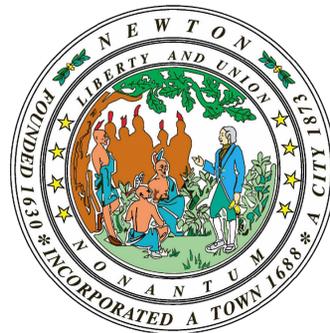


CITY OF NEWTON, MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS

WALNUT STREET ROADWAY REHABILITATION

FEBRUARY 2020



CITY COUNCIL OFFICERS

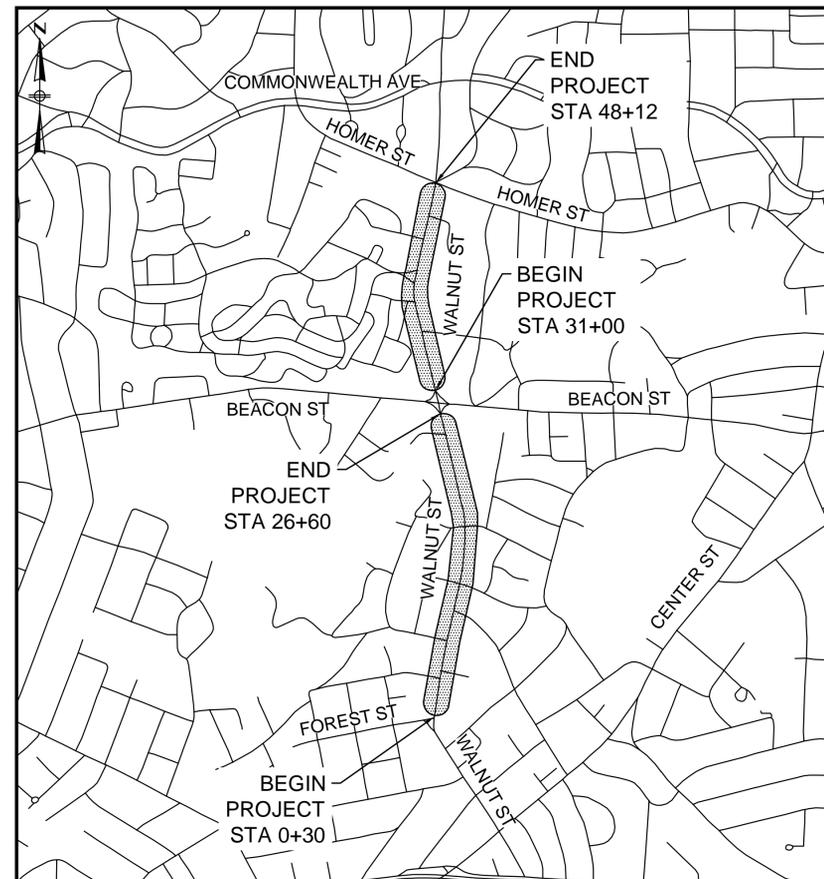
MARC LAREDO, PRESIDENT
DAVID KALIS, VICE PRESIDENT
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DAVID A. OLSON, CLERK OF THE COUNCIL

CITY MAYOR

RUTHANNE FULLER, MAYOR

PUBLIC WORKS

JAMES MCGONAGLE, COMMISSIONER
LOU TAVERNA, CITY ENGINEER
SHANE MARK, DIRECTOR OF STREETS



PROJECT LOCATION

LOCATION MAP
1" = 750'

PLAN INDEX

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
1	COVER
2	LEGEND & ABBREVIATIONS
3	TYPICAL SECTIONS & PAVEMENT NOTES
4-9	CONSTRUCTION DETAILS
10-17	CONSTRUCTION PLANS
18-25	CURB TIE & GRADING PLANS
26-33	TRAFFIC PLANS
34	TRAFFIC SIGN SUMMARY
35-36	TEMPORARY TRAFFIC CONTROL PLANS
37-42	BRENTWOOD AVENUE FINAL PLANS

PREPARED BY:



2/28/2020
SHEETS 1 TO 36

REGISTERED PROFESSIONAL DATE

LEGEND

GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		CURB OR BERM (TYPE AS NOTED)
		EDGE OF PAVEMENT
		CATCH BASIN (OR GUTTER INLET, LEACHING BASIN, DROP INLET, CATCH BASIN CURB INLET)
		ELECTRIC HANDHOLE (NUMBER AS NOTED)
		ELECTRIC MANHOLE
		TELEPHONE MANHOLE
		WATER MANHOLE
		SEWER MANHOLE
		DRAINAGE MANHOLE
		GAS GATE
		WATER GATE
		CURB STOP
		HYDRANT
		FIRE ALARM BOX
		PARKING METER
		STREET LIGHT POLE
		UTILITY POLE
		UTILITY POLE w/ LIGHT
		SIGN
		GUY POLE
		DRAIN PIPE (SIZE AS NOTED)
		SEWER MAIN (SIZE AS NOTED)
		ELECTRIC DUCT
		GAS MAIN (SIZE AS NOTED)
		WATER MAIN (SIZE AS NOTED)
		TELEPHONE DUCT (SIZE AS NOTED)
		OVERHEAD WIRE
		MAIL BOX
		WOOD GUARD RAIL STEEL BEAM GUARD, WOOD OR STEEL POSTS (TYPE AS NOTED)
		STEEL GUARD RAIL, STEEL POSTS (TYPE NOTED)
		STONE WALL
		RETAINING WALL (TYPE NOTED)
		HIGHWAY/PROPERTY BOUND (TYPE AS NOTED)
		STATE HIGHWAY LAYOUT LINE (SHLO)
		CITY, TOWN OR COUNTY LAYOUT LINE (R.O.W.)
		CITY, TOWN, COUNTY OR STATE BOUNDARY LINE
		PROPERTY LINE
		EASEMENT LINE (TYPE NOTED)
		CONSTRUCTION BASELINE
		SURVEY LINE
		RAILROAD OR STREET RAILWAY TRACKS WITH SIDELINES
		WHEELCHAIR RAMP
		TREE (SIZE AND TYPE AS NOTED)
		HEDGE/SHRUBS
		FENCE (SIZE AND TYPE AS NOTED)
		EDGE OF WETLAND w/ FLAGGED NUMBER
		EDGE OF RIVER/STREAM LINE
		100-FT. WETLAND BUFFER LIMIT
		100-FT. RIVER FRONT LIMIT
		200-FT. RIVER FRONT LIMIT
		WOODED AREA / LIMIT OF CLEARING
		SPOT GRADE
		SAW CUT LINE
		TEST PIT
		BORING
		EROSION CONTROL BARRIER/COMPOST FILTER TUBES

ABBREVIATIONS

GENERAL

ABAN	ABANDON
ADJ	ADJUST
ALT	ALTERATION
APPROX	APPROXIMATE
BL	BASELINE
BB	BITUMINOUS BERM
BC	BITUMINOUS CURB
BD OR BND	BOUND
BLDG	BUILDING
BO	BY OTHERS
BOS	BOTTOM OF SLOPE
BOW	BOTTOM OF WALL
BSW	BACK OF SIDEWALK
CC	CONCRETE CURB
CEM	CEMENT
CLF	CHAIN LINK FENCE
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
DWY	DRIVEWAY
EP, EOP	EDGE OF PAVEMENT
EL	ELEVATION
ESMT	EASEMENT
EXIST	EXISTING
FDN	FOUNDATION
GRAN	GRANITE
GC	GRANITE CURB
HOR	HORIZONTAL
IP	IRON PIPE
JCT	JUNCTION
LP	LOW POINT
MB	MAIL BOX
MHB	MASSACHUSETTS HIGHWAY BOUND
OC	ON CENTER
PCC	POINT OF COMPOUND CURVATURE
PC	POINT OF CURVATURE
PRC	POINT OF REVERSE CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PERM	PERMANENT
PGL	PROFILE GRADE LINE
PROP	PROPOSED
PVC	POINT OF VERTICAL CURVATURE
PVMT	PAVEMENT
R	RADIUS OF CURVATURE
R&D	REMOVE AND DISCARD
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
REM	REMOVE
REMOD	REMODEL
RET	RETAIN
RR	RAILROAD
RT	RIGHT
SB	SOUTH BOUND OR STONE BOUND
SDWK	SIDEWALK
SHT	SHEET
SHLD	SHOULDER
STA	STATION
TEMP	TEMPORARY
TOS	TOP OF SLOPE
TOW	TOP OF WALL
TYP	TYPICAL
VAR	VARIABLE
VERT	VERTICAL
VGC	VERTICAL GRANITE CURB
WCR	WHEELCHAIR RAMP

TRAFFIC SIGNAL SYSTEMS

R	STEADY CIRCULAR RED
Y	STEADY CIRCULAR AMBER
G	STEADY CIRCULAR GREEN
FR	FLASHING CIRCULAR RED
FY	FLASHING CIRCULAR AMBER
+FY	FLASHING YELLOW LEFT ARROW
R-	STEADY RED RIGHT ARROW
Y-	STEADY AMBER RIGHT ARROW
G-	STEADY GREEN RIGHT ARROW
+R	STEADY RED LEFT ARROW
+Y	STEADY AMBER LEFT ARROW
+G	STEADY GREEN LEFT ARROW
W	STEADY WALK (PERSON WALKING) - LUNAR WHITE
DW	STEADY DON'T WALK (HAND) - PORTLAND ORANGE
FDW	FLASHING DON'T WALK (FLASHING HAND) - PORTLAND ORANGE

UTILITIES

ACCOMP	ASPHALT COATED CORRUGATED METAL PIPE
CAP	CORRUGATED ALUMINUM PIPE
CB	CATCH BASIN
CBCI	CATCH BASIN WITH CURB INLET
CI	CURB INLET
CIP	CAST IRON PIPE
CIT	CHANGE IN TYPE
CMP	CORRUGATED METAL PIPE
C	CONDUIT
CPP	CORRUGATED PLASTIC PIPE
CSP	CORRUGATED STEEL PIPE
DI	DROP INLET
DIP	DUCTILE IRON PIPE
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
FM	FORCE MAIN
GI	GUTTER INLET
GIP	GALVANIZED IRON PIPE
GG	GAS GATE
HDW	HEADWALL
HYD	HYDRANT
INV	INVERT ELEVATION
LP	LIGHT POLE
MH	MANHOLE
PVC	POLY-VINYL-CHLORIDE PIPE
PWW	PAVED WATER WAY
RCP	REINFORCED CONCRETE PIPE (CLASS III UNLESS NOTED)
SD	SUBDRAIN
SMH	SEWER MANHOLE
TS	TRAFFIC SIGNAL
TSV&B	TAPPING SLEEVE, VALVE AND BOX
UP	UTILITY POLE
UPL	UTILITY POLE w/ LIGHT
UPT	UTILITY POLE w/ TRANSFORMER
VCP	VITRIFIED CLAY PIPE
WIP	WROUGHT IRON PIPE
WG	WATER GATE
WM	WATER METER/WATER MAIN

TRAFFIC SIGNAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		CONTROL CABINET GROUND MOUNTED WITH FOUNDATION
		CONTROL CABINET POLE MOUNTED
		CONTROLLER PHASE
		MAST ARM, SHAFT & BASE (ARM LENGTH AS NOTED)
		VEHICULAR SIGNAL HEAD (ALPHA-NUMERIC DESIGNATION AS NOTED)
		VEHICULAR SIGNAL HEAD, OPTICALLY PROGRAMMED
		VEHICULAR SIGNAL HEAD (REMOVED & RESET)
		FLASHING BEACON
		PEDESTRIAN SIGNAL HEAD
		PEDESTRIAN SIGNAL HEAD, OPTICALLY PROGRAMMED
		PULL BOX 12"x12" OR HANDHOLE
		LOOP DETECTOR
		PEDESTRIAN PUSH BUTTON, SIGN (DIRECTIONAL ARROW AS SHOWN) AND SADDLE
		PRE-EMPTION DETECTOR
		PRE-EMPTION CONFIRMATION STROBE
		SIGNAL CONDUIT (SINGLE RUN)
		SIGNAL CONDUIT (DOUBLE RUN)
		SIGNAL POST & BASE
		MAGNETIC DETECTOR
		SCHOOL ZONE SPEED LIMIT SIGN
		MICROWAVE OR ULTRASONIC DETECTOR
		VIDEO DETECTION CAMERA
		VIDEO DETECTION ZONE

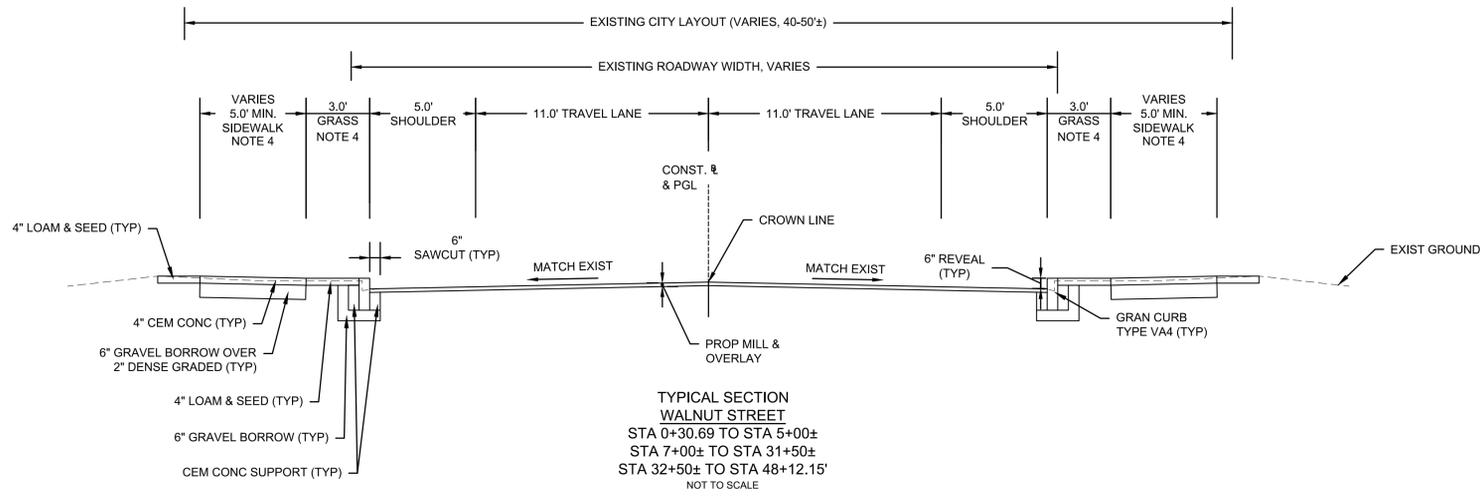
PAVEMENT MARKINGS AND SIGNING SYMBOLS

PROPOSED	DESCRIPTION
CW	CROSSWALK 24" WHITE LINE, 24" SPACING
SL	STOP LINE - 12" WHITE LINE 4' BEHIND CW (TYP.)
SWL	SOLID WHITE LINE - 6"
SWCHL	SOLID WHITE CHANNELIZING LINES - 12" (SPACING NOTED)
SWGL	SOLID WHITE GORE LINE 12" @ 45°, (SPACING NOTED)
SWPL	SOLID WHITE PARKING LINE - 6"
BWL	BROKEN WHITE LINE - 6"
DWLEX	DOTTED WHITE LANE EXTENSION LINE - 6" (2' LINE & 6' GAP)
DYLEX	DOTTED YELLOW LANE EXTENSION LINE - 6" (2' LINE & 6' GAP)
BYL	BROKEN YELLOW LINE - 6"
DBYL	DOUBLE YELLOW LINE - 2 - 6" LINES
SYL	SOLID YELLOW LINE - 6"
SYGL	SOLID YELLOW GORE LINE 12" @ 45°, (SPACING NOTED)
	SCHOOL ZONE - WHITE
	HANDICAP SYMBOL - WHITE
	PAVEMENT ARROW - WHITE
	LEGEND "ONLY" - WHITE

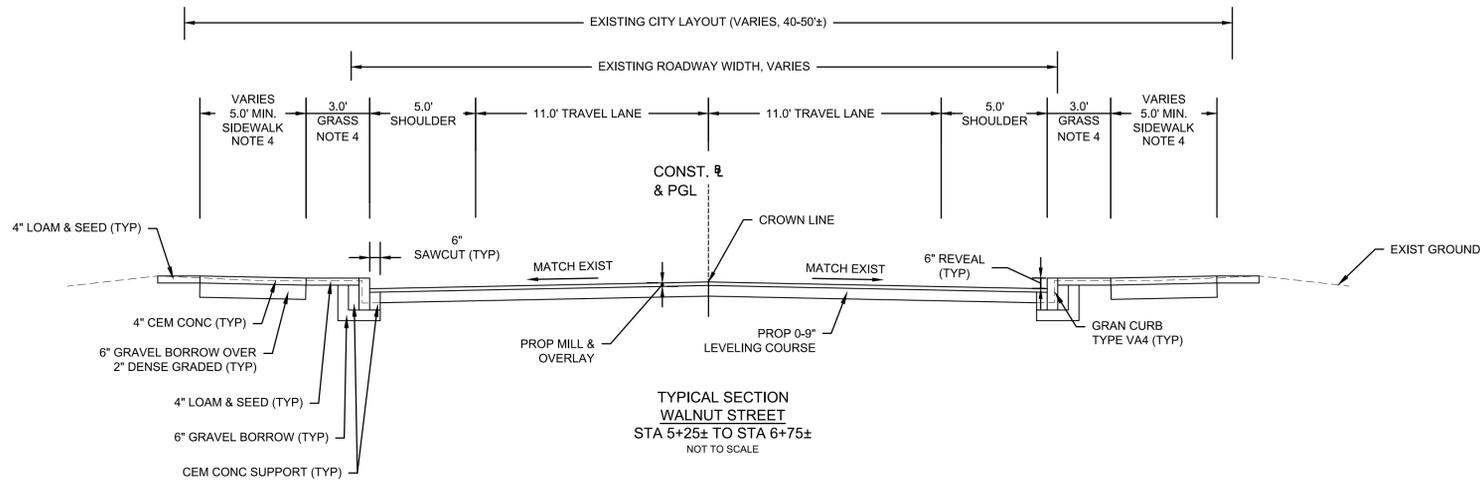
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DRAWN BY: CJT				REGISTERED PROFESSIONAL	PREPARED BY:	SUBCONSULTANT	SCALE: NONE	TITLE: Walnut Street Roadway Rehabilitation Newton, Massachusetts	BETA JOB NO. 6680
DESIGNED BY: CJT				 www.BETA-inc.com					ISSUE DATE: 01/27/2020
CHECKED BY: MT									SHEET NO. 2 OF 36
NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS					

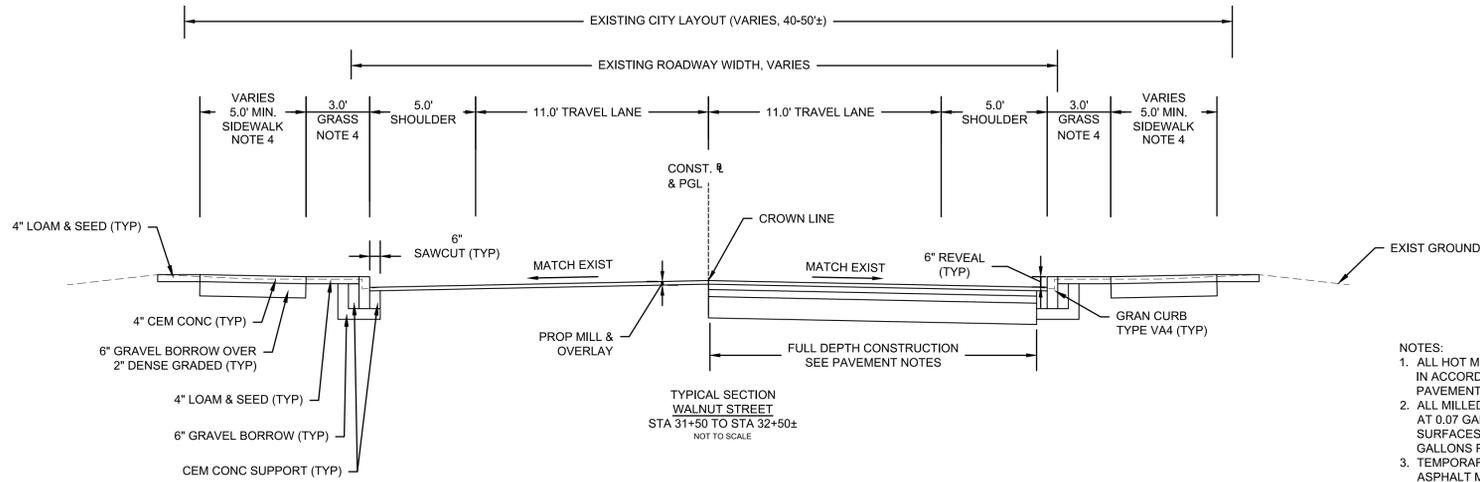
UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION



TYPICAL SECTION
WALNUT STREET
STA 0+30.69 TO STA 5+00±
STA 7+00± TO STA 31+50±
STA 32+50± TO STA 48+12.15'
NOT TO SCALE



TYPICAL SECTION
WALNUT STREET
STA 5+25± TO STA 6+75±
NOT TO SCALE



TYPICAL SECTION
WALNUT STREET
STA 31+50 TO STA 32+50±
NOT TO SCALE

* TOLERANCE FOR CONSTRUCTION ±0.5%

- NOTES:
1. ALL HOT MIX ASPHALT PAVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 450 HOT MIX ASPHALT PAVEMENT SPECIFICATIONS.
 2. ALL MILLED SURFACES SHALL RECEIVE A TACK COAT APPLIED AT 0.07 GALLONS PER SQUARE YARD AND ALL UNMILLED SURFACES SHALL RECEIVE A TACK COAT APPLIED AT 0.05 GALLONS PER SQUARE YARD PRIOR TO PAVING.
 3. TEMPORARY CONSTRUCTION SHALL USE SUPERPAVE HOT MIX ASPHALT MIXTURES AND MAY NOT BE SUBJECT TO THE SAME SAMPLING AND TESTING REQUIRED FOR PERMANENT CONSTRUCTION.
 4. SEE CONSTRUCTION PLAN FOR VARIATION.

PAVEMENT NOTES

PROPOSED PAVEMENT MILLING AND OVERLAY

SURFACE: 1.75" SUPERPAVE SURFACE COURSE- 12.5MM
MILLING: 1.75" PAVEMENT MILLING ASPHALT EMULSION FOR TACK COAT (RS-1) AT 0.07 GAL/SY OVER MILLED SURFACES.

PROPOSED PAVEMENT MILLING AND OVERLAY WITH LEVELING COURSE

SURFACE: 1.75" SUPERPAVE SURFACE COURSE- 12.5MM
MILLING: 1.75" PAVEMENT MILLING ASPHALT EMULSION FOR TACK COAT (RS-1) AT 0.07 GAL/SY OVER MILLED SURFACES.
LEVELING: 0-9" SUPERPAVE INTERMEDIATE COURSE- 19(SIC-19) MAX COURSE THICKNESS 3".

PROPOSED PAVEMENT REPAIR

SURFACE: 1.75" SUPERPAVE SURFACE COURSE - 12.5MM OVER
5" SUPERPAVE INTERMEDIATE COURSE- 19.0 (SIC-19.0). 2 COURSES 2 1/2" MAX THICKNESS.
++SUBBASE: 12" GRAVEL BORROW, TYPE B

PROPOSED CEMENT CONCRETE SIDEWALK

SURFACE: 4" CEMENT CONCRETE WITH LAMPBLACK 2LB/CF EMULSIFIED 7% AIR ENTRAINED 4000 PSI, 3/4", 610 (PER MASSDOT STD SPEC M4.02.00)
++SUBBASE: 6" GRAVEL BORROW, TYPE b. 2" DENSE GRADED CRUSHED STONE TO LEVEL

PROPOSED CEMENT CONCRETE WHEELCHAIR RAMPS

SURFACE: 8" CEMENT CONCRETE WITH LAMPBLACK 2LB/CF EMULSIFIED 7% AIR ENTRAINED 4000 PSI, 3/4", 610 (PER MASSDOT STD SPEC M4.02.00)
++SUBBASE: 6" GRAVEL BORROW, TYPE b. 2" DENSE GRADED CRUSHED STONE TO LEVEL

PROPOSED CEMENT CONCRETE DRIVEWAY APRON

SURFACE: 6" CEMENT CONCRETE WITH LAMPBLACK 2LB/CF EMULSIFIED 7% AIR ENTRAINED 4000 PSI, 3/4", 610 (PER MASSDOT STD SPEC M4.02.00)
++SUBBASE: 8" GRAVEL BORROW, TYPE b. 2" DENSE GRADED CRUSHED STONE TO LEVEL

PROPOSED HMA DRIVEWAY

SURFACE: 1.5" SUPERPAVE SURFACE COURSE- 9.5 MM OVER
2" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC-12.5)
++SUBBASE: 8" GRAVEL BORROW, TYPE b.

PROPOSED HMA WALK

SURFACE: 1.0" SUPERPAVE SURFACE COURSE- 9.5 MM OVER
1.5" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC-12.5)
++SUBBASE: 8" GRAVEL BORROW, TYPE b.

PROPOSED GRASS STRIP / LOAM AND SEED

SURFACE: 4" LOAM AND SEED

BOX WIDENING GREATER THAN 4.0 FEET/ FULL DEPTH CONSTRUCTION

SURFACE: 1.75" SUPERPAVE SURFACE COURSE- 12.5MM
3" SUPERPAVE INTERMEDIATE COURSE- 19.0 (SIC-19.0)
++BASE: 4" SUPERPAVE BASE COURSE- 37.5 (SBC-37.5)
++SUBBASE: 12" GRAVEL BORROW, TYPE B

BOX WIDENING 4.0 FEET OR LESS

SURFACE: 1.75" SUPERPAVE SURFACE COURSE- 9.5MM
3" SUPERPAVE INTERMEDIATE COURSE- 19.0 (SIC-19.0)
BASE: 6" CEMENT CONCRETE BASE, 4000 PSI 3/4", 610
++SUBBASE: 8" GRAVEL BORROW, TYPE B

++ WHERE EXISTING GRAVEL IS FOUND TO BE SUITABLE, THE EXISTING GRAVEL MAY BE USED IN PROPOSED SUBBASE, AFTER APPROVAL BY THE ENGINEER.

