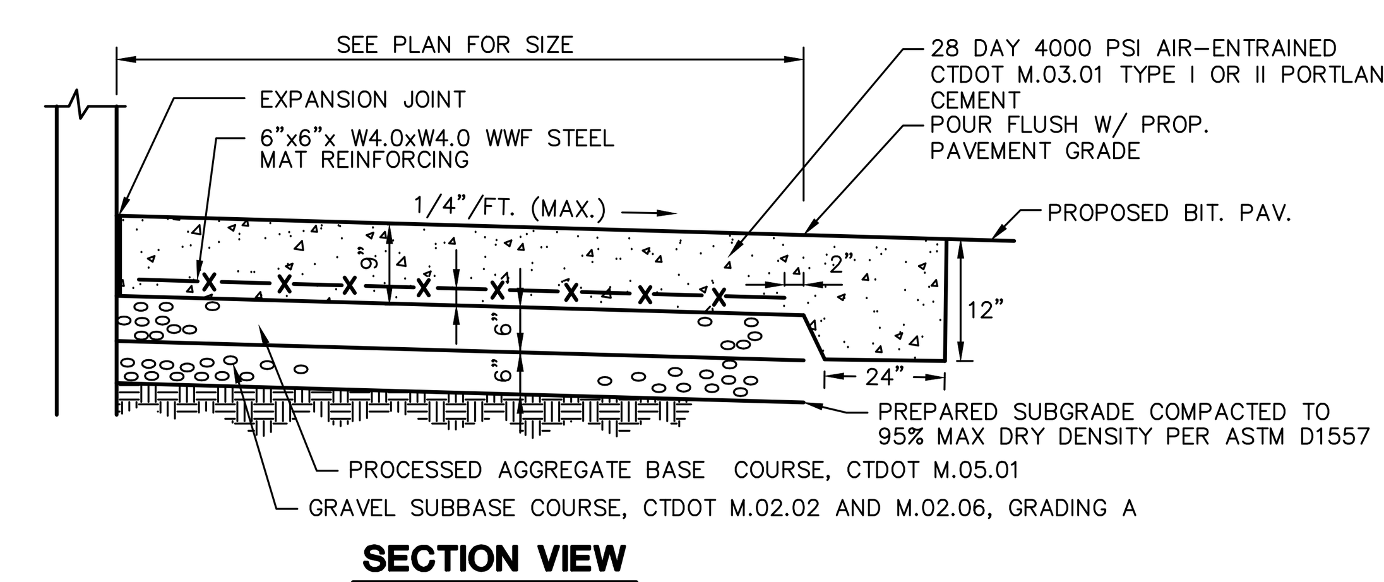
HEAVY DUTY BITUMINOUS CONCRETE PAVEMENT STRUCTURE DETAIL

N.T.S.



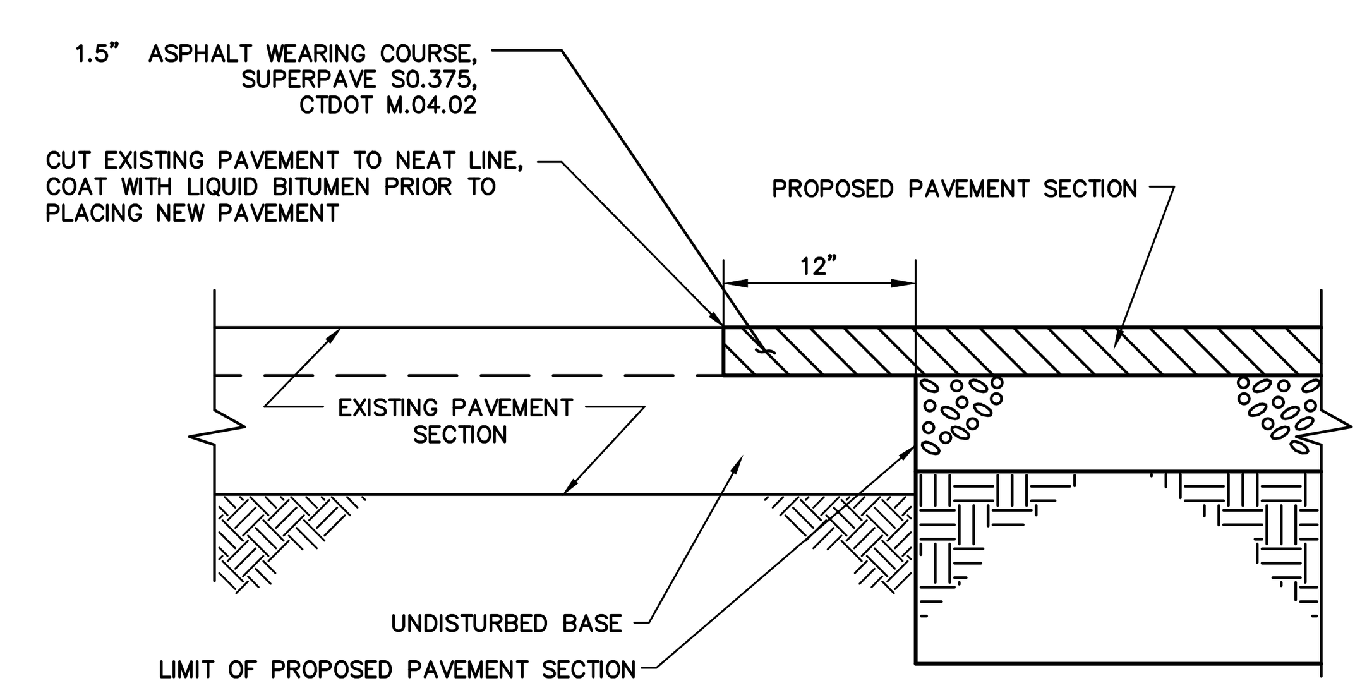
STANDARD DUTY BITUMINOUS CONCRETE PAVEMENT STRUCTURE DETAIL

N.T.S.



CONCRETE TRASH ENCLOSURE DUMPSTER PAD AND CONCRETE PAVEMENT

N.T.S. BLPC-002



EDGE OF PAVEMENT DETAIL

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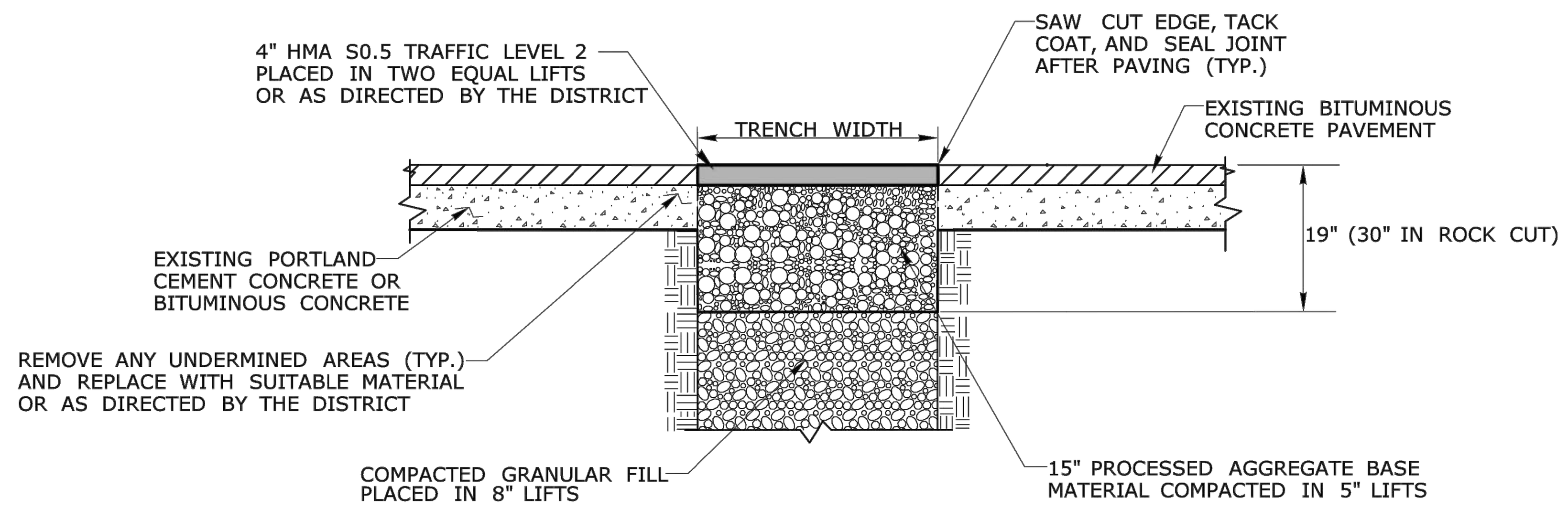
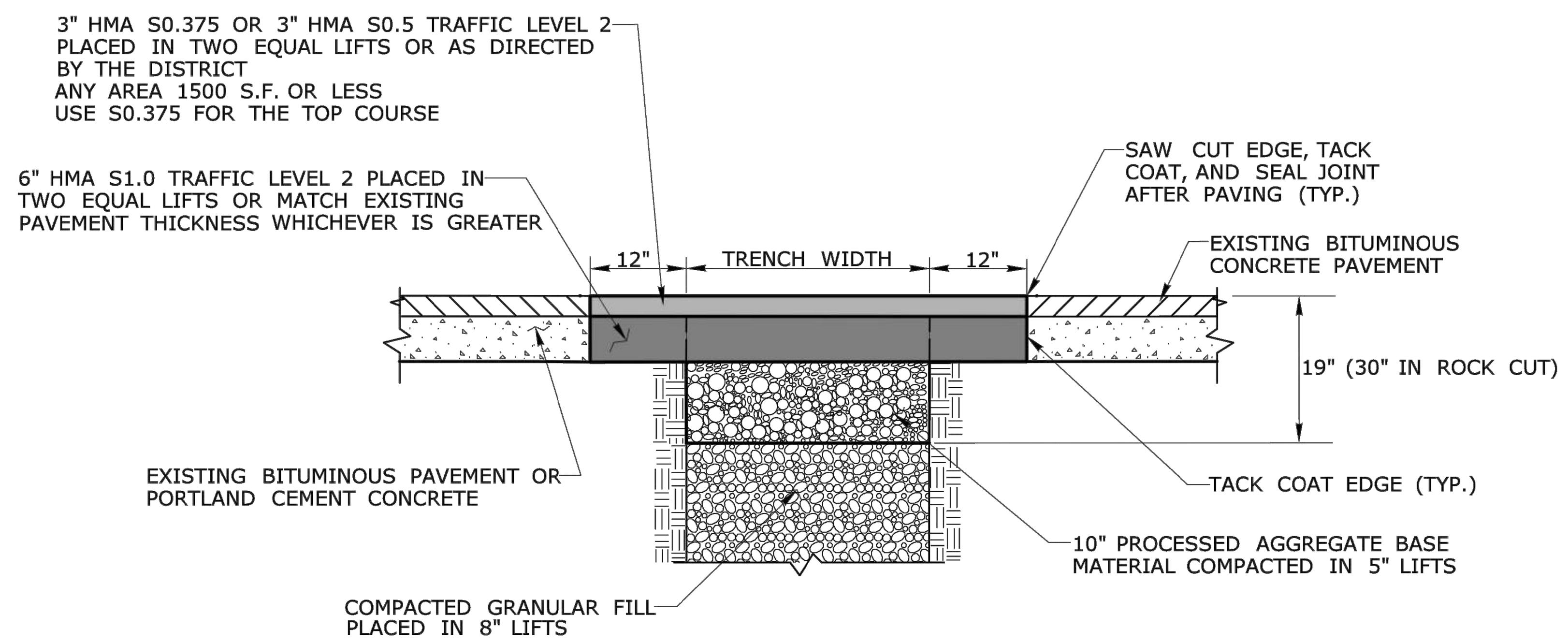
CAD File:	DN200203201

Title
DETAILS SHEET

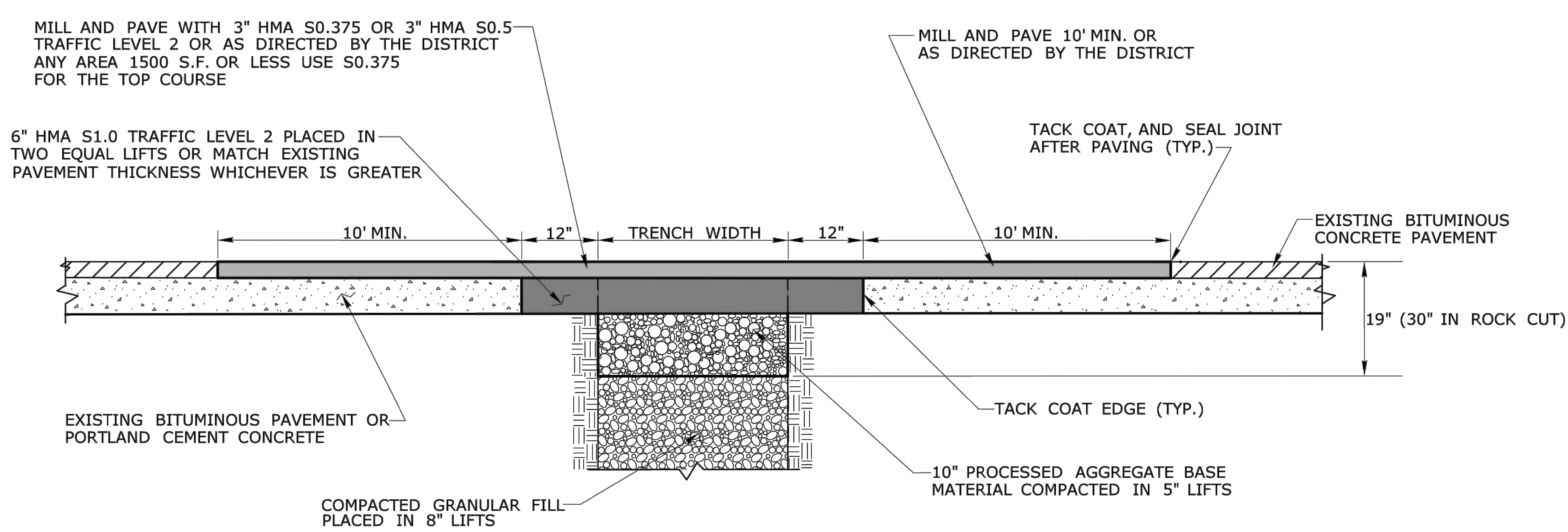
Sheet No.
DN-5



TEMPORARY PAVEMENT REPAIR FOR TRENCH THROUGH OVERLAID PORTLAND CEMENT CONCRETE OR BITUMINOUS CONCRETE PAVEMENT



PERMANENT PAVEMENT REPAIR WITHOUT MILLING - THROUGH PORTLAND CEMENT CONCRETE OR BITUMINOUS CONCRETE PAVEMENT



PERMANENT PAVEMENT REPAIR WITH MILLING

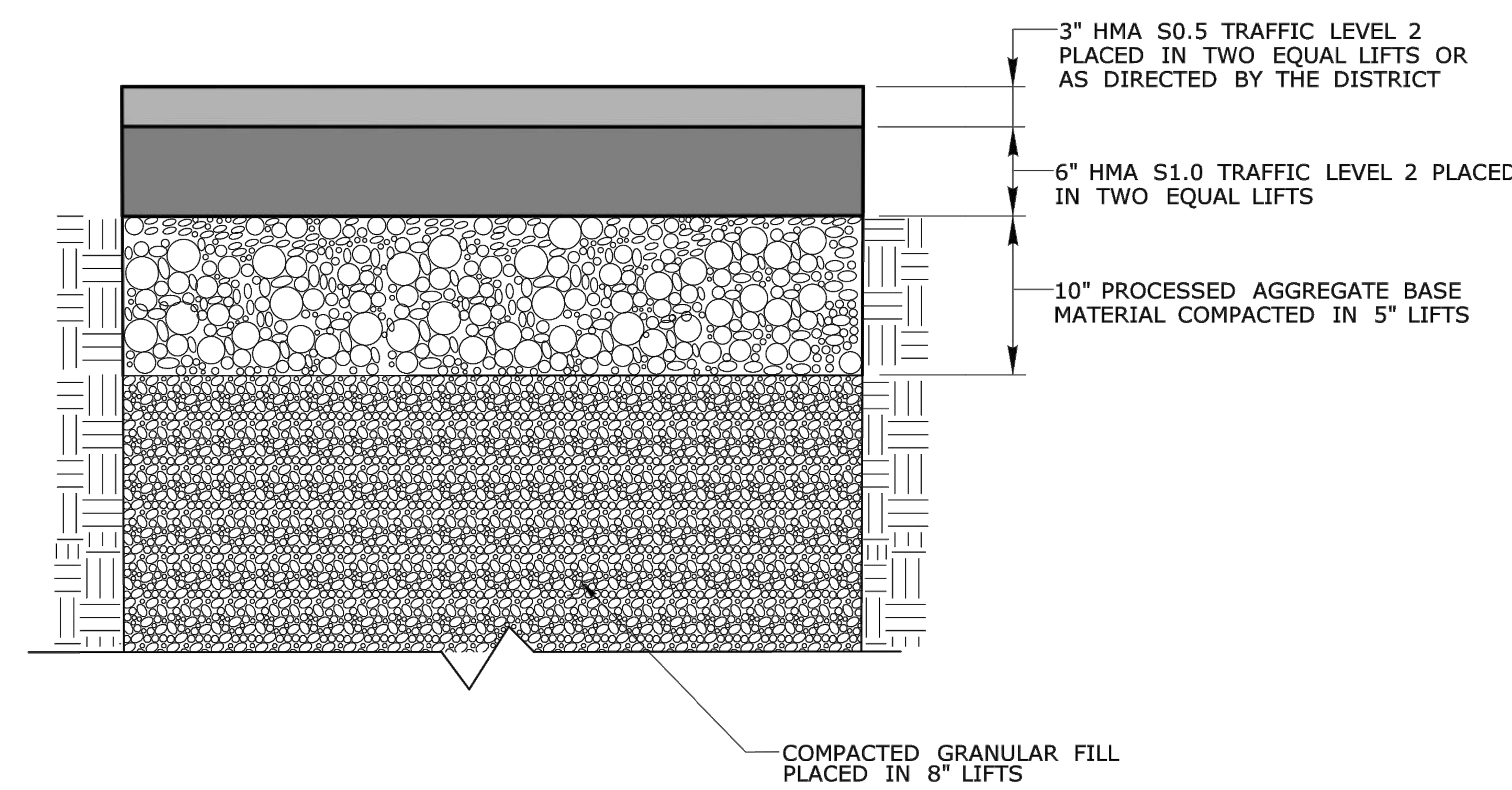
GENERAL NOTES:

1. LONGITUDINAL TRENCHING FOR JOINTED CONCRETE PAVEMENT:
   A. IF THE LONGITUDINAL TRENCH FALLS BETWEEN THE SLAB CENTERLINE AND THE EDGE OF SLAB, REMOVE CONCRETE AND BITUMINOUS CONCRETE PAVEMENT FROM THE TRENCH EDGE TO THE EDGE OF ROAD. IF THE LONGITUDINAL TRENCH FALLS BETWEEN THE LONGITUDINAL JOINT AND THE SLAB CENTERLINE, REMOVE THE ENTIRE CONCRETE SLAB AND BITUMINOUS CONCRETE PAVEMENT TO THE EDGE OF ROAD. IN EITHER CASE REBUILD WITH THE FOLLOWING:
      a. PLACE HMA S1.0 TRAFFIC LEVEL 2 IN TWO EQUAL 4" - 5" LIFTS TO MATCH EXISTING CONCRETE PAVEMENT THICKNESS
      b. PLACE HMA S0.5 TRAFFIC LEVEL 2 IN 2" - 3" LIFTS TO MATCH EXISTING BITUMINOUS CONCRETE PAVEMENT THICKNESS, WITH THE FINAL LIFT BEING 2"
2. TRANSVERSE TRENCHING FOR JOINTED CONCRETE PAVEMENT:

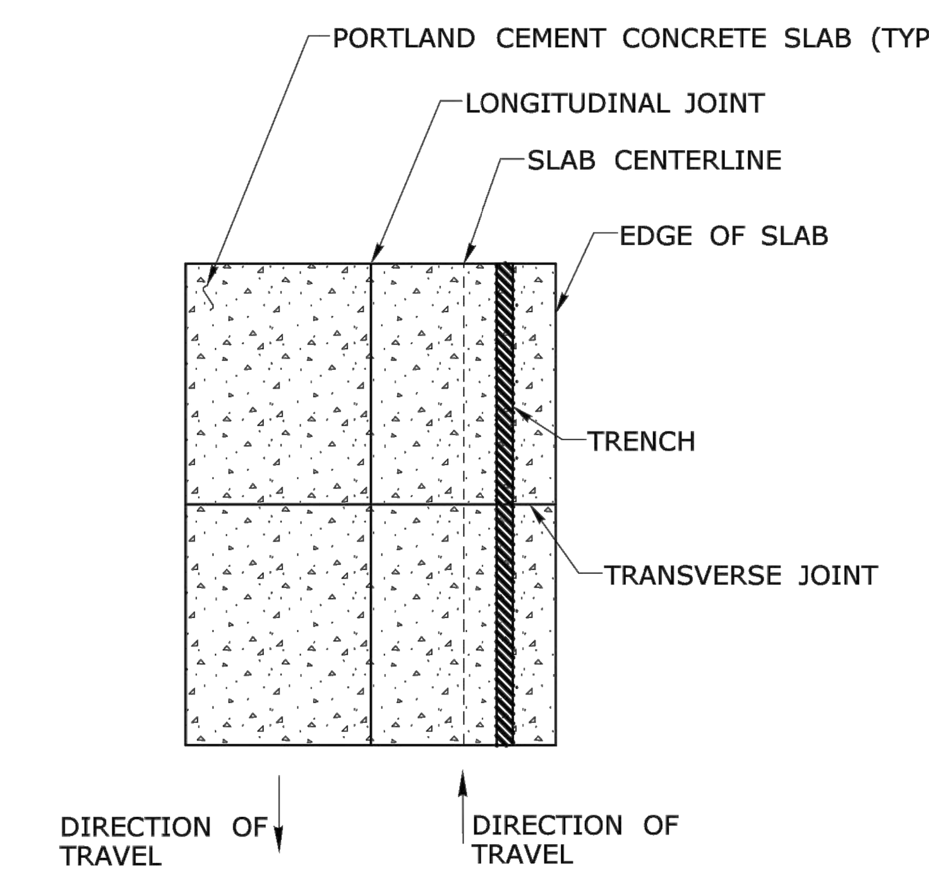
TABLE 1

TOTAL SLAB LENGTH (L)	MIN. LENGTH REMAINING
40' OR LONGER	1/4 L
15' - 40'	10'
15' OR SHORTER	REBUILD TO NEAREST JOINT

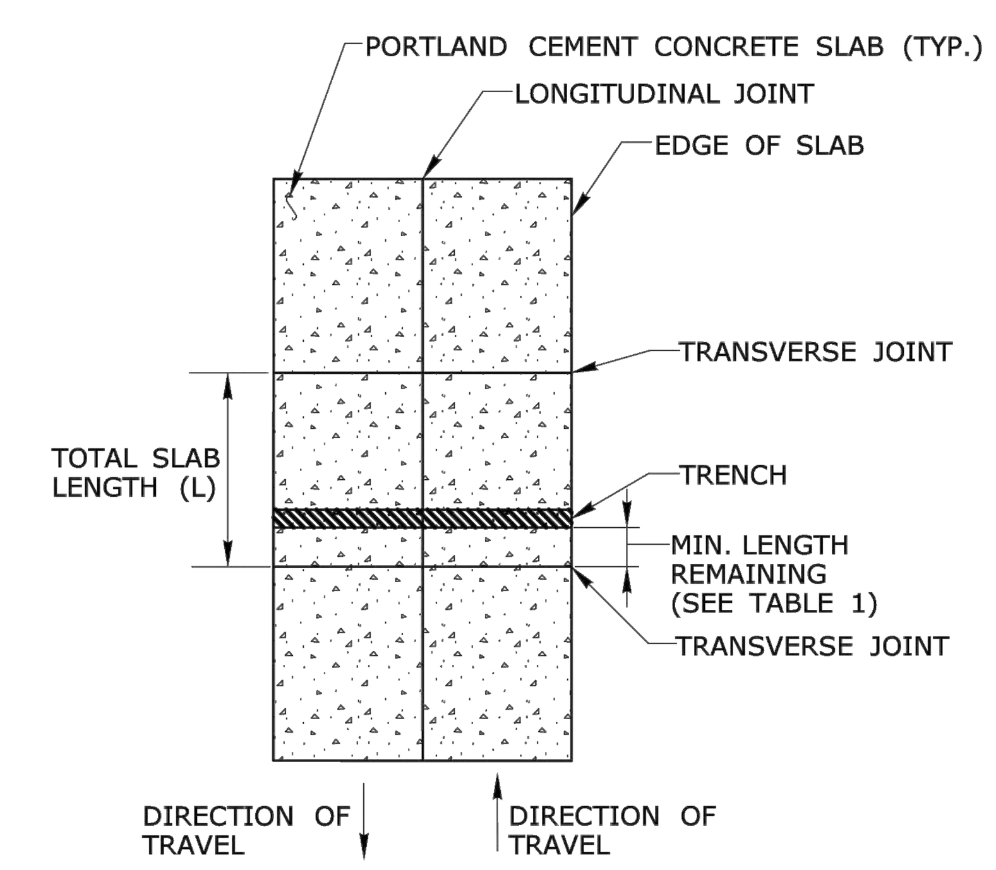
   A. FOR TRANSVERSE TRENCHES, THE MINIMUM SLAB LENGTH AS SHOWN IN TABLE 1 SHALL BE LEFT IN PLACE TO THE NEAREST TRANSVERSE JOINT. IF THIS CRITERIA CANNOT BE MET, THE EXISTING SLAB AREA FROM THE TRENCH EDGE TO THE NEAREST TRANSVERSE JOINT SHALL BE REMOVED AND REBUILT AS FOLLOWS:
      a. PLACE HMA S1.0 TRAFFIC LEVEL 2 IN TWO EQUAL 4" - 5" LIFTS TO MATCH EXISTING CONCRETE PAVEMENT THICKNESS
      b. PLACE HMA S0.5 TRAFFIC LEVEL 2 IN 2" - 3" LIFTS TO MATCH EXISTING BITUMINOUS CONCRETE PAVEMENT THICKNESS, WITH THE FINAL LIFT BEING 2"



ROADWAY PROFILE



LONGITUDINAL TRENCHING FOR JOINTED CONCRETE PAVEMENT
(SEE NOTE 1)



TRANSVERSE TRENCHING FOR JOINTED CONCRETE PAVEMENT
(SEE NOTE 2)

DRAFTER: MS / CHECKED BY: EL / NO SCALE	HIGHWAY OPERATIONS	OFFICE OF MAINTENANCE OPERATIONS SPECIAL SERVICES AND PLANNING	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	DRAWING TITLE: ENCROACHMENT PERMIT - PAVEMENT REPAIR

BOLTON PLANNING AND ZONING COMMISSION, BOLTON, CT

DATE APPROVED ______ DATE OF EXPIRATION ______

______ CHAIRMAN

THE STATUTORY FIVE-YEAR PERIOD FOR COMPLETION OF ALL PHYSICAL IMPROVEMENTS EXPIRES ON ______

FOR PERMITTING PURPOSES ONLY
NOT RELEASED FOR CONSTRUCTION

Architecture Engineering Environmental Land Surveying
BL Companies
100 Constitution Plaza
10th Floor
Hartford, CT 06103
(860) 249-2200
(860) 249-2400 Fax

PROPOSED RETAIL DEVELOPMENT
1100 BOSTON TURNPIKE
BOLTON, CONNECTICUT

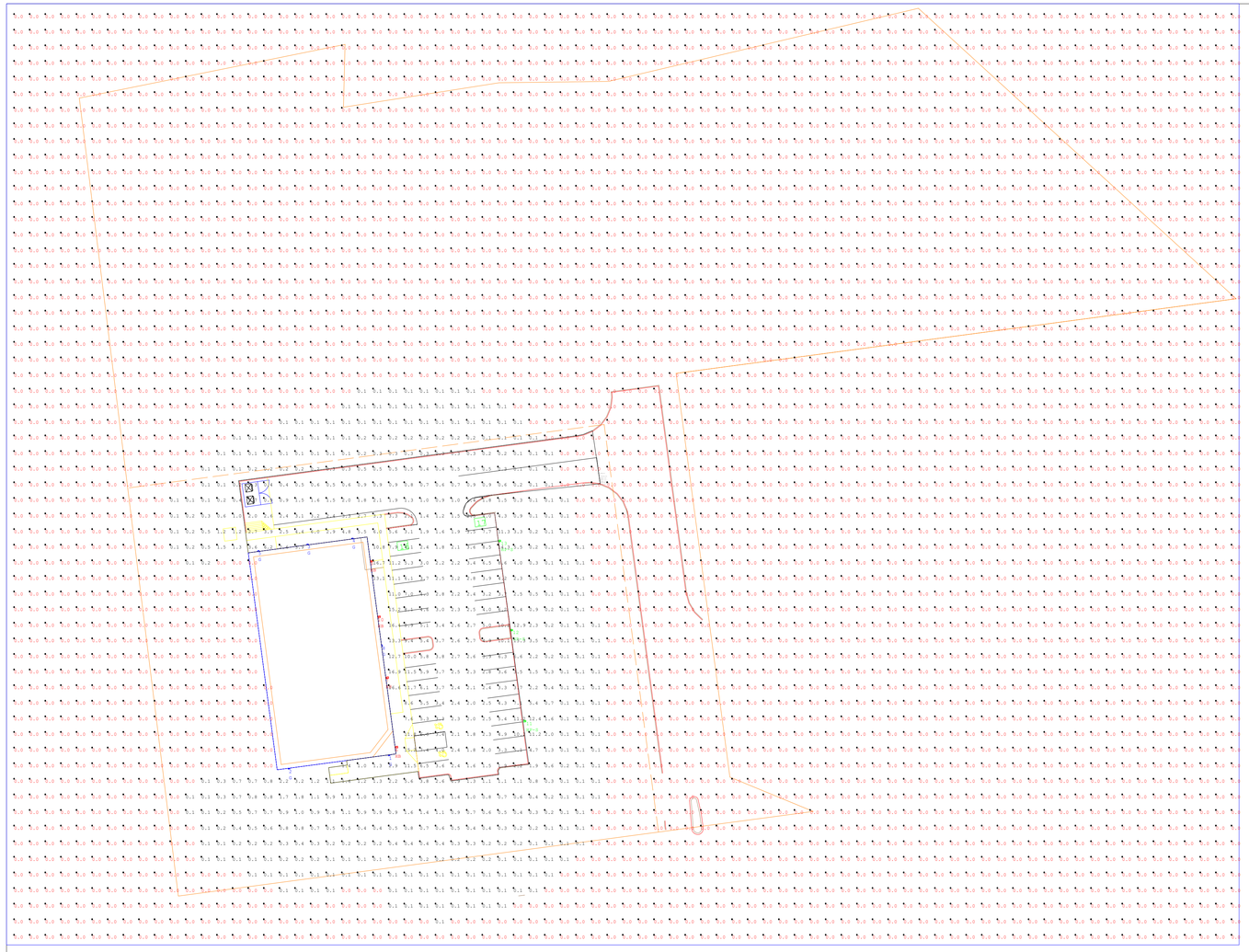
REVISIONS

No.	Date	Desc.
1.	03/05/2021	REVISED PER TOWN COMMENTS

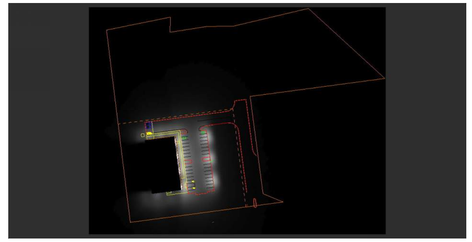
Designed	S.E.L.
Drawn	S.E.L.
Reviewed	K.M.M.
Scale	NONE
Project No.	2002032
Date	04/02/2021
CAD File:	DN200203201

