13150.20_(COV).DWG Plotted on 28-Apr-2020 7:38 AM

DERBY STREET IMPROVEMENTS PHASE 1

IN THE CITY OF

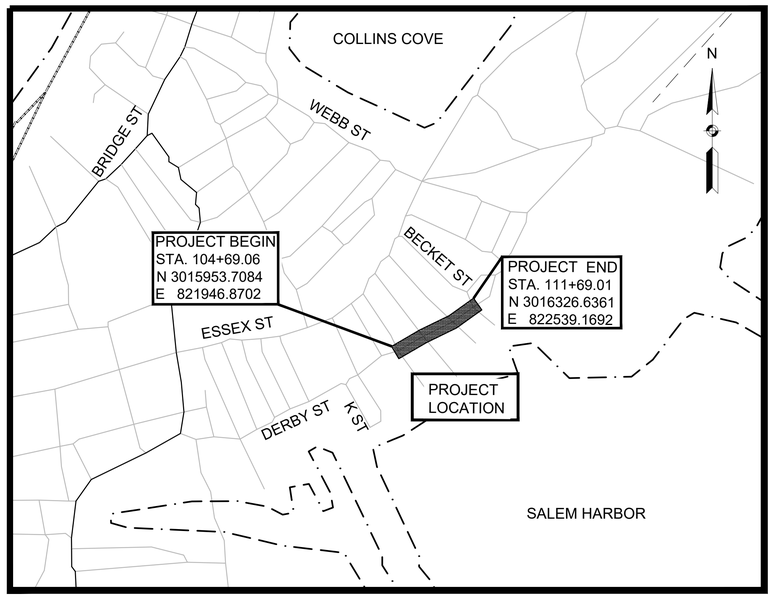
SALEM, MA

ESSEX COUNTY

FINAL SUBMITTAL

THESE PLANS ARE SUPPLEMENTED BY THE OCTOBER 2017 CONSTRUCTION STANDARD DETAILS, THE 2015 OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK.

INDEX



0 500 1000 1500 2000

SCALE: 1" = 500'

KIMBERLEY DRISCOLL, MAYOR

DAVID KNOWLTON, P.E.,
CITY ENGINEER/ DPS DIRECTOR

LENGTH OF PROJECT = 1,124.54 FEET = 0.213 MILES

DATE	DESCRIPTION	REV #

ENGINEER DATE

Vanasse Hangen Brustlin, Inc.
101 Walnut St., PO Box 9151
Watertown, MA 02472
617.924.1770 FAX 617.924.2286

DESIGNED BY	APPROVED BY	SHEET OF
---		01 33
DRAWN BY	DFTG CHECKED BY	VHB CAD FILE NAME
---		13150.20_(COV).DWG
CHECKED BY	DATE	JOB NO.
---	APRIL 2020	13150.20

13150.20_(LEG).DWG Plotted on 28-Apr-2020 8:00 AM

GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
JB	JB	JERSEY BARRIER
CB	CB	CATCH BASIN
		CATCH BASIN CURB INLET
FP	FP	FLAG POLE
GP	GP	GAS PUMP
MB	MB	MAIL BOX
		POST SQUARE
		POST CIRCULAR
WELL	WELL	WELL
EHH	EHH	ELECTRIC HANDHOLE
		FENCE GATE POST
GG	GG	GAS GATE
BHL #	BHL #	BORING HOLE
MW #	MW #	MONITORING WELL
TP #	TP #	TEST PIT
		HYDRANT
		LIGHT POLE
CO.BD.		COUNTY BOUND
		GPS POINT
C	C	CABLE MANHOLE
D	D	DRAINAGE MANHOLE
E	E	ELECTRIC MANHOLE
G	G	GAS MANHOLE
M	M	MISC MANHOLE
S	S	SEWER MANHOLE
T	T	TELEPHONE MANHOLE
W	W	WATER MANHOLE
MHB	MHB	MASSACHUSETTS HIGHWAY BOUND
MON		MONUMENT
SB		STONE BOUND
TB		TOWN OR CITY BOUND
		TRAVERSE OR TRIANGULATION STATION
TPL or GUY	TPL or GUY	TROLLEY POLE OR GUY POLE
HTP		TRANSMISSION POLE
UFB	UFB	UTILITY POLE W/ FIREBOX
UPDL	UPDL	UTILITY POLE WITH DOUBLE LIGHT
ULT	ULT	UTILITY POLE W / 1 LIGHT
UPL	UPL	UTILITY POLE
		BUSH
SIZE & TYPE		TREE
		STUMP
		SWAMP / MARSH
WG	WG	WATER GATE
PM	PM	PARKING METER
		OVERHEAD CABLE/WIRE
		CURBING
99		CONTOURS (ON-THE-GROUND SURVEY DATA)
100 99		CONTOURS (PHOTOGRAMMETRIC DATA)
		UNDERGROUND DRAIN PIPE (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND ELECTRIC DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND GAS MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND SEWER MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND TELEPHONE DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND WATER MAIN (DOUBLE LINE 24 INCH AND OVER)
		BALANCED STONE WALL
		GUARD RAIL - STEEL POSTS
		GUARD RAIL - WOOD POSTS
		GUARD RAIL - DOUBLE FACE - STEEL POSTS
		GUARD RAIL - DOUBLE FACE - WOOD POSTS
		CHAIN LINK OR METAL FENCE
		WOOD FENCE
		EROSION CONTROL BARRIER
		TREE LINE
		SAWCUT LINE
		TOP OR BOTTOM OF SLOPE
		LIMIT OF EDGE OF PAVEMENT OR COLD PLANE AND OVERLAY
		BANK OF RIVER OR STREAM
		BORDER OF WETLAND
		100 FT WETLAND BUFFER
		200 FT RIVERFRONT BUFFER
		STATE HIGHWAY LAYOUT
		TOWN OR CITY LAYOUT
		COUNTY LAYOUT
		RAILROAD SIDELINE
		TOWN OR CITY BOUNDARY LINE
		PROPERTY LINE OR APPROXIMATE PROPERTY LINE
		EASEMENT

PAVEMENT MARKINGS SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
	SL	STOP LINE
	CW	CROSSWALK
	SWL	SOLID WHITE LINE
	DWL	DOTTED WHITE LINE, 2' LINE W/4' SPACING
	DYCL	DOUBLE YELLOW CENTER LINE
	SWCHL	SOLID WHITE CHANNELIZATION LINE

SALEM
DERBY STREET
ABBREVIATIONS & GENERAL NOTES
SHEET 03 OF 33

ABBREVIATIONS

GENERAL

AADT	ANNUAL AVERAGE DAILY TRAFFIC
ABAN	ABANDON
ADJ	ADJUST
APPROX.	APPROXIMATE
A.C.	ASPHALT CONCRETE
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE
BIT.	BITUMINOUS
BC	BOTTOM OF CURB
BD.	BOUND
BL	BASELINE
BLDG	BUILDING
BM	BENCHMARK
BO	BY OTHERS
BOS	BOTTOM OF SLOPE
BR.	BRIDGE
CB	CATCH BASIN
CBCI	CATCH BASIN WITH CURB INLET
CC	CEMENT CONCRETE
CCM	CEMENT CONCRETE MASONRY
CEM	CEMENT
CI	CURB INLET
CIT	CHANGE IN TYPE
CIP	CAST IRON PIPE
CLF	CHAIN LINK FENCE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CSP	CORRUGATED STEEL PIPE
CO.	COUNTY
CONC	CONCRETE
CONT	CONTINUOUS
CONST	CONSTRUCTION
CR GR	CROWN GRADE
DHV	DESIGN HOURLY VOLUME
DI	DROP INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DW	STEADY DON'T WALK - PORTLAND ORANGE
DWY	DRIVEWAY
ELEV (or EL.)	ELEVATION
EMB	EMBANKMENT
EOP	EDGE OF PAVEMENT
EXIST (or EX)	EXISTING
EXC	EXCAVATION
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
FDN.	FOUNDATION
FLDSTN	FIELDSTONE
GAR	GARAGE
GD	GROUND
GG	GAS GATE
GI	GUTTER INLET
GIP	GALVANIZED IRON PIPE
GRAN	GRANITE
GRAV	GRAVEL
GRD	GUARD
HDW	HEADWALL
HMA	HOT MIX ASPHALT
HOR	HORIZONTAL
HYD	HYDRANT
INV	INVERT
JCT	JUNCTION
L	LENGTH OF CURVE
LB	LEACH BASIN
LP	LIGHT POLE
LT	LEFT
MAX	MAXIMUM
MB	MAILBOX
MH	MANHOLE
MHB	MASSACHUSETTS HIGHWAY BOUND
MIN	MINIMUM
NIC	NOT IN CONTRACT
NO.	NUMBER
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
P.G.L.	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
POC	POINT ON CURVE
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVATURE
PROJ	PROJECT
PROP	PROPOSED
PSB	PLANTABLE SOIL BORROW
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT

ABBREVIATIONS (cont.)

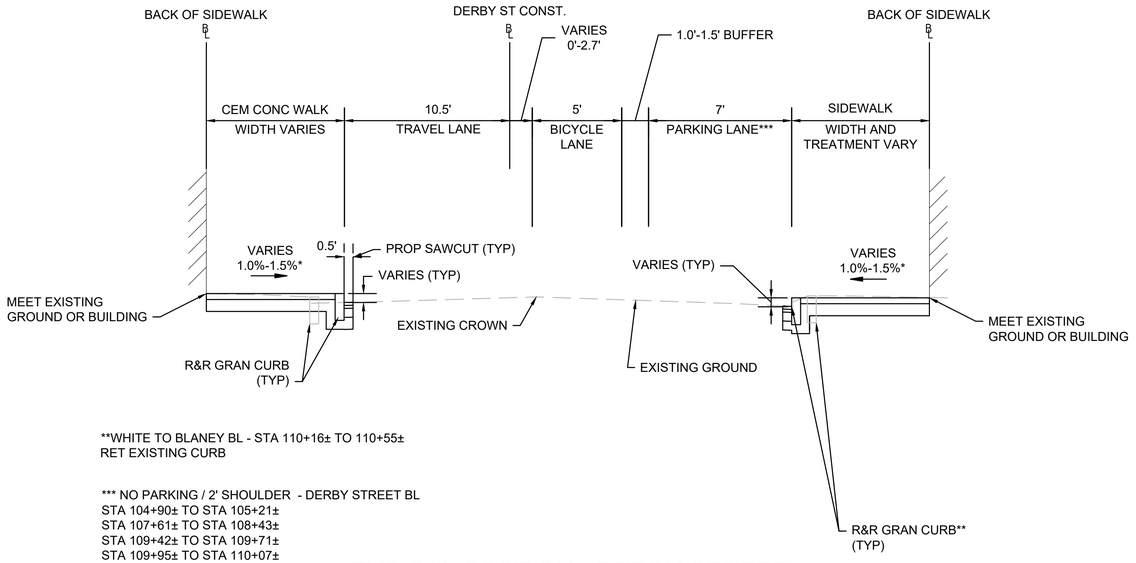
GENERAL

R	RADIUS OF CURVATURE
R&D	REMOVE AND DISPOSE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
REM	REMOVE
RET	RETAIN
RET WALL	RETAINING WALL
RMDL	REMODEL
ROW	RIGHT OF WAY
RR	RAILROAD
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
RT	RIGHT
SB	STONE BOUND
SHLD	SHOULDER
SMH	SEWER MANHOLE
ST	STREET
STA	STATION
SSD	STOPPING SIGHT DISTANCE
SHLO	STATE HIGHWAY LAYOUT LINE
SW	SIDEWALK
T	TANGENT DISTANCE OF CURVE/TRUCK %
TAN	TANGENT
TEMP	TEMPORARY
TC	TOP OF CURB
TOS	TOP OF SLOPE
TRANS	TRANSITION
TYP	TYPICAL
UP	UTILITY POLE
VAR	VARIES
VERT	VERTICAL
VC	VERTICAL CURVE
WCR	WHEEL CHAIR RAMP
WG	WATER GATE
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN
X-SECT	CROSS SECTION

GENERAL NOTES:

1. EXISTING CONDITIONS AND TOPOGRAPHICAL INFORMATION FROM AN ACTUAL FIELD SURVEY CONDUCTED BY MERIDIAN ASSOCIATES IN DECEMBER, 2019.
2. THE HORIZONTAL CONTROL IS BASED ON THE MASSACHUSETTS MAINLAND STATE PLANE COORDINATE SYSTEM AND THE NATIONAL GEODETIC SURVEY (NAD83). ALL ELEVATION IS US FEET, REFERENCED TO THE NORTH AMERICA VERTICAL DATUM OF 1988 (NAVD88).
3. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND GRADES IN THE FIELD BEFORE COMMENCING WORK AND PROMPTLY NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
4. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
5. DRAINAGE ELEVATIONS ARE PROVIDED FOR DESIGN PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY BY TEST PIT, THE LOCATIONS OF EXISTING UTILITIES WHICH MAY CONFLICT WITH THE PROPOSED DRAINAGE DESIGN. ANY FIELD ADJUSTMENTS REQUIRED WILL BE MADE AS APPROVED OR DIRECTED BY THE ENGINEER. ONLY AFTER THE CONTRACTOR VERIFIES ELEVATIONS FOR THE CONSTRUCTABILITY OF THE DRAINAGE SYSTEM SHALL ANY STRUCTURES BE ORDERED. ANY FIELD ADJUSTMENTS TO LINE & GRADE UP TO A DEPTH OF 5' SHALL BE INCLUDED IN THE COST OF THE PIPE. PIPE EXCAVATION GREATER THAN 5' WILL BE PAID UNDER CLASS B TRENCH EXCAVATION.
6. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
7. THE CONTRACTOR SHALL ALTER THE MASONRY OF THE TOP SECTION OF ALL EXISTING DRAINAGE AND SEWER STRUCTURES AS NECESSARY FOR CHANGES IN GRADE, AND RESET ALL WATER AND DRAINAGE FRAMES, GRATES AND BOXES TO THE PROPOSED FINISH SURFACE GRADE. REQUIRED NEW MASONRY SHALL BE CLAY BRICK.
8. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.
9. EXISTING UTILITY POLES WILL BE RELOCATED BY OTHERS IF REQUIRED.
10. TREES AND SHRUBS WITHIN THE LIMITS OF GRADING SHALL BE REMOVED ONLY UPON APPROVAL OF THE ENGINEER.
11. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT NO EXPENSE TO THE OWNER.
12. IF SUITABLE, EXISTING GRANITE CURB & EDGING SHALL BE RE-USED IN THE PROPOSED WORK, EXCEPT CURVED STONES OF A DIFFERENT RADIUS THAN PROPOSED CURB.
13. EXISTING STATE, COUNTY, CITY, AND TOWN LOCATION LINES AND PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATIONS ARE NOT GUARANTEED.
14. THE CONTRACTOR SHALL EXERCISE DUE CARE WHEN WORKING AROUND ALL PROPERTY BOUNDS WHICH ARE TO REMAIN. SHOULD ANY DAMAGE TO A BOUND RESULT FROM THE ACTIONS OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE THE BOUND REPLACED AND/OR REALIGNED BY A LICENSED PROFESSIONAL SURVEYOR AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST.
15. DISPOSAL OF ALL SURPLUS MATERIAL SHALL BE AS APPROVED BY THE ENGINEER AND OWNER.

13150.20_(TYP).DWG Plotted on 28-Apr-2020 8:15 AM



**WHITE TO BLANEY BL - STA 110+16± TO 110+55±
RET EXISTING CURB

*** NO PARKING / 2' SHOULDER - DERBY STREET BL
STA 104+90± TO STA 105+21±
STA 107+61± TO STA 108+43±
STA 109+42± TO STA 109+71±
STA 109+95± TO STA 110+07±
STA 110+64± TO STA 111+00±

TYPICAL SECTION - DERBY STREET

PARKING LANE
DERBY STREET BL
STA 108+43± TO STA 109+43±
STA 110+07± TO STA 110+64±
N.T.S.

PAVEMENT NOTES

PROPOSED CEMENT CONCRETE WHEELCHAIR RAMPS / WALK

4" CEMENT CONCRETE AIR ENTRAINED 4000 PSI, $\frac{3}{4}$", 610 OVER
8" GRAVEL BORROW (TYPE b)

PROPOSED CEMENT CONCRETE DRIVEWAYS

6" CEMENT CONCRETE AIR ENTRAINED 4000 PSI, $\frac{3}{4}$", 610 OVER
8" GRAVEL BORROW (TYPE B)

PROPOSED FULL DEPTH PAVEMENT BOX WIDENING LESS THAN 4'

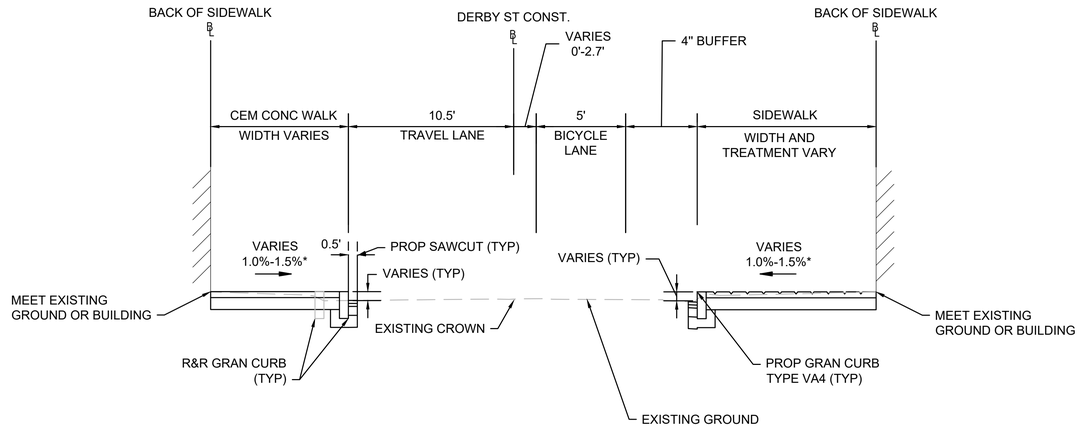
2" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER
2" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER
6" HIGH EARLY STRENGTH CEMENT CONCRETE BASE COURSE OVER
8" GRAVEL BORROW (TYPE b)

* TOLERANCE FOR CONSTRUCTION ±0.5%

- FOR BRICK SIDEWALK NOTES SEE LANDSCAPE DETAILS, SHEET 19

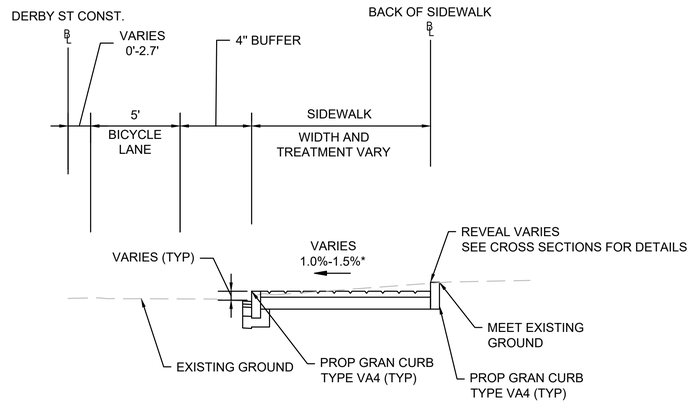
- COBBLES ARE PRESENT UNDERNEATH THE PAVEMENT STRUCTURE ON DERBY STREET. ALL COBBLE EXCAVATION WILL BE PAID FOR UNDER 120.1 UNCLASSIFIED EXCAVATION

- BOX WIDENING LESS THAN 4' HMA AND DRIVEWAY RECONSTRUCTION BEHIND LIMIT OF WORK WILL BE PAID FOR UNDER ITEM 451. HMA FOR PATCHING



TYPICAL SECTION - DERBY STREET

WITHOUT PARKING LANE
DERBY STREET BL
STA 105+52± TO STA 108+43±
STA 109+43± TO STA 110+07±
STA 110+64± TO STA 111+00±
N.T.S.