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NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: ANA
DESIGNED BY: CJT
CHECKED BY: MT

REGISTERED PROFESSIONAL



SUBCONSULTANT

SCALE
NONE

TITLE
**Walnut Street Roadway Rehabilitation
Newton, Massachusetts**
TYPICAL SECTIONS & PAVEMENT NOTES

BETA JOB NO. 6680
ISSUE DATE 01/27/2020
SHEET NO. 3 OF 36

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

GENERAL NOTES

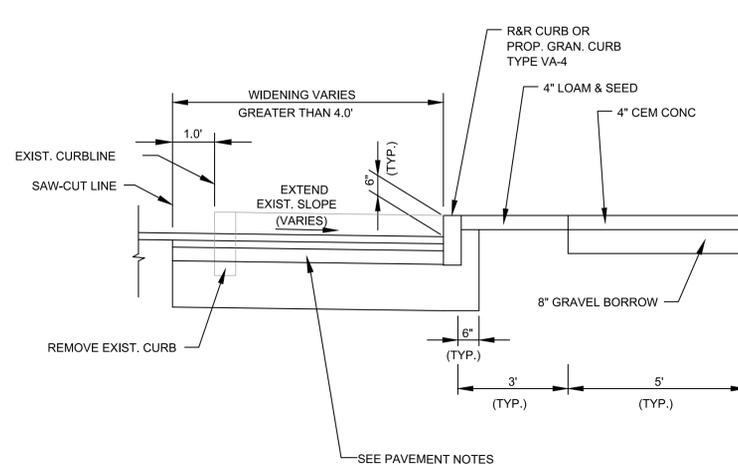
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT SURVEYS. THE CONTRACTOR SHALL EMPLOY A COMPETENT REGISTERED PROFESSIONAL SURVEYOR, REGISTERED IN THE COMMONWEALTH OF MASSACHUSETTS, TO COMPLETE ALL CONSTRUCTION LAYOUT.
- THE ACCURACY AND COMPLETENESS OF ALL UNDERGROUND AND OVERHEAD UTILITIES AS SHOWN ON THE PLANS IS NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE EXACT LOCATION, SIZE, TYPE, DEPTH, ETC. OF ALL UNDERGROUND UTILITIES THAT MAY BE AFFECTED BY THE WORK. ALL CITY-OWNED UTILITY STRUCTURES, WITHIN AREAS AFFECTED BY THE WORK, SHALL BE ADJUSTED OR REMODELED TO NEW LINE AND GRADE AS DIRECTED BY THE ENGINEER AND AS SHOWN ON THE PLANS. ANY UTILITY AND/GUY POLES, WITHIN AREAS AFFECTED BY THE WORK, SHALL BE REMOVED AND RESET BY THE RESPECTIVE UTILITY COMPANY. ALTERATIONS TO UTILITIES AND UTILITY STRUCTURES NOT OWNED BY THE CITY SHALL BE MADE BY THE RESPECTIVE UTILITY OWNERS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WORK IN ADVANCE WITH THOSE UTILITY OWNERS.
- ALL EXISTING DRAINAGE STRUCTURES SHALL BE RETAINED UNLESS OTHERWISE NOTED ON THE PLANS.
- THE CONTRACTOR SHALL VERIFY EXISTING GRADES. IF ANY ADJUSTMENT IS REQUIRED DUE TO DIFFERENT EXISTING GRADES FOUND IN THE FIELD, THE CONTRACTOR SHALL NOTIFY AND OBTAIN THE APPROVAL OF THE ENGINEER PRIOR TO PERFORMING THE WORK.
- EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION, AND SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION AND SHALL BE REMOVED UPON COMPLETION OF ALL THE WORK WHEN ALL DISTURBED AREAS ARE STABILIZED, TO THE SATISFACTION OF THE ENGINEER.
- ALL PROPOSED DRAINAGE STRUCTURES OR CASTINGS SHALL BE AS PER CITY OF NEWTON STANDARDS UNLESS OTHERWISE NOTED.
- WHEN A PROPOSED CATCH BASIN INTERFERES WITH ANY OTHER UNDERGROUND UTILITY, A GUTTER INLET SHALL BE USED, AS DIRECTED BY THE ENGINEER.
- ANY EXISTING GRANITE CURB THAT CAN BE RE-USED SHALL BE R&R AS DIRECTED BY THE ENGINEER. NEW GRANITE CURB SHALL NOT BE INTERLAYED WITH R&R GRANITE CURB. IF EXISTING CATCH BASINS ARE TO REMAIN IN PLACE WITH GRANITE CURB BEHIND THEM, THE CONTRACTOR SHALL REPLACE THE EXISTING CURB WITH A CURB INLET SECTION, AS DIRECTED BY THE ENGINEER.
- ALL TREES WITHIN THE LIMITS OF WORK SHALL BE RETAINED UNLESS OTHERWISE NOTED ON THE PLANS. HOWEVER, SOME TREES, IN CRITICAL LOCATIONS, ARE NOTED TO BE RETAINED, FOR CLARITY. THE ENGINEER SHALL OBTAIN THE APPROVAL OF THE CITY TREE WARDEN OR HIS EQUIVALENT OFFICER BEFORE ANY TREE IS REMOVED.
- TREES AND FOLIAGE TO BE RETAINED, WHICH RESTRICT SIGHT DISTANCE OR RESTRICT HORIZONTAL OR VERTICAL CLEARANCES SHALL BE TRIMMED AS DIRECTED BY THE ENGINEER.
- UNLESS OTHERWISE NOTED, ALL EXISTING WALLS WITHIN THE PROJECT LIMITS SHALL BE RETAINED.
- WHEN WORKING NEXT TO EXISTING TREES, WALLS OR FENCES, THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION NOT TO DISTURB THE EXISTING WALLS, TREES OR FENCES. IF THE CONTRACTOR DOES DAMAGE ANY EXISTING TREES, WALLS OR FENCES AS A RESULT OF THE CONSTRUCTION PROCESS, IT SHALL BE HIS/HER RESPONSIBILITY (THE CONTRACTOR) TO REPAIR ALL DAMAGES AS DIRECTED BY THE ENGINEER. ALL WORK ASSOCIATED WITH THE REPAIR OR REPLACEMENT OF EXISTING TREES, WALLS OR FENCES SHALL BE CONSIDERED AS INCLUDED IN THE BID PRICE AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED THEREFORE.
- IN AREAS OF NEW SIDEWALK, NEW EDGE OF PAVEMENT OR CURB WITHOUT SIDEWALK, OR ANY WORK ADJACENT TO EXISTING GRASS AREAS, LOAM AND SEED SHALL BE PROVIDED AS NECESSARY TO REPAIR ANY DAMAGE TO THE GRADE CAUSED BY THE CONSTRUCTION PROCESS, AS DIRECTED BY THE ENGINEER.
- ALL AREAS OUTSIDE THE LIMITS OF THE PROPOSED WORK THAT HAVE BEEN DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE, TO THE SATISFACTION OF THE ENGINEER AND THE PROPERTY OWNER.
- JOINTS BETWEEN NEW HOT MIX ASPHALT (HMA) ROADWAY PAVEMENT AND SAW-CUT EXISTING PAVEMENT SHALL BE SEALED WITH BITUMEN AND BACKSANDS.
- MAILBOXES, FENCES, ETC., THAT NEED TO BE RELOCATED SHALL BE REMOVED AND RESET (R&R) IN THEIR NEW LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THE OWNER SHALL BE CONSULTED PRIOR TO THE WORK. ALL FENCES AND HEDGES SHALL BE RETAINED AS NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- EXISTING ON-THE-GROUND SURVEY BY LIGHTHOUSE LAND SURVEYING, LLC, 75 KIMBERLY ROAD, TAUNTON, MA, IN AUGUST AND SEPTEMBER 2019.

HORIZONTAL DATUM: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM REFERENCED TO NAD 83
 VERTICAL DATUM: NAVD 88

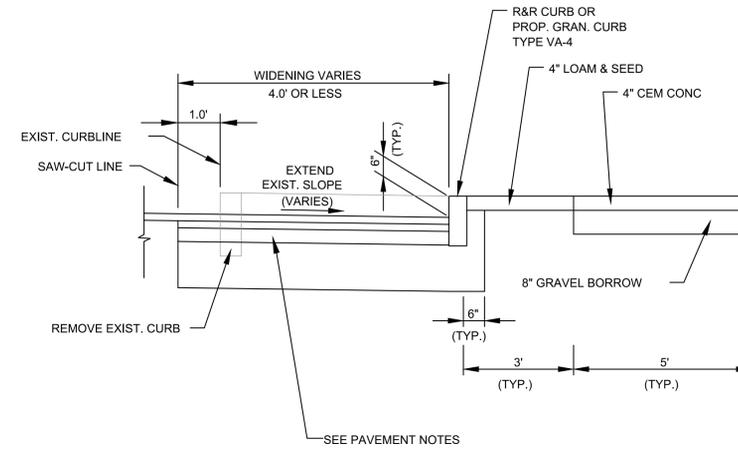
- PROPOSED BOUNDS, AND BOUNDS REMOVED AND RESET SHALL BE SET FLUSH WITH THE ADJACENT WALK SURFACE.

WHEELCHAIR RAMP NOTES:

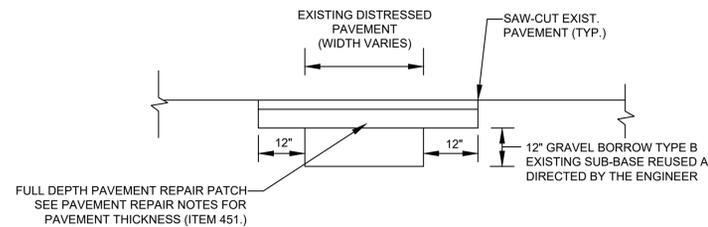
- ALL WHEELCHAIR RAMPS SHALL CONFORM TO THE REQUIREMENTS OF THE ARCHITECTURAL ACCESS BOARD (A.A.B.), THE AMERICANS WITH DISABILITIES ACT (A.D.A.) AND MASSDOT HIGHWAY DIVISION.
- ALL PROPOSED CURB FOR WHEELCHAIR RAMP TRANSITIONS SHALL BE CUT AND TRANSITIONED AS NECESSARY TO PROVIDE THE CORRECT TRANSITION LENGTHS FOR EACH WHEELCHAIR RAMP, AS SHOWN ON THE WHEELCHAIR RAMP DETAILS OR AS DIRECTED BY THE ENGINEER. ANY EXISTING CURB INLETS, IN AREAS OF NEW WHEELCHAIR RAMP TRANSITIONS, SHALL BE REMOVED AND REPLACED WITH APPROPRIATE TRANSITION CURB, AS DIRECTED BY THE ENGINEER.
- IN NO CASE, EXCEPT MAXIMUM LENGTH HIGH SIDE TRANSITIONS, SHALL ANY TRANSITION SLOPE OF ANY WHEELCHAIR RAMP EXCEED 7.5%. PROPOSED WHEELCHAIR RAMP SLOPES, ESPECIALLY HIGH SIDE TRANSITIONS, SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE POURING OF CONCRETE, AND ADJUSTED, IF NECESSARY, AT THE DIRECTION OF THE ENGINEER.
- IN INSTANCES WHERE AN EXISTING MANHOLE, HANDHOLE OR OTHER "SURFACE" TYPE STRUCTURE THAT CANNOT BE REMOVED OR RESET, IS WITHIN THE WHEELCHAIR RAMP PATH OF TRAVEL, THE STRUCTURE SHALL BE CAREFULLY ADJUSTED SUCH THAT THE TOPMOST SURFACES OF THE STRUCTURE COVER SHALL BE FLUSH WITH THE RAMP SURFACE AND SHALL MATCH THE SLOPE OF THE NEW WHEELCHAIR RAMP EXACTLY, AS DIRECTED BY THE ENGINEER.
- ANY UTILITY STRUCTURES WITHIN THE TRANSITIONS OF THE WHEELCHAIR RAMP TRANSITIONS SHALL ALSO BE ADJUSTED TO THE PROPOSED GRADE AND THE SLOPE OF THE SURFACE OF THE PROPOSED TRANSITION PANEL OR PANELS.
- THE LOCATION OF PROPOSED WHEELCHAIR RAMPS ARE SHOWN ON THE CONSTRUCTION PLANS AND THE WHEELCHAIR RAMP DATA SCHEDULE. EXACT LOCATIONS MAY BE ADJUSTED, IF NECESSARY, BY THE ENGINEER IN THE FIELD.
- DETECTABLE WARNING PANELS SHALL BE INSTALLED ON ALL WHEELCHAIR RAMPS IN ACCORDANCE WITH MASSDOT CONSTRUCTION STANDARD E 107.6.5 (2017) AND WILL BE PAID FOR UNDER ITEM 701.2.
- PROPOSED WHEELCHAIR RAMP SLOPES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE POURING OF CONCRETE, AND ADJUSTED, IF NECESSARY, TO CONFORM TO THE LATEST STANDARDS, AS DIRECTED BY THE ENGINEER.
- LENGTH OF TRANSITION TO BE VERIFIED IN FIELD BY CONTRACTOR. SEE TABLE 1 FOR TRANSITION LENGTH REFERENCES.



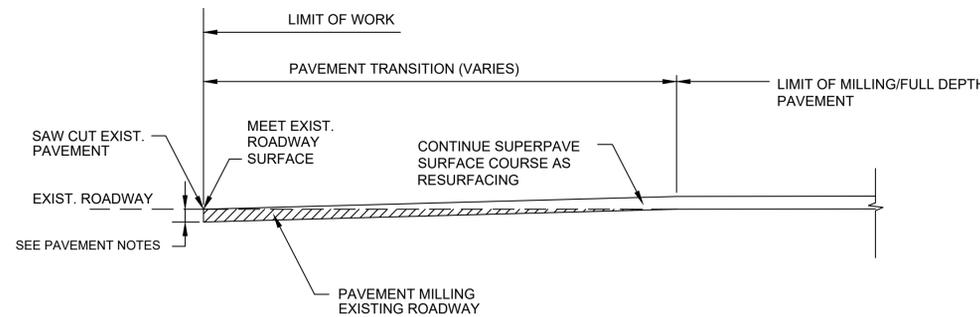
**DETAIL FOR ROADWAY BOX WIDENING
GREATER THAN 4 FEET**
NOT TO SCALE



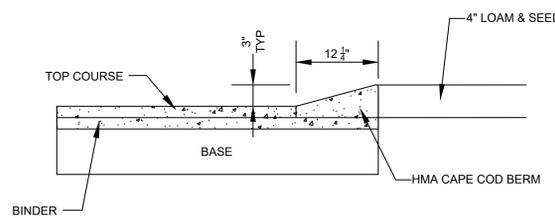
**DETAIL FOR ROADWAY BOX WIDENING
4 FEET OR LESS**
NOT TO SCALE



DETAIL FOR PAVEMENT REPAIR
NOT TO SCALE



DETAIL FOR PAVEMENT TRANSITION AT LIMIT OF WORK
NOT TO SCALE



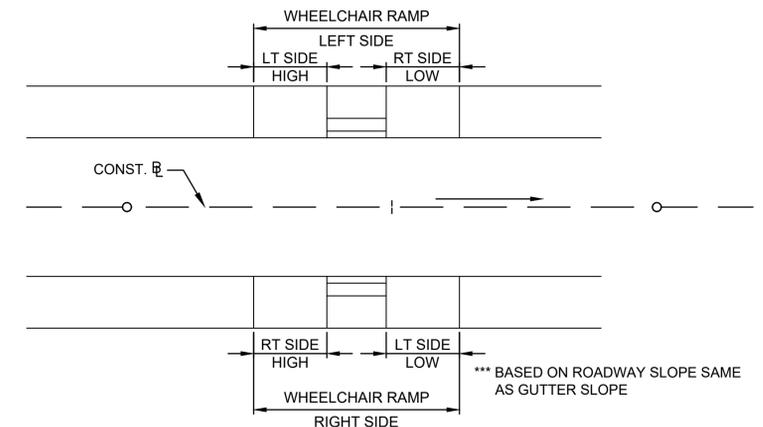
HOT MIX ASPHALT CAPE COD BERM
NOT TO SCALE

PROFILE GRADE	HIGH SIDE TRANSITION LENGTH (L) FOR 7.5% DESIGN SLOPE (FEET)
0	6'-6"
>0-1	7'-8"
>1-2	9'-0"
>2-3	11'-0"
>3-4	14'-0"
>4	15'-0" MAX.

**WHEELCHAIR RAMP
HIGH SIDE TRANSITION LENGTHS**

FIGURES ARE BASED ON A DESIGN SLOPE OF 7.5% AND A REVEAL OF 6".

NOTE: SPECIFIED TRANSITION LENGTHS FOR APPLICABLE WHEELCHAIR RAMPS CAN APPLY TO BOTH LEFT AND RIGHT SIDES.



GUTTER SLOPE DIAGRAM
NOT TO SCALE

* TOLERANCE FOR CONSTRUCTION ±0.5%

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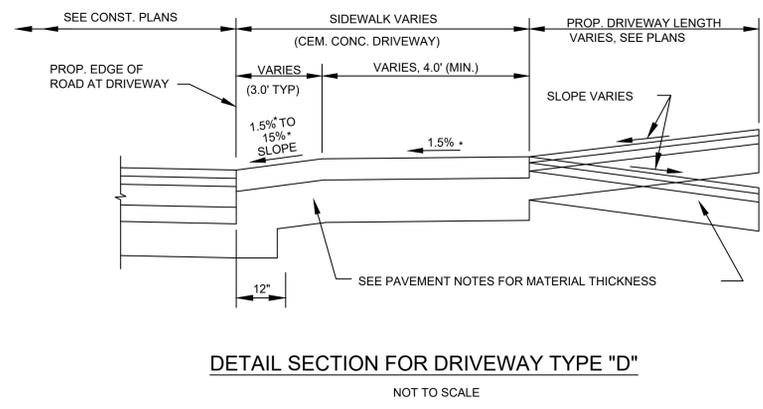
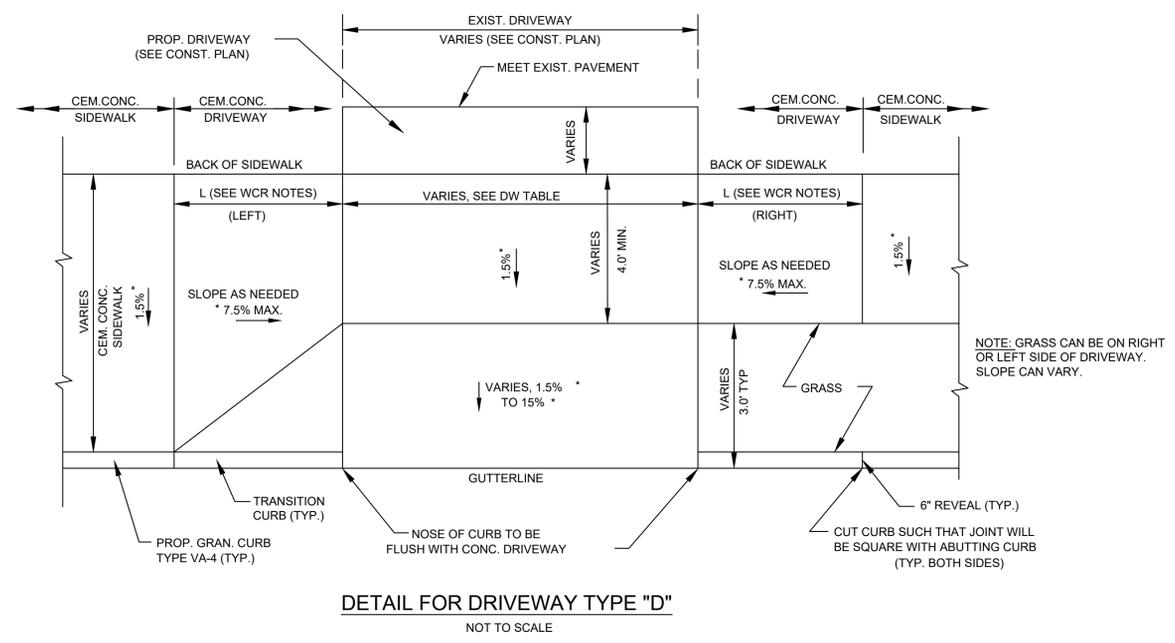
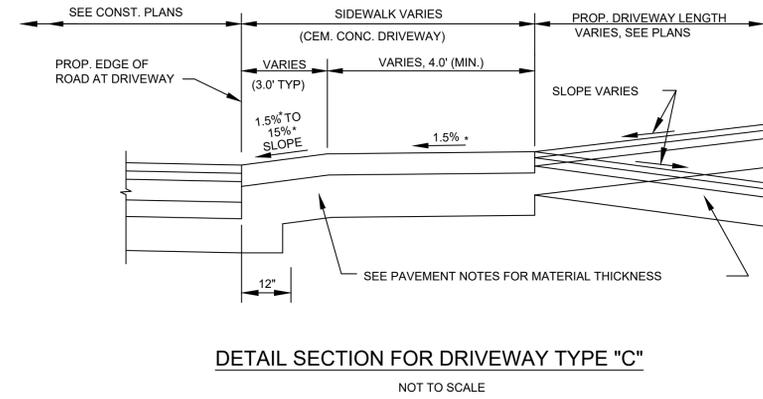
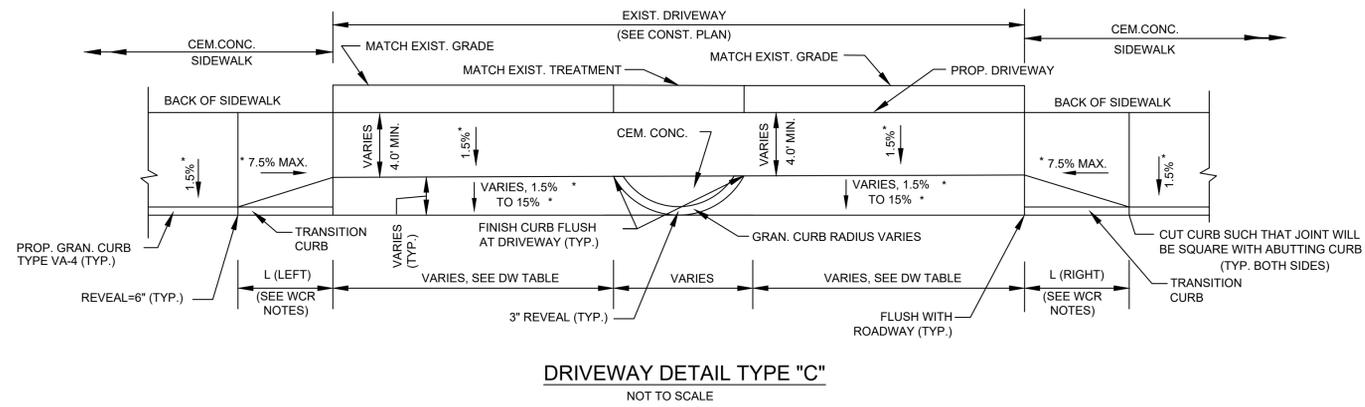
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TITLE

**Walnut Street Roadway Rehabilitation
Newton, Massachusetts**

CONSTRUCTION DETAILS

BETA JOB NO.	6680
ISSUE DATE	01/27/2020
SHEET NO.	4 OF 36



* TOLERANCE FOR CONSTRUCTION ±0.5%

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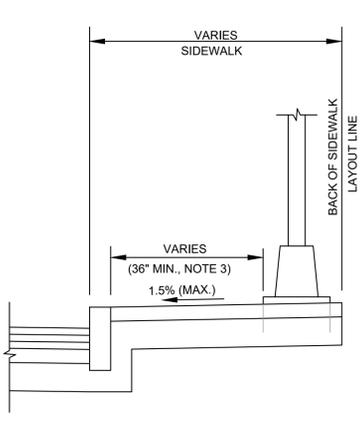
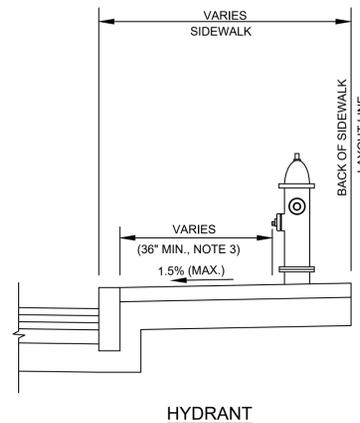
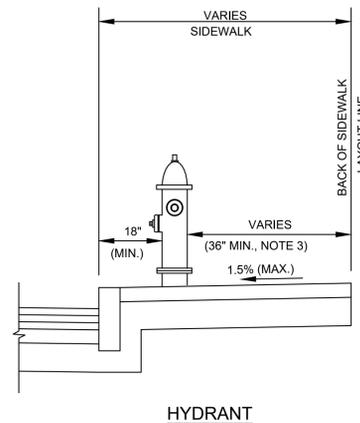
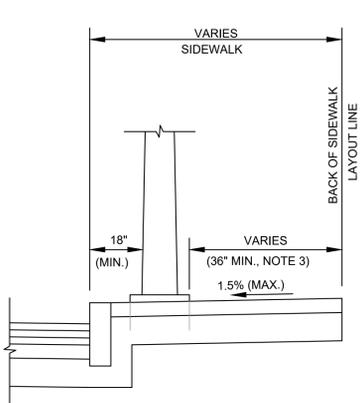
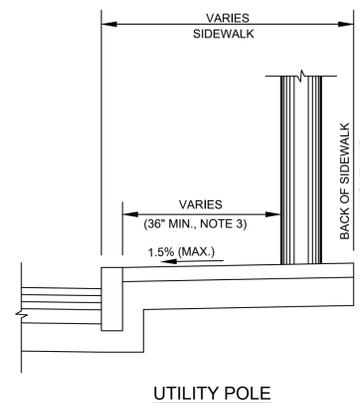
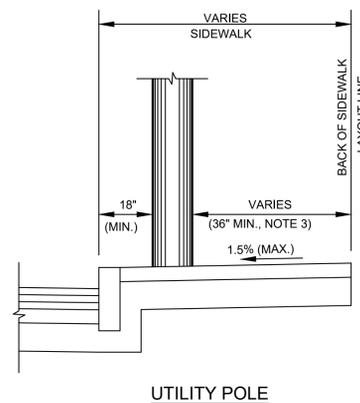
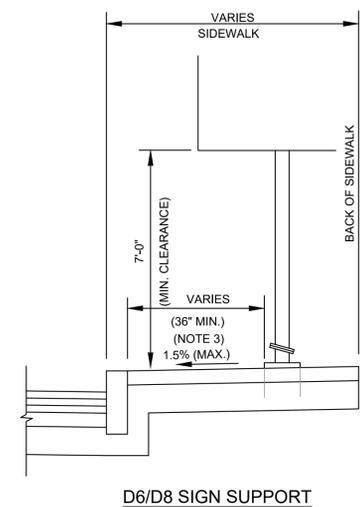
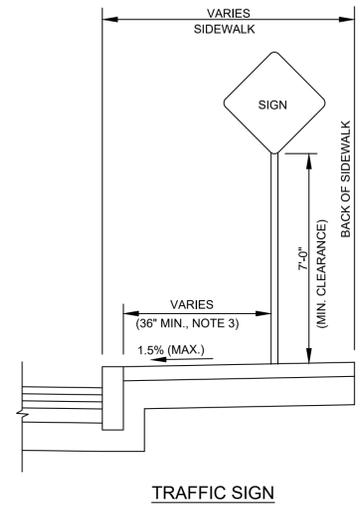
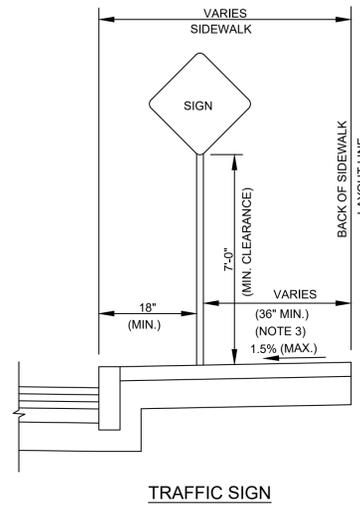
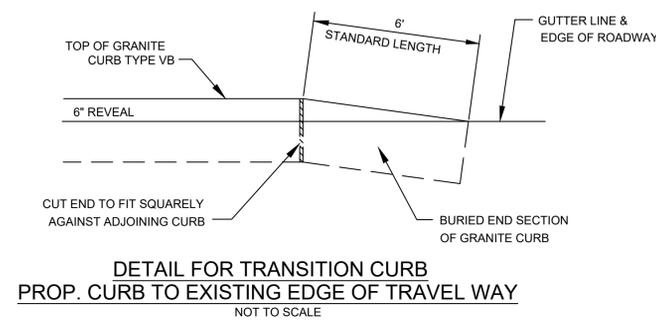
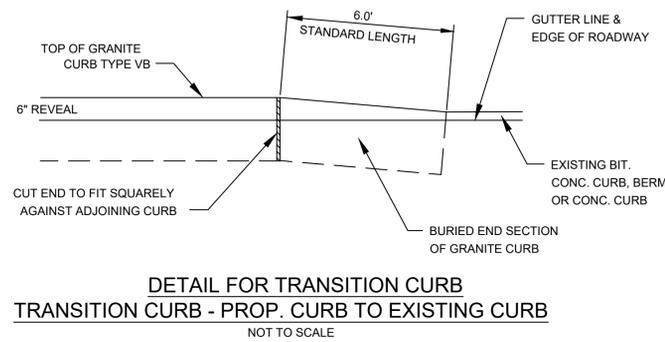
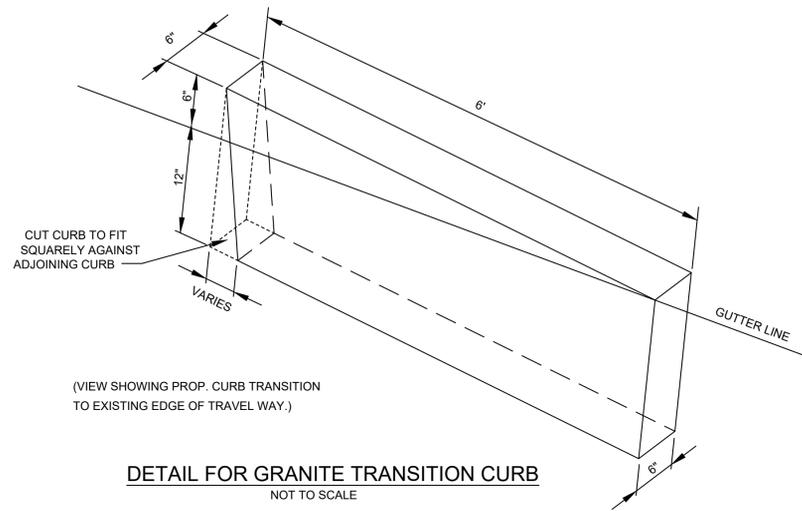


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NONE

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**Walnut Street Roadway Rehabilitation
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CONSTRUCTION DETAILS

BETA JOB NO. 6680
ISSUE DATE 01/27/2020
SHEET NO. 7 OF 36



DETAIL FOR MINIMUM OFFSET DISTANCES FOR SIDEWALK OBSTRUCTIONS
NOT TO SCALE

- NOTES:
1. THE CONTRACTOR SHALL VERIFY THE LOCATION AND CLEARANCE OF ALL OBJECTS (SIGNS, POLES ETC.) (OBSTRUCTIONS) TO BE SET WITHIN THE PROPOSED SIDEWALK, PRIOR TO FINAL PAVING, AND SHALL ENSURE THAT A MINIMUM CLEAR PATH-OF-TRAVEL OF 36 INCHES IS MAINTAINED. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY LOCATION WHICH CANNOT MEET THE CLEARANCE REQUIREMENTS.
 2. MINIMUM CLEAR PATH ON ALL SIDEWALKS SHALL BE 36 INCHES, EXCLUDING THE CURB.
 3. CONTRACTOR TO ATTAIN 60" CLEAR (INCLUDING CURB) WHERE FEASIBLE. ADVISE ENGINEER WHEN 60" IS NOT AVAILABLE.

