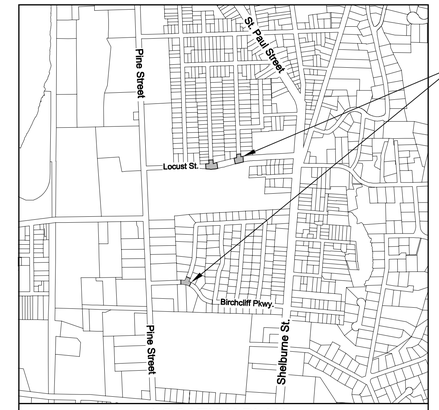
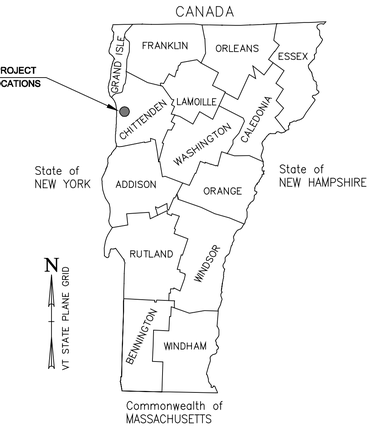
City of Burlington
County of Chittenden
Burlington STP BP 13(6)
Pedestrian Improvements

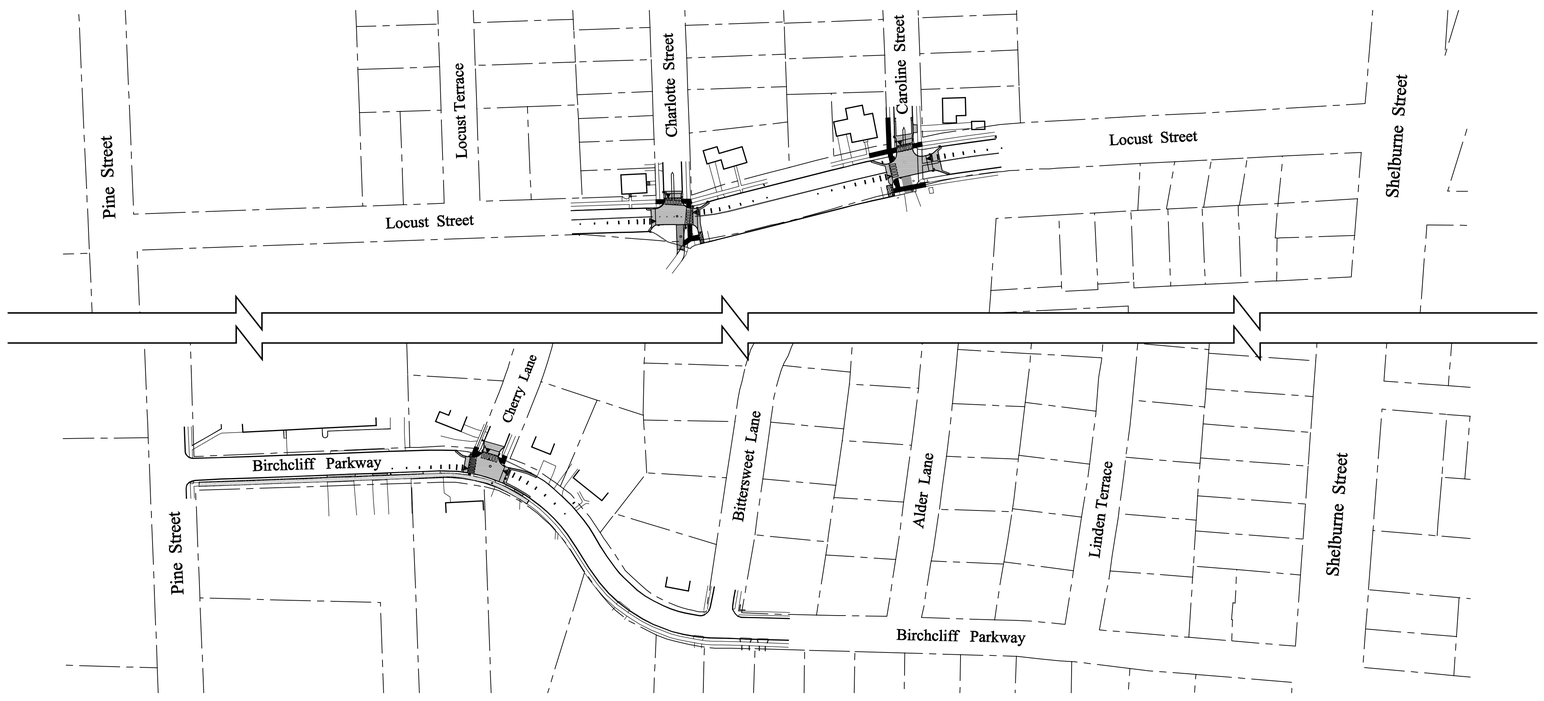
PROJECT LOCATIONS: ON LOCUST STREET; THE INTERSECTIONS OF CAROLINE & CHARLOTTE STREET WITH LOCUST STREET. ON BIRCHCLIFF PARKWAY; STARTING AT PINE STREET AND EXTENDING TO THE CHERRY LANE/BIRCHCLIFF PARKWAY INTERSECTION.

PROJECT DESCRIPTION: WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES GRADING, SUBBASE, NEW 5' WIDE SIDEWALK AND CURB, SPEED TABLES, CURB EXTENSIONS, DRIVEWAY RECONSTRUCTION, NEW DRAINAGE STRUCTURES, NEW SIGNS AND OTHER RELATED ITEMS.



LOCATION PLAN
NTS





OVERALL SITE PLAN

NOTES:

1. THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE VERMONT AGENCY OF TRANSPORTATION. CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE VTRANS STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS INCORPORATED IN THESE PLANS.
2. THE LOCUST STREET AND BIRCHCLIFF PARKWAY RIGHT OF WAYS ARE BASED ON LIMITED FOUND EXISTING BOUNDARY EVIDENCE, CITY RECORDS, AND PLANS BY OTHERS. INDIVIDUAL PROPERTY SIDELINES WERE LOCATED BASED ON FOUND EVIDENCE AND CITY PARCEL MAPS.
3. LINES SHOWN ON THESE PLANS AS EXISTING PROPERTY LINES ARE BELIEVED TO BE ACCURATE BUT SHOULD NOT BE RELIED UPON FOR PURPOSES UNRELATED TO THE ACQUISITION OF LANDS AND RIGHTS FOR THIS PROJECT.

INDEX OF SHEETS

1	TITLE SHEET
2-3	QUANTITY SHEETS
4-5	DETAILS AND SPECIFICATIONS
6	BIRCHCLIFF PARKWAY SIDEWALK LAYOUT PLAN
7	CHERRY LANE/BIRCHCLIFF PARKWAY INTERSECTION LAYOUT PLAN
8	CHERRY LANE/BIRCHCLIFF PARKWAY INTERSECTION GRADING PLAN
9	CHARLOTTE/LOCUST STREET INTERSECTION LAYOUT PLAN
10	CHARLOTTE/LOCUST STREET INTERSECTION GRADING PLAN
11	CAROLINE STREET/LOCUST STREET INTERSECTION LAYOUT PLAN
12	CAROLINE STREET/LOCUST STREET INTERSECTION GRADING PLAN
13	CAROLINE STREET/LOCUST STREET RAIN GARDEN
14-16	CROSS SECTIONS
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18-19	TRAFFIC CONTROL PLANS
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SHEET #	TITLE	DATE
B-71	STANDARD FOR RESIDENTIAL AND COMMERCIAL DRIVES	7-08-05
C-2B	CONCRETE SIDEWALK DRIVE ENTRANCES WITH GREEN STRIP	10-14-05
C-3A	SIDEWALK RAMPS	3-10-08
C-10	CURBING	2-11-08
D-15	PRECAST REINFORCED CONCRETE CATCH BASIN WITH CAST IRON GRATE	6-01-94
T-1	TRAFFIC CONTROL GENERAL NOTES	4-25-16
T-2	TRAFFIC CONTROL GENERAL NOTES	2-12-16
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T-35	CONSTRUCTION ZONE LONGITUDINAL DROP-OFFS	8-06-12
T-45	SQUARE TUBE SIGN POST AND ANCHOR	1-02-13

PRELIMINARY PLANS
MARCH, 2018

QUALITY ASSURANCE
PROGRAM LEVEL 3

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83(1996)

FUNDING ASSISTANCE FOR THIS PROJECT IS BEING FURNISHED BY THE FHWA, THE CITY OF BURLINGTON AND THE STATE OF VERMONT

TITLE SHEET

BURLINGTON STP BP 13(6)

Lamoureux & Dickinson
Consulting Engineers, Inc.
14 Morse Drive, Essex, VT 05452
802-878-4450 www.LDengineering.com

L&D PROJECT NUMBER: 14087
DRAWN BY: L&D
CHECKED BY: DG/RD

SHEET: 1

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES		TOTALS		DESCRIPTIONS			
Roadway	Erosion Control	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND
1		1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10	
400		400		CY	COMMON EXCAVATION	203.15	
5		5		CY	SOLID ROCK EXCAVATION	203.16	
275		275		CY	EXCAVATION OF SURFACES AND PAVEMENTS	203.28	
325		325		CY	TRENCH EXCAVATION OF EARTH	204.20	
55		55		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10	
475		475		CY	SUBBASE OF CRUSHED GRAVEL, COARSE GRADED	301.25	
1		1		CWT	EMULSIFIED ASPHALT	404.65	
230		230		TON	BITUMINOUS CONCRETE PAVEMENT	406.25	
50		50		GAL	WATER REPELLENT, SILANE	514.10	
200		200		LF	15" CPEP(SL)	601.2610	
8		8		EACH	PRECAST REINFORCED CONCRETE CATCH BASIN WITH CAST IRON GRATE	604.20	
1		1		EACH	PRECAST REINFORCED CONCRETE MANHOLE WITH CAST IRON COVER	604.21	
2		2		EACH	CHANGING ELEVATION OF DROP INLETS, CATCH BASINS, OR MANHOLES	604.40	
3		3		EACH	CHANGING ELEVATION OF SEWER MANHOLES	604.42	
40		40		HR	POWER BROOM RENTAL, TYPE II	608.31	
5		5		MGAL	DUST CONTROL WITH WATER	609.10	
755		755		LF	CAST-IN-PLACE CONCRETE CURB, TYPE B	616.28	
630		630		LF	REMOVAL OF EXISTING CURB	616.41	
335		335		SY	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	618.10	
80		80		SY	PORTLAND CEMENT CONCRETE SIDEWALK, 8 INCH	618.11	
112		112		SF	DETECTABLE WARNING SURFACE	618.30	
16		16		EACH	ADJUST ELEVATION OF VALVE BOX	629.20	
50		50		HR	UNIFORMED TRAFFIC OFFICERS	630.10	
800		800		HR	FLAGGERS	630.15	
1		1		LS	MOBILIZATION/DEMOBILIZATION	635.11	
1		1		LS	TRAFFIC CONTROL	641.10	
55		55		LF	4 INCH WHITE LINE	646.20	
220		220		LF	DURABLE 12 INCH WHITE LINE	646.460	
9		9		EACH	DURABLE LETTER OR SYMBOL	646.490	
132		132		LF	DURABLE CROSSWALK MARKING	646.500	
140		140		SF	REMOVAL OF EXISTING PAVEMENT MARKINGS	646.85	
	20	20		LB	SEED	651.15	
	100	100		LB	FERTILIZER	651.18	
	0.2	0.2		TON	AGRICULTURAL LIMESTONE	651.20	
	0.5	0.5		TON	HAY MULCH	651.25	
	60	60		CY	TOPSOIL	651.35	
	16	16		EACH	INLET PROTECTION DEVICE, TYPE II	653.41	
	580	580		LF	PROJECT DEMARCATION FENCE	653.55	
60		60		SF	TRAFFIC SIGNS, TYPE A	675.20	

DETAILED SUMMARY OF QUANTITIES		
QUANTITIES	UNIT	ITEMS

PROJECT NAME: Burlington Pedestrian Improvements
PROJECT NUMBER: Burlington STP BP13(6)

FILE NAME:
PROJECT LEADER: Doug Goulette
DESIGNED BY: Doug Goulette
QUANTITY SHEET #1

PLOT DATE: 03/27/2018
DRAWN BY: Bill Horton
CHECKED BY: Roger Dickin

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES		TOTALS		DESCRIPTIONS			
Roadway	Erosion Control	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND
195		195		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341	
6		6		EACH	REMOVING SIGNS	675.50	
6		6		EACH	ERECTING SALVAGED SIGNS	675.60	
23		23		EACH	DELINEATOR WITH FLEXIBLE POST	676.20	
1		1		LS	SPECIAL PROVISION (RAIN GARDEN)	900.645	
61		61		SY	SPECIAL PROVISION (CONCRETE PAVERS)	900.675	
85		85		TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, HAND PLACED)	900.680	

DETAILED SUMMARY OF QUANTITIES		
QUANTITIES	UNIT	ITEMS

PROJECT NAME: Burlington Pedestrian Improvements
PROJECT NUMBER: Burlington STP BP13(6)

FILE NAME:
PROJECT LEADER: Doug Goulette
DESIGNED BY: Doug Goulette
QUANTITY SHEET #2

PLOT DATE: 03/27/2018
DRAWN BY: Bill Horton
CHECKED BY: Roger Dickin
SHEET 3 OF 25

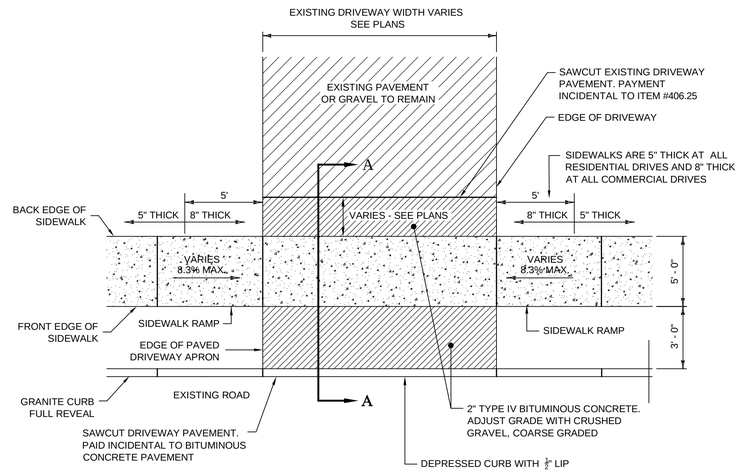
GENERAL CONSTRUCTION SPECIFICATIONS

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION 2011 AND ITS LATEST REVISIONS, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (2009 EDITION) AND THESE PLANS.

2. THE CONTRACTOR SHALL CONTACT ALL UTILITIES BEFORE EXCAVATION TO VERIFY THE LOCATION OF ANY UNDERGROUND LINES. THE CONTRACTOR SHALL NOTIFY "DIG SAFE" AT 811 AND THE CITY OF BURLINGTON PUBLIC WORKS DEPARTMENT PRIOR TO ANY EXCAVATION.

3. UTILITIES INFORMATION SHOWN HEREON WERE OBTAINED FROM BEST AVAILABLE SOURCES AND MAY OR MAY NOT BE EITHER ACCURATE OR COMPLETE. EXPLORATORY EXCAVATION SHALL BE PERFORMED IN THE LOCATIONS SHOWN ON THE PLANS. ADDITIONAL EXPLORATORY EXCAVATION SHALL BE COORDINATED WITH AND SUBJECT TO THE RESIDENT ENGINEERS APPROVAL. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITY, PUBLIC OR PRIVATE, SHOWN OR NOT SHOWN HEREON. THE CONTRACTOR SHALL CONNECT OR RECONNECT ALL UTILITIES TO THE NEAREST SOURCE THROUGH COORDINATION WITH UTILITY OWNER.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE DUST CREATED AS A RESULT OF CONSTRUCTION DOES NOT CREATE A NUISANCE OR A SAFETY HAZARD. THE CONTRACTOR SHALL WET SECTIONS OF THE CONSTRUCTION AREA WITH WATER AND/OR SWEEP ASPHALT ROADS WITH A POWER BROOM (TYPE 1) OR A STREET SWEEPER (POWER BROOM TYPE II) AS DUST CONTROL ON A DAILY BASIS, OR AT MORE FREQUENT INTERVALS AS DIRECTED BY THE ENGINEER AND/OR OWNER.

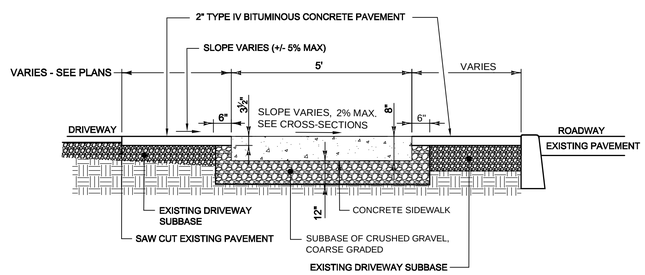


NOTES:

1. SUBBASE MATERIALS SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY USING THE STANDARD PROCTOR TEST, ACCORDING TO ASTM D698.

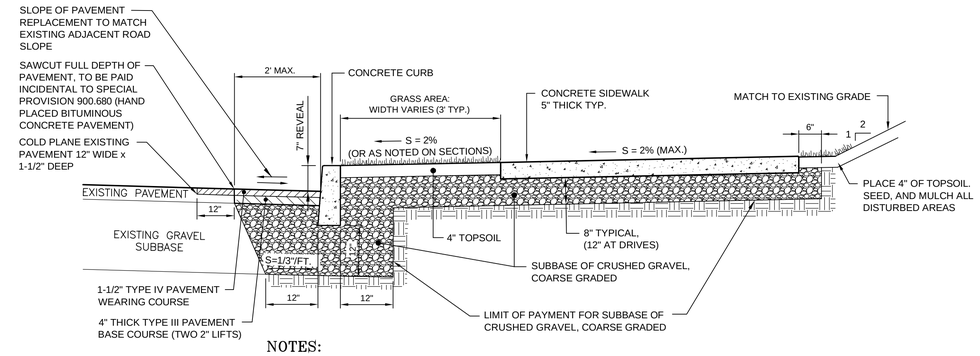
2. EMULSIFIED ASPHALT SHALL BE APPLIED TO THE FACE OF CURB BELOW GRADE, EDGE OF SIDEWALK AND TO THE EXISTING PAVEMENT EDGE. EMULSIFIED ASPHALT SHALL BE APPLIED UNDER PRESSURE OR WITH A "NEW" BRUSH. OLD OR DRIED OUT BRUSHES SHALL NOT BE USED.

PLAN VIEW



SECTION VIEW

TYPICAL BITUMINOUS CONCRETE DRIVEWAY APRON WITH SIDEWALK DETAIL
NTS



NOTES:

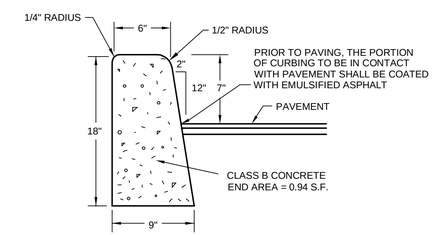
1. EMULSION SHALL BE PLACED ON THE BACK OF THE CURB WHERE IT WILL BE IN CONTACT WITH NEW DRIVEWAY PAVEMENT.

2. EMULSIFIED ASPHALT TO BE APPLIED AT THE RATE OF 0.025 GAL./SQ YD.

3. BITUMINOUS CONCRETE PAVEMENT SHALL BE 75 BLOW MARSHALL MIX AND PERFORMANCE GRADED BINDER SHALL BE PG 58-28.

4. THE CONTRACTOR SHALL APPLY A CONCRETE SEALING COMPOUND TO ALL EXPOSED CONCRETE CURB AND SIDEWALK SURFACES, ITEM #514.10 WATER REPELLANT, SILANE.

TYPICAL CONCRETE SIDEWALK WITH CONCRETE CURB AND GRASS STRIP SECTION
NTS



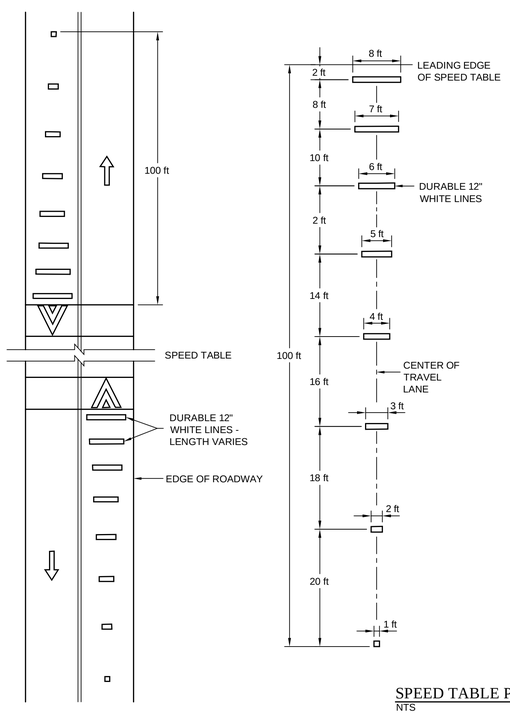
NOTES:

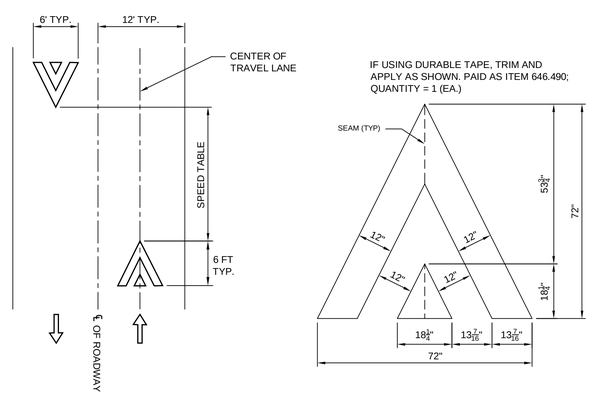
1) CURBING SHALL BE CONSTRUCTED IN 10' SECTIONS WITH 1/8" JOINT BETWEEN SECTIONS.

2) CURBING EXPANSION JOINTS SHALL BE CONSTRUCTED EVERY 20' AND SHALL BE CONSTRUCTED OF MATERIAL CONFORMING TO AASHTO DESIGNATION M-153 (1/2" SPONGE RUBBER OR CORK)

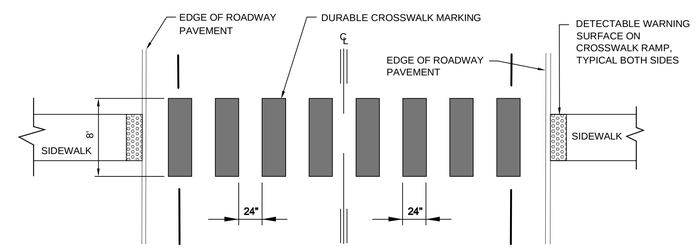
3) ALL CONCRETE SHALL BE AIR ENTRAINED NOT LESS THAN 5% AND NOT MORE THAN 7%

CONCRETE CURB
N.T.S.





