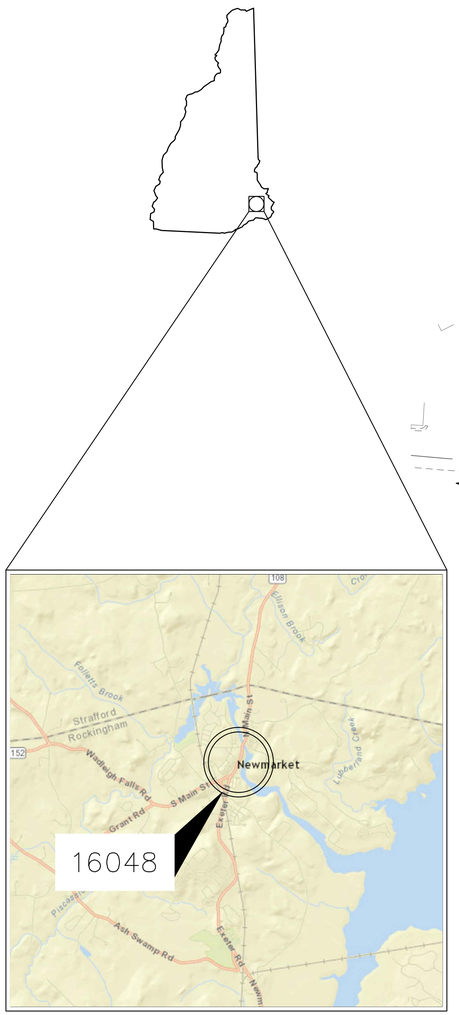
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION

BIDDING DOCUMENTS
FEDERAL AID PROJECT

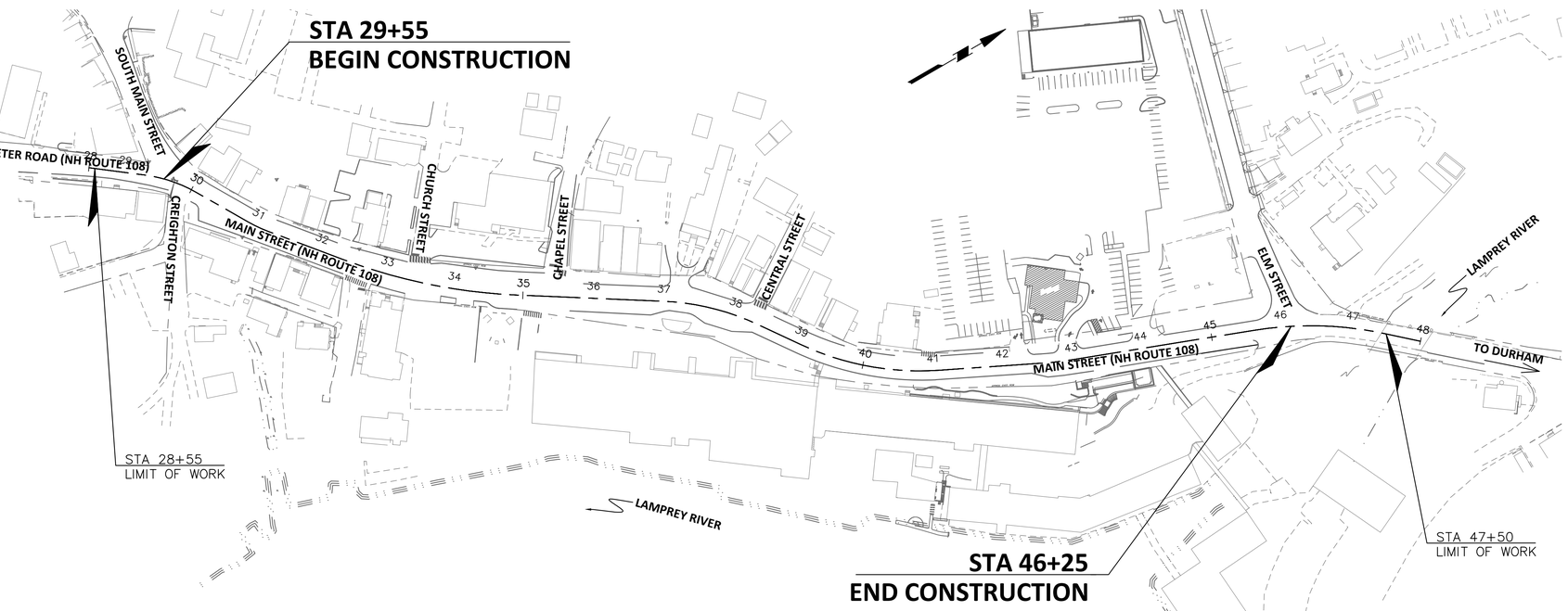
FWHA PROJECT NO. X-A001(108)
NHDOT PROJECT NO. 16048
MAIN STREET PEDESTRIAN CROSSING IMPROVEMENTS
MAY 2015

DESIGN DATA

AVERAGE DAILY TRAFFIC 2009 NH 108	20,000
AVERAGE DAILY TRAFFIC 2011 NH 108	25,148
DESIGN SPEED	25 MPH
LENGTH OF PROJECT	0.32 MILES



LOCATION MAP
SCALE: 1" = 0.5 MILES



FINAL DESIGN PLANS — NOT FOR CONSTRUCTION

TOWN OF NEWMARKET, NH
COUNTY OF ROCKINGHAM
SCALE: 1" = 100'

STATE OF NEW HAMPSHIRE
SCOTT M. BOURNER
No. 11010
LICENSED
PROFESSIONAL ENGINEER
5/13/15

DuBois & King inc.
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BEDFORD, NEW HAMPSHIRE 03110
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THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
X-A001 (108)	16048	1	36

DRAWN BY DATE
CHECKED BY DATE

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE PAGE
2	INDEX OF SHEETS AND GENERAL NOTES
3–4	STANDARD SYMBOLS
5–6	SUMMARY OF QUANTITIES
7	SIGN TEXT SUMMARY
	SPECIAL USE PLANS
8	TYPICAL CROSSWALK AND SIDEWALK DETAIL SHEET
9	DRAINAGE, LIGHTING, AND PAVEMENT MARKING DETAIL SHEET
10–12	CROSSWALK DETAIL SHEETS
13	CANTILEVERED DECK DETAIL SHEET
14	EROSION CONTROL NOTES AND DETAILS
	ROADWAY PLANS
15–18	GENERAL PLANS
19–21	DRAINAGE AND UTILITY PLANS
22–25	CURBING LAYOUT PLANS
26–29	PAVEMENT MARKING AND SIGN PLANS
30	LANDSCAPING PLAN
31–32	TRAFFIC CONTROL NOTES
	REFERENCE PLANS
33–35	SIGHT DISTANCE PLANS
36	EASEMENT PLAN

GENERAL CONSTRUCTION NOTES:

1. BOUNDARY AND UTILITY INFORMATION WAS OBTAINED BY MAIN STREET RECONSTRUCTION – PHASE 2 (RECORD DRAWINGS); PREPARED BY UNDERWOOD ENGINEERS; DATED MAY 2009.
2. TOPOGRAPHIC INFORMATION WAS OBTAINED BY DOUCET SURVEY ON JULY 25, 2014.
3. NH STATE PLAN COORDINATES AND ELEVATIONS ARE DERIVED BY BENCHMARK AND BASED ON NH STATE PLAN AND NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
4. LOCATION OF PUBLIC UTILITIES SHOWN IS ONLY APPROXIMATE AND MAY NOT BE COMPLETE. PRIVATE UNDERGROUND UTILITIES SUCH AS, BUT NOT LIMITED TO, SEWER LINES, WATER LINES AND BURIED ELECTRICAL SERVICE LINES ARE NOT SHOWN.
5. ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE CODES, REGULATIONS AND STANDARDS AS SET FORTH WITHIN THIS PLAN SET AND SUPPLEMENTAL TECHNICAL SPECIFICATIONS.
6. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT DIG SAFE (888–DIG–SAFE) AT LEASE 72 HOURS PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITIES.
7. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (O.S.H.A.).
8. ALL DIMENSIONS AND FIELD CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF THE WORK, ORDERING OF MATERIALS, OR FABRICATION (V.I.F. = VERIFY IN FIELD).
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION SAFETY, AND MEANS AND METHODS TO PERFORM AND COMPLETE THE WORK.
10. THE CONTRACTOR SHALL MAINTAIN CROSSWALK ACCESS AT ALL TIMES.
11. CONTRACTOR STAGING AREA HAS BEEN PROVIDED AT THE WATER STREET MUNICIPAL PARKING LOT.
12. ALL WORK LOCATED WITHIN THE RIGHT OF WAY SHALL BE DONE BETWEEN THE HOURS OF 8:00PM TO 6:00AM. ALL WORK NOT LOCATED WITHIN THE RIGHT OF WAY SHALL BE DONE BETWEEN THE HOURS OF 8:00AM TO 5:00PM.
13. THE CONTRACTOR IS REQUIRED TO SUBMIT A TRAFFIC CONTROL PLAN TO THE ENGINEER, THE TOWN OF NEWMARKET PUBLIC WORKS DEPARTMENT AND THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION – DISTRICT 6 OFFICE PRIOR TO PERFORMING ANY ACTIVITIES WITHIN THE RIGHT OF WAY.
14. THE CONTRACTOR SHALL NOTIFY, IN WRITING, WALTER KEUENHOFF OF THE NHDOT BUREAU OF TRAFFIC (603–271–1548) AND THE ENGINEER SEVEN (7) CALENDAR DAYS PRIOR TO THE INSTALLATION OF THE 25 MPH SPEED LIMIT SIGNS.
15. ALL CONCRETE AND BITUMINOUS PATCH AREAS SHALL MATCH EXISTING GRADES.
16. ALL CURB RADII ARE TO THE OUTSIDE FACE.

GENERAL NOTES

1. FOR STANDARD PLANS, SEE "STANDARD PLANS FOR ROAD CONSTRUCTION" ON THE NHDOT WEBSITE.
2. HIGH TENSION OVERHEAD TRANSMISSION LINES ARE LOCATED THROUGHOUT THE PROJECT WITH CROSSINGS AT VARIOUS LOCATIONS AND RUNNING ALONG THE ROAD THROUGHOUT THE PROJECT EVEN ON REGULAR POLES. THE CONTRACTOR IS ADVISED THAT EXTREME CAUTION WILL BE REQUIRED IN THE OPERATION OF EQUIPMENT, ESPECIALLY CRANES AND PILE DRIVING EQUIPMENT.
3. REMOVE TOPSOIL FOR ITS TOTAL DEPTH WITHIN THE LIMITS OF THE SLOPE LINES. UNLESS OTHERWISE DIRECTED, STOCKPILE TOPSOIL AND USE IT ON THIS PROJECT AS NEEDED UNDER SECTION 641 – LOAM AND/OR SECTION 647 HUMUS.
4. REMOVAL OF EXISTING CONCRETE PAVEMENT WILL BE PAID UNDER ITEM 203.2 – ROCK EXCAVATION. THE BITUMINOUS PAVEMENT ABOVE THE CONCRETE WILL NOT BE PAID UNDER ITEM 203.2
5. MODIFY SUPERELEVATION ON EXISTING CURVES BY THE USE OF A LEVELING COURSE TO THE RATES INDICATED ON THE PLANS OR AS ORDERED.
6. EXISTING DELINEATORS AND WITNESS MARKERS THAT ARE REMOVED AND DETERMINED BY THE ENGINEER TO BE IN ACCEPTABLE CONDITION SHALL BE RESET (SUBSIDIARY). ADDITIONAL DELINEATORS AND WITNESS MARKERS ORDERED WILL BE PAID UNDER THE APPROPRIATE ITEMS OF THE CONTRACT.
7. NO EXISTING MONUMENTS, BOUNDS, OR BENCHMARKS SHALL BE DISTURBED WITHOUT FIRST MAKING PROVISIONS FOR RELOCATION.
8. PERFORM ALL WORK WITHIN THE EXISTING RIGHT–OF–WAY, UNLESS OTHERWISE SHOWN ON PLANS OR AS ORDERED BY THE ENGINEER.
9. REMOVE UNPROTECTED PROJECT MARKERS (SUBSIDIARY).
10. SURVEY DATA FOR THIS PROJECT WAS COLLECTED BY DOUCET SURVEY, INC. AND FIELD NOTES CAN BE LOCATED BY CONTACTED DOUCET SURVEY AT (603) 659–6560. ADDITIONAL EXISTING CONDITIONS INFORMATION WAS PROVIDED BY THE TOWN AND IS USED FOR REFERENCE PURPOSES ONLY. DUBOIS & KING, INC. MAKES NO CLAIM TO THE ACCURACY OF THE EXISTING CONDITIONS AS SHOWN ON THE PLANS.
11. QUANTITIES FOR EMBANKMENT AND EXCAVATION FOR SLOPE ROUNDINGS AS SHOWN ON THE TYPICALS HAVE NOT BEEN CALCULATED AND ARE NOT INCLUDED IN THE QUANTITY SUMMARIES, AND ARE CONSIDERED SUBSIDIARY TO THE APPROPRIATE 203 ITEMS.
12. CLEAR TO THE SLOPE LINES ONLY UNLESS OTHERWISE STATED ON THE PLANS. CONTACT THE PROJECT ENGINEER PRIOR TO CLEARING OPERATIONS.

THE FOLLOWING GENERAL NOTES WILL BE USED ON THIS PROJECT:

1	2				6	7	8		10		

BID DOCUMENTS – NOT FOR CONSTRUCTION

D&K FILE	NAME1	DATE DATE1
DESIGNED BY	NAME2	DATE DATE2
CHECKED BY	NAME3	DATE DATE3

DuBois & King inc.

STATE OF NEW HAMPSHIRE – SCOTT M. BOURDER NO. 11010 – LICENSED PROFESSIONAL ENGINEER

5/13/15

NEWMARKET, NEW HAMPSHIRE

NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X–A001(108)

INDEX OF SHEETS AND GENERAL NOTES

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	2	36

DRAINAGE

MANHOLE
CATCH BASIN — cb — (existing) — (PROPOSED)
DROP INLET — di
DRAINAGE PIPE (existing) — (label size & type)
DRAINAGE PIPE (PROPOSED)
UNDERDRAIN (existing) W/ FLUSHING BASIN — fb — (label size & type)
UNDERDRAIN (PROPOSED) W/ FLUSHING BASIN
show direction of flow
HEADER (existing & PROPOSED) — (with stone outlet protection)
END SECTION (existing & PROPOSED) — METAL or PLASTIC — RCP
OPEN DITCH (PROPOSED)
EROSION CONTROL/ STONE SLOPE PROTECTION

BOUNDARIES / RIGHT-OF-WAY

RIGHT-OF-WAY LINE — (label type)
RR RIGHT-OF-WAY LINE
PROPERTY LINE
PROPERTY LINE (COMMON OWNER)
TOWN LINE — BOW / CONCORD
COUNTY LINE — COOS / GRAFTON
STATE LINE — MAINE / NEW HAMPSHIRE
NATIONAL FOREST
LCHIP CONSERVATION EASEMENT
BENCH MARK / SURVEY DISK
BOUND — bnd — (PROPOSED)
STATE LINE/ TOWN LINE MONUMENT — S/L — T/L
NHDOT PROJECT MARKER
IRON PIPE OR PIN — ip
DRILL HOLE IN ROCK — dh
TAX MAP AND LOT NUMBER — 156 / 14 — 1642/341 — 6.80 Ac.±
PROPERTY PARCEL NUMBER — 12
HISTORIC PROPERTY — H

UTILITIES

existing — PROPOSED

TELEPHONE POLE
POWER POLE
JOINT OCCUPANCY
MISCELLANEOUS/UNKNOWN POLE
GUY POLE OR PUSH BRACE
(plot point at face not center of symbol)
LIGHT POLE
LIGHT ON POWER POLE
LIGHT ON JOINT POLE

POLE STATUS:
REMOVE, LEAVE, PROPOSED, OR TEMPORARY AS APPLICABLE e.g.: — R — L — P+04 25.0' — T+04 25.0'

RAILROAD — (label ownership)
RAILROAD SIGN
RAILROAD SIGNAL
UTILITY JUNCTION BOX — jb — JB
OVERHEAD ELECTRIC — OE

UNDERGROUND UTILITIES
WATER (on existing lines label size, type and note if abandoned) — W — PW
SEWER — S — PS
TELEPHONE — T — PT
ELECTRIC — E — PE
GAS — G — PG
LIGHTING — L — PL
INTELLIGENT TRANSPORTATION SYSTEM — ITS — PITS
FIBER OPTIC — FO — PFO
WATER SHUT OFF
GAS SHUT OFF
HYDRANT

MANHOLES
SEWER — MHS
TELEPHONE — MHT
ELECTRICAL — MHE
GAS — MHG
UNKNOWN

TRAFFIC SIGNALS / ITS

existing — PROPOSED

MAST ARM (existing) — 30' MA (NOTE ANGLE FROM ℄)
OPTICOM RECEIVER
OPTICOM STROBE
TRAFFIC SIGNAL
PEDESTAL WITH PEDESTRIAN SIGNAL HEADS AND PUSH BUTTON UNIT
SIGNAL CONDUIT — C — PC
CONTROLLER CABINET — cc — CC
METER PEDESTAL — mp — MP
PULL BOX — pb — PB
LOOP DETECTOR (QUADRUPOLE) — (label size)
LOOP DETECTOR (RECTANGULAR) — (label size)
CAMERA POLE (CCTV)
FIBER OPTIC DELINEATOR — fod — FOD
FIBER OPTIC SPLICE VAULT — SVF
ITS EQUIPMENT CABINET — its — ITS
VARIABLE SPEED LIMIT SIGN
DYNAMIC MESSAGE SIGN
ROAD AND WEATHER INFO SYSTEM

CONSTRUCTION NOTES

CURB MARK NUMBER - BITUMINOUS	B-1
CURB MARK NUMBER - GRANITE	G-1
CLEARING AND GRUBBING AREA	A
DRAINAGE NOTE	1
EROSION CONTROL NOTE	A
FENCING NOTE	A
GUARDRAIL NOTE	1
ITS NOTE	1
LIGHTING NOTE	A
TRAFFIC SIGNAL NOTE	1

BID DOCUMENTS — NOT FOR CONSTRUCTION

DuBois & King inc.

STATE OF NEW HAMPSHIRE — SCOTT M. BOURDER No. 11010 — LICENSED PROFESSIONAL ENGINEER — 5/13/15

NEWMARKET, NEW HAMPSHIRE
NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X-A001(108)
STANDARD SYMBOLS (SHEET 1 OF 2)

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	3	36

D&K FILE	NAME1	DATE DATE1
DESIGNED BY	NAME2	DATE DATE2
CHECKED BY	NAME3	DATE DATE3

GENERAL

EDGE OF PAVEMENT — PROPOSED ROADWAY
TRAVELED WAY — existing roadway
(pavement removed outside slope lines)

DRIVEWAYS — (label surface type)

BUILDINGS — (building to be removed)
(label house or type of building)

FOUNDATION — (label type)

LEACH FIELD — leach field

BRIDGE CROSSINGS — STREAM, OVERPASS

STEPS AND WALK — (label type)

INTERMITTENT WATER COURSE

SHORE LINE — river/stream, pond (label name of water body)

POTENTIAL WET AREA SYMBOL

BRUSH OR WOODS LINE

TREES (PLANS) — (deciduous) (coniferous) (stump)
(show station, circumference in feet & type)

TREE OR STUMP (CROSS-SECTIONS)

HEDGE — (label type)

MONITORING WELL — mon

WELL

FLAG POLE — fp

ORIGINAL GROUND (TYPICALS)

ROCK OUTCROP

ROCK LINE (TYPICALS & SECTIONS ONLY)

GUARDRAIL (LABEL TYPE) — existing: bgr, cgr; PROPOSED: BGR, MEDIAN CGR

JERSEY BARRIER

CURB (LABEL TYPE)

STONE WALL

RETAINING WALL (LABEL TYPE) — (points toward retained ground)

FENCE (LABEL TYPE)

SIGNS — (single post), (double post)

GAS PUMP — gp

FUEL TANK (ABOVE GROUND) — ft (label size & type)

STORAGE TANK FILLER CAP — fc

SEPTIC TANK — S

GRAVE — gr

MAILBOX — mb

VENT PIPE — vp

SATELLITE DISH ANTENNA — da

PHONE — ph

GROUND LIGHT/LAMP POST — gl, lp

BORING LOCATION — B

TEST PIT — TP

INTERSTATE NUMBERED HIGHWAY — 293

UNITED STATES NUMBERED HIGHWAY — 3

STATE NUMBERED HIGHWAY — 102

WETLANDS

WETLAND DESIGNATION AND TYPE — 2 PUB2E

DELINEATED WETLAND — DW

PRIME WETLAND — PWET

ORDINARY HIGH WATER — OHW

TOP OF BANK — TOB

TOP OF BANK & ORDINARY HIGH WATER — TOBOHW

MEAN HIGH TIDE — MHT

TIDAL BUFFER ZONE — TBZ

HIGHEST OBSERVABLE TIDAL LINE — HOTL

SPECIAL AQUATIC SITE — SAS

VERNAL POOL — VP

INVASIVE SPECIES LABEL — I.S. I, I.S. II

INVASIVE SPECIES — INV

WATER FRONT BUFFER — WB50

NATURAL WOODLAND BUFFER — NWB150

PROTECTED SHORE LAND — PS250

FLOODPLAIN / FLOODWAY

500 YEAR FLOODPLAIN BOUNDARY — FP500

100 YEAR FLOODPLAIN BOUNDARY — FP100

FLOODWAY — FW

ENGINEERING

CONSTRUCTION BASELINE — 30, 31, 32

PC, PT, POT (ON CONST BASELINE)

PI (IN CONSTRUCTION BASELINES)

INTERSECTION OR EQUATION OF TWO LINES

ORIGINAL GROUND LINE (PROFILES AND CROSS-SECTIONS)

PROFILE GRADE LINE (PROFILES AND CROSS-SECTIONS)

CLEARING LINE — SLOPE LINE, CLEARING LINE

SLOPE LINE

SLOPE LINE (FILL)

SLOPE LINE (CUT)

PROFILES AND CROSS SECTIONS:
ORIGINAL GROUND ELEVATION (LEFT) — 72.5
FINISHED GRADE ELEVATION (RIGHT) — 79.14

BID DOCUMENTS — NOT FOR CONSTRUCTION

D&K FILE	NAME1	DATE	DATE1
DESIGNED BY	NAME2	DATE	DATE2
CHECKED BY	NAME3	DATE	DATE3

DuBois & King inc.

STATE OF NEW HAMPSHIRE — SCOTT M. EQUIRER — NO. 11010 — LICENSED — PROFESSIONAL ENGINEER — 5/13/15

NEWMARKET, NEW HAMPSHIRE

NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X-A001(108)

STANDARD SYMBOLS (SHEET 2 OF 2)

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	4	36

CURBING

ITEM NO.			609.01	609.02	609.5
DESCRIPTION	MARK NUMBER	RADIUS	STRAIGHT GRANITE CURB	CURVED GRANITE CURB	RESET GRANITE CURB
STA		LF	LF	LF	LF
STA 30+79.1 LT 26.-0' - STA 30+86.1 LT 26.2'	A1				7.0
STA 30+79.5 LT 19.0' - STA 30+86.5 LT 19.0'	A2				7.1
STA 30+86.5 LT 19.0' - STA 30+97.6 LT 19.2'	A3				10.7
STA 30+89.2.7 LT 11.0' - STA 30+97.6 LT 19.2'	A4	8.0		12.7	
STA 30+88.3 LT 11.0' - STA 30+89.2 LT 11.0'	A5		0.8		
STA 30+86.5 LT 19.0' - STA 30+87.8 LT 11.0'	A6		8.2		
STA 30+87.8 LT 11.0' - STA 30+92.1 RT 14.6'	A7		25.9		
STA 30+93.7 LT 12.4' - STA 30+97.7 RT 13.6'	A8		26.2		
STA 30+86.7 RT 23.2' - STA 30+93.3 RT 14.3'	A9	8.0		12.3	
STA 30+93.3 RT 14.3' - STA 30+97.2 RT 13.6'	A10		4.3		
STA 30+97.7 RT 13.6' - STA 30+98.7 RT 21.2'	A11		7.8		
STA 30+85.9 RT 23.3' - STA 30+92.8 RT 22.2'	A12				7.0
STA 30+92.8 RT 22.2' - STA 30+99.1 RT 21.1'	A13				7.1
STA 30+99.1 RT 21.1' - STA 31+05.4 RT 20.3'	A14				7.0
STA 30+89.5 RT 32.2' - STA 30+90.3 RT 36.8'	A15		4.7		
STA30+89.5 RT 32.2' - STA 30+93.5 RT 26.6'	A16		7.0		
STA 30+93.5 RT 26.6' - STA 30_99.7 RT 25.6'	A17		7.1		
STA 30_99.7 RT 25.6' - STA 31+04.3 RT 29.8'	A18		6.8		
STA 31+04.3 RT 29.8' - STA 31+04.7 RT 34.2'	A19		4.5		
STA 33+14.0 LT 24.0' - STA 33+21.2 LT 24.0'	B1				7.0
STA 33+21.2 LT 24.0' - STA 33+32.3 LT 24.0'	B2				10.7
STA 33+24.0 LT 16.0' - STA 33+32.3 LT 24.0'	B3	8.0		13.1	
STA 33+22.1 LT 16.0' - STA 33+24.0 LT 16.0'	B4		1.8		
STA 33+21.2 LT 24.0' - STA 33+21.6 LT 16.0'	B5		8.1		
STA 33+21.6 LT 16.0' - STA 33+23.1 RT 11.7'	B6		27.9		
STA 33+27.7 LT 16.9' - STA 33+28.9 RT 11.9'	B7		28.9		
STA 33+23.1 RT 11.7' - STA 33+23.5 RT 20.0'	B8		8.1		
STA 33+23.5 RT 11.7' - STA 33+27.3 RT 11.7'	B9		4.0		
STA 33+27.3 RT 11.7' - STA 33+35.0 RT 18.9'	B10	8.0		11.6	
STA 33+35.0 RT 18.9' - STA 33+35.1 RT 20.0'	B11		1.2		
STA 33+23.9 RT 20.0' - STA 33+35.1 RT 20.0'	B12				11.4
STA 33+16.5 RT 20.0' - STA 33+23.9 RT 20.0'	B13				7.6
STA 35+60.7 LT 40.4' - STA 35+60.8 LT 47.4'	C1				7.0
STA 35+60.7 LT 40.4' - STA 35+60.3 LT 20.2'	C2		20.3		
STA 35+60.8 LT 20.4' - STA 35+65.4 LT 20.3'	C3		4.7		
STA 35+65.4 LT 20.3' - STA 35+72.3 LT 20.1'	C4		6.8		
STA 35+72.3 LT 20.1' - STA 35+85.6 LT 19.9'	C5		13.3		
STA 35+77.7 LT 12.0' - STA 35+85.6 LT 19.9'	C6		11.2		
STA 35+68.3 LT 12.0' - STA 35+77.7 LT 12.0'	C7		9.4		
STA 35+60.3 LT 20.2' - STA 35+68.3 LT 12.0'	C8	8.0		12.8	
STA 35+59.7 RT 11.1' - STA 35+60.3 LT 20.2'	C9		28.5		
STA 35+65.7 RT 10.9' - STA 35+66.1 LT 12.3'	C10		23.4		
STA 35+24.2 RT 40.4' - STA 35+27.7 RT 33.3'	C11		7.9		
STA 35+27.7 RT 33.3' - STA 35+63.1 RT 10.9'	C12	40.0		44.2	
STA 35+63.1 RT 10.9' - STA 35+65.7 RT 10.9'	C13		2.1		
STA 35+65.7 RT 10.9' - STA 35+65.5 RT 18.9'	C14		7.9		
STA 35+42.1 RT 17.7' - STA 35+65.5 RT 18.9'	C15		24.1		
STA 35+65.5 RT 18.9' - STA 35+72.5 RT 19.0'	C16				7.0