* TOLERANCE FOR CONSTRUCTION ±0.5%

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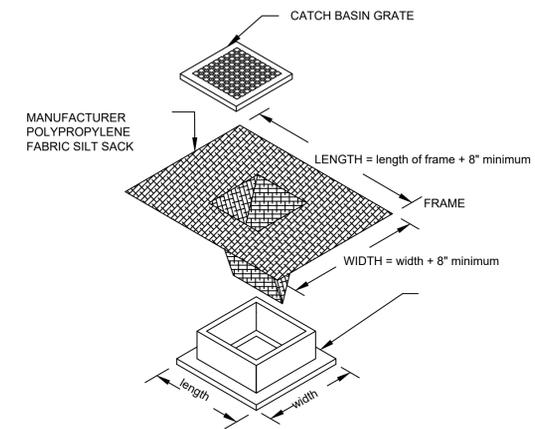
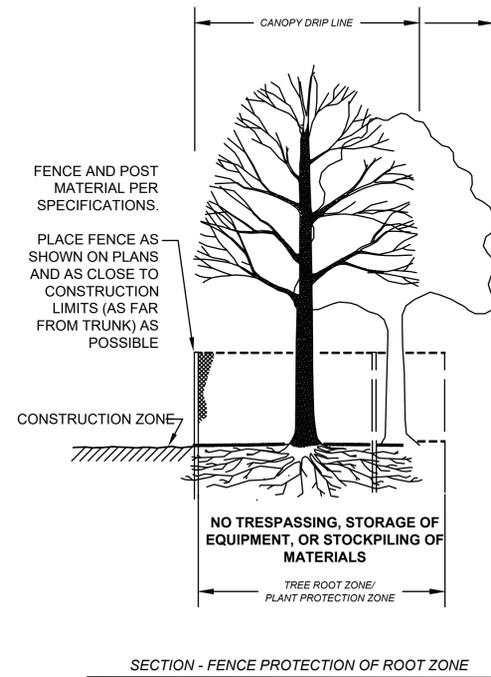
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Newton, Massachusetts**

CONSTRUCTION DETAILS

BETA JOB NO. 6680

ISSUE DATE 01/27/2020

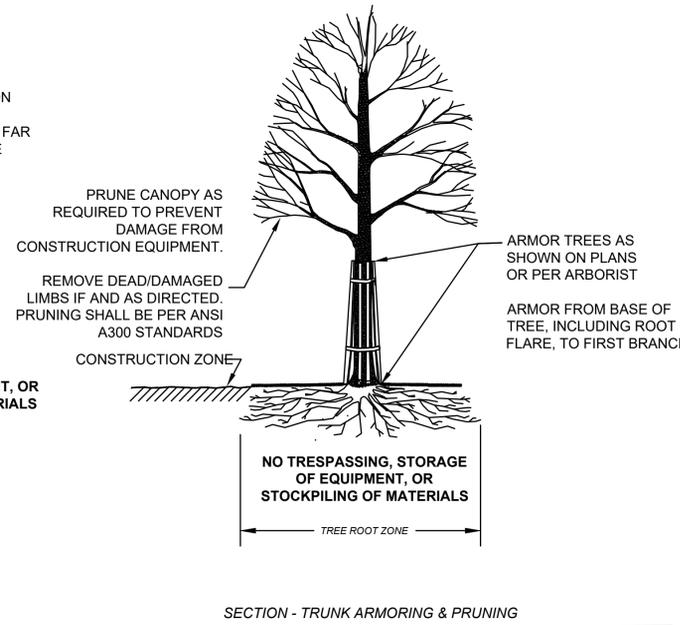
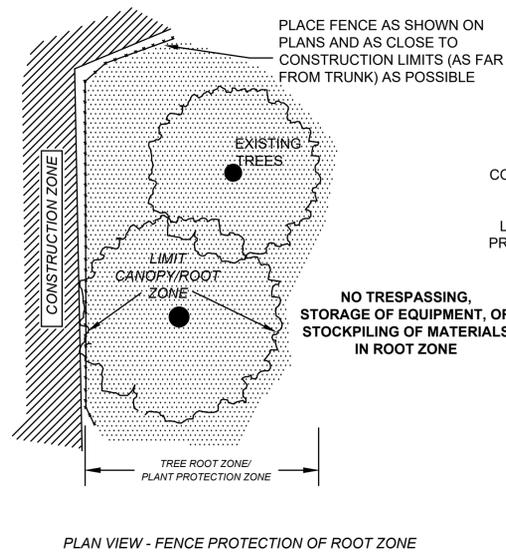
SHEET NO. 8 OF 36



NOTES

1. LENGTH AND WIDTH OF POLYPROPYLENE FABRIC MUST EXCEED EXISTING CATCH BASIN FRAME DIMENSIONS BY A MINIMUM OF 8".
2. REMOVE CATCH BASIN GRATE AND INSTALL POLYPROPYLENE FABRIC OVER CATCH BASIN FRAME. REPLACE CATCH BASIN GRATE TO SECURE POLYPROPYLENE FABRIC IN PLACE.
3. FOR USE ON ALL EXISTING CATCH BASINS WITHIN THE PROJECT LIMITS AND PROPOSED CATCH BASINS THAT ARE IN OPERATION DURING CONSTRUCTION.

SILT SACK
NOT TO SCALE



TREE PROTECTION - EXISTING TREE(S)
NOT TO SCALE

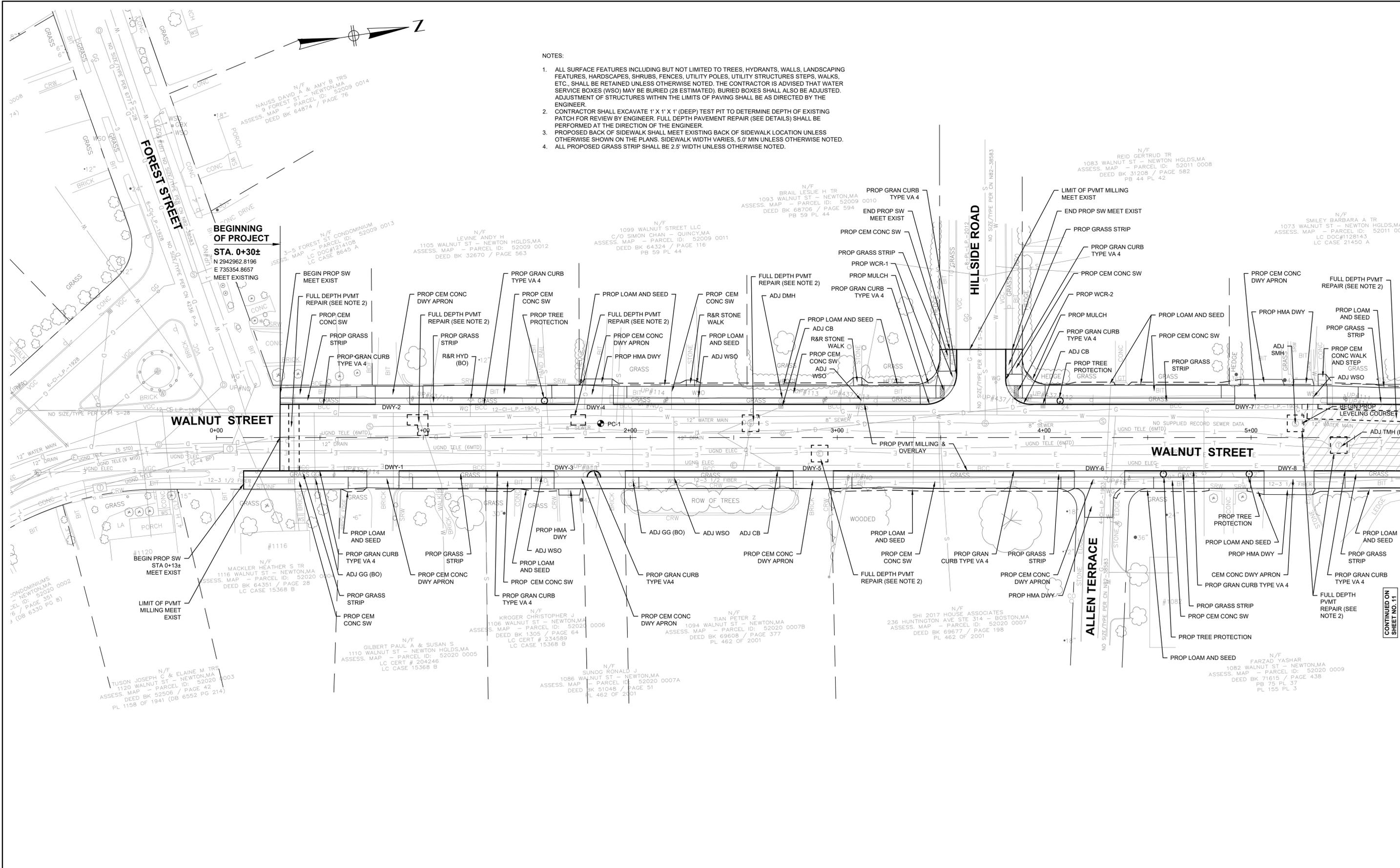
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				DRAWN BY: ANA	REGISTERED PROFESSIONAL	PREPARED BY:	SUBCONSULTANT	SCALE	TITLE	BETA JOB NO. 6680
				DESIGNED BY: CJT		 www.BETA-Inc.com		NONE	Walnut Street Roadway Rehabilitation Newton, Massachusetts CONSTRUCTION DETAILS	ISSUE DATE 01/27/2020
				CHECKED BY: MT						
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- NOTES:
1. ALL SURFACE FEATURES INCLUDING BUT NOT LIMITED TO TREES, HYDRANTS, WALLS, LANDSCAPING FEATURES, HARDSCAPES, SHRUBS, FENCES, UTILITY POLES, UTILITY STRUCTURES STEPS, WALKS, ETC. SHALL BE RETAINED UNLESS OTHERWISE NOTED. THE CONTRACTOR IS ADVISED THAT WATER SERVICE BOXES (WSO) MAY BE BURIED (28 ESTIMATED). BURIED BOXES SHALL ALSO BE ADJUSTED. ADJUSTMENT OF STRUCTURES WITHIN THE LIMITS OF PAVING SHALL BE AS DIRECTED BY THE ENGINEER.
 2. CONTRACTOR SHALL EXCAVATE 1' X 1' X 1' (DEEP) TEST PIT TO DETERMINE DEPTH OF EXISTING PATCH FOR REVIEW BY ENGINEER. FULL DEPTH PAVEMENT REPAIR (SEE DETAILS) SHALL BE PERFORMED AT THE DIRECTION OF THE ENGINEER.
 3. PROPOSED BACK OF SIDEWALK SHALL MEET EXISTING BACK OF SIDEWALK LOCATION UNLESS OTHERWISE SHOWN ON THE PLANS. SIDEWALK WIDTH VARIES, 5.0' MIN UNLESS OTHERWISE NOTED.
 4. ALL PROPOSED GRASS STRIP SHALL BE 2.5' WIDTH UNLESS OTHERWISE NOTED.

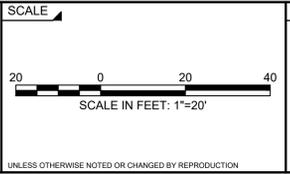


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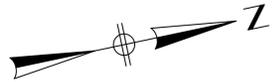
Walnut Street Roadway Rehabilitation
Newton, Massachusetts

CONSTRUCTION PLANS

BETA JOB NO. 6680

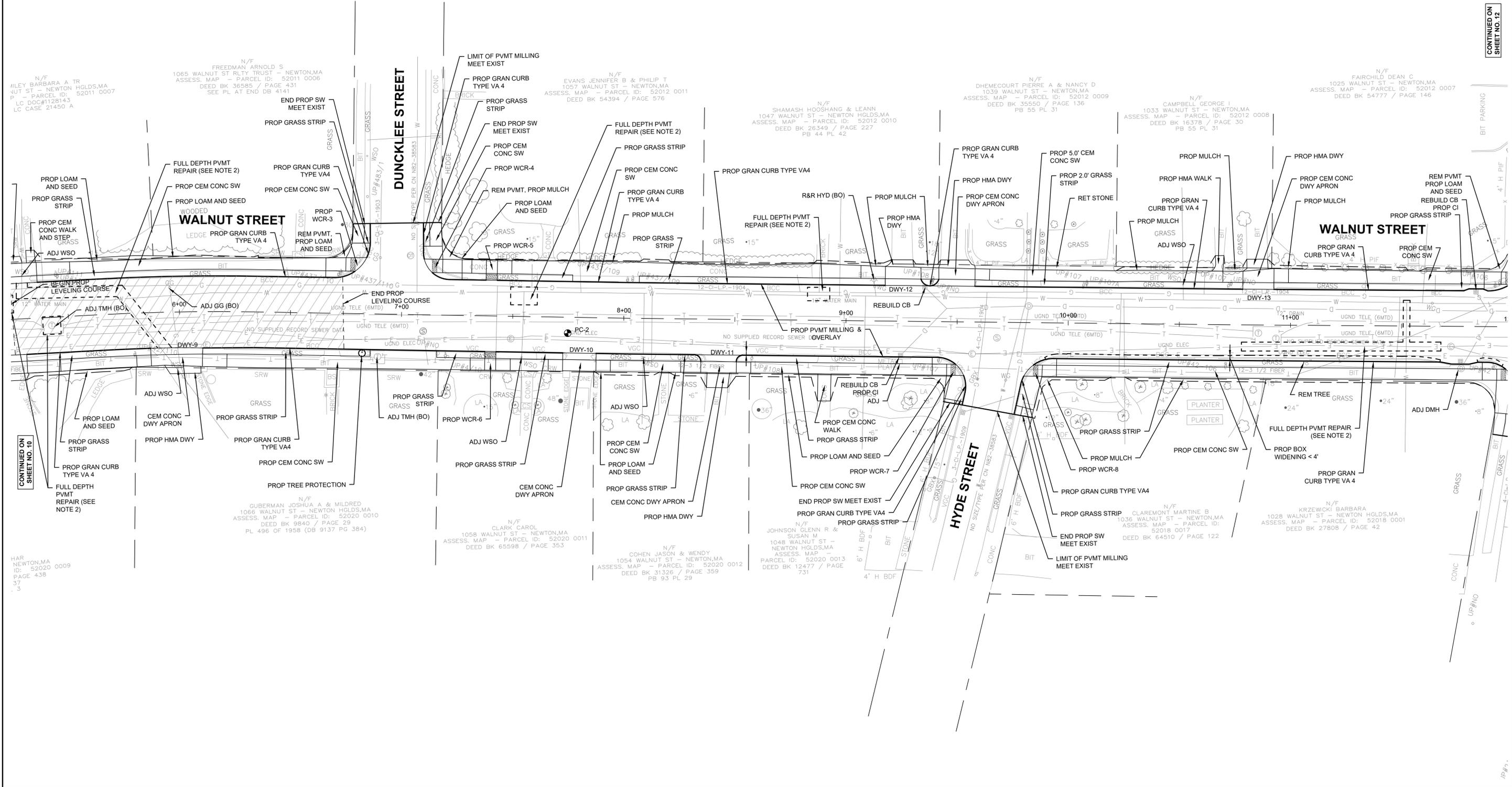
ISSUE DATE 01/27/2020

SHEET NO. 10 OF 36



NOTES:

1. ALL SURFACE FEATURES INCLUDING BUT NOT LIMITED TO TREES, HYDRANTS, WALLS, LANDSCAPING FEATURES, HARDSCAPES, SHRUBS, FENCES, UTILITY POLES, UTILITY STRUCTURES STEPS, WALKS, ETC., SHALL BE RETAINED UNLESS OTHERWISE NOTED. THE CONTRACTOR IS ADVISED THAT WATER SERVICE BOXES (WSO) MAY BE BURIED (28 ESTIMATED). BURIED BOXES SHALL ALSO BE ADJUSTED. ADJUSTMENT OF STRUCTURES WITHIN THE LIMITS OF PAVING SHALL BE AS DIRECTED BY THE ENGINEER.
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CONTINUED ON SHEET NO. 10

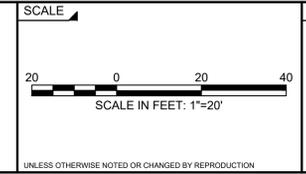
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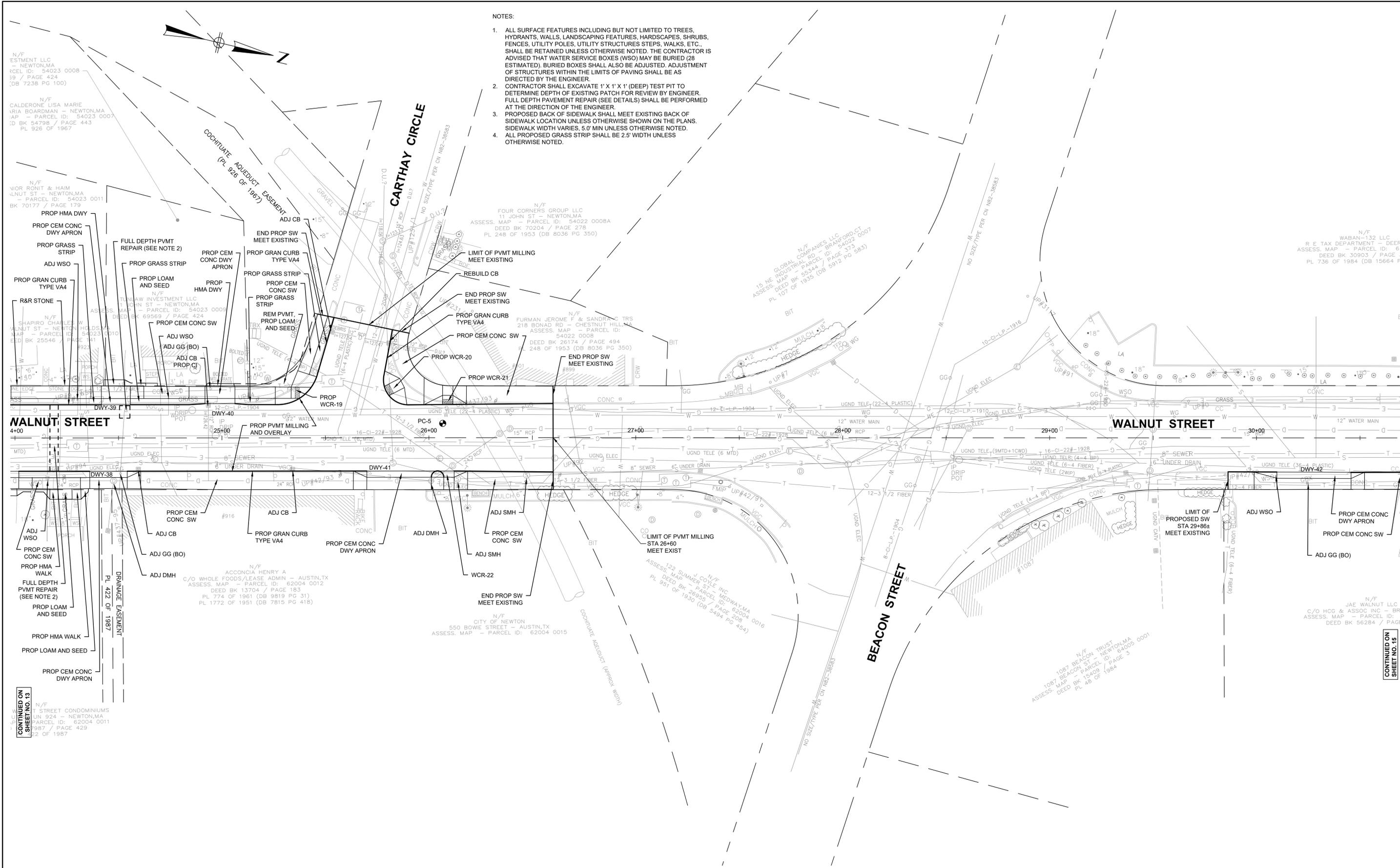
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CONSTRUCTION PLANS

BETA JOB NO.	6680
ISSUE DATE	01/27/2020
SHEET NO.	11 OF 36

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NOTES:

1. ALL SURFACE FEATURES INCLUDING BUT NOT LIMITED TO TREES, HYDRANTS, WALLS, LANDSCAPING FEATURES, HARDSCAPES, SHRUBS, FENCES, UTILITY POLES, UTILITY STRUCTURES STEPS, WALKS, ETC. SHALL BE RETAINED UNLESS OTHERWISE NOTED. THE CONTRACTOR IS ADVISED THAT WATER SERVICE BOXES (WSO) MAY BE BURIED (28 ESTIMATED). BURIED BOXES SHALL ALSO BE ADJUSTED. ADJUSTMENT OF STRUCTURES WITHIN THE LIMITS OF PAVING SHALL BE AS DIRECTED BY THE ENGINEER.
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N/F
ESTMENT LLC
- NEWTON, MA
ASSESS. MAP - PARCEL ID: 54023 0008
39 / PAGE 424
(DB 7238 PG 100)

N/F
CALDERONE LISA MARIE
VIA BOARDMAN - NEWTON, MA
ASSESS. MAP - PARCEL ID: 54023 0007
38 BK 54798 / PAGE 443
PL 926 OF 1967

N/F
VORONIT & HAIM
UNUT ST - NEWTON, MA
ASSESS. MAP - PARCEL ID: 54023 0011
BK 70177 / PAGE 178

N/F
SHAPIRO CHARLES W
WALNUT ST - NEWTON, MA
ASSESS. MAP - PARCEL ID: 54023 0010
BK 25546 / PAGE 141

WALNUT STREET
4+00

PROP CEM CONC SW
PROP HMA WALK
FULL DEPTH PAVMT REPAIR
(SEE NOTE 2)
PROP LOAM AND SEED
PROP HMA WALK
PROP LOAM AND SEED
PROP CEM CONC DWY APRON

N/F
STREET CONDOMINIUMS
UN 924 - NEWTON, MA
ASSESS. MAP - PARCEL ID: 62004 0011
387 / PAGE 429
2 OF 1987

COCHITUATE ADEQUENT EASEMENT
(PL 926 OF 1967)

CARTHAY CIRCLE

N/F
FOUR CORNERS GROUP LLC
11 JOHN ST - NEWTON, MA
ASSESS. MAP - PARCEL ID: 54022 0008A
DEED BK 70204 / PAGE 278
PL 248 OF 1953 (DB 8036 PG 350)

N/F
GLOBAL COMPANIES LLC
15 NE INDUSTRIAL RD - BRANFORD, CT
ASSESS. MAP - PARCEL ID: 54022 0007
DEED BK 95344 / PAGE 373
PL 101 OF 1935 (DB 5912 PG 583)

N/F
FURMAN JEROME F & SANDRA C TRS
218 BONAD RD - CHESTNUT HILLS, MA
ASSESS. MAP - PARCEL ID: 54022 0008
DEED BK 26174 / PAGE 494
PL 248 OF 1953 (DB 8036 PG 350)

N/F
122 SUMMER ST - MEDWAY, MA
ASSESS. MAP - PARCEL ID: 62004 0016
DEED BK 26995 / PAGE 208
PL 951 OF 1930 (DB 5494 PG 454)

N/F
CITY OF NEWTON
550 BOWE STREET - AUSTIN, TX
ASSESS. MAP - PARCEL ID: 62004 0015

N/F
1087 BEACON TRUST
1087 BEACON ST - NEWTON, MA
ASSESS. MAP - PARCEL ID: 62003 0001
DEED BK 15409 / PAGE 3
PL 48 OF 1984

N/F
WABAN-132 LLC
R E TAX DEPARTMENT - DEERF
ASSESS. MAP - PARCEL ID: 64
DEED BK 30903 / PAGE 31
PL 736 OF 1984 (DB 15664 PG 3)

N/F
JAE WALNUT LLC
C/O HCG & ASSOC INC - BRC
ASSESS. MAP - PARCEL ID: 6
DEED BK 56284 / PAGE

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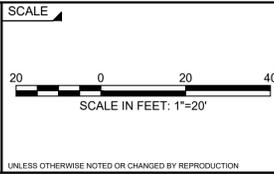
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Newton, Massachusetts**

CONSTRUCTION PLANS

BETA JOB NO. 6680

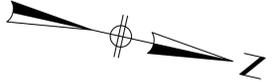
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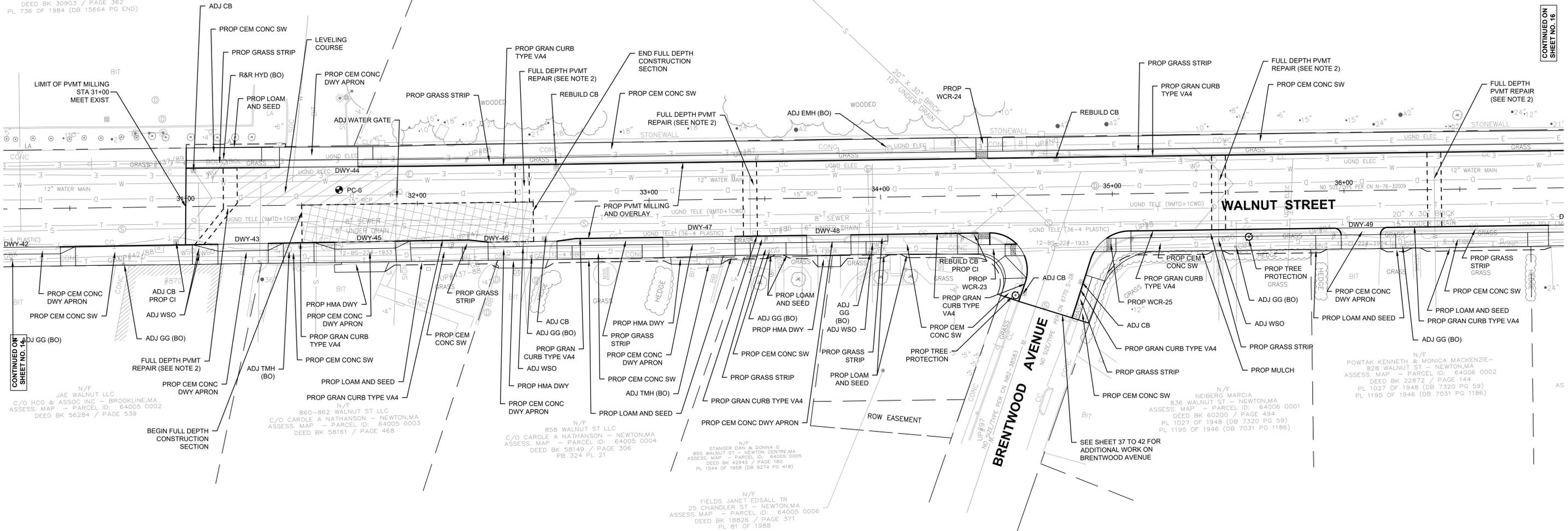
CONTINUED ON SHEET NO. 15

NOTES:

1. ALL SURFACE FEATURES INCLUDING BUT NOT LIMITED TO TREES, HYDRANTS, WALLS, LANDSCAPING FEATURES, HARDSCAPES, SHRUBS, FENCES, UTILITY POLES, UTILITY STRUCTURES STEPS, WALKS, ETC., SHALL BE RETAINED UNLESS OTHERWISE NOTED. THE CONTRACTOR IS ADVISED THAT WATER SERVICE BOXES (WSO) MAY BE BURIED (28 ESTIMATED). BURIED BOXES SHALL ALSO BE ADJUSTED. ADJUSTMENT OF STRUCTURES WITHIN THE LIMITS OF PAVING SHALL BE AS DIRECTED BY THE ENGINEER.
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4. ALL PROPOSED GRASS STRIP SHALL BE 2.5' WIDTH UNLESS OTHERWISE NOTED.