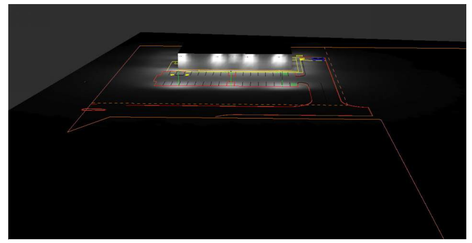
Title
DETAILS SHEET

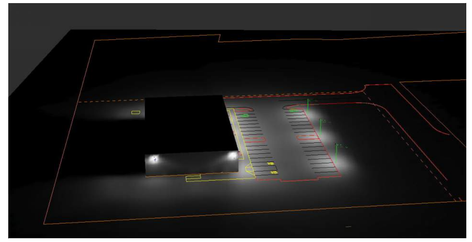
Sheet No.
DN-6

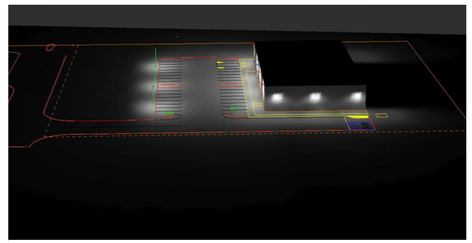


Luminaire Location Summary		
LumNo	Label	Z
1	G	16.5
2	G	16.5
3	G	12
4	G	12
5	G	12
6	HB	16.5
7	HB	16.5
8	G	16.5
9	HB	16.5
10	HB	16.5
11	HP-S	17
12	HP-S	17
13	HP-S	17









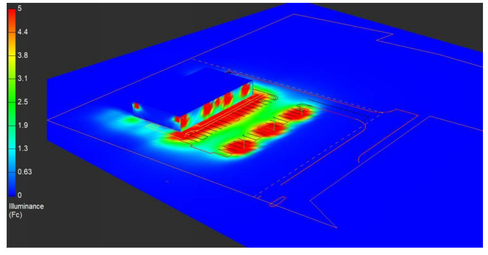
Luminaire Schedule						
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
	3	HP-S	SINGLE	13632	0.950	LEDS-1210-S - Single Pole Mt 150w, Type 4, 5K, Shielded
	4	HB	SINGLE	19188	0.950	LEDS-AL120 - Wall Mt, 150w, Type 4, 5K
	6	G	SINGLE	4740	0.950	LEDBG42W001B-5000K - Wall Pack, 42W, Full Cutoff, 5K

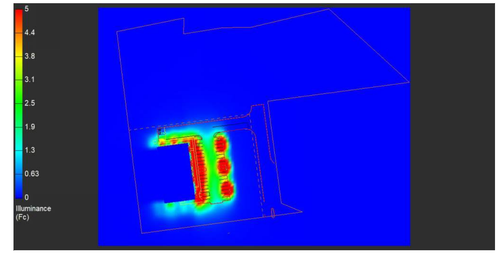
Calculation Summary								
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Site	Illuminance	Fc	0.24	16.9	0.0	N.A.	N.A.
Parking Lot	Illuminance	Fc	3.75	16.9	0.0	N.A.	N.A.

Notes:

Plan Notes:
Calculations at Ground Level (10' x 10' Grid Spacing). Refer to luminaire location summary for mounting heights of each fixture. Pole mounted fixtures include a 2ft concrete base. Mounting heights indicated on luminaire location summary is a total A.F.G. height.

General Notes:
Due to changing lighting ordinances it is the contractors resposibility to submit the site photometrics & luminaire specs to the local inspector before ordering to ensure this plan complies with local lighting ordinances. This lighting design is based on information supplied by others. Changes in electrical supply, area geometry & objects within the lighted area may produce illumination values different from the predicted results shown on this layout. This layout is based on .IES files that were lab tested or computer generated, actual results may vary.





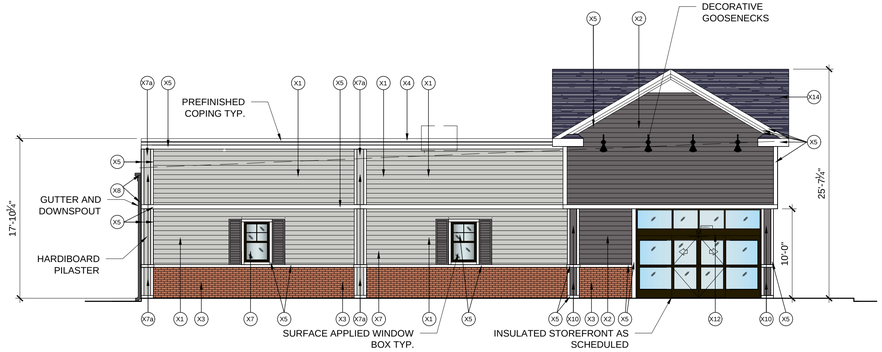
LEDS LLC

#	Date	Comments

Revisions

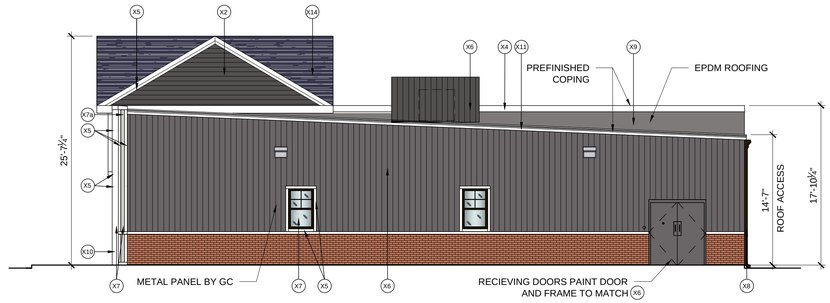
Drawn By: BMF, LC
Checked By:
Date:3/29/2021
Scale:

Bolton CT 23232



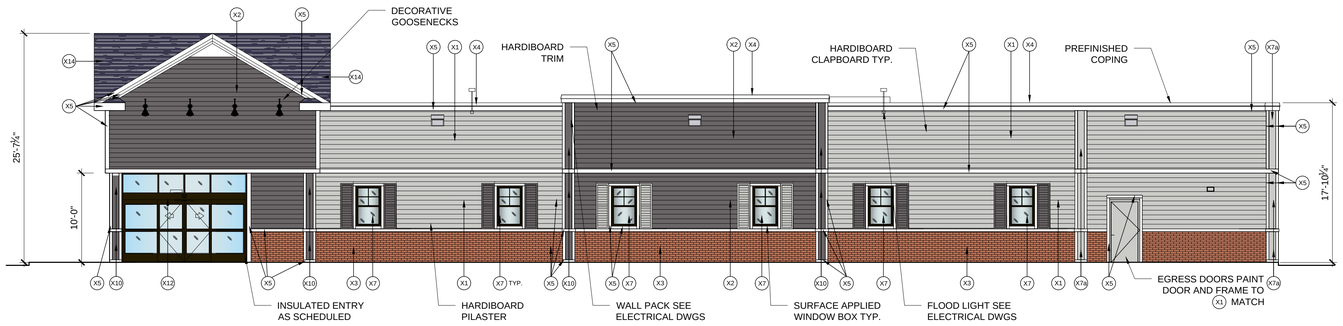
1 PROPOSED SIDE ELEVATION (BOSTON TURNPIKE RT 44)

SCALE: 3/16"-1'-0"



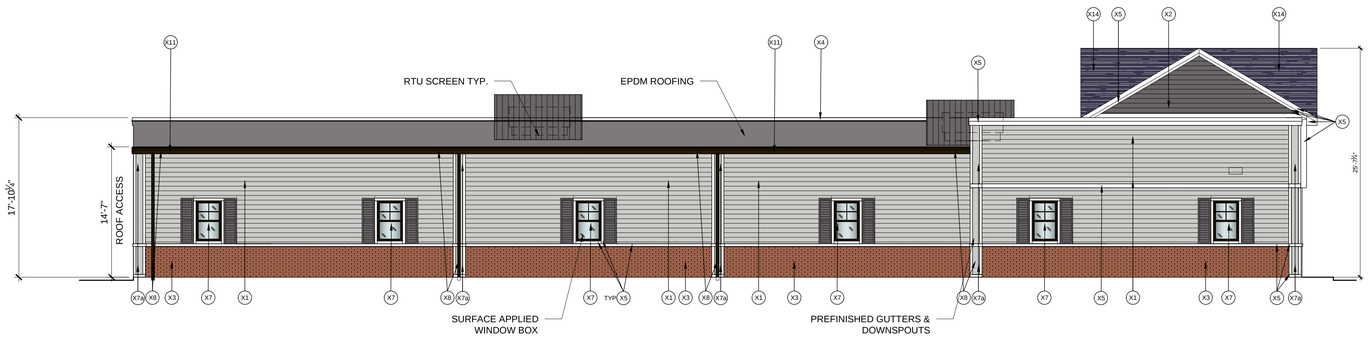
2 PROPOSED SIDE ELEVATION

SCALE: 3/16"-1'-0"



3 PROPOSED FRONT ELEVATION

SCALE: 3/16"-1'-0"



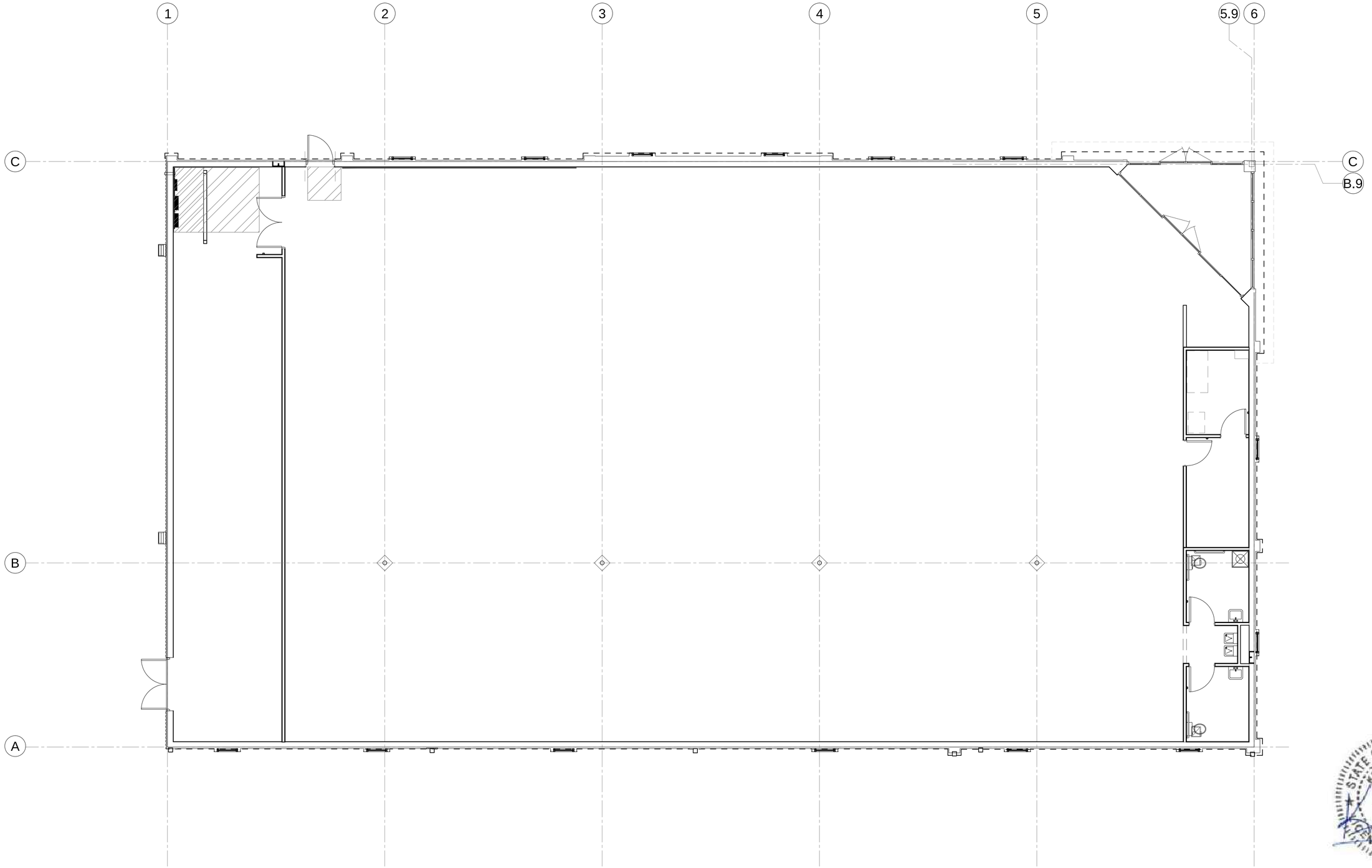
4 PROPOSED REAR ELEVATION

SCALE: 3/16"-1'-0"

EXTERIOR FINISH SCHEDULE

TAG	MATERIAL/ MFG.	COLOR/ NO.	NOTES
X1	HARDIEE-PLANK LAP SIDING	COLOR: PEARL GRAY	PRE-FINISHED; 6" EXPOSURE
X2	HARDIEE-PLANK LAP SIDING	COLOR: NIGHT GRAY	PRE-FINISHED 6" EXPOSURE
X3	VEE BRICK	COLOR: TAVERN FLASH	
X4	METAL COPING	COLOR: WHITE	PRE-FINISHED
X5	HARDIE-BOARD TRIM	COLOR: WHITE TO MATCH X4	COPING BY GC PRE-FINISHED
X6	METAL WALL PANEL	COLOR: CHARCOAL GRAY O.A.E.	PRE-FINISHED
X7	SURFACE APPLIED STOREFRONT	COLOR: DARK BRONZE	LIGHT GRAY SPANDREL
X7a	HARDIE-BOARD TRIM	COLOR: TO MATCH X1	PAINTED
X8	GUTTER & DOWNSPOUT	COLOR: DARK BRONZE	PRE-FINISHED
X9	EPDM ROOF	COLOR: DARK GRAY	PRE-FINISHED
X10	HARDIE-BOARD TRIM	COLOR: TO MATCH X2	PAINTED
X11	METAL COPING	COLOR: CHARCOAL GRAY	PRE-FINISHED
X12	INSULATED SLIDING ENTRY DOORS	COLOR: DARK BRONZE	PRE-FINISHED
X13	METAL DOOR & FRAME	COLOR: TO MATCH X2	PAINTED
X14	ARCH ASPHALT SHINGLES	COLOR: PEWTER GREY	GAF TIMBERLINE

BKA ARCHITECTS
Boston + Brockton
142 Crescent Street
Brockton, MA 02302
508.583.5603
bkaarchitects.com



1 PROPOSED FLOOR PLAN

SCALE: 3/16"-1'-0"

STATE OF CONNECTICUT
KEVIN L PATON
No. 13489
LICENSED ARCHITECT

Conceptual Floor Plan

Bolton, CT Retail Building Conceptual Scheme
1100 Boston Turnpike Bolton ,CT

Prepared For Garrett Homes

SCALE: NOTED
31, March 2021

1 OF 1
DRAWN BY: DSG
PROJECT NO: 221003

BKA ARCHITECTS
Boston + Brockton
142 Crescent Street
Brockton, MA 02302
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Stormwater Management Narrative and Hydrologic Calculations
Proposed Retail Development – 1100 Boston Turnpike – Bolton, CT
May 5, 2021

This narrative has been prepared in support of a Permit Application by Garrett Homes, LLC to the Town of Bolton for the proposed retail development at 1100 Boston Turnpike. The property is approximately 1.85 acres in size and is currently an undeveloped parcel. The property is located on the northern side of Boston Turnpike and is roughly bordered by residential properties to the west and south and a dentist office on the previously subdivided parcel to the east. The site is bordered by undeveloped woodland and Bolton Lake to the north. The subject parcel described in this report is proposed to be subdivided from "Parcel 2" to the north.

Existing Site Conditions

The project parcel is currently undeveloped, consisting entirely of lawn area. There are no formal stormwater management systems currently located on site. Stormwater from the subject property sheet flows untreated to the adjacent properties.

The site soil identified by the United States Department of Agriculture (USDA) Natural Resources Conservation Services (NRCS) is Woodbridge fine sandy loam, 3 to 8 percent slopes, Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony, and Canton and Charlton fine sandy loams, 3 to 8 percent slopes. Per the USDA, the NRCS Hydrologic Soil Group rating for within the project area is C/D, C/D, and B respectively. For the Soil Group ratings of C/D, a Soil Group rating of C was assumed in order to be conservative in the change of curve number from grass to impervious.

Developed Site Conditions

The proposed site improvements will include a 10,640 square foot retail building, paved parking areas, landscaped areas, pedestrian sidewalks, site utilities and lighting, and a stormwater management system.

The proposed stormwater management system will utilize a surface bioretention basin for stormwater quality treatment and peak flow mitigation of stormwater runoff generated by impervious surfaces eventually draining to the neighboring property to the east.

Stormwater Management – Existing Drainage Patterns

The existing site drainage area that was analyzed totals 4.92 acres and is approximately 8% impervious.

Stormwater from the subject property sheet flows untreated to the adjacent properties. There is a ridge line that roughly bifurcates the site into two main drainage areas. The northern portion of the project parcel and neighboring properties sheet flow to the wetland to the northeast of the site (Design Point 1). The northern portion of the site consists of primarily of grassed surface cover

with some wooded and impervious surface cover. The southeastern portion of the project parcel sheet flows to the existing catch basins within the shared driveway to the east that drains to the stormwater management system located within the previously subdivided parcel to the east (Design Point 2). The southeastern portion of the site consists mainly of grassed area with some impervious area from the shared driveway.

Stormwater Management – Proposed Drainage Patterns

The proposed site drainage area totals 4.92 acres and is approximately 28% impervious.

The same Design Points used in the existing conditions analysis have been retained for the proposed analysis. The site stormwater system will provide stormwater retention and quality improvements through the installation of a Bioretention Basin with a grass filter strip and a formalized street sweeping program for the impervious surfaces. These measures will treat the stormwater quality flow through structural means to provide water quality treatment in conformance with the State of Connecticut Water Quality Manual. The proposed stormwater management system has been designed to treat the runoff generated by the proposed development for a minimum 80% TSS removal as required in the CT Stormwater Quality Manual, retain and infiltrate the Water Quality Volume, and provide groundwater recharge.

As noted from town staff during a pre-application meeting, due to the site being in the lower reach of the watershed peak flow mitigation has not been deemed necessary to the wetland located northeast of the site (Design Point 1). Peak flow to the existing offsite drainage system on the parcel to the east (Design Point 2) will be matched in the 2, 10, and 100-year storms to ensure the proposed development will not negatively impact the existing neighboring drainage system, as seen in the peak flow rate comparison table below.

	Peak Flow Rate in Cubic Feet per Second (cfs)		
Drainage Area	**2-yr**	**10-yr**	**100-yr**
Design Point 1 Wetland to Northeast			
Existing	2.6	6.3	12.9
Proposed	2.0	4.7	9.3
Percent Change	-23.1%	-25.4%	-27.9%
Design Point 2 Ex. CBs in Driveway			
Existing	0.9	1.8	3.3
Proposed	0.9	1.8	3.2
Percent Change	0.0%	0.0%	-3.0%

Conclusion

The post-development peak discharge rates for the total developed site have been decreased or matched for all storm events. All post development stormwater will be discharged offsite to mimic existing drainage patterns. The proposed Bioretention Basin been designed to attenuate peak flows to Design Point 2 at the offsite drainage system, while providing water quality improvements. Though it was not necessary to match peak flows to Design Point 1, the flow has been mitigated by reducing the size of the contributing drainage area. The area removed from the drainage area to Design Point 1 now contributes to the proposed Bioretention Basin drainage area, which ultimately discharges to Design Point 2.

This letter has been prepared to compliment the submitted project plans and full Stormwater Management Report, as well as to represent the technical basis for the designs presented herein.

APPENDIX A

DRAINAGE MAPS

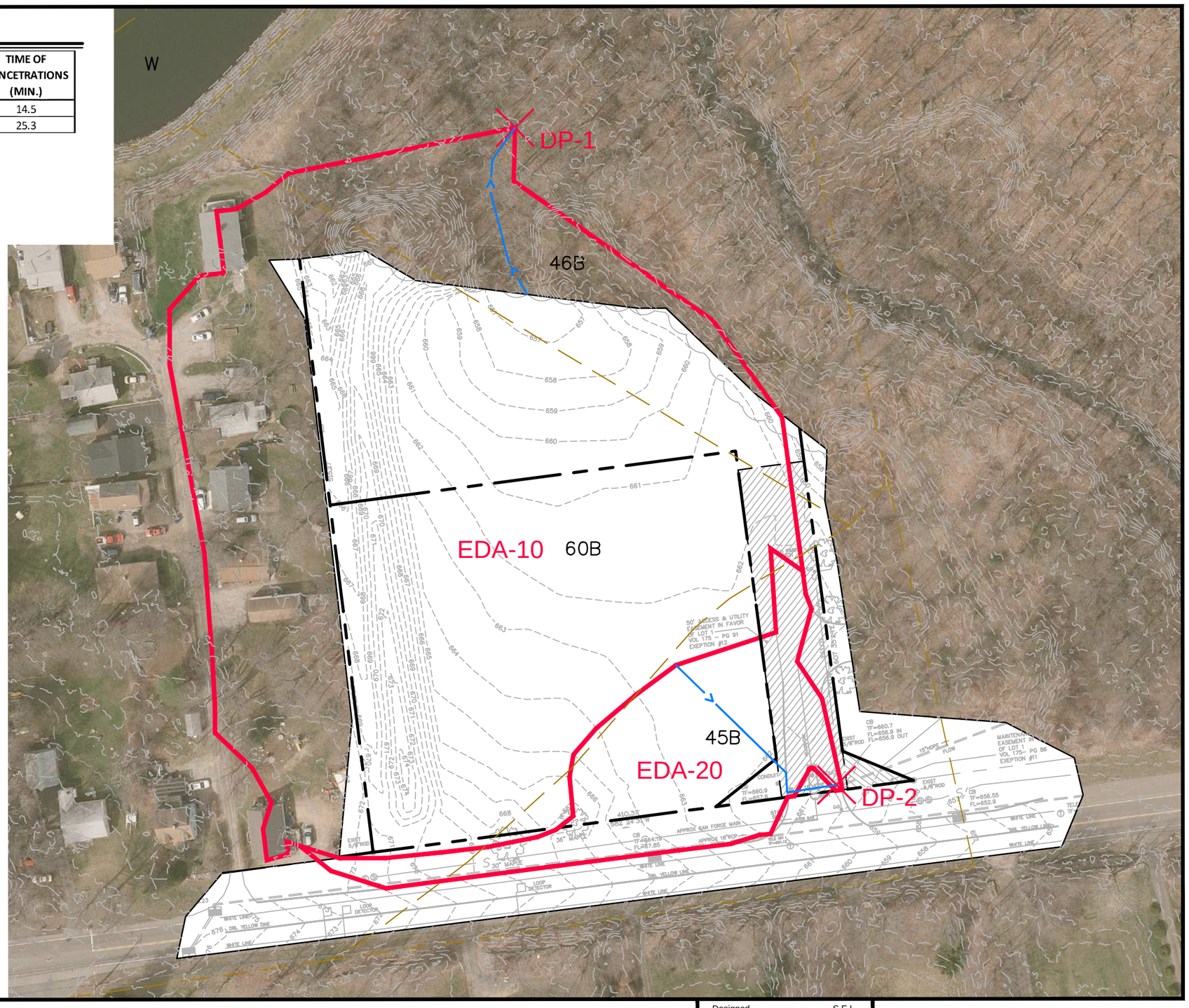
ED-1 – Existing Hydrology Mapping
PD-1 – Proposed Hydrology Mapping

EXISTING HYDROLOGY INFORMATION

DRAINAGEA AREA	TOTAL AREA (S.F.)	IMPERVIOUS AREA (S.F.)	PERVIOUS AREA (S.F.)	PERCENT IMPERVIOUS (%)	CN	TIME OF CONCETRATIONS (MIN.)
EDA-10	185,210	12,135	173,075	6.6%	72	14.5
EDA-20	29,230	4,605	24,625	15.8%	81	25.3

HYDROLOGY LEGEND

- PROPERTY LINE
- DRAINAGE AREA BOUNDARY
- TIME OF CONCENTRATION FLOW PATH
- SOIL TYPE BOUNDARY
- 306 — SOIL TYPE DESIGNATION



GRAPHIC SCALE

80 40 0 80

SCALE IN FEET

BL Companies
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING

100 Constitution Plaza, 10th Floor
Hartford, CT 06103
(860) 249-2200
(860) 249-2400 Fax

EXISTING DRAINAGE MAPPING

PROPOSED RETAIL DEVELOPMENT
1100 BOSTON TURNPIKE
BOLTON, CONNECTICUT

Designed	S.E.L.
Drawn	S.E.L.
Reviewed	J.A.B.
Scale	1"=80'
Project No.	2002032
Date	04/02/2021
CAD File	ED200203201

ED-1

PROPOSED HYDROLOGY INFORMATION

DRAINAGEA AREA	TOTAL AREA (S.F.)	IMPERVIOUS AREA (S.F.)	PERVIOUS AREA (S.F.)	PERCENT IMPERVIOUS (%)	CN	TIME OF CONCETRATIONS (MIN.)
PDA-101	127,015	15,295	111,720	12.0%	74	25.0
PDA-201	22,250	5,970	16,280	26.8%	83	9.8
PDA-202	54,405	27,695	26,710	50.9%	85	16.3
PDA-203	10,770	10,770	0	100.0%	98	5.0

HYDROLOGY LEGEND

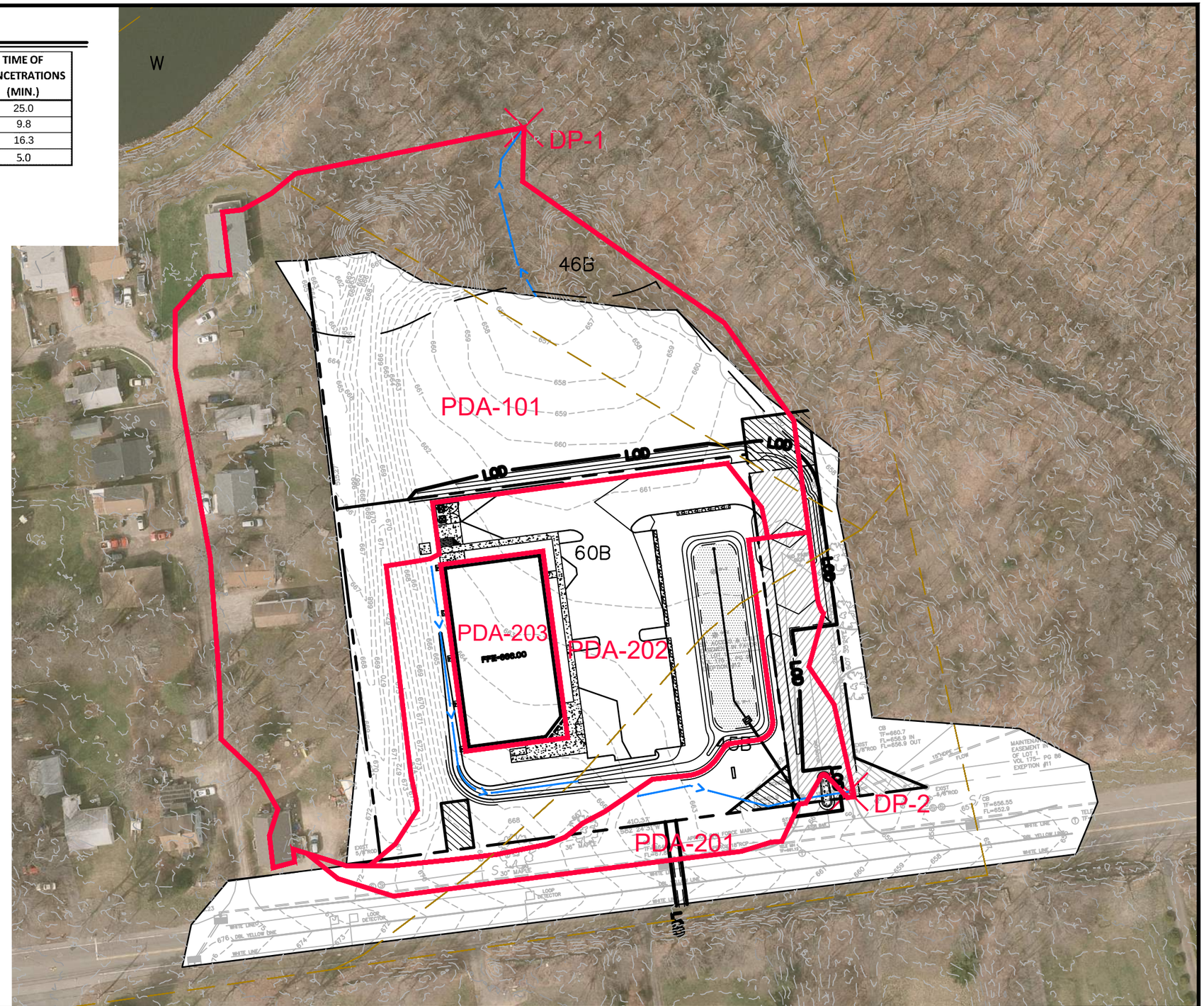
PROPERTY LINE

DRAINAGE AREA BOUNDARY

TIME OF CONCENTRATION FLOW PATH

SOIL TYPE BOUNDARY

306 SOIL TYPE DESIGNATION



N

GRAPHIC SCALE

80 40 0 80

SCALE IN FEET

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Hartford, CT 06103
(860) 249-2200
(860) 249-2400 Fax