CURBING

ITEM NO.			609.01	609.02	609.5
DESCRIPTION	MARK NUMBER	RADIUS	STRAIGHT GRANITE CURB	CURVED GRANITE CURB	RESET GRANITE CURB
STA		LF	LF	LF	LF
STA 38+40.7 LT 32.9' - STA 38+40.8 LT 20.5'	D1		13.0		
STA 38+41.3 LT 20.0' - STA 38+46.3 LT 20.0'	D2		5.0		
STA 38+46.3 LT 20.0' - STA 38+53.3 LT 20.0'	D3		7.0		
STA 38+53.3 LT 20.0' - STA 38+54.9 LT 20.0'	D4		1.7		
STA 38+40.8 LT 20.5' - STA 38+48.8 LT 12.0'	D5	8.0		12.6	
STA 38+48.8 LT 12.0' - STA 38+59.2 LT 12.0'	D6		10.4		
STA 38+59.2 LT 12.0' - STA 38+67.2 LT 20.0'	D7		11.4		
STA 38+36.5 RT 13.0' - STA 38+40.8 LT 20.5'	D8		33.7		
STA 38+43.1 RT 13.0' - STA 38+45.9 LT 12.5'	D9		25.9		
STA 40+44.1 LT 20.0' - STA 40+55.8 LT 20.4'	E1		11.2		
STA 40+55.8 LT 20.4' - STA 40+63.3 LT 20.5'	E2		7.0		
STA 40+63.3 LT 20.5' - STA 40+68.5 LT 20.5'	E3		5		
STA 40+68.5 LT 20.5' - STA 40+74.3 LT 20.4'	E4		5.5		
STA 40+74.3 LT 20.4' - STA 40+83.0 LT 20.1'	E5		8.3		
STA 40+82.7 LT 17.4' - STA 40+83.0 LT 20.1'	E6		3.3		
STA 40+76.3 LT 11.9' - STA 40+82.7 LT 17.4'	E7	6.0		9.1	
STA 40+63.4 LT 12.0' - STA 40+76.3 LT 11.9'	E8		12.6		
STA 40+62.7 LT 20.5' - STA 40+62.8 LT 12.0'	E9		8.5		
STA 40+62.8 LT 12.0' - STA 40+63.1 RT 12.7'	E10		24.7		
STA 40+68.9 RT 12.7' - STA 40+69.0 LT 12.0'	E11		24.7		
STA 43+42.1 LT 13.0' - STA 43+42.6 RT 13.8'	F1		26.8		
STA 43+48.1 LT 13.0' - STA 43+48.6 RT 13.7'	F2		26.8		
STA 43+36.7 RT 20.3' - STA 43+36.7 RT 19.8'	F3		0.5		
STA 43+36.7 RT 19.8' - STA 43+42.6 RT 13.8'	F4	6.0		9.4	
STA 43+42.6 RT 13.8' - STA 43+48.6 RT 13.7'	F5		6.0		
STA 43+48.6 RT 13.7' - STA 43+54.7 RT 19.7'	F6	6.0		9.5	
STA 43+54.7 RT 19.7' - STA 43+54.7 RT 20.2'	F7		0.5		
STA 43+26.5 RT 20.3' - STA 43+36.2 RT 20.3'	F8		9.8		
STA 43+36.2 RT 20.3' - STA 43+43.2 RT 20.3'	F9		7.0		
STA 43+43.2 RT 20.3' - STA 43+48.2 RT 20.2'	F10		5.0		
STA 43+48.2 RT 20.2' - STA 43+55.2 RT 20.2'	F11		7.0		
STA 43+55.2 RT 20.2' - STA 43+64.7 RT 20.2'	F12		9.5		
STA 44+80.8 RT 20.0' - STA 44+89.5 RT 12.0'	G1		11.7		
STA 44+89.5 RT 12.0' - STA 45+58.1 RT 13.8'	G2		68.6		
STA 41+73.2 LT 20.0' - STA 42+04.0 LT 20.0'	H1		30.7		
STA 42+04.0 LT 20.0' - STA 42+11.0 LT 20.0'	H2		7.0		
STA 42+03.0 LT 12.0' - STA 42+11.0 LT 20.0'	H3	8.0		12.6	
STA 41+93.2 LT 12.0' - STA 42+03.0 LT 12.0'	H4		9.8		
STA 41+93.2 LT 20.0" - STA 41+93.2 LT 12.5'	H5		7.5		
SUBTOTAL			796.0	159.9	96.6
ROUNDING			19	5.1	23.4
TOTAL			815	165	120

BID DOCUMENTS — NOT FOR CONSTRUCTION

DuBois & King inc.

STATE OF NEW HAMPSHIRE SCOTT M. BOLDUCER NH. 11010 LICENSED PROFESSIONAL ENGINEER 5/13/15

NEWMARKET, NEW HAMPSHIRE

NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X-A001(108)

SUMMARY OF QUANTITIES

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	5	36

D&K FILE	NAME1	DATE	DATE1
DESIGNED BY	NAME2	DATE	DATE2
CHECKED BY	NAME3	DATE	DATE3

PAVEMENT MARKINGS

ITEM NO.		632.3104	632.3112	632.32	632.911
DESCRIPTION		RETROREF. THERMO. PAVEMENT MARKINGS, 4" LINE	RETROREF. THERMO. PAVEMENT MARKINGS, 12" LINE	RETROREF. THERMO. PAVEMENT MARKINGS, SYMBOL OR WORD	OBLITERATE PAVEMENT MARKING LINE, 12" WIDE AND UNDER
LOCATION	MARKING TYPE	LF	LF	SF	LF
STA 30+00	SHARROW			24.0	
STA 31+00	CROSSWALK BORDER		49.3		
STA 32+50	SHARROW			24.0	
STA 33+25	CROSSWALK BORDER		57.2		
STA 33+50	CONTINENTAL CROSSWALK AND REMOVE MARKING		85.0		92.0
STA 35+00	SHARROW			24.0	
STA 35+50	REMOVE MARKING				83.0
STA 35+65	CROSSWALK BORDER		51.8		
STA 37+50	SHARROW			24.0	
STA 37+80	MOTORCYCLE PARKING	231.0			
STA 38+40	CROSSWALK BORDER AND REMOVE MARKING		56.8		63.0
STA 40+00	SHARROW			24.0	
STA 40+65	CROSSWALK BORDER AND REMOVE MARKING		50.8		49.0
STA 42+50	SHARROW			24.0	
STA 43+45	CROSSWALK BORDER AND REMOVE MARKING		53.6		49.0
STA 45+00	SHARROW			24.0	
STA 47+50	SHARROW			24.0	
SUBTOTAL		231.0	404.5	168.0	336
ROUNDING		4.0	0.5	2.0	4.0
TOTAL		235.0	405.0	170.0	340.0

SIDEWALK

ITEM NO.	304.1	304.2	304.3	520.01	608.441	608.54	608.6
DESCRIPTION	SAND	BANKRUN GRAVEL	CRUSHED GRAVEL	CONCRETE CLASS 'AA'	CONCRETE FIBER REINFORCED CLASS 'A'	DETECTABLE WARNING DEVICES CAST IRON	MODULAR PAVERS
LOCATION	CY	CY	CY	CY	CY	SY	SY
STA 30+90	1.65	6.93	16.01	4.12	31.85	3.00	38.28
STA 33+25	1.23	5.16	11.93	3.09	23.73	6.00	28.54
STA 35+65	2.59	10.88	25.12	6.47	49.99	6.00	60.09
STA 38+40	1.54	6.47	14.94	3.84	29.72	3.00	35.72
STA 40+65	1.38	5.79	13.39	3.40	26.63	3.00	32.02
STA 42+00	0.54	2.27	5.24	1.40	10.43	0.00	12.53
STA 43+45	1.07	4.50	10.37	2.68	20.65	1.00	24.82
SUBTOTAL	10.00	42.00	97.00	25.00	193.00	22.00	232.00
ROUNDING	0.00	0.00	0.00	0.00	0.00	8.00	0.00
TOTAL	10	42	97	25	193	30	232

INCIDENTAL ITEMS

ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY
202.6	CURB REMOVAL	LF	280
203.3	UNCLASSIFIED EXCAVATION	CY	130
403.119	HOT BITUMINOUS PAVEMENT, MACHINE METHOD (NIGHT)	TON	40
520.8	CANTILEVER DECK	U	1
615.023	REMOVE TRAFFIC SIGN TYPE B	EA	2
615.03	TRAFFIC SIGN TYPE C	SY	29.5
615.032	TRAFFIC SIGN TYPE C, BREAKAWAY MOUNTS	SY	99
616.201	FLASHING BEACONS	EA	7
618.7	FLAGGERS	HR	960
619.1	MAINTENANCE OF TRAFFIC	U	1
645.7	STORMWATER POLLUTION PREVENTION PLAN	U	1
665.2	PEDESTRIAN LED LIGHT FIXTURES	EA	25
665.3	STREET LIGHT FIXTURES (LED CONVERSION)	EA	34
665.4	PEDESTRIAN LIGHT FIXTURES (LED CONVERSION)	EA	9
692	MOBILIZATION	EA	1
699	MISCELLANEOUS TEMPORARY EROSION CONTROL	EA	1

LANDSCAPING

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
648	SOD (INCL. LOAM - NHDOT 641)	SY	65
652.96	ULMUS AMERICANA 'PRINCETON', PRINCETON AMERICAN ELM	EA	6

DRAINAGE

ITEM NO.	603.00212	604.124	604.62	604.4
DESCRIPTION	12" RCP	CATCH BASIN TYPE B	DRAIN MANHOLE COVERS & FRAMES	RECONSTRUCTING/ADJUSTING CATCH BASIN
#	LF	EA	EA	LF
1	31.5	1		
2				
3				
4	25.8	1		
5	20	1		
6			1	
7	14.5	1		
8				1
9			1	
10	21	1		
11				1
12				1
SUBTOTAL	112.8	5	2	3
ROUNDING	2.2	0	0	0
TOTAL	115	5	2	3

SUBSIDIARY ITEMS

ITEM NO.	ITEM DESCRIPTION
603.00212	CORING INTO EXISTING DRAINAGE STRUCTURES
608.441	MATERIALS, LABOR, CUTTING AND EQUIPMENT REQUIRED TO RETROFIT EXISTING STEPS AND WALKWAYS AS SHOWN ON PLANS WILL BE SUBSIDIARY
648	4" LOAM

BID DOCUMENTS — NOT FOR CONSTRUCTION

D&K FILE	NAME1	DATE	DATE1
DESIGNED BY	NAME2	DATE	DATE2
CHECKED BY	NAME3	DATE	DATE3

DuBois & King inc.

STATE OF NEW HAMPSHIRE SCOTT A. BOURGER NO. 11910 LICENSED PROFESSIONAL ENGINEER 5/13/15

NEWMARKET, NEW HAMPSHIRE

NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X-A001(108)

SUMMARY OF QUANTITIES

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	6	36

ITEM	IDENT #	SIGN SIZE		TEXT	TEXT DIMENSIONS			SHIELD SIZE (INCH)	ARROW (INCH)	NUMERAL (INCH)	# SIGNS REQ'D	SIGN AREA (SQ. FT.)		POSTS PER SIGN					REMARKS
		WIDTH (INCH)	HEIGHT (INCH)		LETTER HEIGHT (INCH)									BREAKAWAY	STEEL I-BEAM	CONCRETE BASE	4" O.D. ALUMINUM	U-CHANNEL-GALV.	
					UC	LC	CAPS					NOM. AREA	TOTAL AREA						
616.201 615.032	W11-2	30	30								25	6.25	156.25	1					BLACK/FLUORESCENT YELLOW
615.03	W16-9P	24	12				5C				1	2.00	2.00	1					BLACK/FLUORESCENT YELLOW MOUNTED BELOW W11-2
615.03	R4-11	30	30				4C 4C				2	6.25	12.50					1	BLACK/WHITE
616.201	W16-7P (R, L)	24	12								24	2.00	48.00	1					BLACK/FLUORESCENT YELLOW MOUNTED BELOW W11-2
615.03	R7-5-16	12	18								2	1.50	3.00					1	GREEN/WHITE
615.03	R2-1	24	30				4E 4E 10E				2	5.00	10.00					1	BLACK/WHITE
615.03	W16-15P	24	12				5C				2	2.00	4.00					1	BLACK/FLUORESCENT YELLOW MOUNTED TOP OF R2-1
616.201	R10-25	12	9				1C 1C 1C 1C 1C				24	0.75	18.00	1					BLACK/WHITE

1. REFER TO THE 2006 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION PUBLISHED BY THE NHDOT.
2. NOTE NEW REFLECTIVITY REQUIREMENTS IN THE 2006 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SECTION 718 PUBLISHED BY THE NHDOT.
3. REFER TO THE LATEST EDITION OF THE STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION AS PUBLISHED BY THE NHDOT FOR EXACT DETAILS OF PERMANENT SIGNING STANDARDS AND NHDOT SPECIFIC SIGNS.
4. REFER TO THE LATEST EDITION OF THE STANDARD HIGHWAY SIGNS MANUAL AS PUBLISHED BY THE USDOT-FHWA FOR EXACT DETAILS OF BORDERS, ETC.

BID DOCUMENTS – NOT FOR CONSTRUCTION

DuBois & King inc.

STATE OF NEW HAMPSHIRE SCOTT M. BOURQUER No. 11010 LICENSED PROFESSIONAL ENGINEER 5/13/15

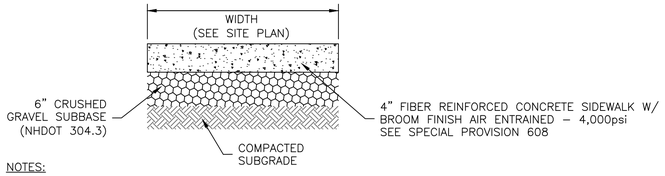
NEWMARKET, NEW HAMPSHIRE

NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X-A001(108)

SIGN TEXT SUMMARY

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	7	36

D&K FILE	NAME1	DATE DATE1
DESIGNED BY	NAME2	DATE DATE2
CHECKED BY	NAME3	DATE DATE3

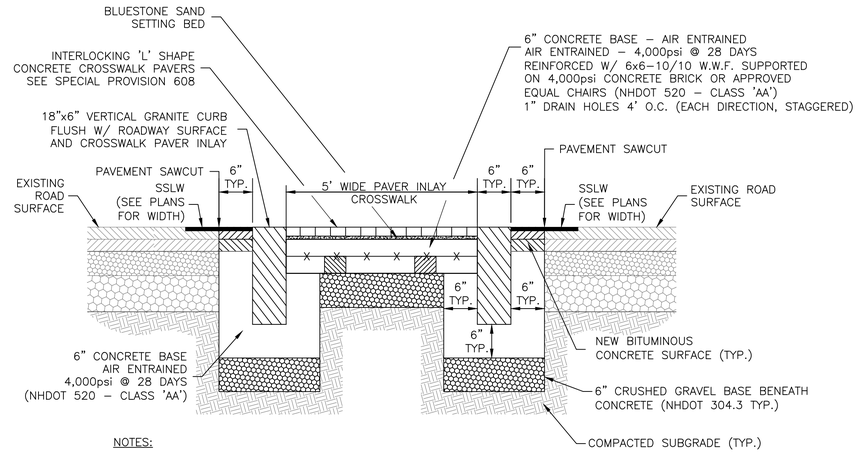


NOTES:

1. MAXIMUM ALLOWABLE SIDEWALK SLOPE IN ALL DIRECTIONS SHALL BE IN ACCORDANCE WITH AMERICAN DISABILITY ACT (ADA) STANDARDS FOR ACCESSIBLE DESIGN.
2. SUBGRADE MATERIAL SHALL BE SHAPED AND COMPACTED TO AN EVEN SURFACE. ALL SOFT AND YIELDING MATERIAL SHALL BE REMOVED AND REPLACED WITH ACCEPTABLE MATERIAL
3. 1/4" RADIUS x 1/2" WIDE x 1/2" DEPTH TOOLED CONTROL JOINTS SHALL BE LOCATED 5' O.C.
4. 1/2" EXPANSION JOINTS SHALL CONFORM TO AASHTO M153, TYPE III OR AASHTO M213 AND BE LOCATED 20' O.C.
5. PROTECTIVE COATING SHALL BE SILANE/SILOXANE AND APPLIED IN ACCORDANCE WITH NHDOT 534.2.2 AND 534.3; RESPECTIVELY

CONCRETE SIDEWALK DETAIL

NOT TO SCALE

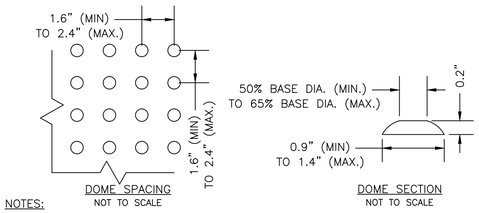


NOTES:

1. ALL ITEMS IDENTIFIED IN THE ABOVE DETAIL, WITH THE EXCEPTION OF PAVEMENT MARKINGS, IS SUBSIDIARY TO ITEM 608.4. BASIS OF PAYMENT IS MADE PER LINEAR FOOT, MEASURED ALONG CENTERLINE OF CROSSWALK BETWEEN DETECTABLE WARNING DEVICES.

RED PAVER CROSSWALK SECTION

NOT TO SCALE

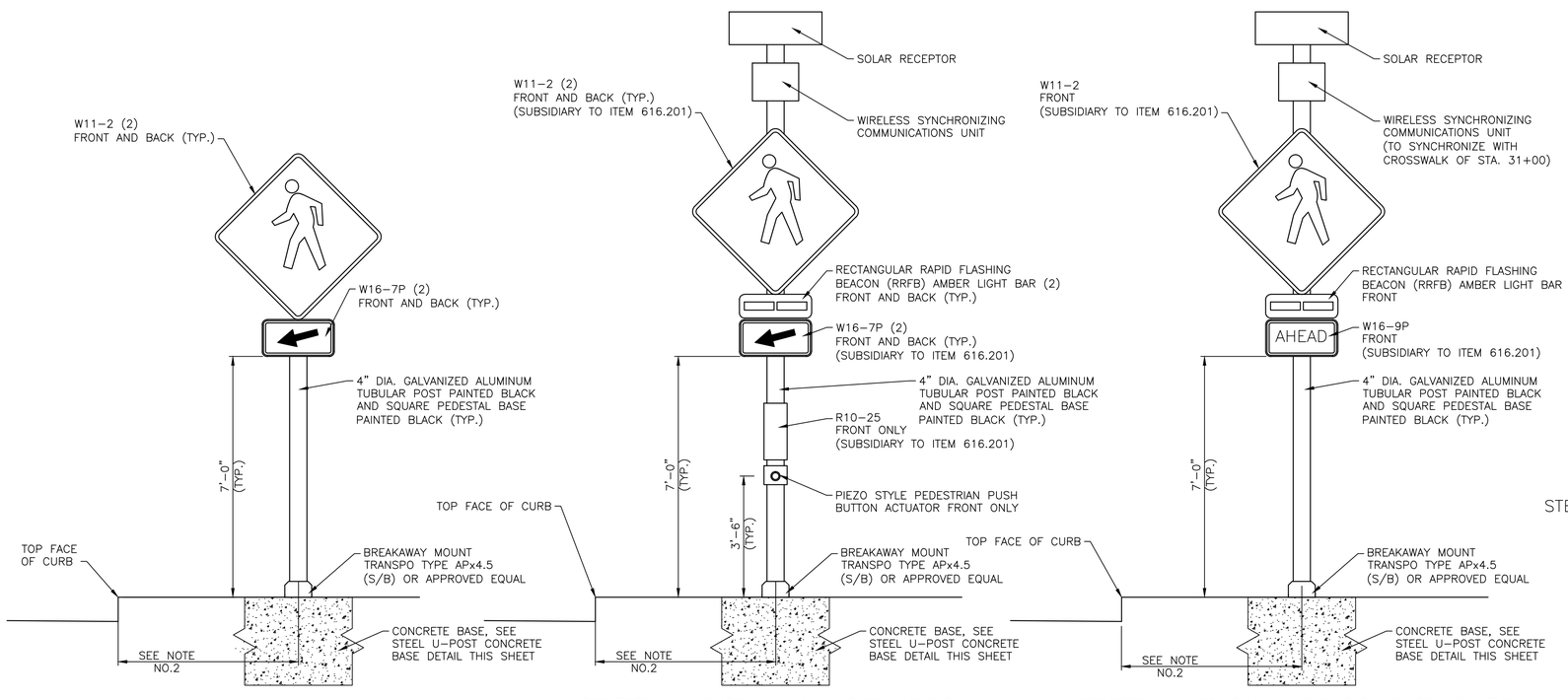


NOTES:

1. ADA DETECTABLE WARNING DEVICES SHALL BE CAST IRON IN ACCORDANCE WITH NHDOT 608.54.
2. DEVICE SHALL BE 24" (MIN) IN WIDTH. LENGTH SHALL EQUAL THE CROSSWALK ACCESS.
3. INSTALLATION SHALL BE PER MANUFACTURER'S RECOMMENDATION.

DETECTABLE WARNING DEVICE DETAIL
(ITEM 608.54)

NOT TO SCALE



PEDESTRIAN CROSSING SIGN POST LOCATION
AND PLACARD INSTALLATION DETAIL
(ITEM 615.032)

NOT TO SCALE

PEDESTRIAN CROSSING SIGN POST LOCATION
RFBB AND PLACARD INSTALLATION DETAIL
(ITEM 616.201)

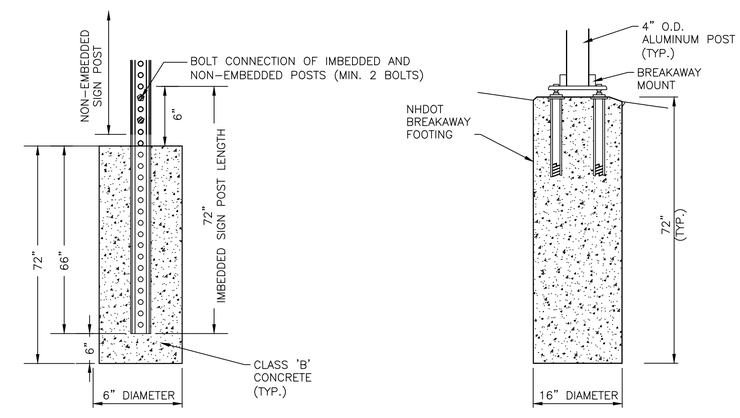
NOT TO SCALE

PEDESTRIAN CROSSING AHEAD SIGN POST LOCATION
RFBB AND PLACARD INSTALLATION DETAIL
(ITEM 616.201)

NOT TO SCALE

NOTE:

1. ALL TRAFFIC SIGNS, POSTS AND FOUNDATIONS SHALL BE IN ACCORDANCE WITH NHDOT SECTION 615 SPECIFICATIONS.
2. SIGN POST SHALL BE LOCATED "DOWN–GRADIENT" OF TRAFFIC FLOW FROM CROSSWALK. SIGN POSTS SHALL ALSO BE LOCATED EITHER
   2.1. 5' MINIMUM FROM FACE OF CURB IF SIDEWALK IS EQUAL TO OR LESS THAN 5' IN WIDTH;
   2.2. 2' FROM FACE OF CURB IF SIDEWALK IS GREATER THAN 5' IN WIDTH; OR,
   2.3. 5' MINIMUM FROM FACE OF CURB IF SIDEWALK IS GREATER THAN 5' IN WIDTH, BUT THE LOCATION OF SIGN POSTS REDUCES THE SIDEWALK CLEAR WIDTH TO LESS THAN 5'.



STEEL U–POST CONCRETE BASE DETAIL
(ITEM 615.03)

NOT TO SCALE

TUBULAR ALUMINUM POST
CONCRETE BASE DETAIL
(SUBSIDIARY TO ITEM 615.032
AND 616.201)

NOT TO SCALE

NOTE:

1. BREAKAWAY SUPPORTS PLACED ON ROADSIDE SLOPES SHALL NOT ALLOW IMPACTING VEHICLES TO SNAG ON EITHER THE FOUNDATION OR ANY SUBSTANTIAL REMAINS OF THE SUPPORT. SURROUNDING TERRAIN SHALL BE GRADED TO PERMIT VEHICLES TO PASS OVER ANY NON–BREAKABLE PORTION OF THE SIGN INSTALLATION WHICH REMAINS IN THE GROUND OR RIGIDLY ATTACHED TO THE FOUNDATION.
2. FOUNDATION SHALL BE INSTALLED PLUMB AND LEVEL.
3. MOUNTING HARDWARE SHALL BE PER NHDOT SPECIFICATION.

NOT FOR CONSTRUCTION

BID DOCUMENTS – NOT FOR CONSTRUCTION

D&K FILE	NAME1	DATE	DATE1
DESIGNED BY	NAME2	DATE	DATE2
CHECKED BY	NAME3	DATE	DATE3

DuBois & King inc.