SPEED TABLE PAVEMENT MARKING DETAILS
NTS



BLOCK PATTERN CROSSWALK DETAIL
NTS

PRELIMINARY PLANS
MARCH, 2018

TYPICAL DETAILS & SPECIFICATIONS

BURLINGTON STP BP 13(6)

Lamoureux & Dickinson
Consulting Engineers, Inc.
14 Morse Drive, Essex, VT 05452
802-878-4450 www.LDengineering.com

L&D PROJECT NUMBER: 14087
DRAWN BY: L&D
CHECKED BY: DG/RD

SHEET: 4

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TURF ESTABLISHMENT

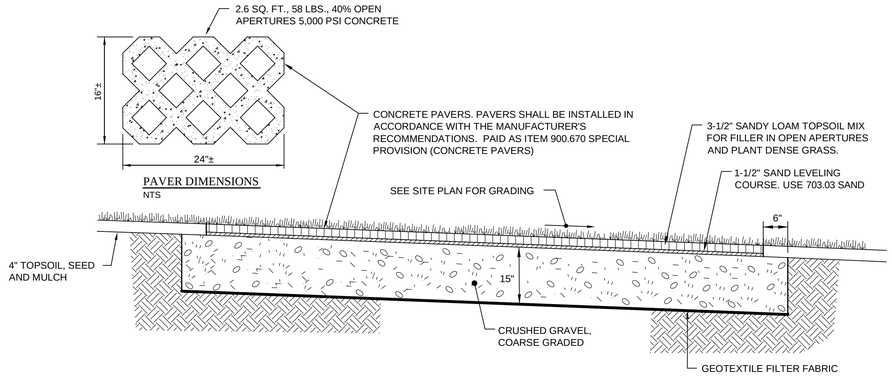
1. USE URBAN SEED MIX AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED LAWN AREAS DISTURBED BY THE CONTRACTOR.
2. ALL SEED MIXTURES SHALL HAVE A WEED CONTENT LESS THAN 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
3. THE CONTRACTOR SHALL PERFORM A SOIL TEST OF THE SUPPLIED TOPSOIL. FERTILIZER AND/OR LIME SHALL ONLY BE APPLIED IF THE RESULTS OF THE SOIL TESTS INDICATES THE NEED FOR THEM.
4. HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, ACHIEVE 90% GROUND COVER OR AS DIRECTED BY THE ENGINEER. PAID AS ITEM 651.25.
5. TOPSOIL: TO BE USED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. PAID AS ITEM 651.35.
6. HYDROSEEDING & HYDRAULIC MULCH: ALTHOUGH GUIDANCE IS GIVEN ABOVE, THE SITE CONDITIONS AND THE TYPE OF HYDROSEED WILL ULTIMATELY DICTATE THE AMOUNTS AND TYPES OF SOIL AMENDMENTS TO BE APPLIED. PAYMENT FOR HYDRAULIC MULCH, IF USED, WILL BE UNDER ITEM 651.25, AS MODIFIED BY SECTION 651.13.
7. TURF ESTABLISHMENT: PLACING SEED, FERTILIZER, LIME AND MULCH BETWEEN APRIL 15 AND SEPTEMBER 15 WILL BETTER ENSURE A VIGOROUS GROWTH OF GRASS.

VAOT URBAN AREA MIX

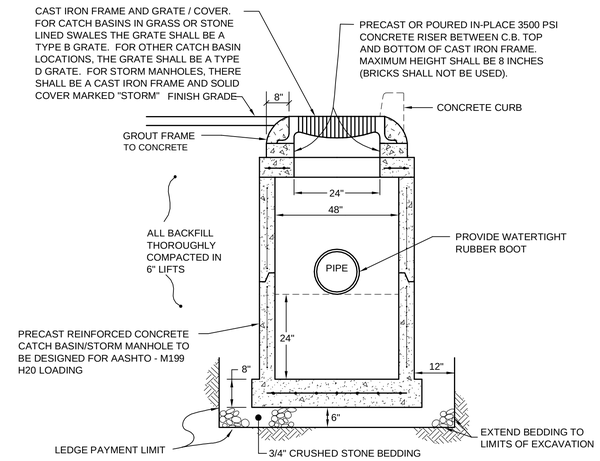
	LBS/AC				
WEIGHT	BROADCAST	HYDROSEED	NAME	GERM	PURITY
42.5%	34	68	CREEPING RED FESCUE *(Festuca rubra)*	85%	98%
20.0%	16	32	PERENNIAL RYE GRASS *(Lolium perenne L.)*	90%	95%
32.5%	26	52	KENTUCKY BLUE GRASS *(Poa partensis)*	85%	85%
5.0%	4	8	ANNUAL RYE GRASS *(Lolium multiflorum)*	85%	95%
100%	80	160			

SOIL AMENDMENT GUIDANCE

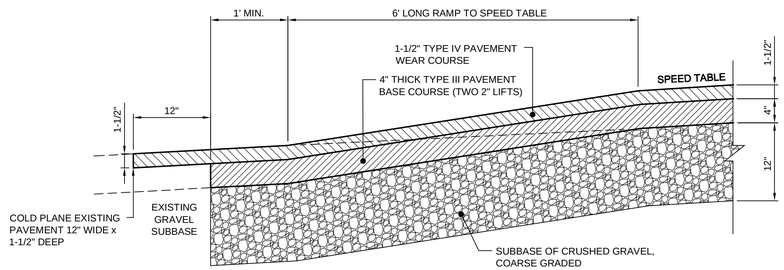
FERTILIZER		LIME	
BROADCAST	HYDROSEED	BROADCAST	HYDROSEED
10-20-10 500 LBS/AC	*FOLLOW MANUFACTURER'S PROCEDURES*	PELLETIZED 1 TON/AC	*FOLLOW MANUFACTURER'S PROCEDURES*



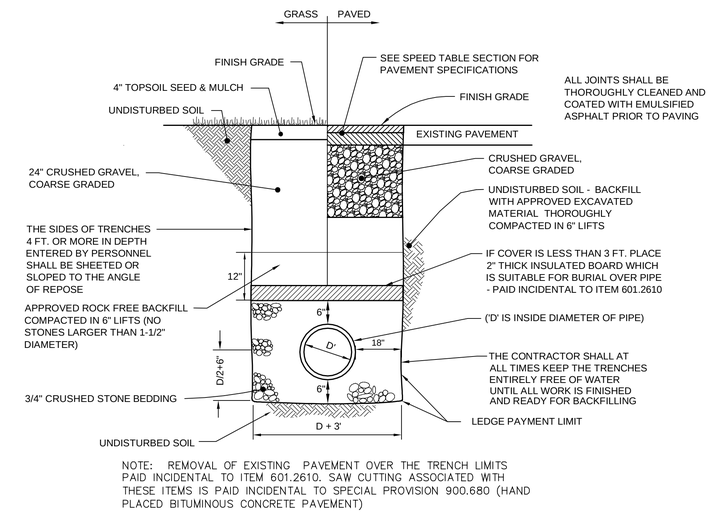
CONCRETE PAVERS / PARK ACCESS ROAD DETAIL
NTS



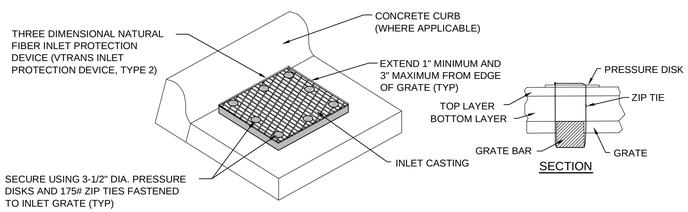
PRECAST REINFORCED CONCRETE 48" DIAMETER CATCH BASIN / STORM MANHOLE
NTS



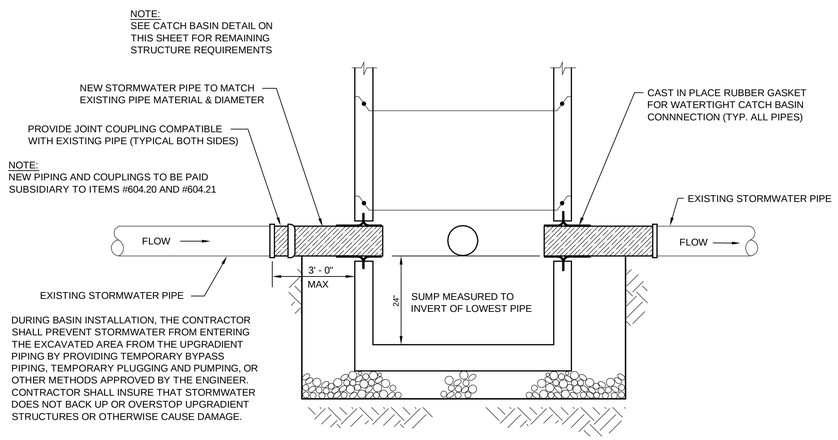
SPEED TABLE SECTION (LONGITUDINAL ALONG TRAVEL LANES)
NTS



TYPICAL STORM TRENCH
NTS



FLAT TYPE INLET PROTECTION TYPE II
NTS



IN-LINE STORM BASIN/MANHOLE DETAIL
NTS

PRELIMINARY PLANS
MARCH, 2018

TYPICAL DETAILS & SPECIFICATIONS

BURLINGTON STP BP 13(6)

Lamoureux & Dickinson Consulting Engineers, Inc.
14 Morse Drive, Essex, VT 05452
802-878-4450 www.LDengineering.com

L&D PROJECT NUMBER: 14087
DRAWN BY: L&D
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SHEET: 5

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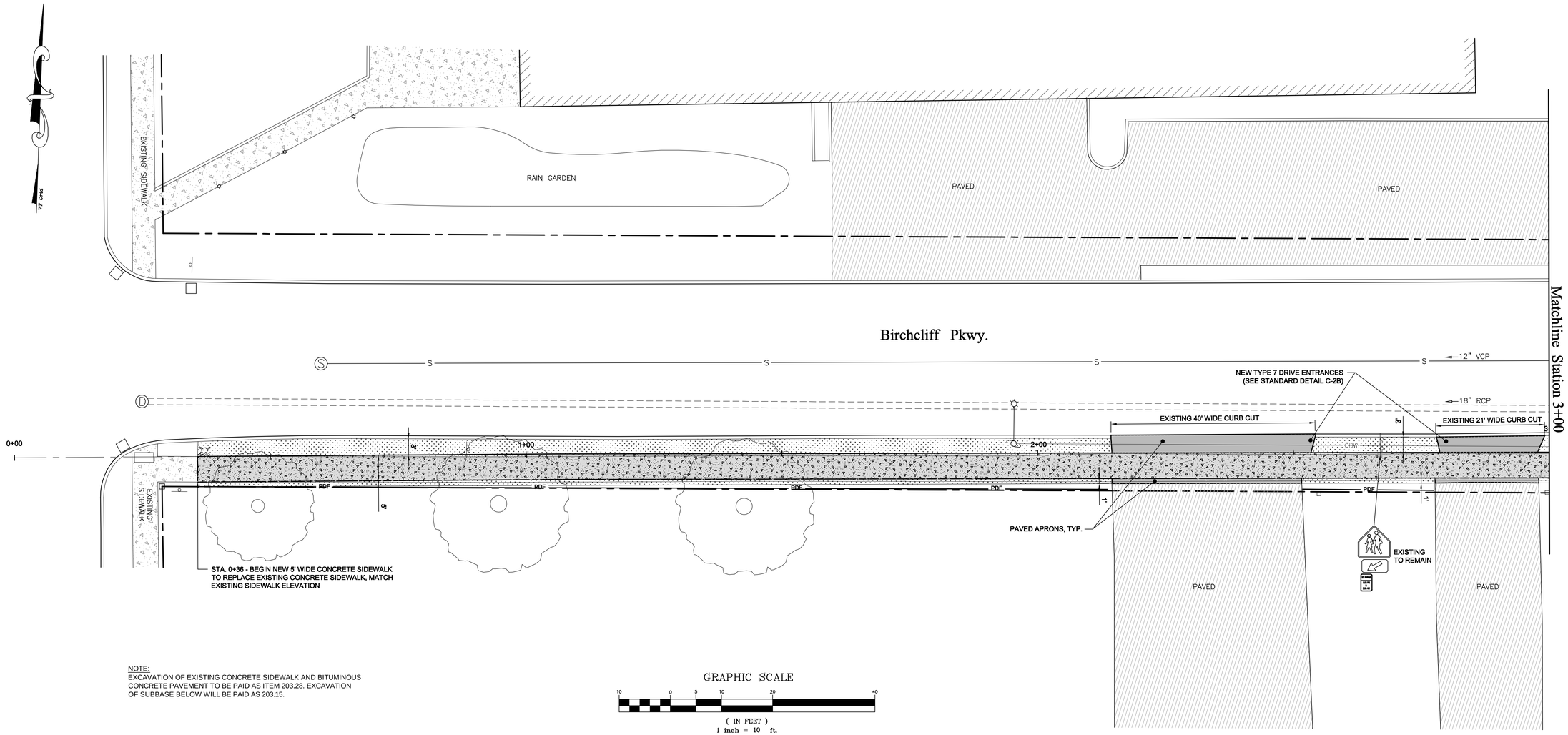


NOTE:
EXCAVATION OF EXISTING CONCRETE SIDEWALK AND BITUMINOUS CONCRETE PAVEMENT TO BE PAID AS ITEM 203.28. EXCAVATION OF SUBBASE BELOW WILL BE PAID AS 203.15.

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

THE CONTRACTOR SHALL NOTIFY 'DIGSAFE' PRIOR TO ANY EXCAVATION

ITEM 618.10 - PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH
STA 0+36 - 2+10 RT
STA 2+58 - 2+74 RT

ITEM 618.11 - PORTLAND CEMENT CONCRETE SIDEWALK, 8 INCH
STA 2+10 - 2+58 RT
STA 2+74 - 3+00 RT

ITEM 653.55 PROJECT DEMARCATION FENCE
STA 0+36 RT - 2+14 RT
STA 2+52 LT - 2+77 LT

ITEM 900.680 - SPECIAL PROVISION (HAND PLACED BITUMINOUS CONCRETE PAVEMENT)
STA 2+10 RT - 2+52 RT
STA 2+10 LT - 2+58 LT
STA 2+78 RT - 2+98 RT
STA 2+78 LT - 2+99 LT

LEGEND

- RIGHT-OF WAY BOUNDARY LINE
- PROPERTY BOUNDARY LINE
- EXISTING FENCE
- W — EXISTING WATER LINE
- S — EXISTING SEWER LINE
- G — EXISTING GAS LINE (APPROX. ONLY)
- UE — EXISTING UG ELEC. (APPROX. ONLY)
- UT — EXISTING UG COMM. (APPROX. ONLY)
- PDF — PROJECT DEMARCATION FENCE
- EXISTING CATCH BASIN & STORM PIPES
- OHW — UTILITY POLE WITH GUY WIRE & OVERHEAD WIRES
- EXISTING SEWER MANHOLE
- EXISTING DRAINAGE MANHOLE
- SURVEY CONTROL POINT
- EXISTING SIGN
- PROPERTY CORNER PIPE/MON. FOUND
- EXISTING TREE/SHRUB
- EXISTING STREET LIGHT
- EXISTING HYDRANT & VALVE
- EXISTING CONCRETE SIDEWALK
- NEW 5' WIDE CONCRETE SIDEWALK
- NEW PAVEMENT

PRELIMINARY PLANS
MARCH, 2018

BIRCHCLIFF PARKWAY SIDEWALK LAYOUT PLAN

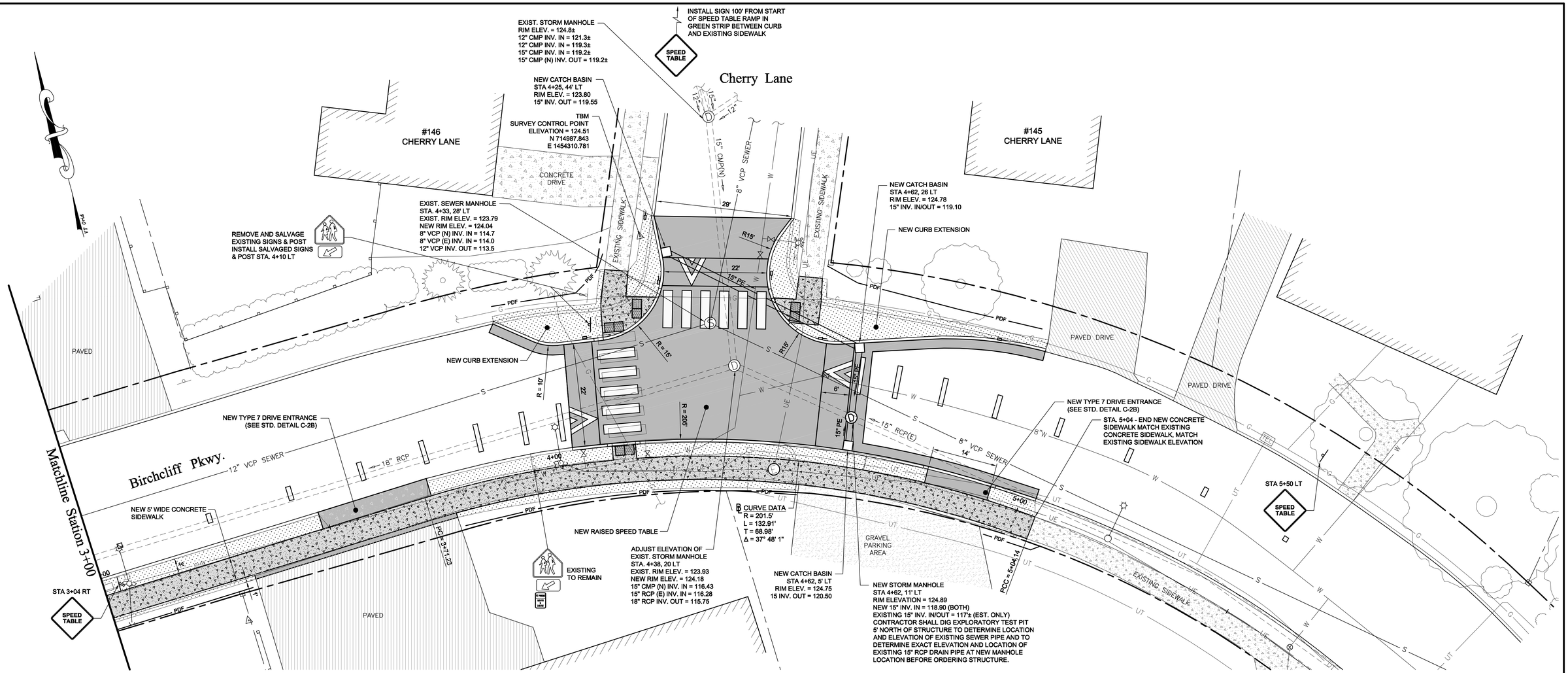
BURLINGTON STP BP 13(6)

Lamoureux & Dickinson
Consulting Engineers, Inc.
14 Morse Drive, Essex, VT 05452
802-878-4450 www.LDengineering.com

L&D PROJECT NUMBER: 14087
DRAWN BY: L&D
CHECKED BY: DG/RD

SHEET: 6

P:\2014\14087\dwg\14087 06 Birchcliff Ilgw\cldwg, 3/26/2018 4:00:06 PM, bill



GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

THE CONTRACTOR SHALL NOTIFY 'DIGSAFE' PRIOR TO ANY EXCAVATION

NOTE:
EXCAVATION OF EXISTING CONCRETE SIDEWALK AND BITUMINOUS CONCRETE PAVEMENT TO BE PAID AS ITEM 203.28. EXCAVATION OF SUBBASE BELOW WILL BE PAID AS 203.15.

ITEM 601.2610 15" CPEP(SL)
STA 4+25 - 4+61 LT
STA 4+61 - 4+62 LT
STA 4+62 - 4+62 LT

ITEM 604.20 PRECAST REINFORCED CONCRETE CATCH BASIN WITH CAST IRON GRATE
STA 4+25 LT
STA 4+61 LT

ITEM 604.21 PRECAST REINFORCED CONCRETE MANHOLE
STA 4+61 LT

ITEM 604.40 CHANGING ELEVATION OF DROP INLETS, CATCH BASINS OR MANHOLES
STA 4+38 LT

ITEM 604.42 CHANGING ELEVATION OF SEWER MANHOLES
STA 4+33 LT

ITEM 616.28 - CAST-IN-PLACE CONCRETE CURB, TYPE B
STA 3+93 - 4+23 LT
STA 4+04 - 5+03 LT
STA 4+43 - 4+95 LT

ITEM 616.41 - REMOVAL OF EXISTING CURB
STA 3+93 - 4+23 LT
STA 4+04 - 4+50 LT
STA 4+47 - 4+49 LT
STA 4+53 - 4+95 LT
STA 4+66 - 5+03 LT

ITEM 618.10 - PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH
STA 3+02 - 3+45 RT
STA 3+78 - 4+74 RT
STA 4+12 - 4+23 LT
STA 4+45 - 4+53 LT
STA 4+98 - 5+04 RT

ITEM 618.11 - PORTLAND CEMENT CONCRETE SIDEWALK, 8 INCH
STA 3+00 - 3+02 RT
STA 3+45 - 3+78 RT
STA 4+74 - 4+98 RT

ITEM 618.30 - DETECTABLE WARNING SURFACE
STA 4+15 LT
STA 4+15 RT
STA 4+19 LT
STA 4+49 LT

ITEM 629.20 - ADJUST ELEVATION OF VALVE BOX
STA 4+06 LT STA 4+18 LT
STA 4+20 LT STA 4+42 LT
STA 4+43 LT STA 4+56 LT

ITEM 646.460 - DURABLE 12" WHITE LINE
STA 3+05 - 4+03 LT
STA 4+06 LT
STA 4+30 LT
STA 4+59 LT
STA 4+62 - 5+53 LT

ITEM 646.500 CROSSWALK MARKING
STA. 4+15 LT
STA. 4+22 LT - 4+45 LT

ITEM 653.55 PROJECT DEMARCATION FENCE
STA 3+00 RT - 3+30 RT
STA 3+79 RT - 4+52 RT
STA 3+93 LT - 4+15 LT
STA 4+53 LT - 4+96 LT
STA 4+94 RT - 5+07 RT

ITEM 676.20 DELINEATOR WITH FLEXIBLE POST
STA 4+10 27' LT
STA 4+22 52' LT
STA 4+24 39' LT
STA 4+44 38' LT
STA 4+55 27' LT
STA 4+88 34' LT

ITEM 900.680 - SPECIAL PROVISION (HAND PLACED BITUMINOUS CONCRETE PAVEMENT)
STA 3+32 RT - 3+77 RT
STA 3+49 LT - 3+73 LT
STA 3+92 LT - 4+04 LT
STA 4+64 LT - 4+95 LT
STA 4+65 LT - 5+03 LT
STA 4+79 LT - 4+97 LT
STA 4+79 RT - 4+97 RT

LEGEND

RIGHT-OF WAY BOUNDARY LINE
PROPERTY BOUNDARY LINE
EXISTING FENCE
W — EXISTING WATER LINE
S — EXISTING SEWER LINE
G — EXISTING GAS LINE (APPROX. ONLY)
UE — EXISTING UG ELEC. (APPROX. ONLY)
UT — EXISTING UG COMM. (APPROX. ONLY)
PDF — PROJECT DEMARCATION FENCE
EXISTING CATCH BASIN & STORM PIPES
OHW — UTILITY POLE WITH GUY WIRE & OVERHEAD WIRES

EXISTING SEWER MANHOLE
EXISTING DRAINAGE MANHOLE
SURVEY CONTROL POINT
EXISTING SIGN
NEW SIGN
NEW WHITE DELINEATOR
PROPERTY CORNER PIPE/MON. FOUND
EXISTING TREE/SHRUB
EXISTING STREET LIGHT
EXISTING HYDRANT & VALVE
EXISTING CONCRETE SIDEWALK
NEW 5' WIDE CONCRETE SIDEWALK
NEW PAVEMENT

PRELIMINARY PLANS
MARCH, 2018

CHERRY LANE & BIRCHCLIFF PARKWAY INTERSECTION LAYOUT PLAN

BURLINGTON STP BP 13(6)

Lamoureux & Dickinson Consulting Engineers, Inc.
14 Morse Drive, Essex, VT 05452
802-878-4450 www.LDengineering.com