PROPOSED DRAINAGE MAPPING

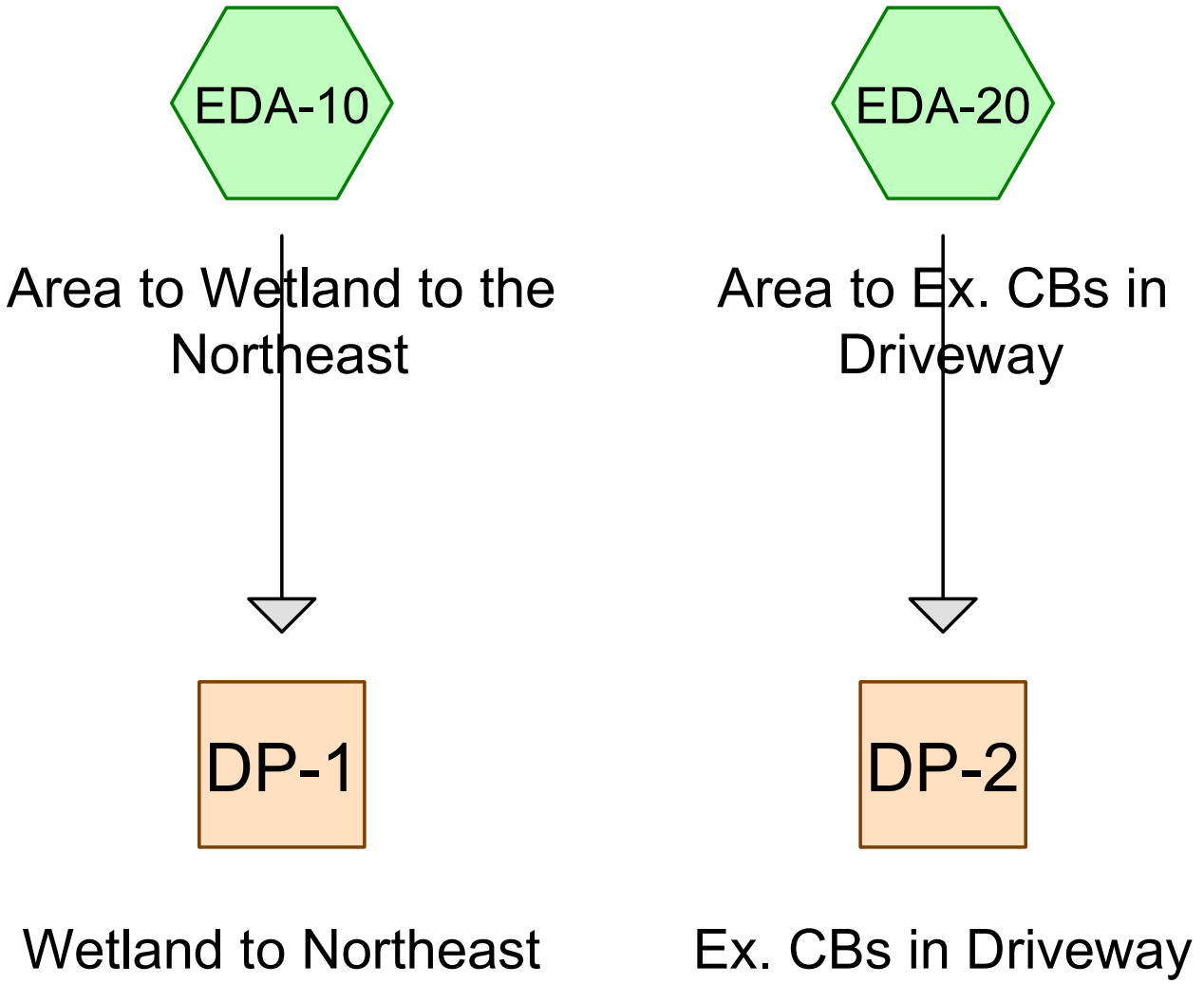
PROPOSED RETAIL DEVELOPMENT
1100 BOSTON TURNPIKE
BOLTON, CONNECTICUT

Designed	S.E.L.
Drawn	S.E.L.
Reviewed	J.A.B.
Scale	1"=80'
Project No.	2002032
Date	05/04/2021
CAD File	PD200203201

PD-1

APPENDIX B

PRE-DEVELOPMENT HYDROLOGY



Subcat Reach Pond Link

Routing Diagram for C-DAT-2002032-EXISTING HYDROLOGY
Prepared by {enter your company name here}, Printed 5/4/2021
HydroCAD® 10.00-25 s/n 01334 © 2019 HydroCAD Software Solutions LLC

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EDA-10: Area to Wetland to Runoff Area=185,210 sf 6.55% Impervious Runoff Depth>0.99"
Flow Length=136' Slope=0.0145 '/' Tc=25.0 min CN=72 Runoff=2.57 cfs 0.350 af

Subcatchment EDA-20: Area to Ex. CBs in Runoff Area=29,230 sf 15.75% Impervious Runoff Depth>1.55"
Flow Length=169' Tc=14.3 min CN=81 Runoff=0.92 cfs 0.087 af

Reach DP-1: Wetland to Northeast Inflow=2.57 cfs 0.350 af
Outflow=2.57 cfs 0.350 af

Reach DP-2: Ex. CBs in Driveway Inflow=0.92 cfs 0.087 af
Outflow=0.92 cfs 0.087 af

Total Runoff Area = 4.923 ac Runoff Volume = 0.437 af Average Runoff Depth = 1.06"
92.19% Pervious = 4.539 ac 7.81% Impervious = 0.384 ac

Summary for Subcatchment EDA-10: Area to Wetland to the Northeast

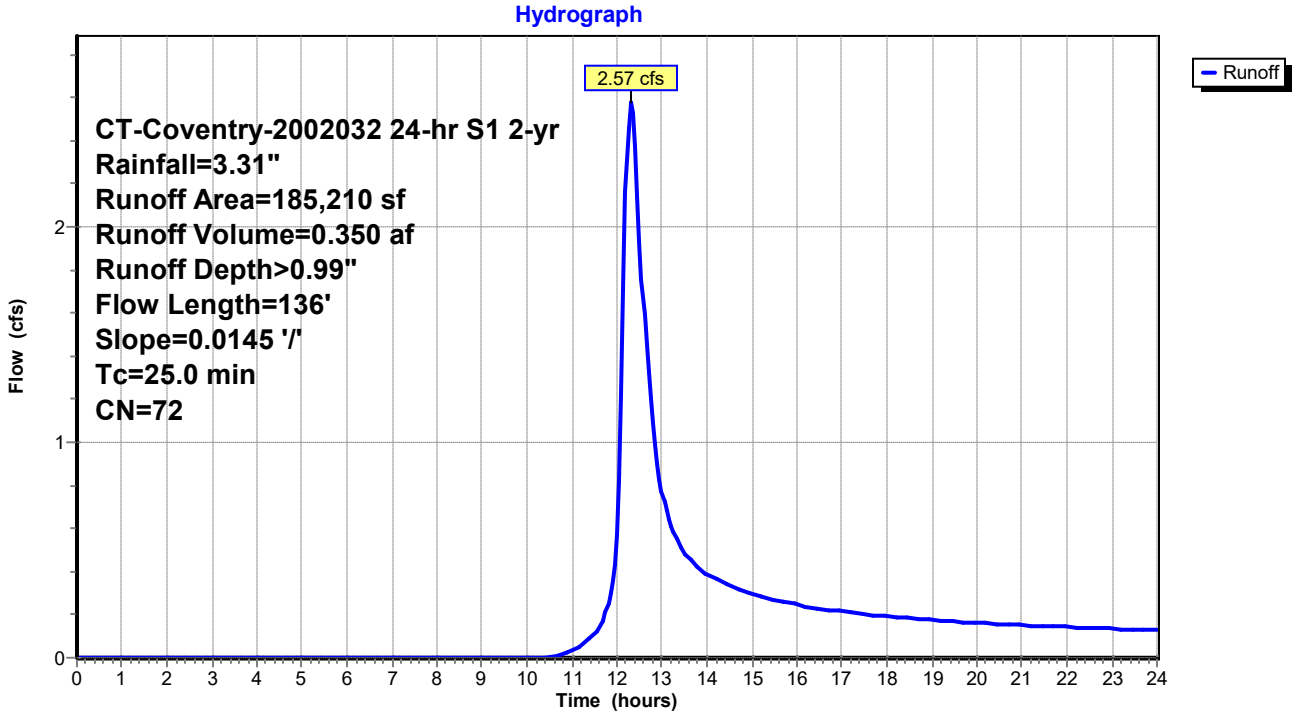
Runoff = 2.57 cfs @ 12.31 hrs, Volume= 0.350 af, Depth> 0.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
CT-Coventry-2002032 24-hr S1 2-yr Rainfall=3.31"

Area (sf)	CN	Description
134,225	69	50-75% Grass cover, Fair, HSG B
15,340	79	50-75% Grass cover, Fair, HSG C
2,445	60	Woods, Fair, HSG B
21,065	73	Woods, Fair, HSG C
12,135	98	Paved parking, HSG B
0	98	Paved parking, HSG C
185,210	72	Weighted Average
173,075		93.45% Pervious Area
12,135		6.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	100	0.0145	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.31"
1.0	36	0.0145	0.60		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
25.0	136	Total			

Subcatchment EDA-10: Area to Wetland to the Northeast



Summary for Subcatchment EDA-20: Area to Ex. CBs in Driveway

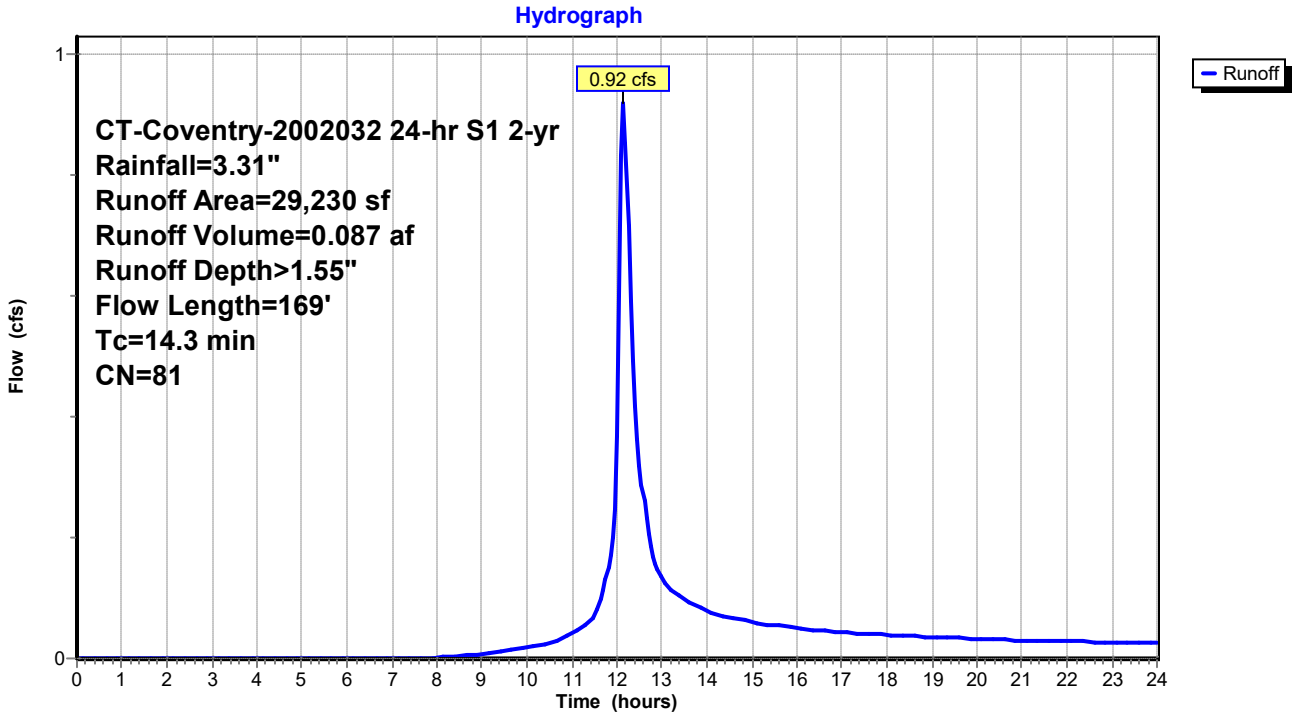
Runoff = 0.92 cfs @ 12.15 hrs, Volume= 0.087 af, Depth> 1.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
CT-Coventry-2002032 24-hr S1 2-yr Rainfall=3.31"

Area (sf)	CN	Description
2,335	69	50-75% Grass cover, Fair, HSG B
22,290	79	50-75% Grass cover, Fair, HSG C
0	60	Woods, Fair, HSG B
0	73	Woods, Fair, HSG C
185	98	Paved parking, HSG B
4,420	98	Paved parking, HSG C
29,230	81	Weighted Average
24,625		84.25% Pervious Area
4,605		15.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.9	100	0.0080	0.12		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.31"
0.2	16	0.0284	1.18		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.1	15	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	38	0.0185	7.16	8.79	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
14.3	169	Total			

Subcatchment EDA-20: Area to Ex. CBs in Driveway

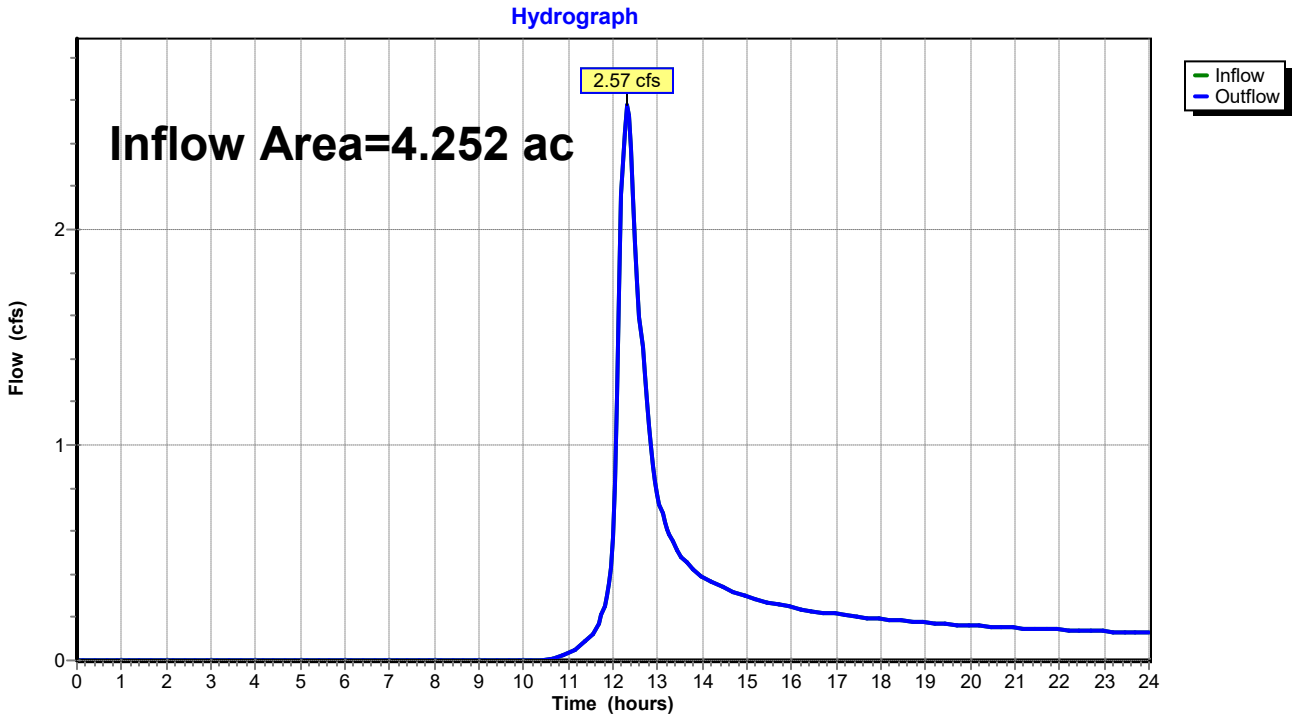


Summary for Reach DP-1: Wetland to Northeast

Inflow Area = 4.252 ac, 6.55% Impervious, Inflow Depth > 0.99" for 2-yr event
Inflow = 2.57 cfs @ 12.31 hrs, Volume= 0.350 af
Outflow = 2.57 cfs @ 12.31 hrs, Volume= 0.350 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DP-1: Wetland to Northeast

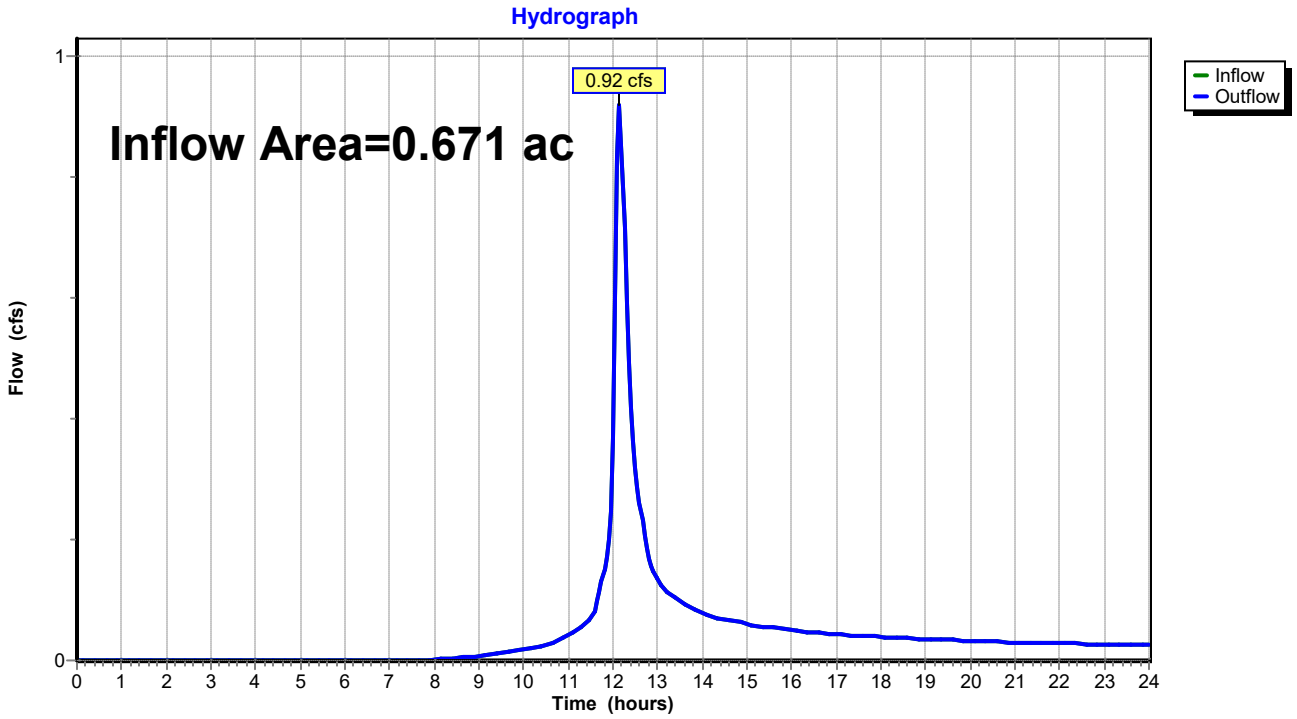


Summary for Reach DP-2: Ex. CBs in Driveway

Inflow Area = 0.671 ac, 15.75% Impervious, Inflow Depth > 1.55" for 2-yr event
Inflow = 0.92 cfs @ 12.15 hrs, Volume= 0.087 af
Outflow = 0.92 cfs @ 12.15 hrs, Volume= 0.087 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DP-2: Ex. CBs in Driveway



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EDA-10: Area to Wetland to Runoff Area=185,210 sf 6.55% Impervious Runoff Depth>2.24"
Flow Length=136' Slope=0.0145 '/' Tc=25.0 min CN=72 Runoff=6.27 cfs 0.794 af

Subcatchment EDA-20: Area to Ex. CBs in Runoff Area=29,230 sf 15.75% Impervious Runoff Depth>3.04"
Flow Length=169' Tc=14.3 min CN=81 Runoff=1.82 cfs 0.170 af

Reach DP-1: Wetland to Northeast Inflow=6.27 cfs 0.794 af
Outflow=6.27 cfs 0.794 af

Reach DP-2: Ex. CBs in Driveway Inflow=1.82 cfs 0.170 af
Outflow=1.82 cfs 0.170 af

Total Runoff Area = 4.923 ac Runoff Volume = 0.964 af Average Runoff Depth = 2.35"
92.19% Pervious = 4.539 ac 7.81% Impervious = 0.384 ac

Summary for Subcatchment EDA-10: Area to Wetland to the Northeast

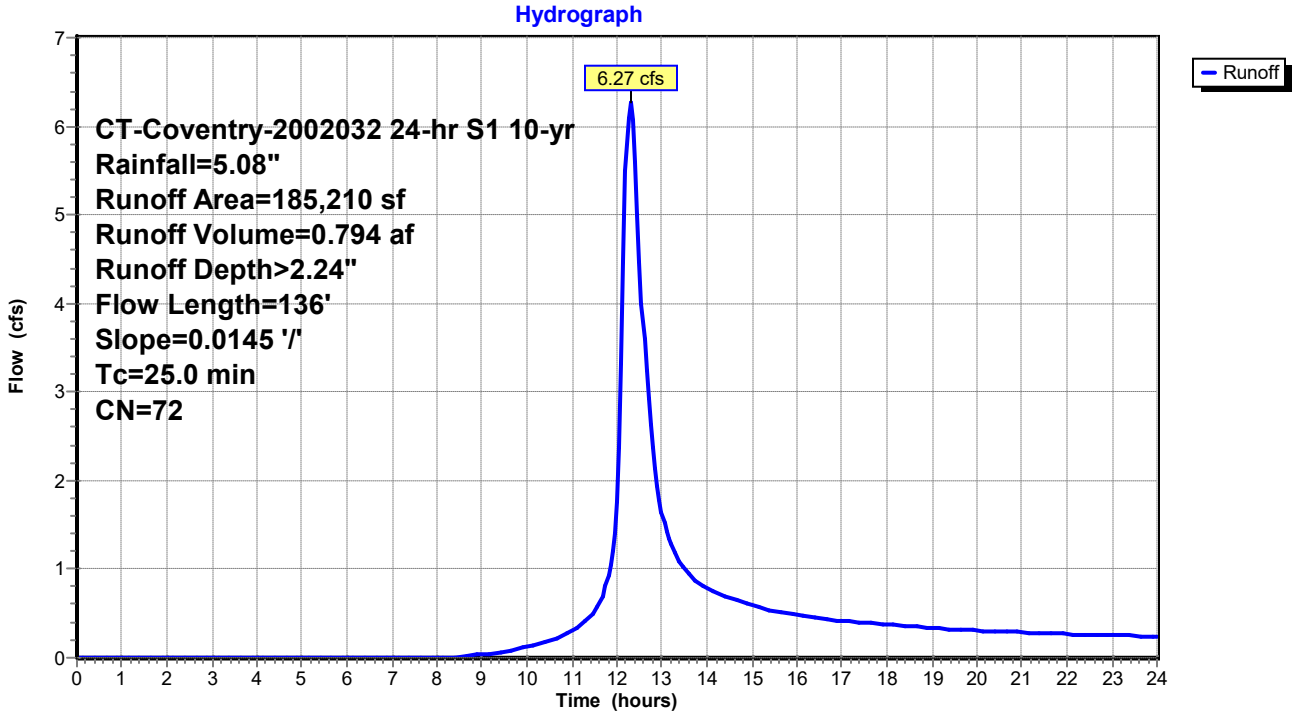
Runoff = 6.27 cfs @ 12.30 hrs, Volume= 0.794 af, Depth> 2.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
CT-Coventry-2002032 24-hr S1 10-yr Rainfall=5.08"

Area (sf)	CN	Description
134,225	69	50-75% Grass cover, Fair, HSG B
15,340	79	50-75% Grass cover, Fair, HSG C
2,445	60	Woods, Fair, HSG B
21,065	73	Woods, Fair, HSG C
12,135	98	Paved parking, HSG B
0	98	Paved parking, HSG C
185,210	72	Weighted Average
173,075		93.45% Pervious Area
12,135		6.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	100	0.0145	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.31"
1.0	36	0.0145	0.60		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
25.0	136	Total			

Subcatchment EDA-10: Area to Wetland to the Northeast



Summary for Subcatchment EDA-20: Area to Ex. CBs in Driveway

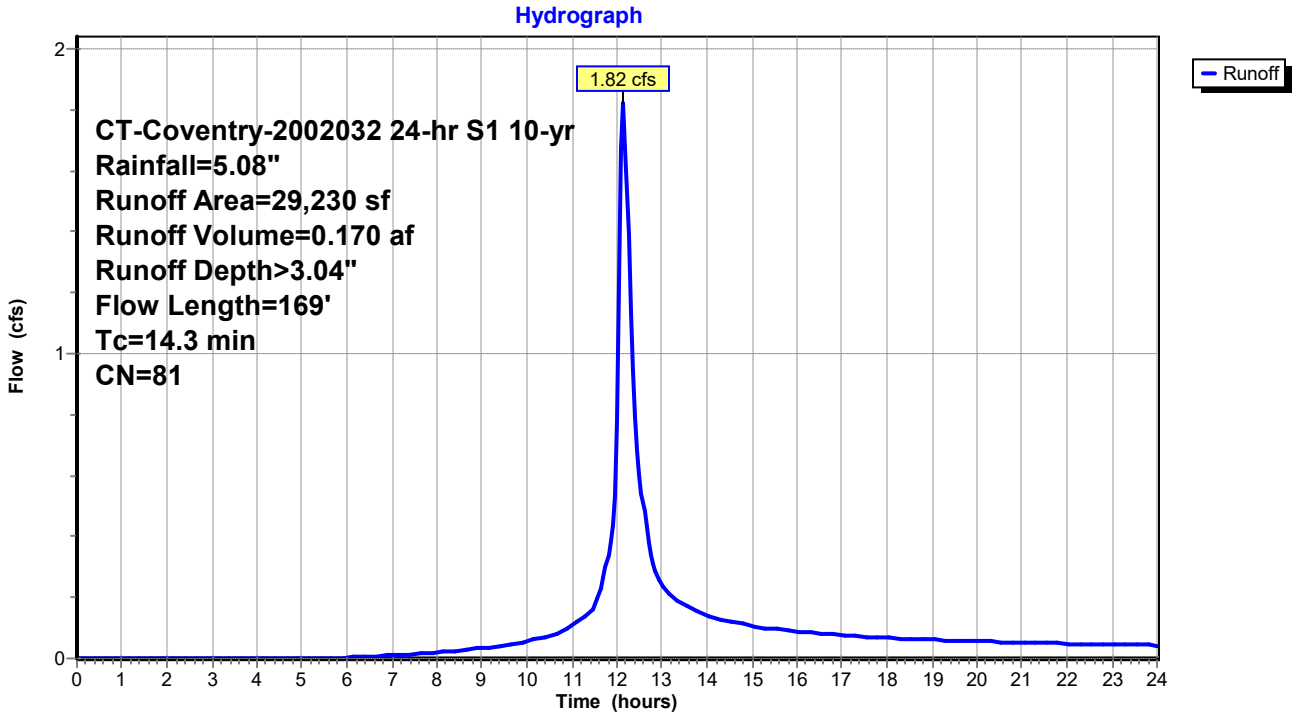
Runoff = 1.82 cfs @ 12.15 hrs, Volume= 0.170 af, Depth> 3.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
CT-Coventry-2002032 24-hr S1 10-yr Rainfall=5.08"

Area (sf)	CN	Description
2,335	69	50-75% Grass cover, Fair, HSG B
22,290	79	50-75% Grass cover, Fair, HSG C
0	60	Woods, Fair, HSG B
0	73	Woods, Fair, HSG C
185	98	Paved parking, HSG B
4,420	98	Paved parking, HSG C
29,230	81	Weighted Average
24,625		84.25% Pervious Area
4,605		15.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.9	100	0.0080	0.12		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.31"
0.2	16	0.0284	1.18		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.1	15	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	38	0.0185	7.16	8.79	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
14.3	169	Total			