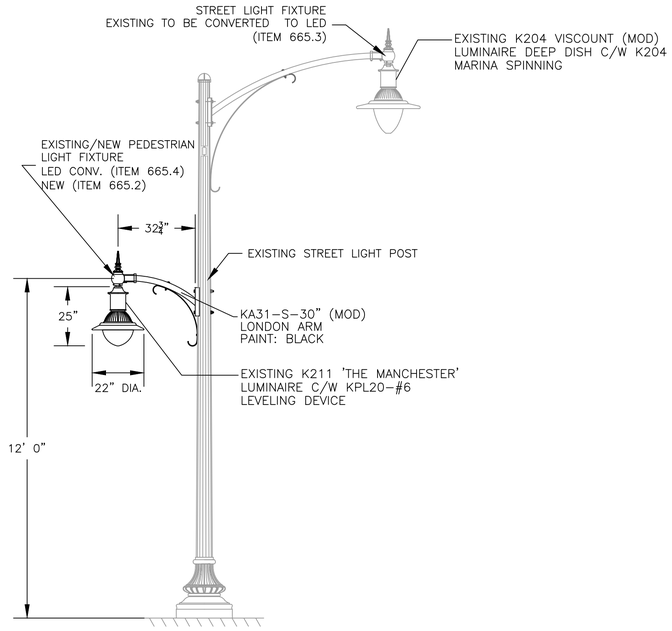
STATE OF NEW HAMPSHIRE
SCOTT A. BOLDUC
No. 11910
LICENSED
PROFESSIONAL ENGINEER
5/13/15

NEWMARKET, NEW HAMPSHIRE

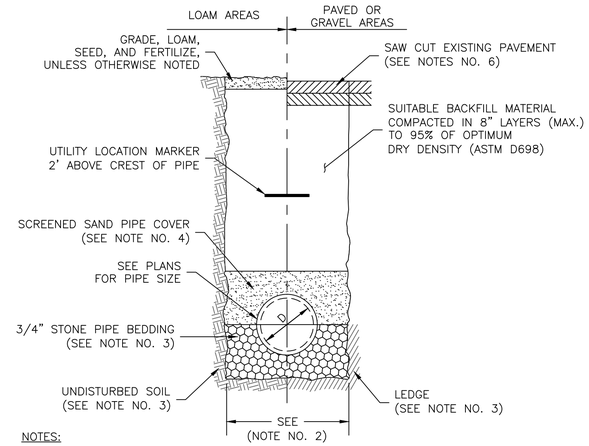
NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X–A001(108)

TYPICAL CROSSWALK AND SIDEWALK DETAIL SHEET

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	8	36



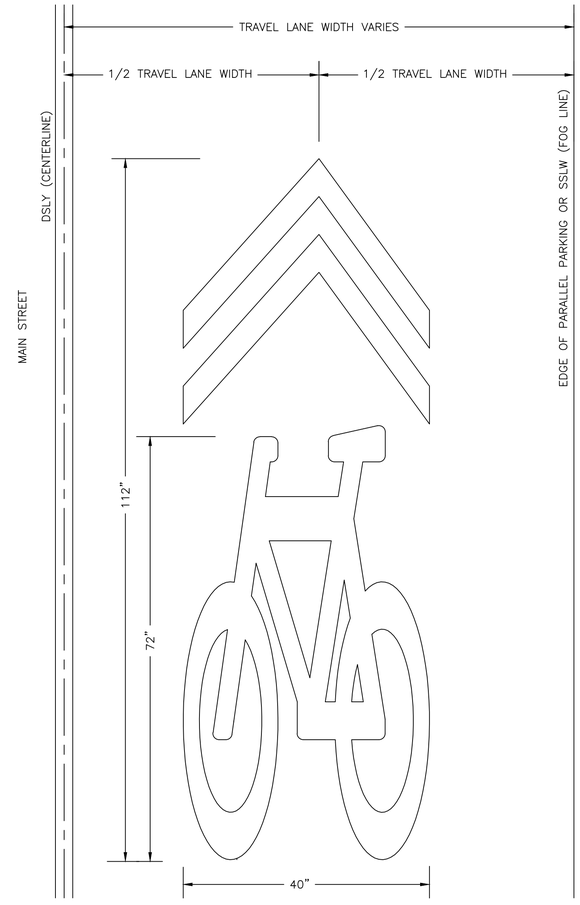
LIGHT FIXTURE DETAIL
(ITEM 665.2, 665.3, 665.4)
NOT TO SCALE



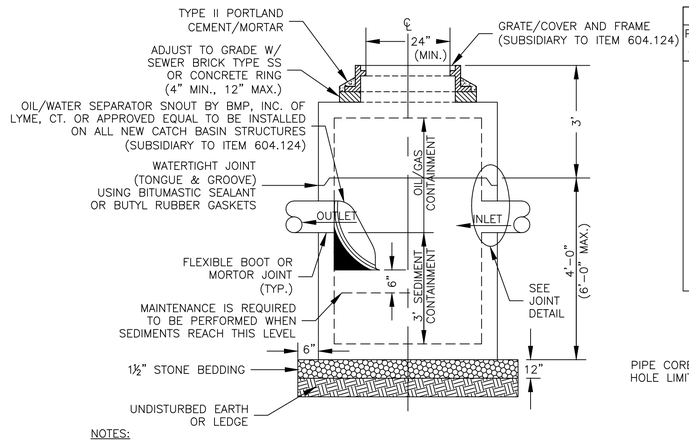
NOTES:

1. ALL EXCAVATION MUST MEET OSHA STANDARDS.
2. STANDARD TRENCH WIDTH SHALL BE D+2' OR 3'; WHICHEVER IS GREATER.
3. BEDDING MATERIAL SHALL BE FULL WIDTH OF TRENCH. BEDDING MATERIAL SHALL BE 6" BELOW PIPE (IN EARTH) OR 12" BELOW PIPE (IN LEDGE) UP TO SPRING LINE OF PIPE.
4. SAND COVER/CUSHION MATERIAL SHALL BE FULL WIDTH OF TRENCH. SAND MATERIAL SHALL BE FROM SPRING LINE UP TO 12" (MINIMUM) ABOVE CREST OF PIPE.
5. STORM DRAIN LAYOUT PLAN PIPE SLOPES SHALL GOVERN OVER MINIMUM PIPE SLOPE SCHEDULE.
6. DURING PAVEMENT REPAIR, THE CONTRACTOR SHALL CUT-BACK SUBBASE MATERIAL AN ADDITIONAL 12-INCHES ON EITHER SIDE OF THE TRENCH AND PAVEMENT COLD PLANE MILL AREA TO A DEPTH OF 1-3/4" AN ADDITIONAL 24-INCHES ON EITHER SIDE OF SUBBASE MATERIAL CUT-BACK.

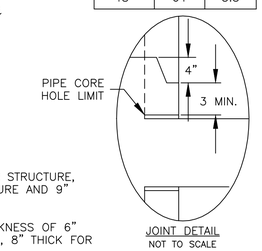
STORM DRAIN PIPE TRENCH DETAIL
(ITEM 603.00212)
NOT TO SCALE



SHARROW THERMOPLASTIC DETAIL
(ITEM 632.32)
NOT TO SCALE



CORE HOLE SCHEUDLE		
PIPE SIZE (INCHES)	CORE HOLE DIA. INCHES	CORE HOLE DIA. FEET
6"	7	0.6
12"	18	1.5
15"	20	1.7
18"	24	2.0
24"	32	2.7
30"	42	3.5
36"	48	4.0
42"	54	4.6
48"	64	5.3

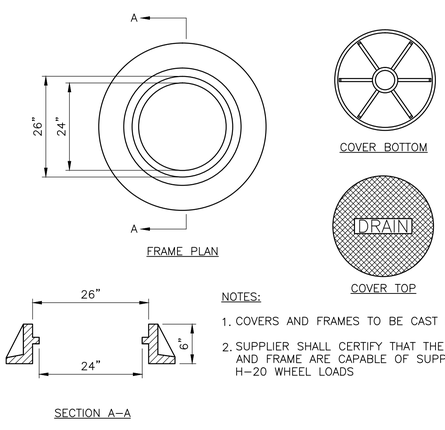


JOINT DETAIL
NOT TO SCALE

NOTES:

1. PRECAST SECTIONS SHALL BE REINFORCED AND BE 5" THICK FOR A 4' DIAMETER STRUCTURE, 6" THICK FOR A 5' DIAMETER STRUCTURE, 7" THICK FOR A 6' DIAMETER STRUCTURE AND 9" THICK FOR A 8' DIAMETER STRUCTURE.
2. PRECAST BASE SECTIONS SHALL BE REINFORCED AND CONSIST OF A FLOOR THICKNESS OF 6" THICK FOR A 4' DIAMETER STRUCTURE, 8" THICK FOR A 5' DIAMETER STRUCTURE, 8" THICK FOR A 6' DIAMETER STRUCTURE AND 10" THICK FOR A 8' DIAMETER STRUCTURE.
3. PRECAST SECTIONS SHALL MEET HS-20 LOADING, CONSIST OF CONCRETE THAT IS A MINIMUM OF 4000psi @28 DAYS AND SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C-478; LATEST REVISION.
4. PRECAST SECTIONS SHALL HAVE TONGUE AND GROOVE JOINT 4" HIGH AT AN 11-DEGREE ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE SEALANT IN JOINTS.
5. PRECAST CONE SECTIONS MAY BE EITHER CONCENTRIC, ECCENTRIC OR FLAT SLAB TOPS MAY BE USED WHERE PIPE WOULD OTHERWISE ENTER INTO THE CONE SECTION OF THE STRUCTURE AND WHERE PERMITTED.
6. ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12" OF INSIDE SURFACE BETWEEN HOLES AND NO MORE THAN 75% OF A HORIZONTAL CROSS-SECTION SHALL BE HOLES, INCLUDING NO HOLES SHALL BE LOCATED CLOSER THAN 3" TO JOINTS.
7. OUTSIDE PIPE EDGES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL STRUCTURE.

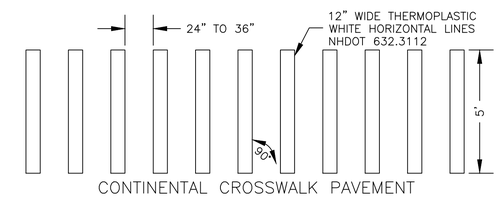
OIL/WATER SEPARATOR MANHOLE DETAIL
(ITEM 604.124)
NOT TO SCALE



NOTES:

1. COVERS AND FRAMES TO BE CAST IRON
2. SUPPLIER SHALL CERTIFY THAT THE COVER AND FRAME ARE CAPABLE OF SUPPORTING H-20 WHEEL LOADS

DRAIN MANHOLE COVER AND FRAME DETAIL
(ITEM 604.62)
NOT TO SCALE



CONTINENTAL CROSSWALK PAVEMENT
MARKING DETAIL (ITEM 632.3112)
NOT TO SCALE

1. SPACING FOR PAVEMENT MARKINGS SHALL BE UNIFORM FOR EACH INDIVIDUAL CROSSWALK BUT CAN BE MODIFIED FOR ONE CROSSWALK TO THE NEXT TO ELIMINATE A CROSSWALK MARKING DIRECTLY IN THE VEHICULAR WHEELPATH.

NOT FOR CONSTRUCTION

BID DOCUMENTS – NOT FOR CONSTRUCTION

DuBois & King inc.

STATE OF NEW HAMPSHIRE
SCOTT M. BOURQUIER
NO. 11010
LICENSED
PROFESSIONAL ENGINEER
5/13/15

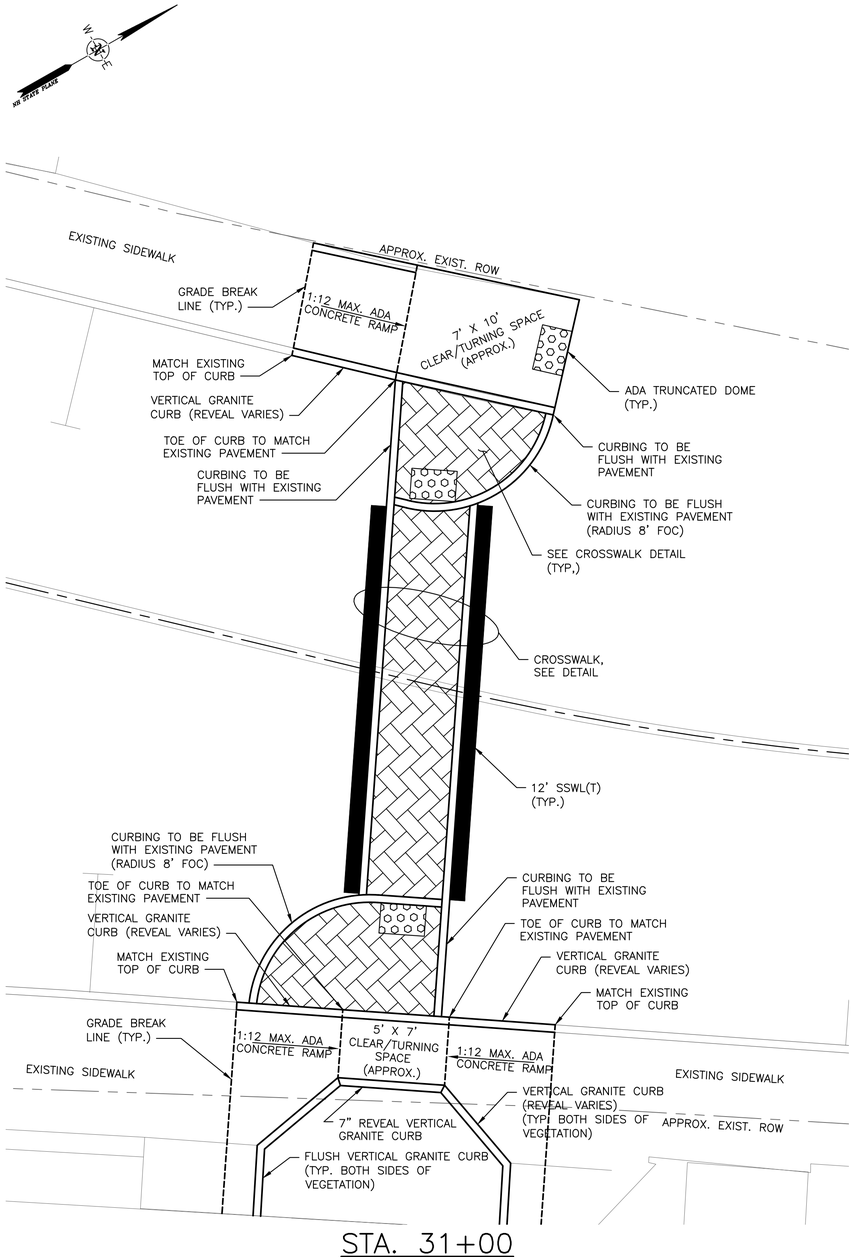
NEWMARKET, NEW HAMPSHIRE

NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X-A001(108)

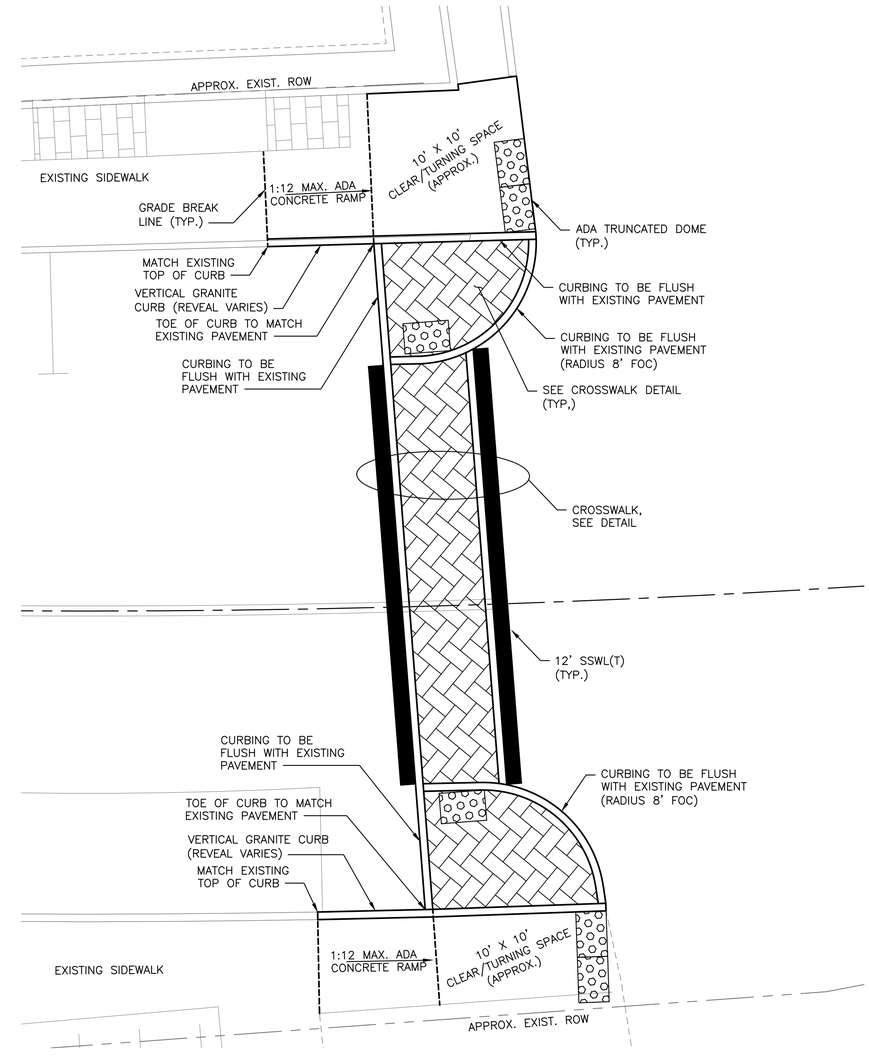
DRAINAGE, LIGHTING, AND PAVEMENT MARKING DETAIL SHEET

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	9	36

D&K FILE	NAME1	DATE	DATE1
DESIGNED BY	NAME2	DATE	DATE2
CHECKED BY	NAME3	DATE	DATE3



STA. 31+00



STA. 33+25

HORIZONTAL GRAPHIC SCALE

0 5 10

1" = 5'

DuBois & King inc.

STATE OF NEW HAMPSHIRE
SCOTT M. BOURQUER
No. 11010
LICENSED
PROFESSIONAL ENGINEER
5/13/15

NEWMARKET, NEW HAMPSHIRE

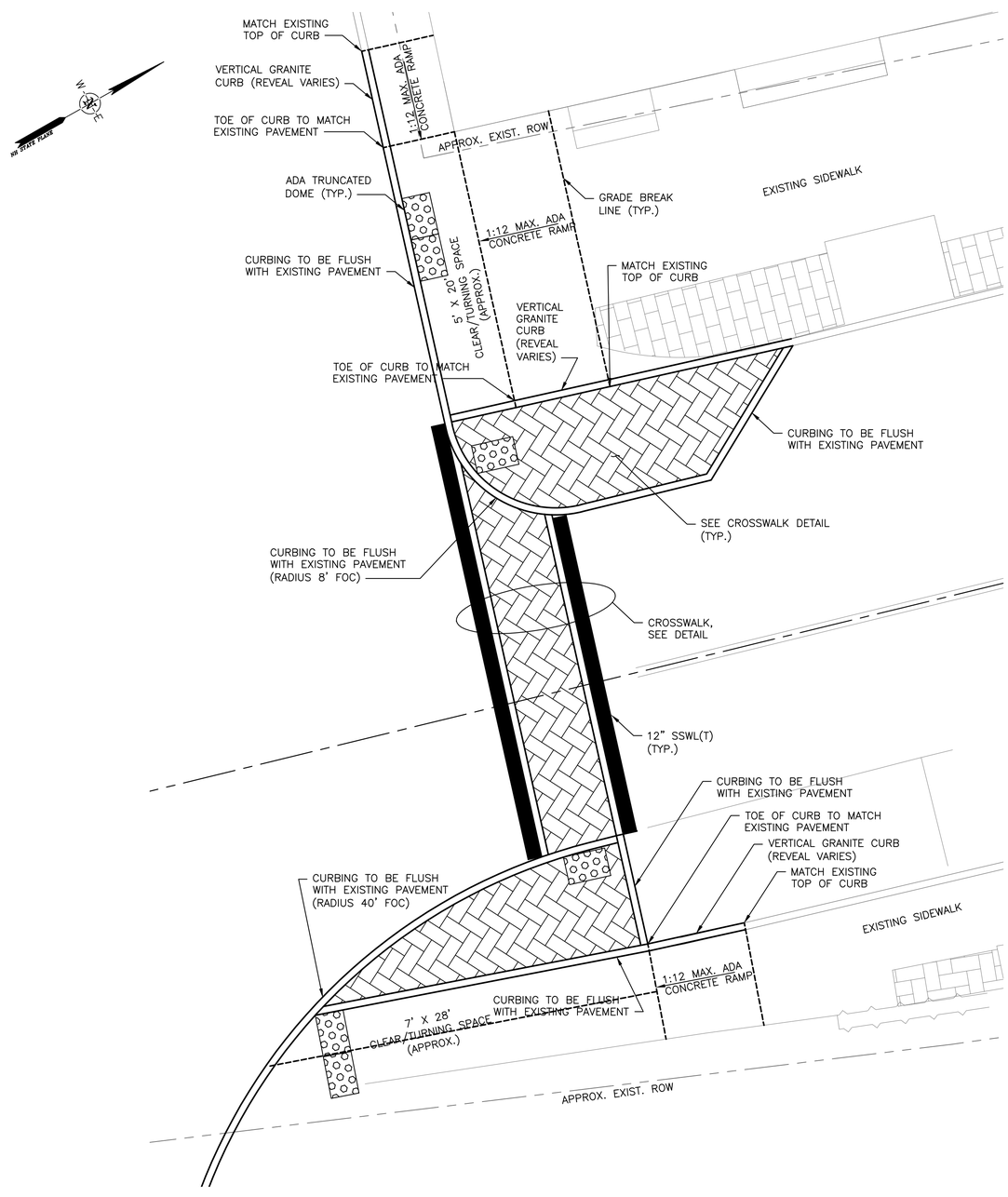
NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X-A001(108)

CROSSWALK DETAIL SHEET (SHEET 1 OF 3)

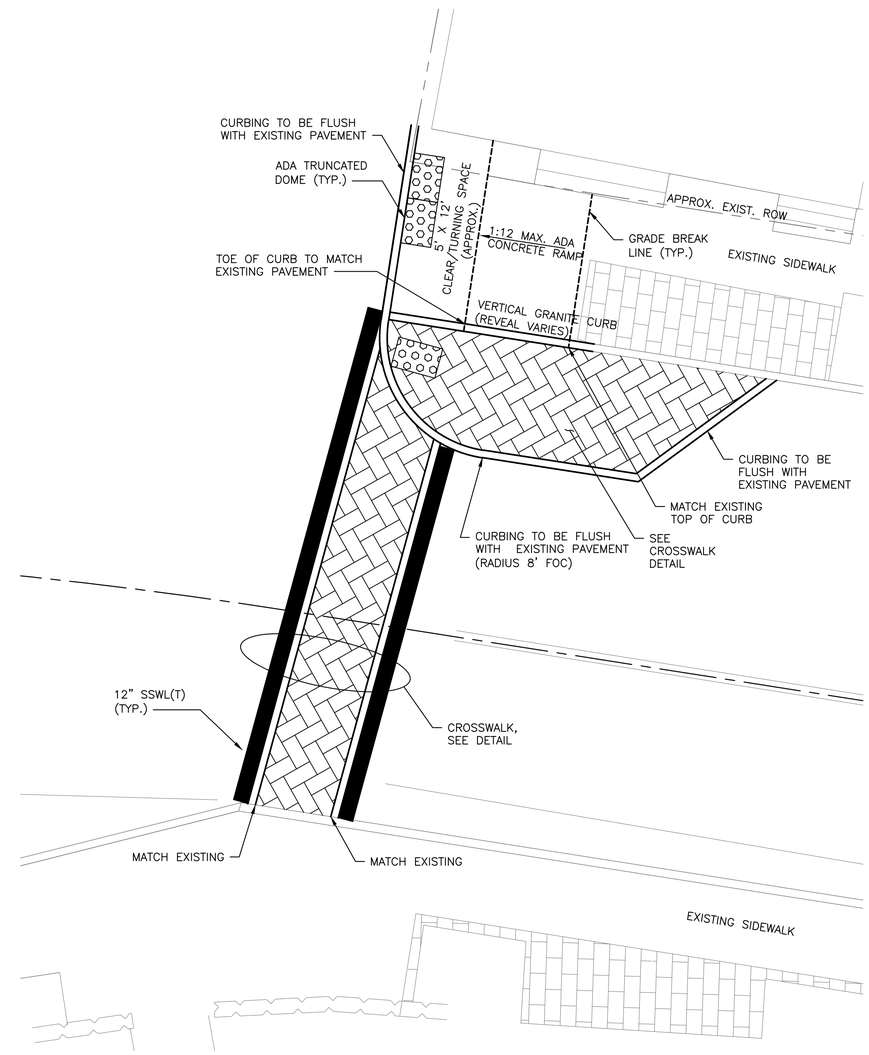
D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	10	36

BID DOCUMENTS – NOT FOR CONSTRUCTION

D&K FILE	NAME1	DATE	DATE1
DESIGNED BY	NAME2	DATE	DATE2
CHECKED BY	NAME3	DATE	DATE3



STA. 35+65



STA. 38+40

BID DOCUMENTS — NOT FOR CONSTRUCTION

HORIZONTAL GRAPHIC SCALE
0 5 10
1" = 5'

DuBois & King inc.

STATE OF NEW HAMPSHIRE SCOTT M. BOURDER No. 11010 LICENSED PROFESSIONAL ENGINEER
5/13/15

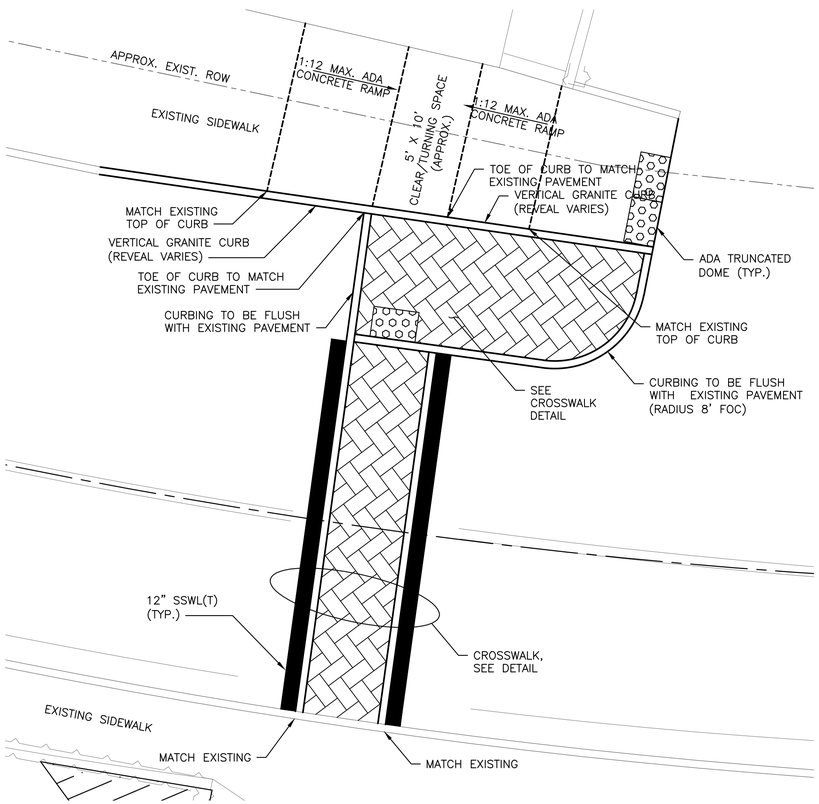
NEWMARKET, NEW HAMPSHIRE

NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X-A001(108)

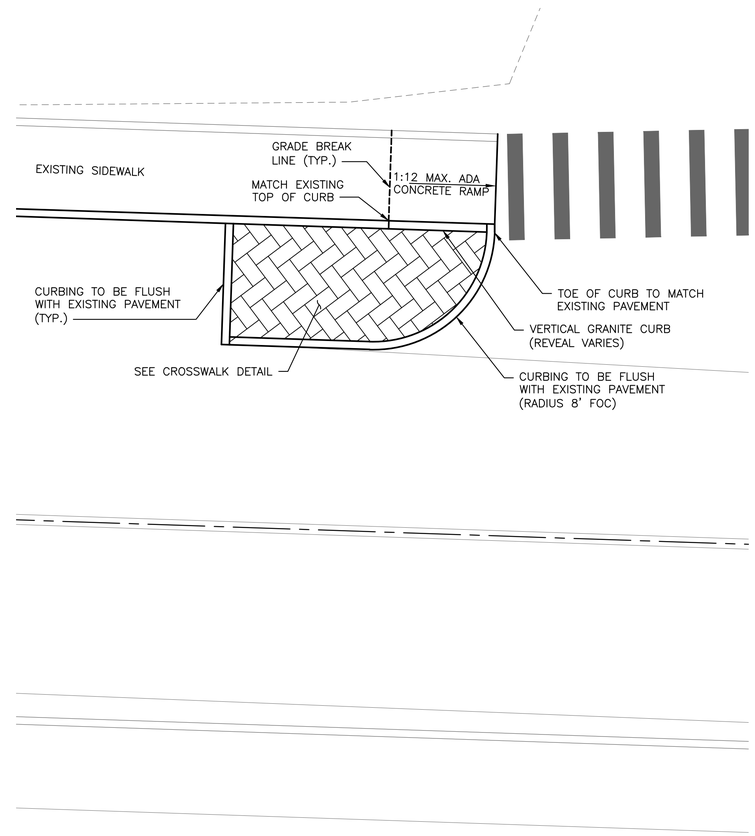
CROSSWALK DETAIL SHEET (SHEET 2 OF 3)

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	11	36

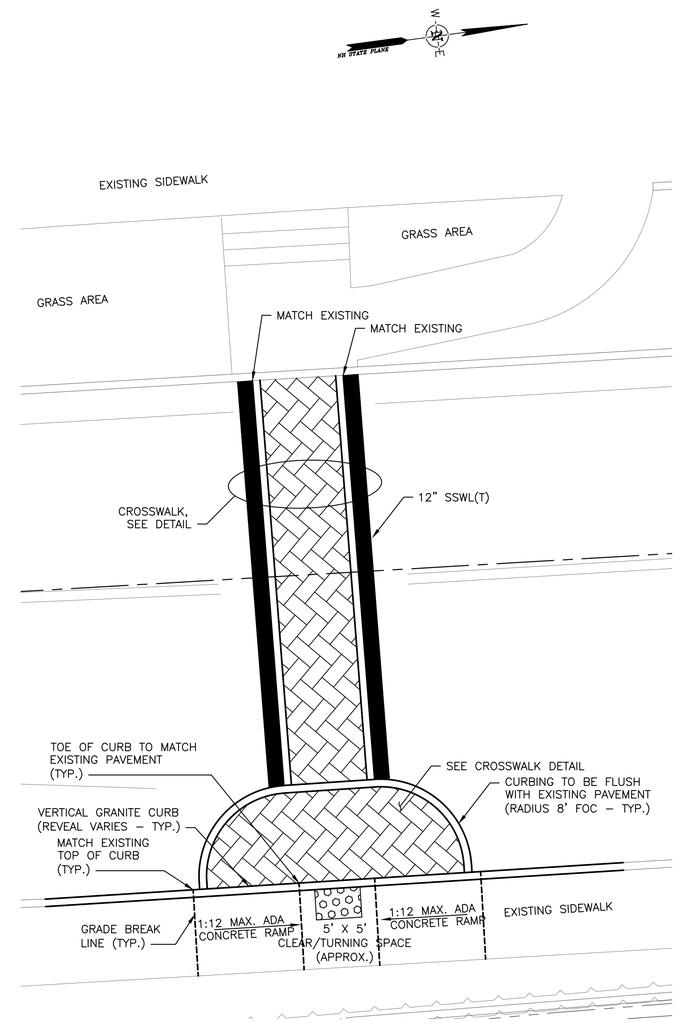
D&K FILE	NAME1	DATE DATE1
DESIGNED BY	NAME2	DATE DATE2
CHECKED BY	NAME3	DATE DATE3



STA. 40+65



STA. 42+00



STA. 43+45

BID DOCUMENTS – NOT FOR CONSTRUCTION

HORIZONTAL GRAPHIC SCALE
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1" = 5'

DuBois & King inc.