L&D PROJECT NUMBER: 14087
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SHEET: 7

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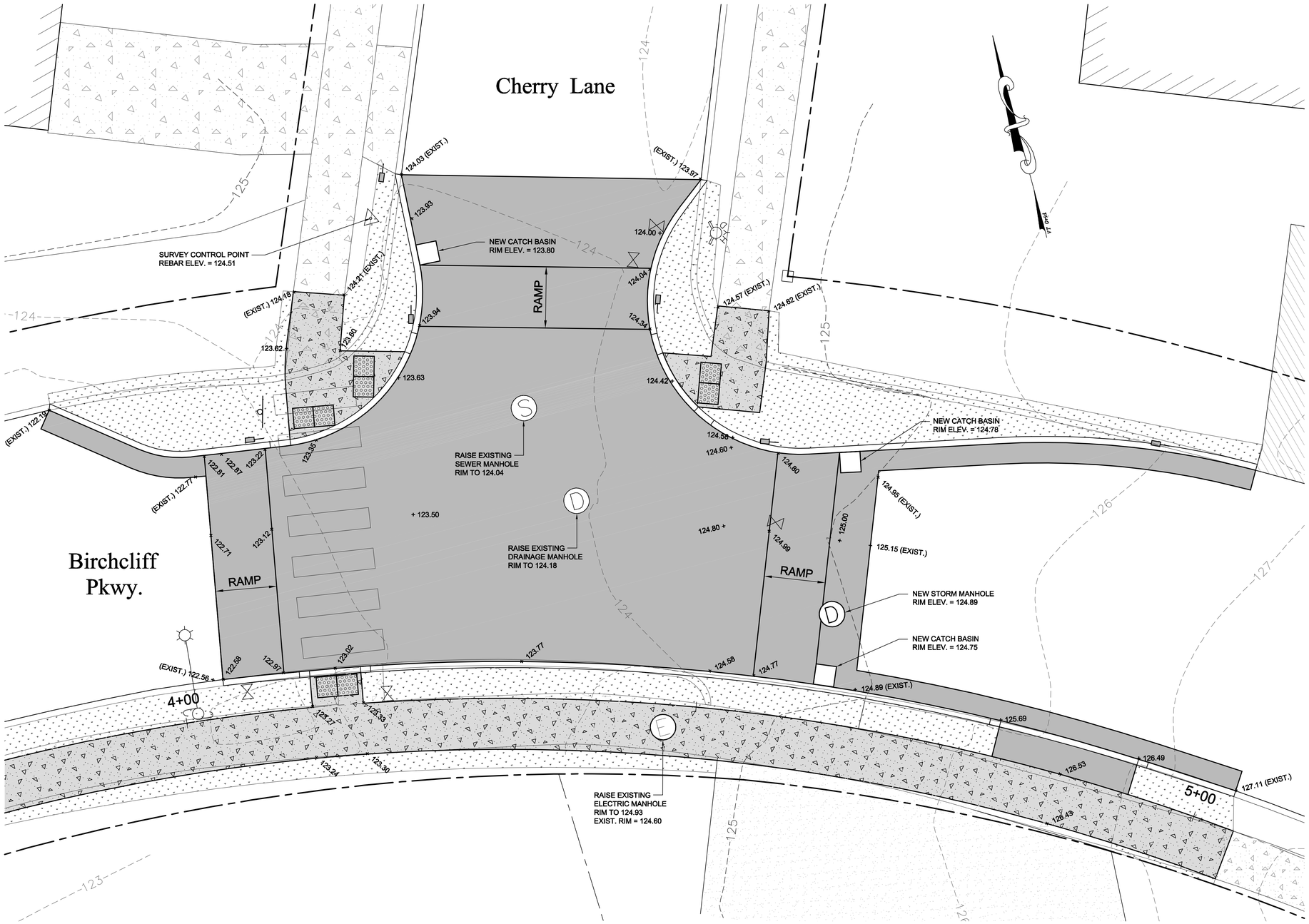

LEGEND

- RIGHT-OF WAY BOUNDARY LINE
- PROPERTY BOUNDARY LINE
- 142 — EXISTING GROUND CONTOUR
- EXISTING UTILITY POLE WITH GUY WIRE
- EXISTING CATCH BASIN
- S — EXISTING SEWER MANHOLE
- D — EXISTING DRAINAGE MANHOLE
- SURVEY CONTROL POINT
- EXISTING SIGN
- PROPERTY CORNER PIPE / MON. FOUND
- EXISTING HYDRANT & VALVE
- PROPOSED CATCH BASIN
- D — PROPOSED DRAINAGE MANHOLE
- + 125.00 — SPOT ELEVATION
- EXISTING CONCRETE SIDEWALK
- NEW 5' WIDE CONCRETE SIDEWALK
- NEW PAVEMENT

GRAPHIC SCALE

5 0 5 10 20

(in feet)
1 inch = 5 ft

THE CONTRACTOR SHALL NOTIFY 'DIGSAFE' PRIOR TO ANY EXCAVATION

PRELIMINARY PLANS
MARCH, 2018

CHERRY LANE & BIRCHCLIFF PARKWAY INTERSECTION GRADING PLAN

BURLINGTON STP BP 13(6)

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L&D PROJECT NUMBER: 14087
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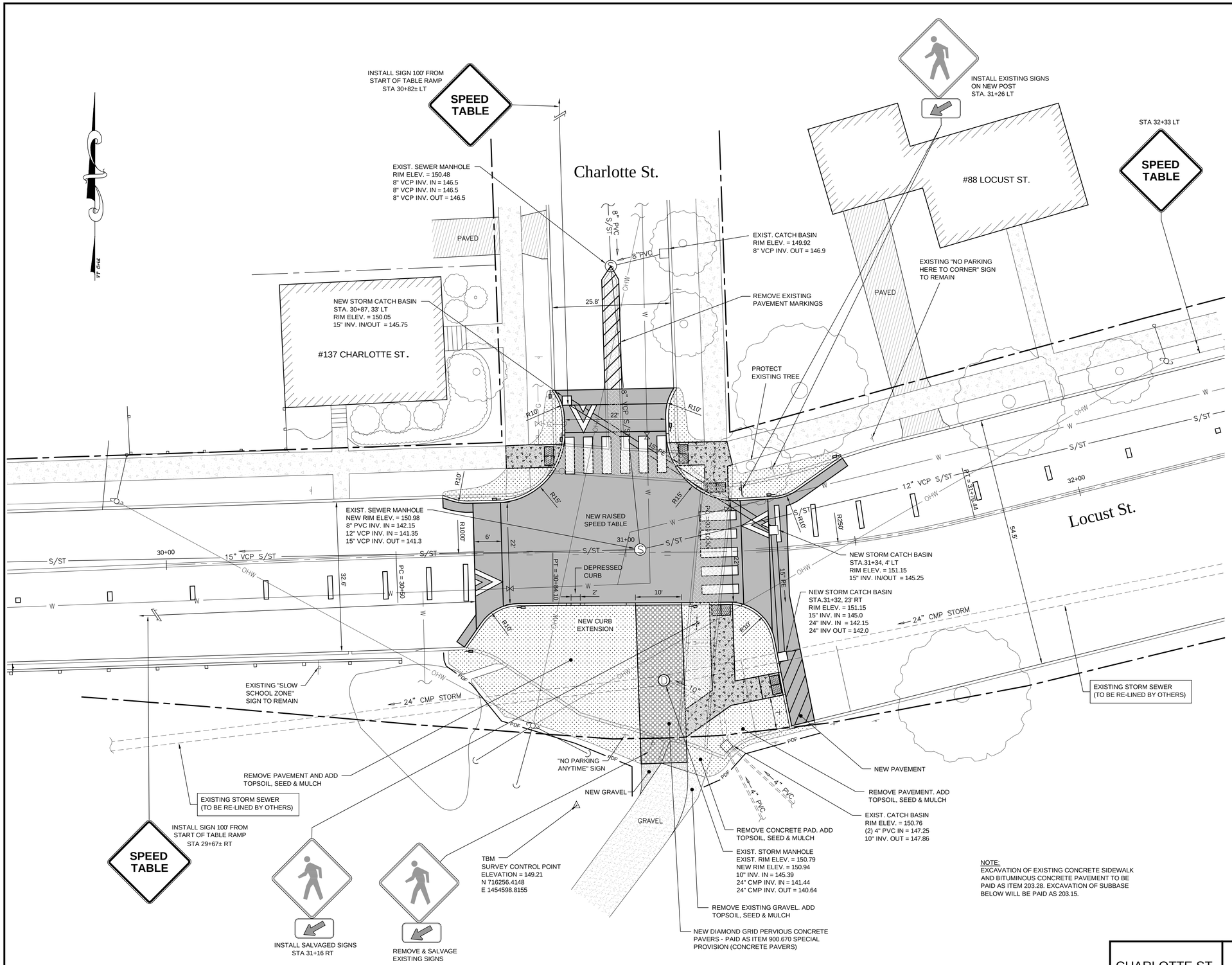

LEGEND

- EXISTING SEWER MANHOLE
- EXISTING DRAINAGE MANHOLE
- SURVEY CONTROL POINT
- EXISTING SIGN
- NEW SIGN
- NEW WHITE DELINEATOR
- PROPERTY CORNER PIPE/MON. FOUND
- EXISTING TREE/SHRUB
- EXISTING STREETLIGHT
- EXISTING HYDRANT & VALVE
- EXISTING CONCRETE SIDEWALK
- NEW 5' WIDE CONCRETE SIDEWALK
- NEW PAVEMENT
- RIGHT-OF WAY BOUNDARY LINE
- PROPERTY BOUNDARY LINE
- EXISTING FENCE
- W — EXISTING WATER LINE
- S — EXISTING SEWER LINE
- G — EXISTING GAS LINE (APPROX. ONLY)
- UE — EXISTING UG ELEC. (APPROX. ONLY)
- UT — EXISTING UG COMM. (APPROX. ONLY)
- PDF — PROJECT DEMARCATION FENCE
- EXISTING CATCH BASIN & STORM PIPES
- OHW — UTILITY POLE WITH GUY WIRE & OVERHEAD WIRES

ITEM 601.2610 15" CPEP(SL)
STA 30+87 - 31+34 LT
STA 31+32 - 31+34 LT/RT

ITEM 604.20 PRECAST REINFORCED CONCRETE CATCH BASIN WITH CAST IRON GRATE
STA 30+87 LT
STA 31+34 LT
STA 31+32 RT

ITEM 604.40 CHANGING ELEVATION OF DROP INLETS, CATCH BASINS OR MANHOLES
STA 31+08 RT

ITEM 604.42 CHANGING ELEVATION OF SEWER MANHOLES
STA 31+03 LT

ITEM 616.28 - CAST-IN-PLACE CONCRETE CURB, TYPE B
STA 30+61 - 30+85 LT
STA 30+64 - 31+33 RT
STA 31+09 - 31+50 LT

ITEM 616.41 - REMOVAL OF EXISTING CURB
STA 30+61 - 30+85 LT
STA 30+64 - 31+33 RT
STA 31+09 - 31+50 LT

ITEM 618.10 - PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH
STA 30+74 - 30+86 LT
STA 31+10 - 31+24 LT
STA 31+13 - 31+32 RT

ITEM 618.30 - DETECTABLE WARNING SURFACE
STA 30+83 LT
STA 31+20 LT
STA 31+31 RT
STA 31+13 LT
STA 31+20 RT

ITEM 629.20 - ADJUST ELEVATION OF VALVE BOX
STA 30+75 RT
STA 30+86 LT
STA 31+05 LT
STA 31+22 LT

ITEM 646.20 - 4" WHITE LINE
STA 31+32 - 31+38 RT

ITEM 646.460 - DURABLE 12" WHITE LINE
STA 29+67 - 30+65 RT
STA 30+69 RT
STA 30+91 LT
STA 31+28 LT
STA 31+33 - 32+32 LT

ITEM 646.85 REMOVAL OF EXISTING PAVEMENT MARKINGS
STA. 30+95 LT - 30+99 LT

ITEM 646.500 DURABLE CROSSWALK MARKING
STA. 30+86 LT - 31+10 LT
STA. 31+20 LT - 31+20 RT

ITEM 653.55 PROJECT DEMARCATION FENCE
STA 30+60 RT - 31+10 RT
STA 31+16 RT - 31+40 RT

ITEM 676.20 DELINEATOR WITH FLEXIBLE POST
STA 30+73 12' LT
STA 30+76 12' RT
STA 30+84 35' LT
STA 30+86 26' LT
STA 31+10 28' LT
STA 31+14 12' RT
STA 31+33 12' LT
STA 31+50 19' LT

ITEM 900.680 - SPECIAL PROVISION (HAND PLACED BITUMINOUS CONCRETE PAVEMENT)
STA 30+61 LT - 30+66 LT
STA 30+62 RT - 30+66 RT
STA 31+35 LT - 31+51 LT
STA 31+30 RT - 31+38 RT

ITEM 900.670 SPECIAL PROVISION (CONCRETE PAVERS)
STA 31+02 RT - 31+12 RT

NOTE:
EXCAVATION OF EXISTING CONCRETE SIDEWALK AND BITUMINOUS CONCRETE PAVEMENT TO BE PAID AS ITEM 203.28. EXCAVATION OF SUBBASE BELOW WILL BE PAID AS 203.15.

THE CONTRACTOR SHALL NOTIFY 'DIGSAFE' PRIOR TO ANY EXCAVATION

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 inch = 10 ft.

PRELIMINARY PLANS
MARCH, 2018

CHARLOTTE ST. & LOCUST ST. INTERSECTION LAYOUT PLAN

BURLINGTON STP BP 13(6)

Lamoureux & Dickinson Consulting Engineers, Inc.
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802-878-4450 www.LDengineering.com

L&D PROJECT NUMBER: 14087
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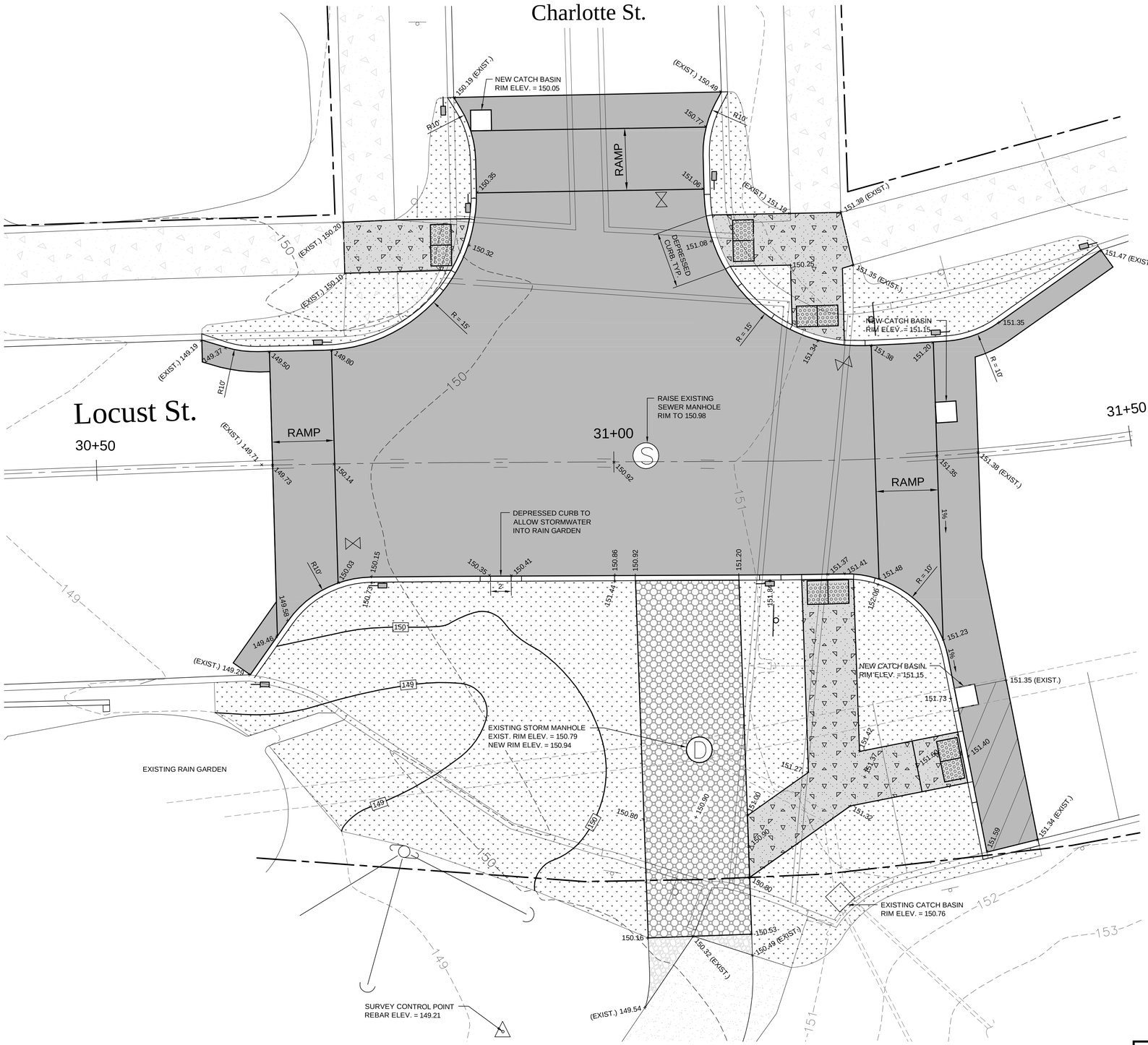

LEGEND

- RIGHT-OF WAY BOUNDARY LINE
- PROPERTY BOUNDARY LINE
- EXISTING GROUND CONTOUR
- EXISTING UTILITY POLE WITH GUY WIRE
- EXISTING CATCH BASIN
- EXISTING SEWER MANHOLE
- EXISTING DRAINAGE MANHOLE
- SURVEY CONTROL POINT
- EXISTING SIGN
- PROPERTY CORNER PIPE / MON. FOUND
- EXISTING HYDRANT & VALVE
- PROPOSED CATCH BASIN
- PROPOSED DRAINAGE MANHOLE
- + 151.35 SPOT ELEVATION
- EXISTING CONCRETE SIDEWALK
- NEW 5' WIDE CONCRETE SIDEWALK
- NEW PAVEMENT

GRAPHIC SCALE

5 0 5 10 20

(in feet)
1 inch = 5 ft

PRELIMINARY PLANS
MARCH, 2018

CHARLOTTE ST. & LOCUST ST. INTERSECTION GRADING PLAN

BURLINGTON STP BP 13(6)

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SHEET: 10

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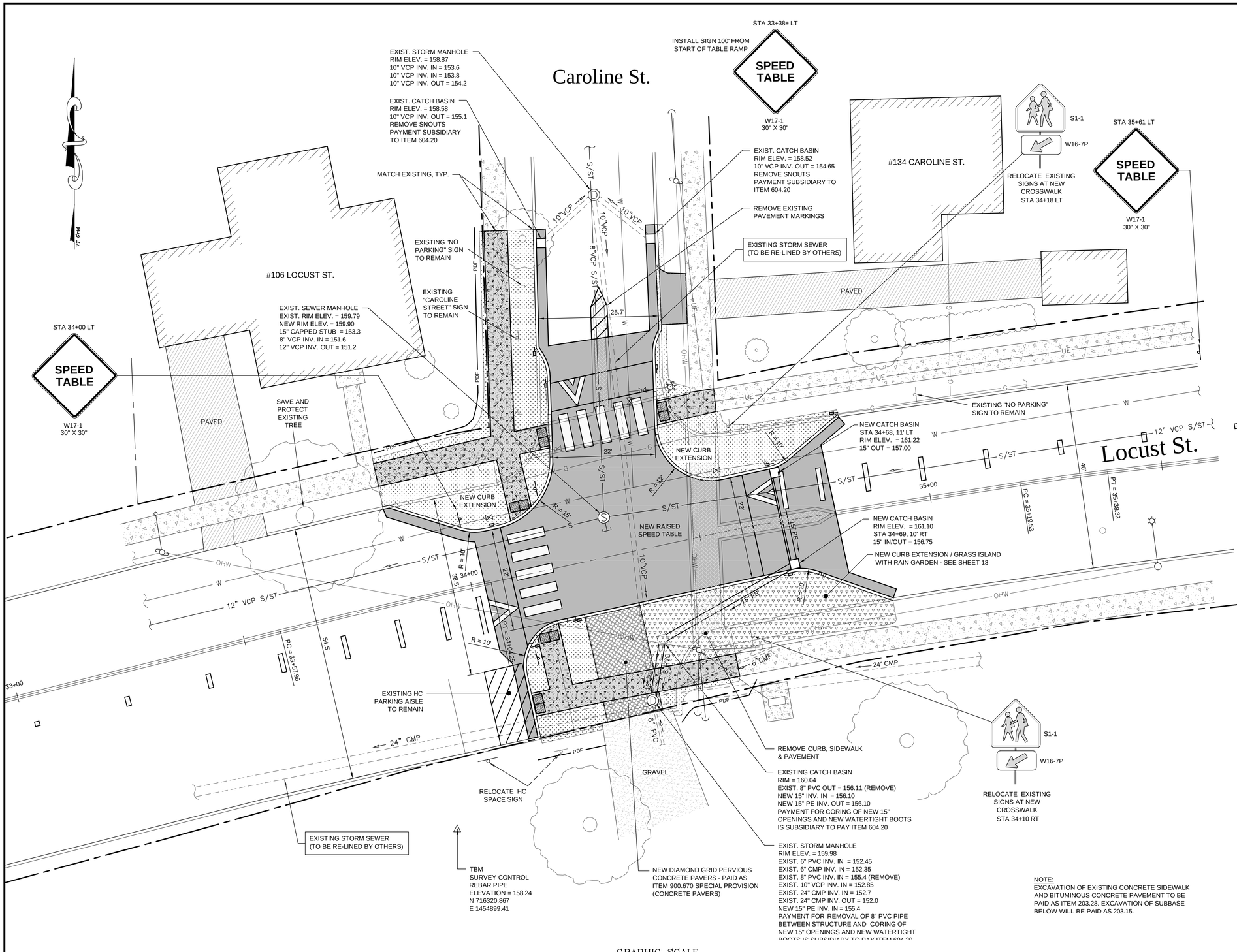

LEGEND

- EXISTING SEWER MANHOLE
- EXISTING DRAINAGE MANHOLE
- SURVEY CONTROL POINT
- EXISTING SIGN
- NEW SIGN
- NEW WHITE DELINEATOR
- PROPERTY CORNER PIPE/MON. FOUND
- EXISTING TREE/SHRUB
- EXISTING STREETLIGHT
- EXISTING HYDRANT & VALVE
- EXISTING CONCRETE SIDEWALK
- NEW 5' WIDE CONCRETE SIDEWALK
- NEW PAVEMENT
- RIGHT-OF WAY BOUNDARY LINE
- PROPERTY BOUNDARY LINE
- EXISTING FENCE
- W — EXISTING WATER LINE
- S — EXISTING SEWER LINE
- G — EXISTING GAS LINE (APPROX. ONLY)
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- PDF — PROJECT DEMARCATION FENCE
- EXISTING CATCH BASIN & STORM PIPES
- OHW — UTILITY POLE WITH GUY WIRE & OVERHEAD WIRES

ITEM 601.2610 15" CPEP(SL)
STA 34+32 - 34+37 RT
STA 34+37 - 34+69 RT
STA 34+68 LT - 34+69 RT

ITEM 604.20 PRECAST REINFORCED CONCRETE CATCH BASIN WITH CAST IRON GRATE
STA 34+68 LT
STA 34+69 RT

ITEM 604.42 CHANGING ELEVATION OF SEWER MANHOLES
STA 34+24 LT

ITEM 616.28 - CAST-IN-PLACE CONCRETE CURB, TYPE B
STA 33+87 - 34+30 LT
STA 34+07 - 34+89 RT
STA 34+45 - 34+86 LT

ITEM 616.41 - REMOVAL OF EXISTING CURB
STA 33+87 - 34+30 LT
STA 34+07 - 34+21 RT
STA 34+36 - 34+80 RT
STA 34+49 - 34+89 LT

ITEM 618.10 - PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH
STA 33+85 - 34+24 LT
STA 34+07 - 34+52 RT
STA 34+46 - 34+60 LT

ITEM 618.30 - DETECTABLE WARNING SURFACE
STA 34+09 RT
STA 34+14 LT
STA 34+48 LT
STA 34+14 RT
STA 34+22 LT

ITEM 629.20 - ADJUST ELEVATION OF VALVE BOX
STA 34+07 LT
STA 34+23 LT
STA 34+24 LT
STA 34+41 LT
STA 34+45 LT
STA 34+56 LT

ITEM 646.20 - 4" WHITE LINE
STA 31+32 - 31+38 RT

ITEM 646.460 - DURABLE 12" WHITE LINE
STA 33+03 - 34+01 RT
STA 34+06 RT
STA 34+30 LT
STA 34+64 LT
STA 34+69 - 35+67 LT

ITEM 646.85 REMOVAL OF EXISTING PAVEMENT MARKINGS
STA. 30+95 LT - 30+99 LT

ITEM 646.500 DURABLE CROSSWALK MARKING
STA. 34+14 LT/RT
STA. 34+24 LT - 34+46 LT

ITEM 673.55 PROJECT DEMARCATION FENCE
STA 33+86 LT - 34+07 LT
STA 34+06 RT - 34+20 RT
STA 34+38 RT - 34+56 RT

ITEM 676.20 DELINEATOR WITH FLEXIBLE POST
STA 34+06 12' LT
STA 34+20 12' RT
STA 34+25 40' LT
STA 34+67 12' LT
STA 34+84 21' LT
STA 34+10 16' RT
STA 34+24 47' LT
STA 34+48 36' LT
STA 34+67 12' RT

ITEM 900.670 SPECIAL PROVISION (CONCRETE PAVERS)
STA 34+22 RT - 34+34 RT

ITEM 900.680 - SPECIAL PROVISION (HAND PLACED BITUMINOUS CONCRETE PAVEMENT)
STA 33+85 LT - 34+02 LT
STA 34+05 RT - 34+07 RT
STA 34+30 LT - 34+32 LT
STA 34+53 LT - 34+55 LT
STA 34+70 LT - 34+84 LT
STA 34+70 RT - 34+90 RT

NOTE:
EXCAVATION OF EXISTING CONCRETE SIDEWALK AND BITUMINOUS CONCRETE PAVEMENT TO BE PAID AS ITEM 203.28. EXCAVATION OF SUBBASE BELOW WILL BE PAID AS 203.15.