Subcatchment EDA-20: Area to Ex. CBs in Driveway

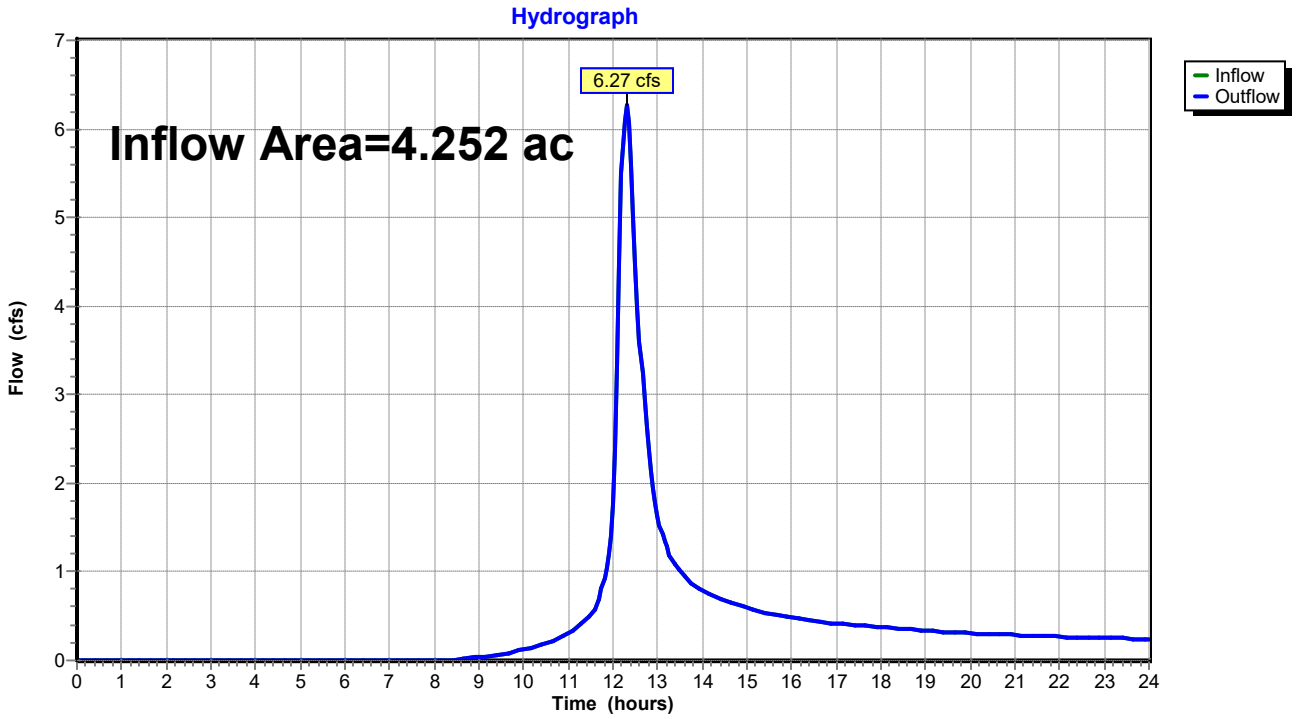


Summary for Reach DP-1: Wetland to Northeast

Inflow Area = 4.252 ac, 6.55% Impervious, Inflow Depth > 2.24" for 10-yr event
Inflow = 6.27 cfs @ 12.30 hrs, Volume= 0.794 af
Outflow = 6.27 cfs @ 12.30 hrs, Volume= 0.794 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DP-1: Wetland to Northeast

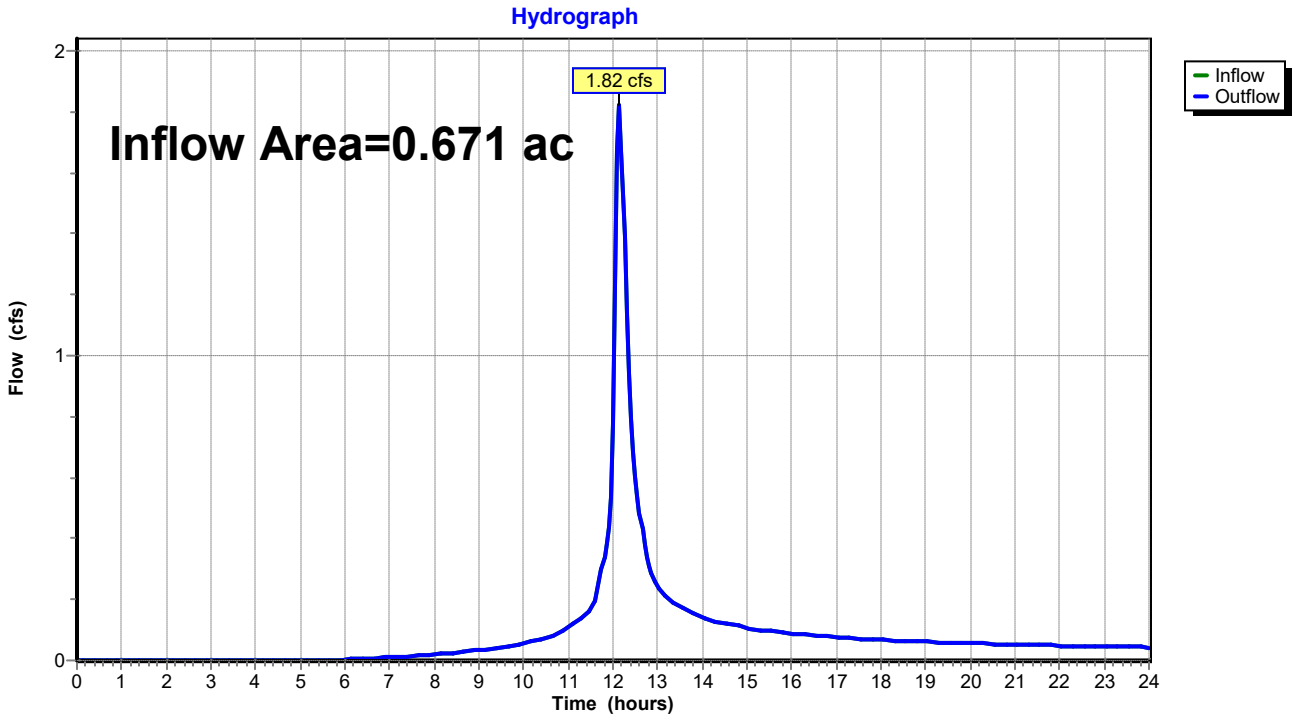


Summary for Reach DP-2: Ex. CBs in Driveway

Inflow Area = 0.671 ac, 15.75% Impervious, Inflow Depth > 3.04" for 10-yr event
Inflow = 1.82 cfs @ 12.15 hrs, Volume= 0.170 af
Outflow = 1.82 cfs @ 12.15 hrs, Volume= 0.170 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DP-2: Ex. CBs in Driveway



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EDA-10: Area to Wetland to Runoff Area=185,210 sf 6.55% Impervious Runoff Depth>4.57"
Flow Length=136' Slope=0.0145 '/' Tc=25.0 min CN=72 Runoff=12.93 cfs 1.620 af

Subcatchment EDA-20: Area to Ex. CBs in Runoff Area=29,230 sf 15.75% Impervious Runoff Depth>5.63"
Flow Length=169' Tc=14.3 min CN=81 Runoff=3.30 cfs 0.315 af

Reach DP-1: Wetland to Northeast Inflow=12.93 cfs 1.620 af
Outflow=12.93 cfs 1.620 af

Reach DP-2: Ex. CBs in Driveway Inflow=3.30 cfs 0.315 af
Outflow=3.30 cfs 0.315 af

Total Runoff Area = 4.923 ac Runoff Volume = 1.934 af Average Runoff Depth = 4.72"
92.19% Pervious = 4.539 ac 7.81% Impervious = 0.384 ac

Summary for Subcatchment EDA-10: Area to Wetland to the Northeast

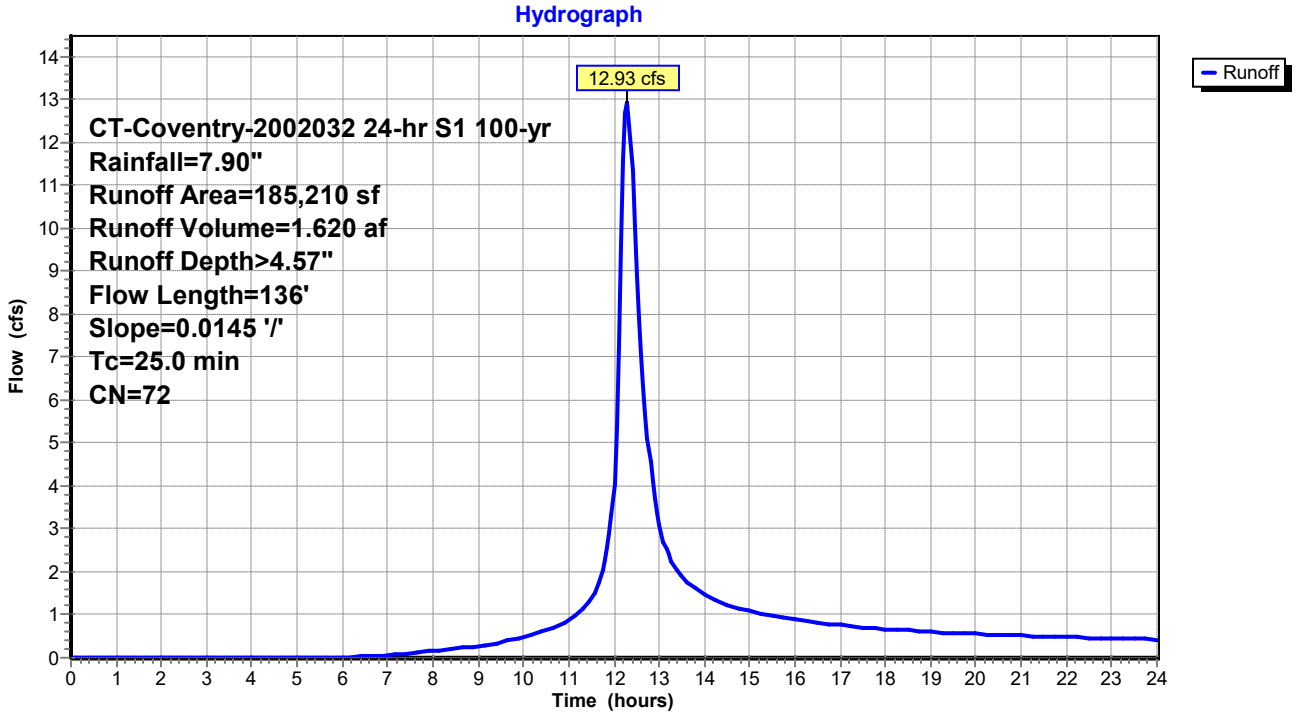
Runoff = 12.93 cfs @ 12.29 hrs, Volume= 1.620 af, Depth> 4.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
CT-Coventry-2002032 24-hr S1 100-yr Rainfall=7.90"

Area (sf)	CN	Description
134,225	69	50-75% Grass cover, Fair, HSG B
15,340	79	50-75% Grass cover, Fair, HSG C
2,445	60	Woods, Fair, HSG B
21,065	73	Woods, Fair, HSG C
12,135	98	Paved parking, HSG B
0	98	Paved parking, HSG C
185,210	72	Weighted Average
173,075		93.45% Pervious Area
12,135		6.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	100	0.0145	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.31"
1.0	36	0.0145	0.60		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
25.0	136	Total			

Subcatchment EDA-10: Area to Wetland to the Northeast



Summary for Subcatchment EDA-20: Area to Ex. CBs in Driveway

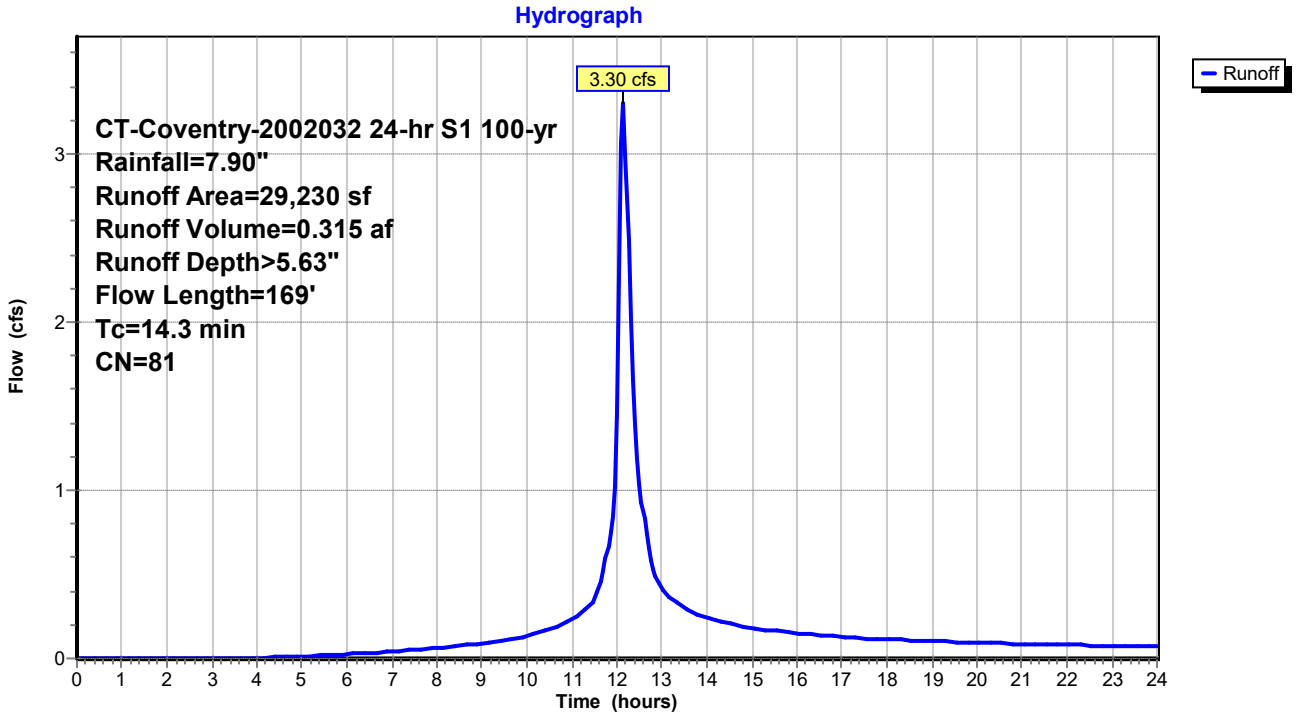
Runoff = 3.30 cfs @ 12.15 hrs, Volume= 0.315 af, Depth> 5.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
CT-Coventry-2002032 24-hr S1 100-yr Rainfall=7.90"

Area (sf)	CN	Description
2,335	69	50-75% Grass cover, Fair, HSG B
22,290	79	50-75% Grass cover, Fair, HSG C
0	60	Woods, Fair, HSG B
0	73	Woods, Fair, HSG C
185	98	Paved parking, HSG B
4,420	98	Paved parking, HSG C
29,230	81	Weighted Average
24,625		84.25% Pervious Area
4,605		15.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.9	100	0.0080	0.12		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.31"
0.2	16	0.0284	1.18		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.1	15	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	38	0.0185	7.16	8.79	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
14.3	169	Total			

Subcatchment EDA-20: Area to Ex. CBs in Driveway

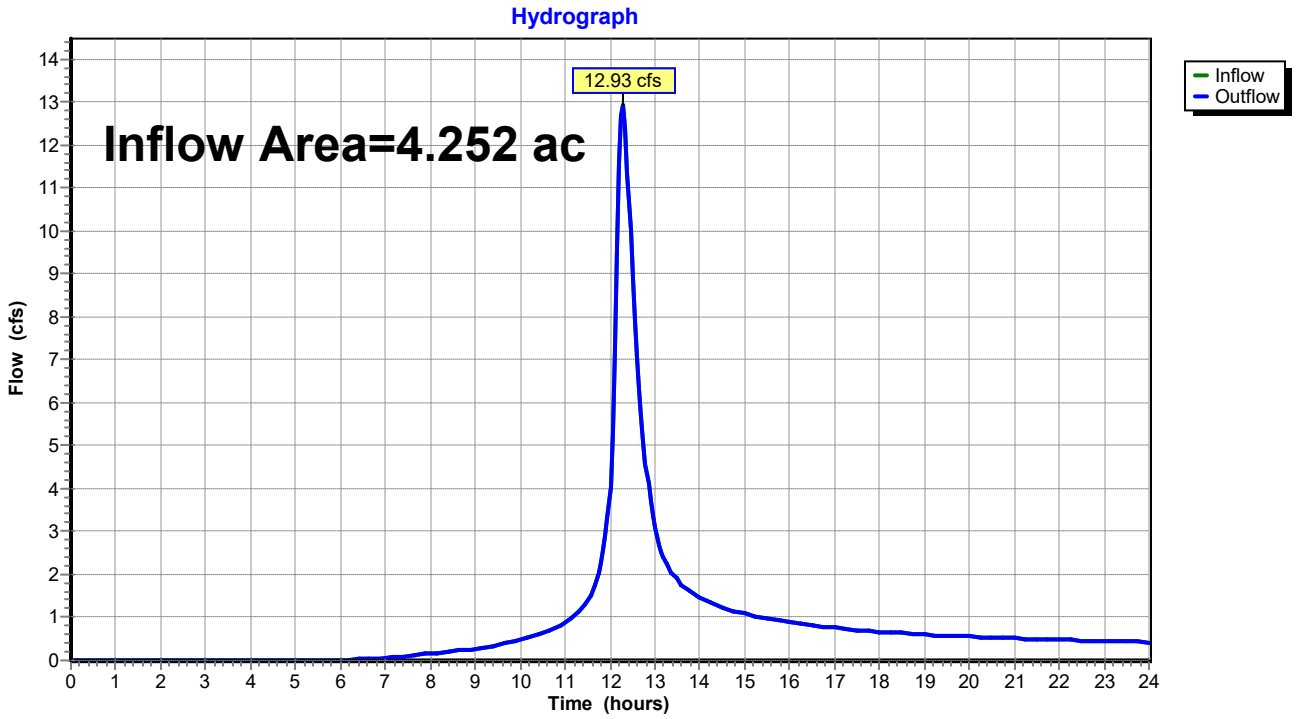


Summary for Reach DP-1: Wetland to Northeast

Inflow Area = 4.252 ac, 6.55% Impervious, Inflow Depth > 4.57" for 100-yr event
Inflow = 12.93 cfs @ 12.29 hrs, Volume= 1.620 af
Outflow = 12.93 cfs @ 12.29 hrs, Volume= 1.620 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DP-1: Wetland to Northeast

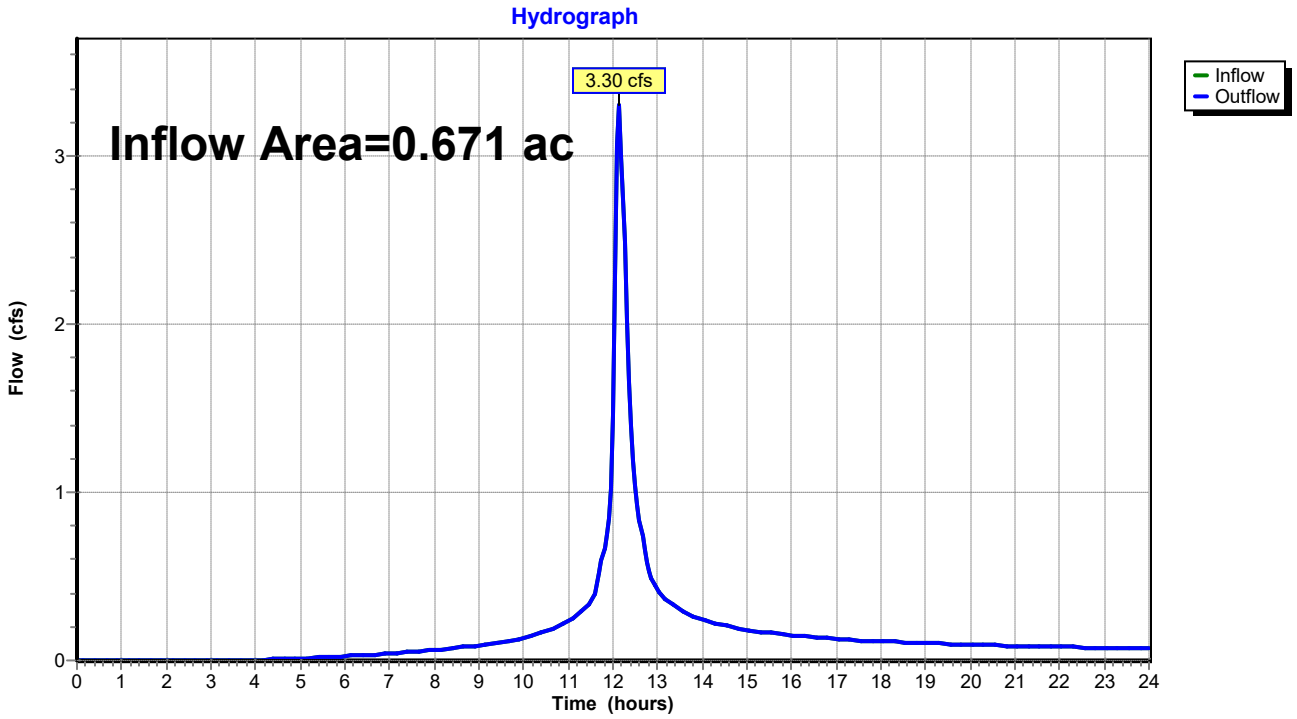


Summary for Reach DP-2: Ex. CBs in Driveway

Inflow Area = 0.671 ac, 15.75% Impervious, Inflow Depth > 5.63" for 100-yr event
Inflow = 3.30 cfs @ 12.15 hrs, Volume= 0.315 af
Outflow = 3.30 cfs @ 12.15 hrs, Volume= 0.315 af, Atten= 0%, Lag= 0.0 min

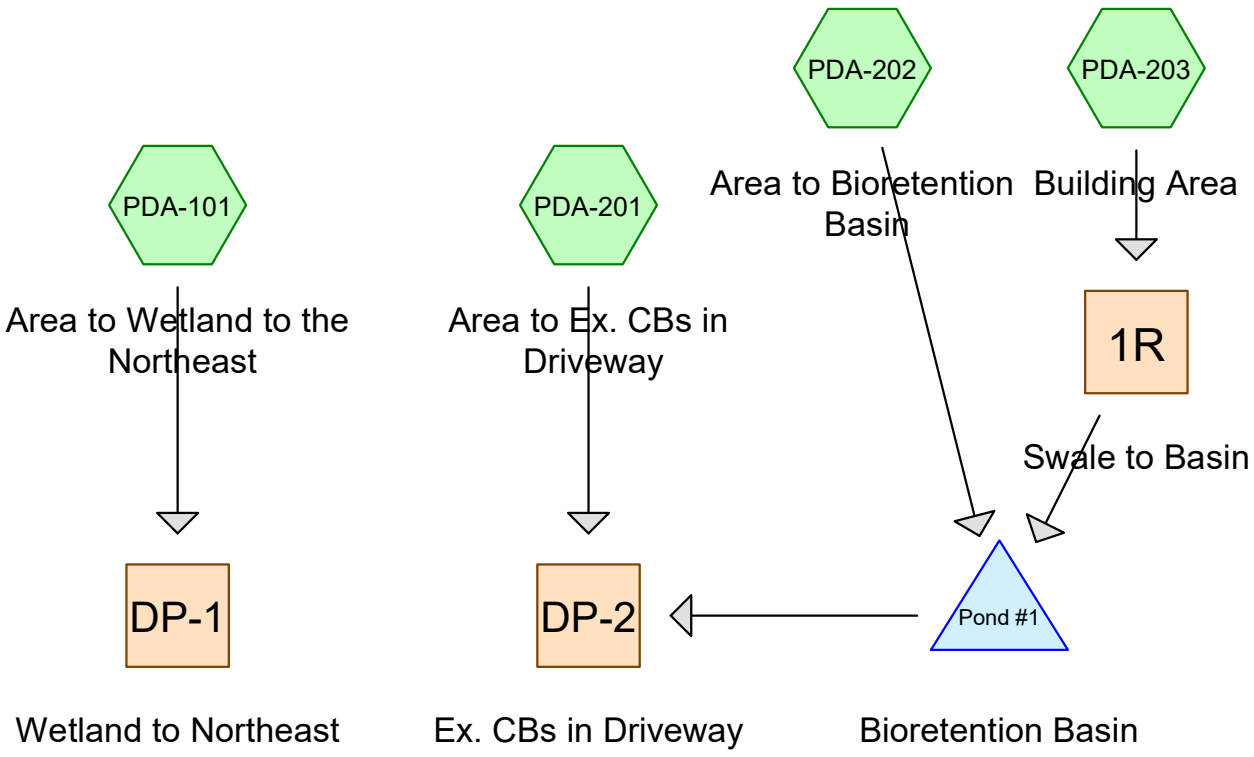
Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DP-2: Ex. CBs in Driveway



APPENDIX C

POST-DEVELOPMENT HYDROLOGY



Subcat Reach Pond Link

Routing Diagram for C-DAT-2002032-PROPOSED HYDROLOGY
Prepared by {enter your company name here}, Printed 5/4/2021
HydroCAD® 10.00-25 s/n 01334 © 2019 HydroCAD Software Solutions LLC

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment PDA-101: Area to Wetland Runoff Area=127,015 sf 12.04% Impervious Runoff Depth=1.11"
Flow Length=136' Slope=0.0145 '/' Tc=25.0 min CN=74 Runoff=2.03 cfs 0.270 af

Subcatchment PDA-201: Area to Ex. CBs Runoff Area=22,250 sf 26.83% Impervious Runoff Depth=1.70"
Flow Length=161' Tc=9.8 min CN=83 Runoff=0.94 cfs 0.072 af

Subcatchment PDA-202: Area to Runoff Area=54,405 sf 50.91% Impervious Runoff Depth=1.85"
Flow Length=250' Slope=0.0100 '/' Tc=16.3 min CN=85 Runoff=1.94 cfs 0.193 af

Subcatchment PDA-203: Building Area Runoff Area=10,770 sf 100.00% Impervious Runoff Depth=3.08"
Tc=5.0 min CN=98 Runoff=0.96 cfs 0.063 af

Reach 1R: Swale to Basin Avg. Flow Depth=0.31' Max Vel=1.73 fps Inflow=0.96 cfs 0.063 af
n=0.030 L=370.0' S=0.0105 '/' Capacity=9.44 cfs Outflow=0.81 cfs 0.063 af

Reach DP-1: Wetland to Northeast Inflow=2.03 cfs 0.270 af
Outflow=2.03 cfs 0.270 af

Reach DP-2: Ex. CBs in Driveway Inflow=0.94 cfs 0.072 af
Outflow=0.94 cfs 0.072 af

Pond Pond #1: Bioretention Basin Peak Elev=659.88' Storage=5,907 cf Inflow=2.64 cfs 0.256 af
Discarded=0.10 cfs 0.256 af Primary=0.00 cfs 0.000 af Outflow=0.10 cfs 0.256 af

Total Runoff Area = 4.923 ac Runoff Volume = 0.598 af Average Runoff Depth = 1.46"
72.15% Pervious = 3.552 ac 27.85% Impervious = 1.371 ac

Summary for Subcatchment PDA-101: Area to Wetland to the Northeast

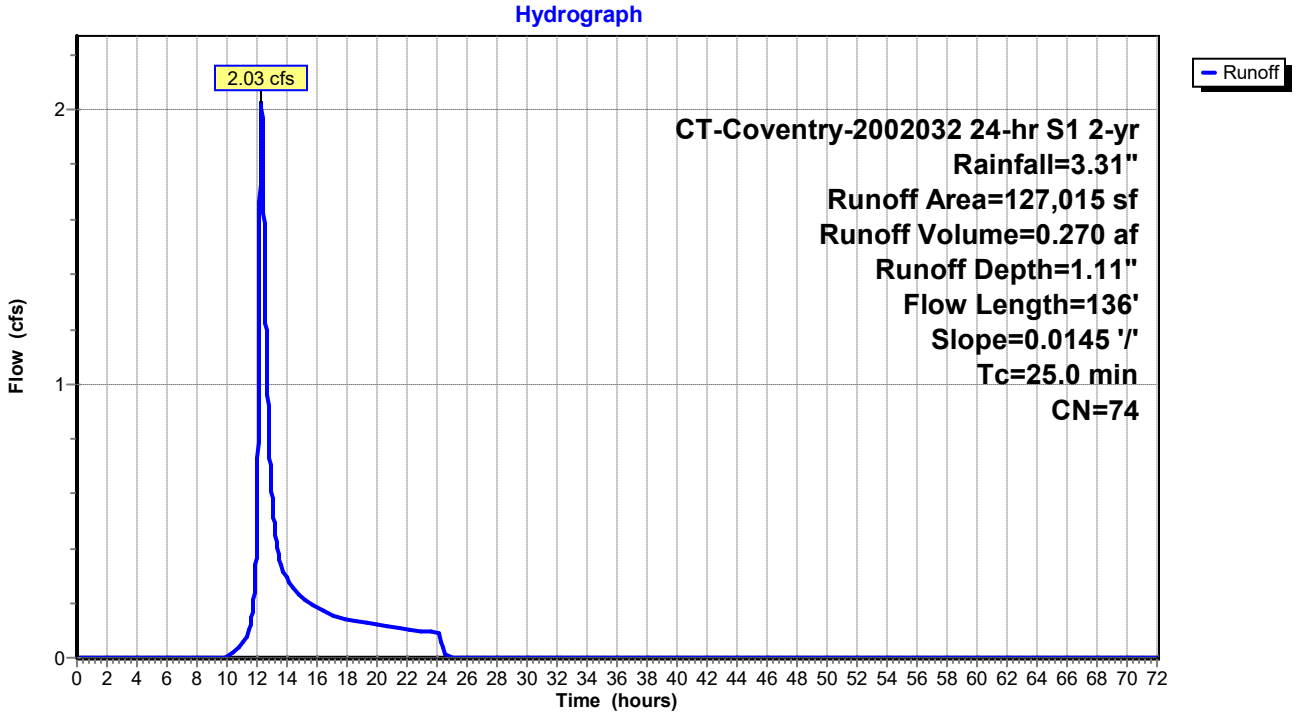
Runoff = 2.03 cfs @ 12.31 hrs, Volume= 0.270 af, Depth= 1.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
CT-Coventry-2002032 24-hr S1 2-yr Rainfall=3.31"