TYPICAL SECTION - DERBY STREET

CURB AT BACK OF SIDEWALK
DERBY STREET BL
STA 105+57± TO STA 106+73±
N.T.S.

SALEM
DERBY STREET
CONSTRUCTION PLANS
SHEET 05 OF 33

13150.20_(GEN).DWG Plotted on 28-Apr-2020 11:23 AM

CONTINUED ON SHEET NO. 06

PALFREY COURT

PALFREY COURT CONDOMINIUMS
BK. 8769 PG. 464
MAP/LOT: 35-346
6 PALFREY COURT

UNITED STATES OF AMERICA
BK. 9870 PG. 60
MAP/LOT: 35-347
158-162 DERBY

STEPHEN J. & JUDY ANN PARLATO
BK. 23444 PG. 543
MAP/LOT: 35-349
16 DANIELS STREET

SPIRO KOUNSALIEH
BK. 17492 PG. 82
MAP/LOT: 35-348
152-156 DERBY STREET

DANIELS STREET

ROSS PECEVICH
BK. 8965 PG. 585
MAP/LOT: 35-386
15 DANIELS STREET

JOHN & HARRIET B. DRABINOWICZ
BK. 4032 PG. 209
MAP/LOT: 35-387
17 DANIELS STREET

REARDON REALTY TRUST
BK. 8427 PG. 83
MAP/LOT: 35-387
142-148 DERBY STREET

LEO A. III & JUDITH M. MURPHY
BK. 16422 PG. 304
MAP/LOT: 35-368
140 DERBY STREET

136-138 DERBY STREET NOMINEE TRUST
BK. 23249 PG. 440
MAP/LOT: 35-369
136-138 DERBY STREET

DERBY-BENTLEY CONDOMINIUM
BK. 7704 PG. 498
MAP/LOT: 35-370
132 DERBY STREET

BENTLEY STREET

RANDY S. & KIMBERLY SWEENEY
BK. 27056 PG. 223
MAP/LOT: 41-306
19 BENTLEY STREET

MICHAEL R. GIARDI & DOUGLAS J. LOWE
BK. 25634 PG. 278
MAP/LOT: 41-304
126 DERBY STREET

128 DERBY STREET

DEBORAH C. PRENTICE
BK. 13050
PG. 235
MAP/LOT: 41-305
16 HARDY STREET

DERBY STREET REALTY TRUST
BK. 6943 PG. 334
MAP/LOT: 41-2
124 DERBY STREET

HARDY STREET

PAUL A. & MEGAN CRONIN
BK. 25641 PG. 24
MAP/LOT: 41-32
17 HARDY STREET

GEORGE H. & MYRTLE T. BURKINSHAW
BK. 5780 PG. 161
MAP/LOT: 41-12
122 DERBY STREET

18 DERBY STREET

PAUL H. NATHAN
BK. 20684 PG. 477
MAP/LOT: 35-407
159 DERBY STREET

KOSCIUSKO STREET

WHARFSIDE CONDOMINIUM
BK. 7570 PG. 554
MAP/LOT: 35-393
155 DERBY STREET

149 DERBY STREET CONDOMINIUM
BK. 6969 PG. 470
MAP/LOT: 35-392
149 DERBY STREET

DANIELS STREET

CAPTAIN DUSTY'S INC.
BK. 18799 PG. 55
MAP/LOT: 41-320
145 DERBY STREET

CAPTAIN DUSTY'S INC.
BK. 18799
PG. 55
MAP/LOT: 41-319
143 DERBY STREET

ROBERT A. DANA
BK. 12748
PG. 320
MAP/LOT: 41-318
137 DERBY STREET

ROBERT A. DANA
BK. 6490
PG. 305
MAP/LOT: 41-317
135 DERBY STREET

RENAISSANCE CONDOMINIUM AT 131 DERBY STREET
BK. 24338 PG. 134
MAP/LOT: 41-316
131 DERBY STREET

127 DERBY STREET CONDOMINIUM
BK. 7287 PG. 304
MAP/LOT: 41-315
127 DERBY STREET

125 DERBY STREET CONDOMINIUM
BK. 7016 PG. 331
MAP/LOT: 41-314
125 DERBY STREET

ERLENDUR KRISTJANSSON & ELINANNA BJARNADOTTIR
BK. 22092 PG. 317
MAP/LOT: 41-313
18 HARDY STREET

THE HOUSE OF THE SEVEN GABLES SETTLEMENT ASSOCIATION
BK. 3098 PG. 361
MAP/LOT: 41-300
25 HARDY STREET

THE HOUSE OF THE SEVEN GABLES SETTLEMENT ASSOCIATION
BK. 13331 PG. 356
MAP/LOT: 41-303
17 DERBY STREET

BEGIN PROJECT
STA 104+69.06±
N: 3015953.708±
E: 821946.870±

BENTLEY TO HARDY BL

DERBY ST CONST BL

DANIELS TO HARDY BL

HARDY TO TURNER (NORTH) BL

HARDY TO TURNER (SOUTH) BL

DERBY STREET

PI +27.48

5+51.07

34+20.27

PROP SAWCUT MEET EXISTING

PROP CEM CONC DRIVEWAY

HARDY TO TURNER (NORTH) BL

R&R GRAN CURB

RET

RET FENCE

PROP GRAN CURB

RET HEDGES

PROP BRICK SIDEWALK WIDTH VARIES (TYP)

PROP CEM CONC WCR W/ TRANS CURB (TYP)

PROP CURVED GRAN CURB

NOTES:
1. BACK OF WALK BASELINES FOR CROSS SECTION STATIONING PURPOSES ONLY
2. FOR LIGHTING AND LANDSCAPE INFORMATION SEE SHEETS 17-19, 20-23

0 20 50 100
SCALE: 1" = 20'

SALEM
DERBY STREET
CONSTRUCTION PLANS
SHEET 06 OF 33

13150.20_(GEN).DWG Plotted on 28-Apr-2020 11:23 AM

CONTINUED ON SHEET NO. 05

N

DERBY STREET

TURNER STREET

CARLTON STREET

BECKET STREET

BECKET AVENUE

WHITE STREET

BLANEY STREET

PROP GRAN CURB
PROP CEM CONC DRIVEWAY
HARDY TO TURNER (NORTH) BL
PROP SAWCUT MEET EXISTING
PROP TREE PROTECTION
RET FENCE
RET
R&D CURB CORNERS
R&R GRAN CURB
PROP BRICK SIDEWALK WIDTH VARIES (TYP)
PROP TREE PROTECTION
PROP CEM CONC DRIVEWAY
HARDY TO TURNER (SOUTH) BL
PROP GRAN CURB
RET HEDGES
R&R BRICK
PROP TREE PROTECTION
PROP LIMIT OF WORK
PROP SAWCUT MEET EXISTING
R&R MB
42+37
7+78.63
TURNER TO CARLTON BL
PROP CEM CONC SIDEWALK WIDTH VARIES (TYP)
PROP SAWCUT MEET EXISTING
REM DETECTABLE WARNING PANEL
REM EXIST DETECTABLE WARNING PANEL
PROP CEM CONC WCR W/ TRANS CURB (TYP)
RET
8+48.57
PI +59.51
PROP BRICK (TYP)
PROP GRAN CURB
R&R GRAN CURB
PROP CURVED GRAN CURB
PROP TREE PROTECTION
PROP CEM CONC DRIVEWAY
REM
PROP TREE PROTECTION/RET GRAN CURB AT TREE PIT
PROP CEM CONC DRIVEWAY
PROP CEM CONC SIDEWALK WIDTH VARIES (TYP)
TURNER TO WHITE BL
PROP SAWCUT (TYP)
CARLTON TO BECKET BL
R&R COBBLES (ITEM 485.1)
PROP CEM CONC DRIVEWAY
RET GATE
REM TREE
PROP TREE PROTECTION
9+27.92
REM EXIST DETECTABLE WARNING PANEL
DERBY ST CONST BL
R&R GRAN CURB
R&R BOLLARD
PROP CURVED GRAN CURB MEET EXIST
PROP SAWCUT MEET EXISTING
53+27.34
REM
R&R BENCH
PROP TREE PROTECTION GRAN CURB TO REMAIN WITHIN TREE PIT
RET POSTS & WALL
PROP CEM CONC DRIVEWAY
PROP TREE PROTECTION GRAN CURB TO REMAIN WITHIN TREE PIT
BECKET BL
REM EXIST DETECTABLE WARNING PANEL
END PROJECT
STA 111+69.01±
N:3016326.636±
E:822539.169±
PROP SAWCUT MEET EXISTING
8+80.93
70+40.16
BLANEY BL
PROP SAWCUT MEET EXISTING
62+04.15
WHITE TO BLANEY BL
RET HEDGES

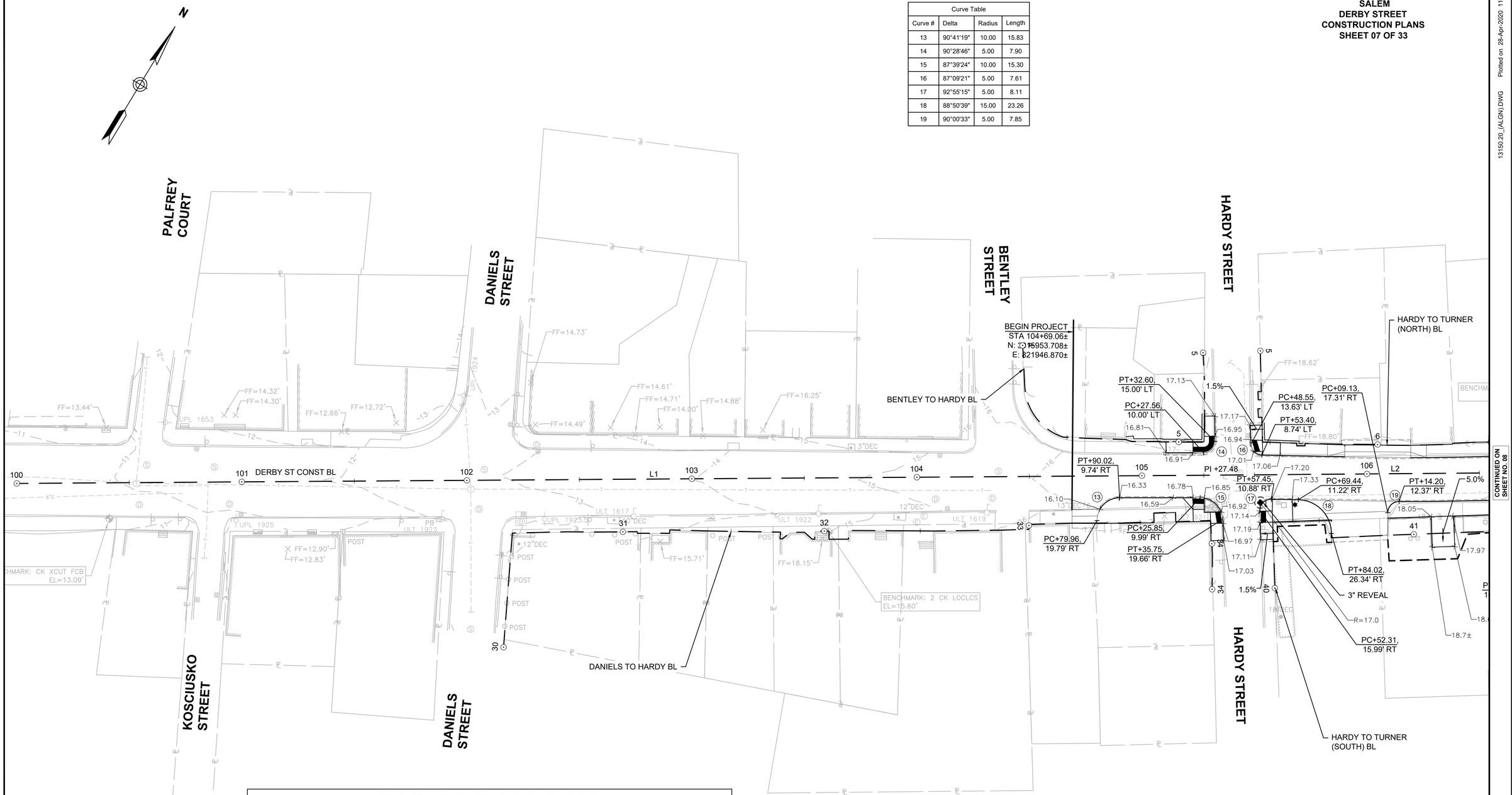
NOTES:
1. BACK OF WALK BASELINES FOR CROSS SECTION STATIONING PURPOSES ONLY
2. FOR LIGHTING AND LANDSCAPE INFORMATION SEE SHEETS 17-19, 20-23

0 20 50 100
SCALE: 1" = 20'

SALEM
DERBY STREET
CONSTRUCTION PLANS
SHEET 07 OF 33

13150.20_(ALGN).DWG Plotted on 28-Apr-2020 11:27 AM

Curve Table			
Curve #	Delta	Radius	Length
13	90°41'19"	10.00	15.83
14	90°28'46"	5.00	7.90
15	87°39'24"	10.00	15.30
16	87°09'21"	5.00	7.61
17	92°55'15"	5.00	8.11
18	88°50'39"	15.00	23.26
19	90°00'33"	5.00	7.85



DERBY STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	100+00.00	3015708.4165	821547.0631		N58°28'11"E 527.48'	105+27.48	3015984.260	821996.668
L2	105+27.48	3015984.2605	821996.6677		N58°23'55"E 232.03'	107+59.51	3016105.845	822194.290

NOTES:
1. SEE SHEETS 25 - 26 FOR WHEELCHAIR RAMP DETAILS

0 20 50 100
SCALE: 1" = 20'

CONTINUED ON SHEET NO. 08

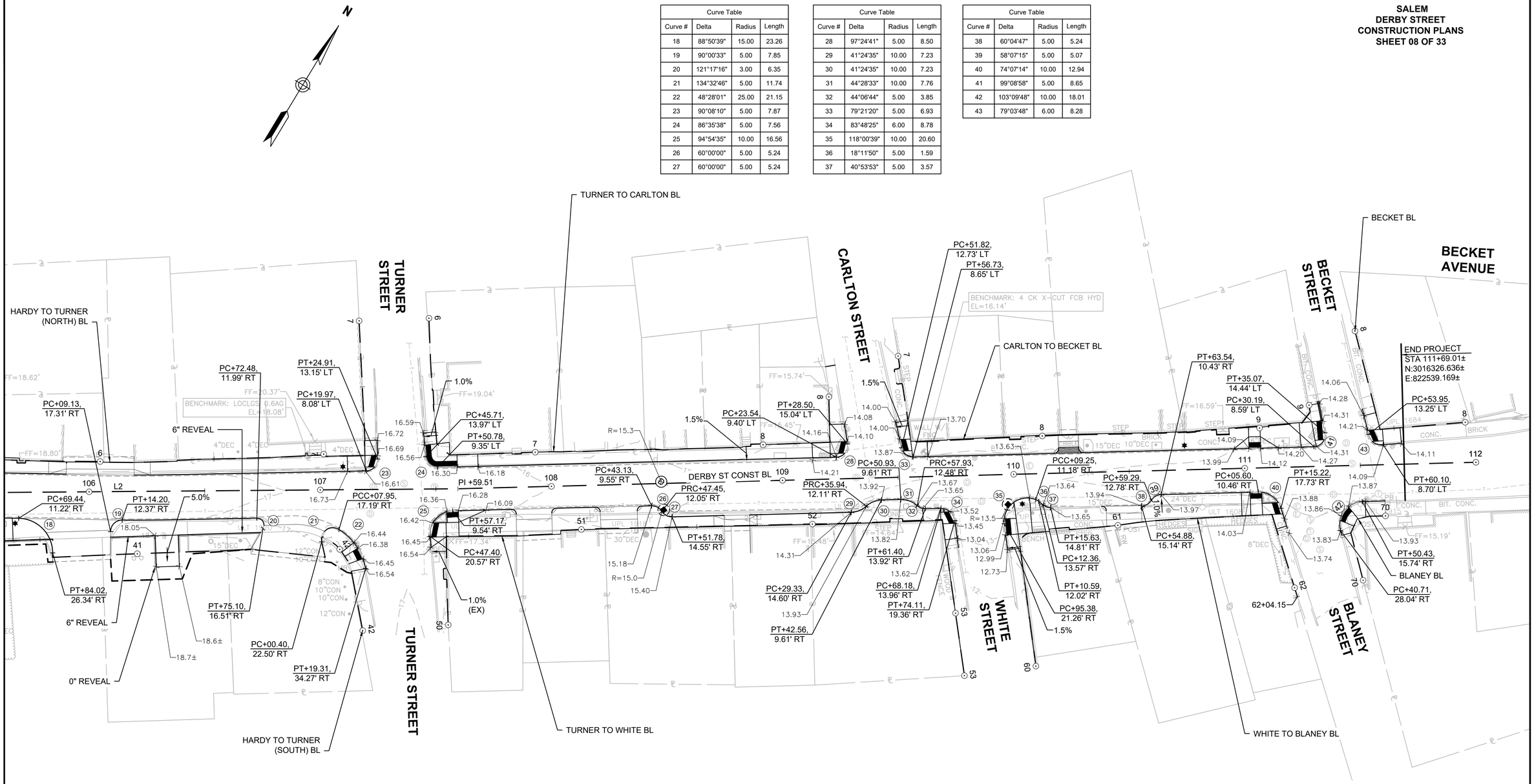
SALEM
DERBY STREET
CONSTRUCTION PLANS
SHEET 08 OF 33

13150.20_(ALGN).DWG Plotted on 28-Apr-2020 11:27 AM

Curve Table			
Curve #	Delta	Radius	Length
18	88°50'39"	15.00	23.26
19	90°00'33"	5.00	7.85
20	121°17'16"	3.00	6.35
21	134°32'46"	5.00	11.74
22	48°28'01"	25.00	21.15
23	90°08'10"	5.00	7.87
24	86°35'38"	5.00	7.56
25	94°54'35"	10.00	16.56
26	60°00'00"	5.00	5.24
27	60°00'00"	5.00	5.24