THE CONTRACTOR SHALL NOTIFY 'DIGSAFE' PRIOR TO ANY EXCAVATION

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 inch = 10 ft.

PRELIMINARY PLANS
MARCH, 2018

CAROLINE ST. & LOCUST ST. INTERSECTION LAYOUT PLAN

BURLINGTON STP BP 13(6)

Lamoureux & Dickinson
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L&D PROJECT NUMBER: 14087
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SHEET: 11

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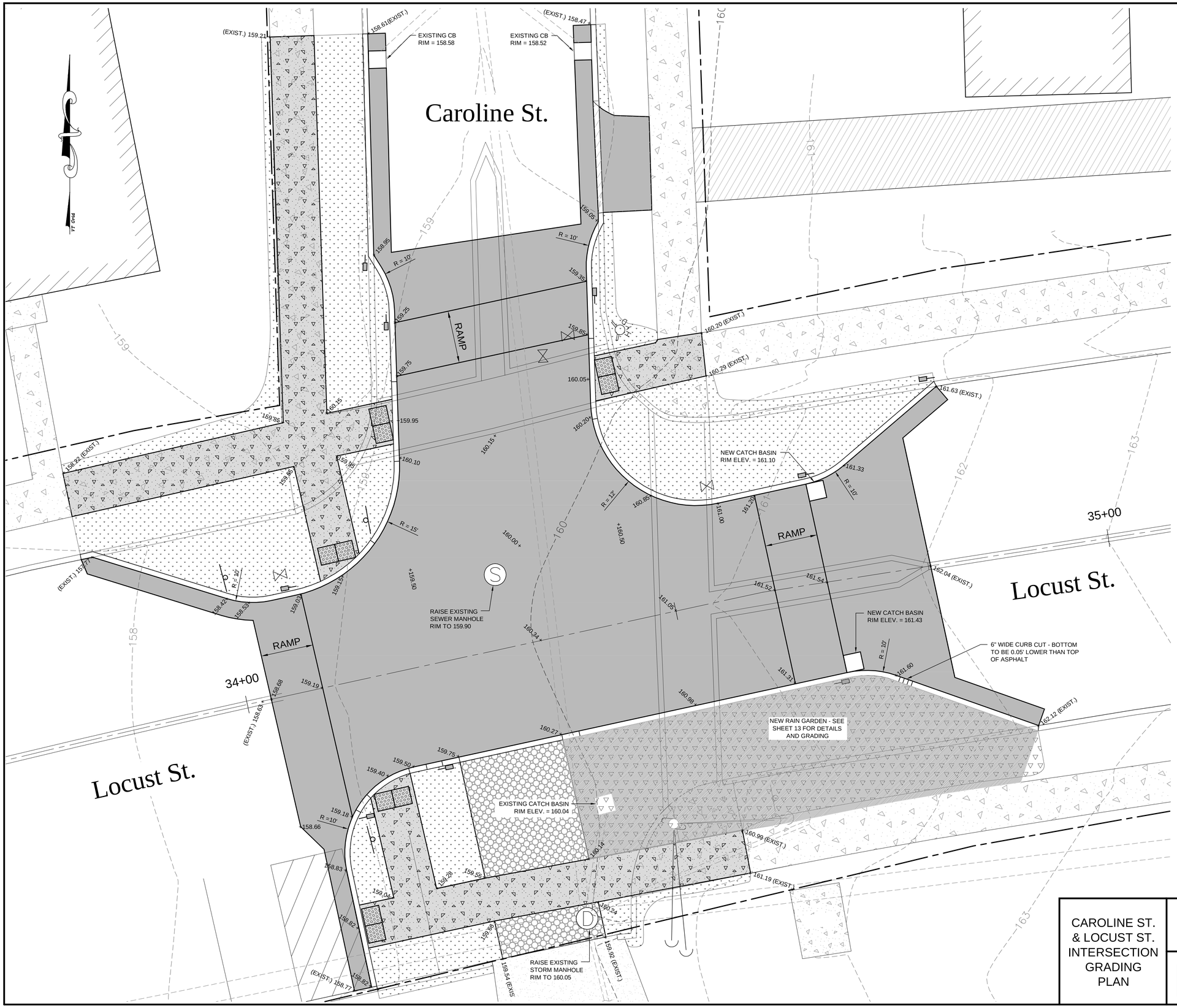

LEGEND

- RIGHT-OF WAY BOUNDARY LINE
- PROPERTY BOUNDARY LINE
- EXISTING GROUND CONTOUR
- EXISTING UTILITY POLE WITH GUY WIRE
- EXISTING CATCH BASIN
- EXISTING SEWER MANHOLE
- EXISTING DRAINAGE MANHOLE
- SURVEY CONTROL POINT
- EXISTING SIGN
- PROPERTY CORNER PIPE / MON. FOUND
- EXISTING HYDRANT & VALVE
- PROPOSED CATCH BASIN
- PROPOSED DRAINAGE MANHOLE
- + 160.00 SPOT ELEVATION
- EXISTING CONCRETE SIDEWALK
- NEW 5' WIDE CONCRETE SIDEWALK
- NEW PAVEMENT

GRAPHIC SCALE

5 0 5 10 20

(in feet)
1 inch = 5 ft

PRELIMINARY PLANS
MARCH, 2018

CAROLINE ST.
& LOCUST ST.
INTERSECTION
GRADING
PLAN

BURLINGTON STP BP 13(6)

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SHEET:
12

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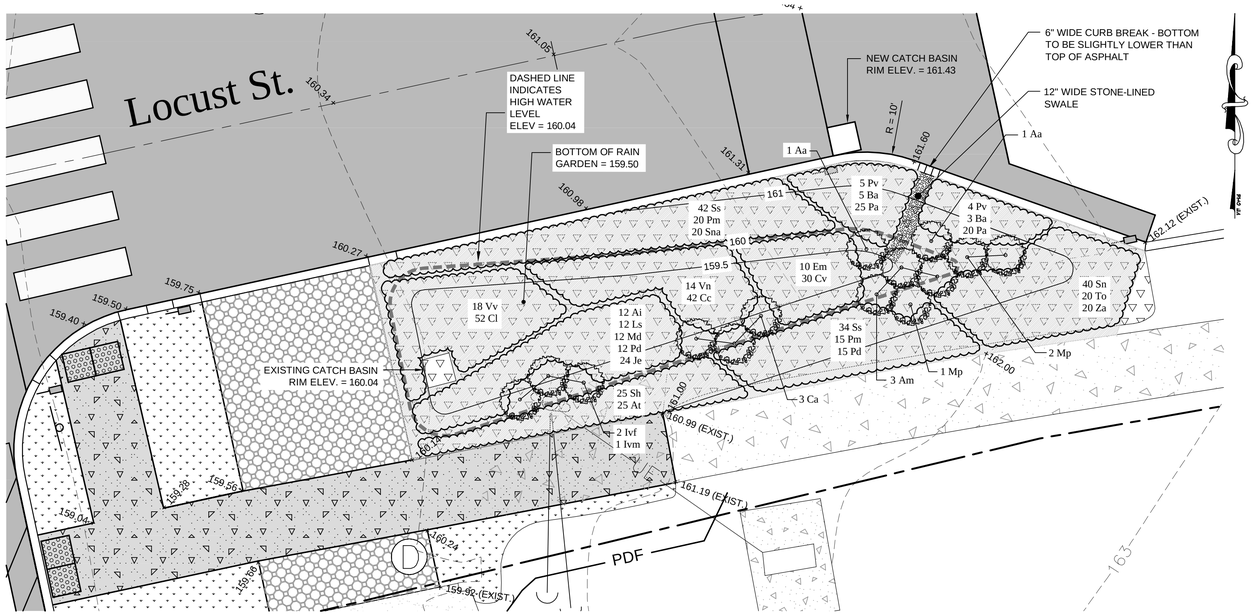


RAIN GARDEN LANDSCAPING PLAN

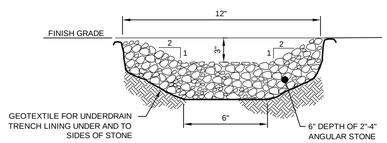
GRAPHIC SCALE

5 0 5 10 20

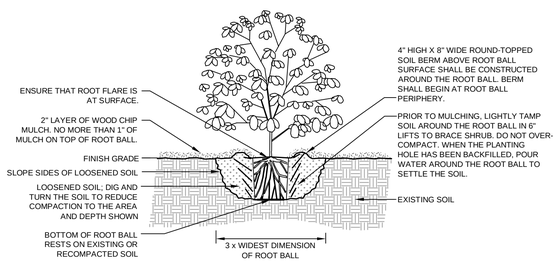
(in feet)

LEGEND

- RIGHT-OF WAY BOUNDARY LINE
- PROPERTY BOUNDARY LINE
- EXISTING GROUND CONTOUR
- EXISTING UTILITY POLE WITH GUY WIRE
- EXISTING CATCH BASIN
- EXISTING DRAINAGE MANHOLE
- PROPOSED CATCH BASIN
- EXISTING CONCRETE SIDEWALK
- NEW 5' WIDE CONCRETE SIDEWALK
- PROPOSED SHRUBS
- PROPOSED PERENNIALS
- LIMITS OF COMPLYING SOIL

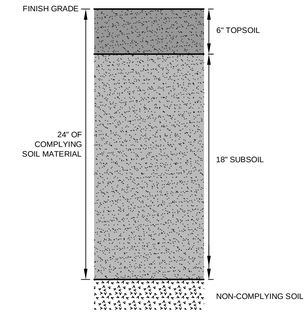


STONE-LINED SWALE



SHRUB PLANTING DETAIL

SOIL SPECIFICATIONS FOR RAIN GARDEN



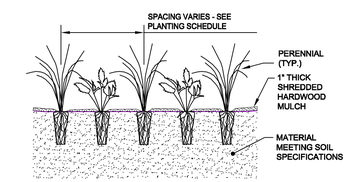
1. TOPSOIL SHALL BE OBTAINED FROM NATURALLY WELL DRAINED SITES WHERE TOPSOIL OCCURS AT LEAST 4 INCHES DEEP. TOPSOIL SHALL NOT BE OBTAINED FROM WETLANDS.
2. SOIL FURNISHED BY THE CONTRACTOR SHALL BE REASONABLY FREE FROM ROOTS, HARD CLAY, COARSE GRAVEL, STONES LARGER THAN TWO INCHES IN ANY DIMENSION, NOXIOUS WEEDS, TALL GRASS, BRUSH, STICKS, STUBBLE, AND ANY MATERIALS THAT WOULD BE DETRIMENTAL TO THE PROPER DEVELOPMENT OF VEGETATIVE GROWTH.
3. BOTH TOPSOIL AND SUBSOIL SHALL HAVE A TEXTURE OF SANDY LOAM PER THE USDA TEXTURAL TRIANGLE AND CONFORM TO THE FOLLOWING SPECIFICATIONS:

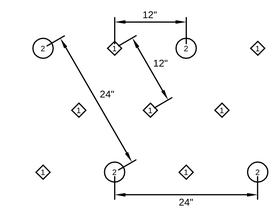
SIEVE NO.	%PASSING
2"	100
10	90-100
40	80-90
60	50-70
100	20-40
200	10-40

CLAY	LESS THAN 10%
pH	5.5 TO 7.0
ORGANIC MATTER	TOPSOIL: 5-10%, SUBSOIL: LESS THAN 10%

4. TO ASSURE THE GROWTH OF PLANTS, THE SOIL MUST NOT BE COMPACTED. ANY AREAS OF INADVERTENTLY COMPACTED SOIL WILL NEED TO BE DECOMPACTED USING A SUBSOILER, CHISEL PLOW, OR BY EXCAVATION AND REPLACEMENT WITH UNCOMPACTED SOIL. DO NOT DRIVE EQUIPMENT ON THE SOIL AFTER IT HAS BEEN PLACED OR DECOMPACTED. FINE GRADING AND PLANTING OF SPECIFIED LANDSCAPING MAY BE DONE USING LOW GROUND PRESSURE EQUIPMENT, IF THIS CAN BE ACHIEVED WITHOUT COMPACTION.
3. ALL SOIL INTENDED FOR USE SHALL BE STOCKPILED ON SITE AND MEASURES TAKEN TO ENSURE THE MATERIAL IS CONSISTENT IN QUALITY. AFTER SOIL TESTING IS COMPLETED, NO ADDITIONAL MATERIAL MAY BE ADDED TO THE STOCKPILE. A MINIMUM OF TWO SUCCESSFUL, REPRESENTATIVE TESTS SHALL BE PROVIDED BY THE CONTRACTOR FROM THE STOCKPILED SOIL. ADDITIONAL TESTING WILL BE REQUIRED FOR ANY NEW OR ADDITIONAL STOCKPILES.
6. DO NOT PLACE SOIL MATERIALS IN WET OR MUDDY CONDITIONS. PROTECT THE MATERIALS AS NECESSARY USING TARPS OR MATTING. PROVIDE EROSION CONTROL TO PREVENT TRANSPORT OF SEDIMENT OR DUST AWAY FROM THE STORAGE AREA.
7. SOILS WITHIN THE FULL SPECIFIED DEPTH SHALL HAVE A BULK DENSITY NOT EXCEEDING 1.5 g/cm³. SOILS SHALL EXHIBIT THE FOLLOWING CONE PENETROMETER READINGS:
   - SURFACE RESISTANCE - LESS THAN 110 PSI (7.7 kg/cm²)
   - SUBSURFACE RESISTANCE - LESS THAN 260 PSI (18.3 kg/cm²)
8. ANY COMPOST THAT IS USED SHALL MEET THE REQUIREMENTS OF THE U.S. COMPOSTING COUNCIL "LANDSCAPE ARCHITECTURE / DESIGN SPECIFICATIONS FOR COMPOST USE", SECTION "COMPOST AS A LANDSCAPE BACKFILL MIX COMPONENT". THE ANALYSIS SHALL BE PROVIDED BY THE COMPOST SUPPLIER. BEFORE BEING DELIVERED TO THE SITE, THE SUPPLIER MUST PROVIDE THE FOLLOWING DOCUMENTATION:
   A. A STATEMENT THAT THE COMPOST MEETS FEDERAL AND STATE HEALTH AND SAFETY REQUIREMENTS
   B. THE SAMPLING AND TESTING METHODOLOGIES SHALL CONFORM WITH THE U.S. COMPOSTING COUNCILS " TEST METHOD FOR THE EXAMINATION OF COMPOSTING AND COMPOST ".
9. SOIL QUALITY AND DEPTH SHALL BE ESTABLISHED TOWARD THE END OF CONSTRUCTION AND, ONCE ESTABLISHED, SHALL BE PROTECTED FROM COMPACTION, EROSION, AND OTHER DETRIMENTAL INFLUENCES THROUGH THE END OF CONSTRUCTION.
10. SUBMITTALS REQUIRED:
   A. SOIL ANALYSIS, INCLUDING
      - USDA PARTICLE SIZE ANALYSIS FOR PERCENTAGES OF GRAVEL, SAND, SILT, AND CLAY
      - USDA TEXTURE
      - NUTRIENT LEVELS IN PARTS PER MILLION FOR PHOSPHORUS, POTASSIUM, CALCIUM, MAGNESIUM, MANGANESE, IRON, COPPER, AND ZINC
      - PERCENTAGE ORGANIC MATTER
      - pH
      - ELECTRICAL CONDUCTIVITY (TOTAL DISSOLVED SOLIDS)
   B. COMPOST ANALYSIS, PER ITEM #8, ABOVE
   C. BEFORE DELIVERY OF SOIL MATERIALS TO THE SITE, REPRESENTATIVE SAMPLES SHALL BE SUBMITTED TO THE ENGINEER IN MINIMUM VOLUMES OF 1 GALLON FOR EACH MATERIAL USED. FOR VISUAL INSPECTION ONLY - CONTRACTOR IS SOLELY RESPONSIBLE FOR ASSURING THAT MATERIALS MEET THE SPECIFICATIONS.

PERENNIAL PLANTING DETAIL





COORDINATING BETWEEN 12" (1) AND 24" (2) SPACING

PLAN VIEW

1. PERENNIALS SHALL BE OF THE SPECIES SHOWN IN THE PLANTING SCHEDULE. ANY CHANGES TO THE SCHEDULE SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER.
2. DO NOT APPLY FERTILIZER UNLESS THE NEED HAS BEEN ESTABLISHED. THE PLANTING SCHEDULE CONTAINS SPECIES WITH LOW FERTILIZER REQUIREMENTS. EXCESS FERTILIZER CAN CAUSE WEAK GROWTH AND REDUCED LONGEVITY.
3. AVOID PLANTING WHEN THE SOIL IS WET. DIGGING OR WALKING ON THE SOIL WHEN SATURATED WILL COMPACT THE SOIL AND REDUCE THE RAIN GARDEN'S ABILITY TO ABSORB WATER, ITS PRIMARY PURPOSE.
4. BEFORE TRANSPLANTING, KEEP PERENNIALS MOIST AND IN AN AREA NOT SUBJECT TO STRONG WIND OR TEMPERATURE EXTREMES.
5. SPECIES ARE TO BE DISTRIBUTED EVENLY OVER THE PLANTING AREAS, NOT IN BLOCKS OR CLUSTERS.
6. SPACING BETWEEN PLANTS REFERS TO THE DISTANCE BETWEEN PLANTS OF THE SAME SPECIES. PLACE SPECIES WITH WIDER SPACING FIRST, THEN FILL IN WITH PLANTS WITH LESSER SPACING, USING THE LESSER DISTANCE AS THE FINAL DISTANCE BETWEEN ALL PLANTS IN THE MIX.
7. DISTRIBUTE PLUGS OVER EACH AREA BEFORE PLANTING TO ENSURE APPROPRIATE SPACING AND DISTRIBUTION OF SPECIES. WORK QUICKLY TO MINIMIZE THE LENGTH OF TIME THAT ROOTS ARE EXPOSED AFTER REMOVAL FROM PLUG TRAYS.
8. MAKE A HOLE FOR EACH PLUG, INSERT THE PLUG UNTIL THE UPPERMOST ROOTS ARE JUST BELOW THE SURFACE OF THE SOIL, THEN FIRM THE SOIL AROUND THE ROOTS TO REMOVE AIR POCKETS.
9. WHEN ALL PLUGS ARE PLANTED, APPLY A 1" LAYER OF WOOD CHIP MULCH OVER THE ENTIRE PLANTING AREA, TAKING CARE THAT PLANT CROWNS ARE NOT COVERED.
10. IMMEDIATELY AFTER PLANTING, ENSURE THAT SOIL IS MOISTENED TO THE FULL DEPTH OF THE ROOTS.
11. USING STAKES AND ROPE, ERECT A BARRICADE AROUND THE PLANTING AREA TO PREVENT FOOT TRAFFIC.
12. UNTIL PLANTS ARE ESTABLISHED, ENSURE THAT THEY RECEIVE AT LEAST 1" OF WATER EACH WEEK, EITHER FROM RAINFALL OR BY IRRIGATION.

PLANTING SCHEDULE

Key	Botanical Name	Common Name	Size	Quantity	Remarks
Shrubs*					
Aa	*Aronia arbutifolia 'Brilliantissima'*	Red Chokeberry	18" to 24" Height	2	Container
Am	*Aronia melanocarpa 'Viking'*	Black Chokeberry	18" to 24" Height	3	Container
Ca	*Clethra alnifolia 'Ruby Spice'*	Summersweet	18" to 24" Height	3	Container
Ivf	*Ilex verticillata 'Winter Red'*	Winterberry (female)	18" to 24" Height	2	Container
Ivm	*Ilex verticillata 'Southern Gentleman'*	Winterberry (male)	18" to 24" Height	1	Container
Mp	*Morella pensylvanica*	Northern Bayberry	18" to 24" Height	3	Container
Perennials*					
Ai	*Asclepias incarnata*	Swamp Milkweed	Use fully rooted, 2" square by 5" deep landscape plugs	12	Plant 12" on center
At	*Asclepias tuberosa*	Butterfly Milkweed		25	Plant 12" on center
Ba	*Baptisia australis*	Blue Wild Indigo		8	Plant 24" on center
Cc	*Carex comosa*	Bearded Sedge		42	Plant 12" on center
Cl	*Carex lurida*	Sallow Sedge		52	Plant 12" on center
Cv	*Carex vulpinoidea*	Fox Sedge		30	Plant 12" on center
Em	*Eutrochium maculatum*	Spotted Joe Pye Weed		10	Plant 24" on center
Je	*Juncus effusus*	Soft Rush		24	Plant 12" on center
Ls	*Liatris spicata*	Dense Blazing Star		12	Plant 12" on center
Md	*Monarda didyma "Jacob Cline"*	Beebalm		12	Plant 12" on center
Pa	*Packera aurea*	Golden Groundsel		45	Plant 12" on center
Pd	*Penstemon digitalis*	Foxglove Beardtongue		12	Plant 12" on center
Pm	*Pycnanthemum muticum*	Clustered Mountain-mint		20	Plant 12" on center
Pv	*Panicum virgatum*	Switchgrass		9	Plant 24" on center
Sb	*Sporobolus heterlepis*	Prairie Dropseed		25	Plant 12" on center
Sn	*Sorghastrum nutans*	Indiangrass		40	Plant 12" on center
Sna	*Symphyotrichum novae-angliae*	New England Aster		20	Plant 12" on center
Ss	*Schizachyrium scoparium*	Little Bluestem		76	Plant 12" on center
To	*Tradescantia ohiensis*	Ohio Spiderwort		20	Plant 12" on center
Vn	*Vernonia noveboracensis*	New York Ironweed		14	Plant 24" on center
Vv	*Veronicastrum virginicum*	Culver's Root		18	Plant 24" on center
Za	*Zizia aurea*	Golden Alexanders		20	Plant 12" on center

*Unless a named cultivar is listed, the species shall be used.