Area (sf)	CN	Description
78,455	69	50-75% Grass cover, Fair, HSG B
10,060	79	50-75% Grass cover, Fair, HSG C
2,445	60	Woods, Fair, HSG B
20,760	73	Woods, Fair, HSG C
13,830	98	Paved parking, HSG B
1,465	98	Paved parking, HSG C
127,015	74	Weighted Average
111,720		87.96% Pervious Area
15,295		12.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	100	0.0145	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.31"
1.0	36	0.0145	0.60		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
25.0	136	Total			

Subcatchment PDA-101: Area to Wetland to the Northeast



Summary for Subcatchment PDA-201: Area to Ex. CBs in Driveway

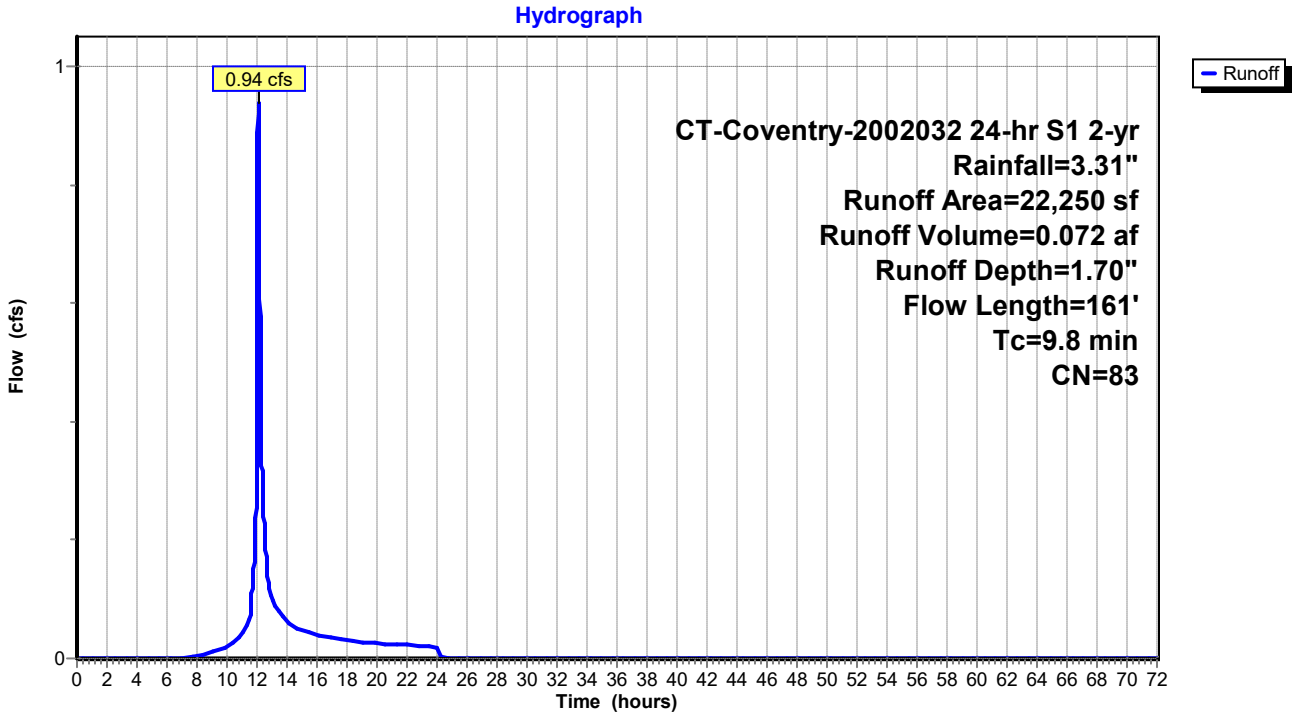
Runoff = 0.94 cfs @ 12.08 hrs, Volume= 0.072 af, Depth= 1.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
CT-Coventry-2002032 24-hr S1 2-yr Rainfall=3.31"

Area (sf)	CN	Description
2,580	69	50-75% Grass cover, Fair, HSG B
13,700	79	50-75% Grass cover, Fair, HSG C
0	60	Woods, Fair, HSG B
0	73	Woods, Fair, HSG C
910	98	Paved parking, HSG B
5,060	98	Paved parking, HSG C
22,250	83	Weighted Average
16,280		73.17% Pervious Area
5,970		26.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.3	100	0.0220	0.18		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.31"
0.4	23	0.0174	0.92		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.1	38	0.0185	7.16	8.79	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
9.8	161	Total			

Subcatchment PDA-201: Area to Ex. CBs in Driveway



Summary for Subcatchment PDA-202: Area to Bioretention Basin

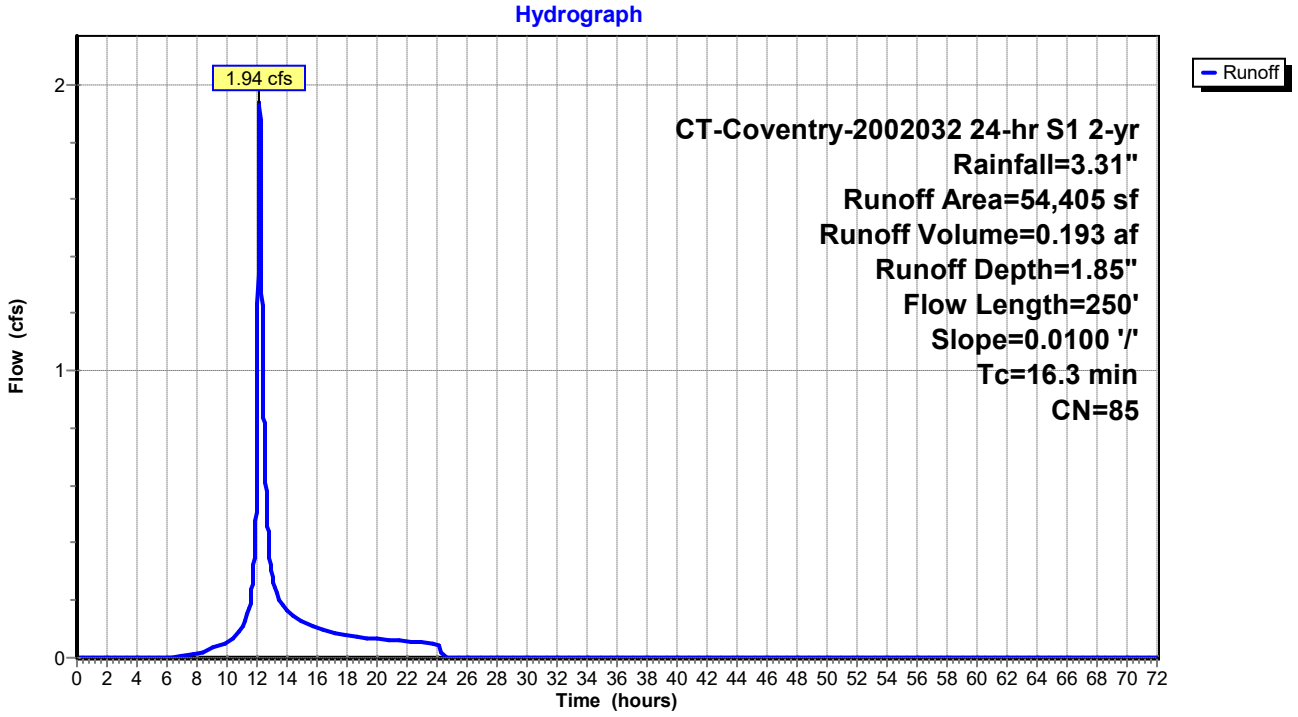
Runoff = 1.94 cfs @ 12.17 hrs, Volume= 0.193 af, Depth= 1.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
CT-Coventry-2002032 24-hr S1 2-yr Rainfall=3.31"

Area (sf)	CN	Description
20,135	69	50-75% Grass cover, Fair, HSG B
6,575	79	50-75% Grass cover, Fair, HSG C
0	60	Woods, Fair, HSG B
0	73	Woods, Fair, HSG C
22,195	98	Paved parking, HSG B
5,500	98	Paved parking, HSG C
54,405	85	Weighted Average
26,710		49.09% Pervious Area
27,695		50.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	100	0.0100	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.31"
3.6	150	0.0100	0.70		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
16.3	250	Total			

Subcatchment PDA-202: Area to Bioretention Basin



Summary for Subcatchment PDA-203: Building Area

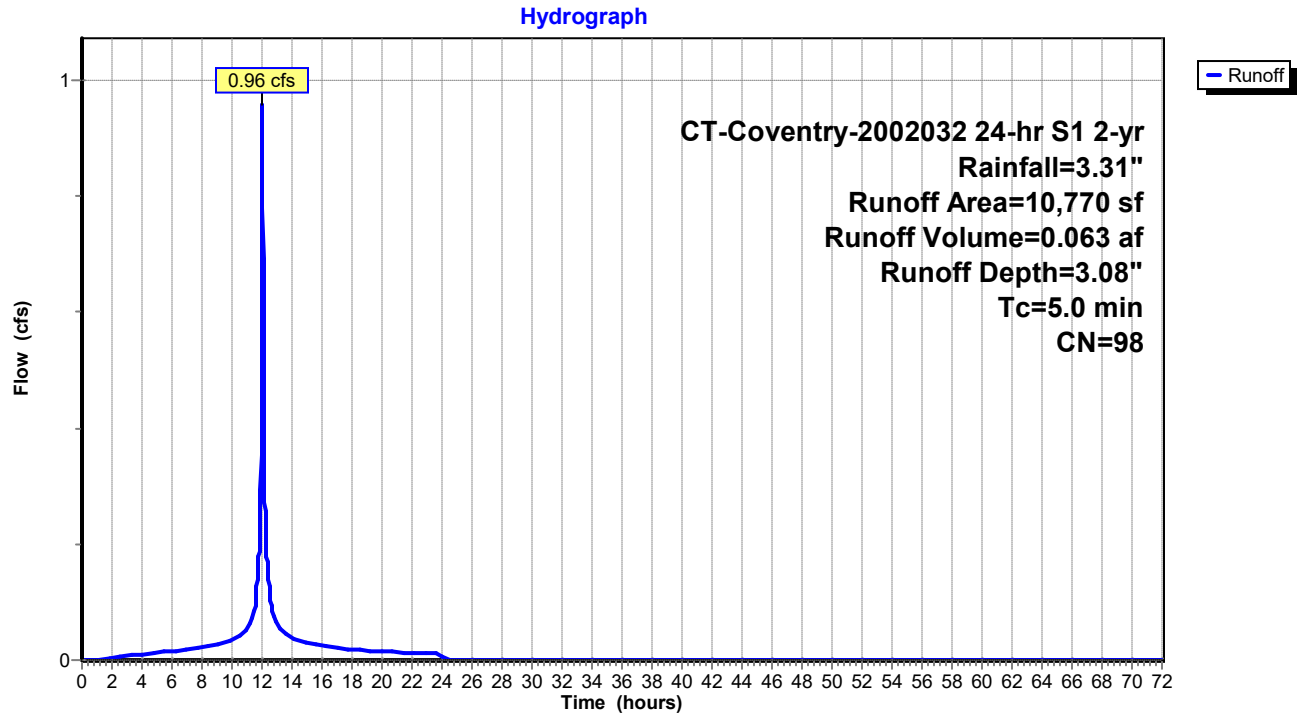
Runoff = 0.96 cfs @ 12.03 hrs, Volume= 0.063 af, Depth= 3.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
CT-Coventry-2002032 24-hr S1 2-yr Rainfall=3.31"

Area (sf)	CN	Description
0	69	50-75% Grass cover, Fair, HSG B
0	79	50-75% Grass cover, Fair, HSG C
0	60	Woods, Fair, HSG B
0	73	Woods, Fair, HSG C
10,770	98	Paved parking, HSG B
0	98	Paved parking, HSG C
10,770	98	Weighted Average
10,770		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PDA-203: Building Area



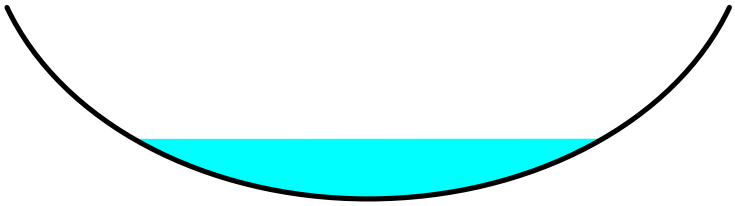
Summary for Reach 1R: Swale to Basin

Inflow Area = 0.247 ac,100.00% Impervious, Inflow Depth = 3.08" for 2-yr event
Inflow = 0.96 cfs @ 12.03 hrs, Volume= 0.063 af
Outflow = 0.81 cfs @ 12.12 hrs, Volume= 0.063 af, Atten= 15%, Lag= 5.4 min

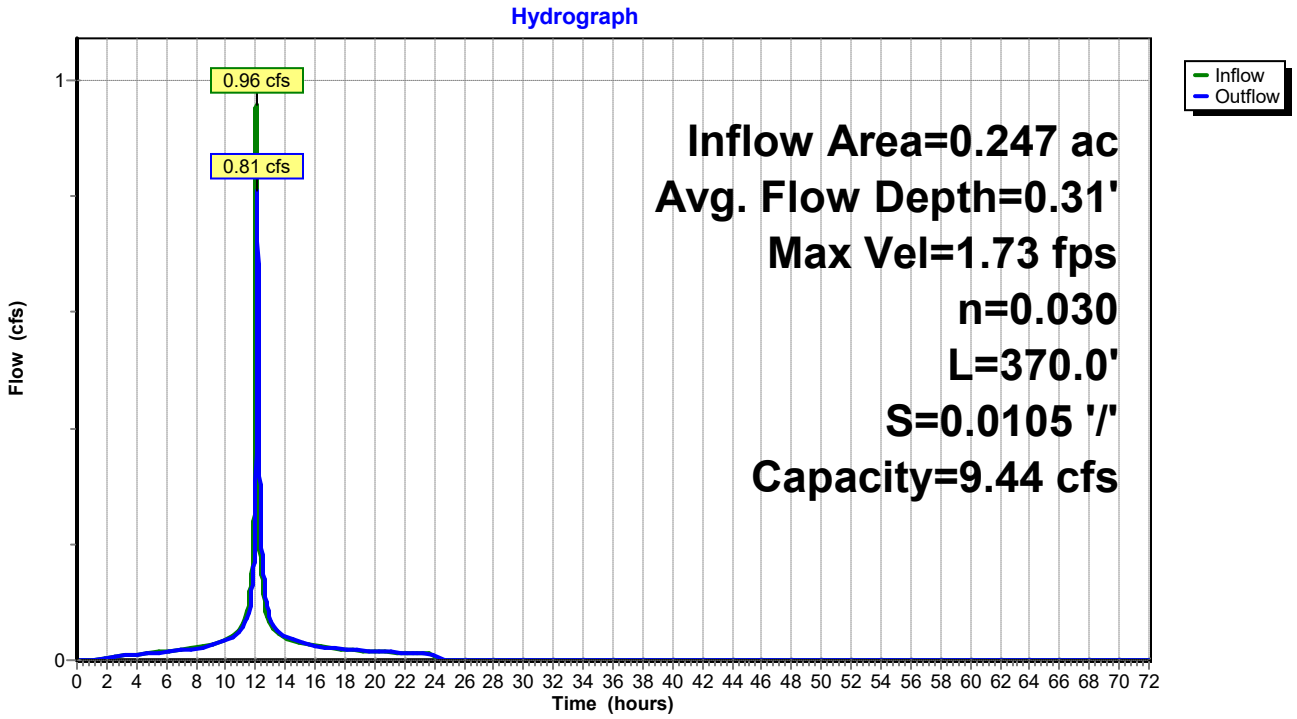
Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.73 fps, Min. Travel Time= 3.6 min
Avg. Velocity = 0.54 fps, Avg. Travel Time= 11.3 min

Peak Storage= 173 cf @ 12.06 hrs
Average Depth at Peak Storage= 0.31'
Bank-Full Depth= 1.00' Flow Area= 2.7 sf, Capacity= 9.44 cfs

4.00' x 1.00' deep Parabolic Channel, n= 0.030 Earth, grassed & winding
Length= 370.0' Slope= 0.0105 '/'
Inlet Invert= 665.90', Outlet Invert= 662.00'



Reach 1R: Swale to Basin

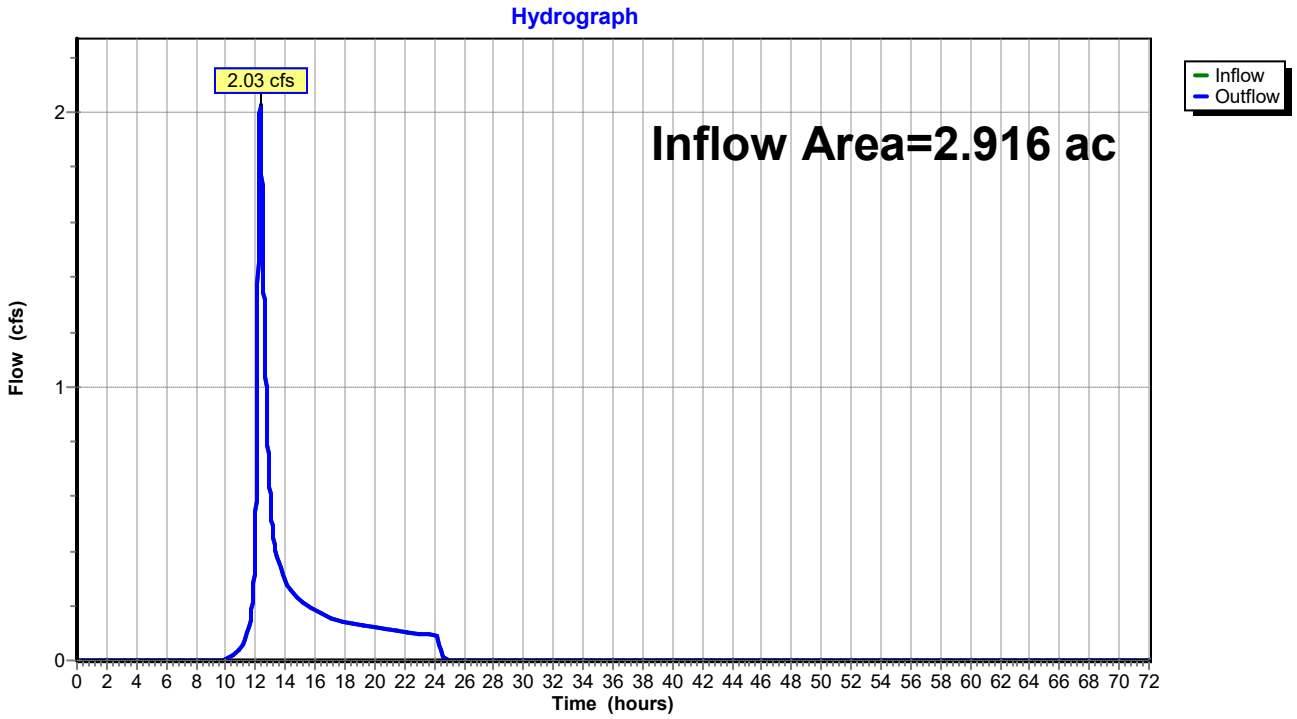


Summary for Reach DP-1: Wetland to Northeast

Inflow Area = 2.916 ac, 12.04% Impervious, Inflow Depth = 1.11" for 2-yr event
Inflow = 2.03 cfs @ 12.31 hrs, Volume= 0.270 af
Outflow = 2.03 cfs @ 12.31 hrs, Volume= 0.270 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Reach DP-1: Wetland to Northeast

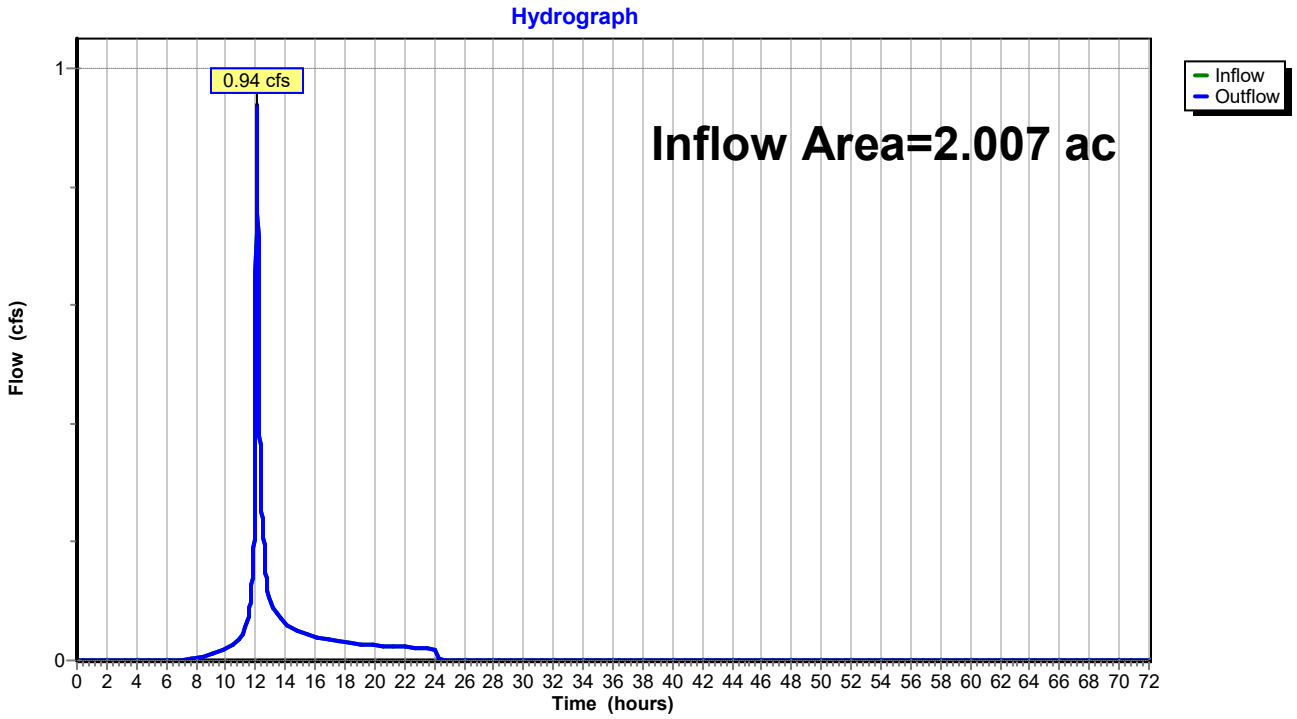


Summary for Reach DP-2: Ex. CBs in Driveway

Inflow Area = 2.007 ac, 50.83% Impervious, Inflow Depth = 0.43" for 2-yr event
Inflow = 0.94 cfs @ 12.08 hrs, Volume= 0.072 af
Outflow = 0.94 cfs @ 12.08 hrs, Volume= 0.072 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Reach DP-2: Ex. CBs in Driveway



Summary for Pond Pond #1: Bioretention Basin

Inflow Area = 1.496 ac, 59.02% Impervious, Inflow Depth = 2.05" for 2-yr event
Inflow = 2.64 cfs @ 12.14 hrs, Volume= 0.256 af
Outflow = 0.10 cfs @ 10.54 hrs, Volume= 0.256 af, Atten= 96%, Lag= 0.0 min
Discarded = 0.10 cfs @ 10.54 hrs, Volume= 0.256 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 659.88' @ 17.72 hrs Surf.Area= 4,366 sf Storage= 5,907 cf

Plug-Flow detention time= 578.0 min calculated for 0.256 af (100% of inflow)
Center-of-Mass det. time= 578.0 min (1,412.2 - 834.2)

Volume	Invert	Avail.Storage	Storage Description
#1	656.50'	6,986 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 17,464 cf Overall x 40.0% Voids
#2	660.50'	15,465 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) -Impervious
		22,450 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
656.50	4,366	0	0
660.50	4,366	17,464	17,464

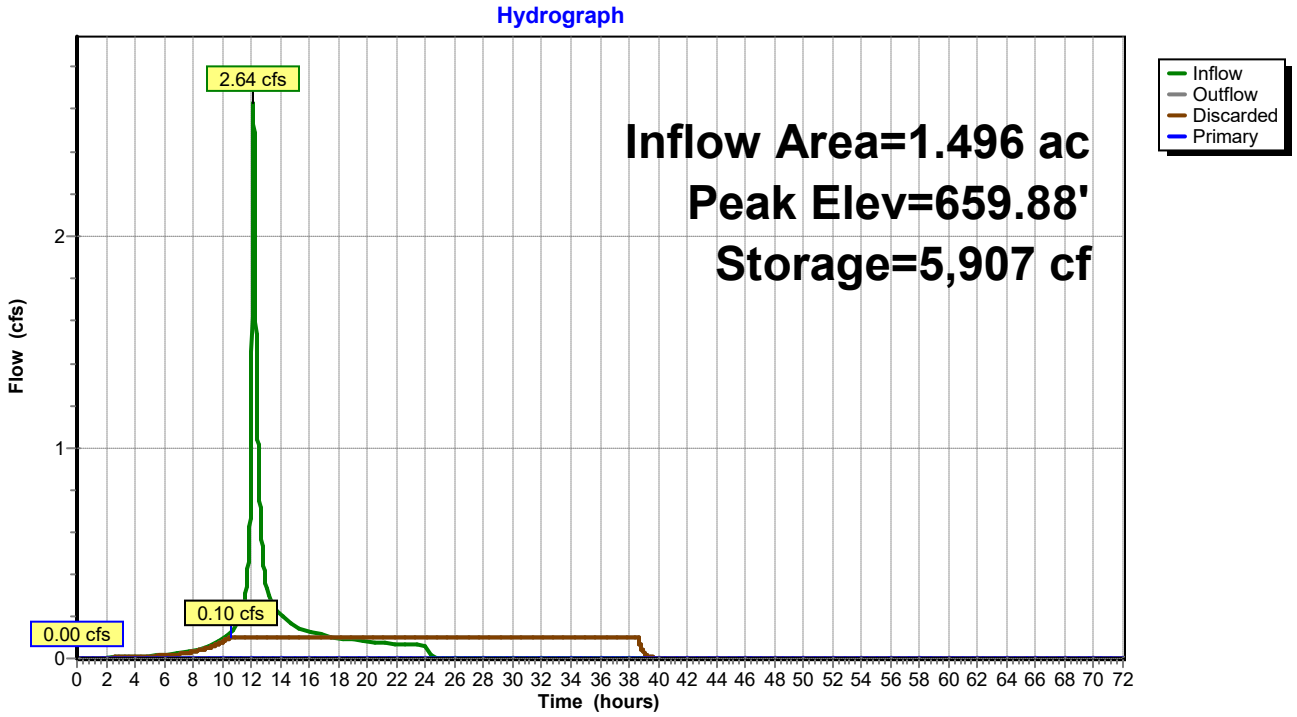
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
660.50	4,366	0	0
661.00	4,888	2,314	2,314
662.00	6,042	5,465	7,779
663.00	7,775	6,909	14,687
663.10	7,775	778	15,465

Device	Routing	Invert	Outlet Devices
#1	Discarded	656.50'	**1.000 in/hr Exfiltration over Surface area**
#2	Primary	658.25'	**12.0" Round Culvert** L= 69.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 658.25' / 657.90' S= 0.0051 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Device 2	661.87'	**24.0" x 36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.10 cfs @ 10.54 hrs HW=656.57' (Free Discharge)
↑└**1=Exfiltration** (Exfiltration Controls 0.10 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=656.50' (Free Discharge)
↑└**2=Culvert** (Controls 0.00 cfs)
↑└**3=Orifice/Grate** (Controls 0.00 cfs)

Pond Pond #1: Bioretention Basin



Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment PDA-101: Area to Wetland Runoff Area=127,015 sf 12.04% Impervious Runoff Depth=2.43"
Flow Length=136' Slope=0.0145 '/' Tc=25.0 min CN=74 Runoff=4.67 cfs 0.590 af

Subcatchment PDA-201: Area to Ex. CBs Runoff Area=22,250 sf 26.83% Impervious Runoff Depth=3.25"
Flow Length=161' Tc=9.8 min CN=83 Runoff=1.79 cfs 0.138 af

Subcatchment PDA-202: Area to Runoff Area=54,405 sf 50.91% Impervious Runoff Depth=3.44"
Flow Length=250' Slope=0.0100 '/' Tc=16.3 min CN=85 Runoff=3.57 cfs 0.358 af

Subcatchment PDA-203: Building Area Runoff Area=10,770 sf 100.00% Impervious Runoff Depth=4.84"
Tc=5.0 min CN=98 Runoff=1.47 cfs 0.100 af

Reach 1R: Swale to Basin Avg. Flow Depth=0.39' Max Vel=1.98 fps Inflow=1.47 cfs 0.100 af
n=0.030 L=370.0' S=0.0105 '/' Capacity=9.44 cfs Outflow=1.28 cfs 0.100 af

Reach DP-1: Wetland to Northeast Inflow=4.67 cfs 0.590 af
Outflow=4.67 cfs 0.590 af