N/F
WABAN-132 LLC
R E TAX DEPARTMENT - DEERFIELD, IL
ASSESS. MAP - PARCEL ID: 64003 0012
DEED BK 30903 / PAGE 362
PL 736 OF 1984 (DB 15664 PG END)



CONTINUED ON
SHEET NO. 15

CONTINUED ON
SHEET NO. 16

N/F
JAE WALNUT LLC
C/O HCG & ASSOC INC - BROOKLINE, MA
ASSESS. MAP - PARCEL ID: 64005 0002
DEED BK 56284 / PAGE 539

860-862 WALNUT ST LLC
N/F
C/O CAROLE A NATHANSON - NEWTON, MA
ASSESS. MAP - PARCEL ID: 64005 0003
DEED BK 58161 / PAGE 468

858 WALNUT ST LLC
N/F
C/O CAROLE A NATHANSON - NEWTON, MA
ASSESS. MAP - PARCEL ID: 64005 0004
DEED BK 58149 / PAGE 306
PB 324 PL 21

N/F
STANGER DAN & DONNA G
850 WALNUT ST - NEWTON CENTRE, MA
ASSESS. MAP - PARCEL ID: 64005 0005
DEED BK 42945 / PAGE 180
PL 1544 OF 1958 (DB 9274 PG 418)

N/F
FIELDS JANET EDSALL TR
25 CHANDLER ST - NEWTON, MA
ASSESS. MAP - PARCEL ID: 64005 0006
DEED BK 18826 / PAGE 371
PL 81 OF 1988

N/F
POWTAK KENNETH & MONICA MACKENZIE -
828 WALNUT ST - NEWTON, MA
ASSESS. MAP - PARCEL ID: 64006 0002
DEED BK 22872 / PAGE 144
PL 1027 OF 1948 (DB 7320 PG 59)
PL 1195 OF 1946 (DB 7031 PG 1186)

N/F
NEIBERG MARCIA
836 WALNUT ST - NEWTON, MA
ASSESS. MAP - PARCEL ID: 64006 0001
DEED BK 60200 / PAGE 494
PL 1027 OF 1948 (DB 7320 PG 59)
PL 1195 OF 1946 (DB 7031 PG 1186)

SEE SHEET 37 TO 42 FOR
ADDITIONAL WORK ON
BRENTWOOD AVENUE

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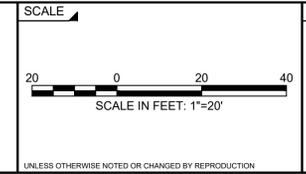
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CHECKED BY:
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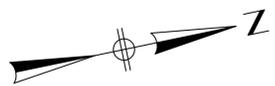
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ISSUE DATE 01/27/2020
SHEET NO. 15 OF 36

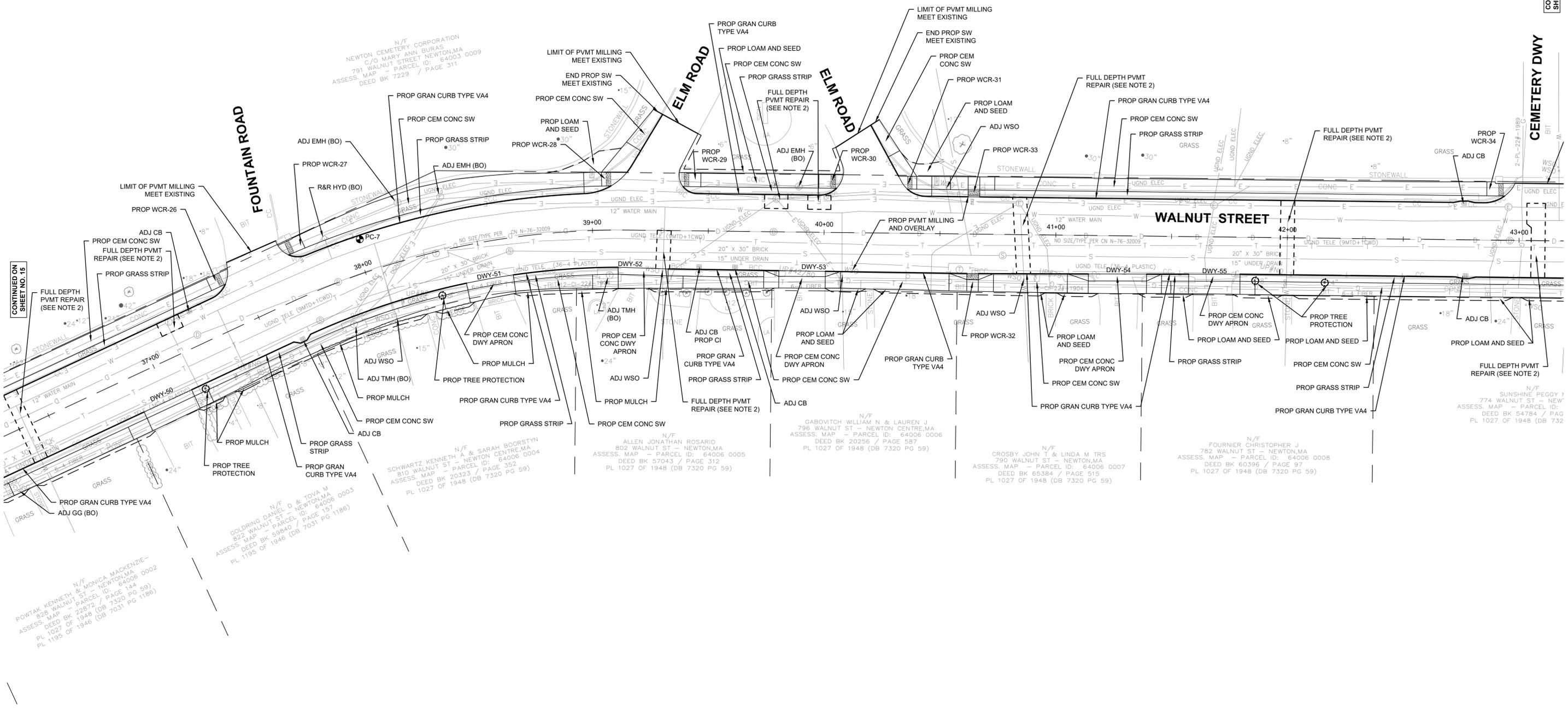
UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION



NOTES:

1. ALL SURFACE FEATURES INCLUDING BUT NOT LIMITED TO TREES, HYDRANTS, WALLS, LANDSCAPING FEATURES, HARDSCAPES, SHRUBS, FENCES, UTILITY POLES, UTILITY STRUCTURES STEPS, WALKS, ETC., SHALL BE RETAINED UNLESS OTHERWISE NOTED. THE CONTRACTOR IS ADVISED THAT WATER SERVICE BOXES (WSO) MAY BE BURIED (28 ESTIMATED). BURIED BOXES SHALL ALSO BE ADJUSTED. ADJUSTMENT OF STRUCTURES WITHIN THE LIMITS OF PAVING SHALL BE AS DIRECTED BY THE ENGINEER.
2. CONTRACTOR SHALL EXCAVATE 1' X 1' X 1' (DEEP) TEST PIT TO DETERMINE DEPTH OF EXISTING PATCH FOR REVIEW BY ENGINEER. FULL DEPTH PAVEMENT REPAIR (SEE DETAILS) SHALL BE PERFORMED AT THE DIRECTION OF THE ENGINEER.
3. PROPOSED BACK OF SIDEWALK SHALL MEET EXISTING BACK OF SIDEWALK LOCATION UNLESS OTHERWISE SHOWN ON THE PLANS. SIDEWALK WIDTH VARIES, 5.0' MIN UNLESS OTHERWISE NOTED.
4. ALL PROPOSED GRASS STRIP SHALL BE 2.5' WIDTH UNLESS OTHERWISE NOTED.

CONTINUED ON SHEET NO. 17



2/25/2020 11:34 AM C:\B660S\6680 - NEWTON - WALNUT ST DRAWING FILES\PLANS\SET\H\6680 CONSTRUCTION PLANS\DWG (BETA STB.BW.STB)

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY:
NJM

DESIGNED BY:
CJT

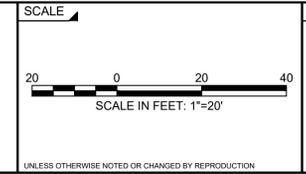
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TITLE

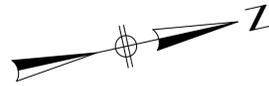
Walnut Street Roadway Rehabilitation
Newton, Massachusetts

CONSTRUCTION PLANS

BETA JOB NO. 6680

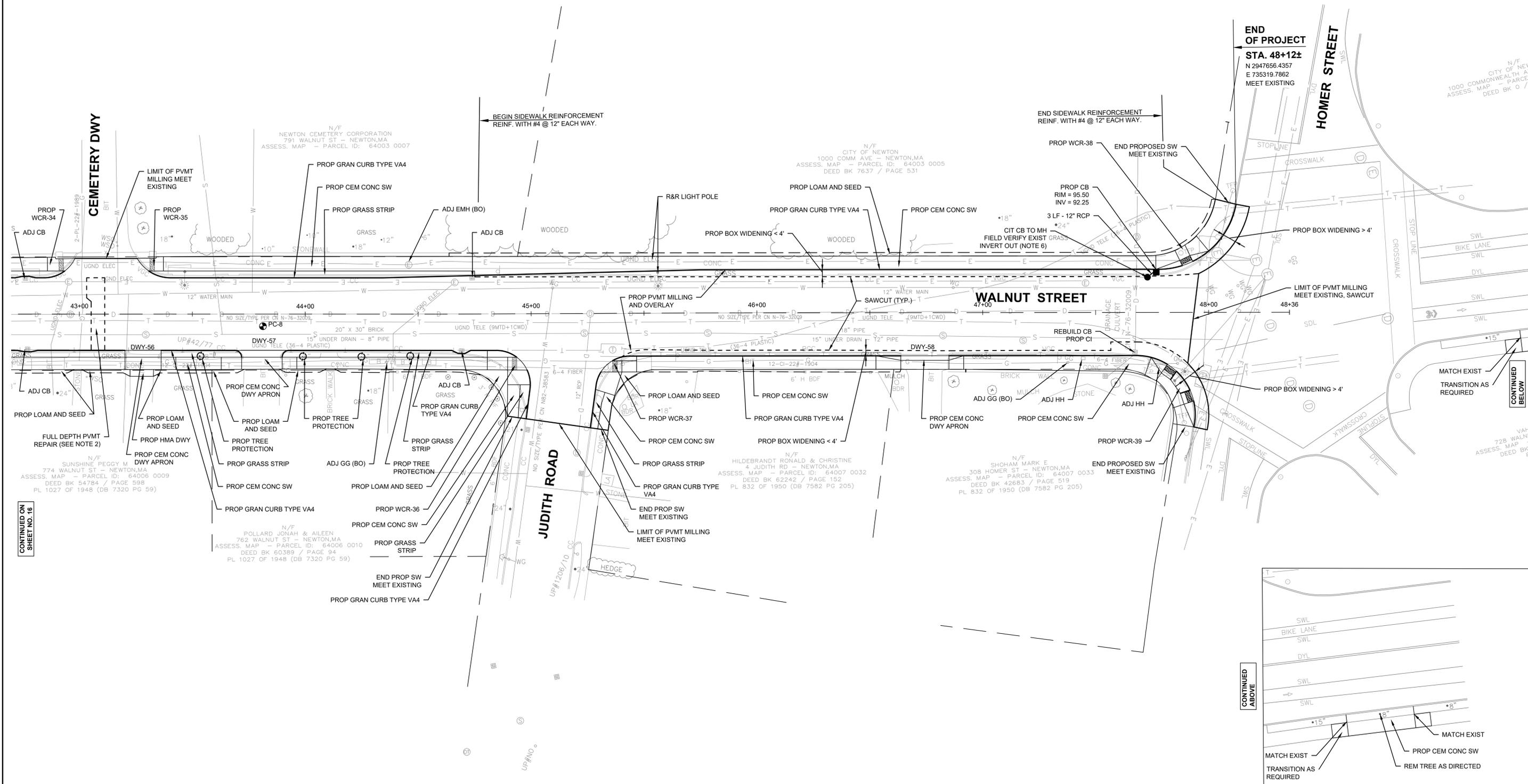
ISSUE DATE 01/27/2020

SHEET NO. 16 OF 36



NOTES:

1. ALL SURFACE FEATURES INCLUDING BUT NOT LIMITED TO TREES, HYDRANTS, WALLS, LANDSCAPING FEATURES, HARDSCAPES, SHRUBS, FENCES, UTILITY POLES, UTILITY STRUCTURES STEPS, WALKS, ETC., SHALL BE RETAINED UNLESS OTHERWISE NOTED. THE CONTRACTOR IS ADVISED THAT WATER SERVICE BOXES (WSO) MAY BE BURIED (28 ESTIMATED). BURIED BOXES SHALL ALSO BE ADJUSTED. ADJUSTMENT OF STRUCTURES WITHIN THE LIMITS OF PAVING SHALL BE AS DIRECTED BY THE ENGINEER.
2. CONTRACTOR SHALL EXCAVATE 1' X 1' X 1' (DEEP) TEST PIT TO DETERMINE DEPTH OF EXISTING PATCH FOR REVIEW BY ENGINEER. FULL DEPTH PAVEMENT REPAIR (SEE DETAILS) SHALL BE PERFORMED AT THE DIRECTION OF THE ENGINEER.
3. PROPOSED BACK OF SIDEWALK SHALL MEET EXISTING BACK OF SIDEWALK LOCATION UNLESS OTHERWISE SHOWN ON THE PLANS. SIDEWALK WIDTH VARIES, 5.0' MIN UNLESS OTHERWISE NOTED.
4. ALL PROPOSED GRASS STRIP SHALL BE 2.5' WIDTH UNLESS OTHERWISE NOTED.
5. FIELD VERIFY INVERT OUT PRIOR TO FABRICATION OF CB AT 47+80 LT. REPORT INVERT TO ENGINEER.



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CONTINUED ON SHEET NO. 16

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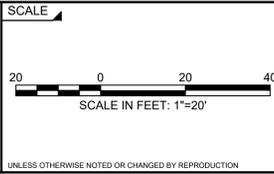
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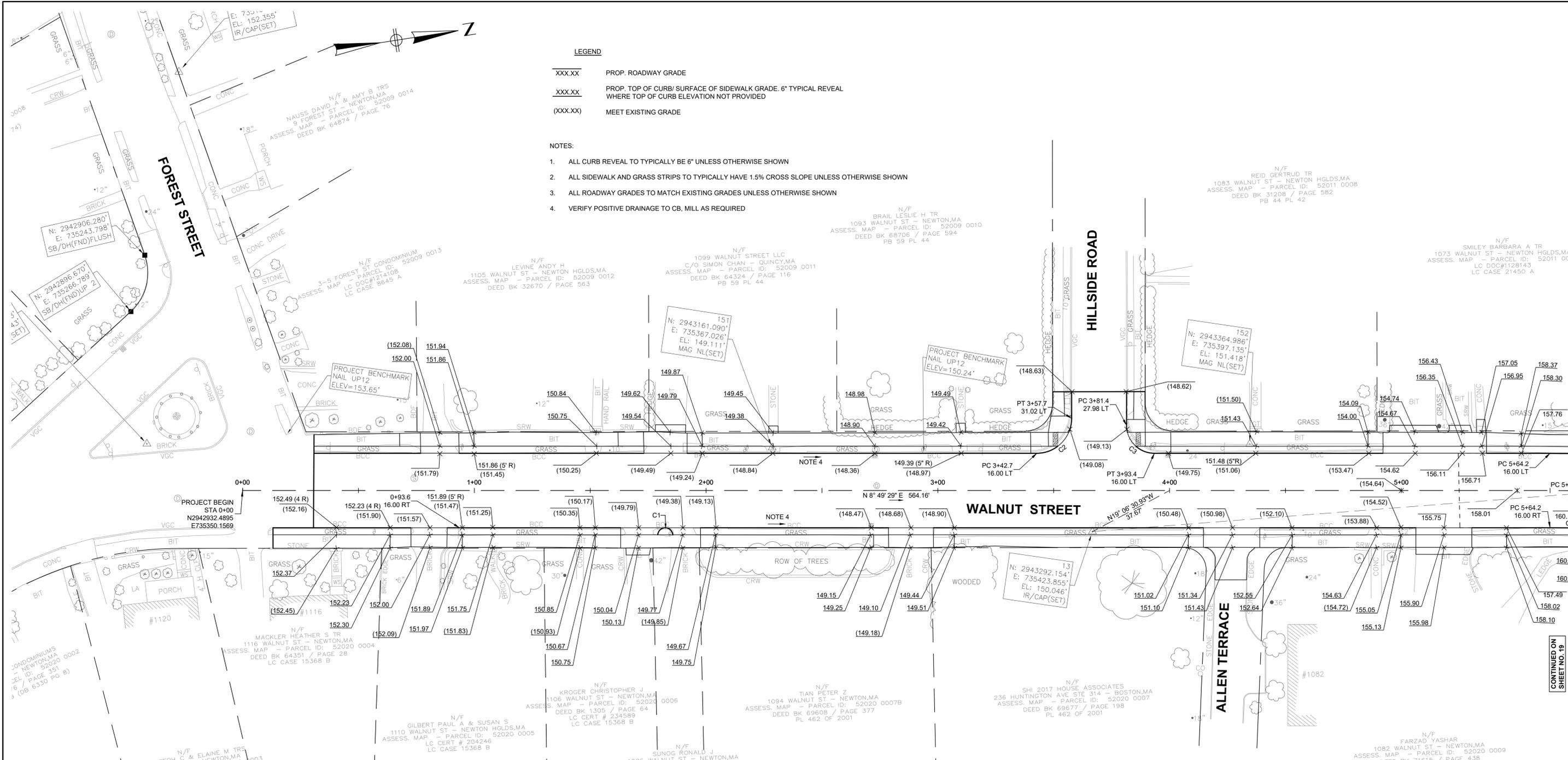
LEGEND

XXX.XX PROP. ROADWAY GRADE

XXX.XX PROP. TOP OF CURB/ SURFACE OF SIDEWALK GRADE, 6" TYPICAL REVEAL WHERE TOP OF CURB ELEVATION NOT PROVIDED

(XXX.XX) MEET EXISTING GRADE

- NOTES:**
- ALL CURB REVEAL TO TYPICALLY BE 6" UNLESS OTHERWISE SHOWN
 - ALL SIDEWALK AND GRASS STRIPS TO TYPICALLY HAVE 1.5% CROSS SLOPE UNLESS OTHERWISE SHOWN
 - ALL ROADWAY GRADES TO MATCH EXISTING GRADES UNLESS OTHERWISE SHOWN
 - VERIFY POSITIVE DRAINAGE TO CB, MILL AS REQUIRED



Curve Table

CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C2	23.58	15.00	090.09	15.02
C3	18.83	12.00	089.91	11.98
C1	8.98	3.00	171.41	39.95

2/25/2020 11:35 AM O:\6605\6680 - NEWTON - WALNUT ST DRAWING FILES\PLANS\TIE&GRADING\PLANS\TIE&GRADING\BETA STB BW\STB

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SCALE



SCALE IN FEET: 1"=20'

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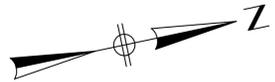
CURB TIE & GRADING PLANS

BETA JOB NO. 6680

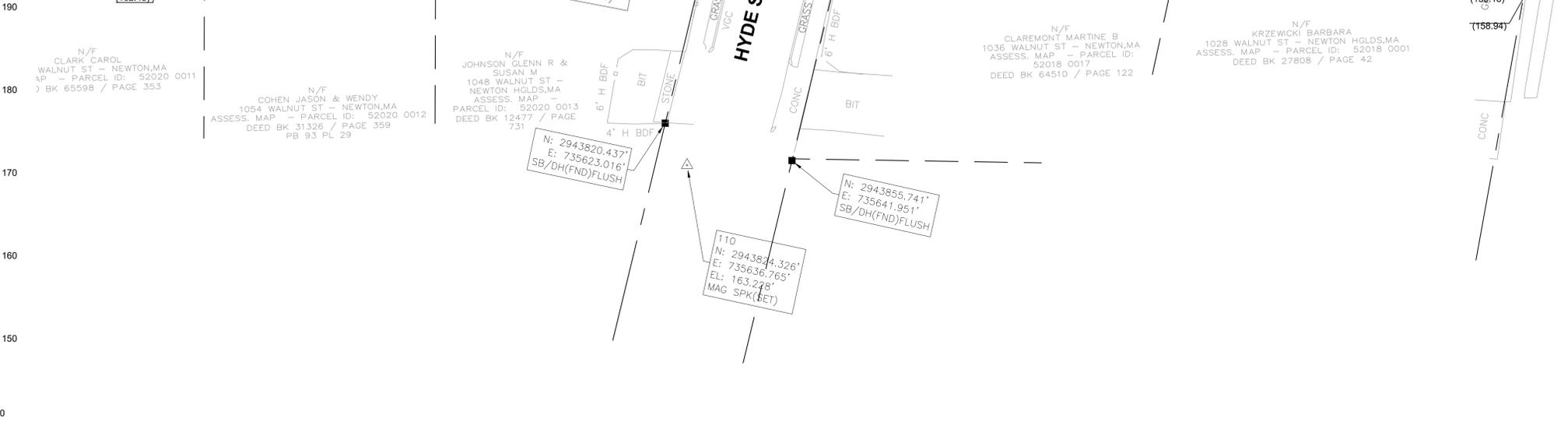
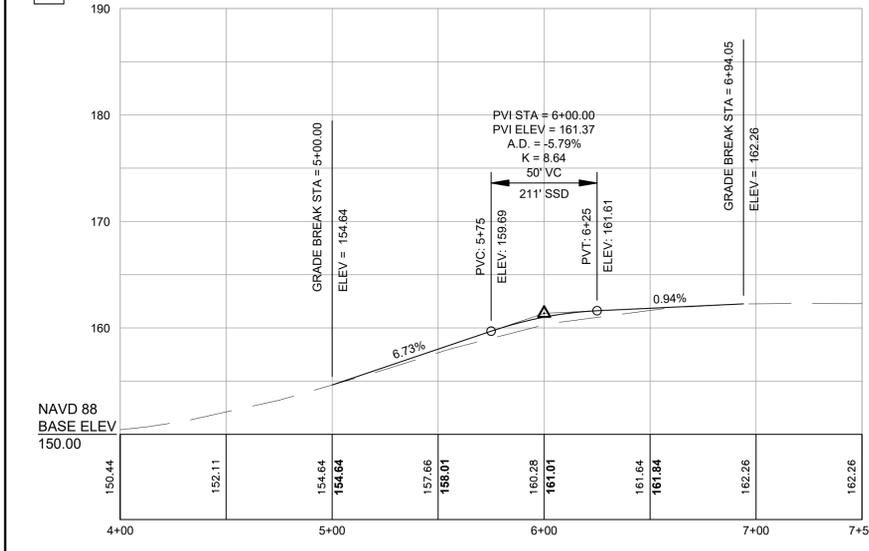
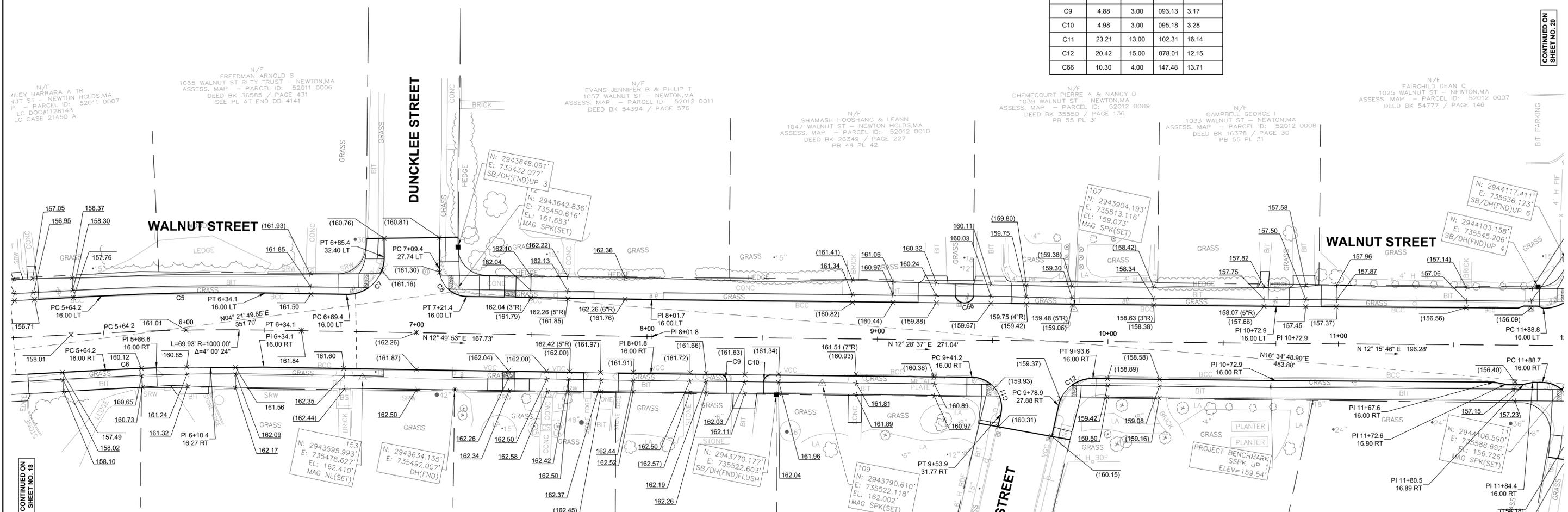
ISSUE DATE 01/27/2020

SHEET NO. 18 OF 36

CONTINUED ON SHEET NO. 19



Curve Table				
CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C6	22.03	984.00	001.28	11.02
C5	71.05	1016.00	004.01	35.54
C7	25.54	16.00	091.44	16.41
C8	18.59	12.00	088.78	11.75
C9	4.88	3.00	093.13	3.17
C10	4.98	3.00	095.18	3.28
C11	23.21	13.00	102.31	16.14
C12	20.42	15.00	078.01	12.15
C66	10.30	4.00	147.48	13.71



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CJT

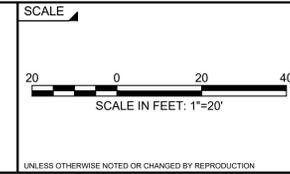
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Walnut Street Roadway Rehabilitation
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CURB TIE & GRADING PLANS