ITEM 900.670 SPECIAL PROVISION (RAIN GARDEN)
STA 34+34 RT - 34+89 RT

RAIN GARDEN MONITORING AND MANAGEMENT

WHAT TO LOOK FOR	PROBLEMS	YES//NO	POSSIBLE CAUSES	ACTIONS
AESTHETICS	ARE WEEDS PRESENT?	YES	YOUNG PLANTS HAVE NOT YET COVERED THE GROUND.	REMOVE WEEDS. IRRIGATE IF NECESSARY TO INCREASE VIGOR OF DESIRED SPECIES. REPLACE ANY PLANTS THAT ARE MISSING BECAUSE OF MORTALITY. APPLY A THIN LAYER OF WOOD CHIP MULCH OVER ANY BARE SOIL.
			THERE ARE NEARBY SOURCES OF WEED SEEDS.	REMOVE SEED SOURCES.
		NO		CHECK AGAIN NEXT TIME.
	IS THE PLANTING ATTRACTIVE?	YES		CHECK AGAIN NEXT TIME.
		NO	THE MIX OF SPECIES HAS DEVIATED FROM ORIGINAL DESIGN.	CONTACT DESIGNER TO DEVELOP ENHANCEMENT PLAN. INSTALL RECOMMENDED PLANTINGS.
	IS LITTER PRESENT?	YES		REMOVE LITTER. INVESTIGATE POSSIBLE SOURCES AND REMOVE, OR IMPROVE LITTER COLLECTION PRACTICES.
		NO		CHECK AGAIN NEXT TIME.
LOSS OF SPECIES DIVERSITY	HAS MORTALITY CAUSED THE DISAPPEARANCE OF SPECIES?	YES	THE ADAPTATIONS OF THE PLANT SPECIES DO NOT MATCH THE HYDROLOGY.	CONTACT DESIGNER TO ASSESS HYDROLOGY AND SUITABILITY OF SPECIES. INSTALL RECOMMENDED SPECIES TO FILL GAPS.
		NO		CHECK AGAIN NEXT TIME.
HEALTH OF PLANTS	DO PLANTS EXHIBIT LOW VIGOR?	YES	THE SOIL HAS INADEQUATE NUTRIENTS.	COLLECT AND SUBMIT SOIL SAMPLES FOR ANALYSIS. CORRECT NUTRIENT DEFICIENCIES OR IMBALANCES. BECAUSE RAIN GARDEN PLANTS DO NOT HAVE HIGH NUTRIENT REQUIREMENTS, BE CONSERVATIVE WITH FERTILIZER APPLICATION.
			SOIL pH IS OUT OF THE ACCEPTABLE RANGE.	COLLECT AND SUBMIT SOIL SAMPLES FOR ANALYSIS. CORRECT pH LEVEL USING SULFUR OR GROUND LIMESTONE, AS PRESCRIBED.
			PLANTS ARE NOT ADAPTED TO THE HYDROLOGY OF THE RAIN GARDEN.	CONTACT DESIGNER TO ASSESS HYDROLOGY AND MAKE RECOMMENDATIONS FOR MORE SUITABLE SPECIES. INSTALL RECOMMENDED SPECIES.
			SUBSTANCES TOXIC TO PLANTS HAVE ENTERED THE RAIN GARDEN.	CONTACT DESIGNER TO ASSESS PLANT AND SOIL SYMPTOMS AND DEVELOP STRATEGY FOR ADDRESSING TOXINS.
		NO		CHECK AGAIN NEXT TIME.
	ARE PLANTS OVERLY VIGOROUS OR FALLING OVER?	YES	THE SOIL HAS EXCESSIVE NUTRIENTS.	FERTILIZER SHOULD NEVER BE APPLIED TO A RAIN GARDEN UNLESS THE NEED IS DEMONSTRATED. CHECK THE CONTRIBUTING WATERSHED FOR SOURCES OF EXCESS NUTRIENTS AND REMOVE IF POSSIBLE. ASSESS SPECIES SUITABILITY IN LIGHT OF HIGH NUTRIENT LEVELS.
		NO		CHECK AGAIN NEXT TIME.
	ARE ONE OR MORE SPECIES ENCROACHING ON OTHERS?	YES	CONDITIONS ARE IDEAL FOR THE OVERLY VIGOROUS SPECIES.	IN EARLY SUMMER, CUT STEMS OF THE OVERLY VIGOROUS PLANTS TO THE GROUND WHERE THEY ENCROACH ON NEARBY SPECIES. CONTINUED ISSUES MAY REQUIRE THAT THE EXCESS PLANT CROWNS BE DUG OUT.
			SPECIES THAT ARE BEING CROWDED OUT ARE NOT WELL SUITED TO THE SOIL OR HYDROLOGY.	CONTACT THE DESIGNER TO ASSESS THE SUITABILITY OF THE LOW-VIGOR SPECIES AND MAKE RECOMMENDATIONS.
		NO		CHECK AGAIN NEXT TIME.
RAIN GARDEN FUNCTION	IS STANDING WATER ABSORBED WITHIN 24 HOURS AFTER A RAIN EVENT?	YES		CHECK AGAIN NEXT TIME.
		NO	OUTLET DRAIN IS BLOCKED.	CLEAR OR UNCLOG DRAIN.
			SOIL IS NOT PERMEABLE ENOUGH.	CONTACT DESIGNER TO ASSESS INFILTRATION RATE AND DEVELOP STRATEGY TO IMPROVE IT.
			EXCESSIVE WATER IS BEING DIRECTED INTO RAIN GARDEN.	CONTACT DESIGNER TO INVESTIGATE WATER FLOW AND DEVELOP PLAN TO MODIFY INLET IF NECESSARY.
	IS RAIN GARDEN RARELY INUNDATED OR INUNDATED FOR ONLY SHORT PERIODS OF TIME?	YES	CURB CUT IS BLOCKED.	CLEAN DEBRIS FROM CURB CUT.
			ADEQUATE WATER IS NOT FLOWING TOWARDS CURB CUT.	MODIFY THE CURB CUT OR CONTRIBUTING PAVEMENT.
			OUTLET STRUCTURE IS LEAKING BELOW THE RIM.	REPAIR THE OUTLET STRUCTURE.
		NO		CHECK AGAIN NEXT TIME.
	IS EROSION, SEDIMENTATION, OR BARE SOIL PRESENT?	YES	GAPS BETWEEN PLANTS ARE NOT STABILIZED BY ROOTS.	CONTACT DESIGNER TO EVALUATE WHETHER MORE OR ALTERNATIVE SPECIES ARE NECESSARY TO STABILIZE SOIL. INSTALL ADDITIONAL PLANTINGS.
			OTHER INFLOW(S) OF WATER BESIDES THE PLANNED ONE EXPOSES SOIL TO EROSION.	BLOCK THE EXTRA INFLOW OR ARMOR THE ROUTE OF INFLOW WITH STONES TO KEEP SOIL IN PLACE.
			SEDIMENT IS BEING CARRIED WITH RUN-OFF INTO THE RAIN GARDEN.	STABILIZE OR REMOVE SEDIMENT SOURCE. DETERMINE THE CAUSE AND PREVENT IT FROM HAPPENING. REPLACE ANY MISSING PLANTS AS SOON AS POSSIBLE. MULCH WITH A THIN LAYER OF WOOD CHIPS.
		NO		CHECK AGAIN NEXT TIME.
	DOES RAIN GARDEN VEGETATION ATTRACT BIRDS AND POLLINATORS?	YES		CHECK AGAIN NEXT TIME.
		NO	NOT ENOUGH OF THE RIGHT KINDS OF PLANTS ARE PRESENT.	CONTACT DESIGNER TO INVENTORY SPECIES AND MAKE RECOMMENDATION FOR SUPPLEMENTING WITH ONES THAT ARE MORE BENEFICIAL. INSTALL NEW PLANTS.
			FLOWERS ARE NOT BLOOMING AT THE PROPER TIME TO BENEFIT DESIRED SPECIES.	ADD MORE FUNCTIONAL SPECIES.
ACCUMULATION OF PLANT DEBRIS	IS THERE A SUBSTANTIAL AMOUNT OF DEAD STEMS PRESENT?	YES	THE END OF THE GROWING SEASON RESULTS IN DEAD HERBACEOUS STEMS.	LEAVE STEMS STANDING OVER THE WINTER TO PROVIDE SEEDS AND COVER FOR BIRDS, PROTECTION FOR SOIL. CUT DEAD STEMS TO 6 - 12" ABOVE THE SOIL IN LATE APRIL. REMOVE STEMS FROM RAIN GARDEN.
			SHRUB STEMS LOSE VIGOR WITH AGE.	AFTER SHRUBS HAVE REACHED MATURITY, REJUVENATE BY PERIODICALLY PRUNING AWAY LESS VIGOROUS STEMS, CLEANLY CUTTING AT GROUND LEVEL. RETAIN ADEQUATE TOP GROWTH TO SUPPORT ROOTS.
		NO		CHECK AGAIN NEXT TIME.

PRELIMINARY PLANS
MARCH, 2018

CAROLINE ST. & LOCUST ST. INTERSECTION RAIN GARDEN LANDSCAPE PLAN

BURLINGTON STP BP 13(6)

Lamoureux & Dickinson Consulting Engineers, Inc.
14 Morse Drive, Essex, VT 05452
802-878-4450 www.LDengineering.com

L&D PROJECT NUMBER: 14087
DRAWN BY: L&D
CHECKED BY: DG/RD

SHEET: 13

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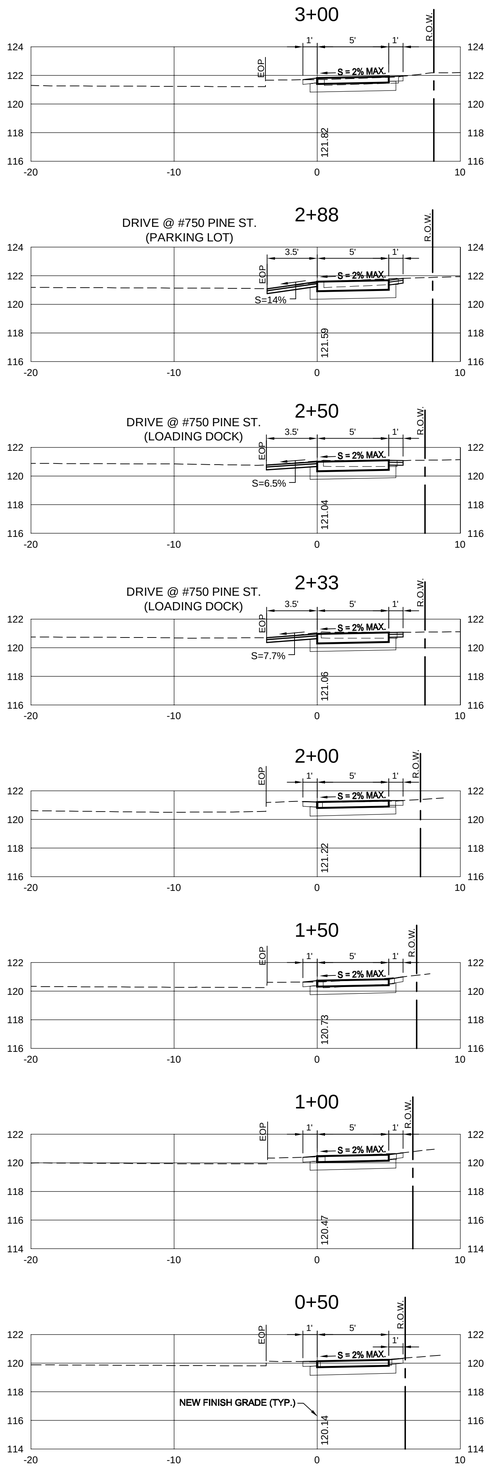

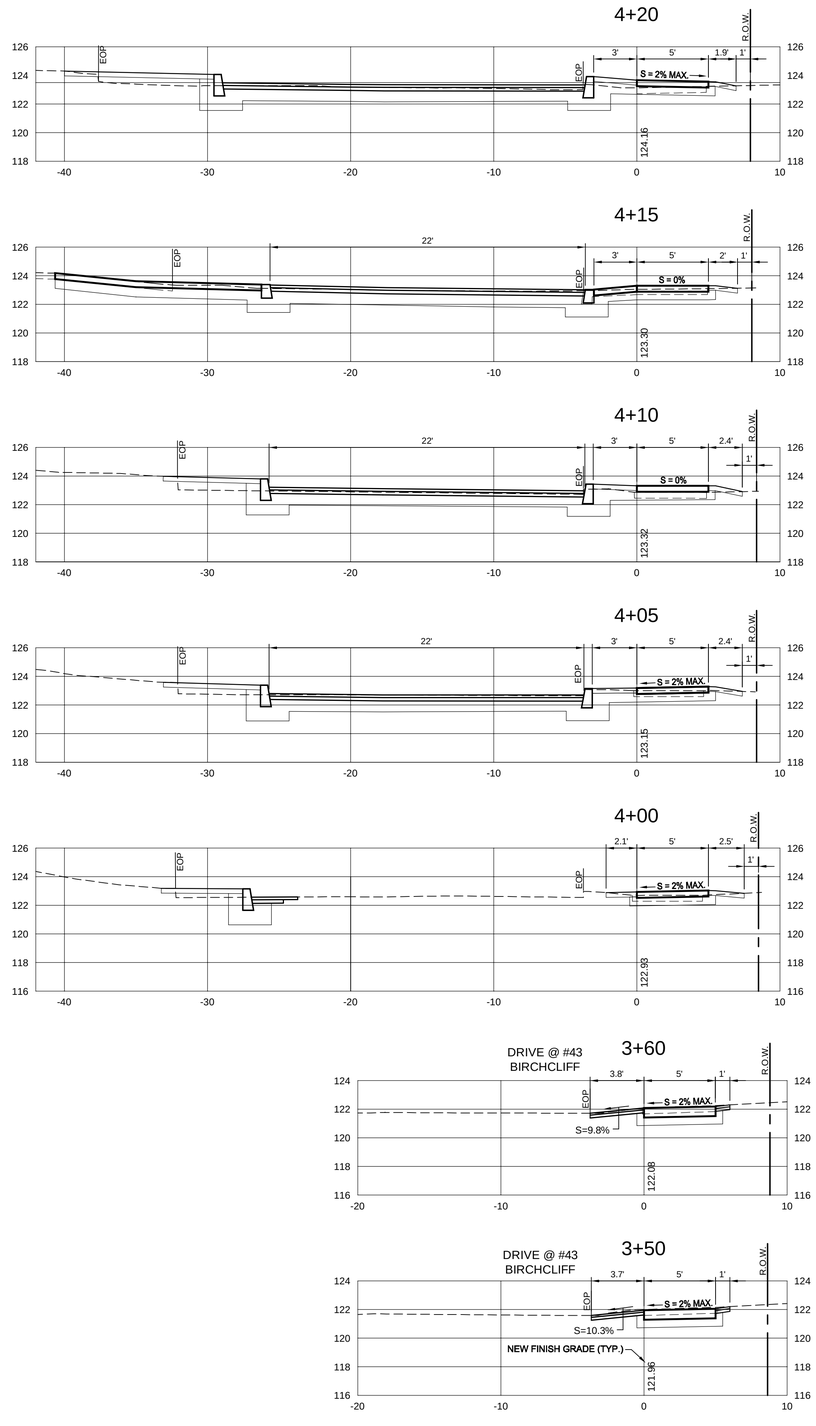

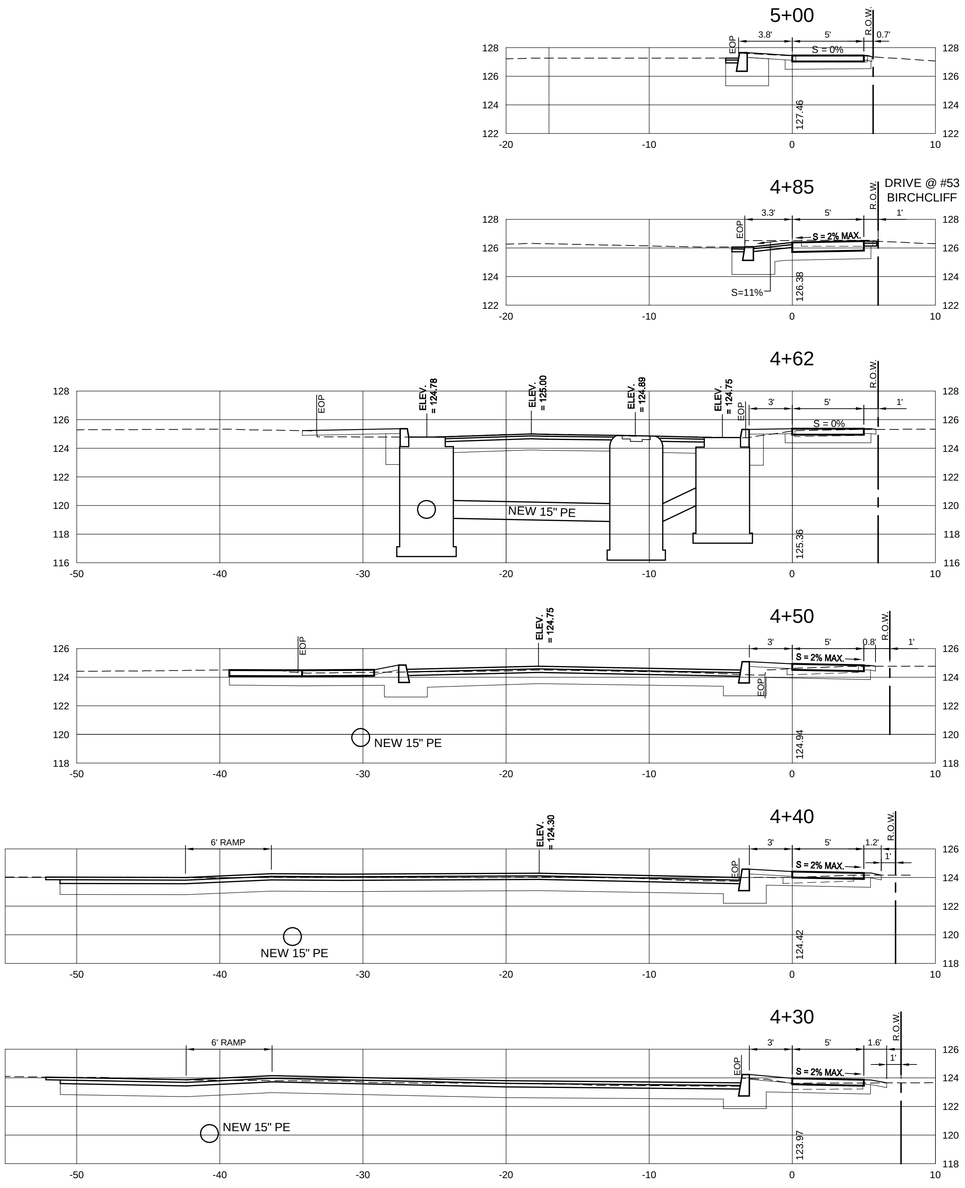

GRAPHIC SCALE

(IN FEET)
1 inch = 5 ft.

PRELIMINARY PLANS
MARCH, 2018

CROSS SECTIONS

BIRCHCLIFF PARKWAY

BURLINGTON STP BP 13(6)

Lamoureux & Dickinson
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L&D PROJECT NUMBER: 14087
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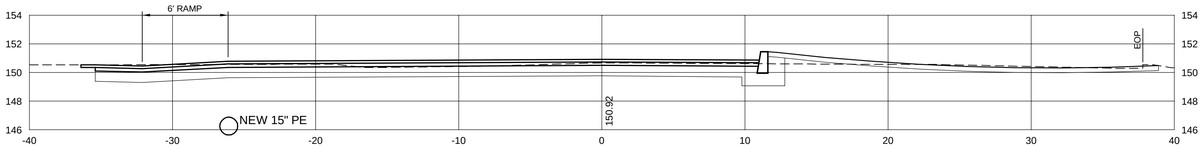

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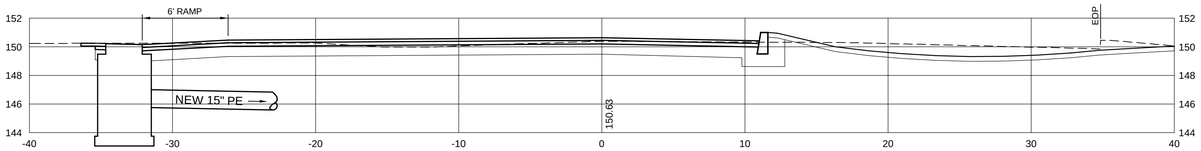

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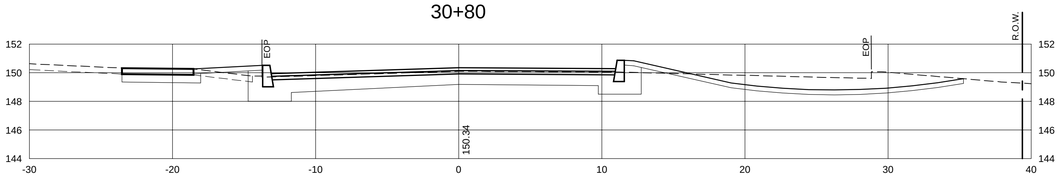

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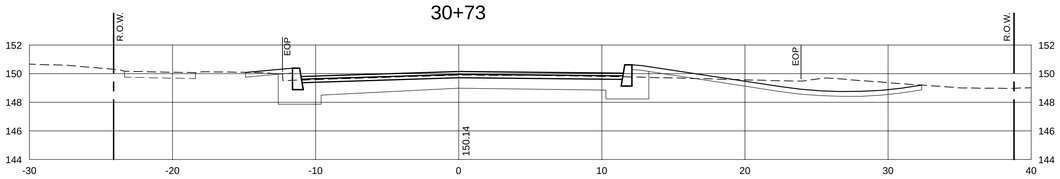

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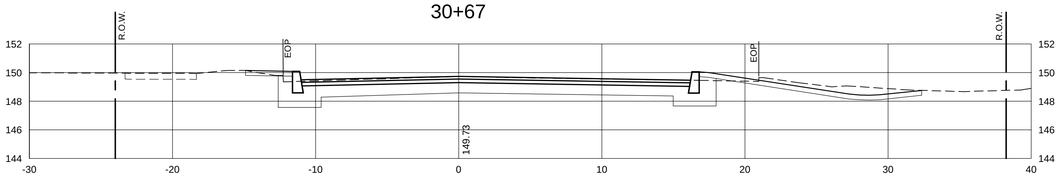