Reach DP-2: Ex. CBs in Driveway Inflow=1.79 cfs 0.138 af
Outflow=1.79 cfs 0.138 af

Pond Pond #1: Bioretention Basin Peak Elev=661.76' Storage=13,330 cf Inflow=4.60 cfs 0.458 af
Discarded=0.10 cfs 0.458 af Primary=0.00 cfs 0.000 af Outflow=0.10 cfs 0.458 af

Total Runoff Area = 4.923 ac Runoff Volume = 1.186 af Average Runoff Depth = 2.89"
72.15% Pervious = 3.552 ac 27.85% Impervious = 1.371 ac

Summary for Subcatchment PDA-101: Area to Wetland to the Northeast

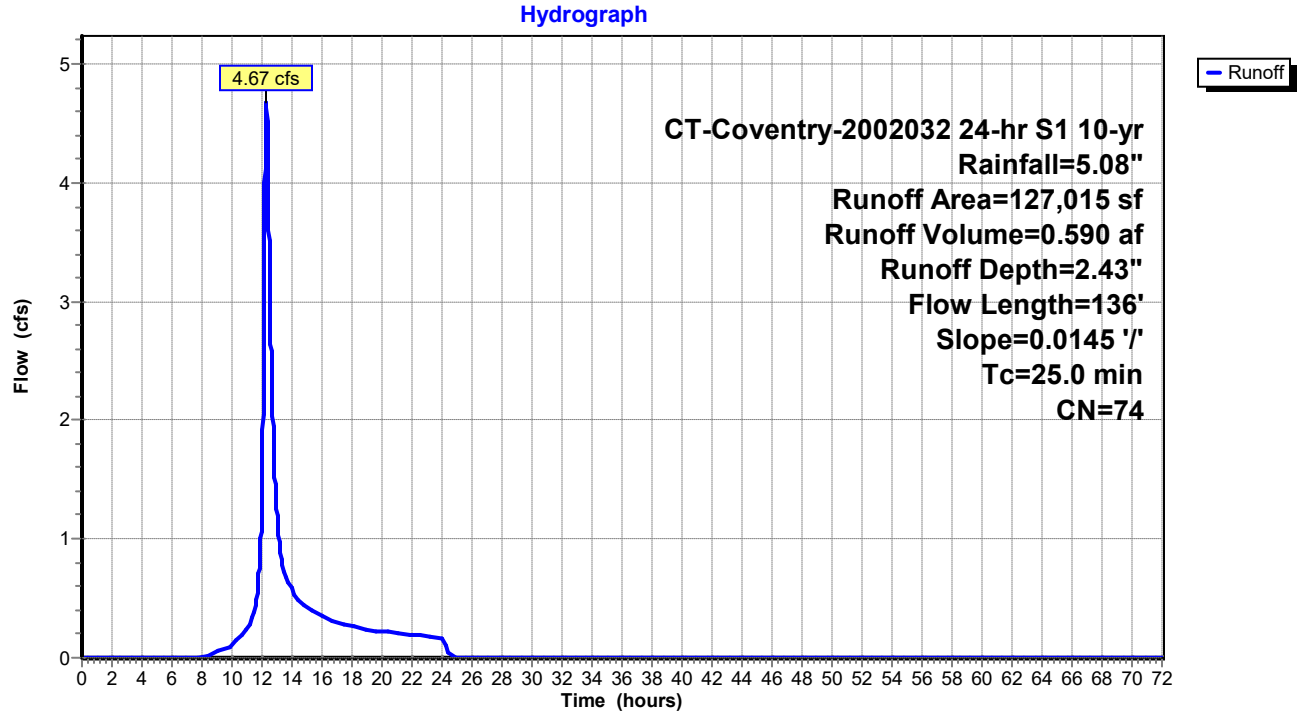
Runoff = 4.67 cfs @ 12.30 hrs, Volume= 0.590 af, Depth= 2.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
CT-Coventry-2002032 24-hr S1 10-yr Rainfall=5.08"

Area (sf)	CN	Description
78,455	69	50-75% Grass cover, Fair, HSG B
10,060	79	50-75% Grass cover, Fair, HSG C
2,445	60	Woods, Fair, HSG B
20,760	73	Woods, Fair, HSG C
13,830	98	Paved parking, HSG B
1,465	98	Paved parking, HSG C
127,015	74	Weighted Average
111,720		87.96% Pervious Area
15,295		12.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	100	0.0145	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.31"
1.0	36	0.0145	0.60		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
25.0	136	Total			

Subcatchment PDA-101: Area to Wetland to the Northeast



Summary for Subcatchment PDA-201: Area to Ex. CBs in Driveway

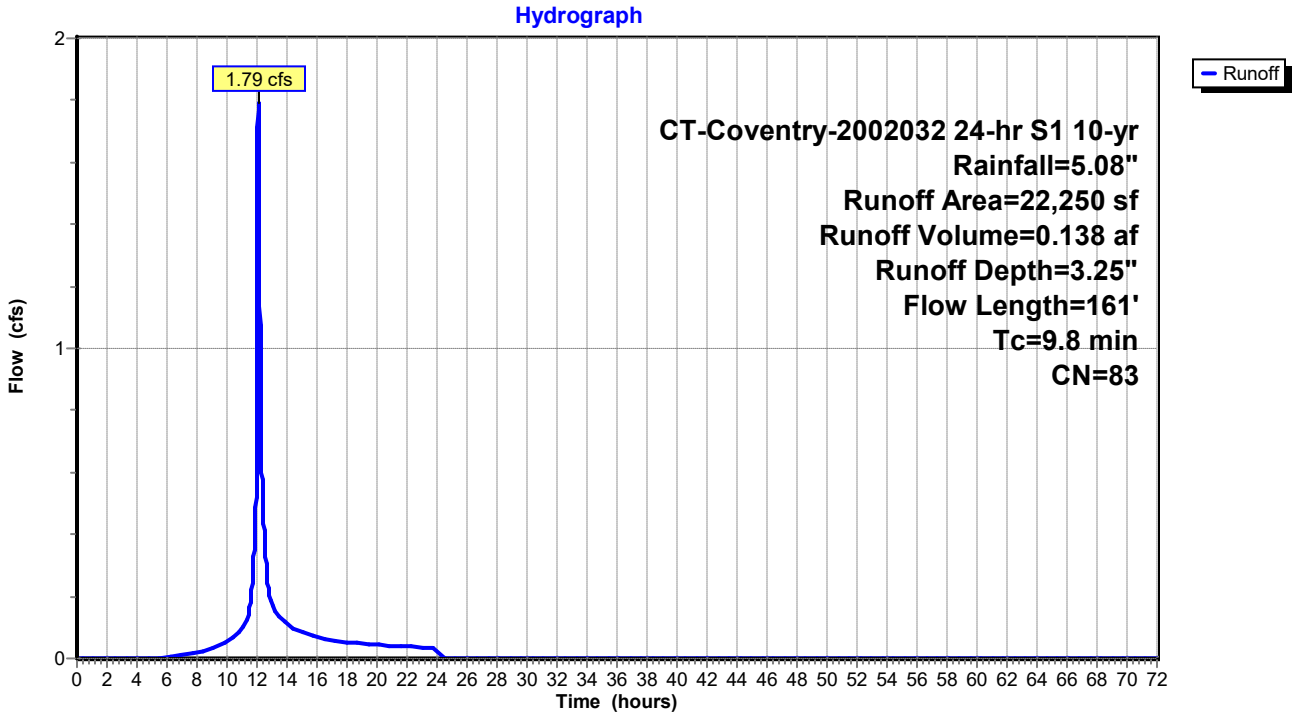
Runoff = 1.79 cfs @ 12.08 hrs, Volume= 0.138 af, Depth= 3.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
CT-Coventry-2002032 24-hr S1 10-yr Rainfall=5.08"

Area (sf)	CN	Description
2,580	69	50-75% Grass cover, Fair, HSG B
13,700	79	50-75% Grass cover, Fair, HSG C
0	60	Woods, Fair, HSG B
0	73	Woods, Fair, HSG C
910	98	Paved parking, HSG B
5,060	98	Paved parking, HSG C
22,250	83	Weighted Average
16,280		73.17% Pervious Area
5,970		26.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.3	100	0.0220	0.18		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.31"
0.4	23	0.0174	0.92		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.1	38	0.0185	7.16	8.79	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
9.8	161	Total			

Subcatchment PDA-201: Area to Ex. CBs in Driveway



Summary for Subcatchment PDA-202: Area to Bioretention Basin

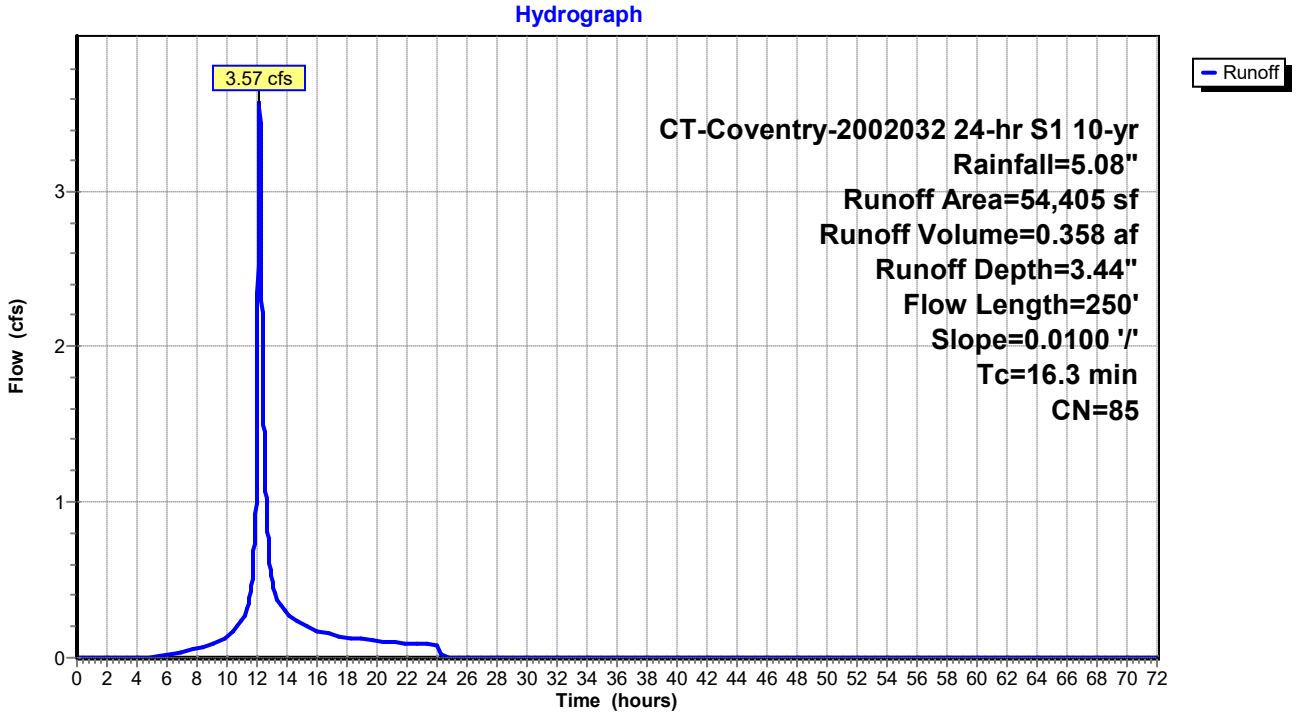
Runoff = 3.57 cfs @ 12.17 hrs, Volume= 0.358 af, Depth= 3.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
CT-Coventry-2002032 24-hr S1 10-yr Rainfall=5.08"

Area (sf)	CN	Description
20,135	69	50-75% Grass cover, Fair, HSG B
6,575	79	50-75% Grass cover, Fair, HSG C
0	60	Woods, Fair, HSG B
0	73	Woods, Fair, HSG C
22,195	98	Paved parking, HSG B
5,500	98	Paved parking, HSG C
54,405	85	Weighted Average
26,710		49.09% Pervious Area
27,695		50.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	100	0.0100	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.31"
3.6	150	0.0100	0.70		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
16.3	250	Total			

Subcatchment PDA-202: Area to Bioretention Basin



Summary for Subcatchment PDA-203: Building Area

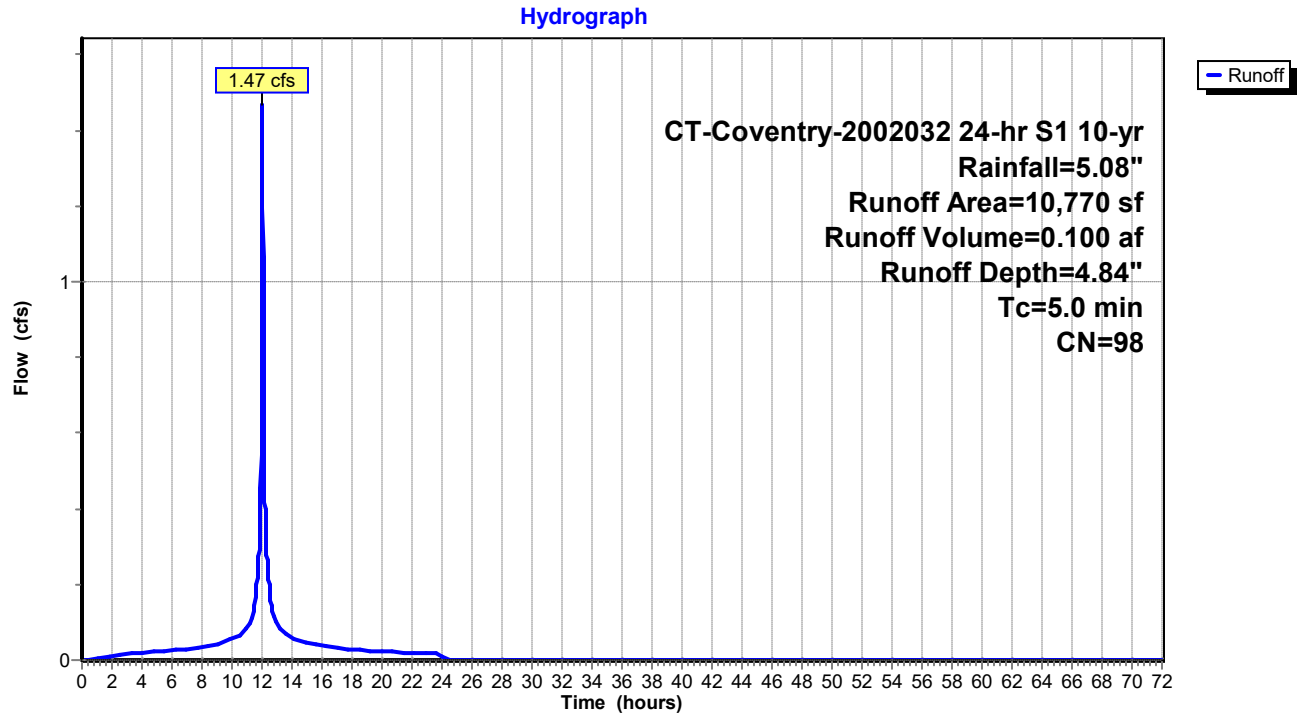
Runoff = 1.47 cfs @ 12.03 hrs, Volume= 0.100 af, Depth= 4.84"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
CT-Coventry-2002032 24-hr S1 10-yr Rainfall=5.08"

Area (sf)	CN	Description
0	69	50-75% Grass cover, Fair, HSG B
0	79	50-75% Grass cover, Fair, HSG C
0	60	Woods, Fair, HSG B
0	73	Woods, Fair, HSG C
10,770	98	Paved parking, HSG B
0	98	Paved parking, HSG C
10,770	98	Weighted Average
10,770		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PDA-203: Building Area



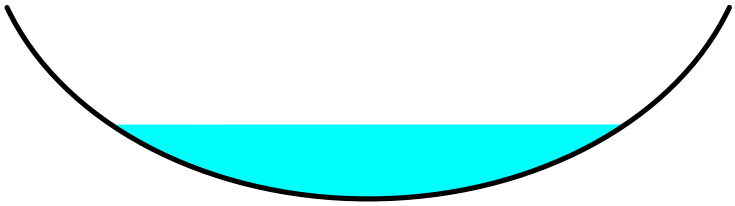
Summary for Reach 1R: Swale to Basin

Inflow Area = 0.247 ac,100.00% Impervious, Inflow Depth = 4.84" for 10-yr event
Inflow = 1.47 cfs @ 12.03 hrs, Volume= 0.100 af
Outflow = 1.28 cfs @ 12.11 hrs, Volume= 0.100 af, Atten= 13%, Lag= 4.8 min

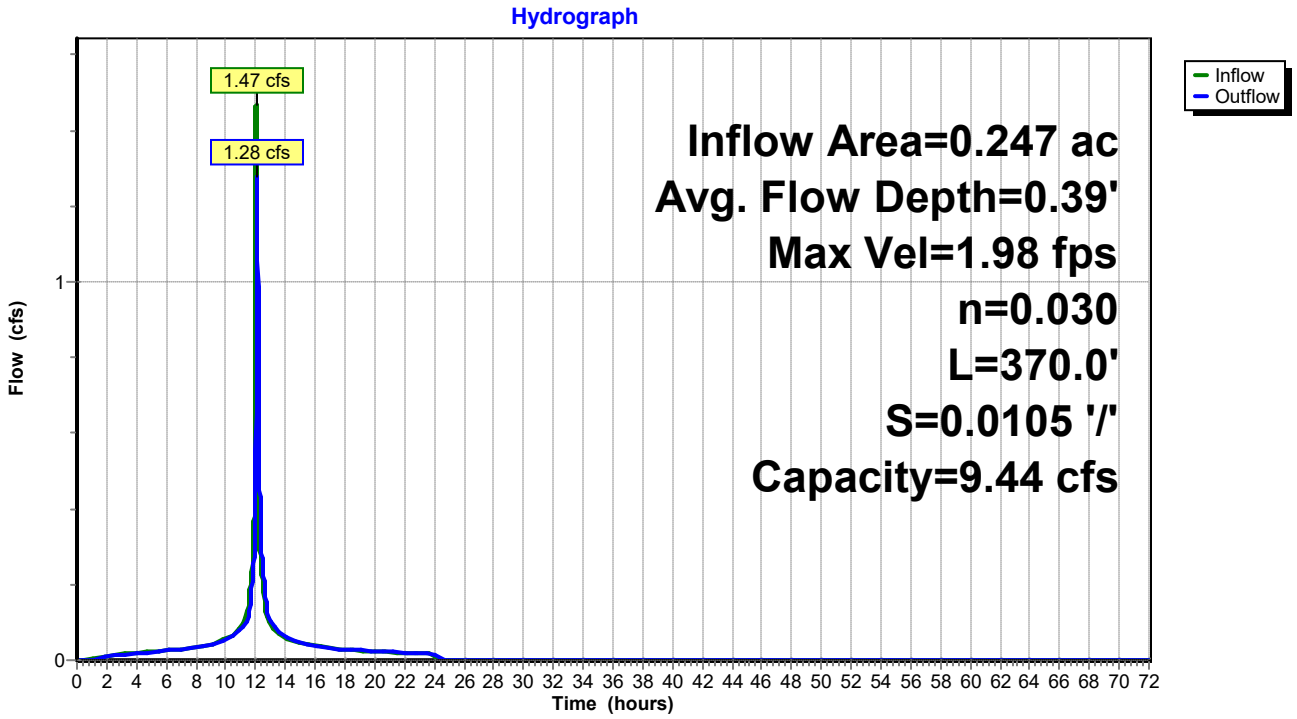
Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.98 fps, Min. Travel Time= 3.1 min
Avg. Velocity = 0.62 fps, Avg. Travel Time= 9.9 min

Peak Storage= 239 cf @ 12.05 hrs
Average Depth at Peak Storage= 0.39'
Bank-Full Depth= 1.00' Flow Area= 2.7 sf, Capacity= 9.44 cfs

4.00' x 1.00' deep Parabolic Channel, n= 0.030 Earth, grassed & winding
Length= 370.0' Slope= 0.0105 '/'
Inlet Invert= 665.90', Outlet Invert= 662.00'



Reach 1R: Swale to Basin

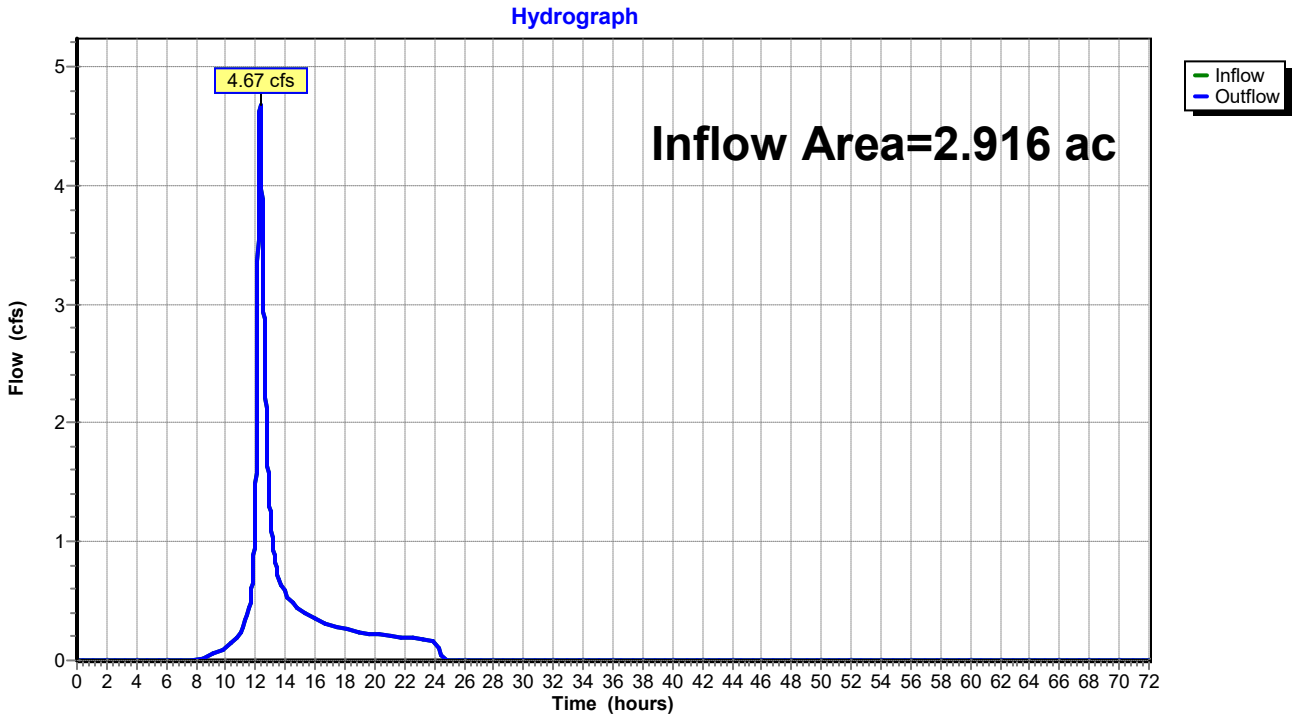


Summary for Reach DP-1: Wetland to Northeast

Inflow Area = 2.916 ac, 12.04% Impervious, Inflow Depth = 2.43" for 10-yr event
Inflow = 4.67 cfs @ 12.30 hrs, Volume= 0.590 af
Outflow = 4.67 cfs @ 12.30 hrs, Volume= 0.590 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Reach DP-1: Wetland to Northeast

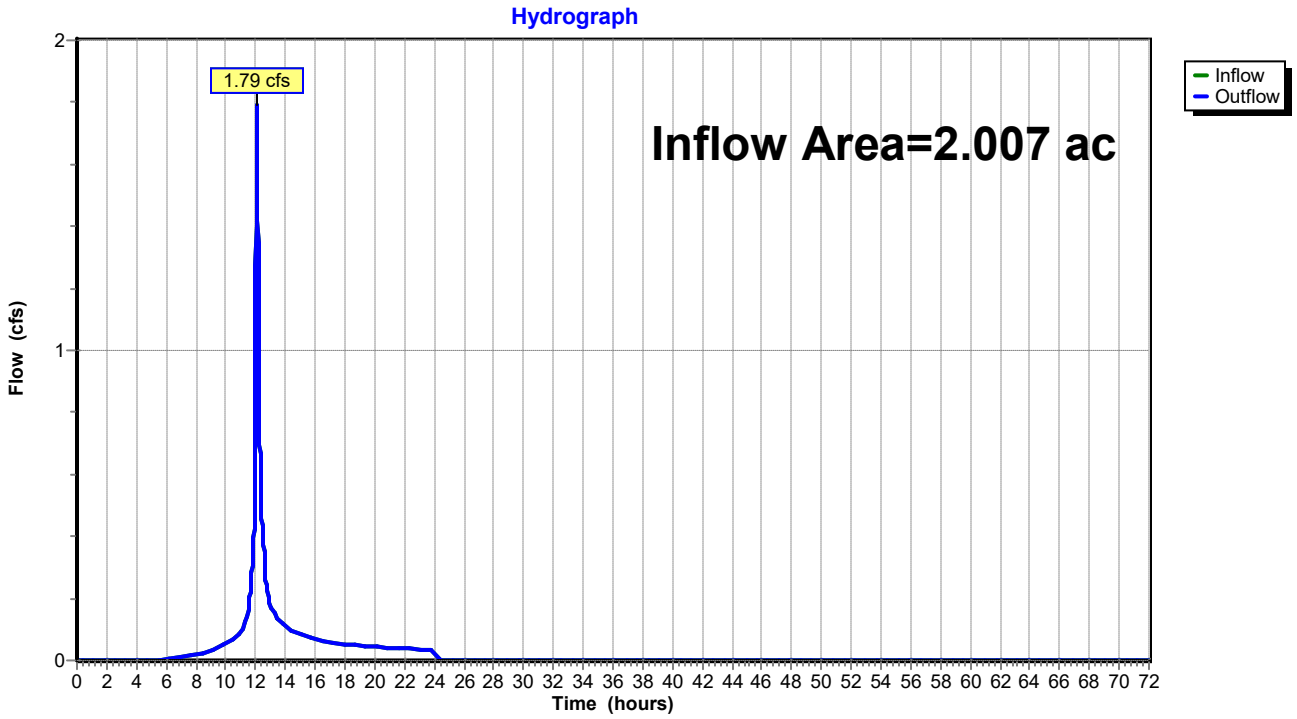


Summary for Reach DP-2: Ex. CBs in Driveway

Inflow Area = 2.007 ac, 50.83% Impervious, Inflow Depth = 0.83" for 10-yr event
Inflow = 1.79 cfs @ 12.08 hrs, Volume= 0.138 af
Outflow = 1.79 cfs @ 12.08 hrs, Volume= 0.138 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Reach DP-2: Ex. CBs in Driveway



Summary for Pond Pond #1: Bioretention Basin

Inflow Area = 1.496 ac, 59.02% Impervious, Inflow Depth = 3.67" for 10-yr event
Inflow = 4.60 cfs @ 12.14 hrs, Volume= 0.458 af
Outflow = 0.10 cfs @ 8.55 hrs, Volume= 0.458 af, Atten= 98%, Lag= 0.0 min
Discarded = 0.10 cfs @ 8.55 hrs, Volume= 0.458 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 661.76' @ 24.04 hrs Surf.Area= 4,366 sf Storage= 13,330 cf

Plug-Flow detention time= 1,190.4 min calculated for 0.458 af (100% of inflow)
Center-of-Mass det. time= 1,190.4 min (2,006.8 - 816.4)

Volume	Invert	Avail.Storage	Storage Description
#1	656.50'	6,986 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 17,464 cf Overall x 40.0% Voids
#2	660.50'	15,465 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) -Impervious
		22,450 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
656.50	4,366	0	0
660.50	4,366	17,464	17,464

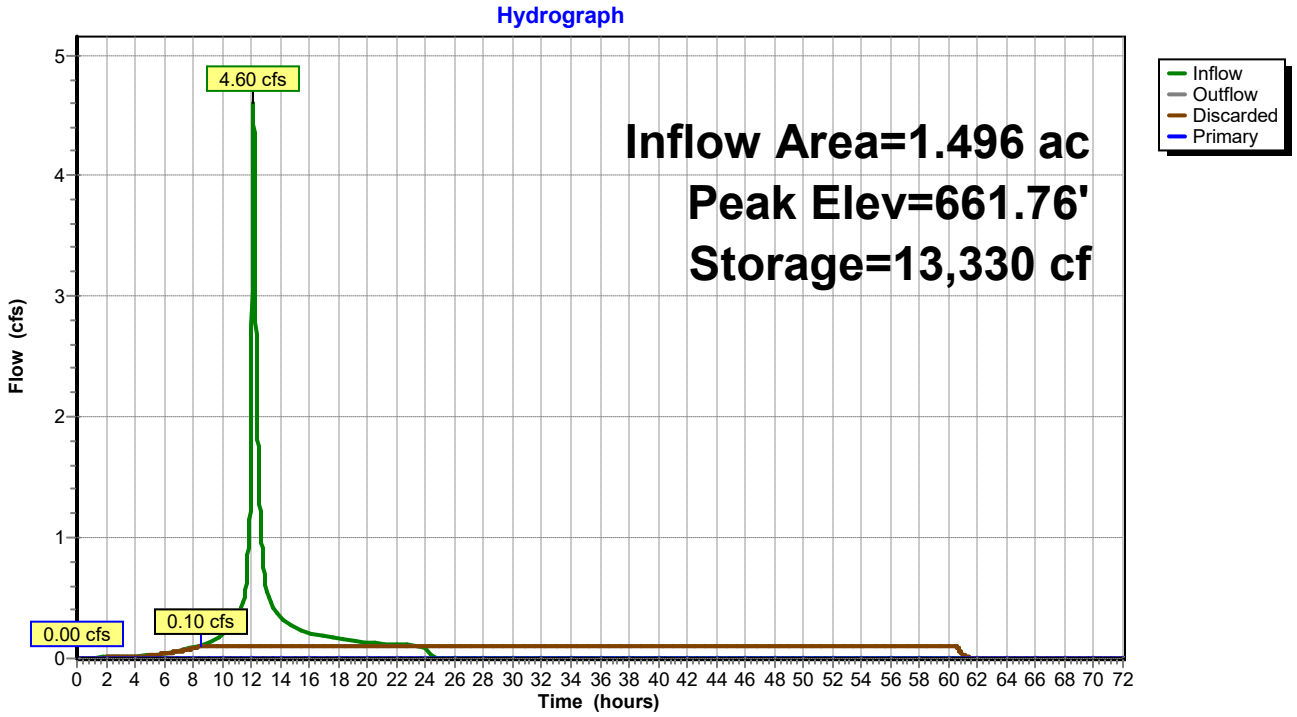
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
660.50	4,366	0	0
661.00	4,888	2,314	2,314
662.00	6,042	5,465	7,779
663.00	7,775	6,909	14,687
663.10	7,775	778	15,465