BETA JOB NO. 6680

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SHEET NO. 19 OF 36

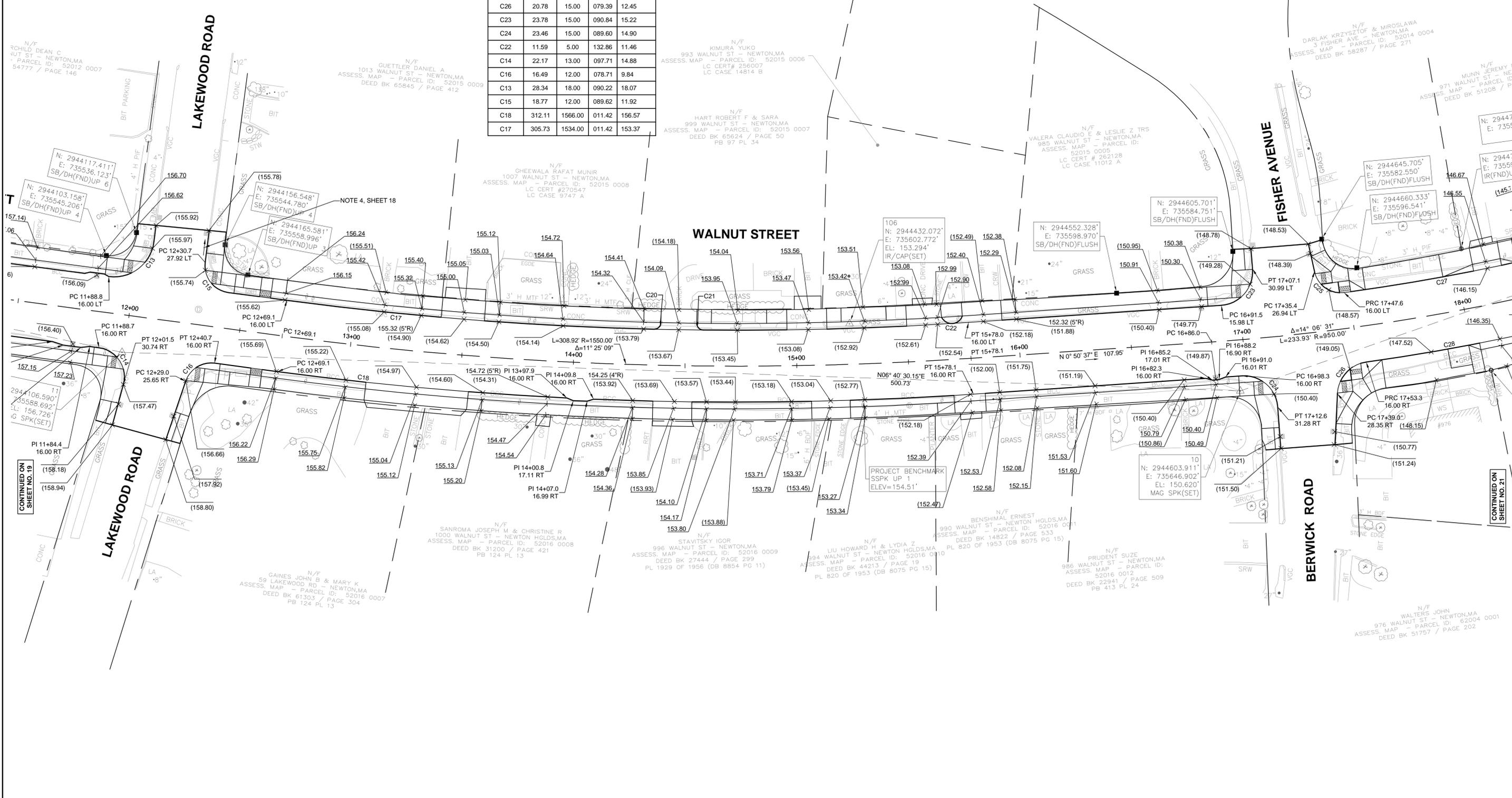
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CONTINUED ON SHEET NO. 20

CONTINUED ON SHEET NO. 18



CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C20	4.72	3.00	090.11	3.01
C21	4.75	3.00	090.71	3.04
C25	17.86	12.00	085.29	11.05
C26	20.78	15.00	079.39	12.45
C23	23.78	15.00	090.84	15.22
C24	23.46	15.00	089.60	14.90
C22	11.59	5.00	132.86	11.46
C14	22.17	13.00	097.71	14.88
C16	16.49	12.00	078.71	9.84
C13	28.34	18.00	090.22	18.07
C15	18.77	12.00	089.62	11.92
C18	312.11	1566.00	011.42	156.57
C17	305.73	1534.00	011.42	153.37



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DESIGNED BY:
CJT

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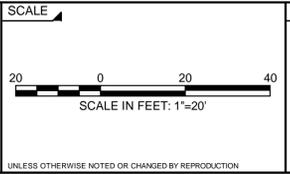
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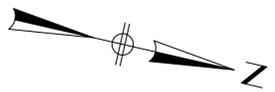
Walnut Street Roadway Rehabilitation
Newton, Massachusetts

CURB TIE & GRADING PLANS

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SHEET NO. 20 OF 36

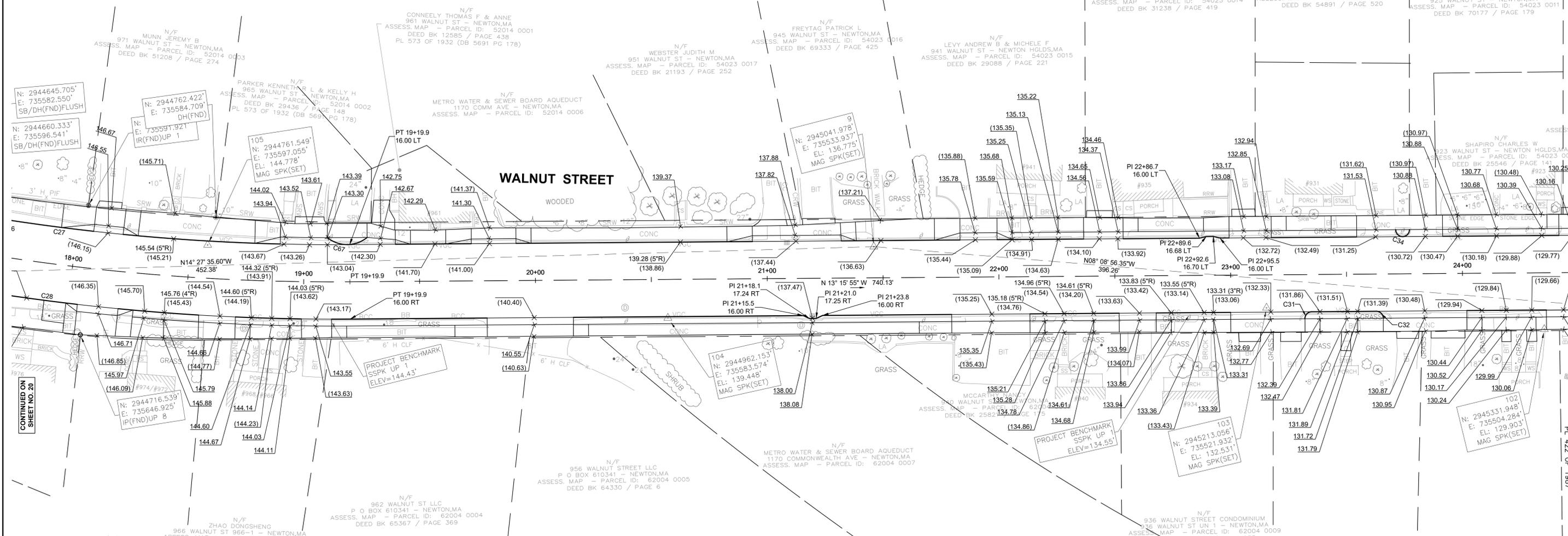


N/F
AK KRZYSZTOF & MIROSLAWA
FISHER AVE - NEWTON, MA
ASSESS. MAP - PARCEL ID: 52014 0004
DEED BK 58287 / PAGE 271

N/F
TUNLAW INVESTMENT LLC
CARTHAY ST - NEWTON, MA
ASSESS. MAP - PARCEL ID: 54023 0008
DEED BK 69589 / PAGE 424
PL 14 OF 1948 (DB 7238 PG 100)

N/F
CALDERONE LISA MARIE
C/O MARIA BOARDMAN - NEWTON, MA
ASSESS. MAP - PARCEL ID: 54023 0007
DEED BK 54798 / PAGE 443
PL 926 OF 1967

CONTINUED ON
SHEET NO. 22



Curve Table				
CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C27	169.34	934.00	010.39	84.90
C28	169.42	966.00	010.05	84.93
C31	4.71	3.00	090.00	3.00
C32	4.71	3.00	090.00	3.00
C34	9.52	3.00	181.87	183.65
C67	18.87	14.00	077.24	11.18

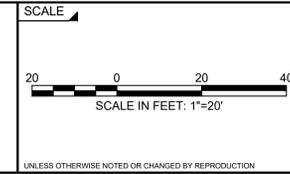
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DESIGNED BY:	CJT			
CHECKED BY:	MT			
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CJT

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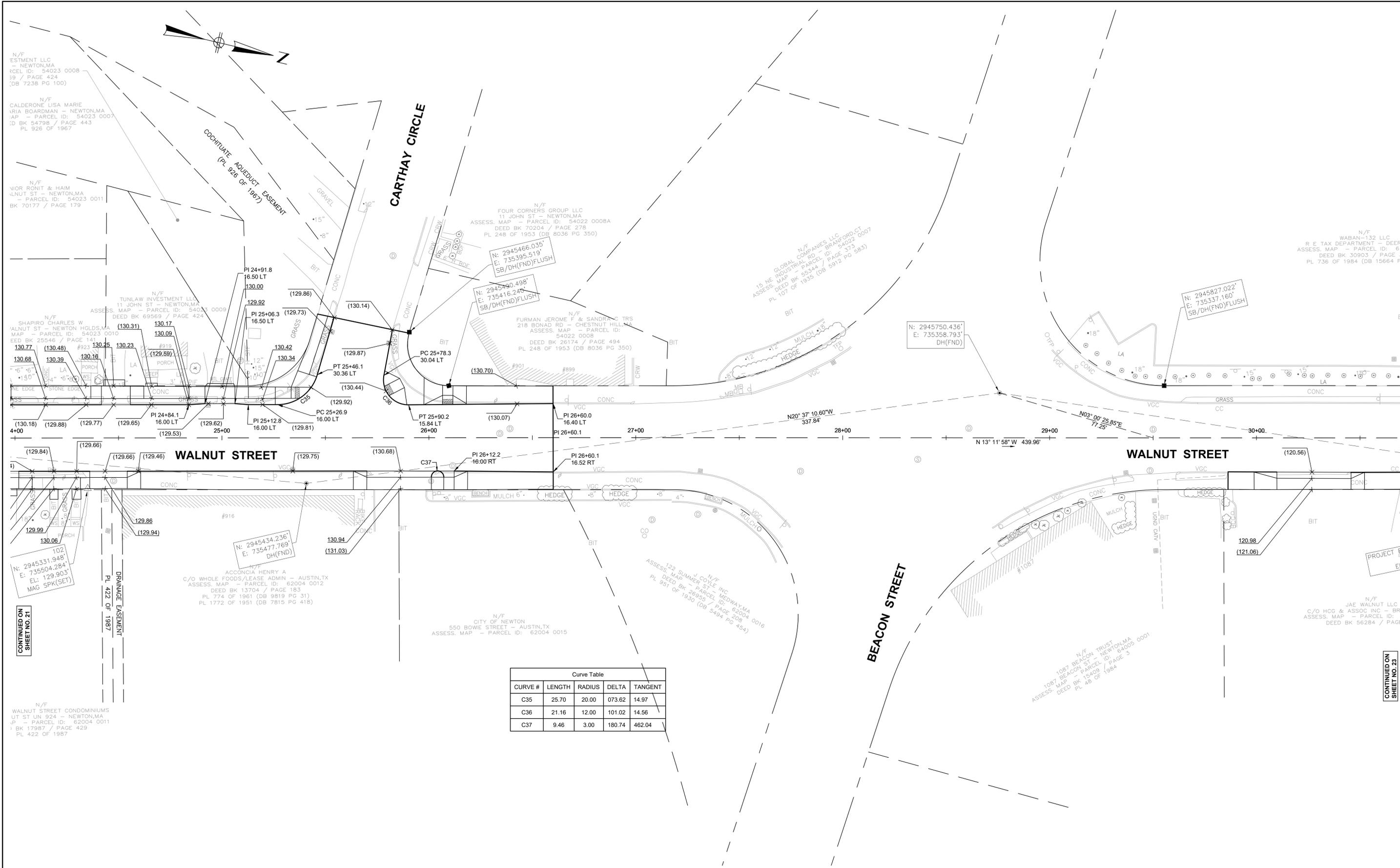
SUBCONSULTANT



TITLE
**Walnut Street Roadway Rehabilitation
Newton, Massachusetts**
CURB TIE & GRADING PLANS

BETA JOB NO. 6680
ISSUE DATE 01/27/2020
SHEET NO. 21 OF 36

PL 422 OF 1987



N/F
ESTMENT LLC
- NEWTON, MA
TAX ID: 54023 0008
39 / PAGE 424
(DB 7238 PG 100)

N/F
CALDERONE LISA MARIE
VIA BOARDMAN - NEWTON, MA
TAX ID: 54023 0007
1D BK 54798 / PAGE 443
PL 926 OF 1967

N/F
VORONIT & HAIM
UNUT ST - NEWTON, MA
TAX ID: 54023 0011
BK 70177 / PAGE 179

N/F
SHAPIRO CHARLES W
WALNUT ST - NEWTON HGLDS, MA
TAX ID: 54023 0010
DEED BK 25546 / PAGE 144

N/F
TUNLAW INVESTMENT LLC
11 JOHN ST - NEWTON, MA
TAX ID: 54023 0009
DEED BK 69569 / PAGE 424

N: 2945331.948'
E: 735504.284'
EL: 129.903'
MAG SPK(SET)

N/F
WALNUT STREET CONDOMINIUMS
UT ST UN 924 - NEWTON, MA
TAX ID: 62004 0011
1 BK 17087 / PAGE 429
PL 422 OF 1987

N: 2945466.035'
E: 735395.519'
SB/DH(FND)FLUSH

N: 2945490.498'
E: 735416.245'
SB/DH(FND)FLUSH

N: 2945434.236'
E: 735477.769'
DH(FND)

ACCIONCIA HENRY A
C/O WHOLE FOODS/LEASE ADMIN - AUSTIN, TX
TAX ID: 62004 0012
DEED BK 13704 / PAGE 183
PL 774 OF 1961 (DB 9819 PG 31)
PL 1772 OF 1951 (DB 7815 PG 418)

N/F
CITY OF NEWTON
550 BOWIE STREET - AUSTIN, TX
TAX ID: 62004 0015
ASSESS. MAP - PARCEL ID: 62004 0015

N/F
J COYLE INC
122 SUMMER ST - MEDWAY, MA
TAX ID: 62004 0016
DEED BK 26995 / PAGE 208
PL 951 OF 1930 (DB 5494 PG 454)

N/F
GLOBAL COMPANIES LLC
15 NE INDUSTRIAL RD - BRANFORD, CT
TAX ID: 54022 0007
DEED BK 65344 / PAGE 373
PL 101 OF 1935 (DB 5912 PG 583)

N/F
FURMAN JEROME F & SANDRA C TRS
218 BONAD RD - CHESTNUT HILL, MA
TAX ID: 54022 0008
DEED BK 26174 / PAGE 494
PL 248 OF 1953 (DB 8036 PG 350)

N/F
WABAN-132 LLC
R E TAX DEPARTMENT - DEERF
ASSESS. MAP - PARCEL ID: 64
DEED BK 30903 / PAGE 31
PL 736 OF 1984 (DB 15664 PG

CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C35	25.70	20.00	073.62	14.97
C36	21.16	12.00	101.02	14.56
C37	9.46	3.00	180.74	462.04

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CJT

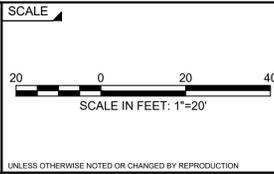
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Walnut Street Roadway Rehabilitation
Newton, Massachusetts

CURB TIE & GRADING PLANS

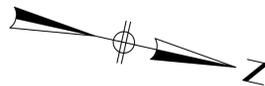
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ISSUE DATE 01/27/2020

SHEET NO. 22 OF 36

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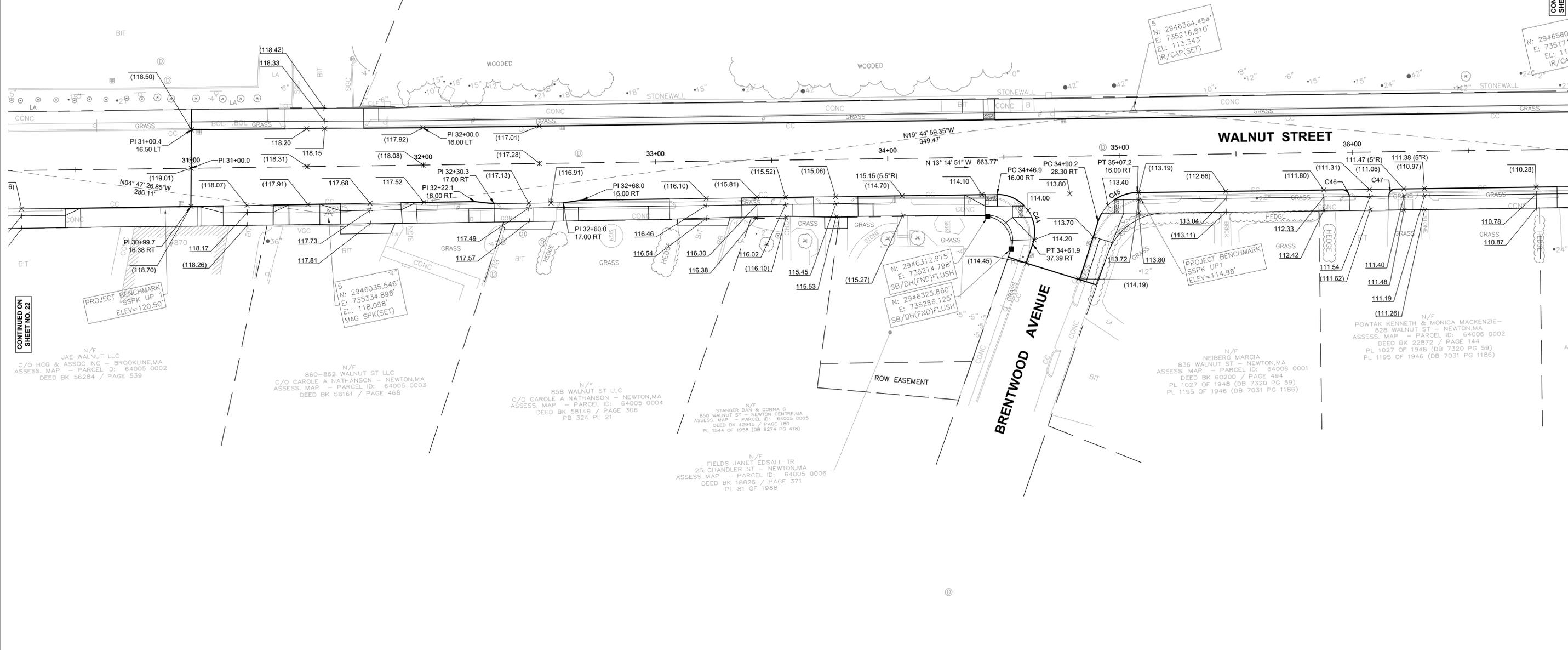
CONTINUED ON SHEET NO. 23



Curve Table				
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C44	30.63	16.00	109.69	22.72
C45	22.47	18.00	071.53	12.96
C47	4.71	3.00	090.00	3.00
C46	4.71	3.00	090.00	3.00

N/F
WABAN-132 LLC
R E TAX DEPARTMENT - DEERFIELD, IL
ASSESS. MAP - PARCEL ID: 64003 0012
DEED BK 30903 / PAGE 362
PL 736 OF 1984 (DB 15664 PG END)

CONTINUED ON
SHEET NO. 24



CONTINUED ON
SHEET NO. 22

N/F
JAE WALNUT LLC
C/O HCG & ASSOC INC - BROOKLINE, MA
ASSESS. MAP - PARCEL ID: 64005 0002
DEED BK 56284 / PAGE 539

N/F
860-862 WALNUT ST LLC
C/O CAROLE A NATHANSON - NEWTON, MA
ASSESS. MAP - PARCEL ID: 64005 0003
DEED BK 58161 / PAGE 468

N/F
858 WALNUT ST LLC
C/O CAROLE A NATHANSON - NEWTON, MA
ASSESS. MAP - PARCEL ID: 64005 0004
DEED BK 58149 / PAGE 306
PB 324 PL 21

N/F
STANGER DAN & DONNA G
850 WALNUT ST - NEWTON CENTRE, MA
ASSESS. MAP - PARCEL ID: 64005 0005
DEED BK 42945 / PAGE 180
PL 1544 OF 1958 (DB 9274 PG 418)

N/F
FIELDS JANET EDSALL TR
25 CHANDLER ST - NEWTON, MA
ASSESS. MAP - PARCEL ID: 64005 0006
DEED BK 18826 / PAGE 371
PL 81 OF 1988

N/F
NEIBERG MARCIA
836 WALNUT ST - NEWTON, MA
ASSESS. MAP - PARCEL ID: 64006 0001
DEED BK 60200 / PAGE 494
PL 1027 OF 1948 (DB 7320 PG 59)
PL 1195 OF 1946 (DB 7031 PG 1186)

N/F
POWTAK KENNETH & MONICA MACKENZIE-
328 WALNUT ST - NEWTON, MA
ASSESS. MAP - PARCEL ID: 64006 0002
DEED BK 22872 / PAGE 144
PL 1027 OF 1948 (DB 7320 PG 59)
PL 1195 OF 1946 (DB 7031 PG 1186)

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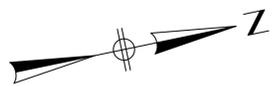
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Newton, Massachusetts
CURB TIE & GRADING PLANS

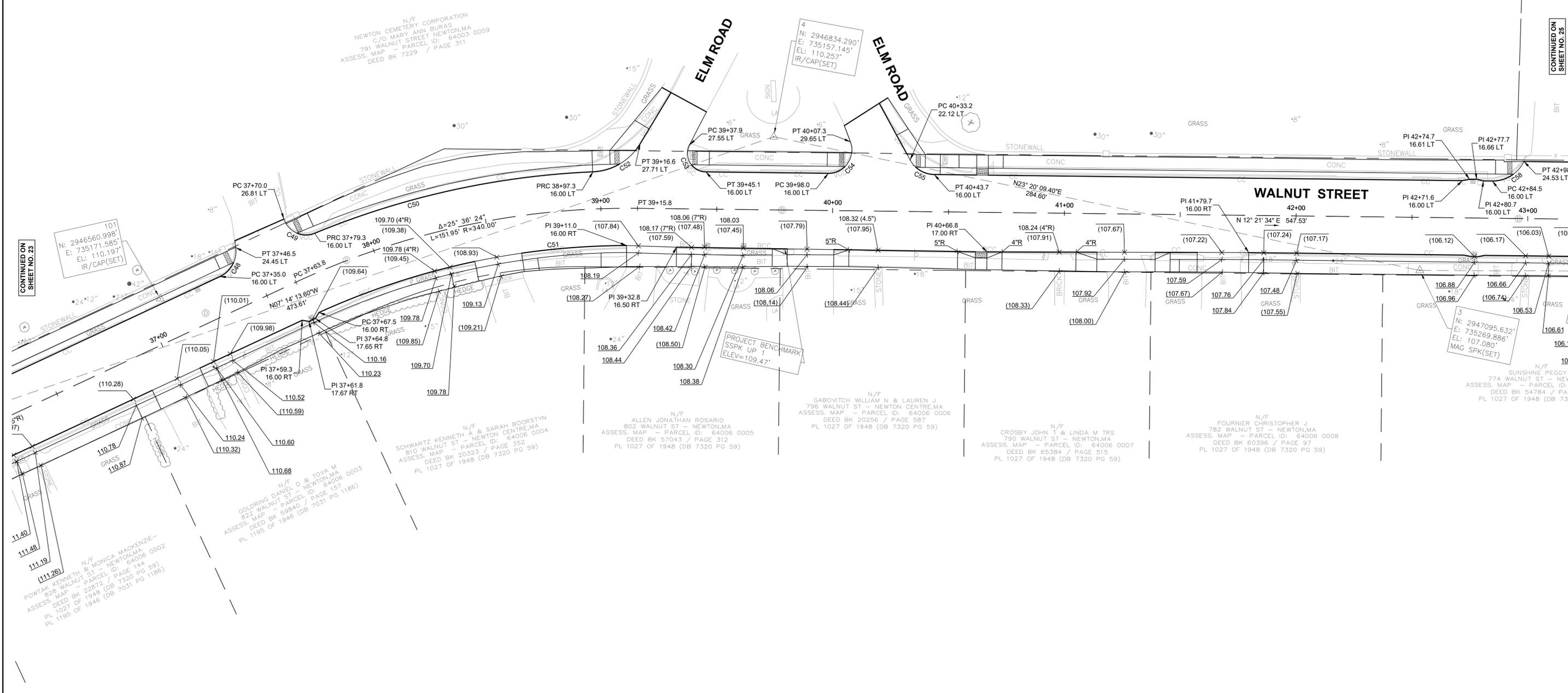
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Curve Table				
CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C50	123.56	356.00	019.89	62.41
C49	16.38	10.00	093.86	10.70
C52	24.56	25.00	056.28	13.37
C51	136.79	324.00	024.19	69.43
C53	16.24	8.00	116.31	12.88
C54	19.45	10.00	111.43	14.67
C55	12.70	12.00	060.64	7.02
C48	15.25	12.00	072.80	8.85
C58	16.88	15.00	064.46	9.46



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TITLE

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Newton, Massachusetts

CURB TIE & GRADING PLANS

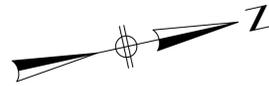
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ISSUE DATE 01/27/2020

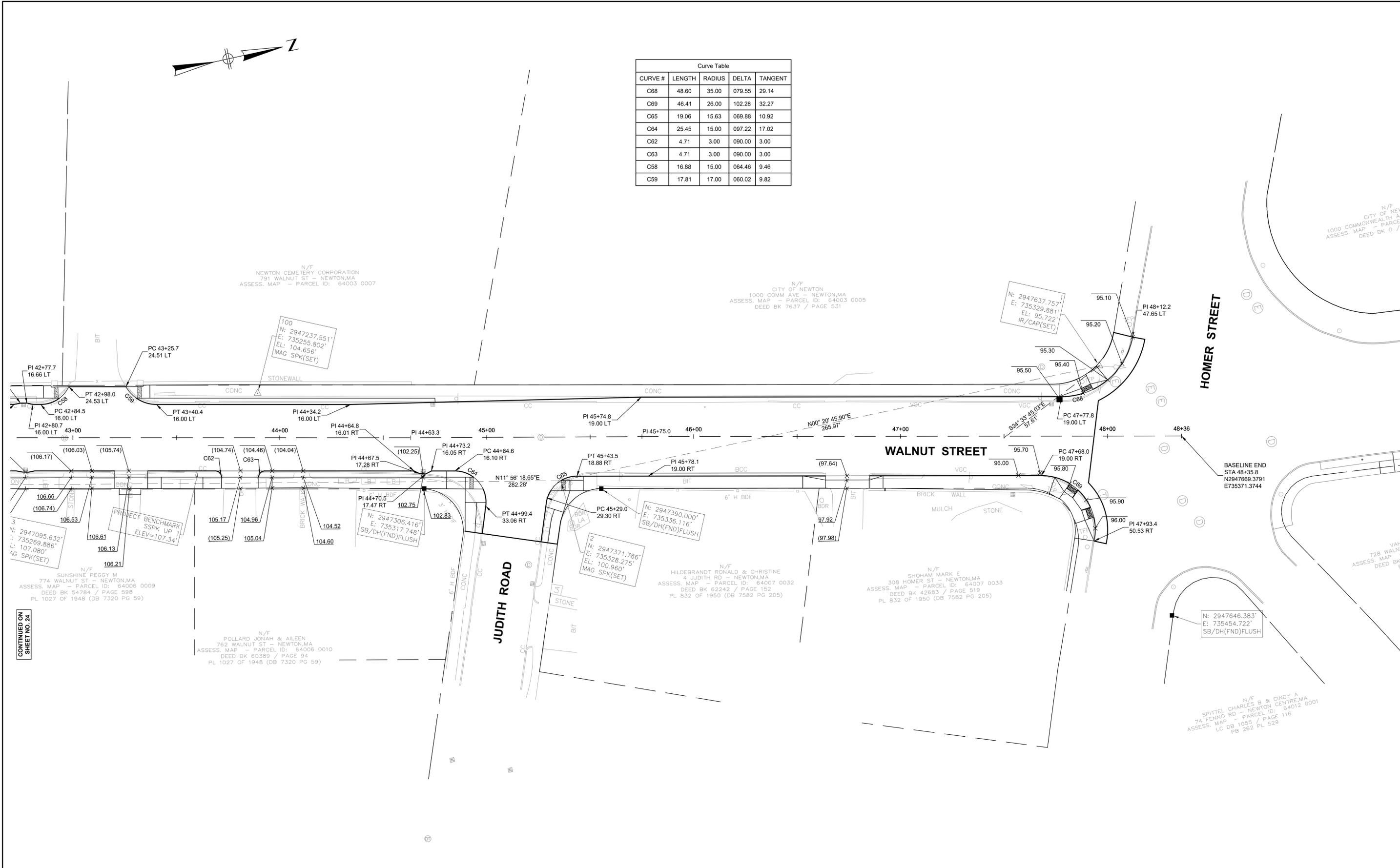
SHEET NO. 24 OF 36

CONTINUED ON SHEET NO. 23

CONTINUED ON SHEET NO. 25



Curve Table				
CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C68	48.60	35.00	079.55	29.14
C69	46.41	26.00	102.28	32.27
C65	19.06	15.63	069.88	10.92
C64	25.45	15.00	097.22	17.02
C62	4.71	3.00	090.00	3.00
C63	4.71	3.00	090.00	3.00
C58	16.88	15.00	064.46	9.46
C59	17.81	17.00	060.02	9.82