Curve Table			
Curve #	Delta	Radius	Length
28	97°24'41"	5.00	8.50
29	41°24'35"	10.00	7.23
30	41°24'35"	10.00	7.23
31	44°28'33"	10.00	7.76
32	44°06'44"	5.00	3.85
33	79°21'20"	5.00	6.93
34	83°48'25"	6.00	8.78
35	118°00'39"	10.00	20.60
36	18°11'50"	5.00	1.59
37	40°53'53"	5.00	3.57

Curve Table			
Curve #	Delta	Radius	Length
38	60°04'47"	5.00	5.24
39	58°07'15"	5.00	5.07
40	74°07'14"	10.00	12.94
41	99°08'58"	5.00	8.65
42	103°09'48"	10.00	18.01
43	79°03'48"	6.00	8.28



CONTINUED ON SHEET NO. 07

DERBY STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	100+00.00	3015708.4165	821547.0631		N58°28'11"E 527.48'	105+27.48	3015984.260	821996.668
L2	105+27.48	3015984.2605	821996.6677		N58°23'55"E 232.03'	107+59.51	3016105.845	822194.290

0 20 50 100

SCALE: 1" = 20'

NOTES:
1. SEE SHEETS 25 - 26 FOR WHEELCHAIR RAMP DETAILS

SALEM
DERBY STREET
SIGNING & PAVEMENT MARKING PLANS
SHEET 09 OF 33

13150.20_(STRP).DWG Plotted on 28-Apr-2020 11:29 AM

N

PALFREY COURT

PALFREY COURT CONDOMINIUMS
BK. 8769 PG. 464
MAP/LOT: 35-346
6 PALFREY COURT

UNITED STATES OF AMERICA
BK. 9870 PG. 60
MAP/LOT: 35-347
158-162 DERBY

STEPHEN J. & JUDY ANN PARLATO
BK. 23444 PG. 543
MAP/LOT: 35-349
16 DANIELS STREET

SPIRO KOUNSALIEH
BK. 17492 PG. 82
MAP/LOT: 35-348
152-156 DERBY STREET

D3(PALFREY ST)
"DEAD END"
R7-8

"WRONG WAY"
R7-8

"WRONG WAY"
R7-8

DANIELS STREET

ROSS PECEVICH
BK. 8965 PG. 585
MAP/LOT: 35-386
15 DANIELS STREET

JOHN & HARRIET B. DRABINOWICZ
BK. 4032 PG. 209
MAP/LOT: 35-387
17 DANIELS STREET

REARDON REALTY TRUST
BK. 8427 PG. 83
MAP/LOT: 35-367
142-148 DERBY STREET

LEO A. III & JUDITH M. MURPHY
BK. 16422 PG. 304
MAP/LOT: 35-368
140 DERBY STREET

136-138 DERBY STREET NOMINEE TRUST
BK. 23249 PG. 440
MAP/LOT: 35-369
136-138 DERBY STREET

DERBY-BENTLEY CONDOMINIUM
BK. 7704 PG. 498
MAP/LOT: 35-370
132 DERBY STREET

"NO BUSES"

R7-8

R6-1
D3(BENTLEY ST)
R5-1

BENTLEY STREET

BEGIN PROJECT
STA 104+69.06±
N: 3015953.708±
E: 821946.870±

RANDY S. & KIMBERLY SWEENEY
BK. 27056 PG. 223
MAP/LOT: 41-306
19 BENTLEY STREET

128 DERBY STREET

DEBORAH C. PRENTICE
BK. 13050
PG. 235
MAP/LOT: 41-305
16 HARDY STREET

MICHAEL R. GIARDI & DOUGLAS J. LOWE
BK. 25634 PG. 273
MAP/LOT: 41-304
126 DERBY STREET

DERBY STREET REALTY TRUST
BK. 6943 PG. 334
MAP/LOT: 41-2
124 DERBY STREET

HARDY STREET

PAUL A. & MEGAN CRONIN
BK. 25641 PG. 24
MAP/LOT: 41-32
17 HARDY STREET

GEORGE H. & MYRTLE T. BURKINSHAW
BK. 5780 PG. 161
MAP/LOT: 41-12
122 DERBY

GEORGE H. & MYRTLE T. BURKINSHAW
BK. 5780 PG. 161
MAP/LOT: 41-13
118 DERBY STREET

8' CW

R&S
R7-8

+27.48

8' CW

DERBY STREET

10.5'
SWL
5'
SWL
4'

R3-17

R1-1

R6-1
R3-2

R6-1 (R&S)
R1-1 (R&S)

R6-1 (R&S)
D3(HARDY ST) (RET)
R1-1 (R&S)

(R&S)
(R&S)

THE HOUSE OF THE SEVEN GABLES SETTLEMENT ASSOCIATION
BK. 13331 PG. 356
MAP/LOT: 41-303
117 DERBY STREET

THE HOUSE OF THE SEVEN GABLES SETTLEMENT ASSOCIATION
BK. 3098 PG. 361
MAP/LOT: 41-300
25 HARDY STREET

101 102 103 104 105 106

"WATERFRONT DISTRICT"

KOSCIUSKO STREET

R6-1
D3(KOSCIUSZKO ST)

R6-1
R6-1
D3(DANELS ST)

R5-1
"NO LEFT TURN"
R7-8

R5-1

R6-1
R7-8

R1-1

R2-1(20)

R6-1
D3(BENTLEY ST)

R7-1L

R6-1
R3-2
MTD ON UP

R&S
R7-8

PAUL H. NATHAN
BK. 20684 PG. 477
MAP/LOT: 35-407
159 DERBY STREET

WHARFSIDE CONDOMINIUM
BK. 7570 PG. 554
MAP/LOT: 35-393
155 DERBY STREET

149 DERBY STREET CONDOMINIUM
BK. 6969 PG. 470
MAP/LOT: 35-392
149 DERBY STREET

CAPTAIN DUSTY'S INC.
BK. 18799 PG. 55
MAP/LOT: 41-320
145 DERBY STREET

CAPTAIN DUSTY'S INC.
BK. 18799
PG. 55
MAP/LOT: 41-319
143 DERBY STREET

ROBERT A. DANA
BK. 12748
PG. 320
MAP/LOT: 41-318
137 DERBY STREET

ROBERT A. DANA
BK. 64903
PG. 305
MAP/LOT: 41-317
135 DERBY STREET

RENAISSANCE CONDOMINIUM AT 131 DERBY STREET
BK. 24338 PG. 134
MAP/LOT: 41-316
131 DERBY STREET

127 DERBY STREET CONDOMINIUM
BK. 7287 PG. 304
MAP/LOT: 41-315
127 DERBY STREET

125 DERBY STREET CONDOMINIUM
BK. 7016 PG. 331
MAP/LOT: 41-314
125 DERBY STREET

ERLENDUR KRISTJANSSON & ELINANNA BJARNADOTTIR
BK. 22092 PG. 317
MAP/LOT: 41-313
18 HARDY STREET

DANIELS STREET

CONSTRUCTION NOTES

1. ALL PAVEMENT MARKINGS WILL BE INSTALLED BY THE CITY UNDER A SEPARATE CONTRACT.
2. RETAIN ALL EXISTING SIGNS UNLESS OTHERWISE NOTED.

0 20 50 100

SCALE: 1" = 20'

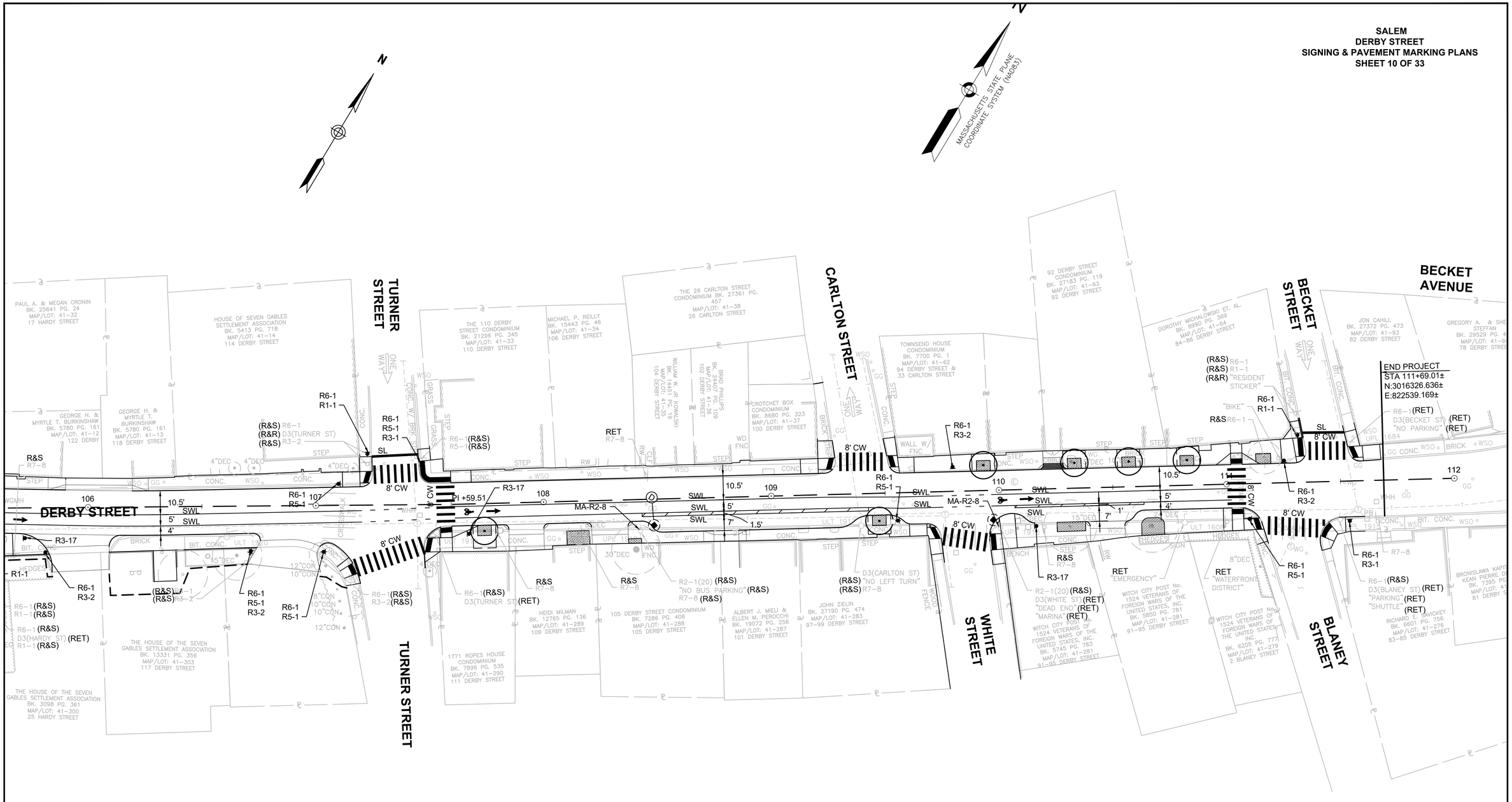
SALEM
DERBY STREET
SIGNING & PAVEMENT MARKING PLANS
SHEET 10 OF 33

13150.20_(STRP).DWG Plotted on 28-Apr-2020 11:29 AM

N

MASSACHUSETTS STATE PLANE COORDINATE SYSTEM (NAD83)

N



CONSTRUCTION NOTES

1. ALL PAVEMENT MARKINGS WILL BE INSTALLED BY THE CITY UNDER A SEPARATE CONTRACT.
2. RETAIN ALL EXISTING SIGNS UNLESS OTHERWISE NOTED.

0 20 50 100

SCALE: 1" = 20'

TRAFFIC SIGN SUMMARY

IDENTIFI–CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK–GROUND	LEGEND	BORDER			
R1-1	30"	30"		SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION"; AS AMENDED			3	RED	WHITE	WHITE	P5-3	5.18	15.54
MA-R2-8	24'	30"					2	YELLOW --- WHITE	BLACK --- BLACK	BLACK --- BLACK	P5-2	5.00	10.00
R3-1	30"	30"					2	WHITE	BLACK/ RED	BLACK	P5-2	6.25	13.50
R3-2	24"	24"					4	WHITE	RED/ BLACK	BLACK	P5-3 1 MTD ON UP	4.00	12.00
R3-17	30"	24"					3	BLACK --- WHITE	WHITE --- BLACK	WHITE --- BLACK	P5-3	5.00	15.00
R5-1	30"	30"					6	WHITE	RED	BLACK	P5-4 2 MTD W/OTHERS	6.25	37.50
R6-1	30"	12"					12	WHITE	BLACK	BLACK	11 MTD W/OTHERS 1 MTD ON UP	2.50	27.50
R7-1L	12"	18"					1	WHITE	RED	RED	P5-1	1.50	1.50

NOTES:
1. HIGH INTENSITY REFLECTIVE SHEETING SHALL BE USED FOR ALL SIGNS. SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION" FOR TEXT DIMENSIONS, AS AMENDED; THE 1977 MASSHIGHWAY DEPARTMENT CONSTRUCTION AND TRAFFIC STANDARD DETAILS, AS AMENDED, FOR SIGNS AND SUPPORTS; THE MASSHIGHWAY DEPARTMENT SIGN LISTINGS 1993 EDITION, AS AMENDED; AND THE 2017 MASSDOT STANDARD SIGNS BOOK, AS AMENDED.

GENERAL NOTES

1. ALL CONSTRUCTION SIGNING, TEMPORARY TRAFFIC CONTROL DEVICES, AND ROADSIDE ELEMENTS SHALL CONFORM WITH THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AS AMENDED, THE MASSDOT STANDARD DETAILS AND DRAWINGS FOR THE DEVELOPMENT OF TEMPORARY TRAFFIC CONTROL PLANS, THE LATEST REVISIONS OF THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, (AASHTO) ROADSIDE DESIGN GUIDE, AASHTO POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS, AND NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM (NCHRP) REPORT 350 OR THE AASHTO MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).

2. CONTRACTOR SHALL DEVELOP ALL NECESSARY TEMPORARY TRAFFIC CONTROL PLANS AS NEEDED TO COMPLETE THE WORK. ALL DRAWINGS SHALL BE SUBMITTED, IN SUFFICIENT DETAIL SUCH THAT ALL MAINTENANCE OF TRAFFIC, PEDESTRIANS, EMERGENCY AND ABUTTER ACCESS ARE PROPERLY ADDRESSED DURING CONSTRUCTION, TO THE TOWN OF SALEM FOR REVIEW AND ACCEPTANCE. CONTRACTOR SHALL SUBMIT THE DOCUMENTS FOR APPROVAL AT LEAST 2 WEEKS IN ADVANCE OF START OF ANY WORK. INFORMATION CONTAINED IN THE TYPICAL DETAILS (SHEET 13) MAY BE USED AS A GUIDE TO PREPARE THE TEMPORARY TRAFFIC CONTROL PLANS.

3. CONTRACTOR MAY PROPOSE TO CLOSE DERBY STREET (BLOCK-BY-BLOCK) AND DETOUR TRAFFIC DURING CONSTRUCTION. CONTRACTOR TO DEMONSTRATE THAT CLOSING THE ROAD WILL SIGNIFICANTLY BENEFIT SCHEDULE WITH NO CONSIDERABLE IMPACTS TO TRAFFIC. PEDESTRIAN, EMERGENCY AND ABUTTER ACCESS WILL REQUIRE TO BE MAINTAINED AT ALL TIMES. TOWN OF SALEM MAY ALLOW ON LIMITED BASIS COMPLETE CLOSURE AND DETOUR OF DERBY STREET. CONTRACTOR TO NOTE THE FOLLOWING.
   - 3.1. PROVIDE DETOUR PLANS THAT CLEARLY IDENTIFY PORTION OF ROAD CLOSED, DETOUR ROUTE AND NECESSARY SIGNAGE FOR REVIEW AND APPROVAL.
   - 3.2. NO SIMULTANEOUS ROAD CLOSURES OF ESSEX STREET AND DERBY STREET WILL BE ALLOWED.

4. WORK HOURS SHALL BE 7AM TO 3:30PM UNLESS OTHERWISE APPROVED BY AND THE TOWN OF SALEM. NO WORK IMPACTING THE PUBLIC WAY WILL BE ALLOWED DURING PEAK PERIODS (MONDAY THRU FRIDAY, 7AM-9AM AND 4PM-6PM). NO WORK SHALL OCCUR DURING THE LAST TWO WEEKS OF OCTOBER.

5. NO WORK SHALL OCCUR WITHIN THE PUBLIC WAY ON STATE RECOGNIZED HOLIDAYS UNLESS OTHERWISE APPROVED BY THE ENGINEER.

6. ALL TEMPORARY PEDESTRIAN PATHWAYS SHALL COMPLY FULLY WITH ALL REQUIREMENTS OF THE MUTCD AND ALL APPLICABLE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (MAAB) AND AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG) REQUIREMENTS AND PUBLIC RIGHTS-OF WAY ACCESSIBILITY GUIDELINES (PROWAG).

7. ALL DRUMS OUTSIDE TAPERS SHALL BE SET AT 20' ON CENTER MAX. UNLESS OTHERWISE NOTED OR ADJUSTED BY THE ENGINEER.

8. ALL DRUMS SHALL BE APPROXIMATELY PLACED AND MOVED AS NECESSARY TO MAINTAIN SAFE AND REASONABLE ABUTTER ACCESS. WORK MAY REQUIRE ADDITIONAL SIGNS, DRUMS AND OTHER TRAFFIC CONTROL DEVICES, GRADING AND TEMPORARY PAVEMENT FOR PASSAGE OF PEDESTRIAN, VEHICULAR AND EMERGENCY TRAFFIC THROUGH THE WORK AREAS, BOTH DURING AND AFTER WORKING HOURS, TO MAINTAIN SUCH ACCESS.

9. REFLECTORIZED CONES SHALL BE A MINIMUM OF 36 INCHES IN HEIGHT.

10. CONES MAY BE USED IN LIEU OF DRUMS OUTSIDE OF TAPER AREAS.

11. THE CONTRACTOR SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OR RESTRICTION OF ACCESS (INCLUDING DELIVERY TRUCKS). CONTRACTOR SHALL COORDINATE WITH SAFE HARBOR MARINA WITH REGARDS TO BOATS BEING BROUGHT IN AND OUT ON TRAILERS.

12. FOR DROP-OFFS 3" OR LESS WITHIN THE CLEAR ZONE, CONDITION MAY BE MITIGATED WITH W8-9 (LOW SHOULDER) SIGN OR TEMPORARY CHANNELIZATION DEVICES.

13. CONTRACTOR SHALL STAGE WORK SUCH THAT A DROP-OFF OF NO MORE THAN 3" AT THE END OF EACH WORK DAY EXISTS WITHIN THE CLEAR ZONE AT ANY TIME AND ENSURE DROP-OFF IS MITIGATED WITHOUT BARRIER PER NOTE 12.

14. CONSTRUCTION CLEAR ZONE SHALL BE IN ACCORDANCE WITH MASSDOT BOSTON TRAFFIC GUIDELINES AS FOLLOWS:
    4' IF POSTED SPEED IS LESS THAN 35 MPH

15. 11' MINIMUM LANE WIDTHS SHALL BE MAINTAINED UNLESS OTHERWISE NOTED.