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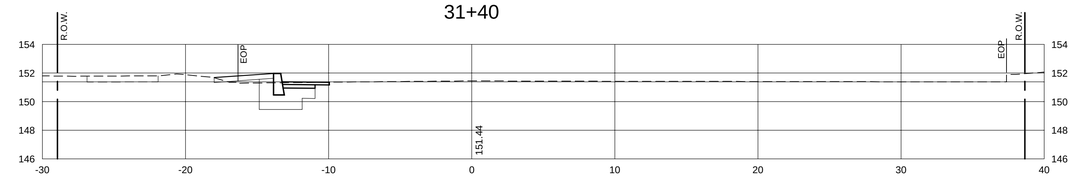

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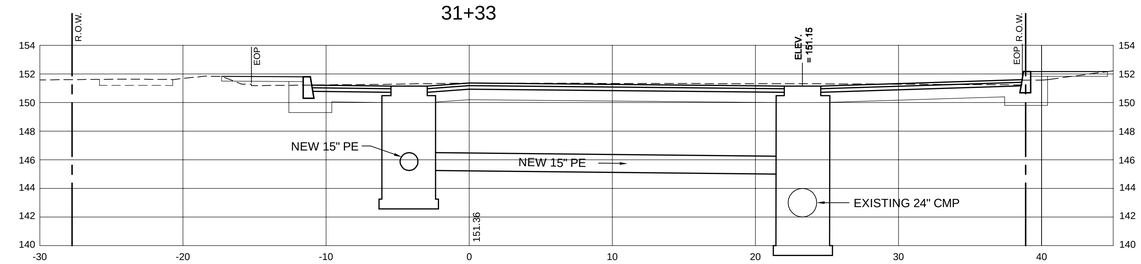

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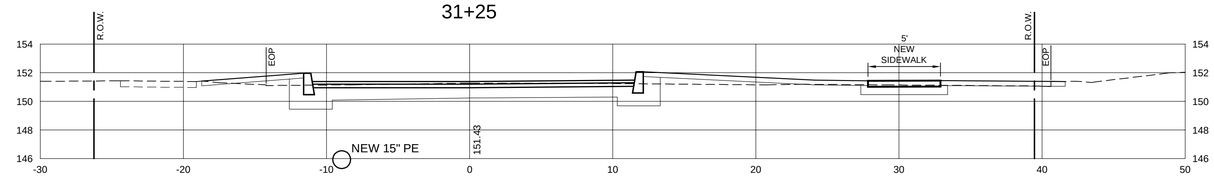

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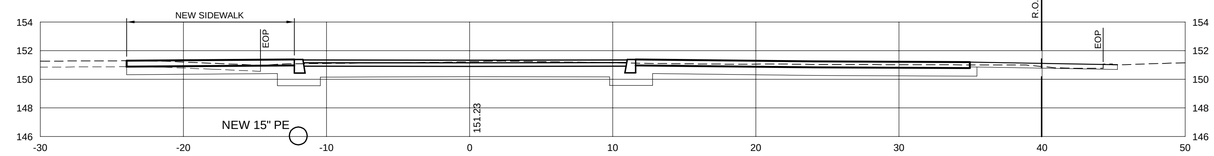

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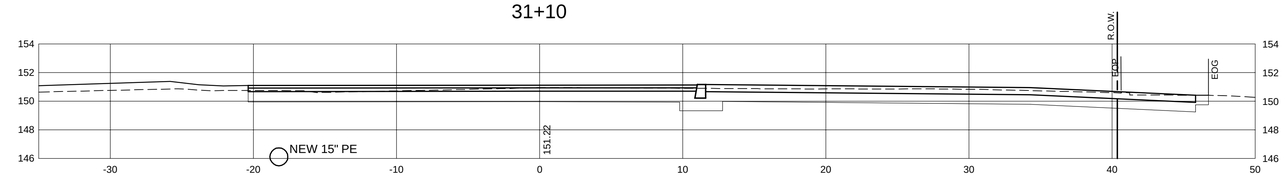

PRELIMINARY PLANS
MARCH, 2018

GRAPHIC SCALE

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1 inch = 5 ft.

CROSS SECTIONS LOCUST & CHARLOTTE STREET INTERSECTION

BURLINGTON STP BP 13(6)

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L&D PROJECT NUMBER: 14087
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SHEET: 15

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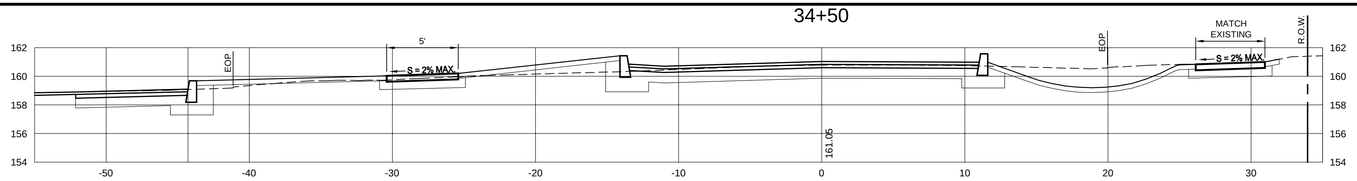

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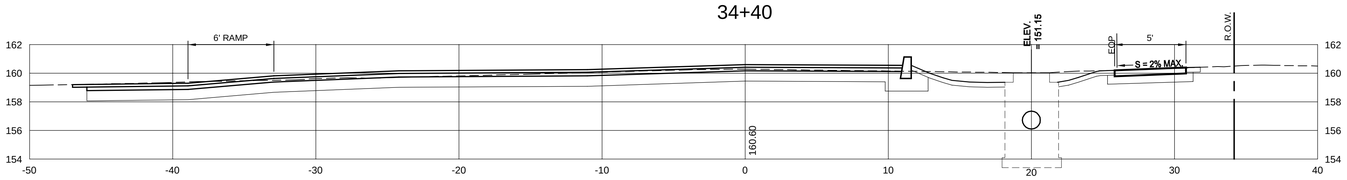

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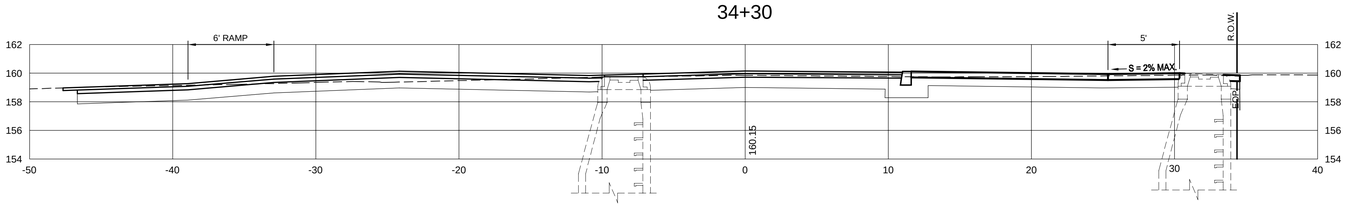

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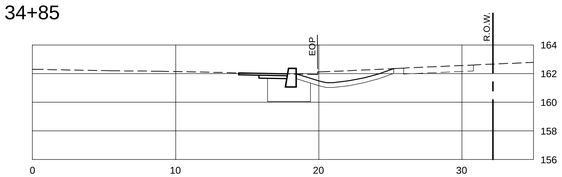

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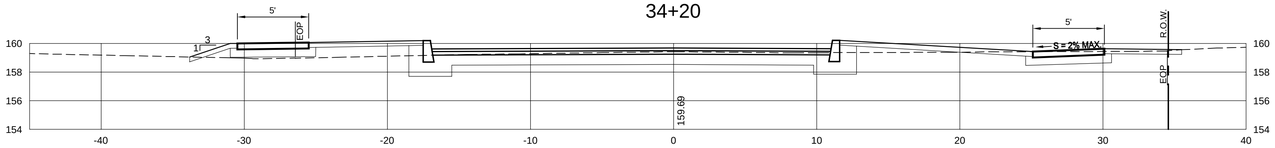

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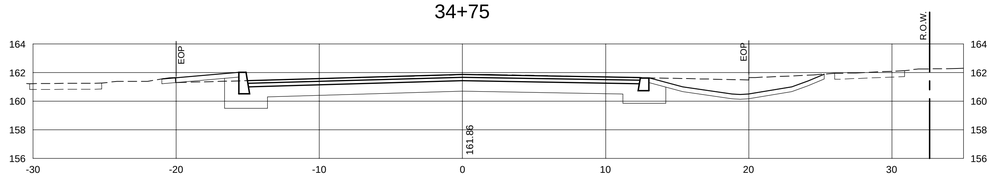

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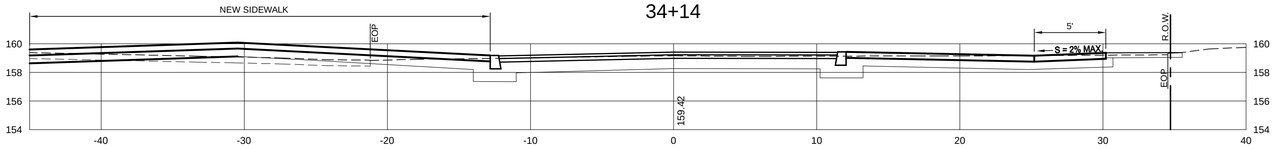

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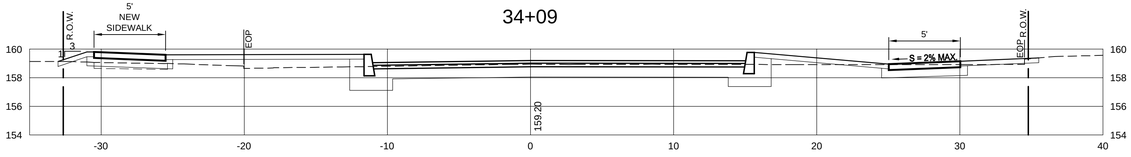

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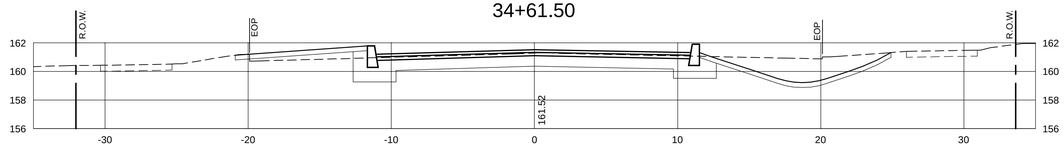

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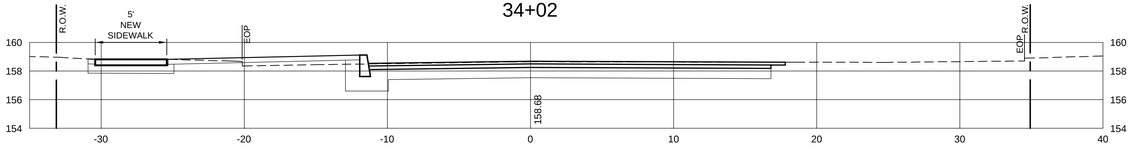

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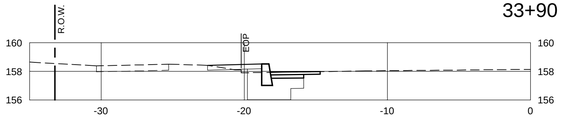
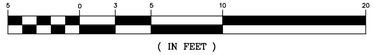


GRAPHIC SCALE



(IN FEET)
1 inch = 5 ft.

PRELIMINARY PLANS
MARCH, 2018

CROSS SECTIONS LOCUST & CAROLINE STREET INTERSECTION

BURLINGTON STP BP 13(6)

Lamoureux & Dickinson Consulting Engineers, Inc.
14 Morse Drive, Essex, VT 05452
802-878-4450 www.LDengineering.com

L&D PROJECT NUMBER: 14087
DRAWN BY: L&D
CHECKED BY: DG/RD

SHEET: 16

P:\2014\14087\dwg\14087 14-16-sections.dwg, 3/26/2018 4:06:24 PM, bill

CHERRY STREET & BIRCHCLIFF PARKWAY — SIGN SUMMARY TABLE

STATION	SIGN LEGEND	SIGN DIMENSIONS EACH	SIGN DIMENSIONS SALVAGED	WIDTH (in)	HEIGHT (in)	AREA (SF)	NEW SIGN POSTS NO. OF POSTS	SQUARE STEEL (in) 1.75 lb/ft 1.88	2.0 lb/ft 2.42	2.5 lb/ft 3.35	MUTCD / COLOR
3+04 RT	SPEED TABLE	1		30"	30"	6.25	1		15		W17-1
4+10 LT			1 1								
4+25± LT	SPEED TABLE	1		30"	30"	6.25	1		15		W17-1
5+50 LT	SPEED TABLE	1		30"	30"	6.25	1		15		W17-1
TOTAL		3	2		TOTALS	SF 18.75	3	FT	FT 45	FT	

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

CHARLOTTE STREET & LOCUST STREET — SIGN SUMMARY TABLE

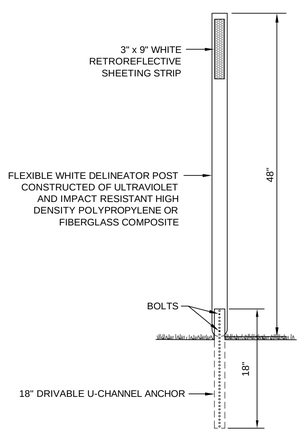
STATION	SIGN LEGEND	SIGN DIMENSIONS EACH	SIGN DIMENSIONS SALVAGED	WIDTH (in)	HEIGHT (in)	AREA (SF)	NEW SIGN POSTS NO. OF POSTS	SQUARE STEEL (in) 1.75 lb/ft 1.88	2.0 lb/ft 2.42	2.5 lb/ft 3.35	MUTCD / COLOR
29+67 RT	SPEED TABLE	1		30"	30"	6.25	1		15		W17-1
30+82 LT	SPEED TABLE	1		30"	30"	6.25	1		15		W17-1
31+16 RT			1 1				1		15		INSTALL SALVAGED SIGNS ON NEW POST
31+26 LT			1 1				1		15		INSTALL SALVAGED SIGNS ON NEW POST
32+33 LT	SPEED TABLE	1		30"	30"	6.25	1		15		W17-1
TOTAL		3	4		TOTALS	SF 18.75	5	FT	FT 75	FT	

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

CAROLINE STREET & LOCUST STREET — SIGN SUMMARY TABLE

STATION	SIGN LEGEND	SIGN DIMENSIONS EACH	SIGN DIMENSIONS SALVAGED	WIDTH (in)	HEIGHT (in)	AREA (SF)	NEW SIGN POSTS NO. OF POSTS	SQUARE STEEL (in) 1.75 lb/ft 1.88	2.0 lb/ft 2.42	2.5 lb/ft 3.35	MUTCD / COLOR
33+03 RT	SPEED TABLE	1		30"	30"	6.25	1		15		W17-1
33+38 LT	SPEED TABLE	1		30"	30"	6.25	1		15		W17-1
34+10 RT			1 1				1		15		INSTALL SALVAGED SIGNS ON NEW POST
34+18 LT			1 1				1		15		INSTALL SALVAGED SIGNS ON NEW POST
35+61 LT	SPEED TABLE	1		30"	30"	6.25	1		15		W17-1
TOTAL		3	4			SF		FT	FT	FT	
					TOTAL	18.75	5		75		
					COLUMN 1	18.75	3		45		
					COLUMN 2	18.75	4		60		
					PROJECT TOTALS	56.25	12		180		

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."



FLEXIBLE GROUND MOUNTED DELINEATOR

NTS PAID AS ITEM #676.20

PRELIMINARY PLANS
MARCH, 2018

Sign Summary Sheet

BURLINGTON STP BP 13(6)

Lamoureux & Dickinson Consulting Engineers, Inc.
14 Morse Drive, Essex, VT 05452
802-878-4450 www.LDengineering.com

L&D PROJECT NUMBER: 14087
DRAWN BY: L&D
CHECKED BY: DG/RD

SHEET: 17

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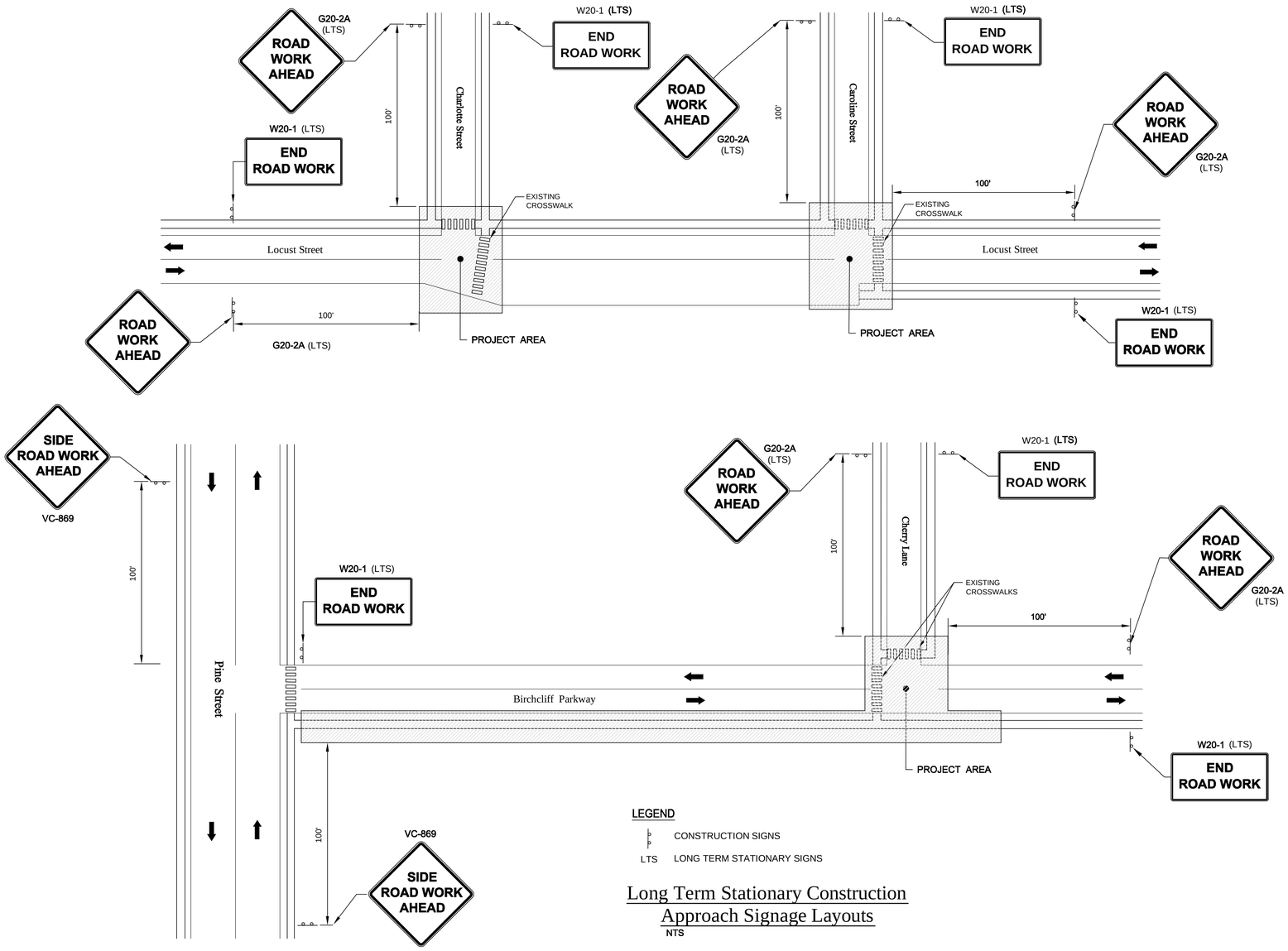
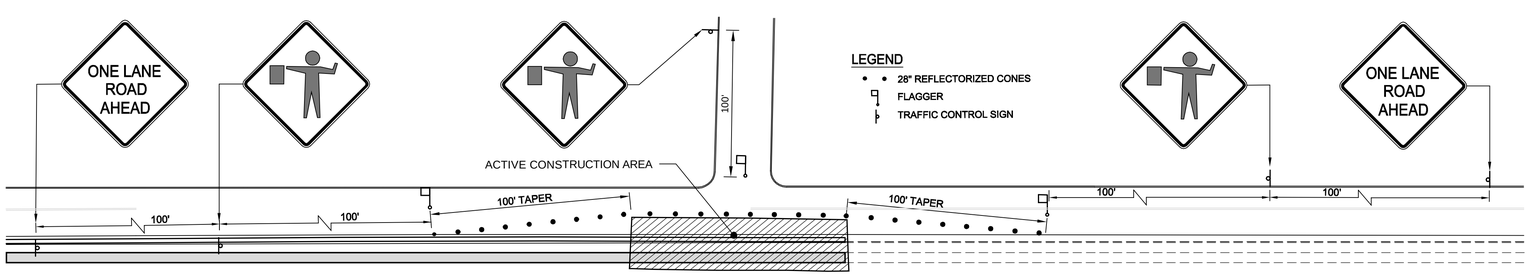


Long Term Stationary Construction Approach Signage Layouts

NTS



Short Term Lane Closure Detail

NTS

TEMPORARY TRAFFIC CONTROL NOTES

1. ALL TEMPORARY CONTROL DEVICES SHALL MEET OR EXCEED VTRANS STANDARD DETAILS. WHERE THE STANDARD DETAILS CONFLICT WITH THE MUTCD, THE MUTCD SHALL GOVERN.
2. FOR ANY WORK WITHIN THE HIGHWAY RIGHT-OF-WAY A MINIMUM OF ONE-WAY THRU TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. CONTINUOUS TWO-WAY TRAFFIC SHALL BE MAINTAINED AT NIGHT, ON WEEKENDS AND HOLIDAYS, DURING PEAK TRAFFIC PERIOD (WEEKDAYS 7-9 AM AND 4-6 PM) AND WHENEVER POSSIBLE DURING CONSTRUCTION. THERE SHALL BE NO OPEN TRENCHES WITHIN THE ROUTE 15 RIGHT-OF-WAY OVER NIGHT. THERE SHALL BE NO WORK DONE WITHIN THE ROUTE 15 RIGHT-OF-WAY THE DAY BEFORE OR AFTER A STATE HOLIDAY.
3. SHORT DURATION TEMPORARY TRAFFIC CONTROL SIGNING AND CHANNELIZING DEVICES SHALL BE IN ACCORDANCE WITH THE APPROPRIATE MUTCD STANDARDS (PART 6). TYPICAL APPLICATIONS 1 AND 3 ARE USEFUL EXAMPLES. VARIATIONS IN THE SIGNING PACKAGES MAY BE DICTATED BY UNIQUE GEOMETRY, SPECIFIC CONSTRUCTION ACTIVITIES, AND/OR TRAFFIC CONDITIONS.
4. APPROACH CONSTRUCTION SIGNING SHALL REMAIN IN PLACE DURING THE ENTIRE CONSTRUCTION PERIOD.
5. THE CONTRACTOR SHALL NOT WORK WITHIN THE HIGHWAY ROW WITHOUT THE APPROPRIATE CONSTRUCTION SIGNING AND TEMPORARY TRAFFIC CONTROL DEVICES IN PLACE.
6. TO FACILITATE THE FLOW OF TRAFFIC, THE RESIDENT ENGINEER SHALL HAVE AUTHORITY TO MODIFY THE CONTRACTOR'S ONGOING OPERATIONS OR PROPOSED METHODS OF CONSTRUCTION AS DEEMED NECESSARY FOR THE SAFETY, CONVENIENCE AND WELFARE OF THE TRAVELING PUBLIC. THE CONTRACTOR SHALL COMPLY WITH ALL SUCH DIRECTIVES.
7. THE MIXING OF TEMPORARY TRAFFIC CONTROL DEVICES (DRUMS, CONES, ETC.) ALONG A TANGENT HIGHWAY IS NOT ALLOWED. DRUMS SHOULD BE USED TO CHANNELIZE OR DELINEATE ROAD USER'S FLOW WHILE REFLECTORIZED CONES ARE BETTER SUITED TO DELINEATE DRIVES WITHIN THE WORK ZONE.
8. CONTRACTOR SHALL PROVIDE A MINIMUM SEVEN DAY ADVANCE NOTICE TO PROPERTY OWNERS PRIOR TO COMMENCING WORK IN DRIVES. WHERE SIDEWALKS CROSS DRIVES, THEY SHALL BE CONSTRUCTED IN TWO PHASES, MAINTAINING ACCESS TO DRIVEWAYS AT ALL TIMES.
9. THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN ACCESS TO BUSINESSES AND RESIDENCES.
10. FLAGGERS AND/OR TRAFFIC CONTROL PERSONNEL SHALL DIRECT BICYCLISTS THROUGH THE CONSTRUCTION AREA IN THE SAME MANNER AS VEHICULAR TRAFFIC. PEDESTRIANS, WHEN PRESENT, SHALL BE ESCORTED THROUGH THE WORK ZONE BY A DESIGNATED WORKER (SEE PEDESTRIAN TRAFFIC CONTROL PLAN).