STATE OF NEW HAMPSHIRE SCOTT M. BOURQUER No. 11010 LICENSED PROFESSIONAL ENGINEER 5/13/15

NEWMARKET, NEW HAMPSHIRE

NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X-A001(108)

CROSSWALK DETAIL SHEET (SHEET 3 OF 3)

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	12	36

D&K FILE	NAME1	DATE	DATE1
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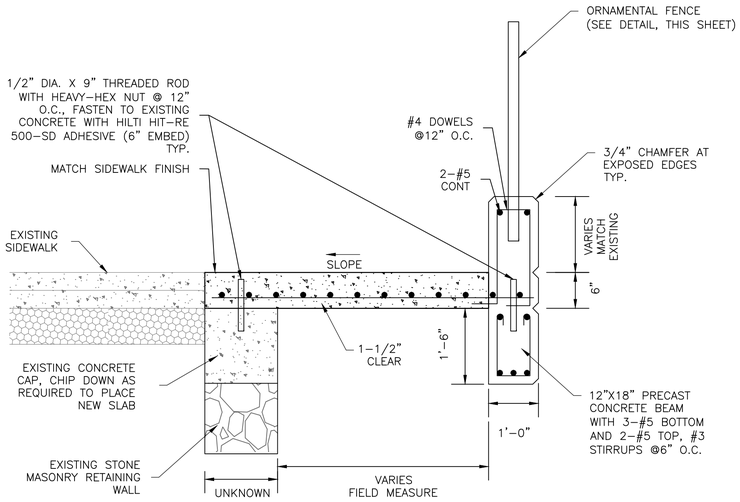
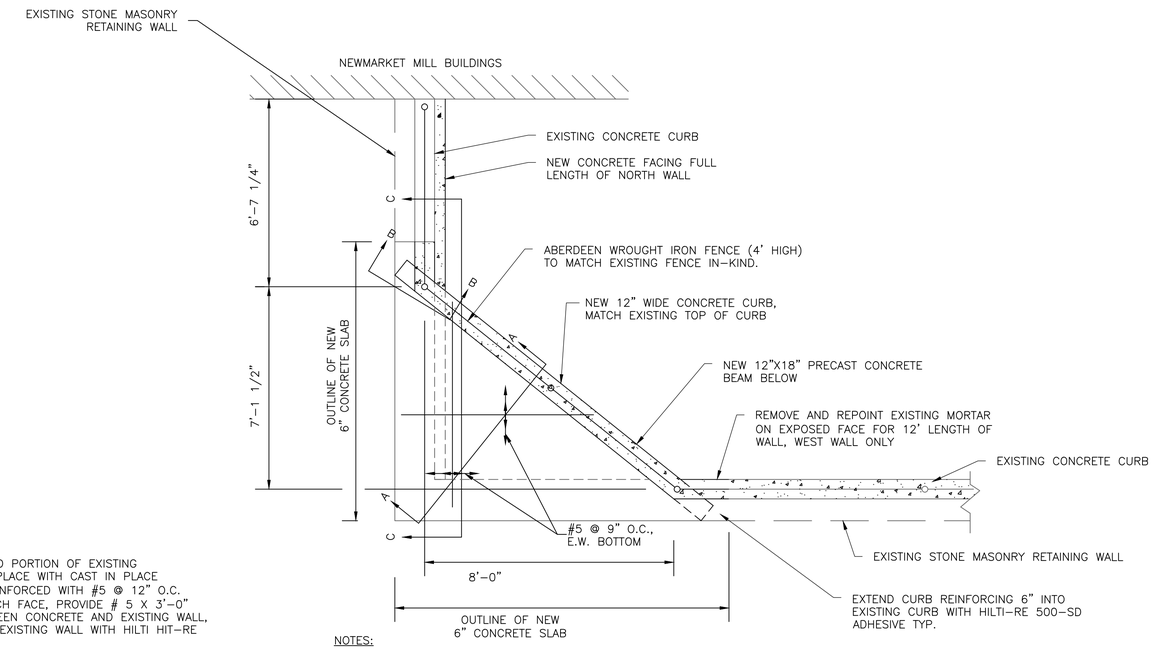
CHECKED BY	NAME3	DATE	DATE3



NOTE: CONTRACTOR'S OPTION TO CAST BEAM IN PLACE

SECTION 'A'

NOT TO SCALE

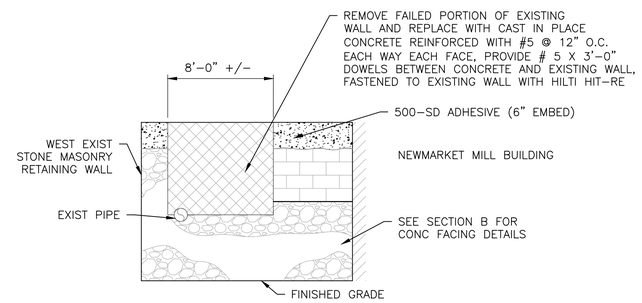


NOTES:

1. REINFORCING TO BE ASTM A615, GRADE 60 EPOXY COATED.
2. CONCRETE f'c = 3,500 psi, AIR ENTRAINED.
3. STRUCTURE DESIGNED FOR MAX. 3,000 LBS WHEEL LOAD.

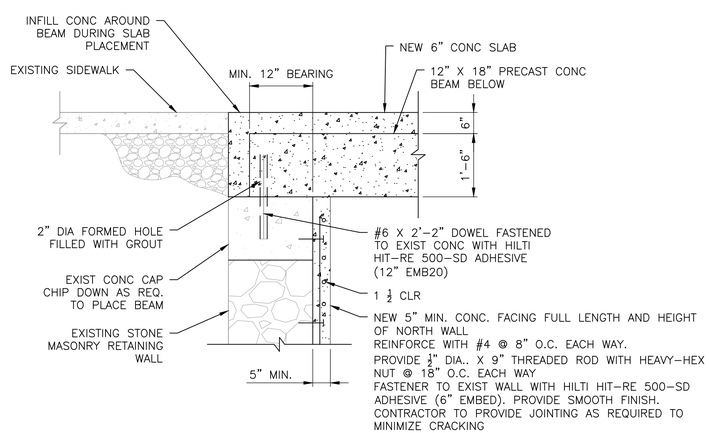
CANTILEVER SIDEWALK PLAN

NOT TO SCALE



SECTION 'C'

NOT TO SCALE



SECTION 'B'

NOT TO SCALE

BID DOCUMENTS – NOT FOR CONSTRUCTION

D&K FILE	NAME1	DATE DATE1
DESIGNED BY	NAME2	DATE DATE2
CHECKED BY	NAME3	DATE DATE3

DuBois & King inc.

STATE OF NEW HAMPSHIRE – SCOTT M. BOURDER – NO. 11010 – LICENSED PROFESSIONAL ENGINEER – 5/13/15

NEWMARKET, NEW HAMPSHIRE

NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X-A001(108)

CANTILEVER DECK DETAIL SHEET

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	13	36

GENERAL EROSION AND SEDIMENTATION CONTROL NOTES:

THIS PLAN HAS BEEN DEVELOPED AS A STRATEGY TO CONTROL SOIL EROSION AND SEDIMENTATION DURING AND AFTER CONSTRUCTION. THIS PLAN IS BASED ON THE STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION IN DEVELOPING AREAS AS CONTAINED IN THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES (NHDES) STORMWATER MANUAL, VOLUME 3. THE PROPOSED LOCATIONS OF EROSION CONTROL BEST MANAGEMENT PRACTICES (TO BE INSTALLED AT A MINIMUM) ARE SHOWN ON THE PLAN SET HEREIN.

1. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3 – EROSION AND SEDIMENTATION CONTROLS DURING CONSTRUCTION", PUBLISHED BY THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES (NHDES); DATED DECEMBER 2008 (OR CURRENT EDITION).

2. THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION SHALL BE MAINTAINED IN AN UNTREATED OR UNVEGETATED CONDITION FOR THE MINIMUM TIME REQUIRED. IN GENERAL, ALL DISTURBED AREAS SHALL NOT BE LEFT BARE FOR MORE THAN 30 DAYS, SHALL BE STABILIZED IN A MANNER TO MITIGATE EROSION OR SEDIMENTATION FROM EXITING THE LIMIT OF WORK AND SHALL BE RESTORED IN–KIND UPON COMPLETION OF THE PROJECT. THE MAXIMUM AREA ALLOWED TO BE DISTURBED AND LEFT UNSTABILIZED IS TWO (2) ACRES AT ANY ONE TIME

3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSPECT, MONITOR AND MAINTAIN ALL EROSION CONTROL STRUCTURES; SEE EROSION CONTROL – INSPECTION, MONITORING & MAINTENANCE NOTES LOCATED HEREIN.

4. SEDIMENT BARRIERS (SILT FENCE, STONE CHECK DAMS, STABILIZED CONSTRUCTION ENTRANCES, ETC.) SHALL BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF UP–GRADIENT DRAINAGE AREAS.

5. ALL EXISTING STORM DRAINAGE INLETS SHALL BE PROTECTED BY STRAW BALE FILTERS AND CATCH BASIN FILTER BASKETS TO PREVENT ENTRY OF SEDIMENT FROM RUNOFF WATERS INTO THE STORM DRAIN SYSTEM.

6. NO TREES ARE TO BE REMOVED FROM AREAS OUTSIDE THE LIMITS OF GRADING OR FROM SPECIFICALLY DESIGNATED UNDISTURBED AREAS WITHIN THE CONSTRUCTION AREA. IF TREES DESIGNATED TO BE SAVED ARE DAMAGED, CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING THEM AT NO COST TO THE OWNER OR OWNER'S REPRESENTATIVE.

7. SLOPES, EITHER PERMANENT OR TEMPORARY, BETWEEN SLOPES 3 HORIZONTAL TO ONE VERTICAL (3:1) TO TWO HORIZONTAL TO ONE VERTICAL (2:1) SHALL BE STABILIZED WITH EROSION CONTROL BLANKETS AND ANCHORED MULCH NETTING (100% BIODEGRADABLE – PLASTIC NETTING WILL NOT BE ALLOWED – AND BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS). SLOPES STEEPER THAT ONE VERTICAL TO ONE VERTICAL (1:1) SHALL BE STABILIZED WITH RIPRAP.

8. CUT AND FILL AREAS ARE TO BE PERMANENTLY STABILIZED AS SOON AS PRACTICABLE BUT NO LATER THAN 72 HOURS FOLLOWING FINAL GRADING.

9. ALL AREAS OF EXPOSED OR DISTURBED SOIL OTHER THAN THE NEWLY STABILIZED STREAM BANK TO BE STABILIZED AS SOON AS PRACTICABLE BUT NO LATER THAN 45 DAYS FROM THE TIME OF INITIAL DISTURBANCE, UNLESS A SHORTER TIME IS SPECIFIED BY LOCAL AUTHORITIES, THE CONSTRUCTION SEQUENCE APPROVED AS PART OF THE ISSUED PERMIT, OR AN INDEPENDENT MONITOR.

10. PERMANENT OR TEMPORARY COVER MUST BE IN PLACE BEFORE THE GROWING SEASON ENDS. WHEN SEEDED AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDED AREAS ARE NOT MULCHED, SEED SHOULD BE PLACED FROM EARLY SPRING TO MAY 20 OR FROM AUGUST 15 TO SEPTEMBER 15. NO DISTURBED AREA SHALL BE LEFT EXPOSED DURING WINTER MONTHS (NOVEMBER THROUGH MARCH). SEE WINTER CONSTRUCTION NOTES. PLANT ANNUAL RYE GRASS PRIOR TO OCTOBER 15TH.

11. AFTER OCTOBER 15TH: WHERE MULCH IS USED, IT SHALL BE APPLIED AT TWICE THE RATE AS DURING REGULAR CONSTRUCTION SEASON TO PROVIDE ADDITIONAL PROTECTION. SNOW AND ICE SHALL BE REMOVED TO A THICKNESS LESS THAN ONE INCH BEFORE APPLYING MULCH (IF APPLICABLE) TO DISTURBED SOILS. WHERE FINISHED GRADE IS ACHIEVED, OR BEFORE FORECASTED THAW OR SPRING MELT, MULCH MUST BE SECURED WITH EROSION CONTROL NETTING, TRACKING, OR OTHER METHOD. DIVERSION SWALES OR DITCHES WITHOUT STABILIZED VEGETATION BY OCTOBER 15TH SHALL BE STABILIZED WITH STONE FILL OR EROSION CONTROL NETTING AS APPROVED BY OWNER OR OWNER'S DESIGNATED REPRESENTATIVE.

12. ONCE DISTURBED AREAS HAVE BEEN STABILIZED AND VEGETATION IS ESTABLISHED, ALL TEMPORARY EROSION CONTROL MEASURES SUCH AS SILT FENCE SHALL BE REMOVED. AREAS DISTURBED BY REMOVAL OF THESE MEASURES SHALL BE IMMEDIATELY SEEDED ACCORDING TO SEEDING SPECIFICATIONS ON THESE DRAWINGS.

13. SPECIES CONSIDERED LOCALLY INVASIVE OR NOXIOUS MAY NOT BE USED.

14. USE ONLY NON–PHOSPHATE FERTILIZERS WITHIN 20' OF SURFACE WATERS.

15. DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO THE SITE AND RE–GRADED ONTO OPEN AREAS. POST SEEDING SEDIMENT, IF ANY, WILL BE DISPOSED OF IN AN ACCEPTABLE MANNER.

16. RE–VEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND RE–VEGETATED AS FOLLOWS:

    16.1. A MINIMUM OF FOUR (4) INCHES OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE.

    16.2. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST. IF SOIL TESTING IS NOT DEEMED FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 800 POUNDS PER ACRE OR 18.4 POUNDS PER 1,000 SQUARE FEET USING 10–20–20 (N–P205–K20) OR EQUIVALENT. APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE (138 LB PER 1,000 SQ. FT.).

    16.3. FOLLOWING SEED BED PREPARATION, DITCHES AND BACK SLOPES WILL BE SEEDED WITH A MIXTURE OF 47% CREEPING RED FESCUE, 5% REDTOP, AND 48% TALL FESCUE. THE LAWN AREAS WILL BE SEEDED WITH A PREMIUM TURF MIXTURE OF 44% KENTUCKY BLUEGRASS, 44% CREEPING RED FESCUE, AND 12% PERENNIAL RYE GRASS: SEEDING RATE IS 1.03 LBS PER 1000 SQ. FT. LAWN QUALITY SOD MAY BE SUBSTITUTED FOR SEED.

    16.4. HAY MULCH AT THE RATE OF 70–90 LBS PER 1000 SQUARE FEET OR A HYDRO–APPLICATION OF CELLULOSE FIBER SHALL BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER WILL BE USED ON HAY MULCH FOR WIND CONTROL.

17. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE SITE IS STABILIZED.

18. AN AREA IS CONSIDERED "STABLE" IF ONE OF THE FOLLOWING HAS OCCURRED: BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED; A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED; A MINIMUM OF 3" OF NON–EROSIVE MATERIAL (SUCH AS STONE RIP RAP OR A CERTIFIED COMPOST BLANKET) HAS BEEN INSTALLED; OR EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

19. WETLANDS (EXCEPT THOSE WHICH ARE TO BE FILLED IN ACCORDANCE WITH STATE AND FEDERAL REGULATIONS) WILL BE PROTECTED WITH SILT FENCE INSTALLED AT THE EDGE OF THE WETLAND OR THE BOUNDARY OF WETLAND DISTURBANCE.

20. IN GENERAL, AREAS WITHIN 100 FEET OF DELINEATED WETLANDS OR STREAMS SHALL HAVE A MAXIMUM PERIOD OF EXPOSURE OF NOT MORE THAN 15 DAYS.

21. FOLLOW APPROPRIATE EROSION CONTROL MEASURES PRIOR TO EACH STORM IN ALL AREAS WITHIN 100 FEET OF DELINEATED WETLANDS OR STREAMS.

22. THE DETENTION POND SHALL NOT HAVE WATER DIRECTED TO IT UNTIL THE SLOPES HAVE ESTABLISHED A 75% VEGETATIVE GROWTH.

23. THE DETENTION POND EMBANKMENT WILL BE MULCHED AT TWICE THE RATE FOR HAY MULCH OR WITH AN EROSION CONTROL BARK MULCH MIX IF THEY ARE NOT FULLY STABILIZED BY NOVEMBER 15TH.

EROSION CONTROL – INSPECTION, MONITORING & MAINTENANCE:

1. THE CONTRACTOR SHALL PREPARE A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IN ACCORDANCE WITH THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION (NHDOT), SECTION 645.

2. THE CONTRACTOR SHALL MAINTAIN INSPECTION AND REPAIR REPORTS OF EROSION AND SEDIMENT CONTROL MONITORING AND THESE SHALL BE KEPT AT THE PROJECT SITE DURING CONSTRUCTION. THE REPORTS SHALL INCLUDE THE FOLLOWING:

    2.1. THE INSPECTION DATE;

    2.2. NAMES, TITLES, AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION;

    2.3. WEATHER INFORMATION AND A DESCRIPTION OF ANY DISCHARGES OCCURRING AT THE TIME OF THE INSPECTION;

    2.4. LOCATION(S) OF DISCHARGES OF SEDIMENT OR OTHER POLLUTANTS FROM THE SITE;

    2.5. LOCATION(S) OF BMPS THAT NEED TO BE MAINTAINED;

    2.6. LOCATION(S) OF BMPS THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION;

    2.7. LOCATION(S) WHERE ADDITIONAL BMPS ARE NEEDED THAT DID NOT EXIST AT THE TIME OF INSPECTION; AND,

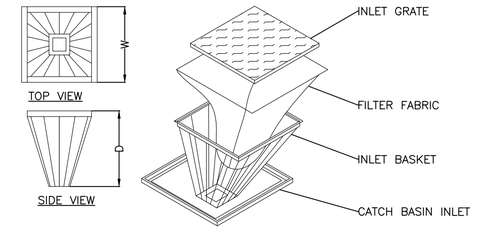
    2.8. CORRECTIVE ACTION REQUIRED INCLUDING IMPLEMENTATION DATES

3. AT LEAST ONCE EVERY 7 CALENDAR DAYS AND DURING OR WITHIN 24 HOURS OF ANY RAIN EVENT IN WHICH 1/2 –INCH OF PRECIPITATION OR MORE FALLS WITHIN A 24–HOUR PERIOD. THE CONTRACTOR SHALL HAVE QUALIFIED PERSONNEL INSPECT ALL CLEARED AND GRADED AREAS OF THE CONSTRUCTION SITE AND ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES.

4. THIS INSPECTION WILL VERIFY THAT ALL EROSION CONTROL DEVICES ARE IN GOOD AND WORKING CONDITION. DISCHARGE LOCATIONS WILL BE INSPECTED TO VERIFY THAT SEDIMENTS ARE NOT ENTERING THE DRAINAGE SYSTEM AND ARE NOT EXITING THE PROJECT SITE. VEHICLE ACCESS LOCATIONS WILL BE INSPECTED FOR EVIDENCE OF SEDIMENT TRACKING INTO THE PUBLIC RIGHT–OF–WAY.

5. ANY OBSERVED ACCUMULATION OF SEDIMENT OFF THE SITE WILL BE IMMEDIATELY REMOVED AND THE AREA RESTORED TO PRE–CONSTRUCTION CONDITIONS.

6. TEMPORARY MEASURES
INSPECTION SHALL VERIFY THAT ANY TEMPORARY MEASURES BEING USED BY THE CONTRACTOR ARE CONSTRUCTED AND OPERATING IN ACCORDANCE WITH APPROVED STANDARDS AND SPECIFICATIONS. MEASURES SHALL BE REPAIRED AND ACCUMULATION OF SEDIMENTS SHALL BE CLEANED AS NEEDED.



NOTES:

1. INLET BASKETS SHALL BE USED ON CATCH BASINS DURING CONSTRUCTION AS INDICATED ON PLANS. INLET BASKETS SHALL BE FURNISHED AND INSTALLED AS MANUFACTURED BY "METAL–ERA, INC.," WAUKESHA, WI., OR APPROVED EQUAL, IN STRICT ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS AND SPECIFICATIONS. BASKET FRAME CONSISTS OF COMMERCIAL GRADE STEEL ANGLES (ASTM A36). SIDES TO BE 1/8"X2"X2", BACK AND FRONT 1/8"X1"X1" WELDED IN PLACE. LENGTH AND WIDTH OF OPENING TO BE DETERMINED BY INSIDE DIMENSIONS OF EXISTING INLET GRATES OR PRE–CAST CONCRETE OPENINGS. THE SIDES OF THE INLET BASKET SHALL BE A MINIMUM OF 1/4 INCH DIAMETER STEEL RODS, APPROXIMATELY 14 INCHES DEEP. BOTTOM FRAME TO BE 1/4"X1" FLATS 5"X5" WELDED. A MINIMUM OF 14 RODS SHALL BE WELDED IN PLACE BETWEEN THE TOP FRAME/BASKET HANGER AND THE BOTTOM FRAME. CERTAIN NON–TYPICAL INLETS MAY REQUIRE SPECIAL CONFIGURATIONS, AND/OR SHALLOWER DEPTH BASKETS.

2. FILTER FABRIC SHALL BE PUSHED DOWN AND FORMED TO THE SHAPE OF THE BASKET. THE SHEET OF FABRIC SHALL BE LARGE ENOUGH TO BE SUPPORTED BY THE BASKET FRAME WHEN HOLDING SEDIMENT AND EXTEND AT LEAST 6 INCHES PAST THE FRAME. THE INLET GRATE SHALL BE PLACED OVER THE BASKET/FRAME AND WILL SERVE AS THE FABRIC ANCHOR.

3. THE FILTER FABRIC SHALL BE A GEO–TEXTILE FABRIC:
POLYESTER, POLYPROPYLENE, STABILIZED NYLON, POLYETHYLENE OR POLYVINYLIDENE CHLORIDE MEETING THE FOLLOWING SPECIFICATIONS:
GRAB STRENGTH: 45 LB. MINIMUM IN ANY PRINCIPAL DIRECTION (ASTM D1682).
MULLEN BURST STRENGTH: MINIMUM 60 psi (ASTM D774).

4. THE FABRIC SHALL HAVE AN OPENING NO GREATER THAN A NUMBER 20 U.S. STANDARD SIEVE AND MINIMUM PERMEABILITY OF 120 gpm/sq. ft.

5. THE INLET BASKET SHALL BE INSPECTED WITHIN 24 HOURS AFTER EACH RAINFALL OR DAILY DURING EXTENDED PERIODS OF PRECIPITATION. REPAIRS SHALL BE MADE IMMEDIATELY, AS NECESSARY, TO PREVENT PARTICLES FROM ENTERING THE DRAINAGE PIPING SYSTEM AND/OR CAUSING SURFACE FLOODING.

6. INLET BASKETS SHALL BE MAINTAINED IN PLACE UNTIL ALL PAVING IS COMPLETED AND ALL UNPAVED AREAS HAVE BEEN STABILIZED WITH VEGETATION. THEY SHALL BE REMOVED UPON COMPLETION.

CATCH BASIN FILTER BASKET DETAIL

NOT TO SCALE

BID DOCUMENTS – NOT FOR CONSTRUCTION

D&K FILE	NAME1	DATE DATE1
DESIGNED BY	NAME2	DATE DATE2
CHECKED BY	NAME3	DATE DATE3

DuBois & King inc.