16. TEMPORARY TRAFFIC CONTROL DEVICES AND SIGNS SHALL BE COVERED OR REMOVED DURING NON-WORKING HOURS WHEN NOT IN USE.

17. SIGNS INSTALLED ON PORTABLE STANDS REQUIRE 12 INCH MINIMUM MOUNTING HEIGHT FROM THE ROADWAY SURFACE TO THE BOTTOM OF THE SIGN.

18. SIGNS INSTALLED ON PORTABLE STANDS PLACED AMONG CHANNELIZATION DEVICES REQUIRE A 36 INCH MINIMUM MOUNTING HEIGHT FROM THE ROADWAY SURFACE TO THE BOTTOM OF THE SIGN.

19. SIGNS MOUNTED ON POSTS REQUIRE A MINIMUM 84 INCH MOUNTING HEIGHT FROM THE ROADWAY OR SIDEWALK SURFACE TO THE BOTTOM OF THE SIGN.

20. ALL SIGNS SHALL BE MOUNTED ON THEIR OWN NCHRP 350 AND/OR MASH CRASH TESTED SIGN SUPPORTS AND INSTALLED IN ACCORDANCE WITH THE MUTCD.

21. W21-7 SIGNS SHALL BE INSTALLED IN ADVANCE (100' MIN) OF AREAS WHERE UTILITY CASTINGS HAVE BEEN RAISED OR AS REQUESTED BY THE ENGINEER.

22. TEMPORARY MARKINGS SHALL BE SURFACE-APPLIED REMOVEBLE TAPE, AS APPROVED BY THE ENGINEER.

23. ALL TEMPORARY CROSSWALKS AND STOP LINES SHALL BE 12 INCHES WIDE.

24. W20-1c OR MA-R2-10a SIGNS SHOWN ON ADVANCE SIGN SCHEMATIC (SHEET 14) MAY BE USED IN LIEU OF THOSE SIGNS SHOWN ON TYPICAL DETAILS ON THE TEMPORARY TRAFFIC CONTROL PLANS (SHEET 13) IF MINIMUM SIGN SPACING IS MET.

25. CONTRACTOR SHALL SECURE WORK AREAS BY APPROPRIATE MEANS TO PREVENT UNAUTHORIZED ACCESS AT ALL TIMES.

26. THERE IS NO DESIGNATED BICYCLE LANE ON THE ROADWAY WITHIN THE PROJECT LIMITS. BICYCLES ARE EXPECTED TO SHARE THE ROAD WITH GENERAL VEHICULAR TRAFFIC.

27. CONTRACTOR TO PROVIDE (1) ADDITIONAL PCMS FOR 14 DAYS AT LOCATION TO BE DETERMINED BY THE TOWN OF SALEM.

TEMPORARY TRAFFIC CONTROL SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN WIDTH	SIZE OF SIGN HEIGHT	TEXT	TEXT DIMENSIONS (INCHES) LETTER HEIGHT / VERTICAL SPACING / ARROW RTE. MKR.	COLOR BACKGROUND	COLOR LEGEND	COLOR BORDER
MA-R2-10a	48"	36"	WORK ZONE / SPEEDING FINES DOUBLED	AS PER MASSDOT STANDARD	FLUORESCENT ORANGE / WHITE	BLACK	BLACK
MA-R2-10e	36"	48"	END ROAD WORK / DOUBLE FINES END		FLUORESCENT ORANGE / WHITE	BLACK	BLACK
R7-1L	12"	18"	NO PARKING ANY TIME ←	SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION"; AS AMENDED	WHITE	RED	RED
R7-1R	12"	18"	NO PARKING ANY TIME →		WHITE	RED	RED
R9-11aL	24"	12"	SIDEWALK CLOSED ← CROSS HERE		WHITE	BLACK	BLACK
R9-11aR	24"	12"	SIDEWALK CLOSED → CROSS HERE		WHITE	BLACK	BLACK
W1-4L	36"	36"			FLUORESCENT ORANGE	BLACK	BLACK
W1-4R	36"	36"			FLUORESCENT ORANGE	BLACK	BLACK
W8-9	36"	36"	LOW SHOULDER		FLUORESCENT ORANGE	BLACK	BLACK
W20-1c	36"	36"	ROAD WORK AHEAD		FLUORESCENT ORANGE	BLACK	BLACK
W20-4c	36"	36"	ONE LANE ROAD AHEAD		FLUORESCENT ORANGE	BLACK	BLACK
MA-W20-7b	36"	36"	POLICE OFFICER AHEAD	AS PER MASSDOT STANDARD	FLUORESCENT ORANGE	BLACK	BLACK
W21-7	36"	36"	UTILITY WORK AHEAD	SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION"; AS AMENDED	FLUORESCENT ORANGE	BLACK	BLACK
MA-W24-2 (MOD)	36"	36"	LANE SHIFT AHEAD	AS PER MASSDOT STANDARD	FLUORESCENT ORANGE	BLACK	BLACK
M4-9L	30"	24"	DETOUR ←	SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION"; AS AMENDED	FLUORESCENT ORANGE	BLACK	BLACK
M4-9R	30"	24"	DETOUR →		FLUORESCENT ORANGE	BLACK	BLACK

NOTES:
1. HIGH INTENSITY REFLECTIVE SHEETING SHALL BE USED FOR ALL SIGNS. SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION" FOR TEXT DIMENSIONS, AS AMENDED; THE 1977 MASSHIGHWAY DEPARTMENT CONSTRUCTION AND TRAFFIC STANDARD DETAILS, AS AMENDED, FOR SIGNS AND SUPPORTS; THE MASSHIGHWAY DEPARTMENT SIGN LISTINGS 1993 EDITION, AS AMENDED; THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR MOUNTING REQUIREMENTS; AND THE 2017 MassDOT STANDARD SIGNS BOOK, AS AMENDED.
2. ALL SIGNS SHOWN GRAPHICALLY FOR INFORMATION ONLY. SIGN VENDOR SHALL FABRICATE ALL SIGNS IN ACCORDANCE WITH THE APPLICABLE STANDARDS.

SALEM
DERBY STREET
TEMPORARY TRAFFIC CONTROL PLANS
SHEET 12 OF 33
GENERAL NOTES & LEGEND

13150.20_(TTCP).DWG Plotted on 28-Apr-2020 8:17 AM

LEGEND

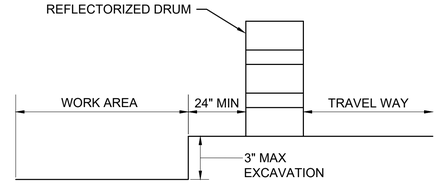
(P)	POLICE OFFICER
(S)	TRAFFIC SIGNAL
●	REFLECTORIZED DRUM
	TEMPORARY CONSTRUCTION SIGN
	TYPE III BARRICADE
	PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
	WORK AREA (PUBLIC ACCESS RESTRICTED)
	TRANSITION/BUFFER AREAS
←	TRAFFIC FLOW
	PEDESTRIAN ROUTE
	CONSTRUCTION FENCE
	TEMPORARY PEDESTRIAN BARRICADE
NTS	NOT TO SCALE

ADVANCE SIGN SPACING

ROADWAY	DISTANCE BETWEEN SIGNS (FEET) A	B	C	D
DERBY ST	350	150	350	350
ALL OTHER ROADWAYS	100	50	100	100

LANE TAPER LENGTH FORMULAS

L= TAPER LENGTH IN FEET
W= WIDTH OF ROADWAY TO BE SHIFTED OR REDIRECTED IN FEET
S= POSTED SPEED LIMIT IN MPH
POSTED SPEED
40 MPH OR LESS
$L = \frac{WS^2}{60}$

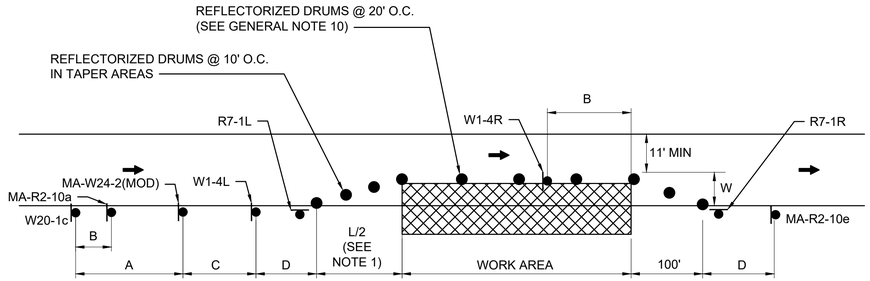


NOTE:
1. CONTRACTOR SHALL INSTALL W8-9 SIGN ON ALL ROADWAYS 350 FT IN ADVANCE OF THE START OF DROP-OFF CONDITION.

TYPICAL ROADWAY DROP-OFF PROTECTION

SCALE: NTS

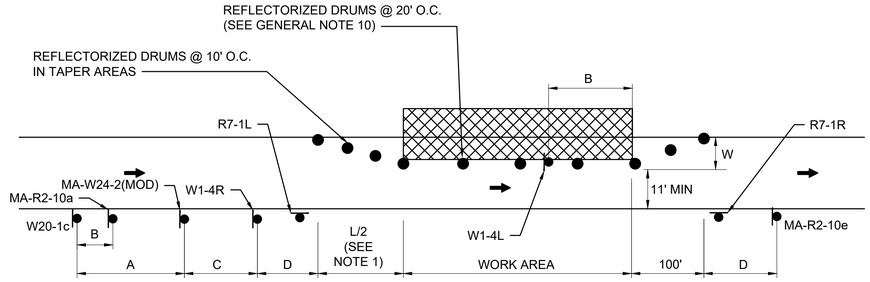
13150.20_(TTCP).DWG Plotted on 28-Apr-2020 8:17 AM



NOTES:
1. SEE TAPER LENGTH FORMULA ON SHEET 12.
2. SEE ADVANCE SIGN SPACING TABLE ON SHEET 12.

TYPICAL ONE-WAY STREET LANE SHIFT - LEFT

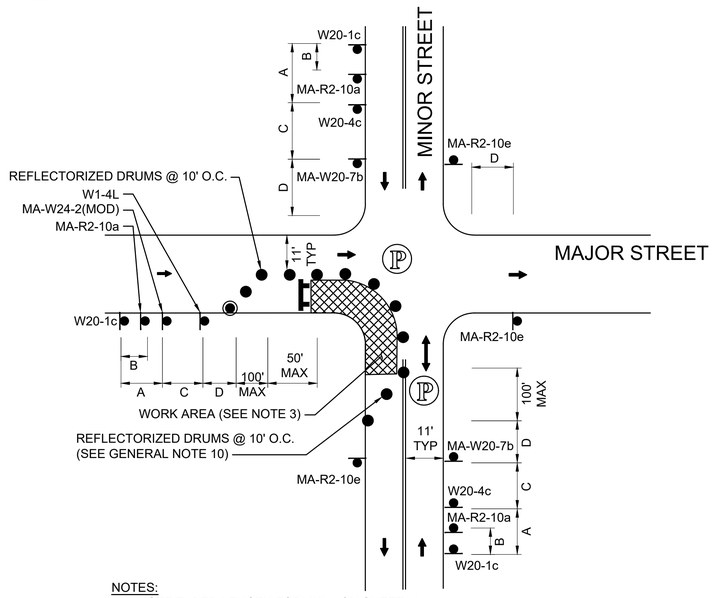
SCALE: NTS



NOTES:
1. SEE TAPER LENGTH FORMULA ON SHEET 12.
2. SEE ADVANCE SIGN SPACING TABLE ON SHEET 12.

TYPICAL ONE-WAY STREET LANE SHIFT - RIGHT

SCALE: NTS



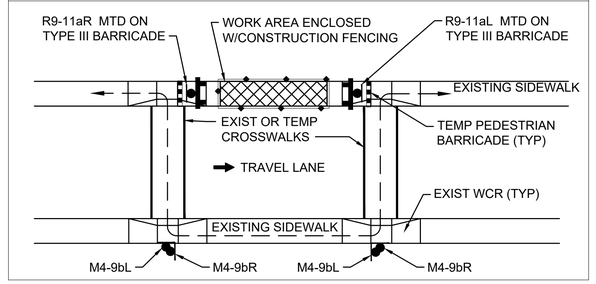
NOTES:
1. SEE TAPER LENGTH FORMULA ON SHEET 12.
2. REFER TO ADVANCE SIGN SPACING TABLE ON SHEET 12.
3. THIS DETAIL ALSO APPLIES IF WORK AREA IS ON THE OPPOSITE SIDE OF THE ROADWAY. IF SO, W1-4L SIGN TO BE REPLACED WITH W1-4R SIGN.

ONE LANE BI-DIRECTIONAL TRAFFIC AT INTERSECTIONS - NEAR SIDE

SCALE: NTS

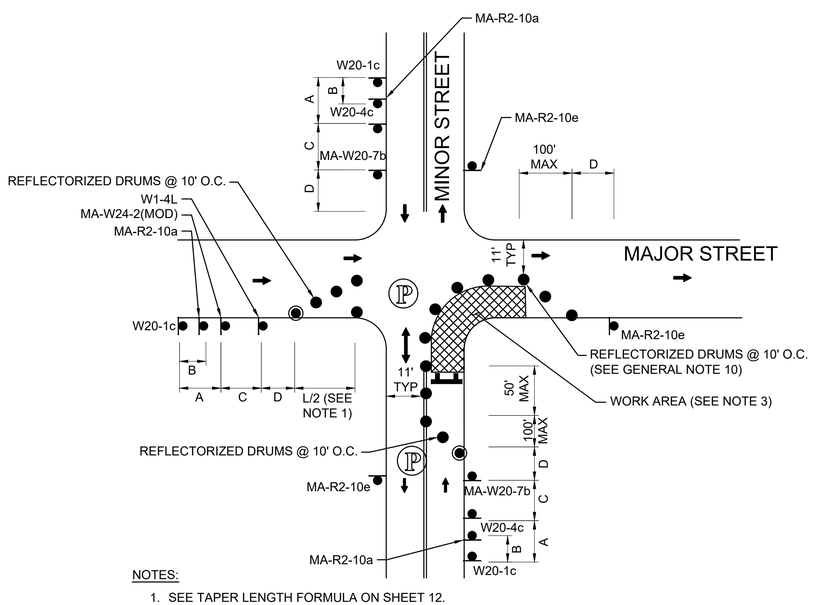
NOTES:
1. ADDITIONAL ADVANCE WARNING SIGNS MAY BE NECESSARY AS DETERMINED BY THE ENGINEER.
2. CONTROLS FOR PEDESTRIAN TRAFFIC ONLY, ARE SHOWN. VEHICULAR TRAFFIC SHALL BE MAINTAINED AS SHOWN ELSEWHERE.
3. STREET LIGHTING SHOULD BE CONSIDERED WHEN LOCATING CONTROL DEVICES.
4. ◄ — ► INDICATES DIRECTION OF PEDESTRIAN TRAVEL.
5. PROPOSED TEMPORARY CROSSWALKS SHALL BE 12" WIDE SURFACE APPLIED TAPE AS DIRECTED BY THE ENGINEER.
6. ALL TEMPORARY PEDESTRIAN PATHWAYS SHALL COMPLY FULLY WITH ALL REQUIREMENTS OF THE MUTCD AND ALL APPLICABLE MAAB AND ADAAG REQUIREMENTS AND INCLUDE THE USE OF ADA COMPLIANT TEMPORARY PEDESTRIAN BARRICADES AT ALL TIMES.
7. CONTRACTOR SHALL MAINTAIN AS WIDE OF A PEDESTRIAN ACCESS AS POSSIBLE AT ALL TIMES. EXCEPT WHERE NECESSARY, THE CONTRACTOR MAY TEMPORARILY REDUCE PEDESTRIAN PATHWAYS TO 4 FEET IN WIDTH (EXCLUDING CURB) FOR NO MORE THAN 200 LINEAR FEET AT A TIME IN ACCORDANCE WITH ALL STANDARDS. A 5' x 5' PASSING AREA SHALL BE PROVIDED IN INTERVALS NOT EXCEEDING 200 FEET.

PEDESTRIAN BYPASS



PEDESTRIAN BYPASS DETAIL

SCALE: NTS



NOTES:
1. SEE TAPER LENGTH FORMULA ON SHEET 12.
2. REFER TO ADVANCE SIGN SPACING TABLE ON SHEET 12.
3. THIS DETAIL ALSO APPLIES IF WORK AREA IS ON THE OPPOSITE SIDE OF THE ROADWAY. IF SO, W1-4L SIGN TO BE REPLACED WITH W1-4R SIGN.