TEMPORARY CONSTRUCTION SIGNS

1. ALL SIGN STANDS AND POST INSTALLATION SHALL BE NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM 350 (NCHRP) COMPLIANT.
2. ALL ROLL-UP SIGN MATERIAL SHALL HAVE ASTM D 4956-01 TYPE VI OR TYPE VII FLUORESCENT ORANGE RETRO-REFLECTIVE SHEETING.
3. ALL POST MOUNTED SIGNS SHALL HAVE ASTM D 4956-01 TYPE VIII OR TYPE IX FLUORESCENT ORANGE RETRO-REFLECTIVE SHEETING.
4. ALL STATIONARY SIGNS SHALL BE MOUNTED ON TWO 3 LBS/FT FLANGED CHANNEL POSTS. NO SIGN POSTS SHALL EXTEND OVER THE TOP EDGE OF THE SIGN INSTALLED ON SAID POSTS.
5. PRIOR TO PLACING TEMPORARY WORK ZONE SIGNS ON THE PROJECT, THE CONTRACTOR MUST FURNISH FOR THE TOWN'S APPROVAL A DETAIL FOR TEMPORARY WORK ZONE SIGNS ON STEEL POSTS SHOWING STUBS PROJECTING A MAXIMUM OF 4 INCHES ABOVE GROUND LEVEL AND BOLTS FOR SIGN POST ATTACHMENT SHALL BE NCHRP 350 COMPLIANT, IF IN THE CLEAR ZONE.

FLAGGERS AND UNIFORM TRAFFIC OFFICERS

FLAGGERS SHALL BE REQUIRED TO ATTEND A 4 HOUR APPROVED TRAINING COURSE AND CARRY THEIR FLAGGER CERTIFICATION CARD WITH THEM. THE CONTRACTOR SHALL PROVIDE COPIES OF ALL DOCUMENTATION OF THE CERTIFICATION OBTAINED FOR EACH FLAGGER ON THE PROJECT.

ALL FLAGGERS OR UTO SERVING AS A TRAINED FLAGGER SHALL WEAR SAFETY APPAREL MEETING REQUIREMENTS OF ISEA "AMERICAN NATIONAL STANDARD OF HIGH-VISIBILITY APPAREL" AND LABELED AS MEETING THE ANSI 107-1999 STANDARD PERFORMANCE FOR CLASS 2 RISK EXPOSURE. INDIVIDUALS ENGAGED IN TRAFFIC CONTROL SHALL WEAR THE HIGH-VISIBILTY VEST.

MUTCD TYPICAL APPLICATIONS TA-6, TA-10 & TA-13 SHALL BE USED WHEN NECESSITATED BY THE CONTRACTOR'S WORK OPERATIONS

W21-1a W3-4 W20-4 VC-869

SHORT-TERM STATIONARY DAY SIGNS

PRELIMINARY PLANS
MARCH, 2018

Construction Approach & Traffic Control Details and Specifications

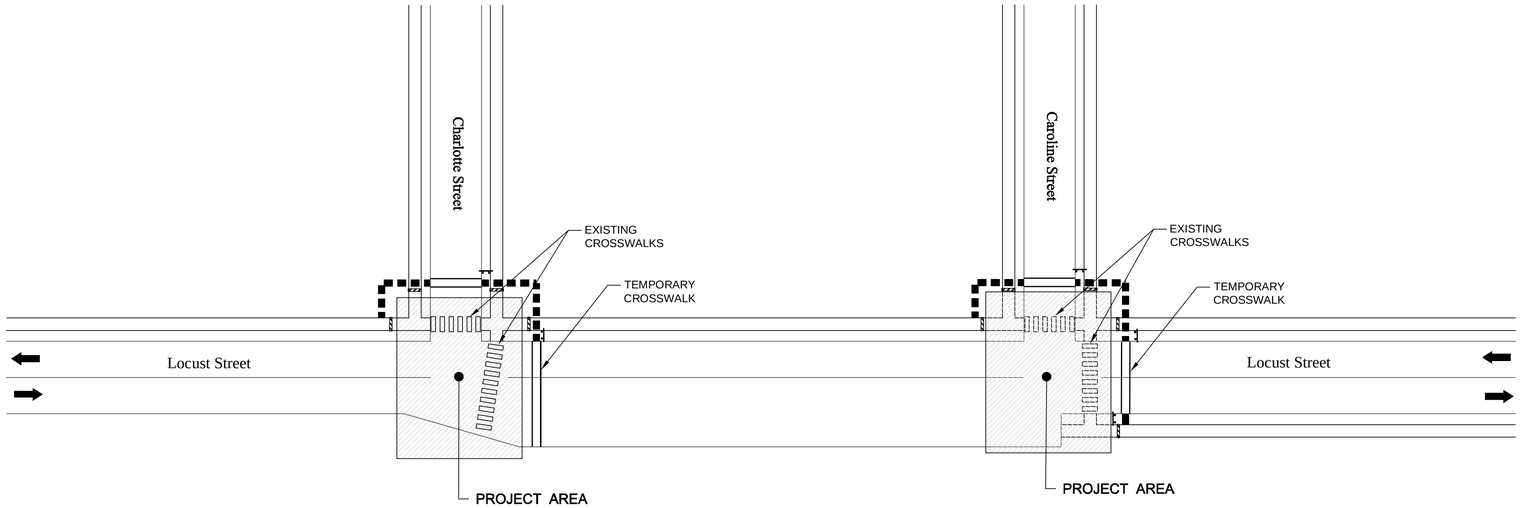
BURLINGTON STP BP 13(6)

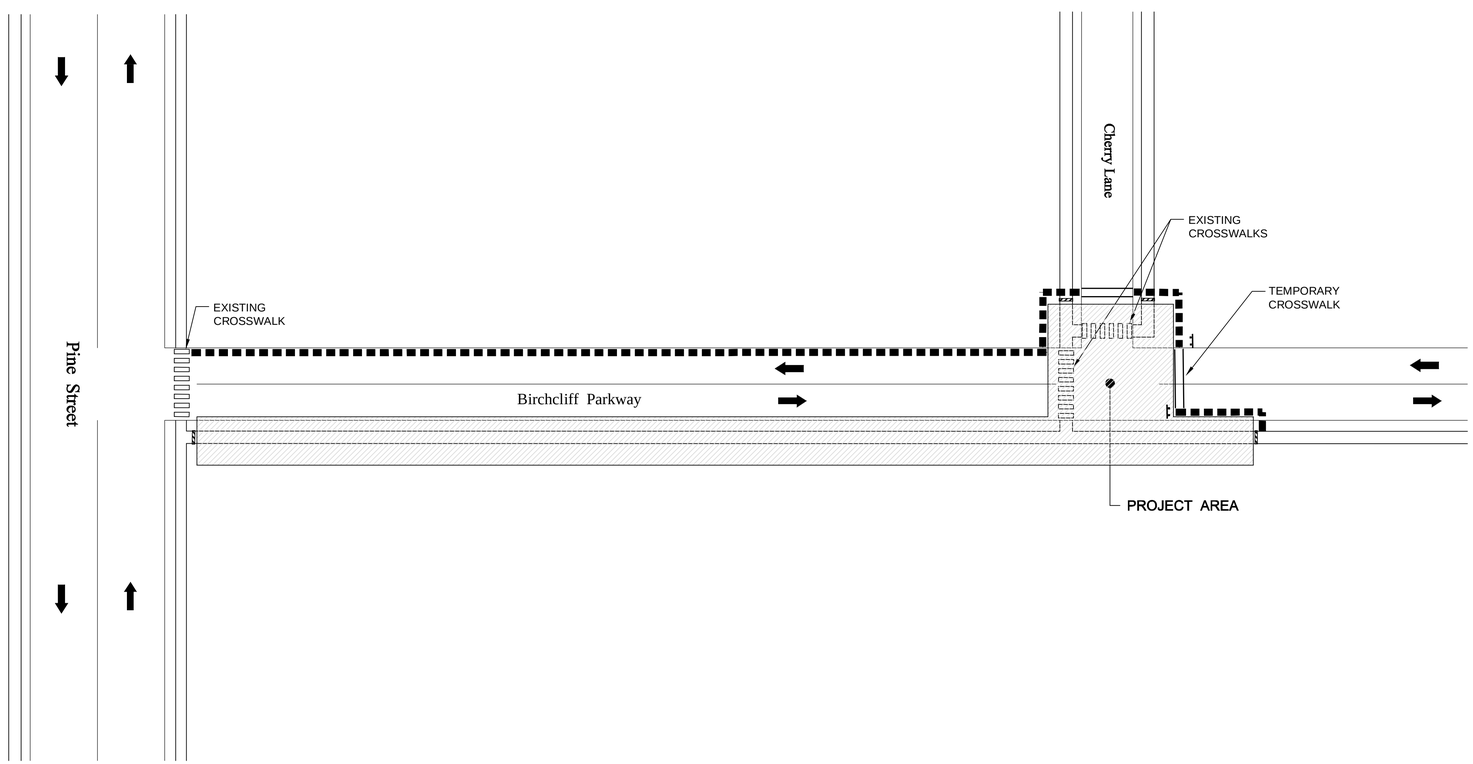
Lamoureux & Dickinson
Consulting Engineers, Inc.
14 Morse Drive, Essex, VT 05452
802-878-4450 www.LDengineering.com

L&D PROJECT NUMBER: 14087
DRAWN BY: L&D
CHECKED BY: DG/RD

SHEET: 18

P:\2014\14087\dwg\14087 18 Traffic Control.dwg, 3/26/2018 4:10:04 PM, bill





PEDESTRIAN TRAFFIC CONTROL NOTES

1. THE CONTRACTOR SHALL PROVIDE A TEMPORARY PEDESTRIAN ACCESS ROUTE (TPAR) FOR REVIEW AND WRITTEN APPROVAL BY THE RESIDENT ENGINEER A MINIMUM OF THREE WEEKS BEFORE SUCH PLAN IS IMPLEMENTED. THIS PLAN SHALL DETAIL THE CONSTRUCTION PHASING AND SCHEDULE AND THE SPECIFIC METHODS OF MAINTAINING SAFE PEDESTRIAN ACCESS THROUGHOUT THE CONSTRUCTION AREA. THIS PLAN SHALL PROVIDE THE LOCATION AND DETAILS OF TEMPORARY CONSTRUCTION SIGNING, MARKINGS, BARRICADES, CHANNELIZING DEVICES, TPARS AND METHODS TO MAINTAIN ACCESS TO ADJACENT PROPERTIES, BUSINESSES, RESIDENCES, ETC.

2. THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN THROUGH MOVEMENTS FROM ONE END OF THE CONSTRUCTION AREA TO THE OTHER, ON AT LEAST ONE SIDE OF THE STREET DURING CONSTRUCTION. ANY SIDEWALK CLOSURES SHALL MEET THE REQUIREMENTS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), PART 6.

3. PEDESTRIAN ACCESS SHALL BE PROVIDED TO ALL ADJACENT PROPERTIES, BUILDINGS, RESIDENCES, COMMERCIAL PROPERTIES AND TRANSIT STOPS. THIS MAY INCLUDE TEMPORARY WALKWAYS SPANNING THE CONSTRUCTION AREA.

4. IF SIDEWALKS ARE CLOSED, A TEMPORARY PEDESTRIAN ACCESS ROUTE (TPAR) SHALL BE PROVIDED ON THE SAME SIDE OF THE ROAD AS THE CLOSED SIDEWALK, IF POSSIBLE. SIGNS AND BARRICADES SHALL BE USED TO PROVIDE ADVANCE NOTICE OF THE CLOSURE AND THE ROUTE OF ANY PEDESTRIAN DETOURS. THE TPAR SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 4 FEET. IF THE TPAR IS LESS THAN 5 FEET IN WIDTH, A 5 FOOT BY 5 FOOT PASSING SPACE MUST BE PROVIDED AT LEAST EVERY 200 FEET. THE SURFACE OF THE TPAR SHALL BE FIRM, STABLE AND SLIP-RESISTANT AND CONTINUOUS WITH A MINIMUM 80 INCHES OVERHEAD CLEARANCE FOR THE LENGTH OF THE TPAR. THE TPAR SHALL MAINTAIN THE SAME LEVEL OF ACCESSIBILITY AND DETECTABILITY AS THE FACILITY THAT IS BEING CLOSED. THE TPAR SHALL NOT LEAD PEDESTRIANS INTO CONFLICTS WITH VEHICLES, EQUIPMENT, OR CONSTRUCTION OPERATIONS.

5. WHEN TEMPORARY CROSSWALKS ARE UTILIZED FOR THE TPAR, TEMPORARY DETECTABLE WARNINGS SHALL BE PLACED AT EACH END OF THE TEMPORARY CROSSWALKS. THE TEMPORARY CROSSWALK SHALL BE DELINEATED WITH TEMPORARY PAVEMENT MARKINGS OR TAPE. THE MARKINGS SHALL BE PARALLEL 12-INCH-WIDE WHITE LINES PLACE 7 FEET ON CENTER APART. IT SHOULD BE NOTED THAT CURB PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF MIDBLOCK CROSSWALKS. TEMPORARY CROSSWALK SIGNS SHALL BE PROVIDED FOR THE CROSSWALK.

6. IF THERE IS WORK OCCURRING OVER AN OPEN SIDEWALK, PROTECTIVE OVERHEAD COVERING MUST BE PROVIDED AS NECESSARY TO ENSURE PROTECTION FROM FALLING OBJECTS AND DRIPPING FROM OVERHEAD STRUCTURES. COVERED WALKWAYS SHOULD BE STURDILY CONSTRUCTED AND ADEQUATELY LIGHTED FOR NIGHTTIME USE.

7. INDIVIDUAL CHANNELIZING DEVICES, TAPE, OR ROPE USED TO CONNECT INDIVIDUAL DEVICES AND OTHER DISCONTINUOUS BARRIERS AND DEVICES, PAVEMENT MARKINGS ARE NOT DETECTABLE BY PERSONS WITH VISUAL DISABILITIES. THESE MEASURES DO NOT PROVIDE ACCEPTABLE PATH GUIDANCE ON TEMPORARY OR RE-ALIGNED SIDEWALKS OR OTHER PEDESTRIAN FACILITIES. PEDESTRIAN CHANNELIZING DEVICES SHALL INCLUDE A CONTINUOUSLY DETECTABLE BOTTOM AND TOP EDGE THROUGHOUT THE LENGTH OF THE FACILITY SUCH THAT IT CAN BE FOLLOWED BY PEDESTRIANS USING LONG CANES FOR GUIDANCE.

8. CHANNELIZING DEVICES ON BOTH SIDES OF THE TPAR SHALL INCLUDE A CONTINUOUS SOLID TOP AND BOTTOM RAILS. THE TOP EDGE OF THE TOP RAIL SHALL BE BETWEEN 32 INCHES AND 38 INCHES ABOVE THE GROUND LEVEL. THE BOTTOM RAIL SHALL BE AT LEAST 6 INCHES WIDE, WITH THE BOTTOM EDGE OF THE BOTTOM RAIL SURFACE NO HIGHER THAN 2 INCHES ABOVE THE GROUND.

9. IF THE TPAR IS ADJACENT TO MOVING TRAFFIC, CONSTRUCTION OPERATIONS/EQUIPMENT, OR DROP-OFFS, THEN CRASHWORTHY CHANNELIZING DEVICES THAT MEET THE REQUIREMENTS OF THE MUTCD SHALL BE USED.

10. THE CONTRACTOR SHALL NOT STORE OR PLACE ANY CONSTRUCTION MATERIALS, EQUIPMENT OR SIGNS IN THE PEDESTRIAN PATH OF TRAVEL.

11. PROVISION OF THE TPAR AND ALL ITS ELEMENTS, INCLUDING BUT NOT LIMITED TO SIGNS, CHANNELIZING DEVICES, BARRICADES, TEMPORARY CURB RAMPS, TEMPORARY PAVEMENT MARKINGS AND OTHER TRAFFIC CONTROL DEVICES IS TO BE PAID FOR INCIDENTAL TO TRAFFIC CONTROL (ITEM 641.10.)

12. THE CONTRACTOR SHALL PROVIDE A DESIGNATED WORKER TO SAFELY ESCORT PEDESTRIANS THROUGH THE WORK ZONE DURING TIMES WHEN CONSTRUCTION IS IN PROGRESS.

PEDESTRIAN TEMPORARY TRAFFIC CONTROL LEGEND

- TEMPORARY CROSSWALK SIGN
- SIDEWALK CLOSED/DETOUR SIGN
- TYPE III BARRICADE WITH SIGN
- TPAR (TEMPORARY PEDESTRIAN ACCESS ROUTE)
- TEMPORARY CROSSWALK MARKINGS

SIDEWALK CLOSED — R9-9, 24" x 12" (BLACK ON WHITE)

PRELIMINARY PLANS
MARCH, 2018

Pedestrian Traffic Control Details and Specifications

BURLINGTON STP BP 13(6)

Lamoureux & Dickinson
Consulting Engineers, Inc.
14 Morse Drive, Essex, VT 05452
802-878-4450 www.LDengineering.com

L&D PROJECT NUMBER: 14087
DRAWN BY: L&D
CHECKED BY: DG/RD

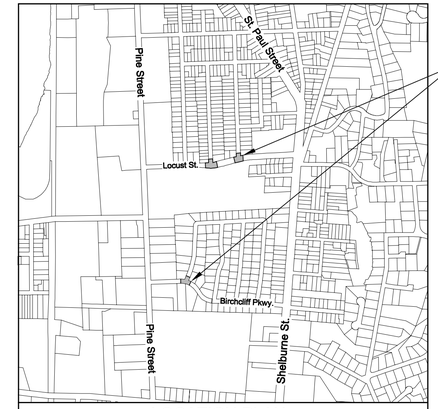
SHEET: 19

P:\2014\14087\dwg\14087 19 Traffic Control.dwg, 3/26/2018 4:10:36 PM, bill

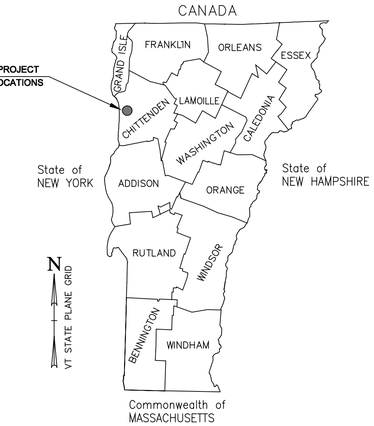
City of Burlington
County of Chittenden
Burlington STP BP 13(6)
Pedestrian Improvements

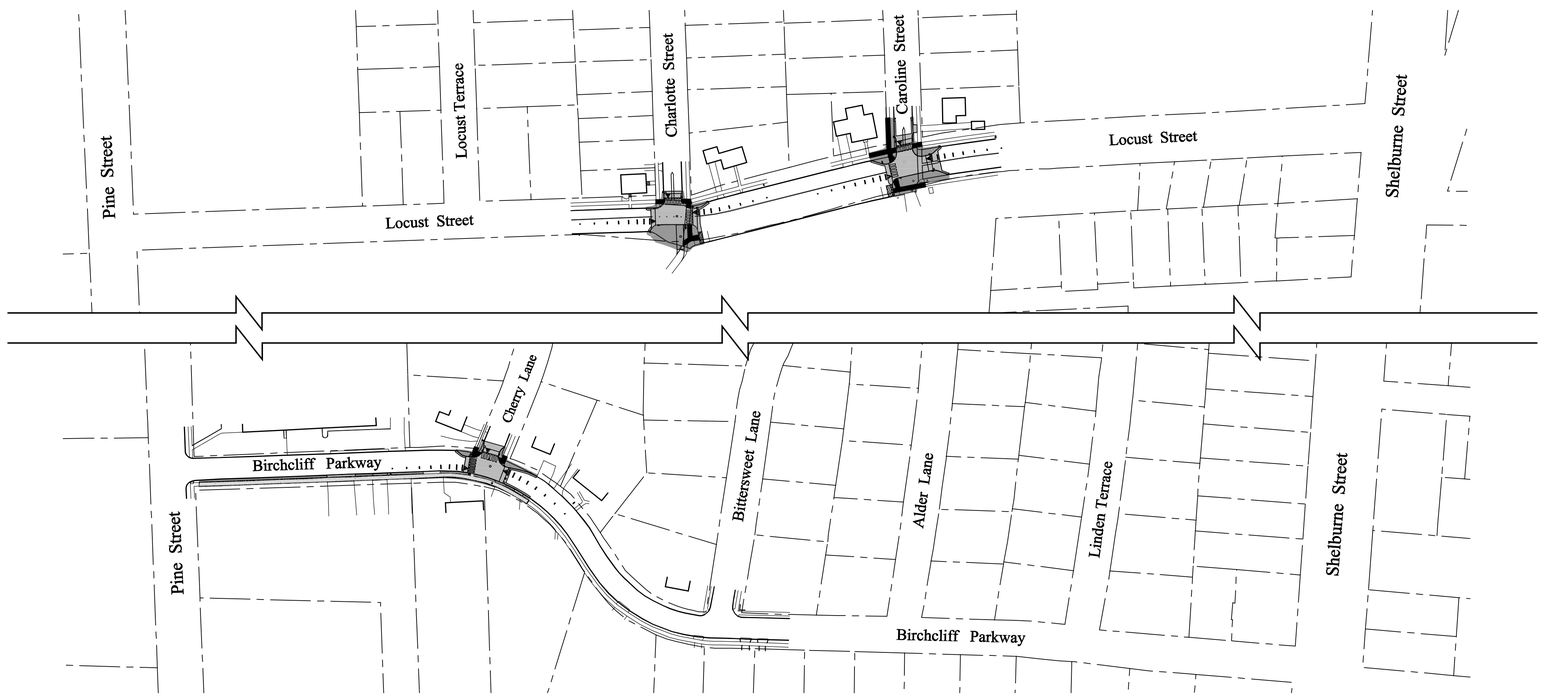
PROJECT LOCATIONS: ON LOCUST STREET; THE INTERSECTIONS OF CAROLINE & CHARLOTTE STREET WITH LOCUST STREET. ON BIRCHCLIFF PARKWAY; STARTING AT PINE STREET AND EXTENDING TO THE CHERRY LANE/BIRCHCLIFF PARKWAY INTERSECTION.

PROJECT DESCRIPTION: WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES GRADING, SUBBASE, NEW 5' WIDE SIDEWALK AND CURB, SPEED TABLES, CURB EXTENSIONS, DRIVEWAY RECONSTRUCTION, NEW DRAINAGE STRUCTURES, NEW SIGNS AND OTHER RELATED ITEMS.



LOCATION PLAN
NTS





OVERALL SITE PLAN

NOTES:

1. THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE VERMONT AGENCY OF TRANSPORTATION. CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE VTRANS STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS INCORPORATED IN THESE PLANS.