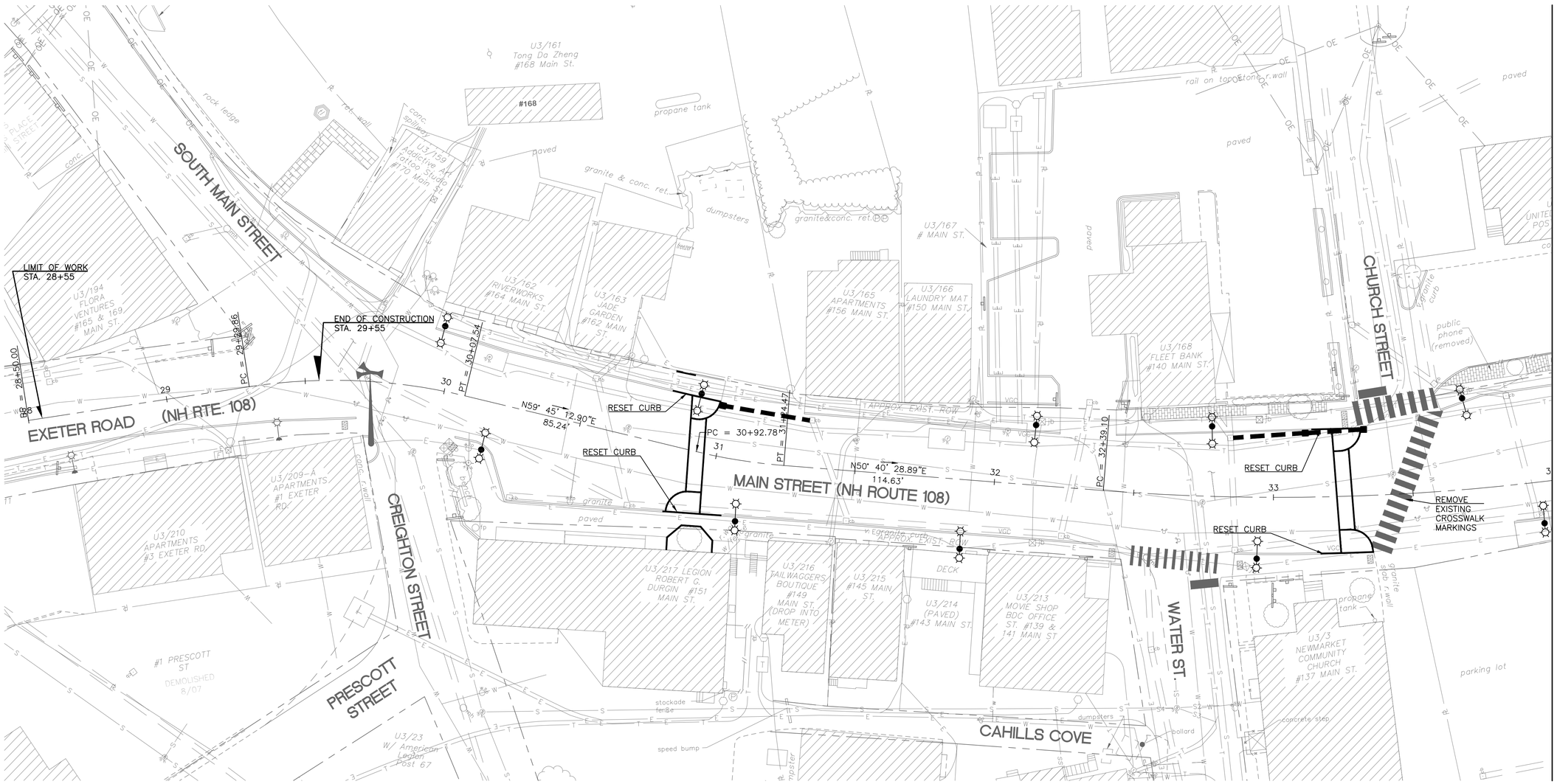
STATE OF NEW HAMPSHIRE – SCOTT M. BOURDER No. 11010 – LICENSED PROFESSIONAL ENGINEER
5/13/15

NEWMARKET, NEW HAMPSHIRE

NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X–A001(108)

EROSION CONTROL NOTES & DETAILS

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	14	36



BID DOCUMENTS – NOT FOR CONSTRUCTION

D&K FILE	NAME1	DATE DATE1
DESIGNED BY	NAME2	DATE DATE2
CHECKED BY	NAME3	DATE DATE3

DuBois & King inc.

STATE OF NEW HAMPSHIRE SCOTT M. BOURGER No. 11910 LICENSED PROFESSIONAL ENGINEER 5/13/15

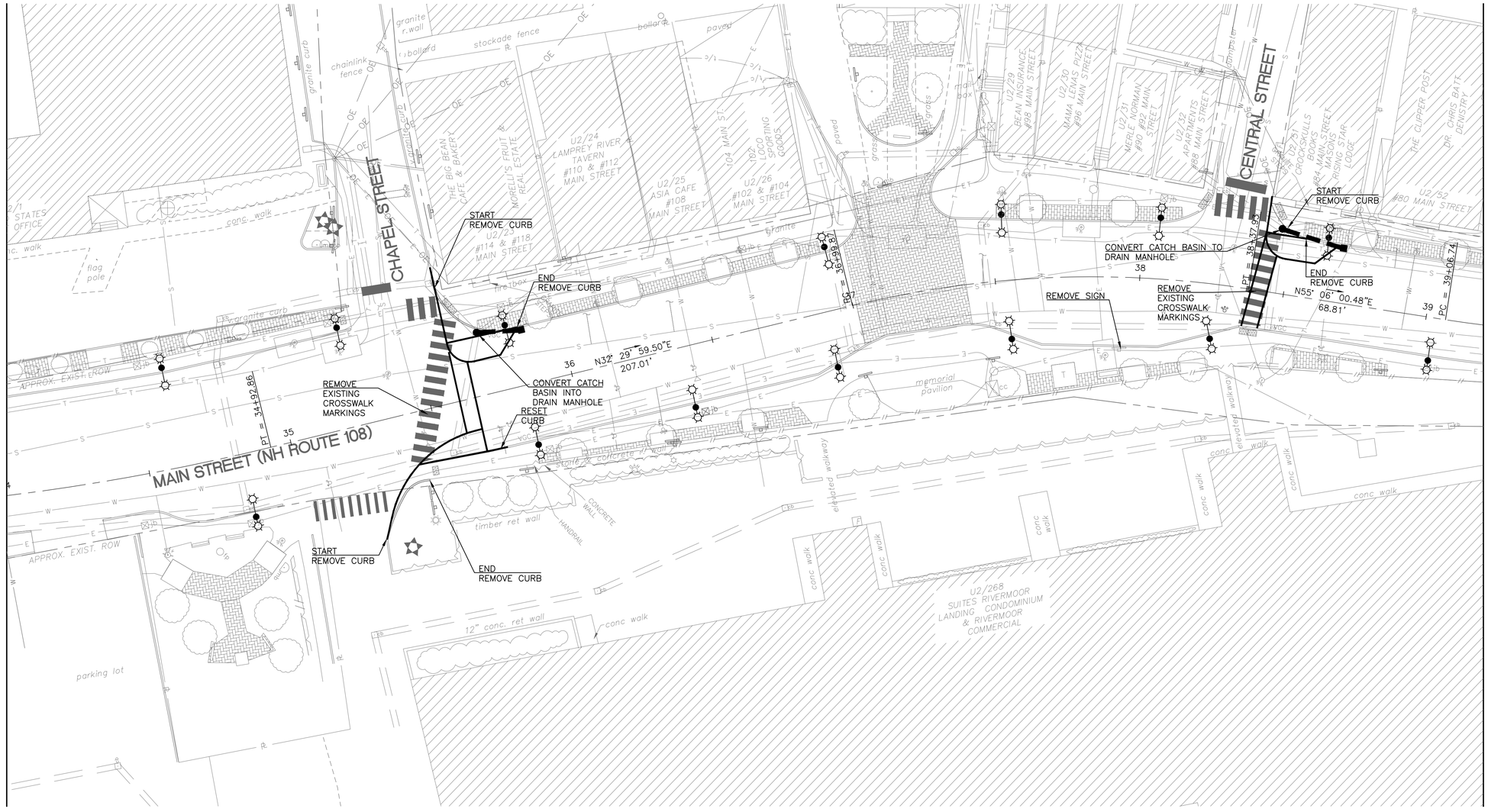
NEWMARKET, NEW HAMPSHIRE

NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X-A001(108)

GENERAL PLANS (SHEET 1 OF 4)

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	15	36

MATCHLINE – STA. 34+00
CONTINUED ON PREVIOUS SHEET



MATCHLINE – STA. 39+20
CONTINUED ON NEXT SHEET

BID DOCUMENTS – NOT FOR CONSTRUCTION

HORIZONTAL GRAPHIC SCALE
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1" = 20'

D&K FILE	NAME1	DATE	DATE1
DESIGNED BY	NAME2	DATE	DATE2
CHECKED BY	NAME3	DATE	DATE3

DuBois & King inc.

STATE OF NEW HAMPSHIRE SCOTT A. BOURDER No. 11010 LICENSED PROFESSIONAL ENGINEER 5/13/15

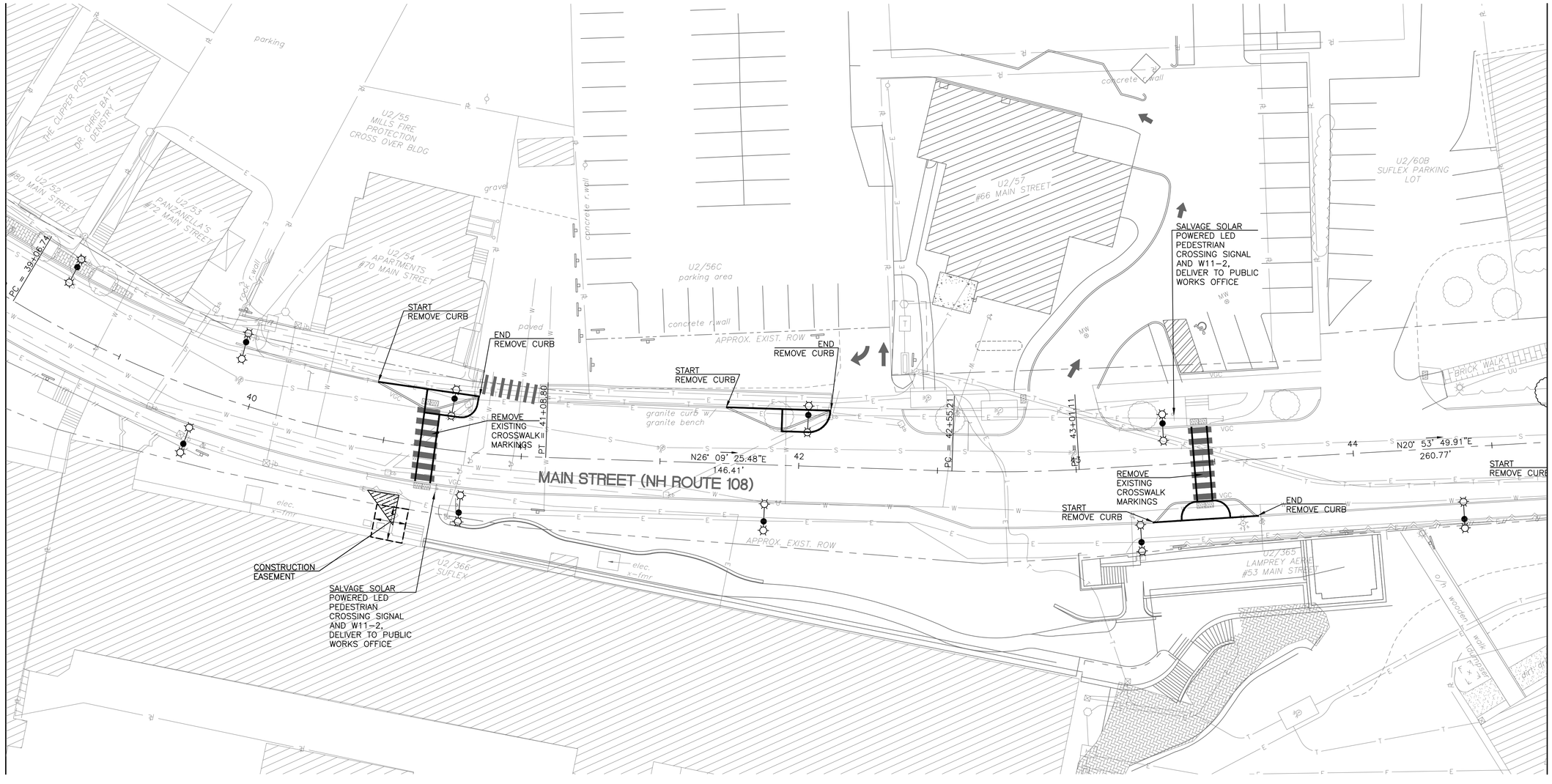
NEWMARKET, NEW HAMPSHIRE

NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X-A001(108)

GENERAL PLANS
(SHEET 2 OF 4)

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	16	36

MATCHLINE – STA. 39+20
CONTINUED ON PREVIOUS SHEET



MATCHLINE – STA. 44+70
CONTINUED ON NEXT SHEET

BID DOCUMENTS – NOT FOR CONSTRUCTION

HORIZONTAL GRAPHIC SCALE

0 10 20 40

1" = 20'

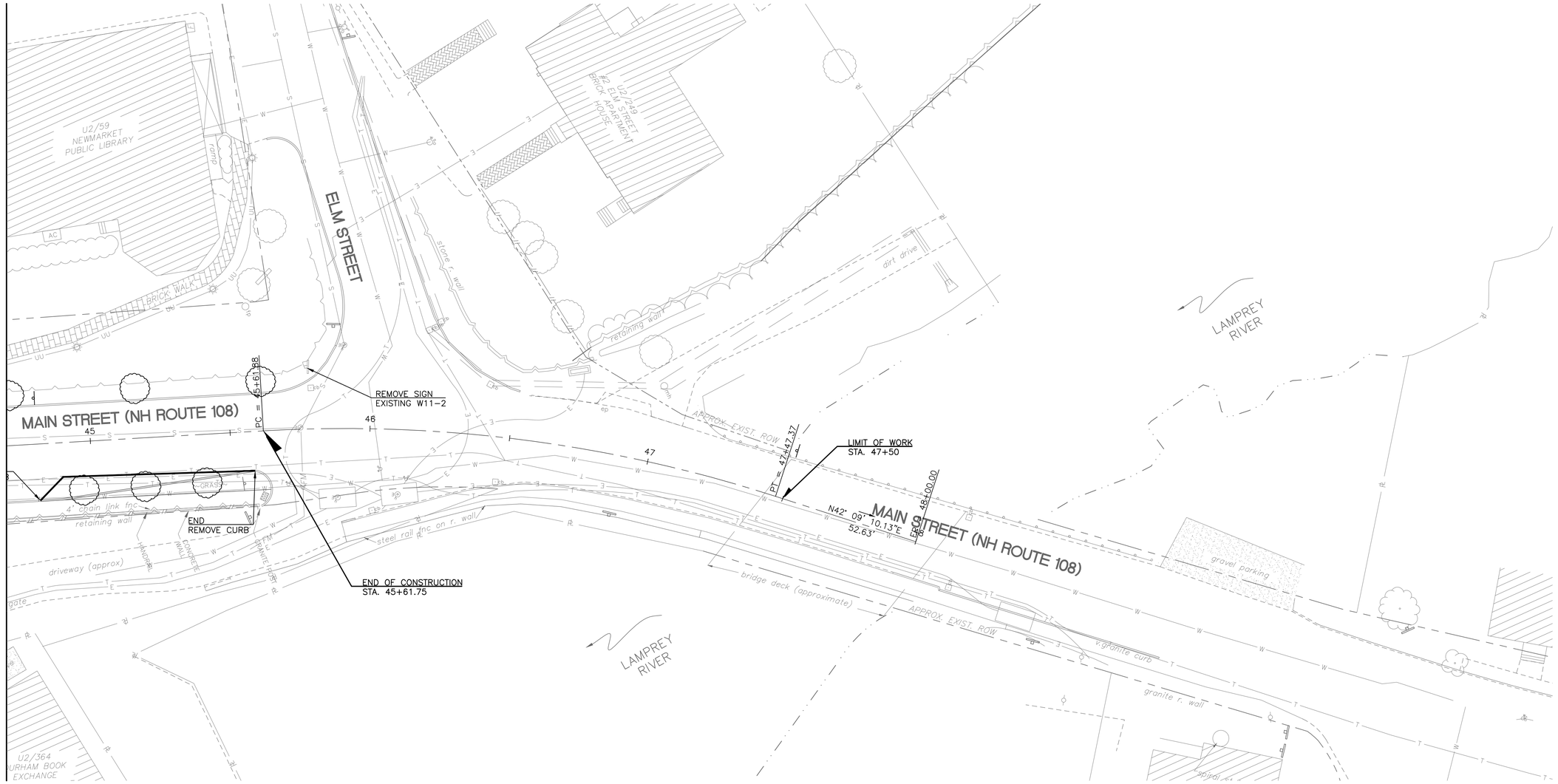
D&K FILE	NAME1	DATE DATE1
DESIGNED BY	NAME2	DATE DATE2
CHECKED BY	NAME3	DATE DATE3

DuBois & King inc.

STATE OF NEW HAMPSHIRE
SCOTT M. BOURQUER
N.H. 11010
LICENSED
PROFESSIONAL ENGINEER
5/13/15

NEWMARKET, NEW HAMPSHIRE		
NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X-A001(108)		
GENERAL PLANS (SHEET 3 OF 4)		
D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	17	36

MATCHLINE – STA. 44+70
CONTINUED ON PREVIOUS SHEET



BID DOCUMENTS – NOT FOR CONSTRUCTION

HORIZONTAL GRAPHIC SCALE

0 10 20 40

1" = 20'

D&K FILE	NAME1	DATE	DATE1
DESIGNED BY	NAME2	DATE	DATE2
CHECKED BY	NAME3	DATE	DATE3

DuBois & King inc.

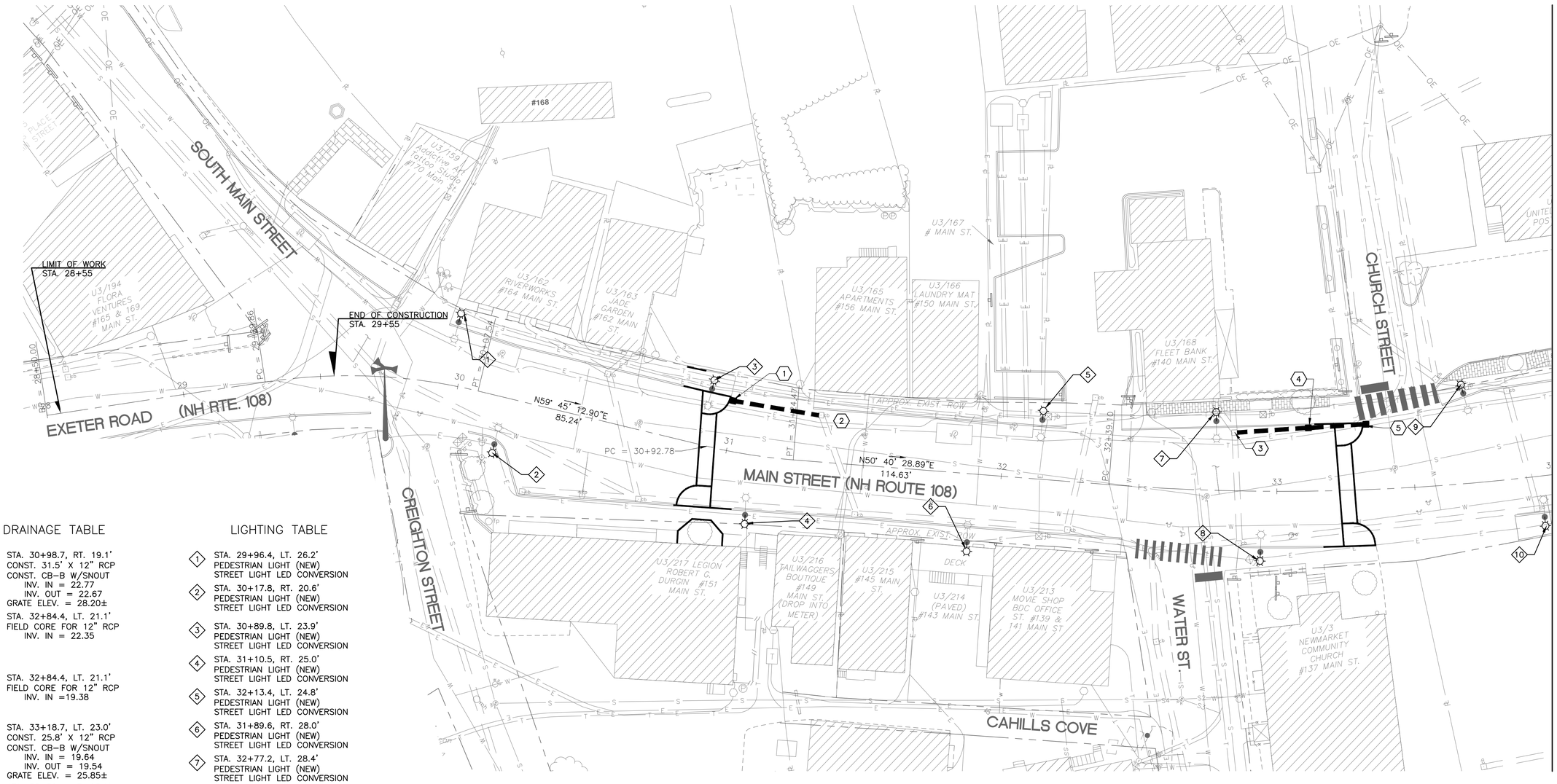
STATE OF NEW HAMPSHIRE
SCOTT M. BOURQUER
NO. 11910
LICENSED
PROFESSIONAL ENGINEER
5/13/15

NEWMARKET, NEW HAMPSHIRE

NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X-A001(108)

GENERAL PLANS
(SHEET 4 OF 4)

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	18	36



BID DOCUMENTS – NOT FOR CONSTRUCTION

DRAINAGE TABLE

1. STA. 30+98.7, RT. 19.1'
   CONST. 31.5' X 12" RCP
   CONST. CB–B W/SNOUT
   INV. IN = 22.77
   INV. OUT = 22.67
   GRATE ELEV. = 28.20±
2. STA. 32+84.4, LT. 21.1'
   FIELD CORE FOR 12" RCP
   INV. IN = 22.35
3. STA. 32+84.4, LT. 21.1'
   FIELD CORE FOR 12" RCP
   INV. IN =19.38
4. STA. 33+18.7, LT. 23.0'
   CONST. 25.8' X 12" RCP
   CONST. CB–B W/SNOUT
   INV. IN = 19.64
   INV. OUT = 19.54
   GRATE ELEV. = 25.85±
5. STA. 33+32.4, LT. 23.2'
   CONST. 20' X 12" RCP
   CONST. CB–B W/SNOUT
   INV. OUT = 19.84
   GRATE ELEV. = 25.80±

LIGHTING TABLE

1. STA. 29+96.4, LT. 26.2'
   PEDESTRIAN LIGHT (NEW)
   STREET LIGHT LED CONVERSION
2. STA. 30+17.8, RT. 20.6'
   PEDESTRIAN LIGHT (NEW)
   STREET LIGHT LED CONVERSION
3. STA. 30+89.8, LT. 23.9'
   PEDESTRIAN LIGHT (NEW)
   STREET LIGHT LED CONVERSION
4. STA. 31+10.5, RT. 25.0'
   PEDESTRIAN LIGHT (NEW)
   STREET LIGHT LED CONVERSION
5. STA. 32+13.4, LT. 24.8'
   PEDESTRIAN LIGHT (NEW)
   STREET LIGHT LED CONVERSION
6. STA. 31+89.6, RT. 28.0'
   PEDESTRIAN LIGHT (NEW)
   STREET LIGHT LED CONVERSION
7. STA. 32+77.2, LT. 28.4'
   PEDESTRIAN LIGHT (NEW)
   STREET LIGHT LED CONVERSION
8. STA. 32+94.1, RT. 25.2'
   PEDESTRIAN LIGHT (NEW)
   STREET LIGHT LED CONVERSION
9. STA. 33+69.8, LT. 35.9'
   PEDESTRIAN LIGHT (NEW)
   STREET LIGHT LED CONVERSION
10. STA. 33+95.4, RT. 18.1'
    PEDESTRIAN LIGHT (NEW)
    STREET LIGHT LED CONVERSION

HORIZONTAL GRAPHIC SCALE
0 10 20 40
1" = 20'

D&K FILE	NAME1	DATE	DATE1
DESIGNED BY	NAME2	DATE	DATE2
CHECKED BY	NAME3	DATE	DATE3

DuBois & King inc.

STATE OF NEW HAMPSHIRE
SCOTT M. BOURQUER
No. 11910
LICENSED
PROFESSIONAL ENGINEER
5/13/15

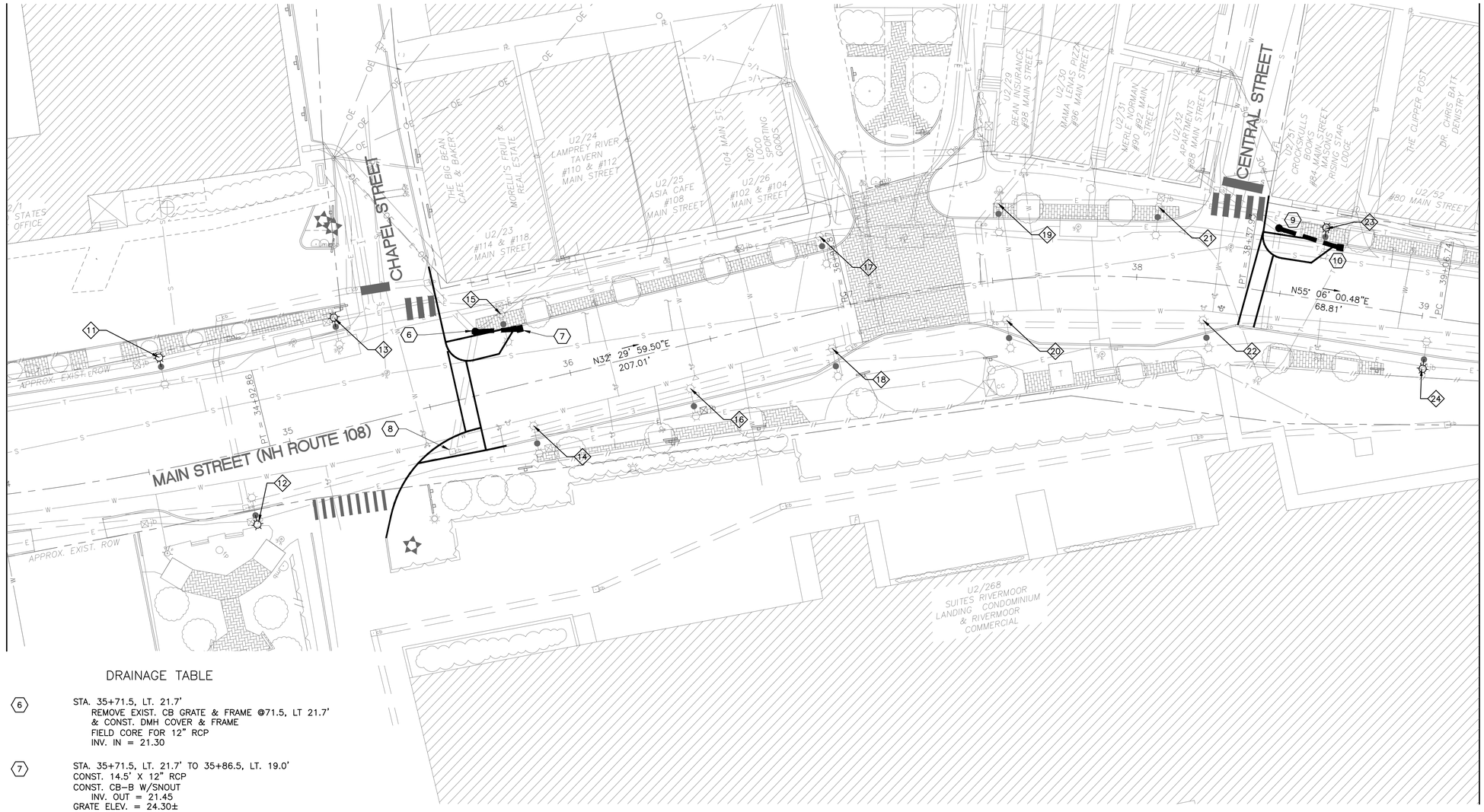
NEWMARKET, NEW HAMPSHIRE

NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X–A001(108)

DRAINAGE AND UTILITY PLANS
(SHEET 1 OF 3)

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	19	36

MATCHLINE – STA. 34+00
CONTINUED ON PREVIOUS SHEET



MATCHLINE – STA. 39+20
CONTINUED ON NEXT SHEET

BID DOCUMENTS – NOT FOR CONSTRUCTION

DRAINAGE TABLE

6 STA. 35+71.5, LT. 21.7'
REMOVE EXIST. CB GRATE & FRAME @71.5, LT 21.7'
& CONST. DMH COVER & FRAME
FIELD CORE FOR 12" RCP
INV. IN = 21.30

7 STA. 35+71.5, LT. 21.7' TO 35+86.5, LT. 19.0'
CONST. 14.5' X 12" RCP
CONST. CB–B W/SNOUT
INV. OUT = 21.45
GRATE ELEV. = 24.30±

8 STA. 35+53.9, RT. 16.9'
ADJUST CB COVER AND FRAME

9 STA. 38+46.2, LT. 22.3'
REMOVE EXIST. CB GRATE & FRAME @46.2, LT 22.3'
& CONST. DMH COVER & FRAME
FIELD CORE FOR 12" RCP
INV. IN = 21.90
COVER ELEV. = 29.10±

10 STA. 38+46.2, LT. 22.3' TO 38+68.3, LT. 19.0'
CONST. 21' X 12" RCP
CONST. CB–B W/SNOUT
INV. OUT = 22.12
GRATE ELEV. = 28.50

LIGHTING TABLE

11 STA. 34+61.3, LT. 38.3'
PEDESTRIAN LIGHT (NEW)
STREET LIGHT LED CONVERSION

12 STA. 34+82.5, RT. 25.5'
PEDESTRIAN LIGHT (NEW)
STREET LIGHT LED CONVERSION

13 STA. 35+25.0, LT. 38.0'
PEDESTRIAN LIGHT (NEW)
STREET LIGHT LED CONVERSION

14 STA. 35+25.0, LT. 38.0'
PEDESTRIAN LIGHT LED CONVERSION
STREET LIGHT LED CONVERSION

15 STA. 35+25.0, LT. 38.0'
PEDESTRIAN LIGHT LED CONVERSION
STREET LIGHT LED CONVERSION

16 STA. 35+25.0, LT. 38.0'
PEDESTRIAN LIGHT LED CONVERSION
STREET LIGHT LED CONVERSION

17 STA. 35+25.0, LT. 38.0'
PEDESTRIAN LIGHT LED CONVERSION
STREET LIGHT LED CONVERSION

18 STA. 35+25.0, LT. 38.0'
PEDESTRIAN LIGHT LED CONVERSION
STREET LIGHT LED CONVERSION

19 STA. 35+25.0, LT. 38.0'
PEDESTRIAN LIGHT LED CONVERSION
STREET LIGHT LED CONVERSION

20 STA. 35+25.0, LT. 38.0'
PEDESTRIAN LIGHT LED CONVERSION
STREET LIGHT LED CONVERSION

21 STA. 35+25.0, LT. 38.0'
PEDESTRIAN LIGHT LED CONVERSION
STREET LIGHT LED CONVERSION

22 STA. 35+25.0, LT. 38.0'
PEDESTRIAN LIGHT LED CONVERSION
STREET LIGHT LED CONVERSION

23 STA. 38+62.4, LT. 25.1'
PEDESTRIAN LIGHT (NEW)
STREET LIGHT LED CONVERSION

24 STA. 39+03.0, RT. 18.1'
PEDESTRIAN LIGHT (NEW)
STREET LIGHT LED CONVERSION

HORIZONTAL GRAPHIC SCALE
0 10 20 40
1" = 20'

DuBois & King inc.