ONE LANE BI-DIRECTIONAL TRAFFIC AT INTERSECTIONS - FAR SIDE

SCALE: NTS

SALEM
DERBY STREET
TEMPORARY TRAFFIC CONTROL PLANS
SHEET 14 OF 33
ADVANCE SIGN PLAN

PCMS #1 MESSAGE TEXT

14 DAYS PRIOR TO START OF CONSTRUCTION	ROAD WORK BEGINS	DAY DATE TIME
7 DAYS POST CONSTRUCTION	ROAD WORK AHEAD	USE CAUTION

PCMS NOTES:

1. PCMS SHALL BE INSTALLED WITHIN THE EXISTING RIGHT-OF-WAY (ROW) OFF THE ROADWAY AT APPROX. LOCATIONS SHOWN OR AS DIRECTED BY THE CITY OF SALEM. PCMS SHALL NOT BLOCK EXIST SIDEWALK.
2. DATE AND TIMES ON PCMS MESSAGING SHALL BE COORDINATED WITH THE CITY OF SALEM.
3. CONTRACTOR SHALL PROVIDE PCMS A MINIMUM OF 14 DAYS PRIOR TO START OF CONSTRUCTION OR AS DIRECTED BY THE CITY OF SALEM.
4. CONTRACTOR SHALL REMOVE PCMS SHOWN 7 DAYS AFTER START OF CONSTRUCTION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

INSET A
SCALE: 1" = 20'

13150.20_(TTCP-ADV_SIGN).DWG Plotted on 28-Apr-2020 8:19 AM

SALEM
DERBY STREET
UTILITY PLANS
SHEET 15 OF 33

13150.20_(UT).DWG Plotted on 28-Apr-2020 11:19 AM

CONTINUED ON SHEET NO. 16

PALFREY COURT

PALFREY COURT CONDOMINIUMS
BK. 8769 PG. 464
MAP/LOT: 35-346
6 PALFREY COURT

UNITED STATES OF AMERICA
BK. 9870 PG. 60
MAP/LOT: 35-347
158-162 DERBY

STEPHEN J. & JUDY ANN PARLATO
BK. 23444 PG. 543
MAP/LOT: 35-349
16 DANIELS STREET

DANIELS STREET

ROSS PECEVICH
BK. 8965 PG. 585
MAP/LOT: 35-386
15 DANIELS STREET

JOHN & HARRIET B. DRABINOWICZ
BK. 4032 PG. 209
MAP/LOT: 35-387
17 DANIELS STREET

REARDON REALTY TRUST
BK. 8427 PG. 83
MAP/LOT: 35-387
142-148 DERBY STREET

LEO A. III & JUDITH M. MURPHY
BK. 16422 PG. 304
MAP/LOT: 35-368
140 DERBY STREET

136-138 DERBY STREET NOMINEE TRUST
BK. 23249 PG. 440
MAP/LOT: 35-369
136-138 DERBY STREET

DERBY-BENTLEY CONDOMINIUM
BK. 7704 PG. 498
MAP/LOT: 35-370
132 DERBY STREET

BENTLEY STREET

RANDY S. & KIMBERLY SWEENEY
BK. 27056 PG. 223
MAP/LOT: 41-306
19 BENTLEY STREET

MICHAEL R. GIARDI & DOUGLAS J. LOWE
BK. 25634 PG. 273
MAP/LOT: 41-304
126 DERBY STREET

DEBORAH C. PRENTICE
BK. 13050
PG. 235
MAP/LOT: 41-305
16 HARDY STREET

HARDY STREET

PAUL A. & MEGAN CRONIN
BK. 25641 PG. 24
MAP/LOT: 41-32
17 HARDY STREET

GEORGE H. & MYRTLE T. BURKINSHAW
BK. 5780 PG. 161
MAP/LOT: 41-12
122 DERBY

GEORGE H. & MYRTLE T. BURKINSHAW
BK. 5780 PG. 161
MAP/LOT: 41-13
118 DERBY STREET

BEGIN PROJECT
STA 104+69.06±
N: 3015953.708±
E: 821946.870±

BENTLEY TO HARDY BL

HARDY TO TURNER (NORTH) BL

5+51.07

ADJ

ADJ (BO)

ADJ

PI +27.48

DERBY ST CONST BL

DERBY STREET

DANIELS TO HARDY BL

RET UP
RET FIRE BOX

34+20.27

REM CB
PROP CB
OVER EXIST 12" PIPE
R=17.0±

HARDY TO TURNER (SOUTH) BL

KOSCIUSKO STREET

DANIELS STREET

HARDY STREET

SMH14
RIM=11.08'
a=4.5'
b,c=-3.4'

CB16
RIM=10.82'
SEALED
WATER@7.1'

SMH17
RIM=11.44'
a=-1.1'
b=-3.1'
c=-3.2'

SMH24
RIM=12.91'
a=-1.9'
b=+3.9'
c,d=-4.0'

SPIRO KOUNSALIEH
BK. 17492 PG. 82
MAP/LOT: 35-348
152-156 DERBY STREET

CB27
RIM=12.88'
INV=10.9'
DMH26
RIM=13.27'
N.P.V.
SUMP=10.3'
FF=14.49'

CB30
RIM=14.63'
INV=10.7'

SMH33
RIM=15.77'
a=6.5'
b=7.9'
c,d=-3.4'

CB36
RIM=16.93'
INV=14.0'
SMH35
RIM=17.06'
a=7.4'
b,d=-3.8'

DMH15
RIM=10.84'
a=3.2'
b=2.8'
c=2.7'

CB29
RIM=10.27'
INV=8.6'

PAUL H. NATHAN
BK. 20684 PG. 477
MAP/LOT: 35-407
159 DERBY STREET

DMH18
RIM=11.18'
a,b=3.1'
c=5.7'
d=7.0'
e=
CB28
RIM=10.34'
a=8.4'
b=8.3'

CB19
RIM=10.94'
(12"VC)
WATER@6.9'

WHARFSIDE CONDOMINIUM
BK. 7570 PG. 554
MAP/LOT: 35-393
155 DERBY STREET

DMH21
RIM=12.68'
a=5.9'
b=5.8'
c,d=3.5'

SMH20
RIM=12.19'

149 DERBY STREET CONDOMINIUM
BK. 6969 PG. 470
MAP/LOT: 35-392
149 DERBY STREET

CB25
RIM=12.53'
RIM BROKEN WATER@10.1

DMH22
RIM=12.91'
INV=8.9'

CB23
RIM=12.28'

CAPTAIN DUSTY'S INC.
BK. 18799 PG. 55
MAP/LOT: 41-320
145 DERBY STREET

CAPTAIN DUSTY'S INC.
BK. 18799
PG. 55
MAP/LOT: 41-319
143 DERBY STREET

ROBERT A. DANA
BK. 12748
PG. 320
MAP/LOT: 41-318
137 DERBY STREET

ROBERT A. DANA
BK. 64903
PG. 305
MAP/LOT: 41-317
135 DERBY STREET

CB31
RIM=14.64'
N.P.V.
BOT=11.0

RENAISSANCE CONDOMINIUM AT 131 DERBY STREET
BK. 24338 PG. 134
MAP/LOT: 41-316
131 DERBY STREET

DMH32
RIM=15.52'
a=12.5'
b,d=8.7'
C=N.P.V.

127 DERBY STREET CONDOMINIUM
BK. 7287 PG. 304
MAP/LOT: 41-315
127 DERBY STREET

125 DERBY STREET CONDOMINIUM
BK. 7016 PG. 331
MAP/LOT: 41-314
125 DERBY STREET

ERLENDUR KRISTJANSSON & ELINANNA BJARNADOTTIR
BK. 22092 PG. 317
MAP/LOT: 41-313
18 HARDY STREET

DMH
RIM=
a=12.4'
d=13.0'
e=7.9'

CB38
RIM=16.84'
INV=13.0'

THE HOUSE OF THE SEVEN GABLES SETTLEMENT ASSOCIATION
BK. 3098 PG. 361
MAP/LOT: 41-300
25 HARDY STREET

THE HOUSE OF THE SEVEN GABLES SETTLEMENT ASSOCIATION
BK. 13331 PG. 356
MAP/LOT: 41-303
117 DERBY STREET

NOTES:
1. BASELINES FOR CONSTRUCTION STATIONING PURPOSES ONLY

0 20 50 100
SCALE: 1" = 20'

SALEM
DERBY STREET
UTILITY PLANS
SHEET 16 OF 33

13150.20_(UT).DWG Plotted on 28-Apr-2020 11:19 AM

CONTINUED ON SHEET NO. 15

N

TURNER STREET

HARDY TO TURNER (NORTH) BL

TURNER TO CARLTON BL

CARLTON STREET

CARLTON TO BECKET BL

BECKET STREET

BECKET AVENUE

BECKET BL

END PROJECT
STA 111+69.01±
N:3016326.636±
E:822539.169±

DERBY STREET

DERBY ST CONST BL

PAUL A. & MEGAN CRONIN
BK. 25641 PG. 24
MAP/LOT: 41-32
17 HARDY STREET

HOUSE OF SEVEN GABLES SETTLEMENT ASSOCIATION
BK. 5413 PG. 718
MAP/LOT: 41-14
114 DERBY STREET

GEORGE H. & MYRTLE T. BURKINSHAW
BK. 5780 PG. 161
MAP/LOT: 41-12
122 DERBY

GEORGE H. & MYRTLE T. BURKINSHAW
BK. 5780 PG. 161
MAP/LOT: 41-13
118 DERBY STREET

THE 110 DERBY STREET CONDOMINIUM
BK. 21296 PG. 345
MAP/LOT: 41-33
110 DERBY STREET

MICHAEL P. REILLY
BK. 15443 PG. 46
MAP/LOT: 41-34
106 DERBY STREET

WILLIAM W. JR KOWALSKI
BK. 7896 PG. 535
MAP/LOT: 41-35
104 DERBY STREET

BRAD PHILLIPS
BK. 27220 PG. 109
MAP/LOT: 41-36
102 DERBY STREET

THE 26 CARLTON STREET CONDOMINIUM
BK. 27361 PG. 457
MAP/LOT: 41-38
26 CARLTON STREET

92 DERBY STREET CONDOMINIUM
BK. 27183 PG. 119
MAP/LOT: 41-63
92 DERBY STREET

TOWNSEND HOUSE CONDOMINIUM
BK. 7700 PG. 1
MAP/LOT: 41-62
94 DERBY STREET &
33 CARLTON STREET

DOROTHY MICHALOWSKI ET. AL.
BK. 8990 PG. 369
MAP/LOT: 41-64
84-86 DERBY STREET

JON CAHILL
BK. 27372 PG. 473
MAP/LOT: 41-93
82 DERBY STREET

GREGORY A. & SHE STEFFAN
BK. 29529 PG. 4
MAP/LOT: 41-9
78 DERBY STREE

1771 ROPES HOUSE CONDOMINIUM
BK. 7896 PG. 535
MAP/LOT: 41-290
111 DERBY STREET

HEIDI MILMAN
BK. 12765 PG. 136
MAP/LOT: 41-289
109 DERBY STREET

105 DERBY STREET CONDOMINIUM
BK. 7286 PG. 406
MAP/LOT: 41-288
105 DERBY STREET

ALBERT J. MIELI & ELLEN M. PEROCCHI
BK. 19072 PG. 256
MAP/LOT: 41-287
101 DERBY STREET

JOHN ZIELIN
BK. 27190 PG. 474
MAP/LOT: 41-283
97 DERBY STREET

THE HOUSE OF THE SEVEN GABLES SETTLEMENT ASSOCIATION
BK. 13331 PG. 356
MAP/LOT: 41-303
117 DERBY STREET

THE HOUSE OF THE SEVEN GABLES SETTLEMENT ASSOCIATION
BK. 3098 PG. 361
MAP/LOT: 41-300
25 HARDY STREET

WITCH CITY POST No. 1524 VETERANS OF FOREIGN WARS OF THE UNITED STATES, INC.
BK. 5850 PG. 781
MAP/LOT: 41-281
91-95 DERBY STREET

WITCH CITY POST No. 1524 VETERANS OF FOREIGN WARS OF THE UNITED STATES, INC.
BK. 5745 PG. 783
MAP/LOT: 41-281
91-95 DERBY STREET

WITCH CITY POST No. 1524 VETERANS OF FOREIGN WARS OF THE UNITED STATES, INC.
BK. 6265 PG. 777
MAP/LOT: 41-279
2 BLANEY STREET

RICHARD [illegible]
BK. 6601 PG. 276
MAP/LOT: 41-276
83-85 DERBY STREET

BRONISLAWA KAPI KEAN PIERRE D BK. 7395 PG MAP/LOT: 4 81 DERBY S

PROP CBCI
PROP 8', 12" RCP
R=15.0±
INV =12.0±

PROP DMH OVER EXIST 12" PIPE
R=15.3±

REM CB
PROP CB
OVER EXIST 12" PIPE
R=13.5±

TURNER STREET

WHITE STREET

BLANEY STREET

HARDY TO TURNER (SOUTH) BL

TURNER TO WHITE BL

WHITE TO BLANEY BL

BLANEY BL

RET FIRE BOX

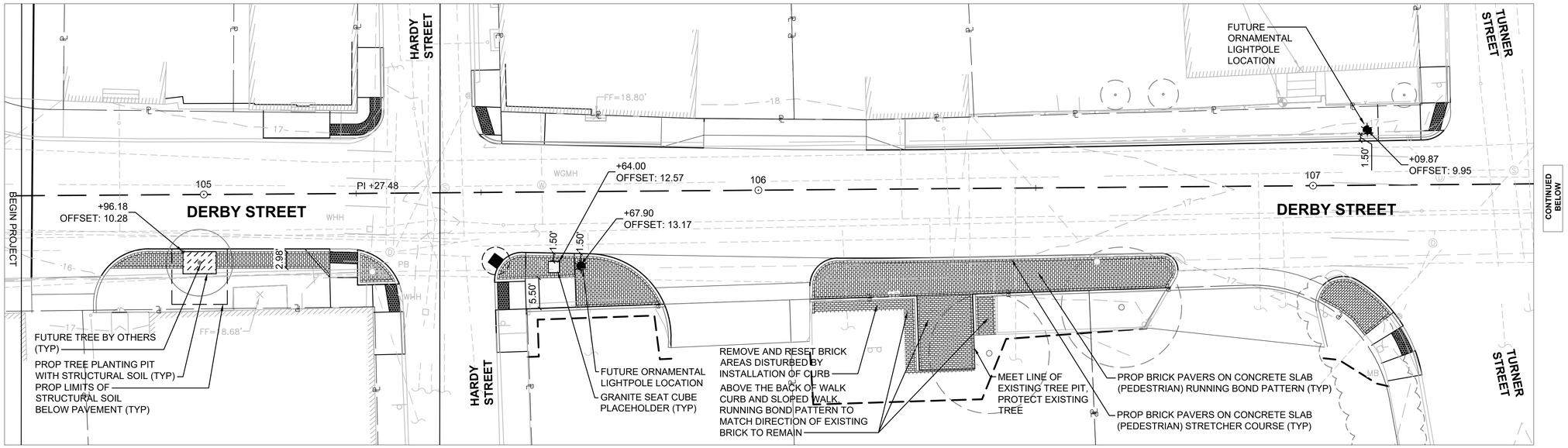
RET UP

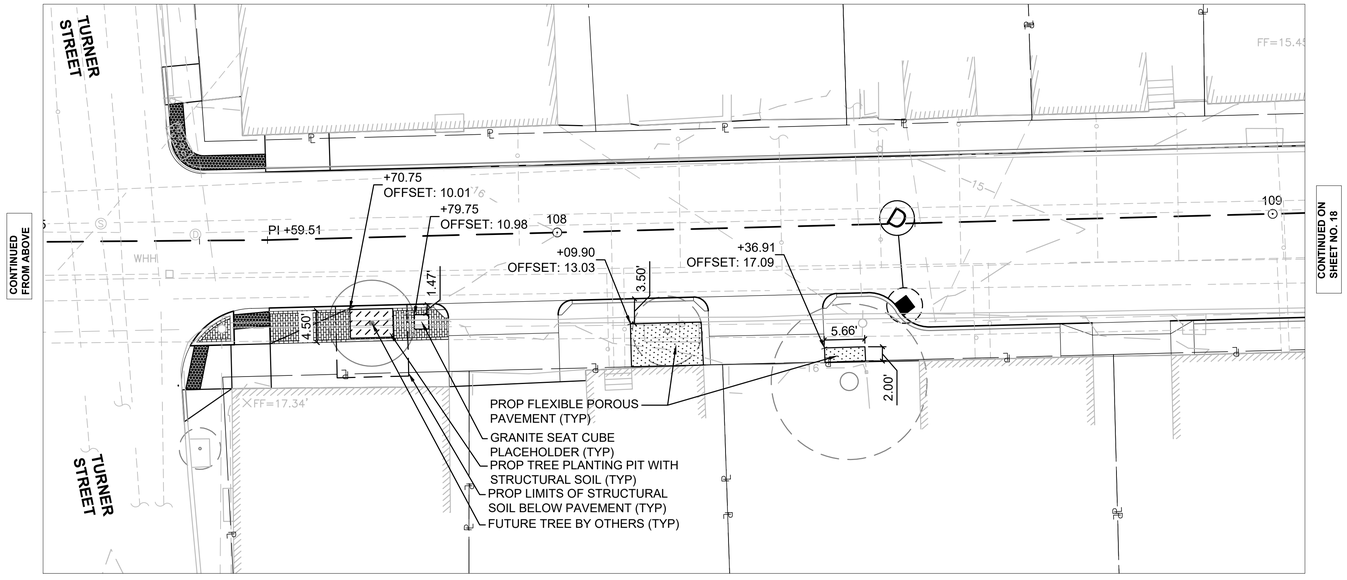
7+78.63
8+48.57
8+80.93
9+27.92
PI +59.51
INV = 11.9±
62+04.15
70+40.16

NOTES:
1. BASELINES FOR CONSTRUCTION STATIONING PURPOSES ONLY

0 20 50 100
SCALE: 1" = 20'

SALEM
DERBY STREET
ENLARGEMENT PLANS
SHEET 17 OF 33



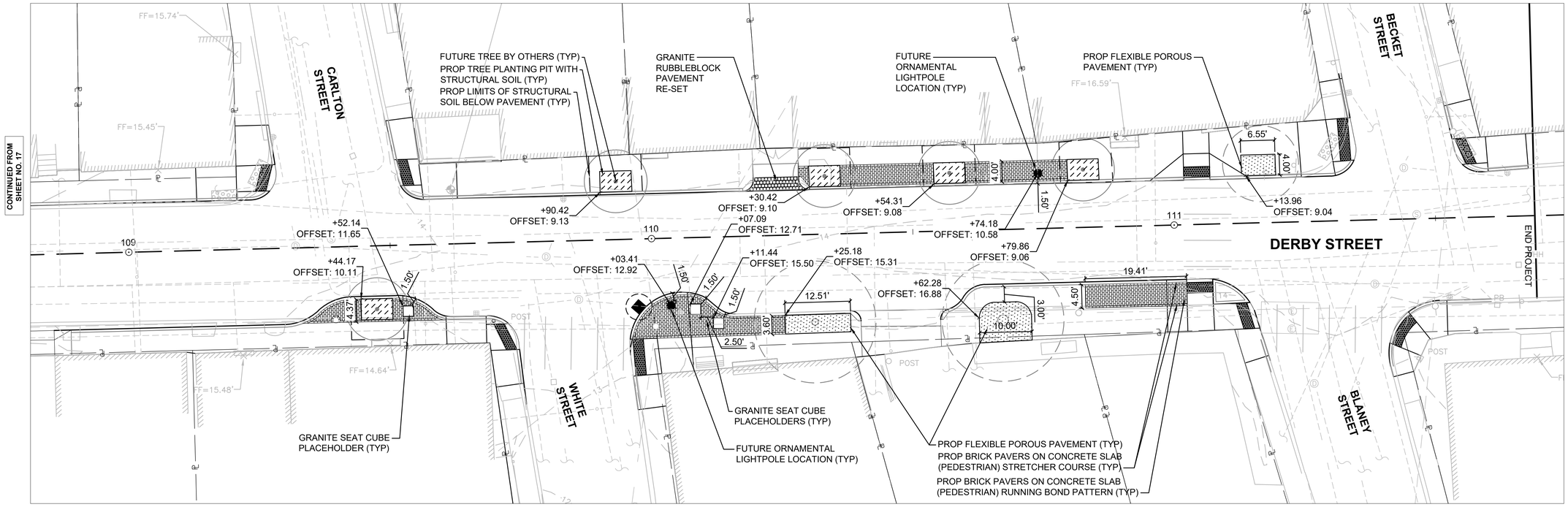


0 10 20 30 40
SCALE: 1" = 10'

KEY
- FUTURE ORNAMENTAL LIGHT POLE
- GRANITE SEAT CUBE PLACEHOLDER
- FLEXIBLE POROUS PAVEMENT
- BRICK PAVERS
- LIMITS OF STRUCTURAL SOIL
- PROPOSED TREE PIT WITH STRUCTURAL SOIL
- FUTURE TREE
- EXISTING TREE
- EXISTING UTILITY POLE

N

13150.20_(LA-DT).DWG Plotted on 28-Apr-2020 1:26 PM



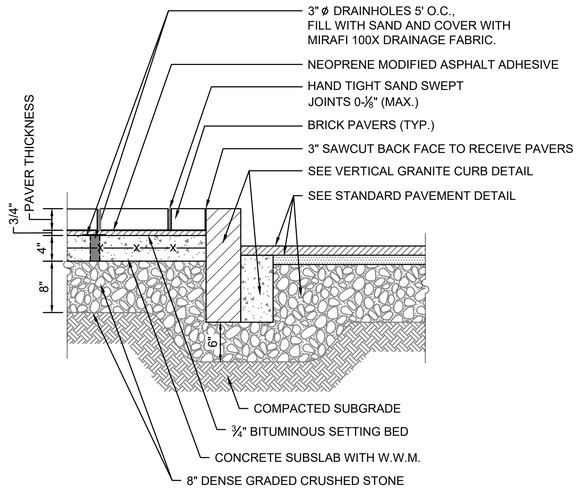
0 10 20 30 40

SCALE: 1" = 10'

KEY

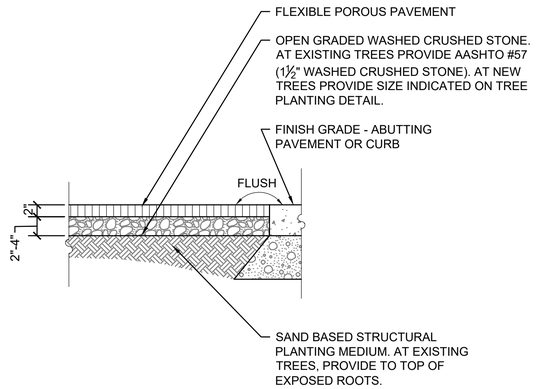
- FUTURE ORNAMENTAL LIGHT POLE
- GRANITE SEAT CUBE PLACEHOLDER
- FLEXIBLE POROUS PAVEMENT
- BRICK PAVERS
- LIMITS OF STRUCTURAL SOIL
- PROPOSED TREE PIT WITH STRUCTURAL SOIL
- FUTURE TREE
- EXISTING TREE
- EXISTING UTILITY POLE

N



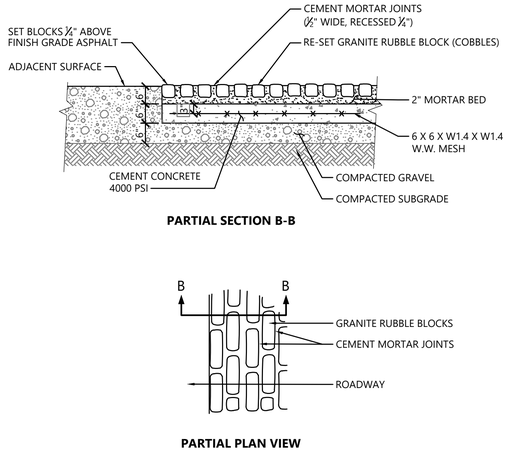
BRICK PAVERS ON CONCRETE SLAB (PEDESTRIAN)

SCALE: N.T.S.