2. THE LOCUST STREET AND BIRCHCLIFF PARKWAY RIGHT OF WAYS ARE BASED ON LIMITED FOUND EXISTING BOUNDARY EVIDENCE, CITY RECORDS, AND PLANS BY OTHERS. INDIVIDUAL PROPERTY SIDELINES WERE LOCATED BASED ON FOUND EVIDENCE AND CITY PARCEL MAPS.

3. LINES SHOWN ON THESE PLANS AS EXISTING PROPERTY LINES ARE BELIEVED TO BE ACCURATE BUT SHOULD NOT BE RELIED UPON FOR PURPOSES UNRELATED TO THE ACQUISITION OF LANDS AND RIGHTS FOR THIS PROJECT.

INDEX OF SHEETS

PLAN SHEET #	ROW SHEET #	DESCRIPTION
20	1	TITLE SHEET
21	2	ACQUISITION TABLE
22-25	3-6	RIGHT-OF-WAY LAYOUT PLANS

RIGHT-OF-WAY PLANS
MARCH 2018

QUALITY ASSURANCE PROGRAM:
INSPECTION LEVEL 3

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83(1996)

CITY OF BURLINGTON
ACCEPTED _____ DATE _____
CITY ENGINEER

FUNDING ASSISTANCE FOR THIS PROJECT IS BEING FURNISHED BY THE FHWA, THE CITY OF BURLINGTON AND THE STATE OF VERMONT

Lamoureux & Dickinson
Consulting Engineers, Inc.
14 Morse Drive, Essex, VT 05452
802-878-4450 www.LDengineering.com

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PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING IN S.F.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
1	LAUREL CANYON DEVELOPMENT LLC	4	4+37 RT	5+09 RT	344	CONST. (T)						INCLUDES RIGHT TO INSTALL EROSION CONTROL MEASURES AND PDF
2	LEVY, STEVEN M.	6	33+81 LT	34+19 LT	367	CONST. (T)						INCLUDES RIGHT TO INSTALL EROSION CONTROL MEASURES AND PDF

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY

DR. (P) - DRAINAGE RIGHT
DIT. (P) - DITCHING RIGHT
CH. (P) - CHANNEL RIGHT
DRIVE (T) - DRIVE RIGHT
CULV. (P) - CULVERT RIGHT

PRESENT R.O.W.
TAKING WITHOUT ACCESS
TAKING WITHOUT ACCESS ALONG PROPERTY LINE
TAKING WITH ACCESS
(P) PERMANENT EASEMENT
(T) TEMPORARY EASEMENT

INSTALL & MAINTAIN (P) — INSTALL & MAINTAIN
CONST.(T) — CONSTRUCTION EASEMENT
SLOPE — SLOPE RIGHTS
P L — PROPERTY LINE
TOP OF CUT
TOE OF SLOPE

THIS SHEET IS FOR ROW USE ONLY

PROJECT NAME: City of Burlington Pedestrian Improvements

PROJECT NUMBER: Burlington STP BP 13(6)

PROJECT #: 14087
PROJECT LEADER: RD
DESIGNED BY: RD
PROPERTY AQUISITION TABLE

DATE: JAN. 2018
DRAWN BY: WH
CHECKED BY: RD
SHEET 2 OF 6

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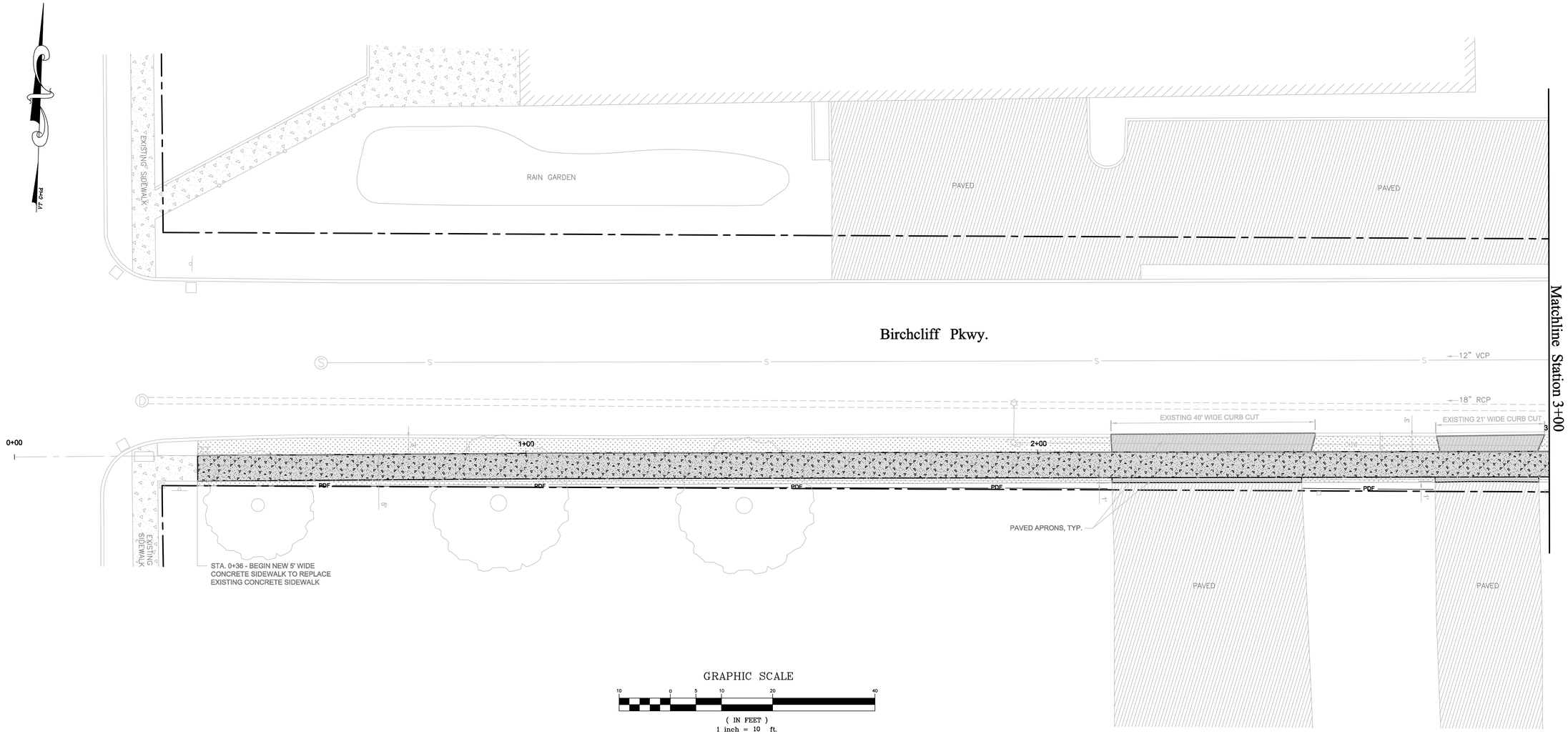

LEGEND

- RIGHT-OF WAY BOUNDARY LINE
- PROPERTY BOUNDARY LINE
- EXISTING FENCE
- W — EXISTING WATER LINE
- S — EXISTING SEWER LINE
- G — EXISTING GAS LINE (APPROX. ONLY)
- UE — EXISTING UG ELEC. (APPROX. ONLY)
- UT — EXISTING UG COMM. (APPROX. ONLY)
- PDF — PROJECT DEMARCATION FENCE
- EXISTING CATCH BASIN & STORM PIPES
- OHW — UTILITY POLE WITH GUY WIRE & OVERHEAD WIRES
- EXISTING SEWER MANHOLE
- EXISTING DRAINAGE MANHOLE
- SURVEY CONTROL POINT
- EXISTING SIGN
- PROPERTY CORNER PIPE/MON. FOUND
- EXISTING TREE/SHRUB
- EXISTING STREETLIGHT
- EXISTING HYDRANT & VALVE
- EXISTING CONCRETE SIDEWALK
- NEW 5' WIDE CONCRETE SIDEWALK

THIS PLAN IS FOR RIGHT-OF-WAY USE ONLY

BIRCHCLIFF PARKWAY SIDEWALK R.O.W. LAYOUT PLAN

BURLINGTON STP BP 13(6)

Lamoureux & Dickinson
Consulting Engineers, Inc.
14 Morse Drive, Essex, VT 05452
802-878-4450 www.LDengineering.com

L&D PROJECT NUMBER: 14087
DRAWN BY: L&D
CHECKED BY: DG/RD

SHEET: 3

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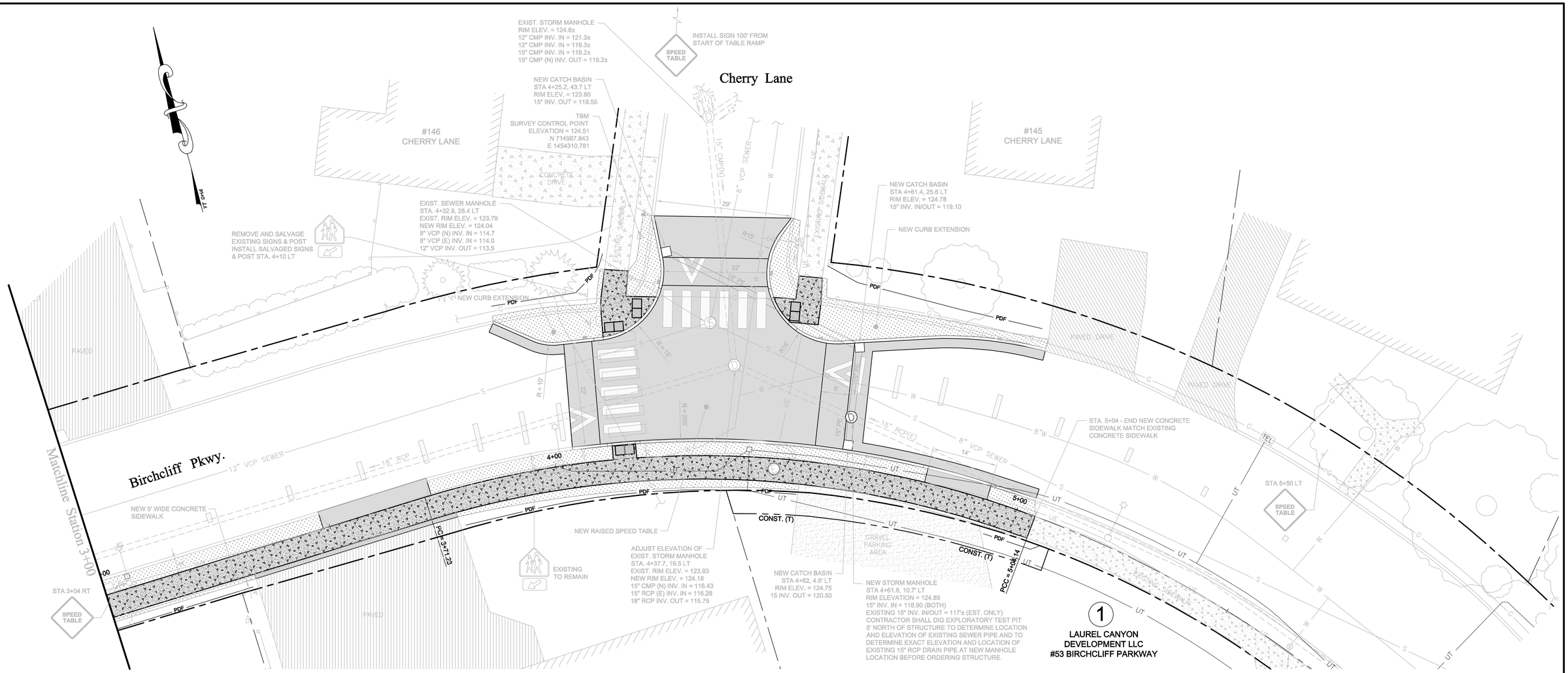

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

THE CONTRACTOR SHALL NOTIFY 'DIGSAFE' PRIOR TO ANY EXCAVATION

LEGEND

- RIGHT-OF WAY BOUNDARY LINE
- PROPERTY BOUNDARY LINE
- EXISTING FENCE
- W — EXISTING WATER LINE
- S — EXISTING SEWER LINE
- G — EXISTING GAS LINE (APPROX. ONLY)
- UE — EXISTING UG ELEC. (APPROX. ONLY)
- UT — EXISTING UG COMM. (APPROX. ONLY)
- PDF — PROJECT DEMARCATION FENCE
- EXISTING CATCH BASIN & STORM PIPES
- OHW — UTILITY POLE WITH GUY WIRE & OVERHEAD WIRES
- CONST. (T) — PROPOSED TEMPORARY EASEMENT
- EXISTING SEWER MANHOLE
- EXISTING DRAINAGE MANHOLE
- SURVEY CONTROL POINT
- EXISTING SIGN
- NEW SIGN
- NEW OBJECT MARKER
- PROPERTY CORNER PIPE/MON. FOUND
- EXISTING TREE/SHRUB
- EXISTING STREETLIGHT
- EXISTING HYDRANT & VALVE
- EXISTING CONCRETE SIDEWALK
- NEW 5' WIDE CONCRETE SIDEWALK

THIS PLAN IS FOR RIGHT-OF-WAY USE ONLY

CHERRY LANE & BIRCHCLIFF PARKWAY INTERSECTION R.OW. LAYOUT PLAN

BURLINGTON STP BP 13(6)

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L&D PROJECT NUMBER: 14087
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CHECKED BY: DG/RD

SHEET: 4

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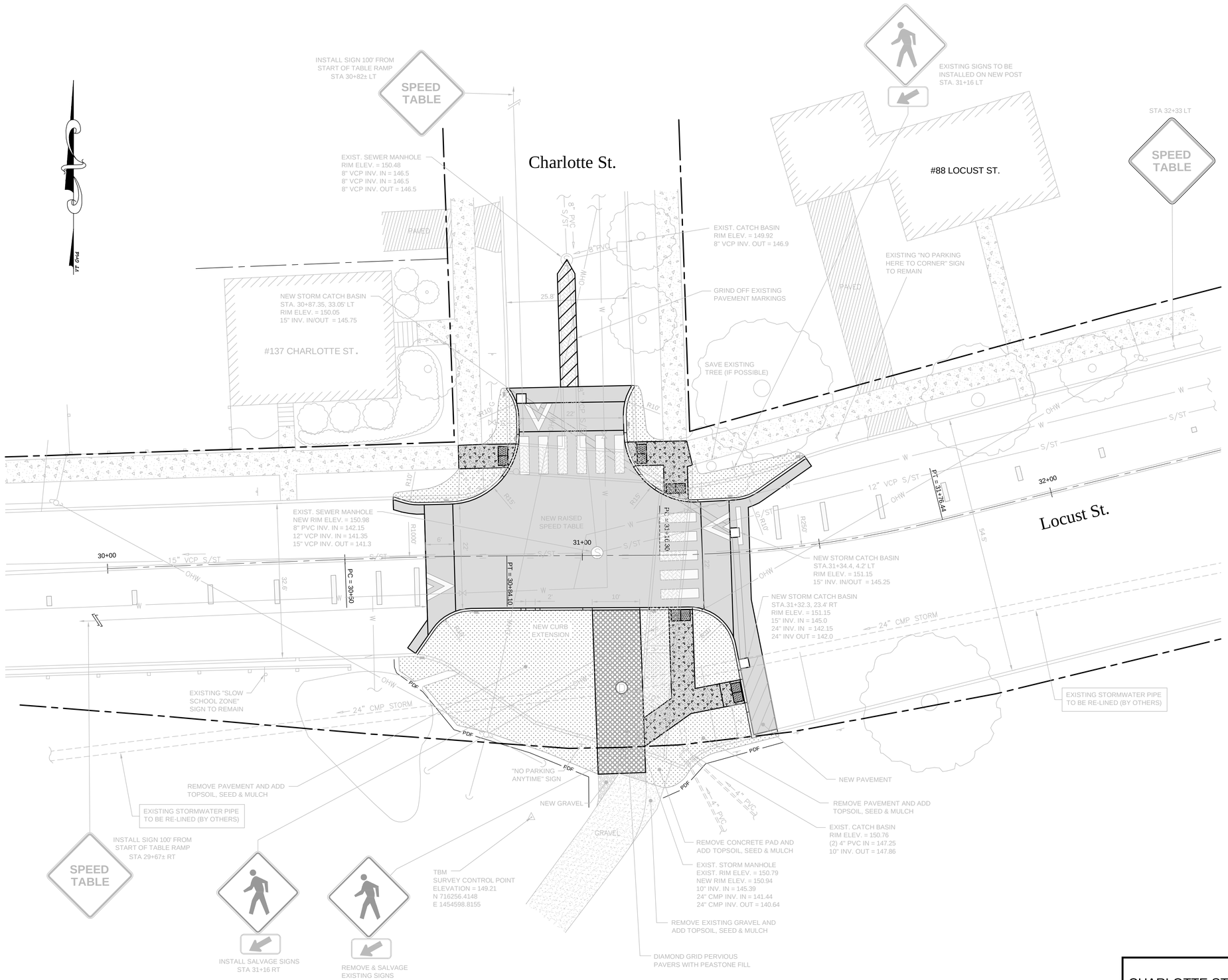

LEGEND

- EXISTING SEWER MANHOLE
- EXISTING DRAINAGE MANHOLE
- SURVEY CONTROL POINT
- EXISTING SIGN
- NEW SIGN
- NEW OBJECT MARKER
- PROPERTY CORNER PIPE/MON. FOUND
- EXISTING TREE/SHRUB
- EXISTING STREETLIGHT
- EXISTING HYDRANT & VALVE
- EXISTING CONCRETE SIDEWALK
- NEW 5' WIDE CONCRETE SIDEWALK
- RIGHT-OF WAY BOUNDARY LINE
- PROPERTY BOUNDARY LINE
- EXISTING FENCE
- W — EXISTING WATER LINE
- S — EXISTING SEWER LINE
- G — EXISTING GAS LINE (APPROX. ONLY)
- UE — EXISTING UG ELEC. (APPROX. ONLY)
- UT — EXISTING UG COMM. (APPROX. ONLY)
- PDF — PROJECT DEMARCATION FENCE
- EXISTING CATCH BASIN & STORM PIPES
- OHW — UTILITY POLE WITH GUY WIRE & OVERHEAD WIRES

THIS PLAN IS FOR RIGHT-OF-WAY USE ONLY

THE CONTRACTOR SHALL NOTIFY 'DIGSAFE' PRIOR TO ANY EXCAVATION

CHARLOTTE ST. & LOCUST ST. INTERSECTION LAYOUT PLAN

BURLINGTON STP BP 13(6)

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L&D PROJECT NUMBER: 14087
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SHEET: 5

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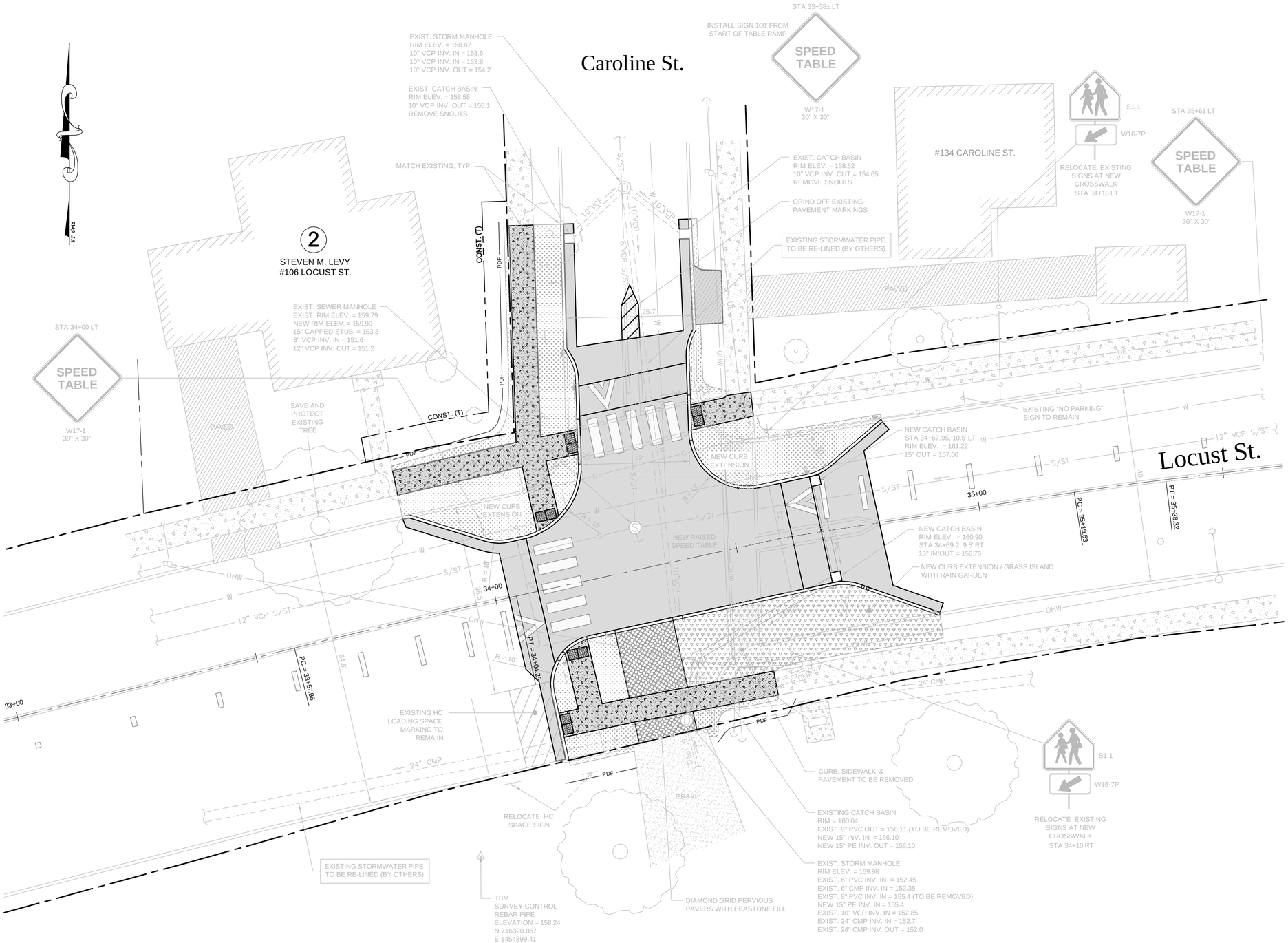

LEGEND

- EXISTING SEWER MANHOLE
- EXISTING DRAINAGE MANHOLE
- SURVEY CONTROL POINT
- EXISTING SIGN
- NEW SIGN
- NEW OBJECT MARKER
- PROPERTY CORNER PIPE/MON. FOUND
- EXISTING TREE/SHRUB
- EXISTING STREETLIGHT
- EXISTING HYDRANT & VALVE
- EXISTING CONCRETE SIDEWALK
- NEW 5' WIDE CONCRETE SIDEWALK
- RIGHT-OF WAY BOUNDARY LINE
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- PDF — PROJECT DEMARCATION FENCE
- EXISTING CATCH BASIN & STORM PIPES
- OHW — UTILITY POLE WITH GUY WIRE & OVERHEAD WIRES
- CONST. (T) — PROPOSED TEMPORARY EASEMENT

THIS PLAN IS FOR RIGHT-OF-WAY USE ONLY

THE CONTRACTOR SHALL NOTIFY 'DIGSAFE' PRIOR TO ANY EXCAVATION

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

CAROLINE ST. & LOCUST ST. INTERSECTION LAYOUT PLAN

BURLINGTON STP BP 13(6)

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CHECKED BY: DG/RD

SHEET: 6

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