STATE OF NEW HAMPSHIRE
SCOTT A. BOURQUER
No. 11010
LICENSED
PROFESSIONAL ENGINEER
5/13/15

NEWMARKET, NEW HAMPSHIRE

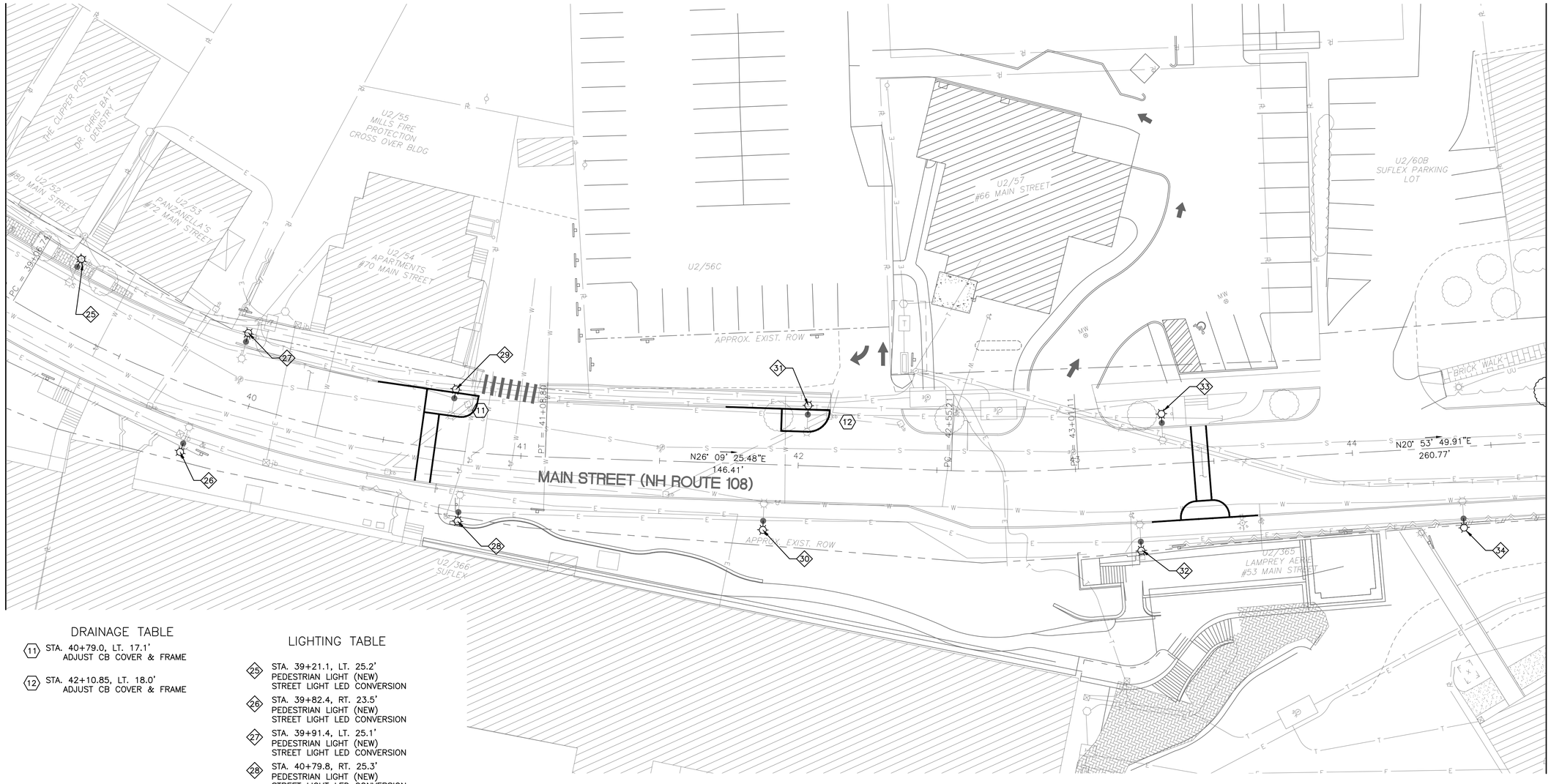
NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X–A001(108)

DRAINAGE AND UTILITY PLANS
(SHEET 2 OF 3)

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	20	36

D&K FILE	NAME1	DATE DATE1
DESIGNED BY	NAME2	DATE DATE2
CHECKED BY	NAME3	DATE DATE3

MATCHLINE – STA. 39+20
CONTINUED ON PREVIOUS SHEET



MATCHLINE – STA. 44+70
CONTINUED ON NEXT SHEET

BID DOCUMENTS – NOT FOR CONSTRUCTION

DRAINAGE TABLE

(11) STA. 40+79.0, LT. 17.1'
ADJUST CB COVER & FRAME

(12) STA. 42+10.85, LT. 18.0'
ADJUST CB COVER & FRAME

LIGHTING TABLE

(25) STA. 39+21.1, LT. 25.2'
PEDESTRIAN LIGHT (NEW)
STREET LIGHT LED CONVERSION

(26) STA. 39+82.4, RT. 23.5'
PEDESTRIAN LIGHT (NEW)
STREET LIGHT LED CONVERSION

(27) STA. 39+91.4, LT. 25.1'
PEDESTRIAN LIGHT (NEW)
STREET LIGHT LED CONVERSION

(28) STA. 40+79.8, RT. 25.3'
PEDESTRIAN LIGHT (NEW)
STREET LIGHT LED CONVERSION

(29) STA. 40+73.9, LT. 21.9'
PEDESTRIAN LIGHT (NEW)
STREET LIGHT LED CONVERSION

(30) STA. 41+88.0, RT. 23.6'
PEDESTRIAN LIGHT (NEW)
STREET LIGHT LED CONVERSION

(31) STA. 42+03.0, LT. 21.8'
PEDESTRIAN LIGHT (NEW)
STREET LIGHT LED CONVERSION

(32) STA. 43+22.0, RT. 30.7'
PEDESTRIAN LIGHT (NEW)
STREET LIGHT LED CONVERSION

(33) STA. 43+32.1, LT. 18.1'
PEDESTRIAN LIGHT (NEW)
STREET LIGHT LED CONVERSION

(34) STA. 44+38.6, RT. 29.2'
PEDESTRIAN LIGHT (NEW)
STREET LIGHT LED CONVERSION

HORIZONTAL GRAPHIC SCALE
0 10 20 40
1" = 20'

D&K FILE	NAME1	DATE DATE1
DESIGNED BY	NAME2	DATE DATE2
CHECKED BY	NAME3	DATE DATE3

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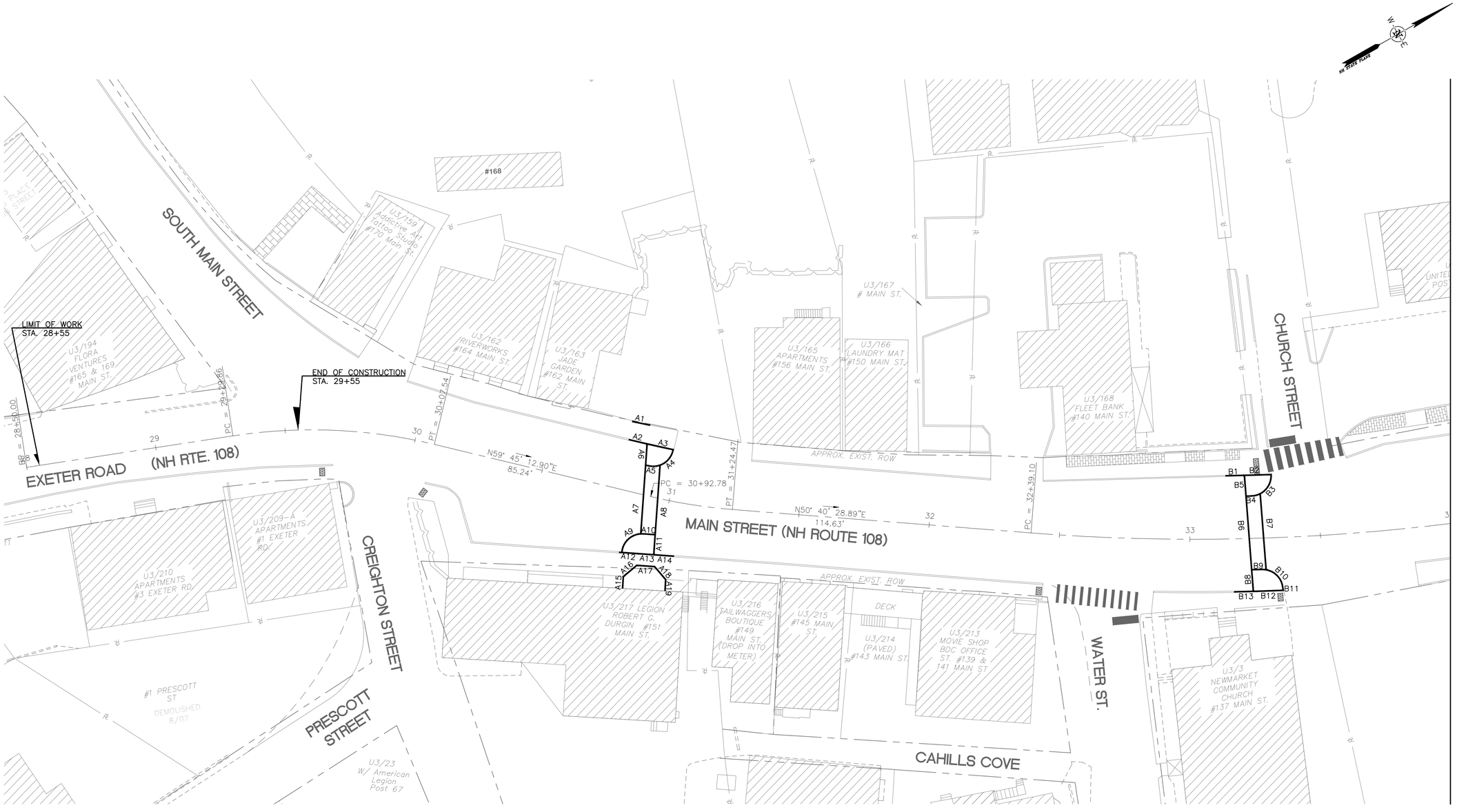
STATE OF NEW HAMPSHIRE
SCOTT M. BOURQUER
No. 11010
LICENSED
PROFESSIONAL ENGINEER
5/13/15

NEWMARKET, NEW HAMPSHIRE

NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X-A001(108)

DRAINAGE AND UTILITY PLANS
(SHEET 3 OF 3)

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	21	36



MATCHLINE – STA. 34+00
CONTINUED ON NEXT SHEET

BID DOCUMENTS – NOT FOR CONSTRUCTION

HORIZONTAL GRAPHIC SCALE

0 10 20 40

1" = 20'

D&K FILE	NAME1	DATE	DATE1
DESIGNED BY	NAME2	DATE	DATE2
CHECKED BY	NAME3	DATE	DATE3

DuBois & King inc.

STATE OF NEW HAMPSHIRE SCOTT A. BOURGER No. 11910 LICENSED PROFESSIONAL ENGINEER 5/13/15

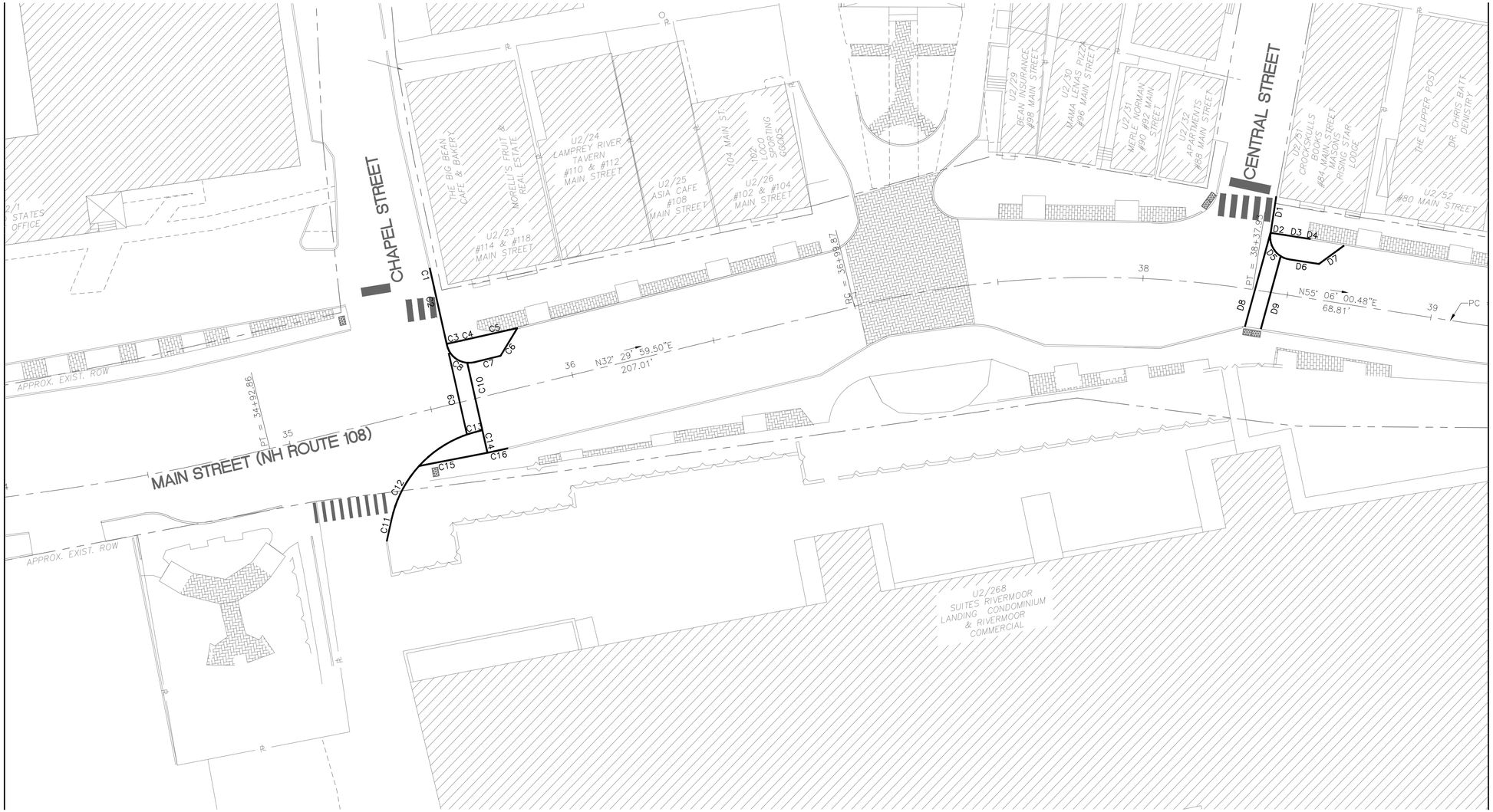
NEWMARKET, NEW HAMPSHIRE

NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X-A001(108)

CURBING LAYOUT PLANS
(SHEET 1 OF 4)

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	22	36

MATCHLINE – STA. 34+00
CONTINUED ON PREVIOUS SHEET



MATCHLINE – STA. 39+20
CONTINUED ON NEXT SHEET

BID DOCUMENTS – NOT FOR CONSTRUCTION

HORIZONTAL GRAPHIC SCALE
0 10 20 40
1" = 20'

D&K FILE	NAME1	DATE	DATE1
DESIGNED BY	NAME2	DATE	DATE2
CHECKED BY	NAME3	DATE	DATE3

DuBois & King inc.

STATE OF NEW HAMPSHIRE
SCOTT M. BOURQUER
No. 11010
LICENSED
PROFESSIONAL ENGINEER
5/13/15

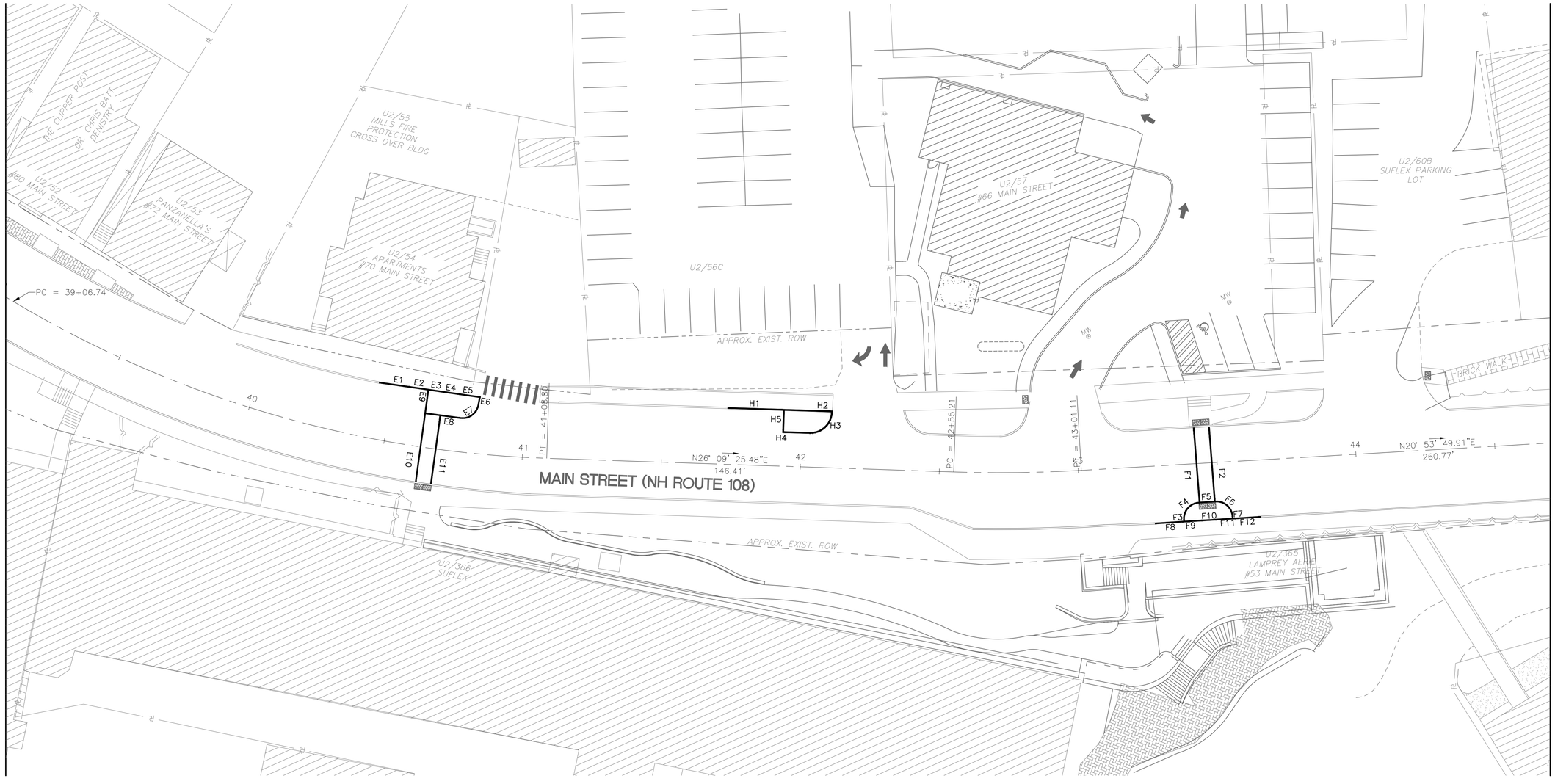
NEWMARKET, NEW HAMPSHIRE

NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X-A001(108)

CURBING LAYOUT PLANS
(SHEET 2 OF 4)

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	23	36

MATCHLINE – STA. 39+20
CONTINUED ON PREVIOUS SHEET



MATCHLINE – STA. 44+70
CONTINUED ON NEXT SHEET

BID DOCUMENTS – NOT FOR CONSTRUCTION

HORIZONTAL GRAPHIC SCALE
0 10 20 40
1" = 20'

D&K FILE	NAME1	DATE	DATE1
DESIGNED BY	NAME2	DATE	DATE2
CHECKED BY	NAME3	DATE	DATE3

DuBois & King inc.

STATE OF NEW HAMPSHIRE
SCOTT M. BOURQUER
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5/13/15

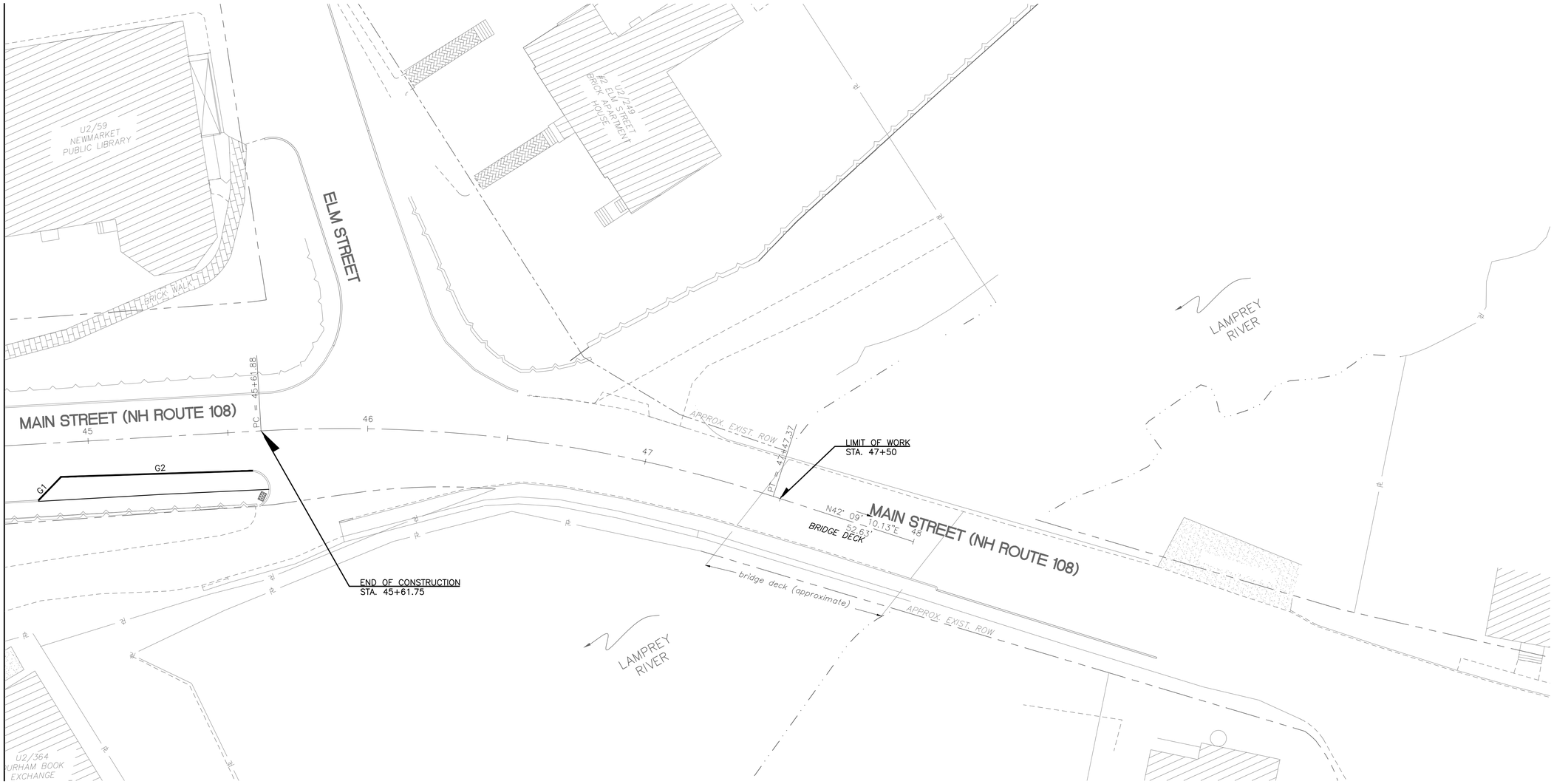
NEWMARKET, NEW HAMPSHIRE

NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X-A001(108)

CURBING LAYOUT PLANS
(SHEET 3 OF 4)

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	24	36

MATCHLINE – STA. 44+70
CONTINUED ON PREVIOUS SHEET



HORIZONTAL GRAPHIC SCALE
0 10 20 40
1" = 20'