2/25/2020 11:37 AM C:\6603\6680 - NEWTON - WALNUT ST DRAWING FILES\PLANS\SET\H\6680 CURB TIE & GRADING PLANS\DWG (BETA STB BW) STB

CONTINUED ON SHEET NO. 24

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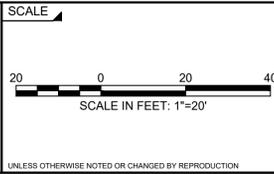
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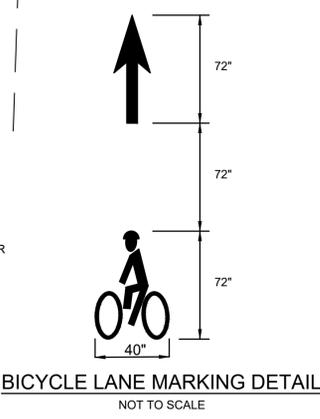
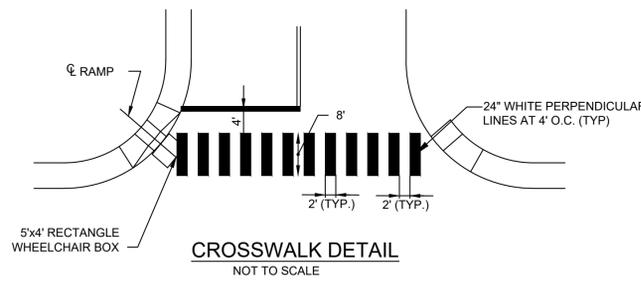
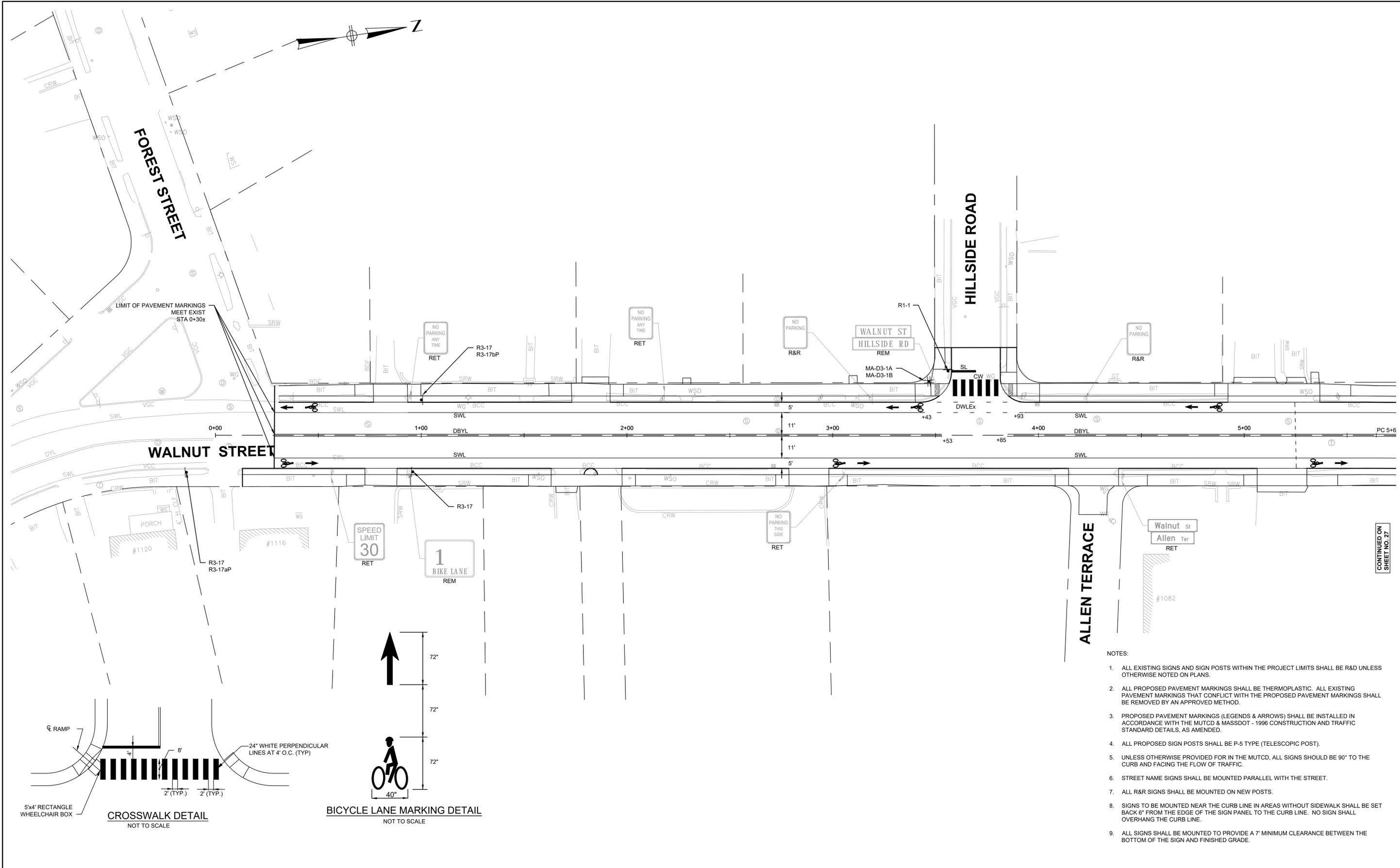
CURB TIE & GRADING PLANS

BETA JOB NO. 6680

ISSUE DATE 01/27/2020

SHEET NO. 25 OF 36

2/25/2020 11:37 AM O:\6603\6680 - NEWTON - WALNUT STREET ROADWAY REHABILITATION\TRAFFIC PLANS\DWG (BETA STB.BW.STB)



- NOTES:
1. ALL EXISTING SIGNS AND SIGN POSTS WITHIN THE PROJECT LIMITS SHALL BE R&R UNLESS OTHERWISE NOTED ON PLANS.
 2. ALL PROPOSED PAVEMENT MARKINGS SHALL BE THERMOPLASTIC. ALL EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE PROPOSED PAVEMENT MARKINGS SHALL BE REMOVED BY AN APPROVED METHOD.
 3. PROPOSED PAVEMENT MARKINGS (LEGENDS & ARROWS) SHALL BE INSTALLED IN ACCORDANCE WITH THE MUTCD & MASSDOT - 1996 CONSTRUCTION AND TRAFFIC STANDARD DETAILS, AS AMENDED.
 4. ALL PROPOSED SIGN POSTS SHALL BE P-5 TYPE (TELESCOPIC POST).
 5. UNLESS OTHERWISE PROVIDED FOR IN THE MUTCD, ALL SIGNS SHOULD BE 90° TO THE CURB AND FACING THE FLOW OF TRAFFIC.
 6. STREET NAME SIGNS SHALL BE MOUNTED PARALLEL WITH THE STREET.
 7. ALL R&R SIGNS SHALL BE MOUNTED ON NEW POSTS.
 8. SIGNS TO BE MOUNTED NEAR THE CURB LINE IN AREAS WITHOUT SIDEWALK SHALL BE SET BACK 6" FROM THE EDGE OF THE SIGN PANEL TO THE CURB LINE. NO SIGN SHALL OVERHANG THE CURB LINE.
 9. ALL SIGNS SHALL BE MOUNTED TO PROVIDE A 7' MINIMUM CLEARANCE BETWEEN THE BOTTOM OF THE SIGN AND FINISHED GRADE.

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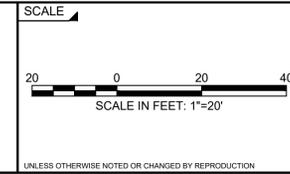
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TITLE

**Walnut Street Roadway Rehabilitation
Newton, Massachusetts**

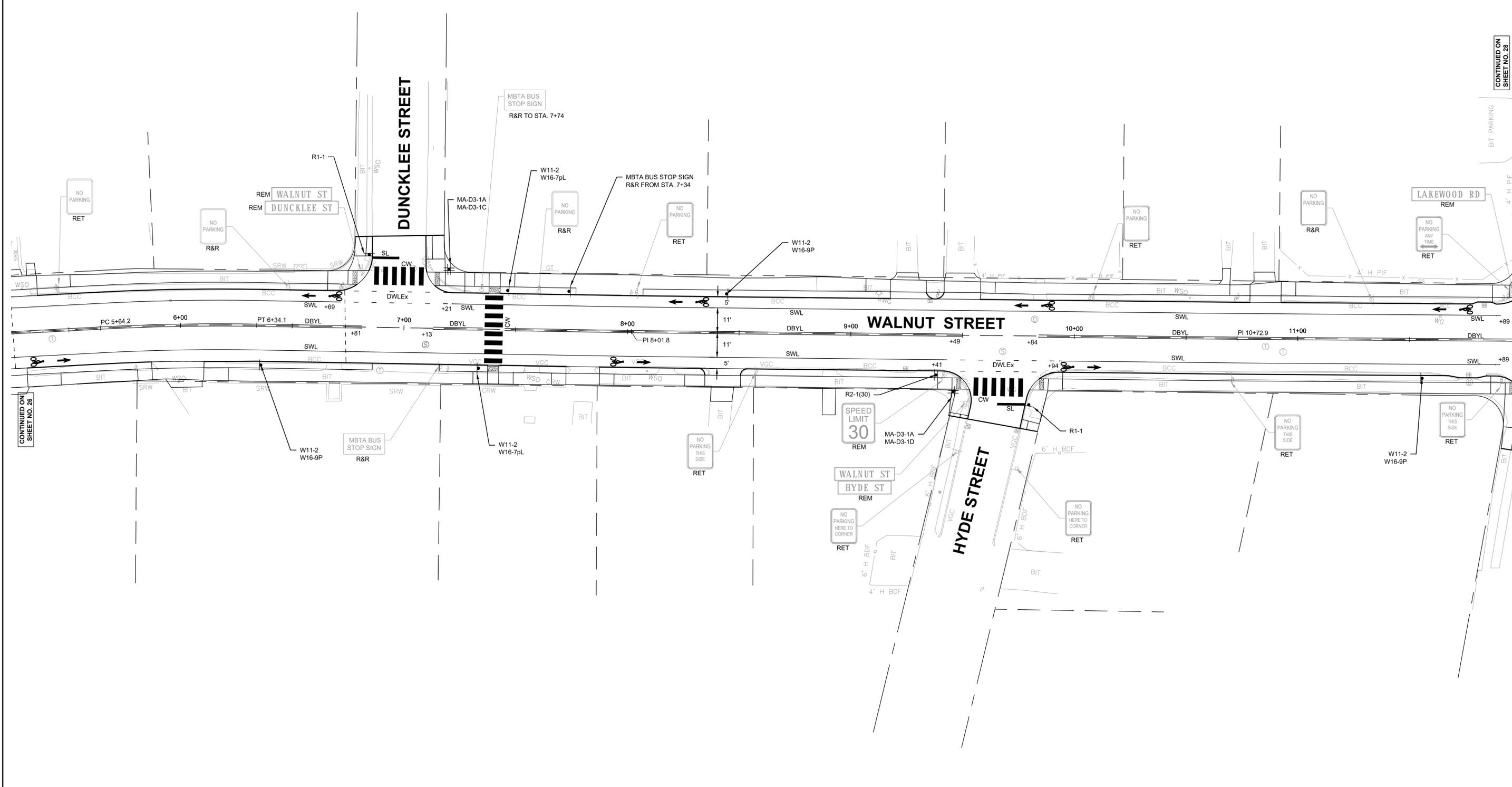
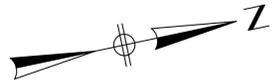
TRAFFIC PLANS

BETA JOB NO. 6680

ISSUE DATE 01/27/2020

SHEET NO. 26 OF 36

CONTINUED ON
SHEET NO. 27



CONTINUED ON SHEET NO. 26

CONTINUED ON SHEET NO. 28

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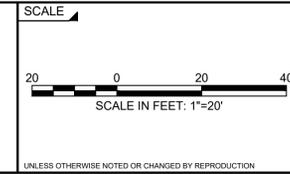
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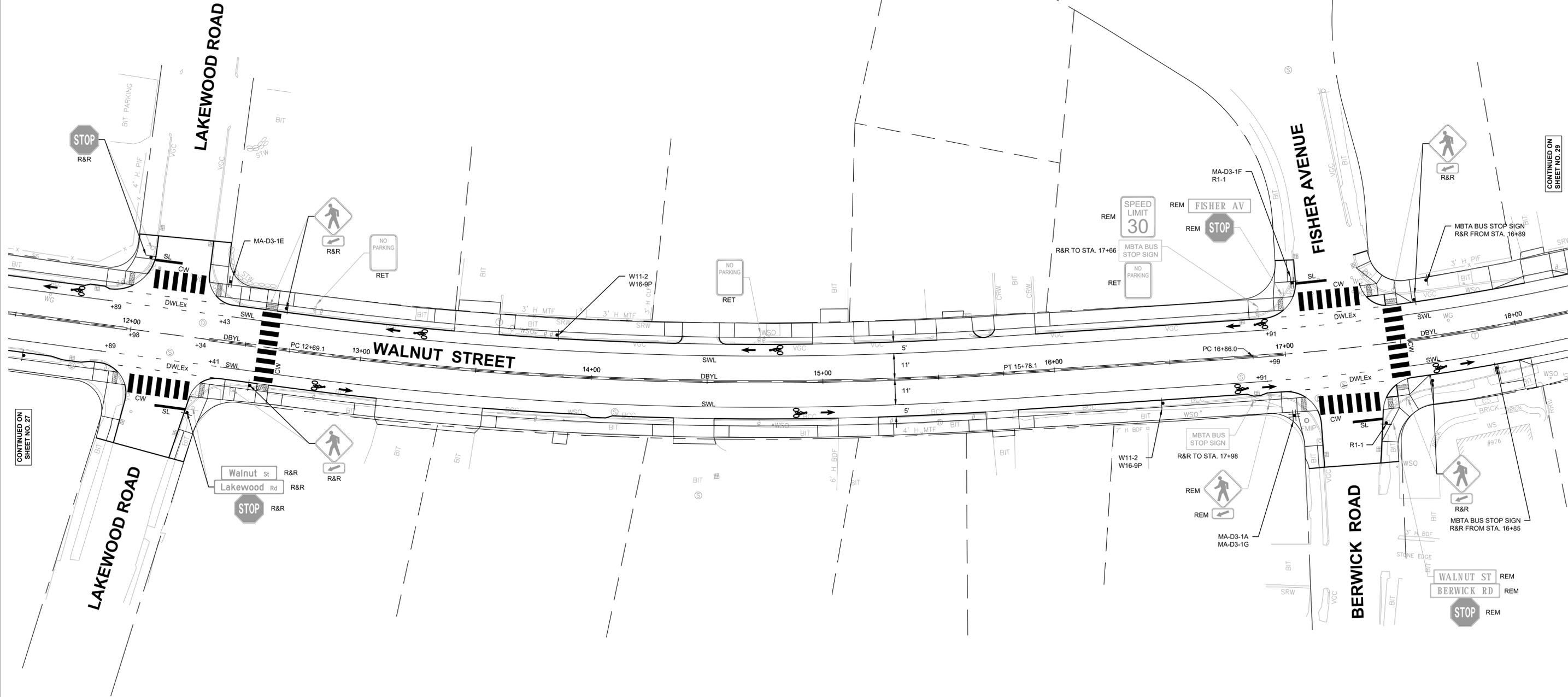
**Walnut Street Roadway Rehabilitation
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TRAFFIC PLANS

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CONTINUED ON SHEET NO. 27

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SCALE



TITLE

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TRAFFIC PLANS

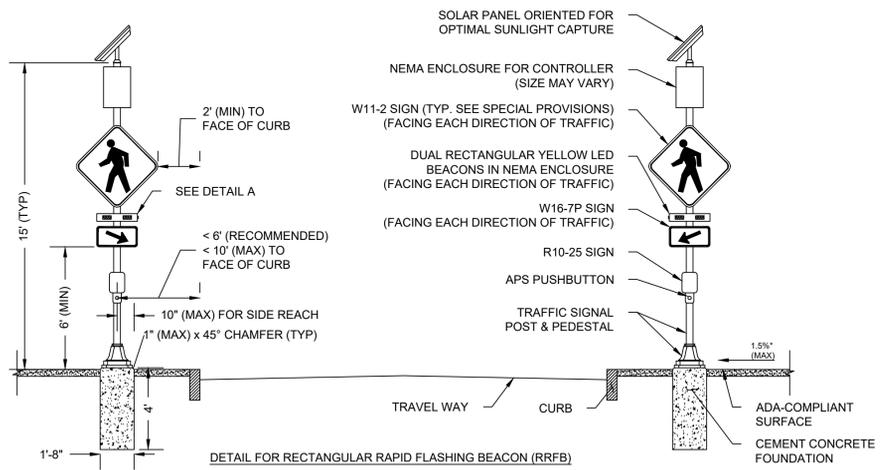
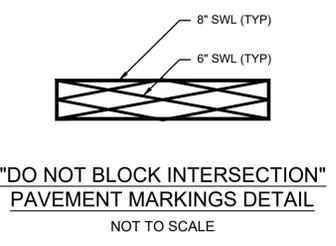
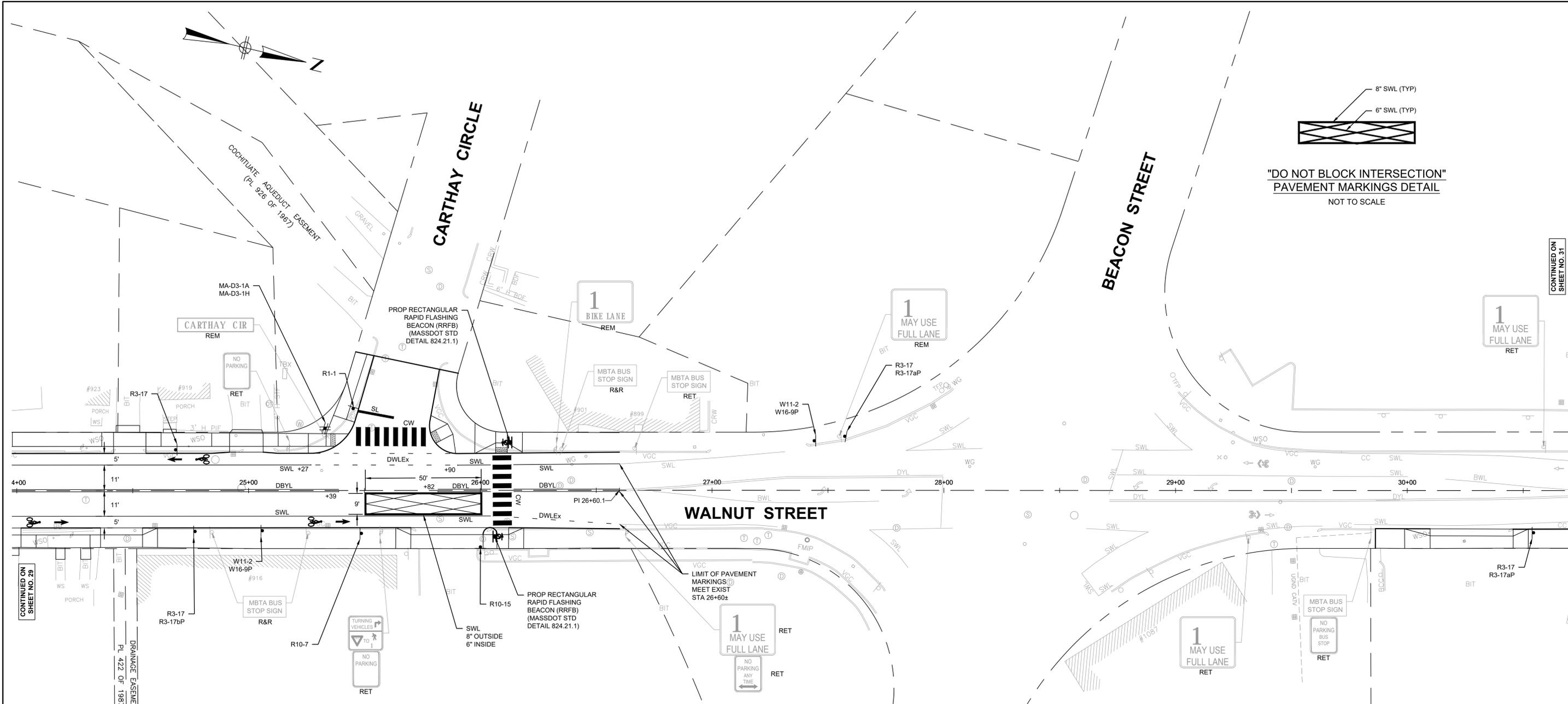
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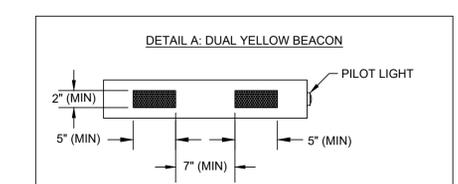
SHEET NO. 28 OF 36

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- NOTES:**
- CROSSWALK AND ADA-COMPLIANT RAMPS NOT SHOWN. SEE PLANS FOR LOCATIONS.
 - REFER TO THE SPECIAL PROVISIONS FOR SIGN DIMENSIONS.
 - ALL CONDUIT, PULL BOXES, SERVICE CONNECTIONS, AND EQUIPMENT GROUNDING REQUIRED FOR AC POWER IS NOT SHOWN IN THIS DETAIL AND SHALL BE PAID FOR SEPARATELY UNDER THEIR RESPECTIVE PAY ITEMS.
 - ACCESS TO ALL PEDESTRIAN ACTUATED CONTROLS SHALL BE ADA/AAB COMPLIANT.
 - +0.5% CONSTRUCTION TOLERANCE FOR CROSS-SLOPE.



MAJOR ITEMS	
QUANTITY	DESCRIPTION
2	CEMENT CONCRETE FOUNDATIONS PER 812.30.1
2	15' TRAFFIC SIGNAL POSTS & PEDESTALS
2	APS PUSHBUTTON SYSTEMS
4	DUAL RECTANGULAR YELLOW LED BEACONS IN NEMA ENCLOSURES
2	R10-25 SIGNS
4	W11-2 SIGNS
2	W16-7PR SIGNS
2	W16-7PL SIGNS
2	SOLAR PANEL SYSTEMS
2	NEMA ENCLOSURES FOR ALL COMPONENTS NEEDED TO MEET FUNCTIONAL REQUIREMENTS FOR SPECIAL PROVISIONS
2	BATTERY SYSTEMS

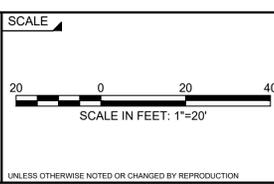
PLUS ALL MOUNTING AND SUPPORTING HARDWARE AND WIRING NECESSARY TO COMPLETE A WORKING SYSTEM.

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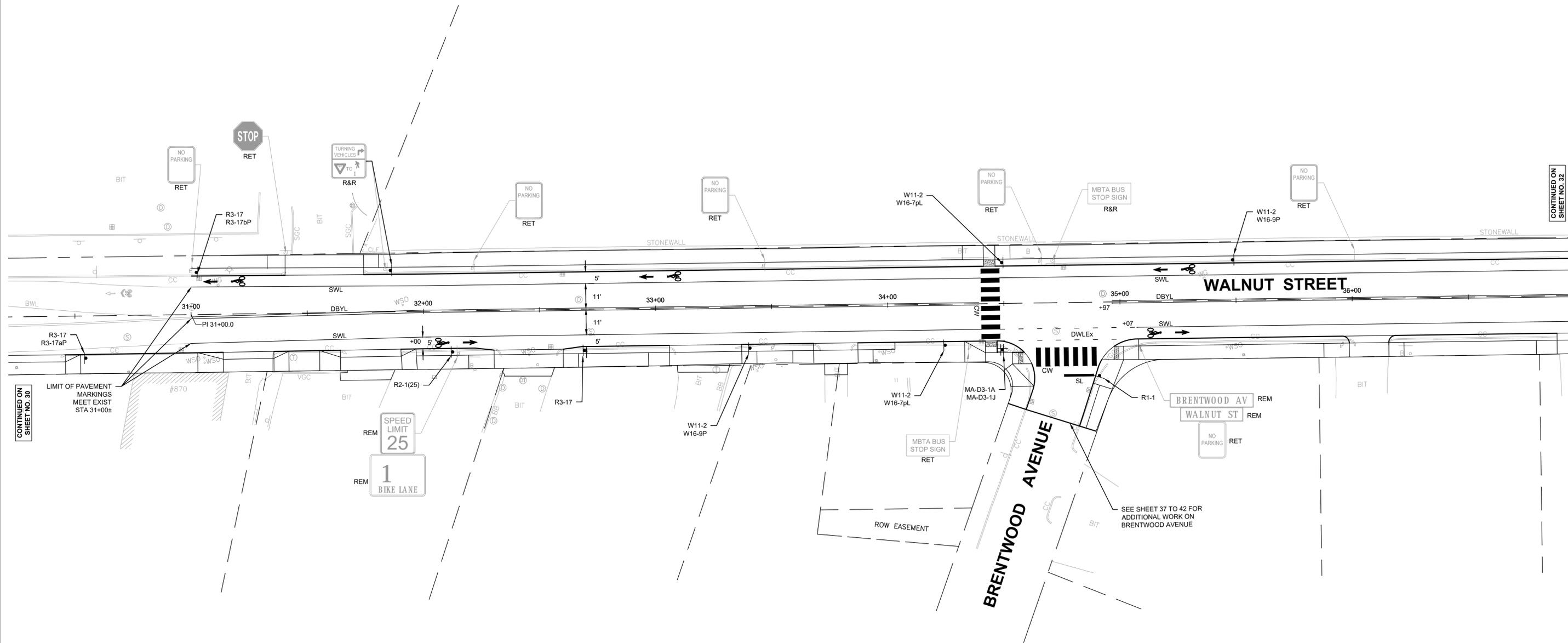
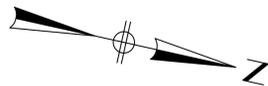
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**Walnut Street Roadway Rehabilitation
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TRAFFIC PLANS