Device	Routing	Invert	Outlet Devices
#1	Discarded	656.50'	**1.000 in/hr Exfiltration over Surface area**
#2	Primary	658.25'	**12.0" Round Culvert** L= 69.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 658.25' / 657.90' S= 0.0051 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Device 2	661.87'	**24.0" x 36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.10 cfs @ 8.55 hrs HW=656.57' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.10 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=656.50' (Free Discharge)
↑**2=Culvert** (Controls 0.00 cfs)
↑**3=Orifice/Grate** (Controls 0.00 cfs)

Pond Pond #1: Bioretention Basin



Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment PDA-101: Area to Wetland Runoff Area=127,015 sf 12.04% Impervious Runoff Depth=4.84"
Flow Length=136' Slope=0.0145 '/' Tc=25.0 min CN=74 Runoff=9.32 cfs 1.175 af

Subcatchment PDA-201: Area to Ex. CBs Runoff Area=22,250 sf 26.83% Impervious Runoff Depth=5.88"
Flow Length=161' Tc=9.8 min CN=83 Runoff=3.17 cfs 0.250 af

Subcatchment PDA-202: Area to Runoff Area=54,405 sf 50.91% Impervious Runoff Depth=6.12"
Flow Length=250' Slope=0.0100 '/' Tc=16.3 min CN=85 Runoff=6.17 cfs 0.637 af

Subcatchment PDA-203: Building Area Runoff Area=10,770 sf 100.00% Impervious Runoff Depth=7.66"
Tc=5.0 min CN=98 Runoff=2.28 cfs 0.158 af

Reach 1R: Swale to Basin Avg. Flow Depth=0.48' Max Vel=2.28 fps Inflow=2.28 cfs 0.158 af
n=0.030 L=370.0' S=0.0105 '/' Capacity=9.44 cfs Outflow=2.03 cfs 0.158 af

Reach DP-1: Wetland to Northeast Inflow=9.32 cfs 1.175 af
Outflow=9.32 cfs 1.175 af

Reach DP-2: Ex. CBs in Driveway Inflow=3.18 cfs 0.552 af
Outflow=3.18 cfs 0.552 af

Pond Pond #1: Bioretention Basin Peak Elev=662.05' Storage=15,071 cf Inflow=7.69 cfs 0.794 af
Discarded=0.10 cfs 0.493 af Primary=2.52 cfs 0.302 af Outflow=2.62 cfs 0.794 af

Total Runoff Area = 4.923 ac Runoff Volume = 2.220 af Average Runoff Depth = 5.41"
72.15% Pervious = 3.552 ac 27.85% Impervious = 1.371 ac

Summary for Subcatchment PDA-101: Area to Wetland to the Northeast

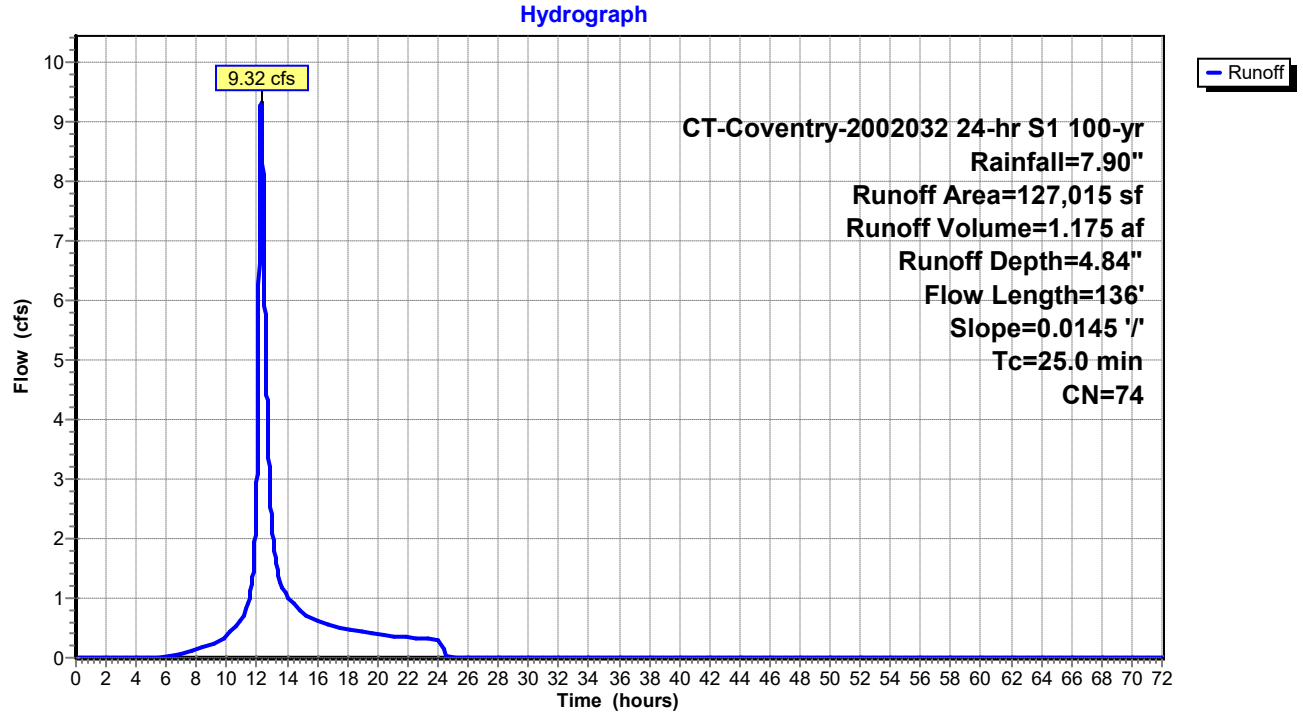
Runoff = 9.32 cfs @ 12.30 hrs, Volume= 1.175 af, Depth= 4.84"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
CT-Coventry-2002032 24-hr S1 100-yr Rainfall=7.90"

Area (sf)	CN	Description
78,455	69	50-75% Grass cover, Fair, HSG B
10,060	79	50-75% Grass cover, Fair, HSG C
2,445	60	Woods, Fair, HSG B
20,760	73	Woods, Fair, HSG C
13,830	98	Paved parking, HSG B
1,465	98	Paved parking, HSG C
127,015	74	Weighted Average
111,720		87.96% Pervious Area
15,295		12.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	100	0.0145	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.31"
1.0	36	0.0145	0.60		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
25.0	136	Total			

Subcatchment PDA-101: Area to Wetland to the Northeast



Summary for Subcatchment PDA-201: Area to Ex. CBs in Driveway

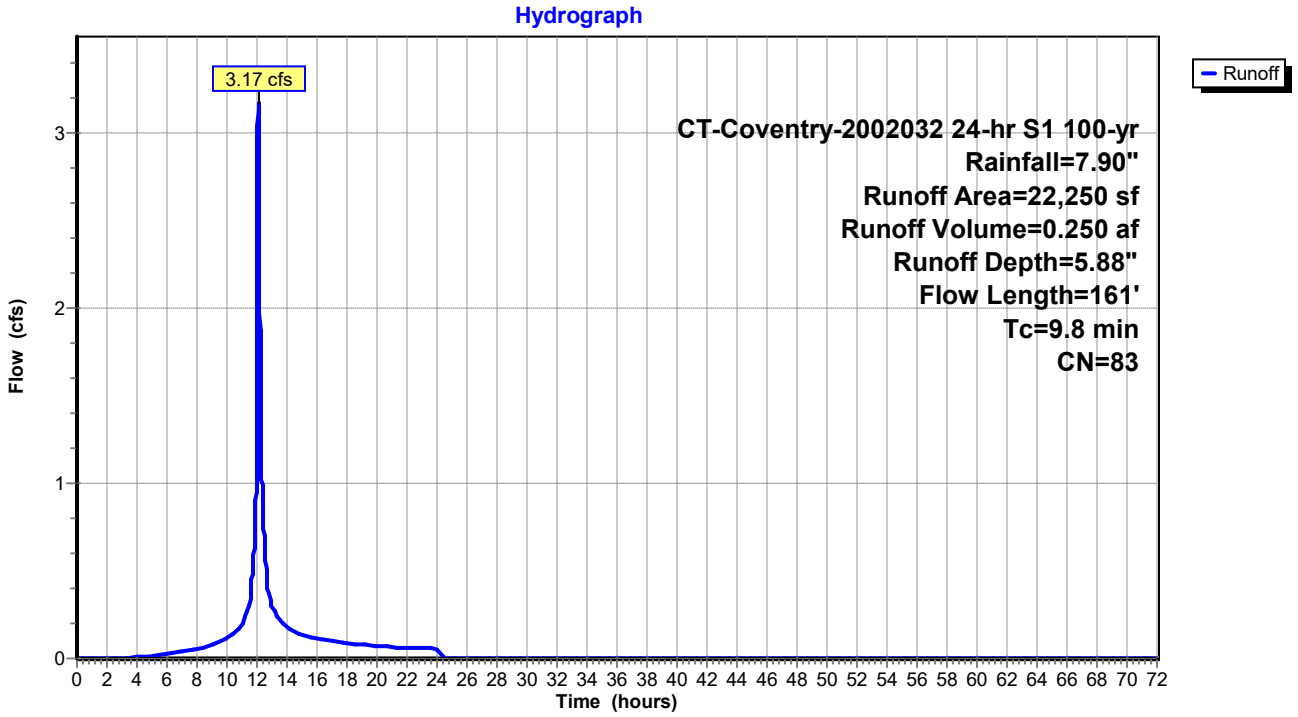
Runoff = 3.17 cfs @ 12.08 hrs, Volume= 0.250 af, Depth= 5.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
CT-Coventry-2002032 24-hr S1 100-yr Rainfall=7.90"

Area (sf)	CN	Description
2,580	69	50-75% Grass cover, Fair, HSG B
13,700	79	50-75% Grass cover, Fair, HSG C
0	60	Woods, Fair, HSG B
0	73	Woods, Fair, HSG C
910	98	Paved parking, HSG B
5,060	98	Paved parking, HSG C
22,250	83	Weighted Average
16,280		73.17% Pervious Area
5,970		26.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.3	100	0.0220	0.18		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.31"
0.4	23	0.0174	0.92		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.1	38	0.0185	7.16	8.79	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
9.8	161	Total			

Subcatchment PDA-201: Area to Ex. CBs in Driveway



Summary for Subcatchment PDA-202: Area to Bioretention Basin

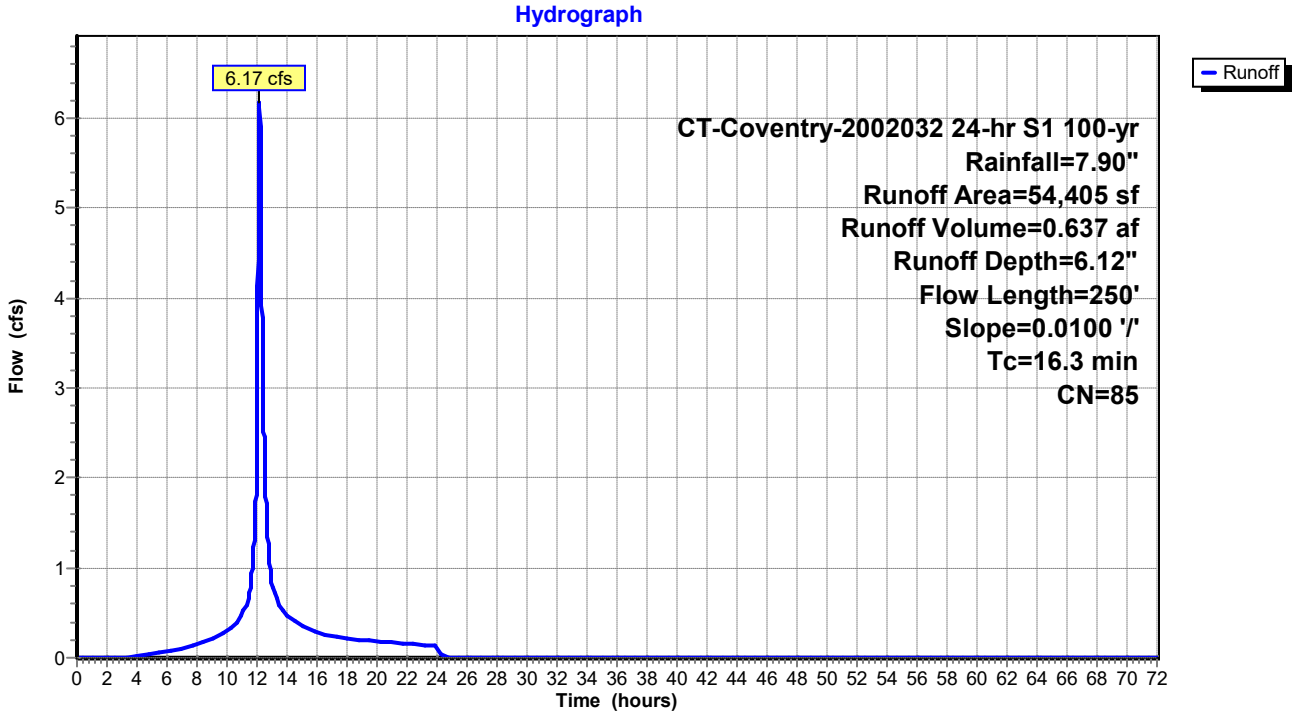
Runoff = 6.17 cfs @ 12.17 hrs, Volume= 0.637 af, Depth= 6.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
CT-Coventry-2002032 24-hr S1 100-yr Rainfall=7.90"

Area (sf)	CN	Description
20,135	69	50-75% Grass cover, Fair, HSG B
6,575	79	50-75% Grass cover, Fair, HSG C
0	60	Woods, Fair, HSG B
0	73	Woods, Fair, HSG C
22,195	98	Paved parking, HSG B
5,500	98	Paved parking, HSG C
54,405	85	Weighted Average
26,710		49.09% Pervious Area
27,695		50.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	100	0.0100	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.31"
3.6	150	0.0100	0.70		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
16.3	250	Total			

Subcatchment PDA-202: Area to Bioretention Basin



Summary for Subcatchment PDA-203: Building Area

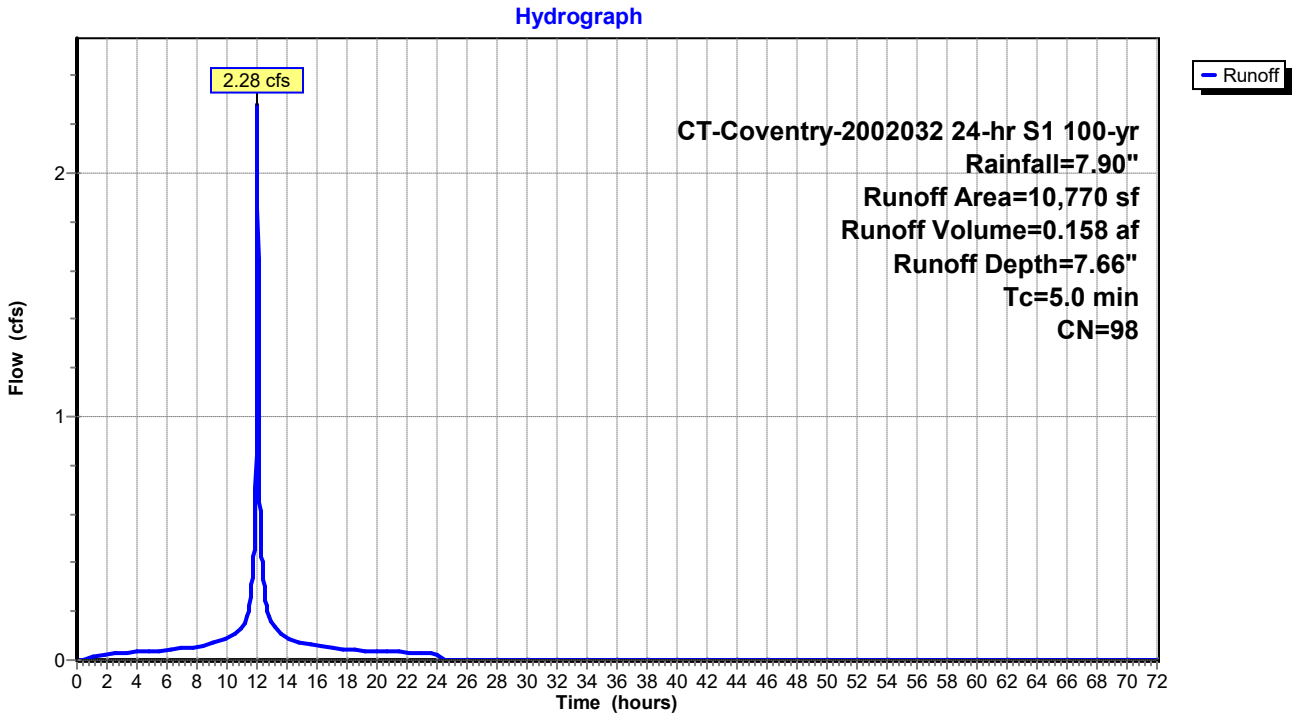
Runoff = 2.28 cfs @ 12.03 hrs, Volume= 0.158 af, Depth= 7.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
CT-Coventry-2002032 24-hr S1 100-yr Rainfall=7.90"

Area (sf)	CN	Description
0	69	50-75% Grass cover, Fair, HSG B
0	79	50-75% Grass cover, Fair, HSG C
0	60	Woods, Fair, HSG B
0	73	Woods, Fair, HSG C
10,770	98	Paved parking, HSG B
0	98	Paved parking, HSG C
10,770	98	Weighted Average
10,770		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PDA-203: Building Area



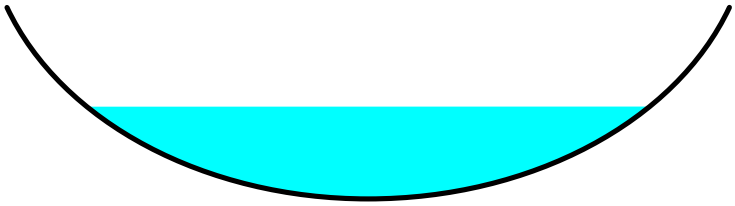
Summary for Reach 1R: Swale to Basin

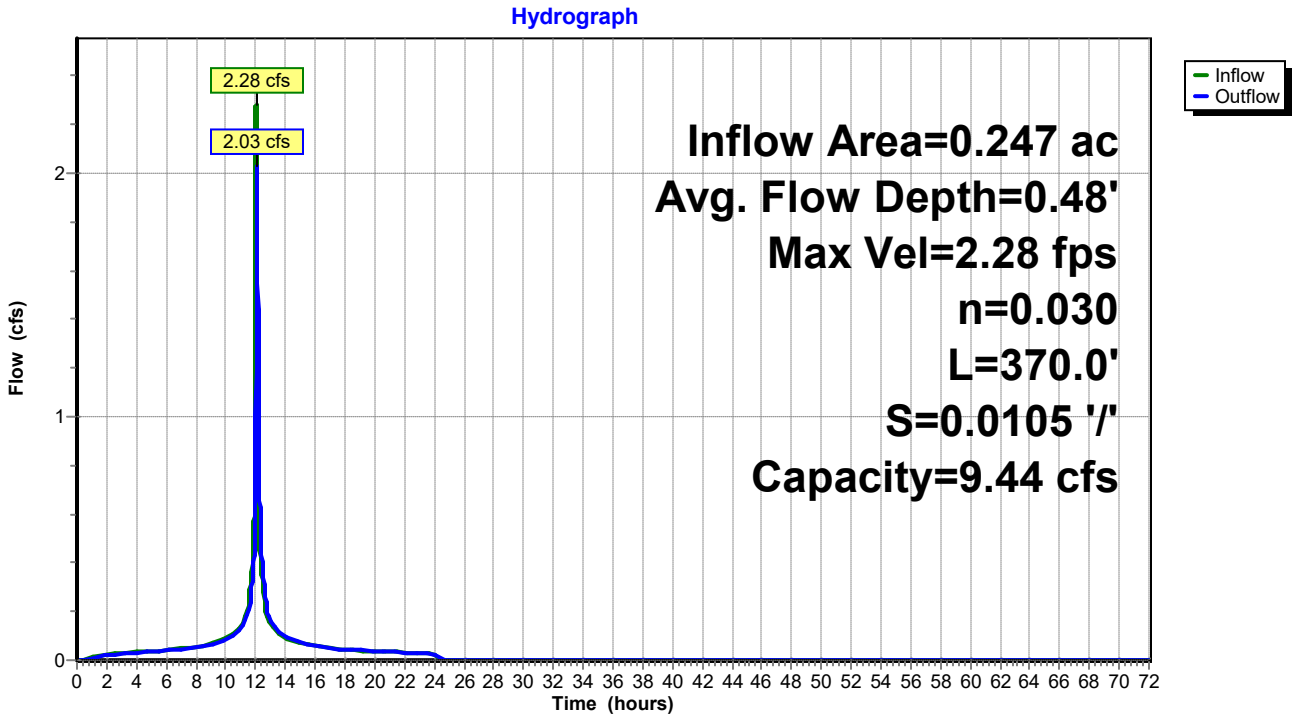
Inflow Area = 0.247 ac,100.00% Impervious, Inflow Depth = 7.66" for 100-yr event
Inflow = 2.28 cfs @ 12.03 hrs, Volume= 0.158 af
Outflow = 2.03 cfs @ 12.10 hrs, Volume= 0.158 af, Atten= 11%, Lag= 4.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Max. Velocity= 2.28 fps, Min. Travel Time= 2.7 min
Avg. Velocity = 0.71 fps, Avg. Travel Time= 8.6 min

Peak Storage= 331 cf @ 12.05 hrs
Average Depth at Peak Storage= 0.48'
Bank-Full Depth= 1.00' Flow Area= 2.7 sf, Capacity= 9.44 cfs

4.00' x 1.00' deep Parabolic Channel, n= 0.030 Earth, grassed & winding
Length= 370.0' Slope= 0.0105 '/'
Inlet Invert= 665.90', Outlet Invert= 662.00'



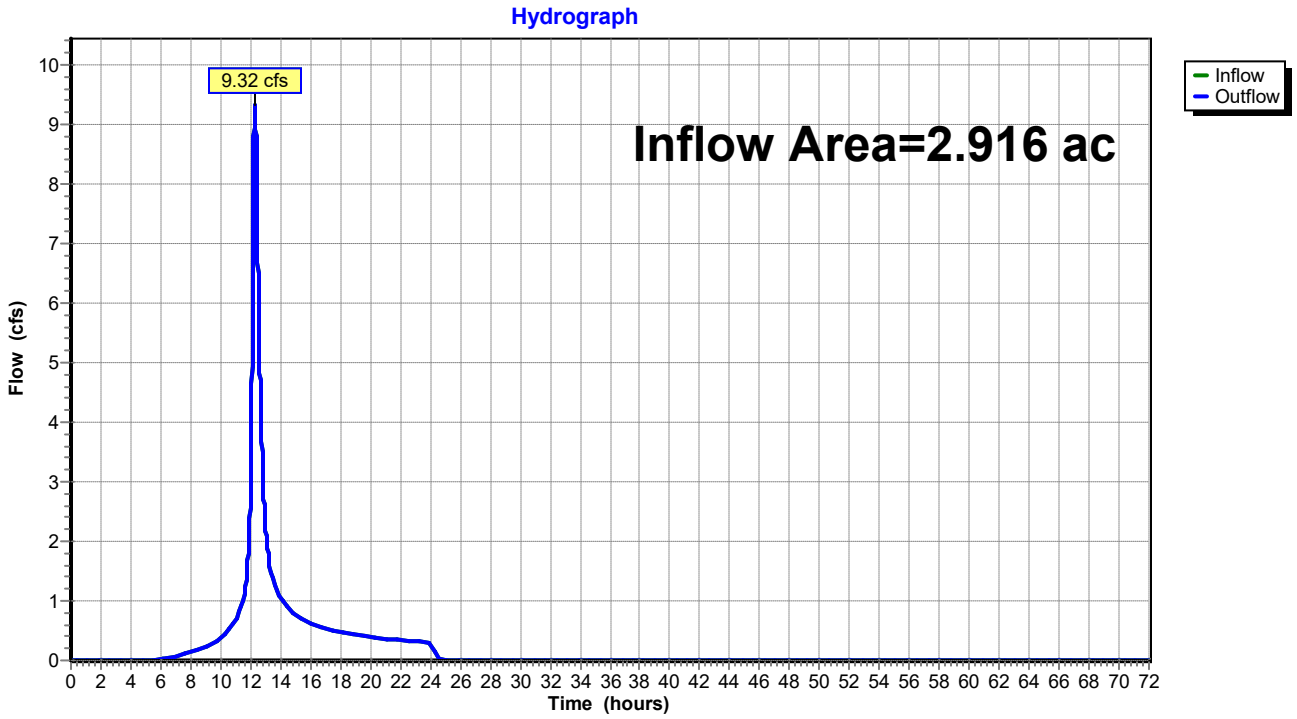


Summary for Reach DP-1: Wetland to Northeast

Inflow Area = 2.916 ac, 12.04% Impervious, Inflow Depth = 4.84" for 100-yr event
Inflow = 9.32 cfs @ 12.30 hrs, Volume= 1.175 af
Outflow = 9.32 cfs @ 12.30 hrs, Volume= 1.175 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Reach DP-1: Wetland to Northeast

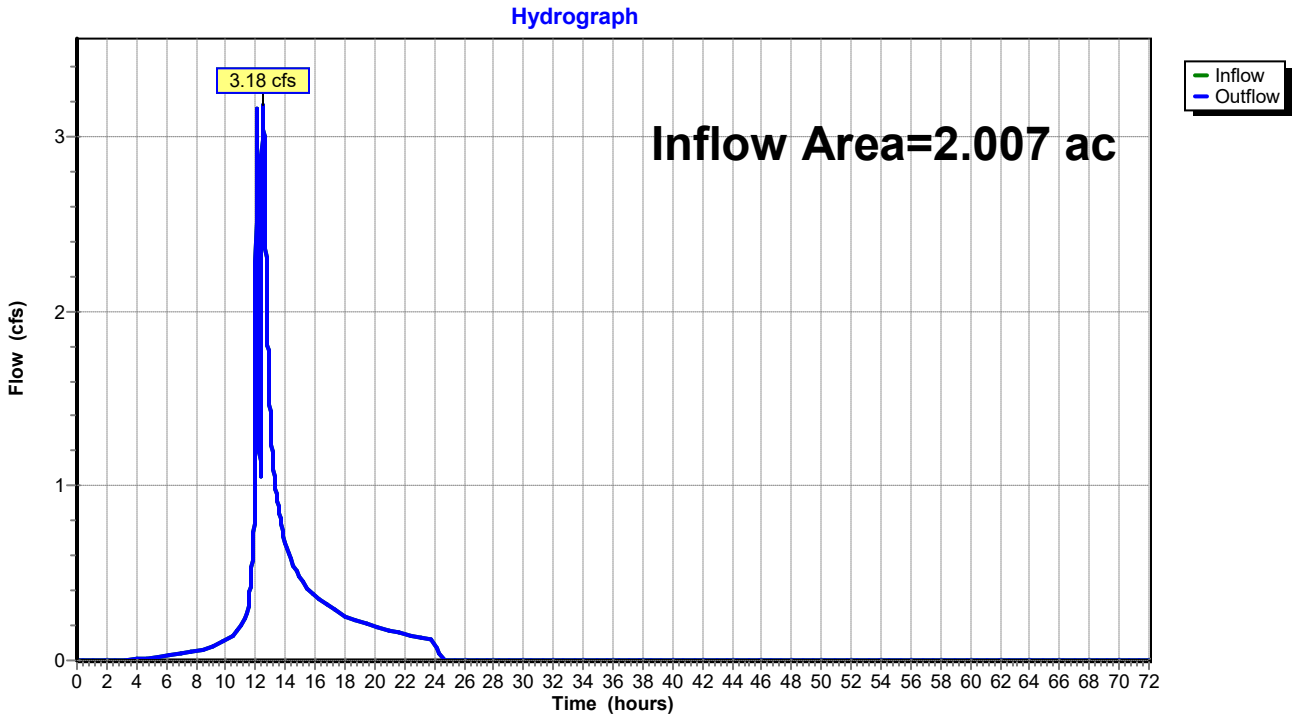


Summary for Reach DP-2: Ex. CBs in Driveway

Inflow Area = 2.007 ac, 50.83% Impervious, Inflow Depth = 3.30" for 100-yr event
Inflow = 3.18 cfs @ 12.49 hrs, Volume= 0.552 af
Outflow = 3.18 cfs @ 12.49 hrs, Volume= 0.552 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Reach DP-2: Ex. CBs in Driveway



Summary for Pond Pond #1: Bioretention Basin

Inflow Area = 1.496 ac, 59.02% Impervious, Inflow Depth = 6.37" for 100-yr event
Inflow = 7.69 cfs @ 12.14 hrs, Volume= 0.794 af
Outflow = 2.62 cfs @ 12.50 hrs, Volume= 0.794 af, Atten= 66%, Lag= 21.7 min
Discarded = 0.10 cfs @ 5.84 hrs, Volume= 0.493 af
Primary = 2.52 cfs @ 12.50 hrs, Volume= 0.302 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 662.05' @ 12.50 hrs Surf.Area= 4,366 sf Storage= 15,071 cf