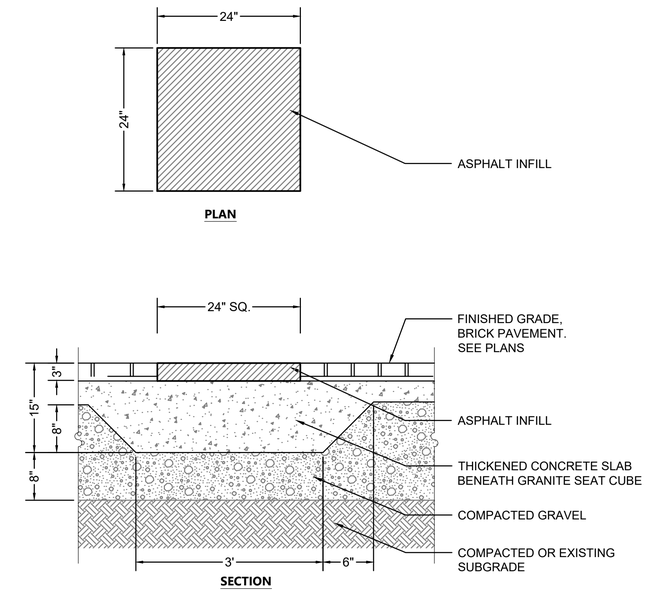
FLEXIBLE POROUS PAVEMENT

SCALE: N.T.S.



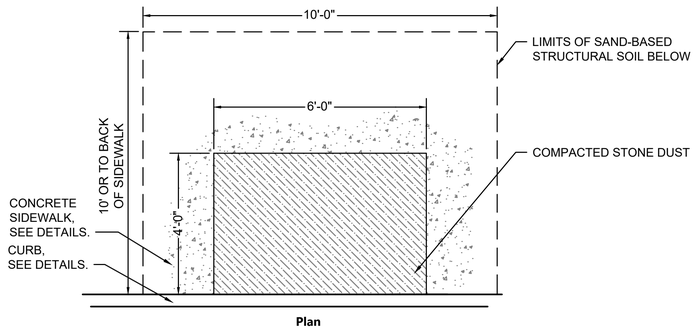
GRANITE RUBBLE BLOCK PAVEMENT REMOVED AND RESET

SCALE: N.T.S.



GRANITE SEAT CUBE PLACEHOLDER

SCALE: N.T.S.



TREE PLANTING PIT WITH STRUCTURAL SOIL

SCALE: N.T.S.

SPECIFYING NOTES

1 – THIS CONTRACTOR SHALL OBTAIN THE NECESSARY PERMITS FOR CONSTRUCTION AND APPROVAL OF THE PLANS BY THE NECESSARY AUTHORITIES AND SHALL OBTAIN ALL OTHER PERMITS, LICENSES OR CERTIFICATES OF APPROVAL, ARRANGE FOR ALL INSPECTIONS AND PAY FOR ALL FEES AND CHARGES CONNECTED THEREWITH. THIS CONTRACTOR SHALL, AT THE COMPLETION OF THE JOB FURNISH THE ENGINEER WITH A CERTIFICATE OF INSPECTION OF THE WORK FROM THE AUTHORITIES HAVING JURISDICTION.

2 – THE WORK SHALL BE EXECUTED IN FULL ACCORDANCE WITH THE CURRENT RULINGS OF THE LATEST EDITION OF THE **MASSACHUSETTS ELECTRICAL CODE** AND ALL STATE AND LOCAL RULINGS. WHERE CODES CONFLICT, THE MORE STRINGENT SHALL APPLY. ANY CHANGES NECESSARY TO THE DRAWINGS AND SPECIFICATIONS AS SUBMITTED FOR BID, REQUIRED TO MAKE CONFORMITY TO ANY OF THE ABOVE STATE AUTHORITIES, SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER BY THIS CONTRACTOR AT THE TIME OF SUBMISSION OF HIS BID, OTHERWISE HE SHALL BE HELD FINANCIALLY RESPONSIBLE FOR ALL WORK NECESSARY FOR AN APPROVED INSTALLATION. IF THIS CONTRACTOR PERFORMS ANY WORK KNOWING IT TO BE CONTRARY TO ANY SUCH LAWS, RULES OR REGULATIONS, HE SHALL ASSUME ALL COSTS ARISING THEREFROM TO MAKE CONFORMITY TO SUCH ABOVE RULINGS.

3 – BEFORE SUBMITTING PRICES OR BEGINNING WORK, THOROUGHLY MAKE AN EXAMINATION OF THE SITE AND CONTRACT DRAWINGS. BIDDERS ARE ADVISED TO VISIT THE SITE AND INFORM THEMSELVES AS TO THE CONDITIONS UNDER WHICH THIS WORK WILL BE PERFORMED. FAILURE TO DO SO WILL IN NO WAY RELIEVE THE SUCCESSFUL BIDDER FROM RESPONSIBILITY OF FURNISHING ANY MATERIALS OR PERFORMING ANY WORK IN ACCORDANCE WITH THE TRUE INTENT AND MEANING OF THE DRAWINGS AND SPECIFICATIONS. NO CLAIMS FOR EXTRA COMPENSATION WILL BE RECOGNIZED IF DIFFICULTIES ARE ENCOUNTERED WHICH AN EXAMINATION OF SITE CONDITIONS AND CONTRACT DOCUMENTS, PRIOR TO EXECUTING THE CONTRACT, WOULD HAVE REVEALED.

4 – IF ANY WORK IS PERFORMED AND SUBSEQUENT CHANGES ARE NECESSARY TO CONFORM TO THE **MASSACHUSETTS ELECTRICAL CODE**, SUCH CHANGES SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.

5 – THE WORK TO BE PERFORMED SHALL INCLUDE THE FURNISHING OF ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE INSTALLATION AS SHOWN ON THE ELECTRICAL DRAWINGS.

6 – ALL WIRING SHALL BE MANUFACTURED OF COPPER WITH A MINIMUM SIZE OF #12 AWG ALL CONDUCTORS SHALL BE RATED AT 600–VOLTS WITH A TYPE THHN INSULATION. CONDUCTORS #10 AWG OR LARGER SHALL BE STRANDED UNLESS OTHERWISE NOTED. PROVIDE THE CODE–REQUIRED CABLE SUPPORTS.

7 – ALL CONDUCTORS SHALL CONFORM TO THE **MASSACHUSETTS ELECTRICAL CODE** REQUIREMENTS AS TO CONSTRUCTION AND USE.

8 – COLOR CODING OF FEEDERS SHALL BE IN ACCORDANCE WITH THE EXISTING COLOR CODING SYSTEM.

9 – THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC ONLY AND ARE NOT INTENDED TO SHOW EVERY DETAIL OF CONSTRUCTION OR ARBITRARY LOCATION OF WIRING. EACH SYSTEM SHALL BE COMPLETE WITH MINOR PARTS NOT SPECIFICALLY NOTED ON THE DRAWINGS, BUT REQUIRED FOR A PROPERLY FUNCTIONING SYSTEM CONFORMING TO STATE AND LOCAL CODES. WHERE BUILDING CONSTRUCTION MAKES IT ADVISABLE OR NECESSARY TO CHANGE LOCATION OF WIRING OF FIXTURES WITHOUT INCREASING THE COST OF WORK, SUCH CHANGES SHALL BE MADE WITH THE CONSENT OF THE ENGINEER AND AT NO ADDITIONAL COST TO THE OWNER.

10 – APPROVED EQUAL SHALL MEAN THAT THE USE OF ALL MATERIALS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL, AND THAT SUCH APPROVAL SHALL BE AT THE SOLE DISCRETION OF THE ENGINEER.

11 – MANUFACTURER'S CATALOG DATA OR SPECIFICATION SHEETS OF ALL SPECIFIED ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

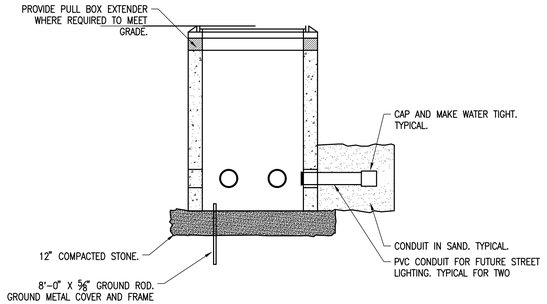
12 – THE ELECTRICAL CONTRACTOR SHALL FURNISH AND KEEP ON THE JOB AT ALL TIMES, ONE (1) COMPLETE AND SEPARATE SET OF BLACKLINE PRINTS OF THE ELECTRICAL WORK ON WHICH SHALL BE CLEARLY, NEATLY, ACCURATELY AND PROMPTLY NOTED AS THE WORK PROGRESSES, ALL ARCHITECTURAL AND ELECTRICAL CHANGES, REVISIONS AND ADDITIONS TO THE WORK FOR "AS BUILT DRAWINGS", WHEREVER THE WORK WAS INSTALLED OTHERWISE THAN AS SHOWN ON THE CONTRACT DRAWINGS, ALL SUCH CHANGES SHALL BE NOTED.

13 – HANDHOLES SHALL BE OF THE PROPER TYPE, CLASS AND CONSTRUCTION TO SUIT THE SPECIFIC CONDITIONS ENCOUNTERED AND SHALL BE OF SUFFICIENT VOLUME AND PHYSICAL CONFIGURATION TO ACCOMMODATE THE NUMBER OF CONDUCTORS ENTERING AND LEAVING THE BOX AS WELL AS ANY SPLICES OR CONNECTIONS THAT MAY BE MADE WITHIN SAME.

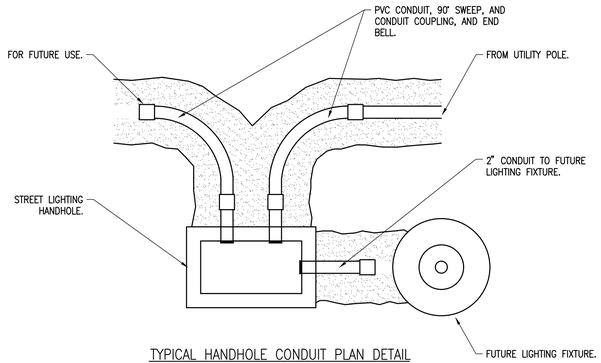
14 – UPON COMPLETION OF THE ELECTRICAL INSTALLATION, REMOVE ALL DEBRIS, CLEAN, AND POLISH ALL ELECTRICAL APPARATUS AND LEAVE ALL WORK IN PERFECT OPERATING CONDITION.

15 – THE ENTIRE WORK PROVIDED IN THIS SPECIFICATION SHALL BE CONSTRUCTED AND FINISHED IN EVERY RESPECT IN A WORKMANLIKE AND SUBSTANTIAL MANNER. IT IS NOT INTENDED THAT THE DRAWINGS SHALL SHOW EACH AND EVERY PART HOWEVER, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL SUCH PARTS AS MAY BE NECESSARY TO COMPLETE THE SYSTEM IN ACCORDANCE WITH THE BEST TRADE PRACTICE AND TO THE SATISFACTION OF THE ENGINEER.

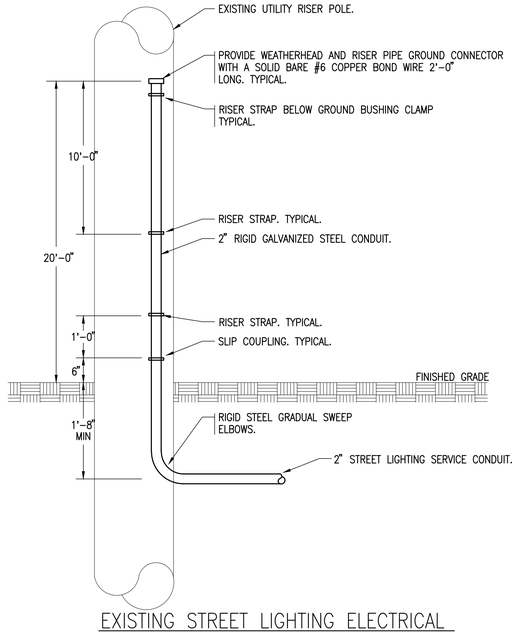
16 – ALL WORK IN THIS CONTRACT SHALL BE GUARANTEED FREE FROM DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE BY THE OWNER. THE CONTRACTOR SHALL AND HEREBY DOES CERTIFY ALL OF HIS WORK AND THAT OF HIS SUBCONTRACTORS, FREE OF DEFECTS AS STATED ABOVE. THE CONTRACTOR FURTHER GUARANTEES THE WORK OF HIS SUBCONTRACTORS AND AGENTS TO BE SIMILARLY FREE OF DEFECTS IN WORKMANSHIP AND MATERIALS. AS TO EQUIPMENT OR PARTS THEREOF WHICH ARE REPLACED, THE ONE YEAR GUARANTEE SHALL RUN FROM THE DATE OF FINAL ACCEPTANCE OF THE REPLACED EQUIPMENT OR PARTS THEREOF.



TYPICAL HANDHOLE INSTALLATION SECTION DETAIL
N.T.S.



TYPICAL HANDHOLE CONDUIT PLAN DETAIL
N.T.S.



EXISTING STREET LIGHTING ELECTRICAL RISER POLE DETAIL
N.T.S.

ELECTRICAL GENERAL NOTES

1 – CONTRACTORS BY SUBMITTING A BID, ARE DEEMED TO BE COMPLETELY FAMILIAR WITH THE EXISTING CONDITION OF THE SITE AS IT INFLUENCES THE WORK DESCRIBED. ABSOLUTELY NO CLAIMS FOR EXTRA COMPENSATION WILL BE CONSIDERED FOR EXISTING CONDITIONS VISIBLE OR REASONABLY INFERABLE FROM A CAREFUL EXAMINATION OF THE EXISTING SITE.

2 – THIS CONTRACTOR SHALL INSPECT THE EXISTING FIELD CONDITIONS AT THE SITE AND CONTRACT DOCUMENTS PRIOR TO THE START OF ANY WORK TO DETERMINE THE EFFECT THE EXISTING CONDITIONS WILL HAVE ON HIS WORK. POTENTIAL PROBLEM AREAS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.

3 – THE NEW WORK SHALL BE COMPATIBLE WITH THE SITE. LOCATION OF EQUIPMENT OR THE ROUTING OF VARIOUS SYSTEMS SHALL BE COORDINATED WITH OTHER TRADES AND AS THEY APPEAR IN THE FIELD OR ON THE DRAWINGS.

4 – CARE SHALL BE TAKEN DURING THE INSTALLATION OF THE NEW WORK, AS NOT TO DAMAGE OR INTERRUPT THE OTHER ELECTRICAL SYSTEMS AND STRUCTURES. DAMAGE TO STRUCTURES AND/OR OTHER EQUIPMENT CAUSED BY THIS CONTRACTOR DURING INSTALLATION SHALL BE REPAIRED AND/OR REPLACED AT THIS CONTRACTOR'S EXPENSE TO THE COMPLETE SATISFACTION OF THE OWNER.

5 – SHUTDOWN OF THE ELECTRICAL SYSTEMS FOR CONNECTION TO EXISTING SERVICES SHALL BE COORDINATED WITH THE ENGINEER AND OWNER. THIS CONTRACTOR SHALL SUBMIT REQUESTS, WHERE THEY AFFECT THE OPERATION OF THE SITE, AT LEAST ONE WEEK IN ADVANCE OF ANY REQUIRED SHUTDOWN. THE ACTUAL SHUTDOWN PERIOD WILL BE AS SHORT AS POSSIBLE AND AT A TIME MUTUALLY AGREEABLE TO THE OWNER AND THE ENGINEER.

6 – DRAWINGS ARE DIAGRAMMATIC, THEREFORE DETERMINE EXACT LOCATIONS OF SYSTEMS AND COMPONENTS IN THE FIELD.

7 – ALL WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED.

8 – VERIFY ALL EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED SHOP DRAWINGS. FIELD VERIFY AND COORDINATE ALL ELECTRICAL EQUIPMENT AND CHARACTERISTICS.

9 – REFER TO CIVIL ENGINEERING PLANS FOR DETAILS AND COORDINATION.

10 – ALL MATERIALS AND EQUIPMENT INDICATED AS NEW SHALL BE NEW.

11 – ANY DEMOLITION SHALL BE COORDINATED WITH OWNER, CONSTRUCTION MANAGER, AND ENGINEER.

12 – CONTRACTOR SHALL REPORT ANY EQUIPMENT DEFICIENCIES FOUND TO THE ENGINEER.