BETA JOB NO. 6680
ISSUE DATE 01/27/2020
SHEET NO. 30 OF 36



CONTINUED ON SHEET NO. 30

CONTINUED ON SHEET NO. 32

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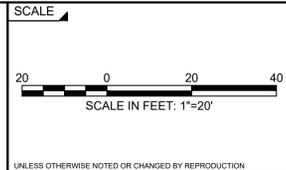
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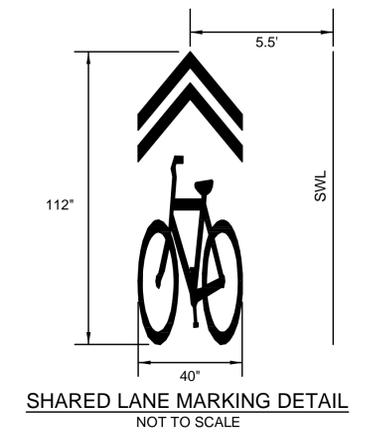
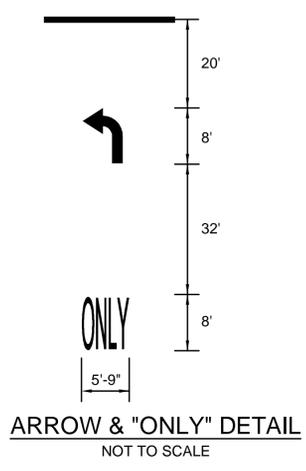
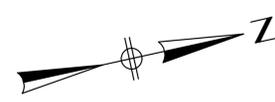
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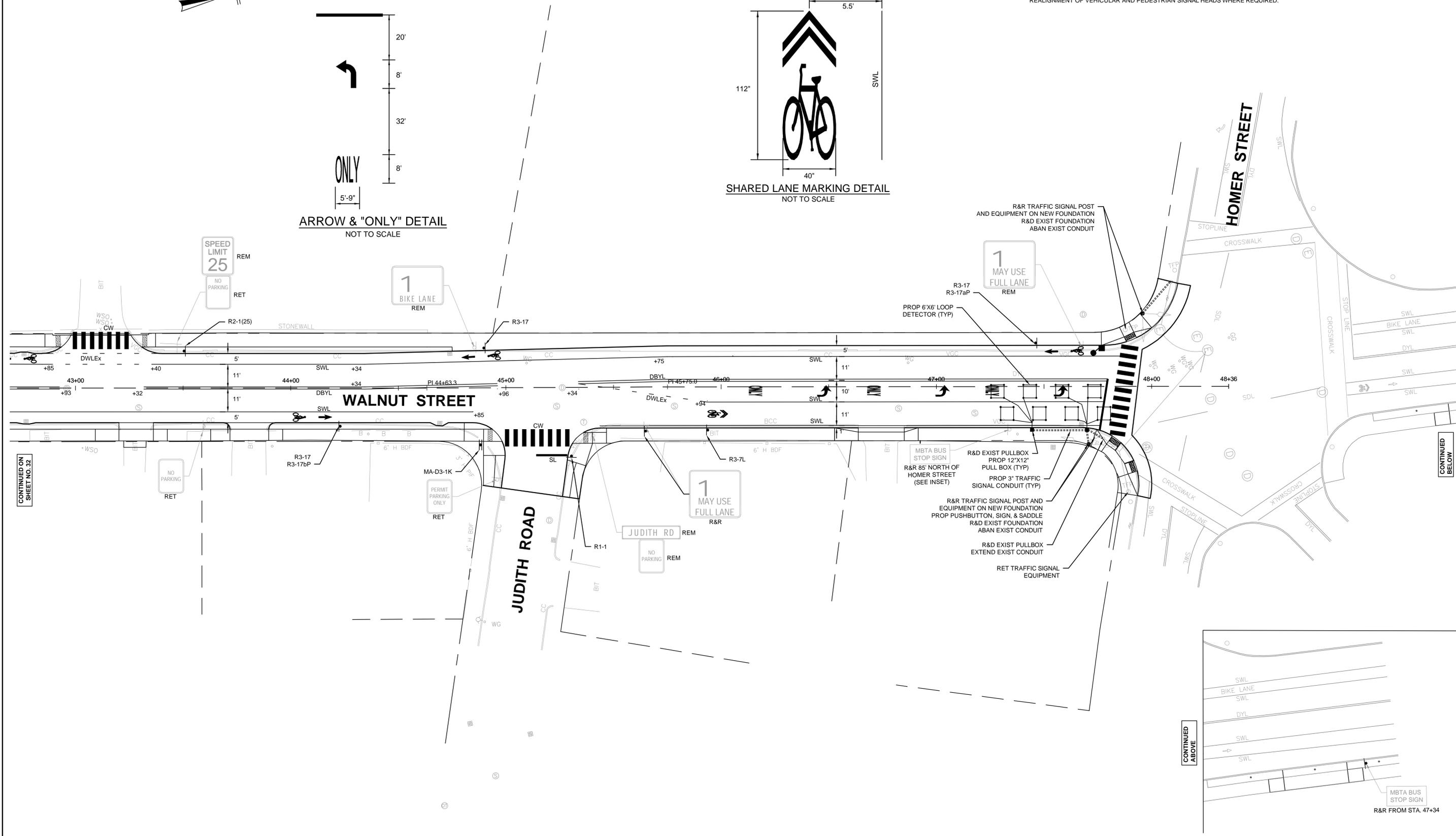
TRAFFIC PLANS

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SHEET NO. 31 OF 36

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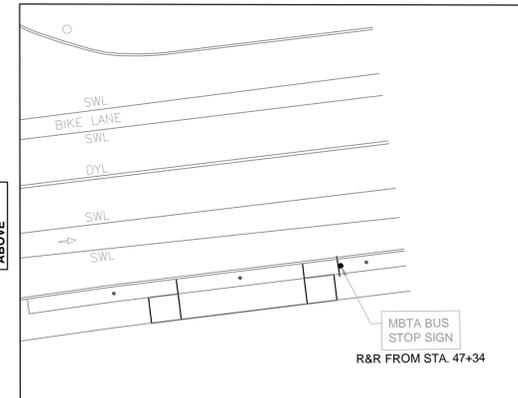
- NOTES:
- THE REMOVAL AND RESETTING OF TRAFFIC SIGNAL POSTS AND EQUIPMENT INCLUDES REALIGNMENT OF VEHICULAR AND PEDESTRIAN SIGNAL HEADS WHERE REQUIRED.



CONTINUED ON SHEET NO. 32

CONTINUED BELOW

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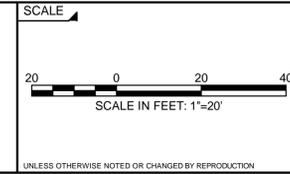
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TRAFFIC PLANS

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ISSUE DATE 01/27/2020

SHEET NO. 33 OF 36

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IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	DIMENSIONS (in)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA IN SQUARE FEET	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW		BACK-GROUND	LEGEND	BORDER			
R1-1	30 in	30 in					8	RED	WHITE	WHITE	P-5 8	6.25	50.00
R2-1(25)	24 in	30 in					3	WHITE	BLACK	BLACK	P-5 3	5.00	15.00
R2-1(30)	24 in	30 in					2	WHITE	BLACK	BLACK	P-5 2	5.00	10.00
R3-7L	30 in	30 in					1	WHITE	BLACK	BLACK	P-5 1	6.25	6.25
R3-17	24 in	18 in					13	BLACK	WHITE	WHITE	P-5 13	3.0	39.00
R3-17aP	24 in	8 in					4	WHITE	BLACK	BLACK	MOUNT W/ R3-17	1.33	5.32
R3-17bP	24 in	8 in					4	WHITE	BLACK	BLACK	MOUNT W/ R3-17	1.33	5.32
R10-7	24 in	30 in					1	WHITE	BLACK	BLACK	P-5 1	5.00	5.00
R10-15	30 in	30 in					1	FYG	BLACK	BLACK	P-5 1	6.25	6.25
R10-25	9 in	12 in					2	WHITE	BLACK	BLACK	MOUNT ON RRFB	--	--
W11-2	30 in	30 in					18 4	FYG	BLACK	BLACK	MOUNT 18 ON P-5 MOUNT 4 ON RRFB	6.25 --	112.50 --
W16-7pL	24 in	12 in					6 2	FYG	BLACK	BLACK	MOUNT 6 W/ W11-2 MOUNT 2 ON RRFB	2.00 --	12.00 --
W16-7pR	24 in	12 in					2	FYG	BLACK	BLACK	MOUNT ON RRFB	--	--
W16-9P	24 in	12 in					12	FYG	BLACK	BLACK	MOUNT W/ W11-2	2.00	24.00

SEE 2009 MUTCD STANDARDS

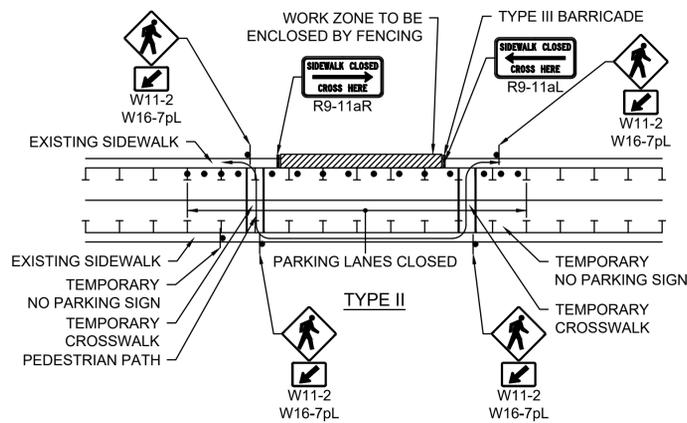
IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	DIMENSIONS (in)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA IN SQUARE FEET	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW		BACK-GROUND	LEGEND	BORDER			
MA-D3-1A	48 in	12 in		6D/ 4D	3 3		12	GREEN	WHITE	WHITE	P-5 6	EACH	EACH
MA-D3-1B	48 in	12 in		6D/ 4D	3 3		2	GREEN	WHITE	WHITE	MOUNT W/ MA-D3-1A	EACH	EACH
MA-D3-1C	54 in	12 in		6D/ 4D	3 3		2	GREEN	WHITE	WHITE	MOUNT W/ MA-D3-1A	EACH	EACH
MA-D3-1D	42 in	12 in		6D/ 4D	2.75 3.25		2	GREEN	WHITE	WHITE	MOUNT W/ MA-D3-1A	EACH	EACH
MA-D3-1E	60 in	12 in		6D/ 4D	3 3		2	GREEN	WHITE	WHITE	P-5 1	EACH	EACH
MA-D3-1F	48 in	12 in		6D/ 4D	3 3		2	GREEN	WHITE	WHITE	MOUNT W/ R1-1	EACH	EACH
MA-D3-1G	54 in	12 in		6D/ 4D	3 3		2	GREEN	WHITE	WHITE	MOUNT W/ MA-D3-1A	EACH	EACH
MA-D3-1H	54 in	12 in		6D/ 4D	2.75 3.25		2	GREEN	WHITE	WHITE	MOUNT W/ MA-D3-1A	EACH	EACH
MA-D3-1J	66 in	12 in		6D/ 4D	3 3		2	GREEN	WHITE	WHITE	MOUNT W/ MA-D3-1A	EACH	EACH
MA-D3-1K	48 in	12 in		6D/ 4D	3 3		2	GREEN	WHITE	WHITE	MOUNT W/ R1-1	EACH	EACH

NOTES:

- HIGH INTENSITY ENCAPSULATED LENS REFLECTIVE SHEETING CONFORMING TO SECTION M9:30.0, TYPE III OR IV, OF THE MASSDOT STANDARD SPECIFICATIONS SHALL BE USED FOR ALL SIGNS.
- ALL P5 POSTS SHALL BE TELESCOPIC, RECTANGULAR TYPE POSTS, CONFORMING TO THE DIMENSIONS AND REQUIREMENTS OF THE MASSDOT "STANDARD DRAWINGS FOR SIGNS AND SUPPORTS" (LATEST EDITION).
- SEE THE 2009 "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND "STANDARD HIGHWAY SIGNS" FOR THE LATEST SPECIFICATIONS ON TEXT DIMENSIONS AND COLOR. (ALSO SEE SECTION M9.30.0 TYPE III MASSDOT STANDARD SPECIFICATION, THE "MASSACHUSETTS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES," AND "GUIDE SIGN POLICY FOR SECONDARY STATE HIGHWAYS" (LATEST EDITIONS AND AMENDMENTS) BY THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION).
- STREET NAME (D3) SIGNS SHALL USE TWO SIGNS MOUNTED BACK TO BACK WITH BOLT-THROUGH METHOD.
- FYG: FLUORESCENT YELLOW-GREEN

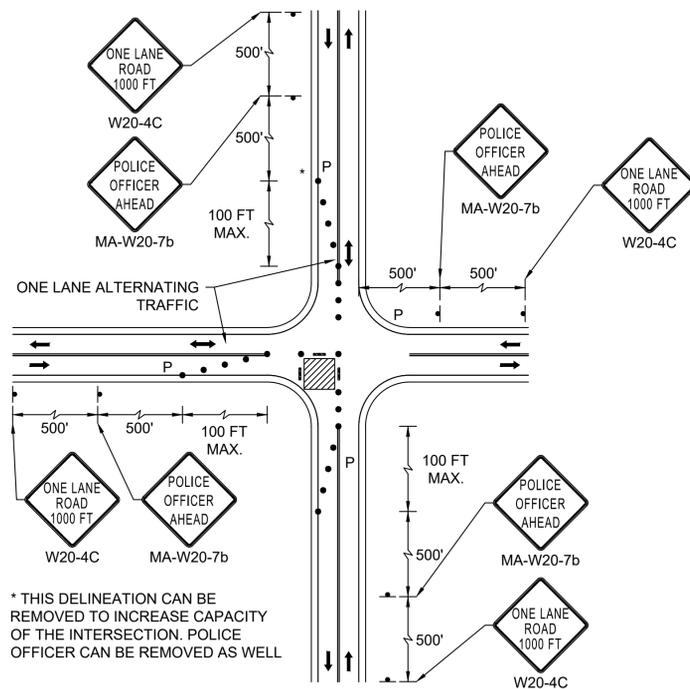
				DRAWN BY: ANA	REGISTERED PROFESSIONAL	PREPARED BY:	SUBCONSULTANT	SCALE: NONE	TITLE: Walnut Street Roadway Rehabilitation Newton, Massachusetts	BETA JOB NO. 6680	
				DESIGNED BY: ANA		 www.BETA-Inc.com				ISSUE DATE: 01/27/2020	
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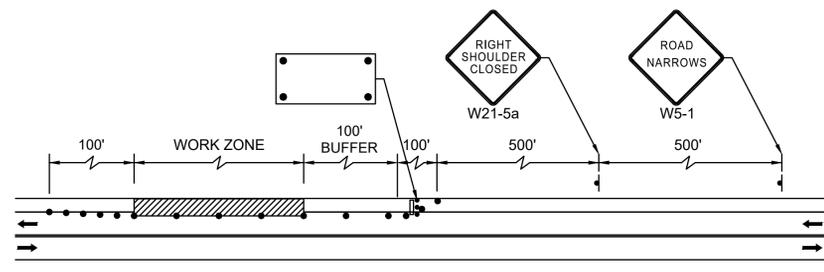
1. ADDITIONAL ADVANCE WARNING MAY BE NECESSARY.
2. CONTROLS ONLY FOR PEDESTRIAN TRAFFIC ARE SHOWN. VEHICULAR TRAFFIC SHOULD BE HANDLED AS SHOWN ELSEWHERE.
3. STREET LIGHTING SHOULD BE CONSIDERED WHEN LOCATING CONTROL DEVICES.
4. IF THE WORK ZONE DOES NOT PERMIT PEDESTRIANS TO TRAVEL ADJACENT TO IT, TEMPORARY CROSSWALKS WITH APPROPRIATE SIGNS SHOULD BE INSTALLED TO CROSS PEDESTRIANS TO THE OPPOSITE SIDE OF THE STREET AS SHOWN IN PEDESTRIAN BYPASS, AND AS DIRECTED BY THE ENGINEER. TEMPORARY CURB RAMPS WILL BE REQUIRED AT ALL TEMPORARY CROSSWALK LOCATIONS.
5. BYPASS IS TO BE USED IN CONJUNCTION WITH THE PROPOSED LANE CLOSURE DETAILS AND DURING CONSTRUCTION STAGING, AS DIRECTED BY THE ENGINEER.
6. THE TEMPORARY SIDEWALK SHOULD BE A MINIMUM OF 4 FEET WIDE. IF THIS WALKWAY EXCEEDS 200 FEET THEN A 5 FOOT X 5 FOOT PASSING ZONE.



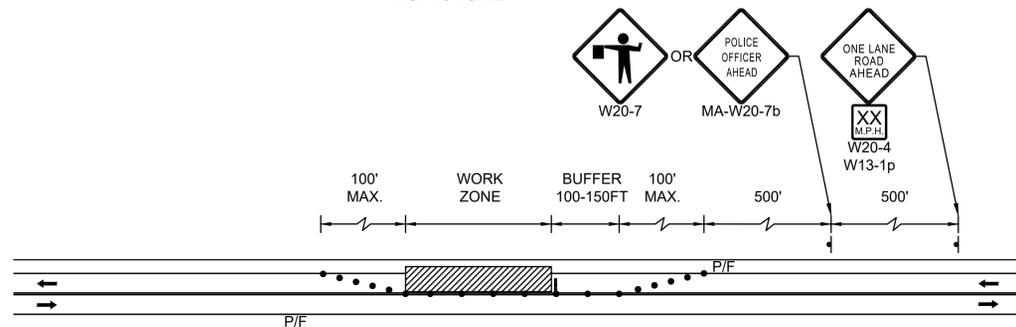
* THIS DELINEATION CAN BE REMOVED TO INCREASE CAPACITY OF THE INTERSECTION. POLICE OFFICER CAN BE REMOVED AS WELL

INTERSECTION WITH LANE CLOSURE NOT TO SCALE

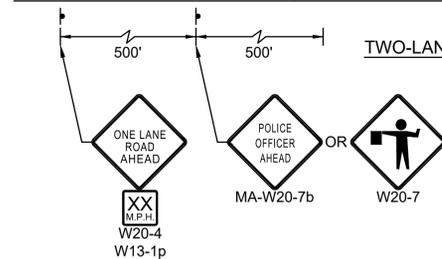
PEDESTRIAN BYPASS DETAILS NOT TO SCALE



TWO-LANE ROAD - SHOULDER CLOSED NOT TO SCALE



TWO-LANE ROAD - ONE LANE ALTERNATING TRAFFIC WITH POLICE DETAIL NOT TO SCALE



WORK ZONE SPEEDING FINES DOUBLED

MA-R2-10a
NOTE:
"WORK ZONE" BLACK ON ORANGE;
"SPEEDING FINES DOUBLED" BLACK ON WHITE

END ROAD WORK DOUBLE FINES END

MA-R2-10e
NOTE:
"END ROAD WORK" BLACK ON ORANGE;
"DOUBLE FINES END" BLACK ON WHITE

XX M.P.H.

W13-1
24" x 24"

ROAD WORK 1500 FT

W20-1A
36" x 36"

ROAD WORK AHEAD

W20-1B
36" x 36"

RIGHT SHOULDER CLOSED

W21-5aR
30" x 30"

CONSTRUCTION SIGNS NOT TO SCALE

SAFETY SIGNING FOR CONSTRUCTION OPERATIONS

LEGEND	TYPE	SIZE	COLOR			UNIT AREA	NO. SIGNS	TOTAL AREA	POSTS
			BACKGROUND	LEGEND	BORDER				
WORK ZONE SPEEDING FINES...	MA-R2-10a	48" x 36"	ORANGE**/WHITE	BLACK	BLACK	12 SF	15	180 SF	P-5: 30
END ROAD WORK	MA-R2-10e	36" x 48"	ORANGE**/WHITE	BLACK	BLACK	12 SF	15	180 SF	P-5: 30
SIDEWALK CLOSED CROSS HERE	R9-11a	48" x 24"	WHITE	BLACK	BLACK	8 SF	2	16 SF	P-5: 2
ROAD NARROWS	W5-1	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF	P-5: 2
BUMP	W8-1	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	4	36 SF	P-5: 4
PAVEMENT ENDS	W8-3	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	4	36 SF	P-5: 4
GROOVED PAVEMENT	W8-15	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	4	36 SF	P-5: 4
STEEL PLATE AHEAD	W8-24	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	4	36 SF	P-5: 4
PEDESTRIAN	W11-2	30" x 30"	FYG***	BLACK	BLACK	6.3 SF	4	25 SF	P-5: 4
ADVISORY SPEED	W13-1	24" x 24"	ORANGE**	BLACK	BLACK	4 SF	2	8 SF	P-5: 0
DOWNWARD LEFT DIAGONAL ARROW	W16-7pL	24" x 12"	FYG***	BLACK	BLACK	2 SF	4	8 SF	P-5: 0
ROAD WORK 1500 FT	W20-1A	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF	P-5: 2
ROAD WORK AHEAD	W20-1B	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	15	135 SF	P-5: 15
ONE LANE ROAD AHEAD	W20-4	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	4	36 SF	P-5: 4
ONE LANE ROAD 1000 FT	W20-4C	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	4	36 SF	P-5: 4
FLAGGER	W20-7	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	4	36 SF	P-5: 4
POLICE OFFICER AHEAD	MA-W20-7b	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	4	36 SF	P-5: 4
RIGHT SHOULDER CLOSED	W21-5aR	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF	P-5: 2
TOTAL AREA OF SIGNS:								894 SF	P-5: 119

* NO. OF SIGNS ARE ESTIMATED FOR BIDDING PURPOSES ONLY

** ALL CONSTRUCTION SIGNAGE SHALL HAVE FLUORESCENT ORANGE BACKGROUND

*** FLUORESCENT YELLOW GREEN

2/25/2020 11:30 AM C:\BEG056680 - NEWTON - WALNUT ST DRAWING FILES\PLANS\SET\HID\6680 TTCP\DWG (BETA STB BW STB)

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: ANA	REGISTERED PROFESSIONAL	PREPARED BY: 	SUBCONSULTANT
DESIGNED BY: ANA			
CHECKED BY: GL			



SCALE NONE	TITLE Walnut Street Roadway Rehabilitation Newton, Massachusetts TEMPORARY TRAFFIC CONTROL PLANS
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BETA JOB NO. 6680
ISSUE DATE 01/27/2020
SHEET NO. 36 OF 36

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

LEGEND

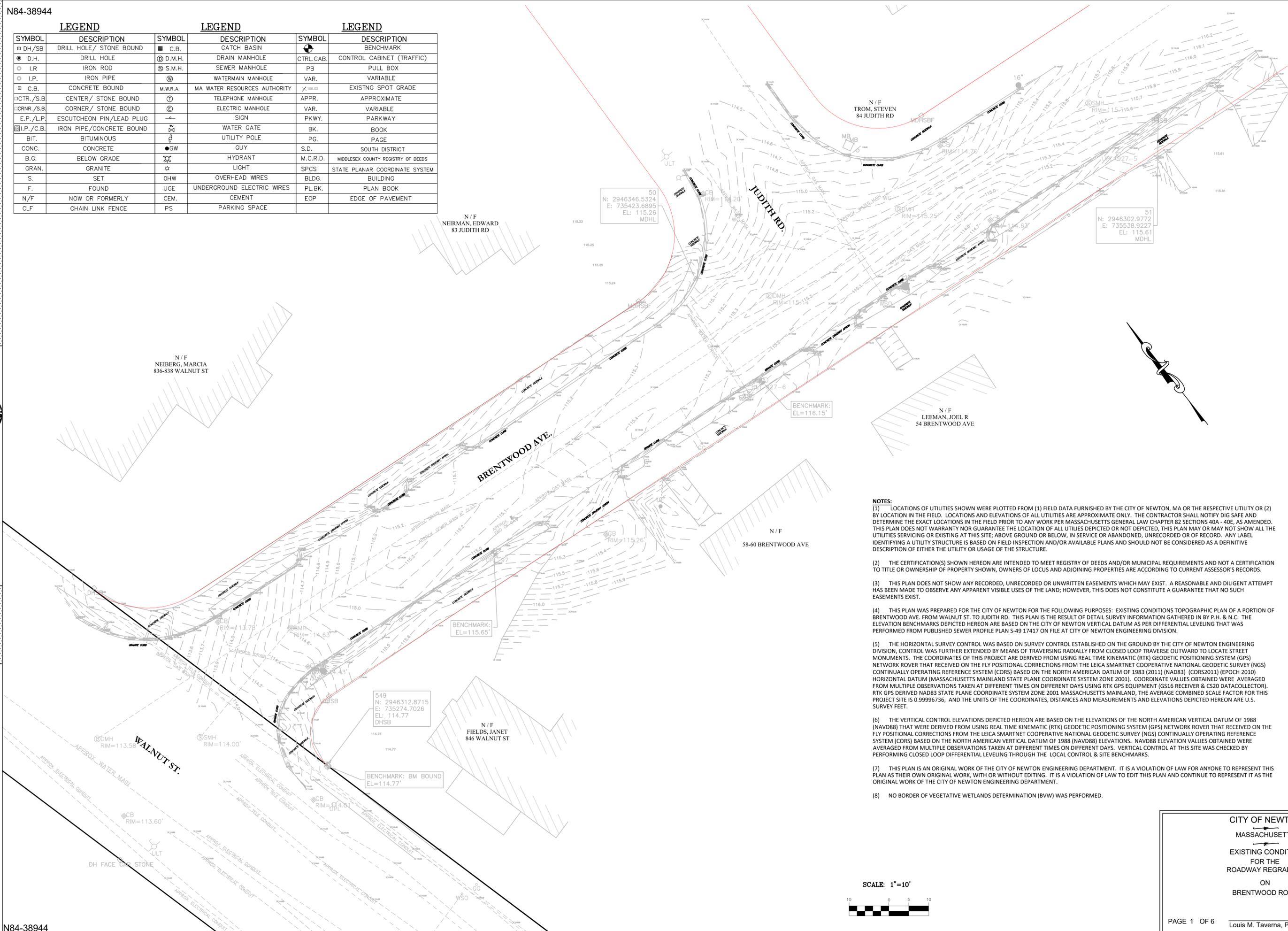
SYMBOL	DESCRIPTION
□ DH/SB	DRILL HOLE/ STONE BOUND
● D.H.	DRILL HOLE
○ I.R.	IRON ROD
○ I.P.	IRON PIPE
□ C.B.	CONCRETE BOUND
CTR./S.B	CENTER/ STONE BOUND
CRNR./S.B	CORNER/ STONE BOUND
E.P./L.P	ESCUTCHEON PIN/LEAD PLUG
I.P./C.B.	IRON PIPE/CONCRETE BOUND
BIT.	BITUMINOUS
CONC.	CONCRETE
B.G.	BELOW GRADE
GRAN.	GRANITE
S.	SET
F.	FOUND
N/F	NOW OR FORMERLY
CLF	CHAIN LINK FENCE

LEGEND

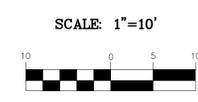
SYMBOL	DESCRIPTION
■ C.B.	CATCH BASIN
⊙ D.M.H.	DRAIN MANHOLE
⊙ S.M.H.	SEWER MANHOLE
M.W.R.A.	MA WATER RESOURCES AUTHORITY
⊕	TELEPHONE MANHOLE
⊕	ELECTRIC MANHOLE
—	SIGN
⊕	WATER GATE
⊕	UTILITY POLE
● GW	GUY
⊕	HYDRANT
☆	LIGHT
OHW	OVERHEAD WIRES
UGE	UNDERGROUND ELECTRIC WIRES
CEM.	CEMENT
PS	PARKING SPACE

LEGEND

SYMBOL	DESCRIPTION
⊕	BENCHMARK
CTRL.CAB.	CONTROL CABINET (TRAFFIC)
PB	PULL BOX
VAR.	VARIABLE
EXISTNG SPOT GRADE	EXISTING SPOT GRADE
APPR.	APPROXIMATE
VAR.	VARIABLE
PKWY.	PARKWAY
BK.	BOOK
PG.	PAGE
S.D.	SOUTH DISTRICT
M.C.R.D.	MIDDLESEX COUNTY REGISTRY OF DEEDS
SPCS	STATE PLANAR COORDINATE SYSTEM
BLDG.	BUILDING
PL.BK.	PLAN BOOK
EOP	EDGE OF PAVEMENT