BID DOCUMENTS – NOT FOR CONSTRUCTION

D&K FILE	NAME1	DATE	DATE1
DESIGNED BY	NAME2	DATE	DATE2
CHECKED BY	NAME3	DATE	DATE3

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STATE OF NEW HAMPSHIRE
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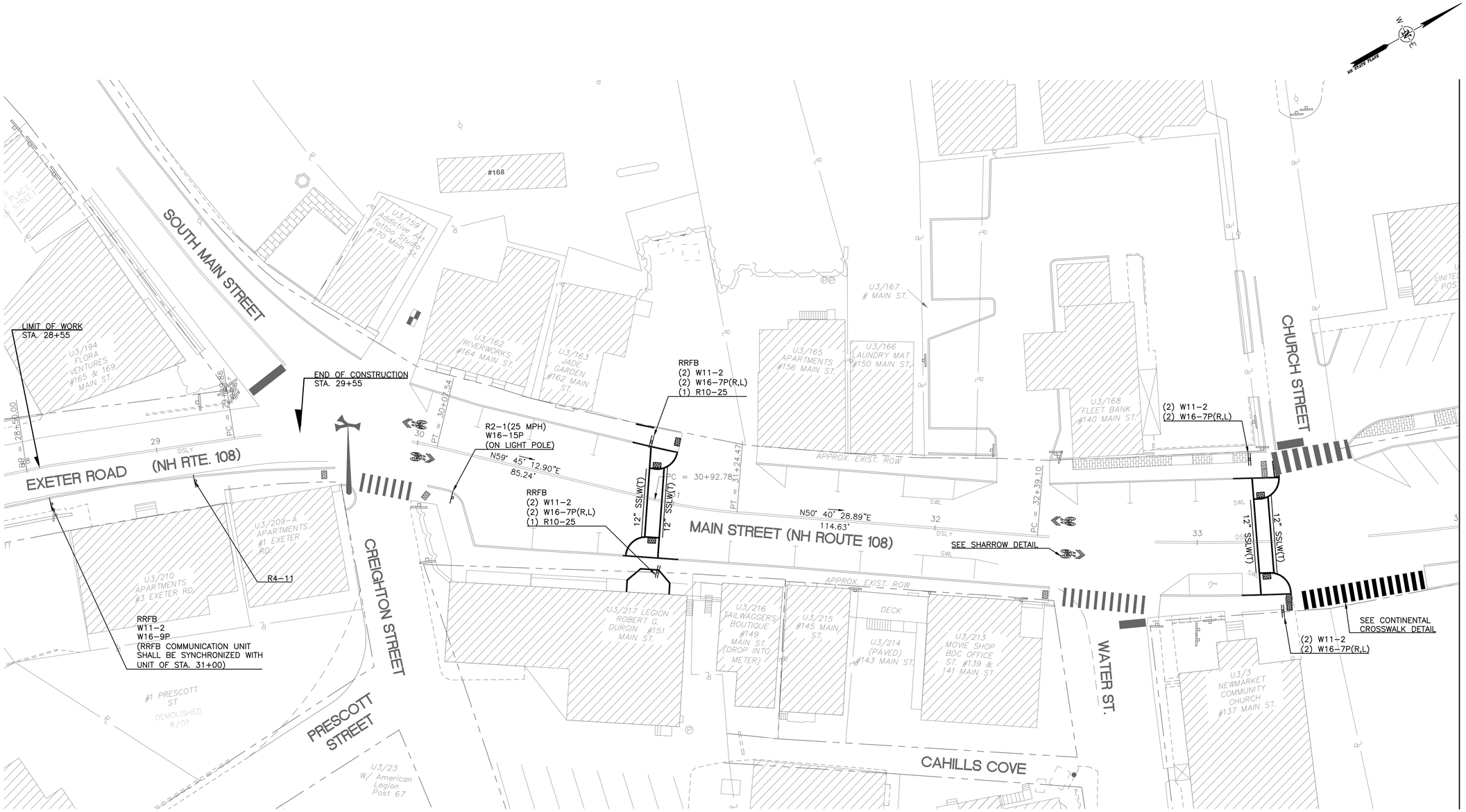
5/13/15

NEWMARKET, NEW HAMPSHIRE

NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X-A001(108)

CURBING LAYOUT PLANS
(SHEET 4 OF 4)

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	25	36



MATCHLINE – STA. 34+00
CONTINUED ON NEXT SHEET

BID DOCUMENTS – NOT FOR CONSTRUCTION

HORIZONTAL GRAPHIC SCALE
0 10 20 40
1" = 20'

D&K FILE	NAME1	DATE	DATE1
DESIGNED BY	NAME2	DATE	DATE2
CHECKED BY	NAME3	DATE	DATE3

DuBois & King inc.

STATE OF NEW HAMPSHIRE
SCOTT M. BOURQUER
No. 11910
LICENSED
PROFESSIONAL ENGINEER
5/13/15

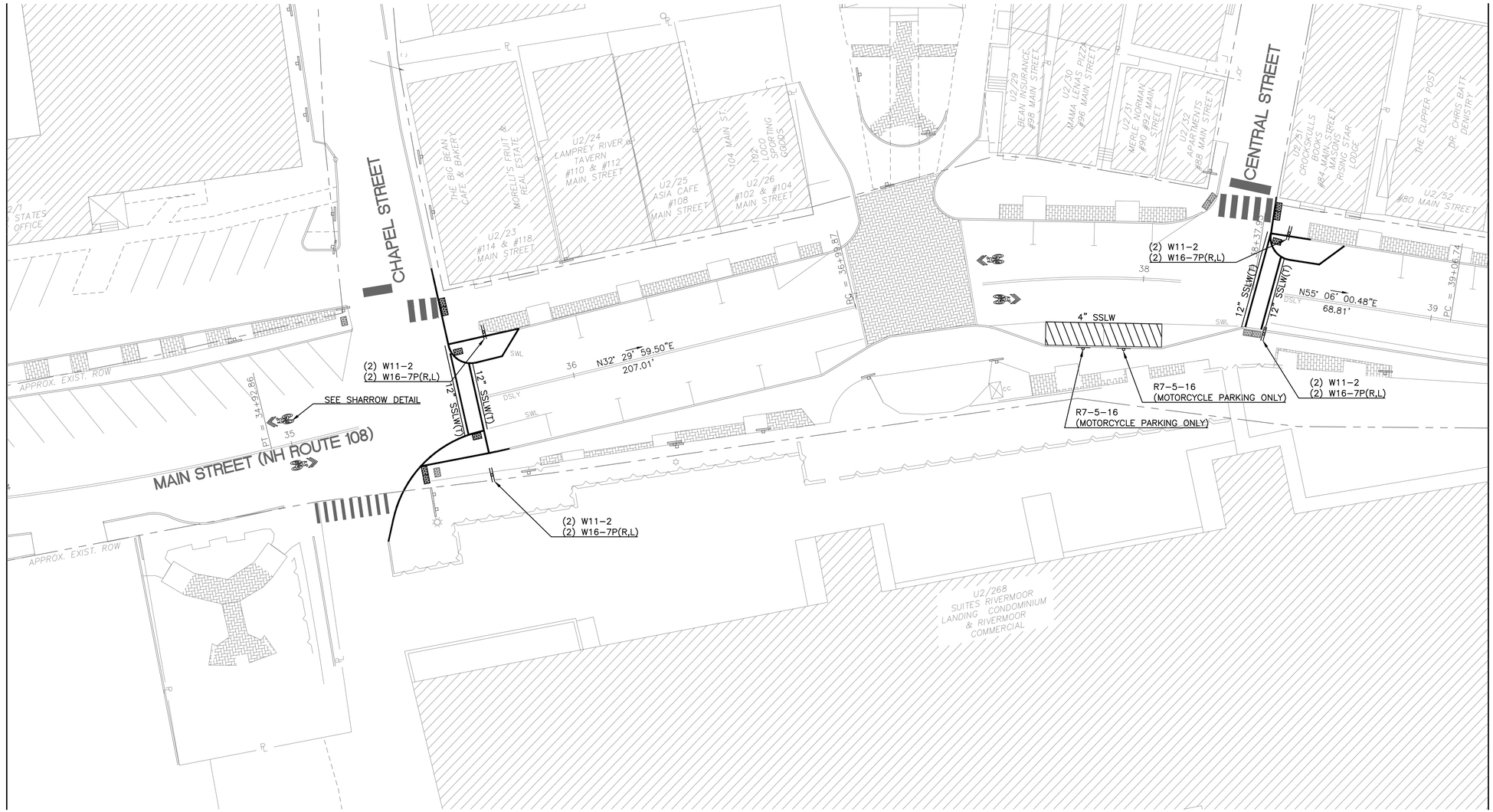
NEWMARKET, NEW HAMPSHIRE

NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X-A001(108)

PAVEMENT MARKING AND SIGN PLANS
(SHEET 1 OF 4)

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	26	36

MATCHLINE – STA. 34+00
CONTINUED ON PREVIOUS SHEET



MATCHLINE – STA. 39+20
CONTINUED ON NEXT SHEET

BID DOCUMENTS – NOT FOR CONSTRUCTION

HORIZONTAL GRAPHIC SCALE
0 10 20 40
1" = 20'

D&K FILE	NAME1	DATE	DATE1
DESIGNED BY	NAME2	DATE	DATE2
CHECKED BY	NAME3	DATE	DATE3

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STATE OF NEW HAMPSHIRE
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5/13/15

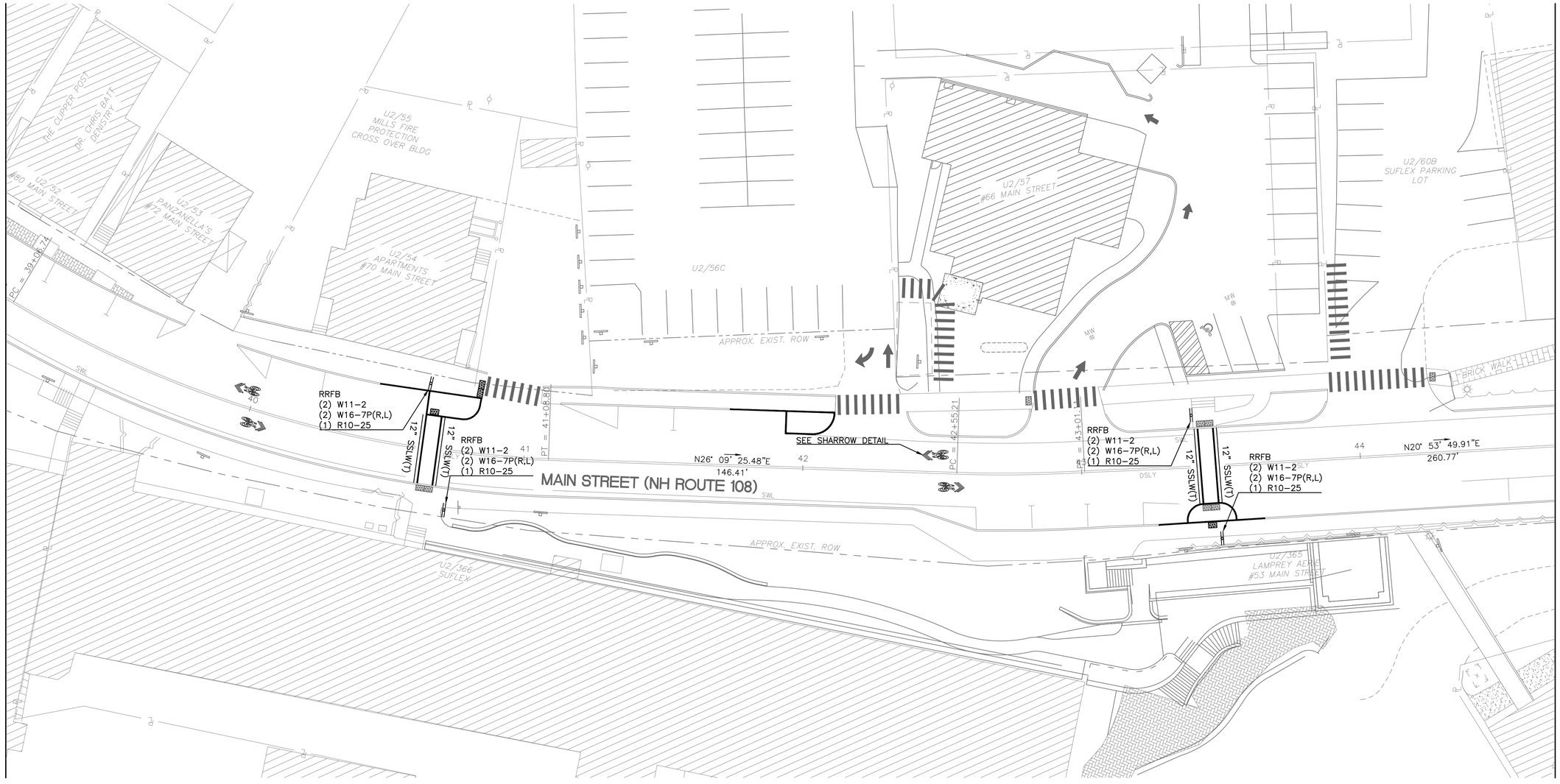
NEWMARKET, NEW HAMPSHIRE

NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X-A001(108)

PAVEMENT MARKING AND SIGN PLANS
(SHEET 2 OF 4)

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	27	36

MATCHLINE – STA. 39+20
CONTINUED ON PREVIOUS SHEET



MATCHLINE – STA. 44+70
CONTINUED ON NEXT SHEET

BID DOCUMENTS – NOT FOR CONSTRUCTION

HORIZONTAL GRAPHIC SCALE
0 10 20 40
1" = 20'

D&K FILE	NAME1	DATE	DATE1
DESIGNED BY	NAME2	DATE	DATE2
CHECKED BY	NAME3	DATE	DATE3

DuBois & King inc.

STATE OF NEW HAMPSHIRE
SCOTT A. BOURQUER
NO. 11910
LICENSED
PROFESSIONAL ENGINEER
5/13/15

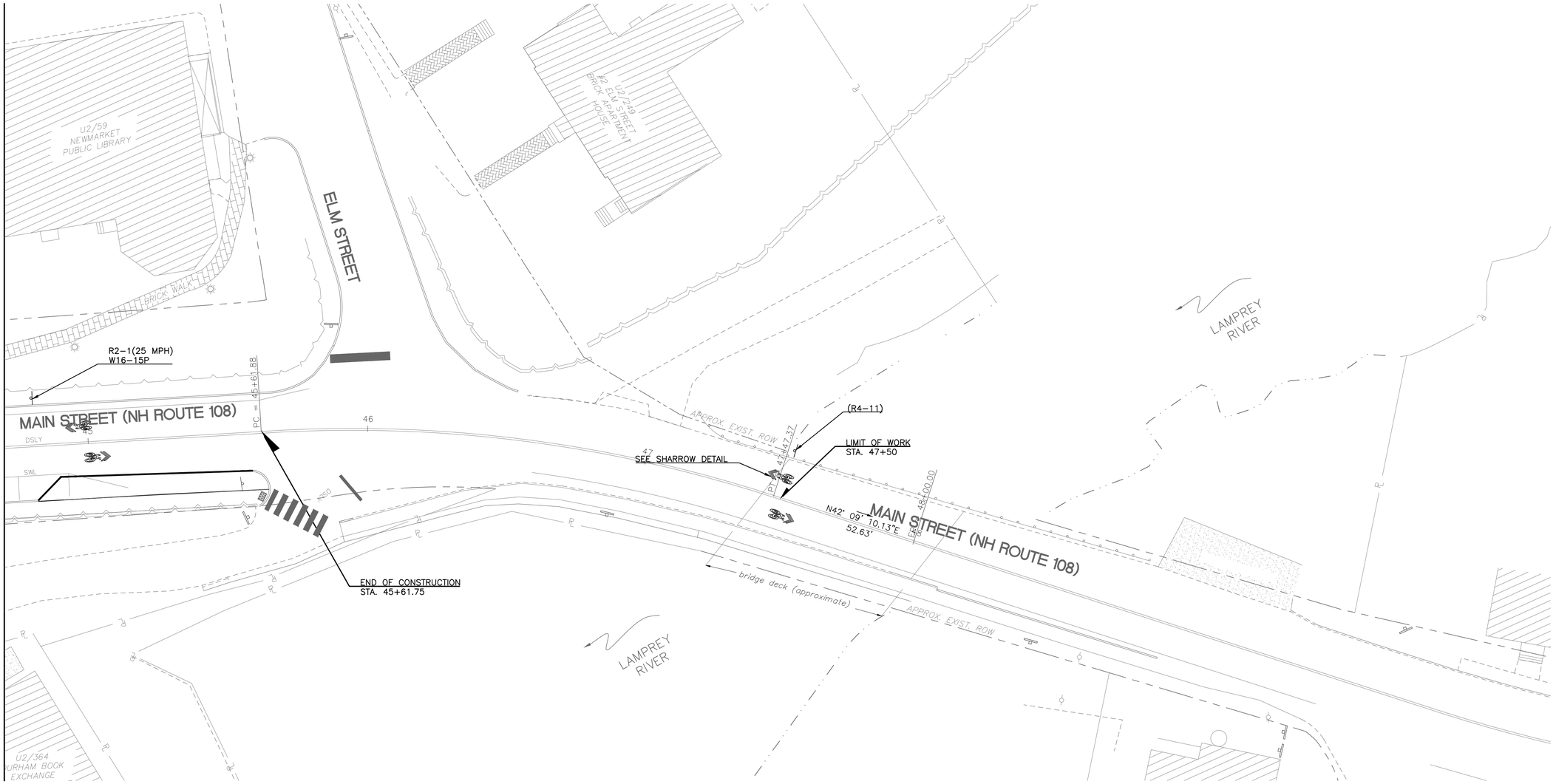
NEWMARKET, NEW HAMPSHIRE

NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X-A001(108)

PAVEMENT MARKING AND SIGN PLANS
(SHEET 3 OF 4)

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	28	36

MATCHLINE – STA. 44+70
CONTINUED ON PREVIOUS SHEET



BID DOCUMENTS – NOT FOR CONSTRUCTION

HORIZONTAL GRAPHIC SCALE
0 10 20 40
1" = 20'

D&K FILE	NAME1	DATE DATE1
DESIGNED BY	NAME2	DATE DATE2
CHECKED BY	NAME3	DATE DATE3

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STATE OF NEW HAMPSHIRE
SCOTT A. BOLDUC
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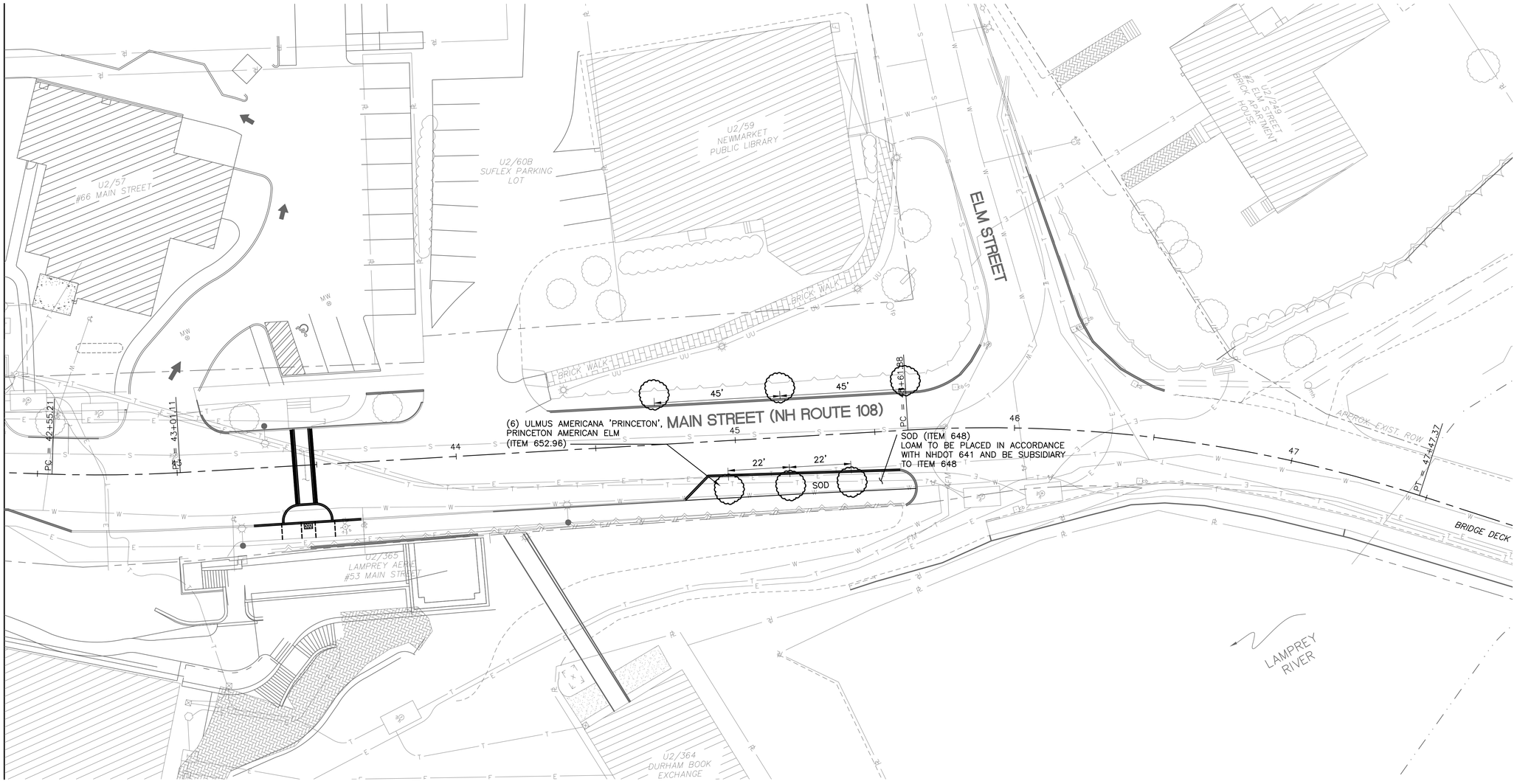
5/13/15

NEWMARKET, NEW HAMPSHIRE

NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X-A001(108)

PAVEMENT MARKING AND SIGN PLANS
(SHEET 4 OF 4)

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	29	36



BID DOCUMENTS — NOT FOR CONSTRUCTION

HORIZONTAL GRAPHIC SCALE

0 10 20 40

1" = 20'

D&K FILE	NAME1	DATE	DATE1
DESIGNED BY	NAME2	DATE	DATE2
CHECKED BY	NAME3	DATE	DATE3

DuBois & King inc.

STATE OF NEW HAMPSHIRE
SCOTT M. BOLDUCER
NO. 11010
LICENSED
PROFESSIONAL ENGINEER
5/13/15

NEWMARKET, NEW HAMPSHIRE

NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X-A001(108)

LANDSCAPING PLAN

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	30	36

TRAFFIC CONTROL NOTES:

1. TRAFFIC CONTROL DEVICES NOT DETAILED IN THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION (NHDOT) "STANDARD DRAWINGS" OR THE PROJECT PLANS SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND THE "STANDARD HIGHWAY SIGNS AND MARKINGS" BOOK (SHSM) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA). THE INSTALLATION OF TRAFFIC CONTROL DEVICES SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.

2. CONSTRUCTION SIGNS SHALL BE ERECTED BEFORE THE START OF ANY WORK AND SHALL BE COVERED UNTIL WORK COMMENCES, DURING PERIODS OF INACTIVITY OR UPON COMPLETION OF THE WORK. EACH SIGN SHALL BE ERECTED IN A NEAT AND WORKMANLIKE MANNER.

3. CONSTRUCTION SIGN COVERS SHALL CONSIST OF A PANEL, PAINTED FLAT BLACK, THE SAME SIZE AS THE SIGN IT COVERS. THE PANEL SHALL BE OF WOOD, PLYWOOD, HARDBOARD OR ANY MATERIAL SATISFACTORY TO THE ENGINEER. NO MATERIAL WILL BE APPROVED THAT WILL DETERIORATE BY EXPOSURE TO THE WEATHER DURING THE PROJECT. MOUNTING OF THE PANEL SHALL BE DONE IN SUCH A WAY AS NOT TO DAMAGE THE SIGN FACE MATERIAL.

4. SIGNS SHALL BE MAINTAINED IN A CLEAN AND LEGIBLE CONDITION SATISFACTORY TO THE ENGINEER. THEY SHALL BE KEPT PLUMB AND LEVEL, AND ALWAYS PRESENT A NEAT APPEARANCE. DAMAGED, DEFACED OR DIRTY SIGNS SHALL BE REPAIRED, CLEANED OR REPLACED AS ORDERED BY THE ENGINEER.

5. PORTABLE SIGNS SHALL BE PLACED ON THE EDGE OF ROADWAY AND A MINIMUM OF ONE FOOT ABOVE THE TRAVELED WAY. ALL VEGETATION THAT INTERFERES WITH VISIBILITY OF THE SIGNS SHALL BE REMOVED. WHEN PLACED BEHIND GUARDRAIL, THE BOTTOM OF THE SIGN FACE SHALL BE ABOVE THE TOP OF THE GUARDRAIL.

6. SIGNS SHALL BE REMOVED UPON COMPLETION OF THE WORK AT THE DISCRETION OF THE ENGINEER.

7. WHERE CONSTRUCTION SIGN INSTALLATIONS ARE NOT PROTECTED BY GUARDRAIL OR OTHER APPROVED TRAFFIC BARRIERS, ALL SIGN STANDS AND POST INSTALLATIONS SHALL MEET "NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM" (NCHRP) REPORT 350 OR THE AASHTO "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH). THE APPROPRIATE RESOURCE SHALL BE DETERMINED AS DESCRIBED IN THE MASH PUBLICATION. NO SIGN POSTS SHALL EXTEND OVER THE TOP OF THE SIGN INSTALLED ON SAID POSTS. WHEN ANCHORS ARE INSTALLED, STUBS SHALL NOT BE GREATER THAN FOUR INCHES ABOVE EXISTING GROUND.

8. ROADWAY AND SHOULDER WIDTHS DEPICTED ON THE STANDARD DRAWINGS MAY VARY.

9. THESE STANDARD DRAWINGS ARE INTENDED TO SERVE AS NHDOT STANDARD OPERATING PROCEDURE. IT IS NOTED THAT COMPONENT PARTS OF A TEMPORARY TRAFFIC CONTROL WORK ZONE MAY BE MODIFIED DUE TO FIELD CONDITIONS, AT THE DISCRETION OF THE ENGINEER.

10. THE CONTRACTOR SHALL PROVIDE ACCESS THROUGH THE WORK ZONE FOR EMERGENCY VEHICLES AT ALL TIMES.

11. A MINIMUM LANE WIDTH OF 10 FT. SHALL BE MAINTAINED.

12. MAINTAIN ACCESS TO ALL PROPERTIES AT ALL TIMES FOR EMERGENCY VEHICLES. MAINTAIN ACCESS TO ALL COMMERCIAL AND MUNICIPAL PROPERTIES DURING BUSINESS HOURS. ACCESS TO RESIDENTIAL PROPERTIES MAY BE RESTRICTED FOR A SHORT DURATION (A FEW HOURS). THIS WORK WILL BE COORDINATED WITH THE OWNER. COORDINATE MAJOR WORK ON COMMERCIAL OR MUNICIPAL ACCESSES WITH THE OWNER AT LEAST ONE WEEK PRIOR TO STARTING THE WORK. ALL ACCESSES SHALL ALSO BE KEPT FREE OF WORK AND TRAFFIC CONTROLLED BY UNIFORMED TRAFFIC OFFICERS OR FLAGGERS AS REQUIRED BY THE ENGINEER.

13. TRAFFIC SHALL NOT BE CHANGED FROM ONE TRAFFIC PATTERN TO THE NEXT TRAFFIC PATTERN UNTIL ALL TEMPORARY MARKINGS, SIGNING AND SIGNAL WORK ARE COMPLETED. ANY CONFLICTING MARKINGS SHALL BE REMOVED.