Plug-Flow detention time= 786.5 min calculated for 0.794 af (100% of inflow)
Center-of-Mass det. time= 786.5 min (1,586.2 - 799.7)

Volume	Invert	Avail.Storage	Storage Description
#1	656.50'	6,986 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 17,464 cf Overall x 40.0% Voids
#2	660.50'	15,465 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) -Impervious
		22,450 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
656.50	4,366	0	0
660.50	4,366	17,464	17,464

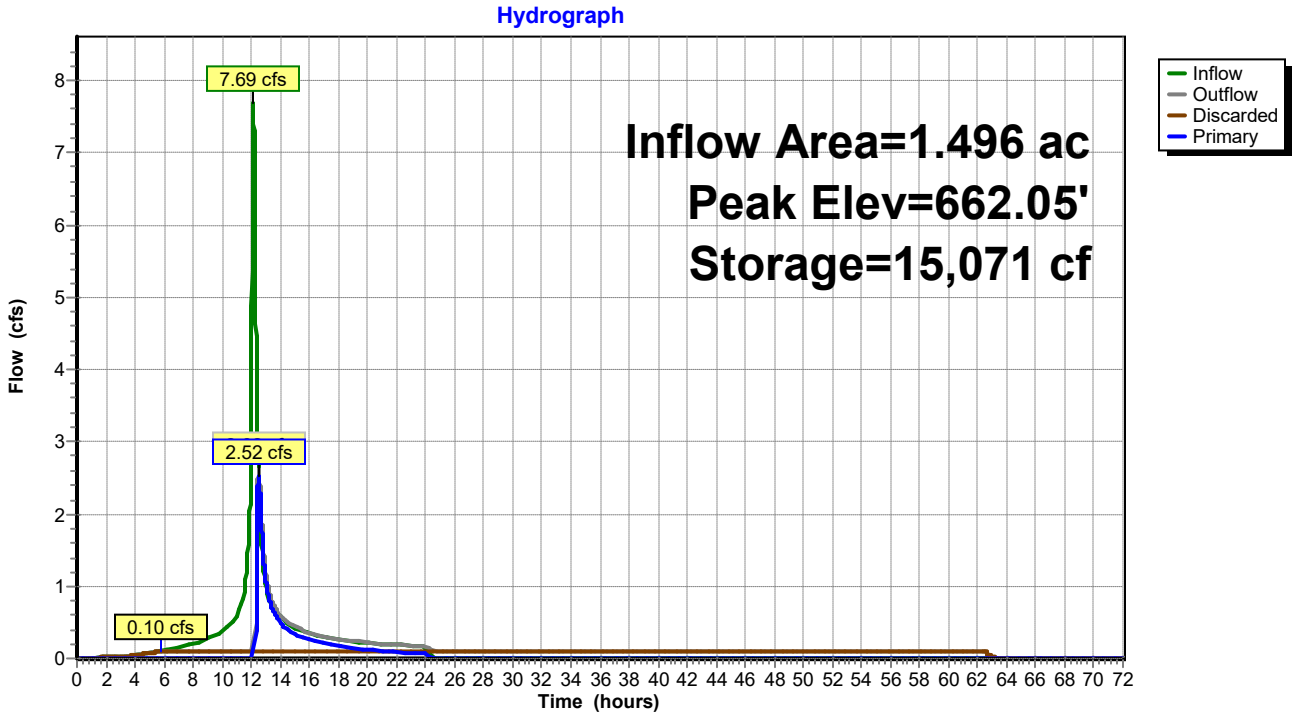
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
660.50	4,366	0	0
661.00	4,888	2,314	2,314
662.00	6,042	5,465	7,779
663.00	7,775	6,909	14,687
663.10	7,775	778	15,465

Device	Routing	Invert	Outlet Devices
#1	Discarded	656.50'	**1.000 in/hr Exfiltration over Surface area**
#2	Primary	658.25'	**12.0" Round Culvert** L= 69.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 658.25' / 657.90' S= 0.0051 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Device 2	661.87'	**24.0" x 36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.10 cfs @ 5.84 hrs HW=656.57' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.10 cfs)

Primary OutFlow Max=2.50 cfs @ 12.50 hrs HW=662.05' (Free Discharge)
└**2=Culvert** (Passes 2.50 cfs of 5.84 cfs potential flow)
└**3=Orifice/Grate** (Weir Controls 2.50 cfs @ 1.39 fps)

Pond Pond #1: Bioretention Basin



APPENDIX D

WATER QUALITY CALCUATIONS

CTDEEP Water Quality Volume Calculations
Bioretention Basin Calculation
Groundwater Recharge Calculation
Treatment Train Efficiency Worksheet

Water Quality Calculations

Determine Water Quality Volume

From CT 2004 Stormwater Quality Manual:

$$WQV = \frac{(1")(R)(A)}{12}$$

$$R = 0.05 + 0.009(I)$$

WQV = water quality volume (ac-ft)
R = volumetric runoff coefficient
I = percent impervious cover
A = site area in acres
WQv = Calculated Water Quality Volume

Area		Total Area		Impervious Area		Impervious Cover	Volumetric Runoff Coefficient	Water Quality Volume (WQV)		Proposed Water Quality Volume (WQV)	
ID		ac	ft^2	ac	ft^2	%	R	acre-feet	ft^3	acre-feet	ft^3
Area to Bioretention Basin	PDA 202/PDA 203	1.496	65,175	0.883	38,465	59.02	0.581	0.072	3,136	0.117	5,079

Bioretention Basin Calculations

Surface area of the Bioretention System
SA=(WQv)/hf

WQv = Calculated Water Quality Volume
hf=depth of ponding above soil media in feet)

		Water Quality Volume Required (CF)	Depth of Ponding (FT)	Required Surface Area (SF)	Surface Area Provided (SF)	WQV Provided in Ponded Depth (CF)
Bioretention Basin #1	PDA 202/PDA 203	3,136	1.37	2,289	4,366	5,079

Groundwater Recharge Volume Calculations

Groundwater Recharge Volume

From CT 2004 Stormwater Quality Manual:

$$GVR = \frac{(D)(A)(I)}{12}$$

GRV Groundwater Recharge Volume (ac-ft)
D = Depth of Runoff to be Recharged (table 7-4)
A = site area in acres
I = impervious cover (decimal)
WQv = Calculated Water Quality Volume

1.37 4366

	A														
	Total Site Area (AC)	Site Area by NRCS Hydrologic Soil Group				Impervious Cover by NRCS Hydrologic Soil Group				Site Imperviousness (Decimel) by NRCS Hydrologic Soil Group				GRV Required (ac-ft)	Potential Recharge Pond Volumes Proposed (ac-ft)
		A	B	C	D	A	B	C	D	A	B	C	D		
	1.87	0.00	1.46	0.41	0.00	0.00	0.76	0.13	0.00	0.00	0.41	0.07	0.00	0.013	0.117

Table 7-4
Groundwater Recharge Depth

NRCS Hydrologic Soil Group	Average Annual Recharge	Groundwater Recharge Depth (D)
A	18 inches/year	0.4 inches
B	12 inches/year	0.25 inches
C	6 inches/year	0.10 inches
D	3 inches/year	0 inches (waived)

Source: MADEP, 1997.
NRCS – Natural Resources Conservation Service

Best Management Practice (BMP) Treatment Train Efficiency Worksheet

Prepared for:
Proposed Retail Development
1100 Boston Turnpike
Bolton, Connecticut

Prepared by:
BL Companies
100 Constitution Plaza, 10th Floor
Hartford Connecticut

Date prepared:
April 2, 2021

Overall Site Treatment Train Efficiency

Et=[1-(1-E1)(1-E2)(1-E3)(1-E4)(1-E?)]*100

BMP	BMP Description	Type pf Treatment	Efficiency Rate %
E1	Impervious Surface Sweeping***	Secondary (conventional)	10
E2	Bioretention Basin	Primary	90

Overall Treatment Train Efficiency (Et)= **91 % Total Suspended Solids (TSS) Remova**

* 80% require per CT DEP
** Manufacturers claim 80% TSS removal
*** Schueler 1996 & EPA 1993
**** University of New Hampshire

BMP	*Type pf Treatment*	*TSS Removal Rate*	*Starting TSS Load*	*Amount Removed*	*Remaining Load*
Impervious Surface Sweeping***	secondary (conventional)	0.10	1.00	0.10	0.90
Bioretention Basin	Primary	0.9	0.90	0.81	0.09

Overall Treatment Train Efficiency (% **91**

TSS Removal Rates (adapted from Schueler, 1996, & EPA, 1993)

BMP List	Design Rate	Range of Average TSS Removal Rates	Brief Design Requirements
Extended Detention Pond	70%	60-80%	Sediment forebay
Wet Pond (a)	70%	60-80%	Sediment forebay
Constructed Wetland (b)	80%	65-80%	Designed to infiltrate or retain
Water Quality Swale	70%	60-80%	Designed to infiltrate or retain
Infiltration Trench	80%	75-80%	Pretreatment critical
Infiltration Basin	80%	75-80% (predicted)	Pretreatment critical
Dry Well	80%	80% (predicted)	Rooftop runoff
			(uncontaminated only)
Sand Filter (c)	80%	80%	Pretreatment
Organic Filter (d)	80%	80%+	Pretreatment
Water Quality Inlet	25%	15-35% w/ cleanout	Off-line only; 0.1" minimum Water Quality Volume (WQV) storage
Sediment Trap (Forebay)	25%	25% w/ cleanout	Storm flows for 2-year event must not cause erosion; 0.1" minimum WQV storage
Drainage Channel	25%	25%	Check dams; non-erosive for 2-yr.
Deep Sump and Hooded Catch Basin	25%	25% w/ cleanout	Deep sump general rule = 4 x pipe diameter or 4.0' for pipes 18" or less
Street Sweeping	10%	10%	Discretionary non-structural credit, must be part of approved plan

APPENDIX E

SUBSURFACE SOIL INVESTIGATION LOGS
Test Pit Logs
Falling Head Permeability Test Logs

TP-1
BL Project #2002032
May 4, 2021

Proposed Retail Development - 1100 Boston Turnpike
Bolton, CT

TEST PIT FIELD LOG

PERSONNEL PRESENT	EXCAVATION EQUIPMENT			
Cody L'Heureux- BL Companies	Contractor		Ground Surface Elevation	662.50
	Operator		Datum	NAVD 88
	Make	Model	Temperature	54
	Bucket Capacity	Reach	Weather	Cloudy w/ Rain

Depth	SOIL DESCRIPTION	Excav. Effort	Cobble and Boulder Data	Remark No.
0"-2"	Topsoil	E		
2"-60"	Dark brown coarse sand with trace cobbles	E	TR C	
60"-120"	Dark brown silty sand	E		1
	Bottom of Test Pit at 120" (10')			

REMARKS:

1. Ground water was observed at 8'.
2. Bedrock was not observed.

TEST PIT PLAN

North

LEGEND

COBBLES AND BOULDERS

Size Range Classification	Letter Designation
3" - 12"	Cobble (C)
12" - 24	Small (S)
24" - 36"	Medium (M)
36" and Larger	Large (L)

PROPORTIONS USED (QUANTITATIVE TERMS)

TRACE (TR)	0-10%
LITTLE (LI)	10-20%
SOME (SO)	20-35%
MANY (MA)	35-50%

QUALITATIVE TERMS

OCCASIONAL
FEW
FREQUENT
NUMEROUS

EXCAVATION EFFORT

E - Easy
M - Moderate
D - Difficult

▼ Observed Depth to Groundwater

355 Research Parkway Meriden, CT 06450 Tel.(203) 630-1406 Fax (203) 630-2615
Architecture § Engineering § Planning § Landscape Architecture § Land Surveying § Environmental Sciences

TP-2
BL Project #2002032
May 4, 2021

Proposed Retail Development - 1100 Boston Turnpike
Bolton, CT

TEST PIT FIELD LOG

PERSONNEL PRESENT	EXCAVATION EQUIPMENT			
Cody L'Heureux- BL Companies	Contractor		Ground Surface Elevation	662.30
	Operator		Datum	NAVD 88
	Make	Model	Temperature	54
	Bucket Capacity	Reach	Weather	Cloudy w/ Rain

Depth	SOIL DESCRIPTION	Excav. Effort	Cobble and Boulder Data	Remark No.
0"-6"	Topsoil	E		
6"-72"	Dark brown coarse sand with trace cobbles	E	TR C	
72"-120"	Dark brown silty sand	E		1
	Bottom of Test Pit at 120" (10')			

REMARKS:

1. Ground water was observed at 8'.
2. Bedrock was not observed.

TEST PIT PLAN

North

LEGEND

COBBLES AND BOULDERS

Size Range Classification	Letter Designation
3" - 12"	Cobble (C)
12" - 24	Small (S)
24" - 36"	Medium (M)
36" and Larger	Large (L)

PROPORTIONS USED (QUANTITATIVE TERMS)

TRACE (TR)	0-10%
LITTLE (LI)	10-20%
SOME (SO)	20-35%
MANY (MA)	35-50%

QUALITATIVE TERMS

OCCASIONAL
FEW
FREQUENT
NUMEROUS

EXCAVATION EFFORT

E - Easy
M - Moderate
D - Difficult

▼ Observed Depth to Groundwater

355 Research Parkway Meriden, CT 06450 Tel.(203) 630-1406 Fax (203) 630-2615
Architecture § Engineering § Planning § Landscape Architecture § Land Surveying § Environmental Sciences

TP-3
BL Project #2002032
May 4, 2021

Proposed Retail Development - 1100 Boston Turnpike
Bolton, CT

TEST PIT FIELD LOG

PERSONNEL PRESENT	EXCAVATION EQUIPMENT			
Cody L'Heureux- BL Companies	Contractor		Ground Surface Elevation	661.90
	Operator		Datum	NAVD 88
	Make	Model	Temperature	54
	Bucket Capacity	Reach	Weather	Cloudy w/ Rain

Depth	SOIL DESCRIPTION	Excav. Effort	Cobble and Boulder Data	Remark No.
0"-6"	Topsoil	E		
6"-66"	Dark brown coarse sand with trace cobbles	E	TR C	
66"-120"	Dark brown silty sand	E		1
	Bottom of Test Pit at 120" (10')			

REMARKS:

1. Ground water was observed at 7'.
2. Bedrock was not observed.

TEST PIT PLAN

North

LEGEND

COBBLES AND BOULDERS

Size Range Classification	Letter Designation
3" - 12"	Cobble (C)
12" - 24	Small (S)
24" - 36"	Medium (M)
36" and Larger	Large (L)

PROPORTIONS USED (QUANTITATIVE TERMS)

TRACE (TR)	0-10%
LITTLE (LI)	10-20%
SOME (SO)	20-35%
MANY (MA)	35-50%

QUALITATIVE TERMS

OCCASIONAL
FEW
FREQUENT
NUMEROUS

EXCAVATION EFFORT

E - Easy
M - Moderate
D - Difficult

▼ Observed Depth to Groundwater

355 Research Parkway Meriden, CT 06450 Tel.(203) 630-1406 Fax (203) 630-2615
Architecture § Engineering § Planning § Landscape Architecture § Land Surveying § Environmental Sciences

FALLING HEAD
PERMEABILITY TEST

PROJECT: Proposed Retail Development
Bolton, CT

PROJECT #2002032
DATE: 5/4/2021

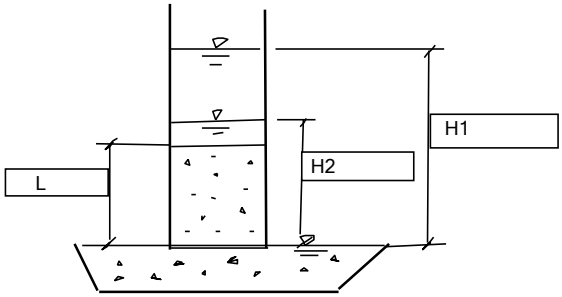
BY: C.J.L.

TEST PIT # **1**

SAMPLE TP-1

SAMPLE LENGTH: **4.50** **in.**
SAMPLE DEPTH (BELOW EG): **6.00** **ft**

presoak start: 10:00 am
presoak finish: 10:30 am



$$K = \frac{(H1 - H2) \times L}{t \times (H1 + H2)/2}$$

Time (min.)	H1 (in.)	H2 (in.)	H1 - H2	(H1 + H2)/2	K (in/min.)	K (ft./day)
0.000	6.500	6.500	0.000	6.500	-	-
5.000	6.500	6.260	0.240	6.380	0.034	4.063
10.000	6.500	5.960	0.540	6.230	0.039	4.681
15.000	6.500	5.720	0.780	6.110	0.038	4.596
20.000	6.500	5.540	0.960	6.020	0.036	4.306
25.000	6.500	5.420	1.080	5.960	0.033	3.914
30.000	6.500	5.300	1.200	5.900	0.031	3.661
35.000	6.500	5.060	1.440	5.780	0.032	3.844
40.000	6.500	4.880	1.620	5.690	0.032	3.844
45.000	6.500	4.680	1.820	5.590	0.033	3.907
50.000	6.500	4.500	2.000	5.500	0.033	3.927
					Average=	**4.074** ft/day
					or	2.04 in/hr

FALLING HEAD
PERMEABILITY TEST

PROJECT: Proposed Retail Development
Bolton, CT

PROJECT #2002032
DATE: 5/4/2021

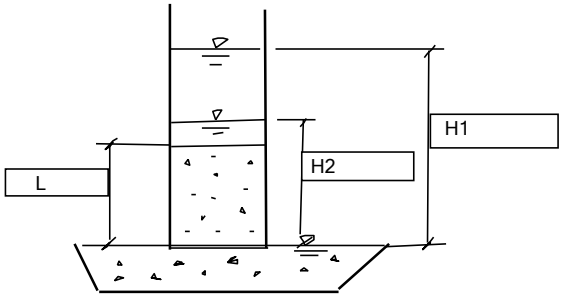
BY: C.J.L.

TEST PIT # **1**

SAMPLE TP-2

SAMPLE LENGTH: **4.50** **in.**
SAMPLE DEPTH (BELOW EG): **6.00** **ft**

presoak start: 10:00 am
presoak finish: 10:30 am



$$K = \frac{(H1 - H2) \times L}{t \times (H1 + H2)/2}$$

Time (min.)	H1 (in.)	H2 (in.)	H1 - H2	(H1 + H2)/2	K (in/min.)	K (ft./day)
0.000	6.500	6.500	0.000	6.500	-	-
5.000	6.500	6.170	0.330	6.335	0.047	5.626
10.000	6.500	5.880	0.620	6.190	0.045	5.409
15.000	6.500	5.650	0.850	6.075	0.042	5.037
20.000	6.500	5.300	1.200	5.900	0.046	5.492
25.000	6.500	5.060	1.440	5.780	0.045	5.381
30.000	6.500	4.680	1.820	5.590	0.049	5.860
35.000	6.500	4.500	2.000	5.500	0.047	5.610
40.000	6.500	4.300	2.200	5.400	0.046	5.500
45.000	6.500	4.000	2.500	5.250	0.048	5.714
					Average=	**5.514** ft/day
					or	2.76 in/hr

FALLING HEAD
PERMEABILITY TEST

PROJECT: Proposed Retail Development
Bolton, CT

PROJECT #2002032
DATE: 5/4/2021

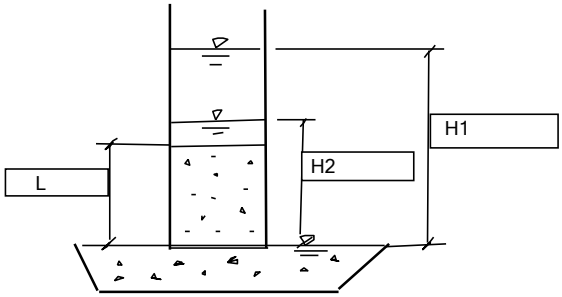
BY: C.J.L.

TEST PIT # **1**

SAMPLE TP-3

SAMPLE LENGTH: **4.00** **in.**
SAMPLE DEPTH (BELOW EG): **6.00** **ft**

presoak start: 10:00 am
presoak finish: 10:30 am



$$K = \frac{(H1 - H2) \times L}{t \times (H1 + H2)/2}$$

Time (min.)	H1 (in.)	H2 (in.)	H1 - H2	(H1 + H2)/2	K (in/min.)	K (ft./day)	
0.000	6.500	6.500	0.000	6.500	-	-	
5.000	6.500	6.180	0.320	6.340	0.040	4.845	
10.000	6.500	5.540	0.960	6.020	0.064	7.654	
15.000	6.500	5.060	1.440	5.780	0.066	7.972	
20.000	6.500	4.280	2.220	5.390	0.082	9.885	
25.000	6.500	4.220	2.280	5.360	0.068	8.167	
30.000	6.500	4.000	2.500	5.250	0.063	7.619	
					Average=	**7.691**	ft/day
					or	3.85	in/hr

May 5, 2021

Patrice L. Carson, AICP, Director of Community Development
Town of Bolton
222 Bolton Center Road
Bolton, CT 06043

Re: Special Permit Application
2-Lot Subdivision Application
Proposed Retail Development
1100 Boston Turnpike

Dear Ms. Carson:

We are in receipt of engineering comments dated April 26, 2021, from Nathan L. Jacobson & Associates, Inc., and your comments dated May 3, 2021, regarding the project referenced above. Our responses below are shown in ***bold italic*** text. We have provided the following additional information documenting our responses:

- Land Development Plans, revised to May 5, 2021
- Stormwater Management Narrative and Hydrologic Calculations, dated May 5, 2021

NATHAN L. JACOBSON & ASSOCIATES, INC.

1. Referral should be made to the Connecticut Department of Transportation (CTDOT) for work proposed within the State right-of-way.

   Response: Reference to CTDOT requirements for permanent pavement repair in Route 44 has been included on the revised Site Plan sheet SP-1. The CTDOT standard details for trench repair are included on Details Sheet DN-6.

2. An application should be made to the Bolton Lakes Regional Water Pollution Authority (BLRWPCA) prior to the installation of the pressure line and sewage pump station.

   Response: Acknowledged. An application to the BLRWPCA has been initiated; coordination is ongoing.

3. We would recommend that an underdrain be placed along the centerline of the proposed water quality basin to help to drain the basin between rain events and prevent problems with standing water.

Response: A 4" perforated HDPE underdrain has been added to the water quality basin. A raised underdrain system is being utilized to create an internal water storage zone within the bioretention soil media. This configuration will allow for a 6" depth of submerged bioretention soil to provide enhanced nitrogen removal. Please refer to the updated Grading and Drainage Plan sheet GD-1 and Details Sheet DN-3.

4. An existing conditions model should be provided for the subarea that contributes to the water quality basin on the Bolton Dental site. From the data provided in the Stormwater Management Report, it appears that flows being sent to the existing basin will be minimal, but it should be quantified.

Response: Acknowledged. A supplementary Stormwater Management Narrative and Hydrologic Calculations letter has been provided with this submission. The letter details and compares the existing and proposed condition peak flows directed offsite. As indicated in the letter, peak flow directed to the Bolton Dental site is matched in the 2, 10, and 100-year storm events.

5. The available Water Quality Volume (WQv) should be calculated as the volume of the basin up to the lowest proposed outlet elevation. In this regard, the available storage should be calculated only up to the top of frame of the proposed outlet structure. The data provided in the Stormwater Management Report indicates that the basin still provides adequate WQv even with the reduced available storage. The "Proposed Water Quality Volume (WQv)" column of the WQv table should be revised for accuracy.

Response: The Bioretention Basin Calculations sheet has been revised to indicate the correct depth of ponding of 1.37' between the revised outlet structure frame (661.87') and the revised bottom of the bioretention basin (660.50'). The WQV provided in the ponded depth is 5,079 CF. The updated Stormwater Quality Calculations can be seen in Appendix D of the supplementary Stormwater Management Narrative and Hydrologic Calculations letter included with this submission.

6. Test pits should be performed within the area of the proposed stormwater basin to determine if rock or high groundwater will conflict with the soil media and drainage layers below the proposed basin floor elevation.

Response: Test pits were performed on site on 5/4/2021. A total of three test pits, spaces 50' on center, were observed spanning the location of the proposed bioretention basin. Test pit locations have been added to the Land Development Plans included with this submission.

The test pits indicate that the site soils consist of dark brown sand within the upper 5' to 6' below existing grade, transitioning to sand with silt in below 6'. Groundwater was observed in all three pits ranging in depth from 7' to 8' below grade. Test pit 1 (TP-1) represents the highest potential groundwater table, with water located at elevation 654.50. To provide the 2' minimum required vertical separation from groundwater to

the bottom of the bioretention media, the bioretention basin elevation has been raised by 0.50'. The bottom of the ¾" stone layer is now proposed at elevation 656.50, and the bottom of the above-ground basin storage is now 660.50.

Falling head soil permeability testing was also performed for each test pit. Results of permeability testing ranged from 2.04 in/hr to 3.85 in/hr. The infiltration rate of 1 in/hr used in the hydrologic modeling conservatively represents the minimum field-measured rate of 2.04 in/hr reduced by half to accommodate a clogging factor of safety.

COMMUNITY DEVELOPMENT STAFF ANALYSIS – 2-LOT SUBDIVISION APPLICATION

1. PZC determined no Public Hearing would be held and was not required by CGS.

   Response: Acknowledged.

2. A feasibility plan needs to be shown for lot #2 which would include proposed locations of a building, parking, and general site layout.

   Response: A feasibility plan indicating potential locations of a building, parking and drive aisle areas, and other general site layout items has been provided in the Land Development Plans. Please refer to Master Plan sheet MP-1.

3. Once Street Numbers are assigned and approved by the Town, they should be shown on the Plan.

   Response: Acknowledged, appropriate street numbers will be added to the plans upon approval.

4. Section 16A.3.x. – Buildings and Structures: Architectural and Design Requirements & Section 16B.4.l. – Architectural Character, Historic Preservation, Site Design. The Commission needs to determine if the design of the proposed building is adequate to meet these standards. If the Commission's intention along this corridor is to preserve the residential-type character and create transitions to existing residential neighborhoods, this proposal seems to accomplish that. Staff feels the applicant has paid particular attention to keeping all activity (no lighting, windows, etc.) away from the west side of the building to keep from interfering with the residences on North Road.

   Response: Acknowledged, please note that additional brick banding and faux windows have been added to the northern side of the building in an effort to increase visual aesthetics while mitigating disturbance to the residential abutters. Please refer to the updated architectural elevations provided in the Land Development Plan set included with this submission.

5. Subdivision Regulations Section 4 – Open Space – The Commission needs to declare on the record that the conservation easement on the west side of the property satisfies the Open Space requirement of the Subdivision Regulations.

Response: Acknowledged.

COMMUNITY DEVELOPMENT STAFF ANALYSIS – SPECIAL PERMIT APPLICATION

The plans appear to meet Town Regulations. The following items may require additional information:

1. The PZC will hold a Public Hearing on May 5, 2021 as required by CGS.

Response: Acknowledged.

2. Once Street Numbers are assigned and approved by the Town, they should be shown on the Plan.

Response: Acknowledged, appropriate street numbers will be added to the plans upon approval.

3. The Town Engineer's comments need to be addressed.

Response: The Town Engineer's comments have been addressed, please refer to the Nathan L. Jacobson & Associates, Inc. portion of this response letter.

4. Section 16A.3.x. – Buildings and Structures: Architectural and Design Requirements & Section 16B.4.l. – Architectural Character, Historic Preservation, Site Design. The Commission needs to determine if the design of the proposed building is adequate to meet these standards. If the Commission's intention along this corridor is to preserve the residential-type character and create transitions to existing residential neighborhoods, this proposal seems to accomplish that. Staff feels the applicant has paid particular attention to keeping all activity (no lighting, windows, etc.) away from the west side of the building to keep from interfering with the residences on North Road.

Response: Acknowledged, please note that additional brick banding and faux windows have been added to the northern side of the building in an effort to increase visual aesthetics while mitigating disturbance to the residential abutters. Please refer to the updated architectural elevations provided in the Land Development Plan set included with this submission.

5. Section 16A.4.d. – Notices – Statutory notices have been published on the town's website, and the applicant has been provided with a sign for posting. The applicant has provided an affidavit for the posting of a sign.

Response: Acknowledged.

General Revision Notes

1. A conduit sleeve under the proposed development driveway, within the access and utility easement area, is now shown on the revised Site Utility Plan sheet SU-1. The conduit sleeve may be used for future sign conduit installation to Lot 2.

2. Additional brick banding and faux windows have been added to the northern side of the building in an effort to increase visual aesthetics while mitigating disturbance to the residential abutters. Please refer to the updated Conceptual Elevations sheet by BKA Architects dated May 3, 2021 provided in the Land Development Plan set included with this submission.

3. Screening vegetation to be planted between the proposed building and the residential abutters has been relocated to align with the top of the existing earthen berm, rather than being planted on the sloped portion of the berm, to maximize screening efficiency. Please refer to the updated Landscape Plan sheet LL-1.

4. The sanitary sewer service connection has been relocated to the force main along Boston Turnpike, greatly reducing the length of sanitary lateral, at the recommendation of the BLRWPCA. The Land Development Plans have been updated to indicate approximate connection invert to the main and required lateral kit installation. The plans also indicate the location of a proposed 20' wide sanitary sewer easement in favor of the BLRWPCA on the project parcel up to and including the sanitary sewer pump station. Please refer to the revised Site Utility Plan sheet SU-1.

5. The developer will provide a site work completion bond and sewer bond as required.

6. The property owner's signature will be provided on required applications upon receipt.

7. Reponses to comments from the Eastern Highlands Health district received on 5/5/2021 are forthcoming.

We trust this addresses your concerns. Should you require additional information, please contact me at 860-760-1908.

Sincerely,

Kimberly M. Masiuk, P.E.
Senior Project Manager