- NOTES:**
- (1) LOCATIONS OF UTILITIES SHOWN WERE PLOTTED FROM (1) FIELD DATA FURNISHED BY THE CITY OF NEWTON, MA OR THE RESPECTIVE UTILITY OR (2) BY LOCATION IN THE FIELD. LOCATIONS AND ELEVATIONS OF ALL UTILITIES ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL NOTIFY DIG SAFE AND DETERMINE THE EXACT LOCATIONS IN THE FIELD PRIOR TO ANY WORK PER MASSACHUSETTS GENERAL LAW CHAPTER 82 SECTIONS 40A - 40E, AS AMENDED. THIS PLAN DOES NOT WARRANT NOR GUARANTEE THE LOCATION OF ALL UTILITIES DEPICTED OR NOT DEPICTED, THIS PLAN MAY OR MAY NOT SHOW ALL THE UTILITIES SERVING OR EXISTING AT THIS SITE, ABOVE GROUND OR BELOW, IN SERVICE OR ABANDONED, UNRECORDED OR OF RECORD. ANY LABEL IDENTIFYING A UTILITY STRUCTURE IS BASED ON FIELD INSPECTION AND/OR AVAILABLE PLANS AND SHOULD NOT BE CONSIDERED AS A DEFINITIVE DESCRIPTION OF EITHER THE UTILITY OR USAGE OF THE STRUCTURE.
 - (2) THE CERTIFICATION(S) SHOWN HEREON ARE INTENDED TO MEET REGISTRY OF DEEDS AND/OR MUNICIPAL REQUIREMENTS AND NOT A CERTIFICATION TO TITLE OR OWNERSHIP OF PROPERTY SHOWN, OWNERS OF LOCUS AND ADJOINING PROPERTIES ARE ACCORDING TO CURRENT ASSESSOR'S RECORDS.
 - (3) THIS PLAN DOES NOT SHOW ANY RECORDED, UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT VISIBLE USES OF THE LAND; HOWEVER, THIS DOES NOT CONSTITUTE A GUARANTEE THAT NO SUCH EASEMENTS EXIST.
 - (4) THIS PLAN WAS PREPARED FOR THE CITY OF NEWTON FOR THE FOLLOWING PURPOSES: EXISTING CONDITIONS TOPOGRAPHIC PLAN OF A PORTION OF BRENTWOOD AVE. FROM WALNUT ST. TO JUDITH RD. THIS PLAN IS THE RESULT OF DETAIL SURVEY INFORMATION GATHERED IN BY P.H. & N.C. THE ELEVATION BENCHMARKS DEPICTED HEREON ARE BASED ON THE CITY OF NEWTON VERTICAL DATUM AS PER DIFFERENTIAL LEVELING THAT WAS PERFORMED FROM PUBLISHED SEWER PROFILE PLAN S-49 17417 ON FILE AT CITY OF NEWTON ENGINEERING DIVISION.
 - (5) THE HORIZONTAL SURVEY CONTROL WAS BASED ON SURVEY CONTROL ESTABLISHED ON THE GROUND BY THE CITY OF NEWTON ENGINEERING DIVISION, CONTROL WAS FURTHER EXTENDED BY MEANS OF TRAVERSING RADIALLY FROM CLOSED LOOP TRAVERSE OUTWARD TO LOCATE STREET MONUMENTS. THE COORDINATES OF THIS PROJECT ARE DERIVED FROM USING REAL TIME KINEMATIC (RTK) GEODETIC POSITIONING SYSTEM (GPS) NETWORK ROVER THAT RECEIVED ON THE FLY POSITIONAL CORRECTIONS FROM THE LEICA SMARTNET COOPERATIVE NATIONAL GEODETIC SURVEY (NGS) CONTINUALLY OPERATING REFERENCE SYSTEM (CORS) BASED ON THE NORTH AMERICAN DATUM OF 1983 (2011) (NAD83) (CORS2011) (EPOCH 2010) HORIZONTAL DATUM (MASSACHUSETTS MAINLAND STATE PLANE COORDINATE SYSTEM ZONE 2001). COORDINATE VALUES OBTAINED WERE AVERAGED FROM MULTIPLE OBSERVATIONS TAKEN AT DIFFERENT TIMES ON DIFFERENT DAYS USING RTK GPS EQUIPMENT (GS16 RECEIVER & CS20 DATACOLLECTOR). RTK GPS DERIVED NAD83 STATE PLANE COORDINATE SYSTEM ZONE 2001 MASSACHUSETTS MAINLAND, THE AVERAGE COMBINED SCALE FACTOR FOR THIS PROJECT SITE IS 0.99996736, AND THE UNITS OF THE COORDINATES, DISTANCES AND MEASUREMENTS AND ELEVATIONS DEPICTED HEREON ARE U.S. SURVEY FEET.
 - (6) THE VERTICAL CONTROL ELEVATIONS DEPICTED HEREON ARE BASED ON THE ELEVATIONS OF THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) THAT WERE DERIVED FROM USING REAL TIME KINEMATIC (RTK) GEODETIC POSITIONING SYSTEM (GPS) NETWORK ROVER THAT RECEIVED ON THE FLY POSITIONAL CORRECTIONS FROM THE LEICA SMARTNET COOPERATIVE NATIONAL GEODETIC SURVEY (NGS) CONTINUALLY OPERATING REFERENCE SYSTEM (CORS) BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) ELEVATIONS. NAVD88 ELEVATION VALUES OBTAINED WERE AVERAGED FROM MULTIPLE OBSERVATIONS TAKEN AT DIFFERENT TIMES ON DIFFERENT DAYS. VERTICAL CONTROL AT THIS SITE WAS CHECKED BY PERFORMING CLOSED LOOP DIFFERENTIAL LEVELING THROUGH THE LOCAL CONTROL & SITE BENCHMARKS.
 - (7) THIS PLAN IS AN ORIGINAL WORK OF THE CITY OF NEWTON ENGINEERING DEPARTMENT. IT IS A VIOLATION OF LAW FOR ANYONE TO REPRESENT THIS PLAN AS THEIR OWN ORIGINAL WORK, WITH OR WITHOUT EDITING. IT IS A VIOLATION OF LAW TO EDIT THIS PLAN AND CONTINUE TO REPRESENT IT AS THE ORIGINAL WORK OF THE CITY OF NEWTON ENGINEERING DEPARTMENT.
 - (8) NO BORDER OF VEGETATIVE WETLANDS DETERMINATION (BVW) WAS PERFORMED.



**CITY OF NEWTON
MASSACHUSETTS**

EXISTING CONDITIONS
FOR THE
ROADWAY REGRADING
ON
BRENTWOOD ROAD

PAGE 1 OF 6
Louis M. Taverna, P.E. DATE: 12/17/18

CITY OF NEWTON
MASSACHUSETTS

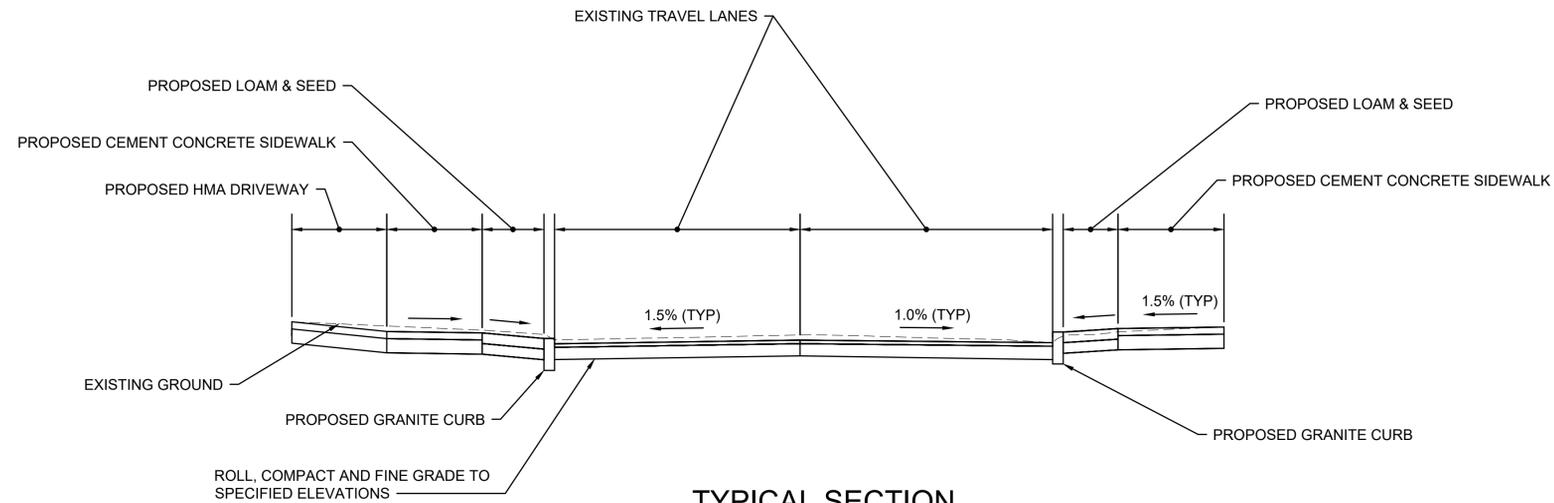
DESIGNED BY: A.VARGAS
DESIGN DRAFTED BY: M.PANZA
CHECKED BY: J.DAGHIAN
APPROVED BY: L.TAVERNA



CITY OF NEWTON
MASSACHUSETTS

DESIGNED BY: A. VARGAS
 DESIGN DRAFTED BY: M. PANZA
 CHECKED BY: J. DACHIAN
 APPROVED BY: L. TAVERNA

SURVEYED BY: P. HIGGINS
 BASE MAP DRAFTED BY: P. HIGGINS



TYPICAL SECTION

BRENTWOOD AVE
 STA 10+37± TO STA 10+55± (PAVEMENT MILLING AND OVERLAY)
 STA 10+55± TO STA 11+40± (PAVEMENT PATCH)
 STA 11+40± TO STA 11+69± (PAVEMENT MILLING AND OVERLAY)
 NTS

PAVEMENT NOTES

PROPOSED PAVEMENT MILLING AND OVERLAY

SURFACE: 1.5" SUPERPAVE SURFACE COURSE - 12.5 (SSC-12.5)
 MILLING: 1.5" PAVEMENT MILLING
 ASPHALT EMULSION FOR TACK COAT (RS-1) AT 0.07 GAL/SY
 OVER MILLED SURFACES.

PROPOSED PAVEMENT PATCH

SURFACE: 1.5" SUPERPAVE SURFACE COURSE - 12.5 (SSC-12.5) OVER
 3" SUPERPAVE INTERMEDIATE COURSE- 19.0 (SIC-19.0)
 ++SUBBASE: 12" GRAVEL BORROW, TYPE B

PROPOSED CEMENT CONCRETE SIDEWALK

SURFACE: 4" CEMENT CONCRETE WITH LAMPBLACK 2LB/CF EMULSIFIED
 7% AIR ENTRAINED 4000 PSI, 3/4", 610 (PER MASSDOT STD SPEC M4.02.00)
 ++SUBBASE: 6" GRAVEL BORROW, TYPE b.
 2" DENSE GRADED CRUSHED STONE TO LEVEL

PROPOSED CEMENT CONCRETE DRIVEWAY APRON

SURFACE: 6" CEMENT CONCRETE WITH LAMPBLACK 2LB/CF EMULSIFIED
 7% AIR ENTRAINED 4000 PSI, 3/4", 610 (PER MASSDOT STD SPEC M4.02.00)
 ++SUBBASE: 8" GRAVEL BORROW, TYPE b.
 2" DENSE GRADED CRUSHED STONE TO LEVEL

PROPOSED HMA DRIVEWAY

SURFACE: 1.5" SUPERPAVE SURFACE COURSE- 12.5 (SSC-12.5) OVER
 2" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0)
 ++SUBBASE: 8" GRAVEL BORROW, TYPE b.

PROPOSED GRASS STRIP / LOAM AND SEED

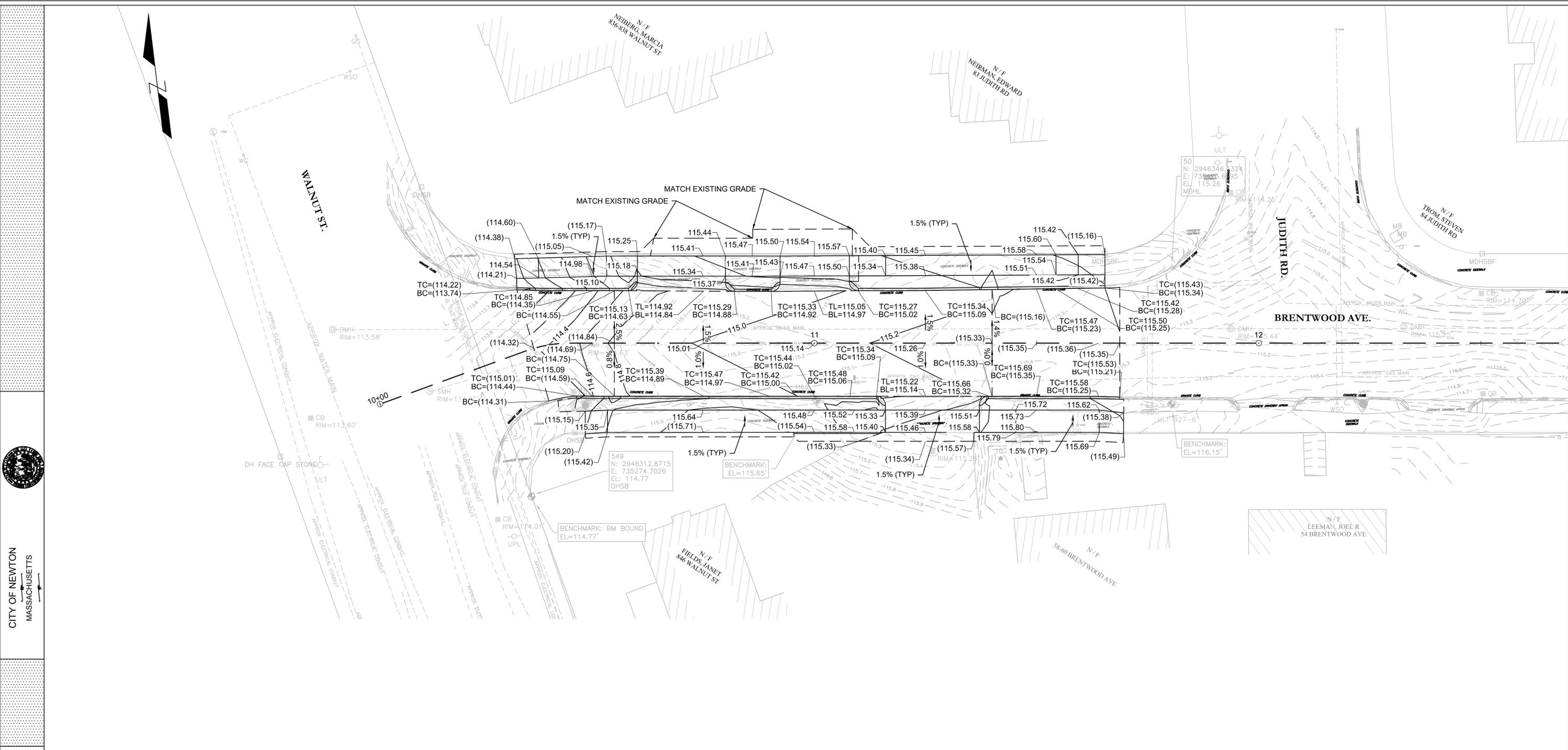
SURFACE: 6" LOAM AND SEED
 ++SUBBASE: 6" BANK GRAVEL, TYPE a.

++ WHERE EXISTING GRAVEL IS FOUND TO BE SUITABLE, THE EXISTING GRAVEL
 MAY BE USED IN PROPOSED SUBBASE, AFTER APPROVAL BY THE ENGINEER.

NOTES:

1. ALL HOT MIX ASPHALT PAVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 450 HOT MIX ASPHALT PAVEMENT SPECIFICATIONS.
2. ALL MILLED SURFACES SHALL RECEIVE A TACK COAT APPLIED AT 0.07 GALLONS PER SQUARE YARD AND ALL UNMILLED SURFACES SHALL RECEIVE A TACK COAT APPLIED AT 0.05 GALLONS PER SQUARE YARD PRIOR TO PAVING.
3. TEMPORARY CONSTRUCTION SHALL USE SUPERPAVE HOT MIX ASPHALT MIXTURES AND MAY NOT BE SUBJECT TO THE SAME SAMPLING AND TESTING REQUIRED FOR PERMANENT CONSTRUCTION.

CITY OF NEWTON
 MASSACHUSETTS
 PAVEMENT NOTES AND TYPICAL SECTION
 FOR THE
 ROADWAY REGRADING
 ON
 BRENTWOOD ROAD



CITY OF NEWTON
MASSACHUSETTS

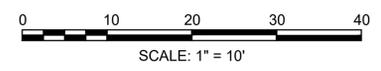
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 CHECKED BY: J. D'AGLIAN
 APPROVED BY: L. TAVERNA

ABBREVIATIONS:

- BC BOTTOM OF CURB
- BL BOTTOM OF LIP
- TC TOP OF CURB
- TL TOP OF LIP
- TYP TYPICAL

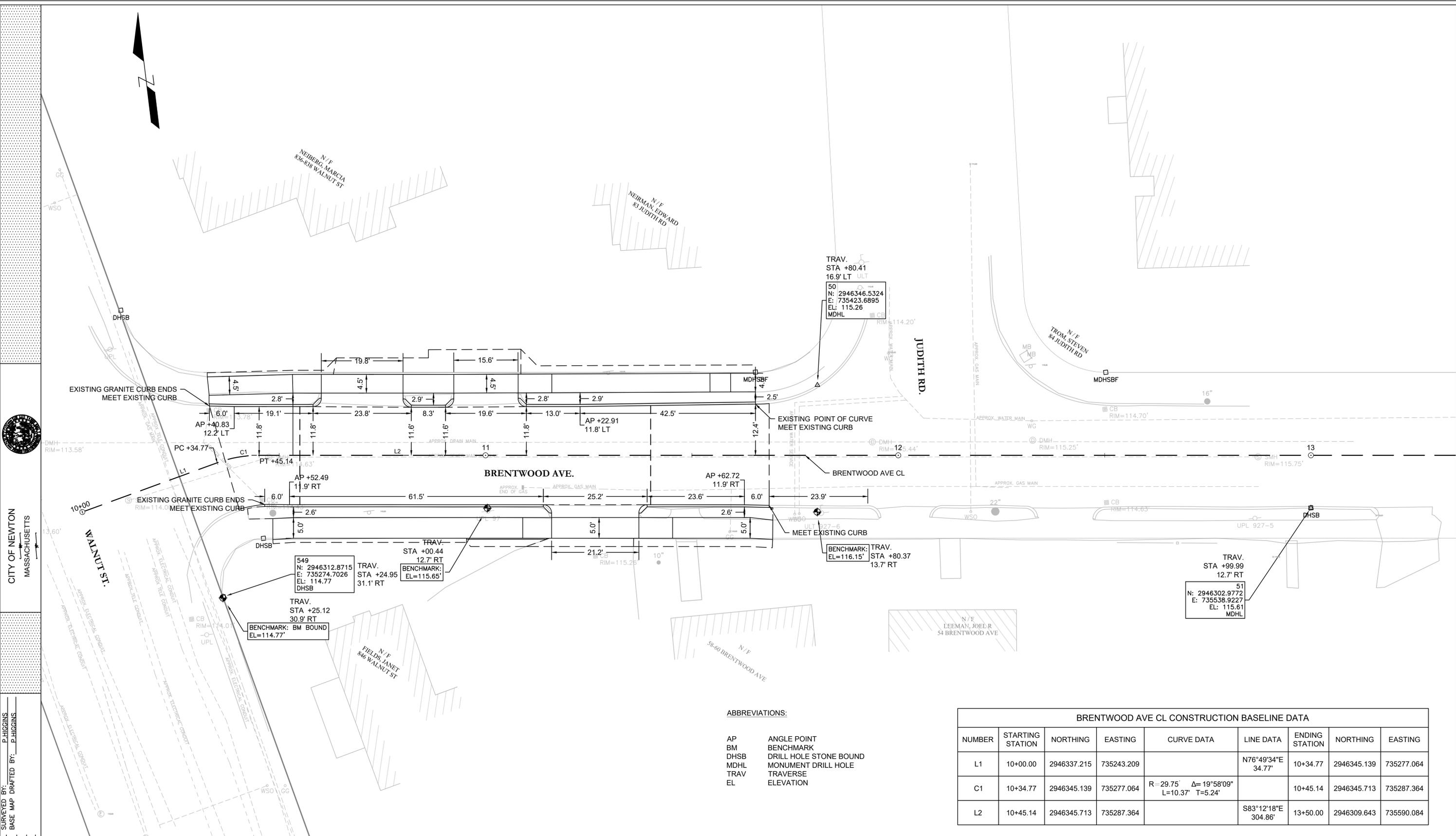
LEGEND:

- 115.26 PROPOSED SPOT ELEVATION
- (115.33) EXISTING SPOT ELEVATION



CITY OF NEWTON
 MASSACHUSETTS
 GRADING PLAN
 FOR THE
 ROADWAY REGRADING
 ON
 BRENTWOOD ROAD

PAGE 4 OF 6
 Louis M. Taverna, P.E. DATE: 12/17/18



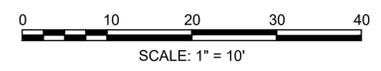
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MASSACHUSETTS

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ABBREVIATIONS:

- AP ANGLE POINT
- BM BENCHMARK
- DHSB DRILL HOLE STONE BOUND
- MDHL MONUMENT DRILL HOLE
- TRAV TRAVERSE
- EL ELEVATION

BRENTWOOD AVE CL CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	10+00.00	2946337.215	735243.209		N76°49'34"E 34.77'	10+34.77	2946345.139	735277.064
C1	10+34.77	2946345.139	735277.064	R=29.75' Δ=19°58'09" L=10.37' T=5.24'		10+45.14	2946345.713	735287.364
L2	10+45.14	2946345.713	735287.364		S83°12'18"E 304.86'	13+50.00	2946309.643	735590.084



CITY OF NEWTON
 MASSACHUSETTS
 ALIGNMENT PLAN
 FOR THE
 ROADWAY REGRADING
 ON
 BRENTWOOD ROAD

PAGE 5 OF 6
 Louis M. Taverna, P.E. DATE: 12/17/18

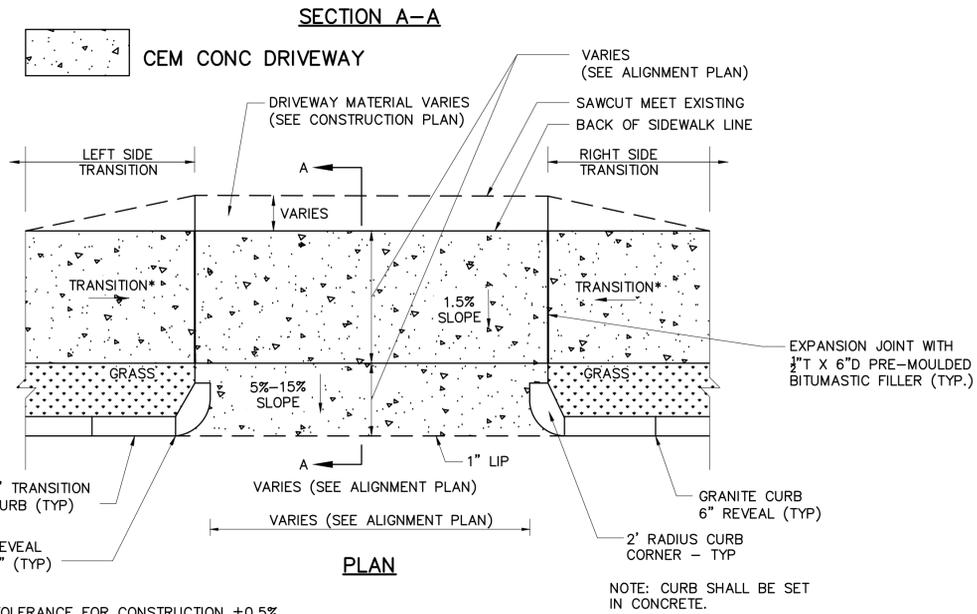
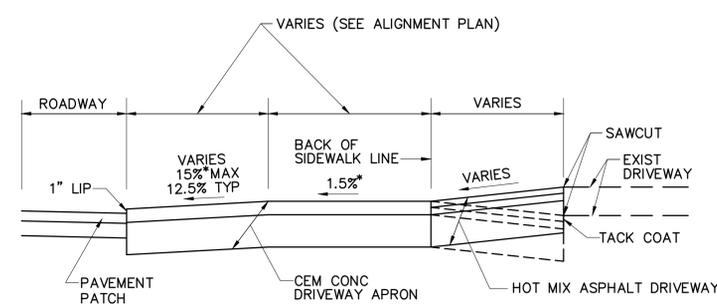


CITY OF NEWTON
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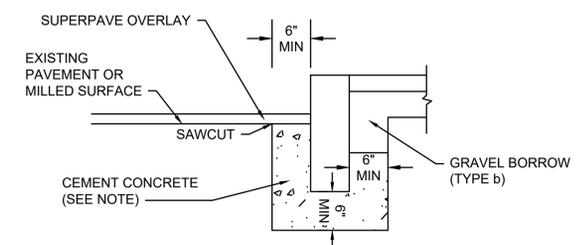
NO.	STATION	ROADWAY GUTTER	SIDEWALK WIDTH	LEFT SIDE		RIGHT SIDE	
				REVEAL	TRANSITION	REVEAL	TRANSITION
①	10+70.10	0.5%	4.5'	6"	6.5'	5"	7'-8"
②	11+00.09	0.5%	4.5'	5"	6.5'	3"	7'-8"
③	11+26.58	0.5%	5.0'	4"	7'-6"	5"	6.5'



CEMENT CONCRETE DRIVEWAY APRON WITH GRASS STRIP

SCALE: N.T.S.

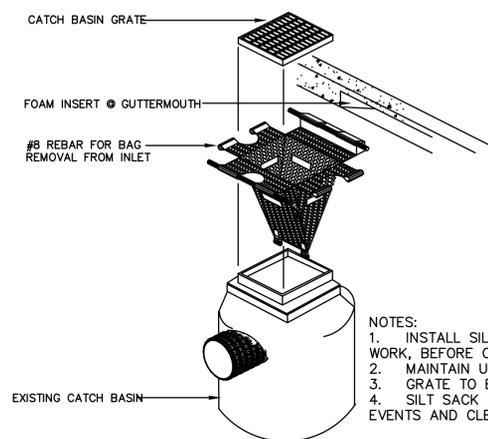
* TOLERANCE FOR CONSTRUCTION ±0.5%



NOTE: ANY DESIGNATED CEMENT CONCRETE THAT IS ACCEPTABLE UNDER SECTION M4 OF THE STANDARD SPECIFICATIONS MAY BE USED. ALL TEST REQUIREMENTS ARE WAIVED. HOT MIX ASPHALT SHALL NOT BE USED AS A SUBSTITUTE.

GRANITE CURB IN EXISTING PAVEMENT WITH OVERLAY

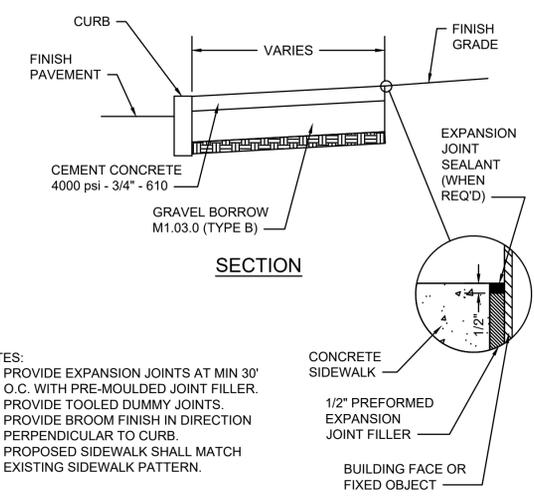
SCALE: N.T.S.



NOTES:
 1. INSTALL SILT SACK IN EXISTING CATCH BASINS WITHIN THE LIMITS OF WORK, BEFORE COMMENCING WORK.
 2. MAINTAIN UNTIL A PERMANENT STAND OF GRASS HAS BEEN ESTABLISHED.
 3. GRATE TO BE PLACED OVER SILT SACK.
 4. SILT SACK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED

TYPICAL 2'X2' SILT SACK

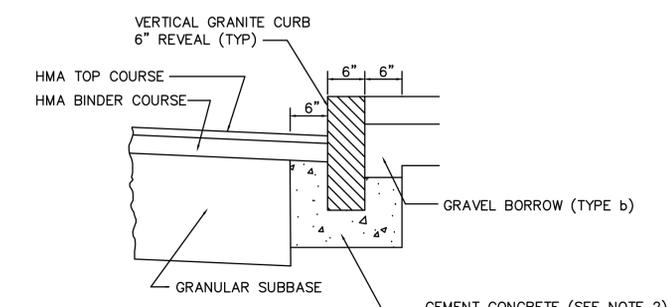
SCALE: N.T.S.



NOTES:
 1. PROVIDE EXPANSION JOINTS AT MIN 30' O.C. WITH PRE-MOULDED JOINT FILLER.
 2. PROVIDE TOOLED DUMMY JOINTS.
 3. PROVIDE BROOM FINISH IN DIRECTION PERPENDICULAR TO CURB.
 4. PROPOSED SIDEWALK SHALL MATCH EXISTING SIDEWALK PATTERN.

CEMENT CONCRETE SIDEWALK

SCALE: N.T.S.



NOTES:
 1. THIS PROCEDURE IS APPLICABLE ONLY IF CURB IS TO BE SET AFTER BASE COURSE IS IN PLACE PRIOR TO BINDER AND TOP PLACEMENT.
 2. ANY DESIGNATED CEMENT CONCRETE THAT IS ACCEPTABLE UNDER SECTION M4 OF THE STANDARD SPECIFICATIONS MAY BE USED. ALL TEST REQUIREMENTS ARE WAIVED. HOT MIX ASPHALT SHALL NOT BE USED AS A SUBSTITUTE.

GRANITE CURBING DETAIL

SCALE: N.T.S.

CITY OF NEWTON
 MASSACHUSETTS
 DETAILS
 FOR THE
 ROADWAY REGRADING
 ON
 BRENTWOOD ROAD