14. ALL PERMANENT SIGNS WHICH CONFLICT WITH TEMPORARY TRAFFIC CONTROL MUST BE COMPLETELY COVERED.

15. ALL REASONABLE EFFORTS SHALL BE MADE TO ACCOMMODATE PEDESTRIAN TRAVEL AT ALL TIMES. THIS CAN INCLUDE, BUT IS NOT LIMITED TO A DEDICATED PEDESTRIAN ESCORT, SIGNAGE AND CONED OFF WALKING AREAS WITHIN CLOSED LANES. FLAGGERS SHALL NOT BE USED AS PEDESTRIAN ESCORTS. WHEN EXISTING PEDESTRIAN FACILITIES ARE DISRUPTED, CLOSED, OR RELOCATED IN A TEMPORARY TRAFFIC CONTROL ZONE, THE TEMPORARY FACILITIES SHALL BE DETECTABLE AND SHALL INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH THE FEATURES PRESENT IN THE EXISTING PEDESTRIAN FACILITY. PAYMENT WILL BE INCLUDED IN THE UNIT PRICE FOR ITEM 641.10 TRAFFIC CONTROL.

BID DOCUMENTS — NOT FOR CONSTRUCTION

D&K FILE	NAME1	DATE	DATE1
DESIGNED BY	NAME2	DATE	DATE2
CHECKED BY	NAME3	DATE	DATE3

DuBois & King inc.

STATE OF NEW HAMPSHIRE — SCOTT M. BOURDER — No. 11010 — LICENSED PROFESSIONAL ENGINEER — 5/13/15

NEWMARKET, NEW HAMPSHIRE

NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X-A001(108)

TRAFFIC CONTROL NOTES (SHEET 1 OF 2)

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	31	36

TC-1

AMENDMENTS TO PART VI OF THE MUTCD (2003 EDITION)

TC-1

NOTE: TC-1 through TC-8 amend Part VI of the 2003 Edition of the MUTCD by superseding or supplementing certain Sections. They shall be used in conjunction with the MUTCD and the Specifications for work zone traffic control on all projects.

1. Section 6C.04, Tables 6C–1 and 6H–3. "Urban (low speed)" shall be defined as those roadways with regulatory speed limits of 30 mph or less; "Urban (high speed)" shall be defined as those roadways with regulatory speed limits of 35 mph and greater.

2. Section 6F.03, Sign Placement. Add the following paragraph as a "Standard" heading:

   Actual placement of construction signs shall be carefully considered to avoid obstructing existing signs or allowing existing signs, vegetation or other physical features to obstruct or limit visibility to construction signs. Construction signs shall also be placed at locations that avoid overwhelming motorists with information when combined with existing signs.

3. Section 6F.59, Cones. Replace the second paragraph under the heading "Standard" with the following:

   Cones shall not be used for either long–term stationary or intermediate–term stationary work applications (as defined in Section 6G.02–Work Duration). Cones, regardless of size, shall not be used at night as the primary channelization device, except during work hours. Cones may, however, be used to supplement other channelizing devices such as drums and barricades in place at night. For nighttime use, cones shall be retroreflectorized or equipped with lighting devices for maximum visibility. Retroreflectorization of 700 mm (28 in.) or larger cones shall be provided by a white band 150 mm (6 in.) wide located 75 to 100 mm (3 to 4 in.) from the top of the cone and an additional 100 mm (4 in.) wide band approximately 50 mm (2 in.) below the 150 mm (6 in.) band.

4. Section 6F.60, Tubular Markers. Replace the "Standard" section with the following:

   Tubular markers (see Figure 6F–7) shall be predominately orange and shall be not less than 1050 mm (42 in.) high and 75 mm (3 in.) wide when facing road users. They shall be made of a material that can be struck without causing damage to the impacting vehicle.

   For nighttime use, tubular markers shall be retroreflectorized. Retroreflectorization of tubular markers shall be provided by three 100 mm (4 in.) wide white bands placed a maximum of 50 mm (2 in.) from the top, with a minimum of 50 mm (2 in.) and maximum 150 mm (6 in.) between the bands.

5. Section 6F.62, Drums. Replace the first sentence of the "Standard" section with the following:

   Drums (see Figure 6F–7) used for road user warning or channelization shall be predominately orange and shall be constructed of lightweight, deformable materials.

6. Section 6F.72 – Temporary Pavement Markings. Replace the paragraphs under the headings "Guidance" and "Standard" with the following "Standard" heading paragraphs:

   (a) Temporary pavement markings shall not be in place for more than 2 weeks, except for temporary raised pavement markers on divided highways, which shall not be in place for more than 1 week (see note (b) under Temporary Raised Pavement Markers, Section 6F.73).

   (b) Temporary yellow centerline pavement markings shall be retroreflectorized paint or tape or removable raised pavement markers (see note (a) under Temporary Raised Pavement Markers, Section 6F.73).

   (c) All temporary white broken–line pavement markings for traffic moving in the same direction shall be retroreflectorized paint or tape (see note (b) under Temporary Raised Pavement Markers, Section 6F.73). Temporary paint or tape markings shall use the same cycle length (N) as permanent markings, i.e., 12 m (40 ft.) and be at least 1.2 m. (4 ft.) long, except that half–cycle lengths (N/2) with a minimum of 0.6 m (2 ft.) stripes should be used for roadways with severe curvature (see Section 3A.05).

   (d) Edgelines, channelizing lines, lane reduction transitions, gore markings, and non–longitudinal lines (e.g., stop lines, railroad crossings, crosswalks, words, symbols, etc.) are usually not required for temporary situations. Their use should be evaluated on a project by project basis based on field conditions, relative traffic speeds and volumes, and the use of other traffic control devices. When used, temporary markings for these types of longitudinal and non–longitudinal lines shall be retroreflectorized paint or tape and conform to MUTCD Part 3 Chapters 3A and 3B.

7. Section 6F.73 – Raised Pavement Markers. Change Section title to Temporary Raised Pavement Markers and replace the entire Section with the following paragraphs:

   (a) Temporary raised pavement markers may be used for double yellow centerline pavement markings on two–way roadways prior to placement of full MUTCD standard pavement markings. They shall be removable yellow retroreflectorized double–face temporary raised pavement markers and shall be placed in pairs, separated by a lateral space of approximately 75 mm (3 in.), using a maximum cycle length of N, i.e., 12 m (40 ft.). On sections of roadway with severe curvature (horizontal and/or vertical), lesser cycle lengths should be used so that at least 3 pairs of markers are visible to approaching traffic at all times. Whenever temporary raised pavement markers are used for centerline pavement markings, "DO NOT PASS" (R4–1) signs may be installed for added emphasis.

   (b) Temporary raised pavement markers may also be used for up to 1 week to delineate lane separation on divided highways prior to placement of full MUTCD standard pavement markings. They shall be removable white retroreflectorized single face temporary raised pavement markers placed individually using a maximum cycle length of N, i.e., 12 m (40 ft.)

8. Section 6H.01, Typical Applications. Add the following paragraph as a "Standard" heading:

   Many diagrams show ROAD WORK (W20–1), ROAD WORK NEXT XX MILES (G20–1), and END ROAD WORK (G20–2a) signs being used for the activities. These signs may be omitted if the activity is being performed within the limits of a larger project and the signs are in place as part of the Advance Warning Area or Termination Area for the larger project (see NHDOT Work Zone Traffic Control Standard Plan TC–2).

9. Section 6H.01, Figure 6H–12. Add to the diagram a distance of 15 m (50 ft.) for the minimum distance between the stop line and the portable barrier.

10. Section 6H.01, Figure 6H–14. The diagram for the unsignalized crossing shows interim tape and a NO PASSING ZONE (W14–3) sign to deter passing maneuvers. In lieu of this method, cones may be placed along the centerline, using a maximum spacing of 12 m (40 ft.).

    In both diagrams, add a TRUCK CROSSING (W8–6) sign at a distance "B" in advance of the DO NOT PASS (R4–1) sign. Show the ROAD WORK AHEAD (W20–1a) sign at a distance "C" in advance of the TRUCK CROSSING sign. (See Table 6H–3 for distance between signs.)

11. Section 6H.01, Figure 6H–33. Replace this diagram and all associated notes with the Single Lane Closure (Divided Highway) diagram shown on NHDOT Work Zone Traffic Control Standard Plan TC–5.

12. Section 6H.01, Figures 6H–34, 6H–38, 6H–39, 6H–42, and 6H–44. Revise the advance warning signs for the lane closure to agree with those shown on NHDOT Work Zone Traffic Control Standard Plan TC–5.

13. Section 6H.01, Figure 6H–36. Make the following revisions:

    (a) Use REVERSE CURVE (W1–4 series) signs which show side–by–side arrows, one arrow for each open lane, at each location that this sign is shown.

    (b) Revise note 6 to read: If passing is discouraged but not prohibited, solid white lane lines shall be used; if passing is prohibited, then double solid white lane lines shall be used. The STAY IN LANE (R4–9) sign shall be used when passing is prohibited.

14. Section 6H.01, Figure 6H–37. Replace this diagram and all associated notes with NHDOT Work Zone Traffic Control Standard Plan TC–7.

New Hampshire DOT Department of Transportation

WORK ZONE TRAFFIC CONTROL STANDARD PLANS

APPROVED: _____ CHIEF ENGINEER _____ DATE

REVISION DATE	.DGN FILENAME
8/3/04	TC–1

New Hampshire DOT Department of Transportation

WORK ZONE TRAFFIC CONTROL STANDARD PLANS

BID DOCUMENTS – NOT FOR CONSTRUCTION

D&K FILE	NAME1	DATE DATE1
DESIGNED BY	NAME2	DATE DATE2
CHECKED BY	NAME3	DATE DATE3

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STATE OF NEW HAMPSHIRE SCOTT M. BOURQUER No. 11010 LICENSED PROFESSIONAL ENGINEER 5/13/15

NEWMARKET, NEW HAMPSHIRE

NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X–A001(108)

TRAFFIC CONTROL NOTES (SHEET 2 OF 2)

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
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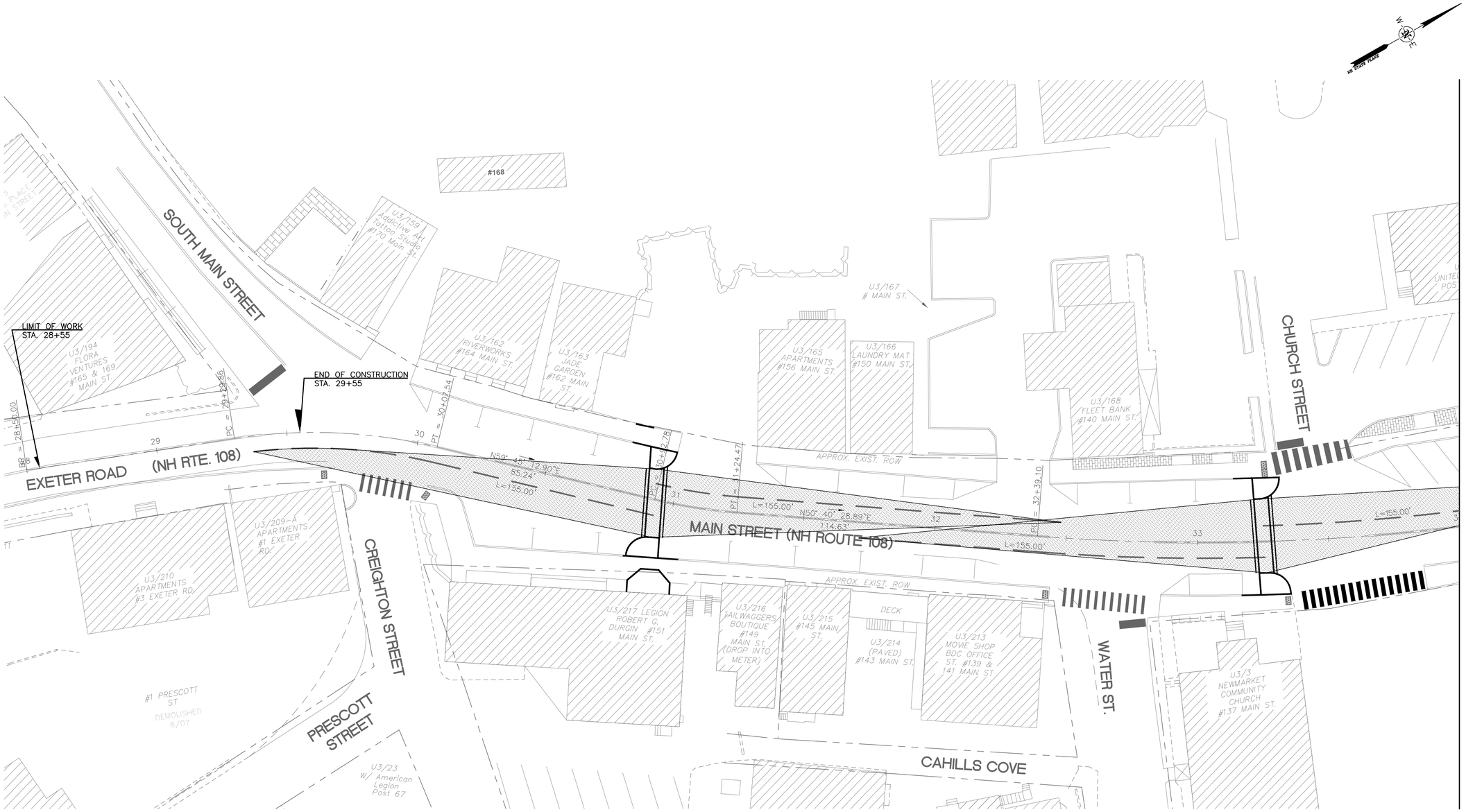

MATCHLINE – STA. 34+00
CONTINUED ON NEXT SHEET

BID DOCUMENTS – NOT FOR CONSTRUCTION

HORIZONTAL GRAPHIC SCALE
0 10 20 40
1" = 20'

SIGHT DISTANCE AREA

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NEWMARKET, NEW HAMPSHIRE

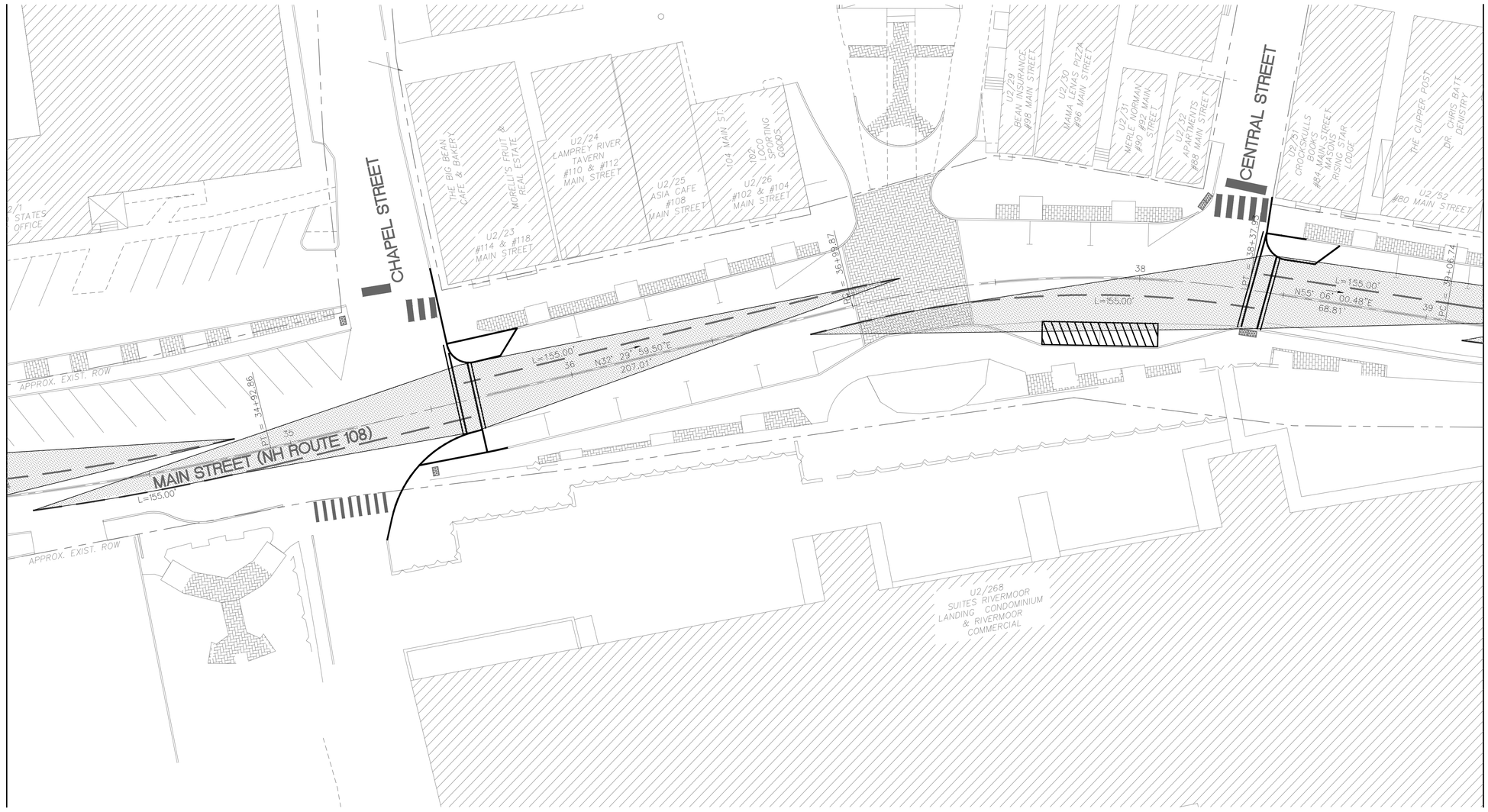
NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X-A001(108)

SIGHT DISTANCE PLAN
(SHEET 1 OF 3)

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	33	36

D&K FILE	NAME1	DATE	DATE1
DESIGNED BY	NAME2	DATE	DATE2
CHECKED BY	NAME3	DATE	DATE3

MATCHLINE – STA. 34+00
CONTINUED ON PREVIOUS SHEET



MATCHLINE – STA. 39+20
CONTINUED ON NEXT SHEET

BID DOCUMENTS – NOT FOR CONSTRUCTION

HORIZONTAL GRAPHIC SCALE
0 10 20 40
1" = 20'

SIGHT DISTANCE AREA

D&K FILE	NAME1	DATE	DATE1
DESIGNED BY	NAME2	DATE	DATE2
CHECKED BY	NAME3	DATE	DATE3

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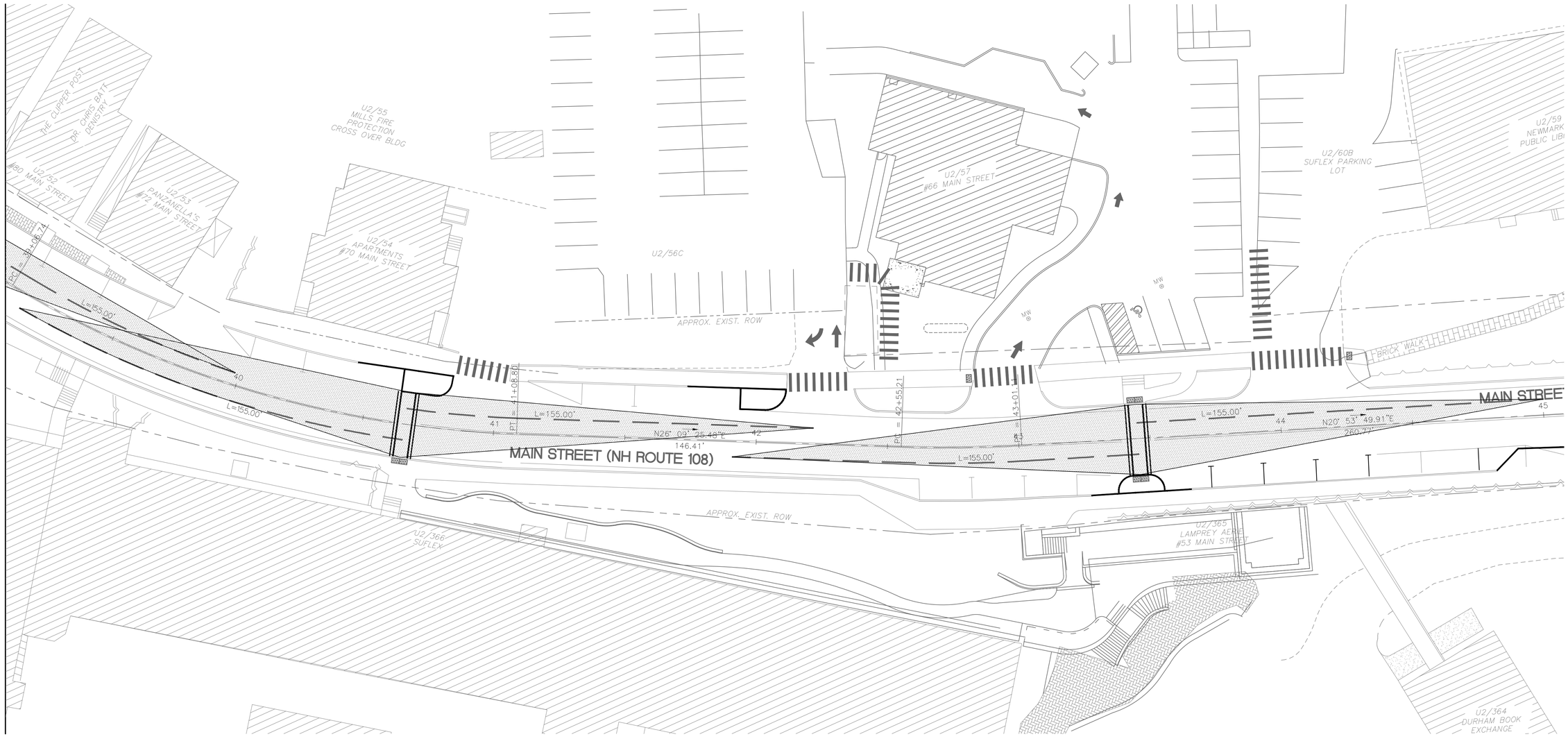
SIGHT DISTANCE PLAN
(SHEET 2 OF 3)

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
621764L	34	36

MATCHLINE – STA. 39+20
CONTINUED ON PREVIOUS SHEET



BID DOCUMENTS – NOT FOR CONSTRUCTION

HORIZONTAL GRAPHIC SCALE
0 10 20 40
1" = 20'

SIGHT DISTANCE AREA

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DESIGNED BY	NAME2	DATE	DATE2
CHECKED BY	NAME3	DATE	DATE3

NEWMARKET, NEW HAMPSHIRE

NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X-A001(108)

SIGHT DISTANCE PLAN
(SHEET 3 OF 3)

D&K PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
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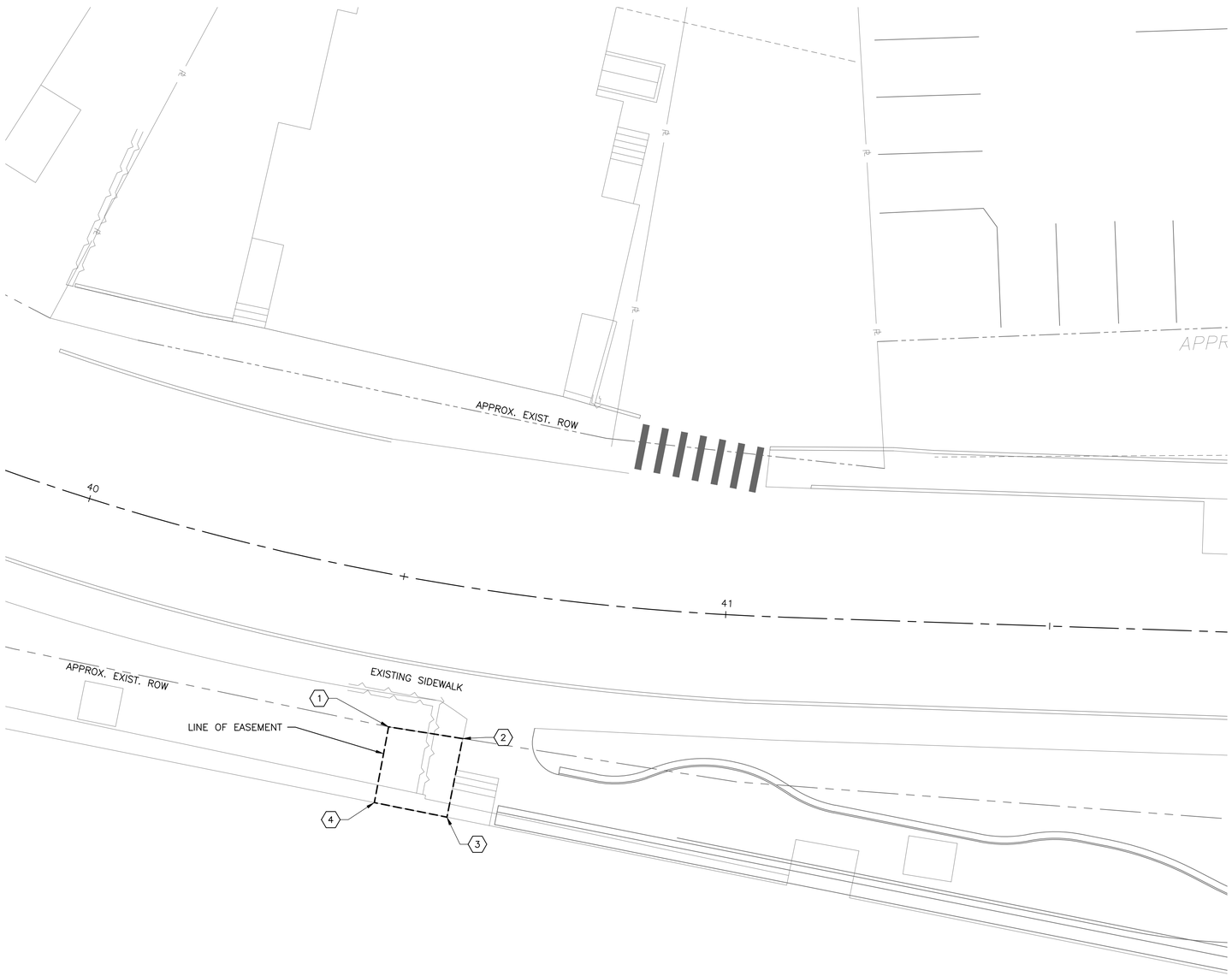

EASEMENT CORNER LOCATIONS		
POINT ID	STATION	OFFSET
1	40+51.72	23..24' RIGHT
2	40+62.66	23.18' RIGHT
3	40+62.10	35.53' RIGHT
4	40+51.62	35.13' RIGHT

PARCEL ID	PROPERTY OWNER	SQUARE FEET	EASEMENT TYPE
U2-366	NEWMARKET MILLS	140	MAINTENANCE (PERMANENT)

EASEMENT PLAN

SCALE: 1"=10'

HORIZONTAL GRAPHIC SCALE
0 10 20

BID DOCUMENTS – NOT FOR CONSTRUCTION

D&K FILE	NAME1	DATE	DATE1
DESIGNED BY	NAME2	DATE	DATE2
CHECKED BY	NAME3	DATE	DATE3

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NEWMARKET, NEW HAMPSHIRE

NHDOT PROJECT NO. 16048 / FHWA PROJECT NO. X-A001(108)

EASEMENT PLAN

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621764L	36	36