GENERAL NOTES FOR DUCTLINES

1 – BECAUSE OF LIMITED SPACE FOR UNDERGROUND UTILITIES, IT IS CRITICAL FOR THE ELECTRICAL SUBCONTRACTOR TO COORDINATE THE ELECTRIC AND COMMUNICATION SERVICE INSTALLATION WITH THE GENERAL CONTRACTOR, SITE SUBCONTRACTORS AND THE UTILITY COMPANIES.

2 – ALL RACEWAYS SHALL BE PVC SCHEDULE 40 UNLESS OTHERWISE NOTED.

3 – ALL DUCTLINES UNDER SIDEWALKS SHALL BE INSTALLED A MINIMUM OF 1'–8" BELOW FINISHED GRADE TO TOP OF CONDUIT. ALL DUCTLINES UNDER STREETS SHALL BE INSTALLED A MINIMUM OF 2'–0" BELOW FINISHED GRADE TO TOP OF CONDUIT. ALL DUCTLINES SHALL PITCH TOWARD MANHOLES MAINTAINING A PITCH OF 4" PER 100 FEET. ALL DUCTLINES SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MASSACHUSETTS ELECTRIC CODE.

4 – ROUTE DUCTLINES IN SUCH A MANNER AS TO AVOID ALL TREES, SHRUBS, MANHOLES, CATCH BASINS, HYDRANTS, WATER PIPES, GAS PIPES, SEWER PIPES, ETC.

5 – IT IS THE RESPONSIBILITY OF THE ELECTRICAL SUBCONTRACTOR TO COORDINATE WITH THE UTILITY COMPANIES AND THE LOCAL AUTHORITY HAVING JURISDICTION DURING THE UTILITY WORK.

6 – ALL RADIUS BENDS IN THE CONCRETE ENCASED DUCTLINE SHALL BE GRADUAL. AT THESE BEND LOCATIONS INSTALL GRADUAL SWEEP RIGID STEEL ELBOWS.

7 – THE ELECTRICAL SUBCONTRACTOR SHALL INSTALL ALL CONDUITS (PVC OR RIGID), ALL ASSOCIATED EQUIPMENT INCLUDING BUT NOT LIMITED TO SPACERS, 5/8" PULL LINE, COUPLINGS, ETC. THE ELECTRICAL SUBCONTRACTOR SHALL FURNISH AND INSTALL 5/8" PULL LINE IN ALL CONDUITS INCLUDING SPARES.

8 – THE SITE CONTRACTOR SHALL PERFORM ALL TRENCHING AND BACKFILLING INCLUDING LABOR AND MATERIAL FOR ALL DUCT LINES. REFER TO CIVIL DRAWINGS FOR DETAILS.

SYMBOL LIST

— FUTURE EXTERIOR POLE MOUNTED LIGHTING FIXTURE. LETTER INDICATES SWITCH CONTROL A. NUMERAL INDICATES CIRCUIT NUMBER 1. F FOLLOWED BY A NUMERAL INDICATES FIXTURE TYPE.

WP — GROUND FAULT INTERRUPTER – DUPLEX RECEPTACLE 20A–125V–3W. "WP" INDICATES RECEPTACLE INSTALL IN A NEMA 3R ENCLOSURE.

— CONDUIT (RIGID OR SCHEDULE 40 PVC) – ARROW INDICATES HOME RUN. DIAGONAL LINES INDICATE NUMBER OF #12 AWG WIRES. DOT INDICATES 1#12 AWG GREEN EQUIPMENT GROUND WIRE. (UNLESS OTHERWISE NOTED).

— JUNCTION BOX

— POWER PANEL

— LIGHTING PANEL

HH — SITE LIGHTING HANDHOLE.

EXISTING EQUIPMENT

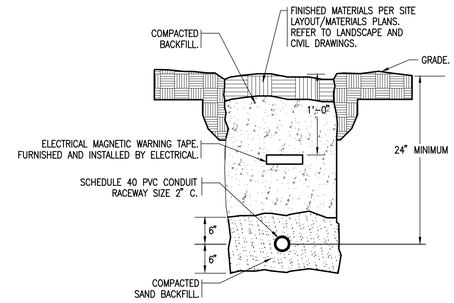
---- DASHED LINE–WORK DENOTES EXISTING EQUIPMENT UNLESS OTHERWISE INDICATED.

X — EXISTING ITEM TO BE REMOVED AND CIRCUIT PULLED BACK TO NEXT ACTIVE OUTLET OR BACK TO PANEL.

XM — EXISTING ITEM TO REMAIN.

XR — EXISTING ITEM TO BE REMOVED AND RELOCATED.

XL — NEW LOCATION OF RELOCATED EXISTING ITEM.



UNDERGROUND SITE LIGHTING CONDUIT DETAIL
N.T.S.

NOTES

1 – IT IS ESSENTIAL THAT THE BACKFILL BE CAREFULLY COMPACTED BEFORE AND AFTER CONDUIT INSTALLATION TO ENSURE THAT FUTURE CONDUIT DEFLECTION IS KEPT AT AN ABSOLUTE MINIMUM.

2 – PVC CONDUIT RACEWAY SHALL BE U.L. LISTED, STANDARD WALL WITH INTERFERENCE JOINTS AND WATER TIGHT SEALANT.

SALEM
DERBY STREET
ELECTRICAL PLANS
SHEET E1.1

DATE	DESCRIPTION	REV #

ENGINEER DATE

COMMONWEALTH OF MASSACHUSETTS
JAMES P. STROKE
NO. 20068
REGISTERED PROFESSIONAL ENGINEER

thompson engineering company, inc.
CONSULTING ENGINEERS
89 Newbury Street, Suite 103 Danvers, MA 01923 617.886.9066

DESIGNED BY	APPROVED BY	SHEET OF
EG	KM	
DRAWN BY	DFTG CHECKED BY	TEC CAD FILE NAME
SS, SB	EG	
CHECKED BY	DATE	JOB NO.
KM	APRIL 24, 2020	13150.20

E1.1.DWG Plotted on 24-Apr-2020 10:01 AM

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SALEM
DERBY STREET
ELECTRICAL PLANS
SHEET E2.1

EXTERIOR GENERAL NOTES

1 – THE CITY OF SALEM PROPRIETARY STREET LIGHTING FIXTURE AND POLE WILL BE FURNISHED UNDER A SEPARATE FUTURE CONTRACT.

2 – THE TRAPEZOID PRE–CAST CONCRETE BASE FOR EACH LIGHTING FIXTURE AND POLE LOCATION WILL BE FURNISHED UNDER A SEPARATE FUTURE CONTRACT.

3 – THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL PRE–CAST CONCRETE HANDHOLES WITH METAL COVER AT EACH STREET LIGHTING FIXTURE/POLE LOCATION. HANDHOLES SHALL BE 11" X 18" X 18" DEEP, CONCRETE, OPEN BOTTOM, TIER 22 RATED, SHALL BE QUAZITE PC SERIES OR APPROVED EQUAL. METAL COVERS TO BE FURNISHED WITH "LIGHTING" ON COVER. FURNISH AND INSTALL 12" OF CRUSHED STONE BELOW HANDHOLES. FURNISH AND INSTALL MAGNETIC WARNING TAPE ABOVE ALL CONDUITS. COORDINATE EXACT LOCATION WITH ENGINEER.

4 – THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL A CONDUIT RACEWAY FROM THE EXISTING UTILITY POLE TO THE HANDHOLE. SCH 40 PVC CONDUIT BELOW GRADE AND RIGID GALVANIZED STEEL CONDUIT ABOVE GRADE. PROVIDE PULL LINES.

5 – EXISTING UTILITY POLE. ELECTRICAL CONTRACTOR TO FURNISH AND INSTALL A 2" RIGID STEEL CONDUIT RISER WITH WEATHERHEAD. REFER TO DETAIL ON DRAWING E1–1.

6 – FURNISH AND INSTALL A 2" PVC CONDUIT FROM THE HANDHOLE TO A LOCATION APPROXIMATELY 3'–0" FROM THE HANDHOLE FOR CITY FUTURE USE. CAP AND MAKE WATER TIGHT. COORDINATE LOCATION WITH THE ENGINEER.

7 – FURNISH AND INSTALL A 2" PVC CONDUIT FROM THE HANDHOLE TO A LOCATION APPROXIMATELY 1'–6" FROM THE HANDHOLE FOR THE FUTURE STREET LIGHTING FIXTURE AND POLE. CAP AND MAKE WATER TIGHT. COORDINATE LOCATION WITH THE ENGINEER.

8 – ALL UNDERGROUND CONDUIT, ELBOWS AND COUPLINGS FOR EXTERIOR SITE LIGHTING SHALL BE 2" SCHEDULE 40 PVC CONDUIT OR APPROVED EQUAL. ALL CONDUITS ON THE UTILITY POLE AND ELBOW AT THE UTILITY POLE SHALL BE 2" RIGID GALVANIZED STEEL CONDUIT. PROVIDE PULL LINES. PROVIDE MAGNETIC WARNING TAPE OVER ALL UNDERGROUND CONDUITS.

9 – COORDINATE INSTALLATION WITH NGRID.

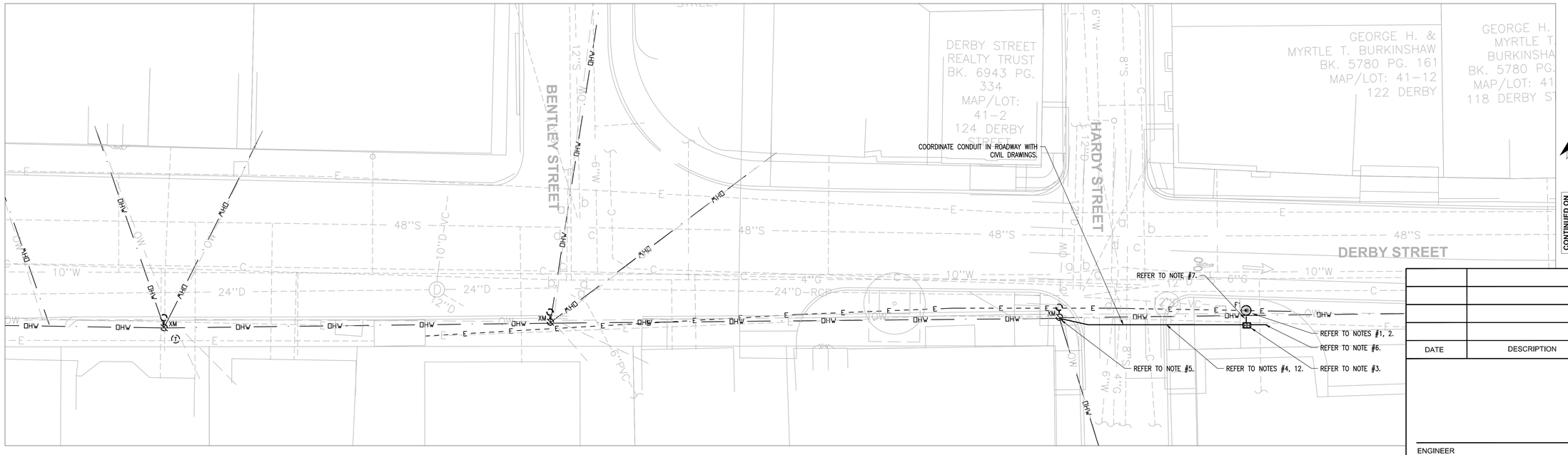
10 – COORDINATE INSTALLATION AND LOCATION OF ALL CONDUITS, HANDHOLES AND FUTURE STREET LIGHTING FIXTURES WITH ENGINEER. REFER TO THE CIVIL DRAWINGS FOR THE EXACT LOCATION OF THE HANDHOLES AND FUTURE STREET LIGHTING FIXTURES/POLES.

11 – PROVIDE GROUND ROD IN EACH HANDHOLE. PROPERLY GROUND HANDHOLE METAL COVER AND FRAME.

12 – ALL SITE LIGHTING CONDUIT ROUTING SHALL BE COORDINATED WITH ALL TREE AND PLANTING LOCATIONS SO THAT NO CONDUITS ARE INSTALLED WITHIN OR NEAR TREE AND PLANTING ROOT BULBS. COORDINATE CONDUIT ROOTING WITH THE ENGINEER AND SITE CONTRACTOR. INSTALLED IN A MANNER TO LIMIT DAMAGE.

13 – THE CONDUIT AND HANDHOLE INSTALLATION SHALL BE FURNISHED AND INSTALLED PER CITY OF SALEM STREET LIGHTING STANDARDS.

LEGEND	
EXISTING OVERHEAD AERIAL UTILITIES	—— · ——— OHW ——
EXISTING UNDERGROUND SECONDARY ELECTRIC SERVICE	– – – – E – – – – E –
EXISTING UNDERGROUND TELEPHONE CABLES	– – – – T – – – – T –
EXISTING UNDERGROUND FIBER OPTICS	– – – – F – – – – F –
EXISTING ELECTRICAL METER	XM
EXISTING ELECTRICAL MANHOLE	E MH
EXISTING TELEPHONE MANHOLE	T MH
EXISTING CABLE TELEVISION HANDHOLE	C HH
EXISTING ELECTRICAL HANDHOLE	E HH
EXISTING TELEPHONE HANDHOLE	T HH
EXISTING UTILITY POLE	
EXISTING UTILITY POLE WITH LIGHT	
NEW STREET LIGHTING FIXTURE AND POLE	
EXISTING MANHOLE	MH



DATE	DESCRIPTION	REV #

ENGINEER DATE

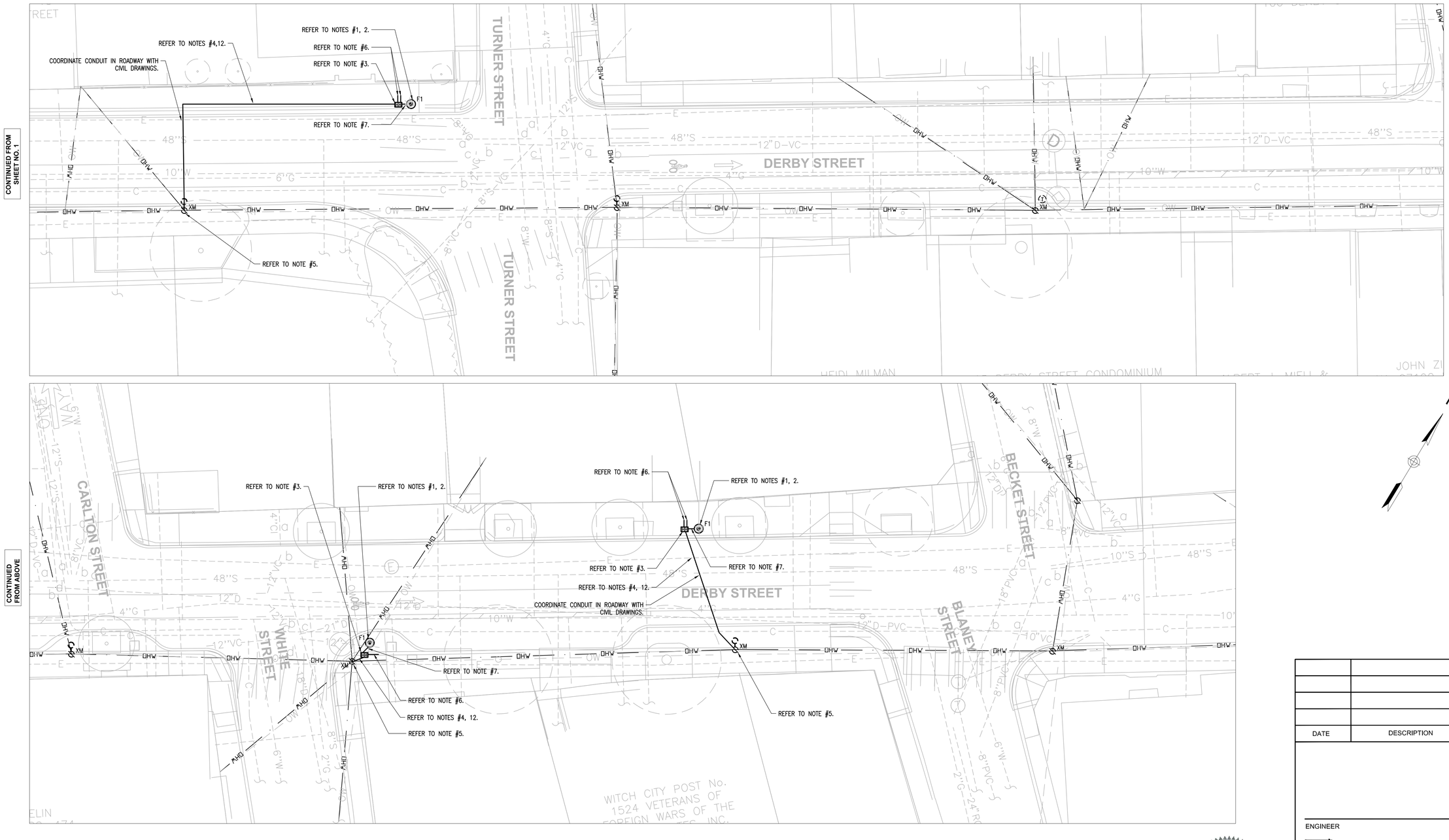
thompson engineering company inc.
CONSULTING ENGINEERS
89 Newbury Street, Suite 103 Danvers, MA 01923 617.886.9066

COMMONWEALTH OF MASSACHUSETTS
JAMES P. STROKE
NO. 20068
REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY EG	APPROVED BY KM	SHEET 02 OF 03
DRAWN BY SS, SB	DFTG CHECKED BY EG	TEC CAD FILE NAME E2.1- E2.2
CHECKED BY KM	DATE APRIL 24, 2020	JOB NO. 13150.20

SALEM
DERBY STREET
ELECTRICAL
E2.2

E2.1- E2.2.DWG Plotted on 24-Apr-2020 10:00 AM



0 10 20 30 40

SCALE: 1" = 10'

N

DATE	DESCRIPTION	REV #

ENGINEER DATE

thompson engineering company, inc.
CONSULTING ENGINEERS

89 Newbury Street, Suite 103 Danvers, MA 01923 617.886.9066

COMMONWEALTH OF MASSACHUSETTS
JAMES P. STROKE
NO. 20068
REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY EG	APPROVED BY KM	SHEET 03	OF 03
DRAWN BY SS, SB	DFTG CHECKED BY EG	TEC CAD FILE NAME E2.1- E2.2	
CHECKED BY KM	DATE APRIL 24, 2020	JOB NO. 13150.20	

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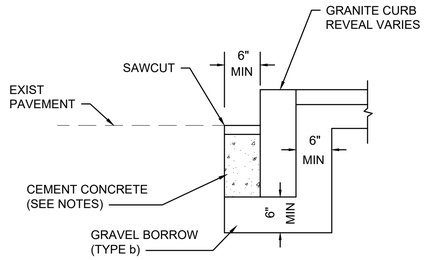
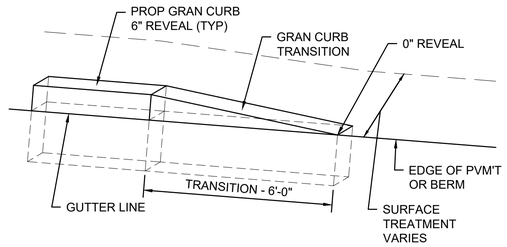


NOTES:
1. CONCRETE SHALL BE INCLUDED IN PRICE BID FOR GRANITE CURB.
2. ANY DESIGNATED CEMENT CONCRETE THAT IS ACCEPTABLE UNDER SECTION M4 OF THE STANDARD SPECIFICATIONS MAY BE USED. ALL TEST REQUIREMENTS ARE WAIVED. HOT MIX ASPHALT SHALL NOT BE USED AS A SUBSTITUTE.

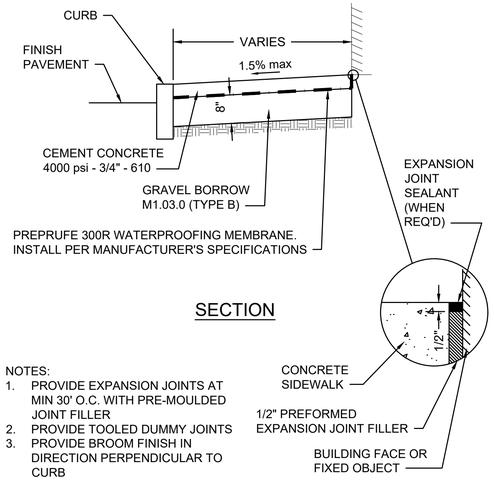
GRANITE CURB IN EXISTING PAVEMENT

SCALE: N.T.S.



GRANITE CURB TRANSITION PIECE

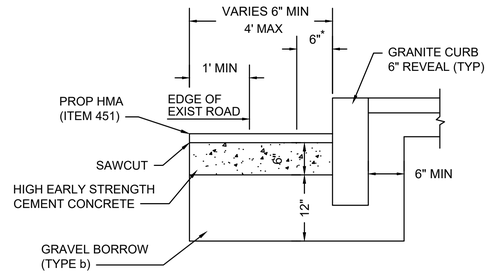
SCALE: N.T.S.



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

CEMENT CONCRETE SIDEWALK

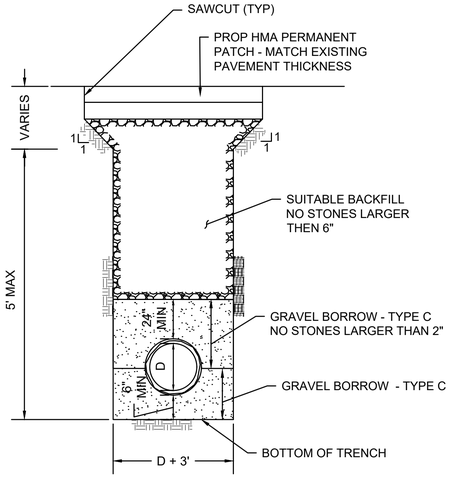
SCALE: N.T.S.



* 6" OF HIGH EARLY STRENGTH CEMENT CONCRETE BASE COURSE SHALL BE INCLUDED IN PRICE BID FOR GRANITE CURB.

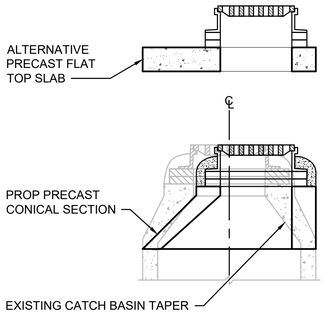
GRANITE CURB IN FULL DEPTH PAVEMENT LESS THAN 4' WIDE

SCALE: N.T.S.



PERMANENT TRENCH DETAIL

SCALE: NTS

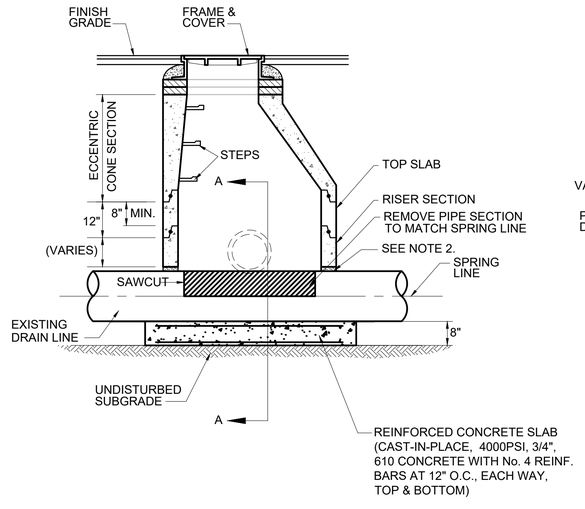


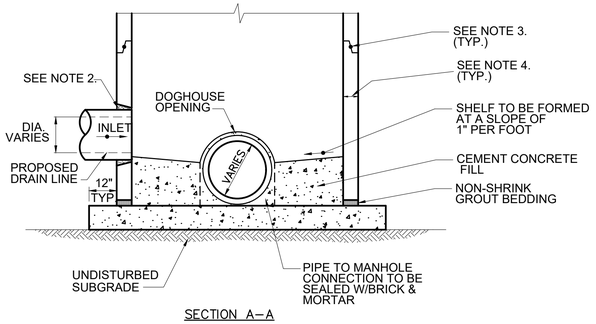
CB TREATMENT NOTES

1. BASED ON ACTUAL FIELD CONDITIONS; THE CONTRACTOR SHALL DETERMINE WHICH STYLE OF TOP SECTION SHOULD BE USED.
2. CATCH BASIN FRAME AND GRATE SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM).

CATCH BASIN REMODELED

SCALE: N.T.S.



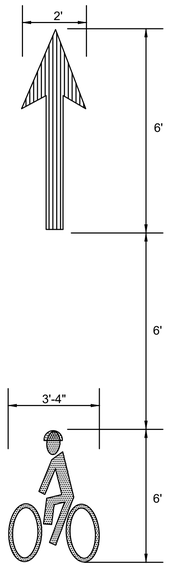


SECTION A–A

NOTES:
1. STRUCTURE SHALL BE DESIGNED FOR HS-20 LOADING.
2. PROVIDE OPENINGS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS (NON-SHRINK GROUT).
3. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
4. FOR MANHOLES OVER 9' IN DEPTH, WALL THICKNESS SHALL BE 6" MIN. FOR MANHOLES 9' OR LESS IN DEPTH, WALL THICKNESS SHALL BE 5" MIN.

DRAIN MANHOLE OVER EXISTING PIPE

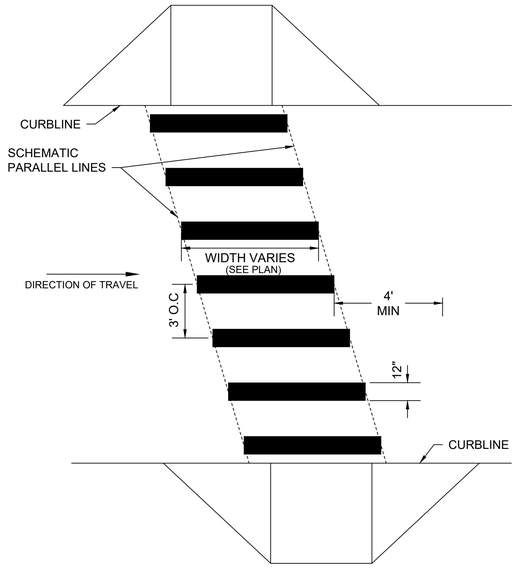
SCALE: N.T.S.



NOTES:
1. SEE MUTCD FIGURE 9C-6 FOR MORE INFORMATION.
2. BIKE LANE MARKINGS SHALL BE REFLECTORIZED PREFORMED THERMOPLASTIC.

BIKE LANE PAVEMENT MARKINGS (NOT IN CONTRACT)

SCALE: N.T.S. DWG: PM-11 DATE: NOV 2015



NOTES:
1. ALL EXISTING CROSSWALK MARKINGS SHALL BE FULLY ERADICATED BY APPROVED METHOD PRIOR TO THE APPLICATION OF PROPOSED MARKINGS.
2. ALL 12" THERMOPLASTIC LINES SHALL BE APPLIED IN ONE APPLICATION, NO COMBINATION OF LINES (TWO - 6" LINES) WILL BE ACCEPTED.
3. LAYOUT OF CROSSWALKS SHALL BE ORIENTATED IN THE DIRECTION OF TRAVEL AND LOCATED OUTSIDE OF THE WHEEL PATH OF VEHICLES. LAYOUT SHALL BE APPROVED BY SALEM DPW PRIOR TO APPLICATION OF THERMOPLASTIC.
4. ALL CROSSWALKS INSTALLED SHALL CONFORM TO THE RELEVANT PROVISIONS OF THE MASSACHUSETTS HIGHWAY DEPARTMENT "STANDARD SPECIFICATION FOR HIGHWAY AND BRIDGES" DATED 1988, SECTION 860 FOR REFLECTORIZED LINE (THERMO-PLASTIC) & MATERIAL M7.01.20, LATEST REVISIONS.

CONTINENTAL-STYLE CROSSWALK - 12" WIDE LINES (NOT IN CONTRACT)

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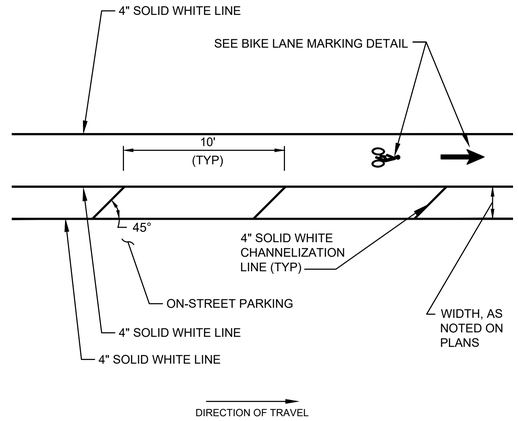
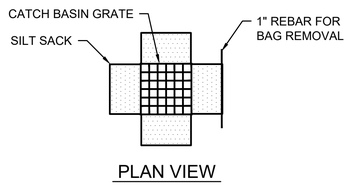


SEPARATED BIKE LANE MARKINGS (NOT IN CONTRACT)

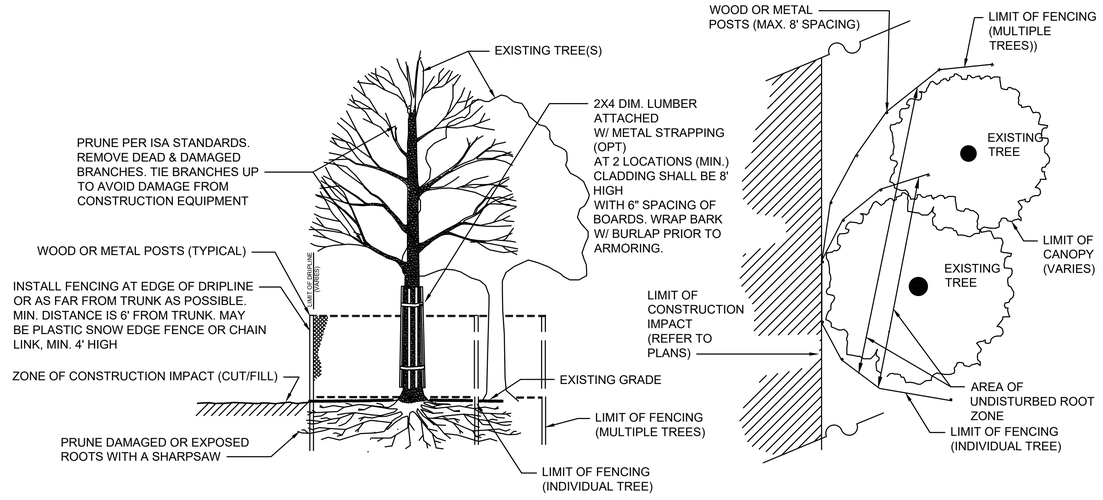
SCALE: NTS



NOTES:
1. INSTALL SILT SACK IN EXISTING CATCH BASINS, BEFORE COMMENCING WORK, AND IN NEW CATCH BASINS IMMEDIATELY AFTER INSTALLATION OF STRUCTURE. MAINTAIN UNTIL BINDER COURSE PAVING IS COMPLETE OR A PERMANENT STAND OF GRASS HAS BEEN ESTABLISHED.
2. GRATE TO BE PLACED OVER SILT SACK.
3. SILT SACK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED

INLET PROTECTION - SILT SACK IN CATCH BASIN

SCALE: N.T.S.

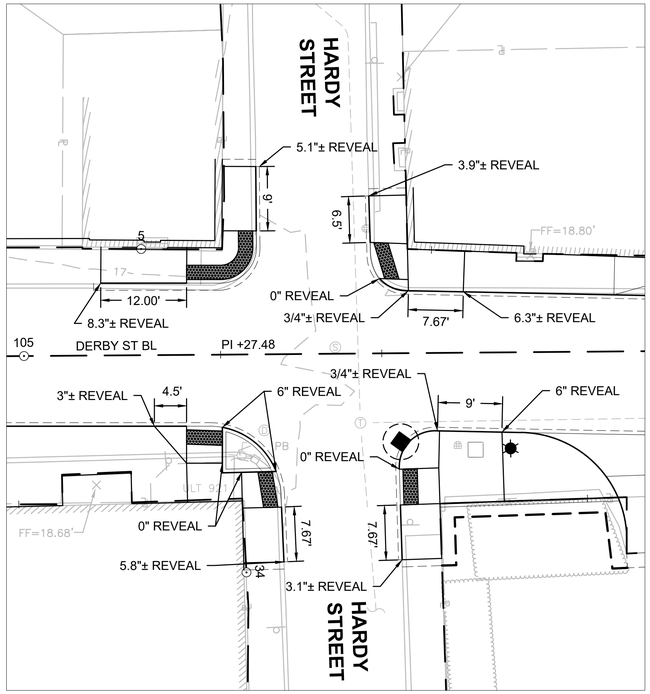


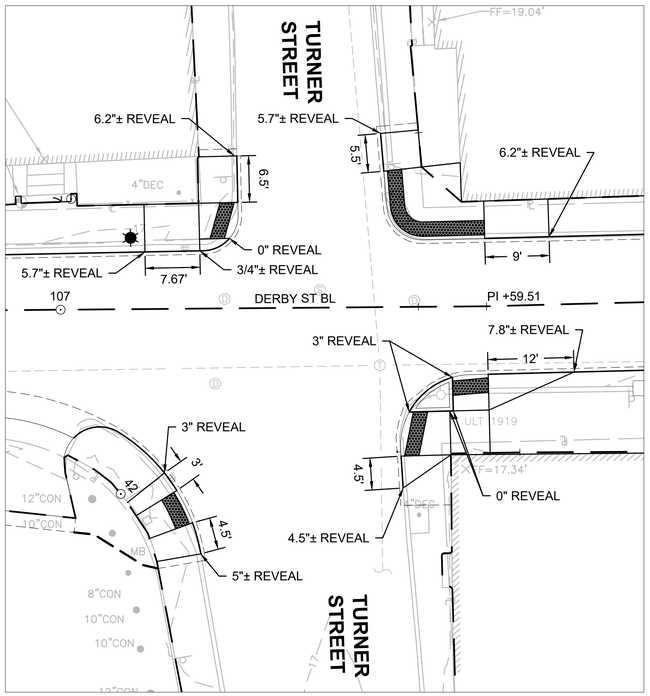
TREE PROTECTION OF EXISTING TREE(S)

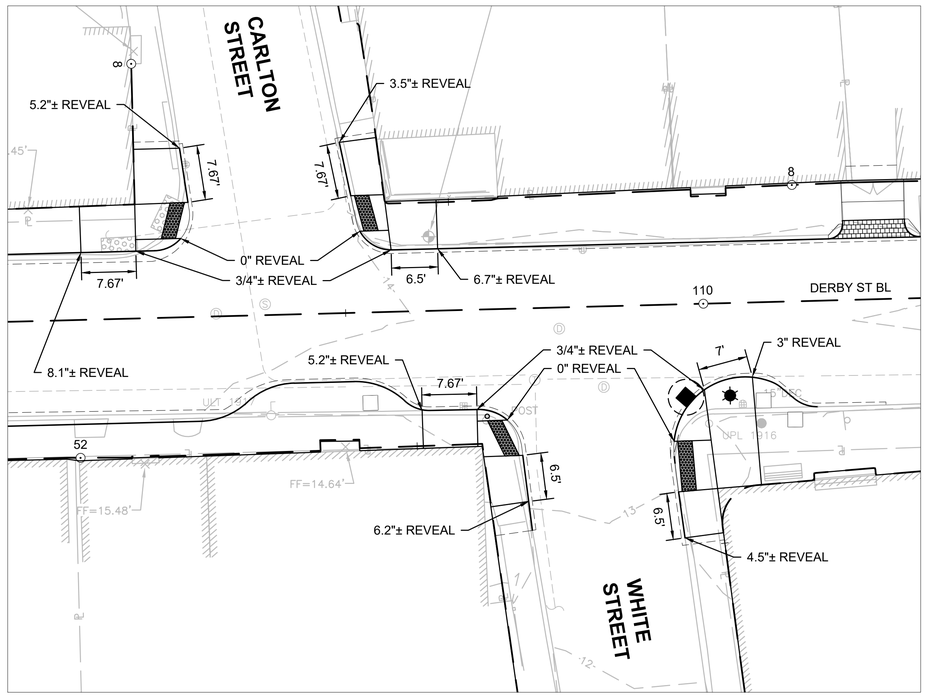
SCALE: N.T.S.

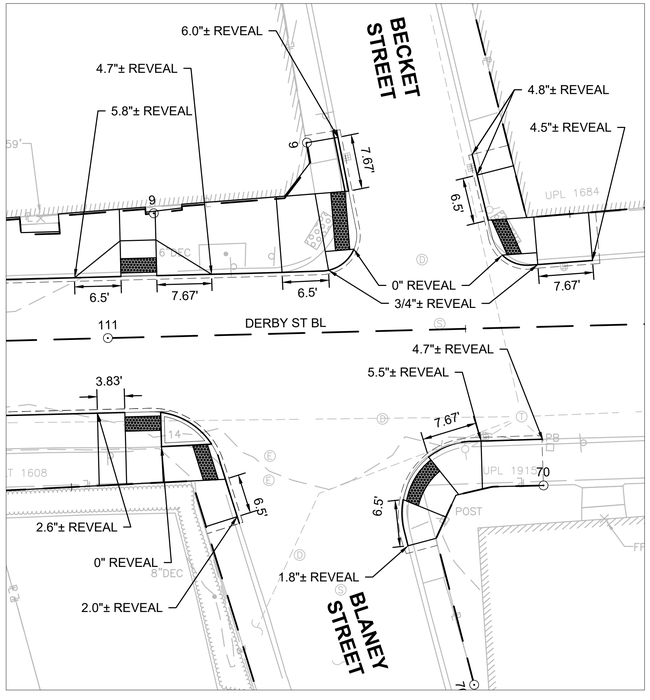
SALEM
DERBY STREET
CONSTRUCTION DETAILS
SHEET 25 OF 33

13150.20_(WCR-DET).DWG Plotted on 28-Apr-2020 11:16 AM





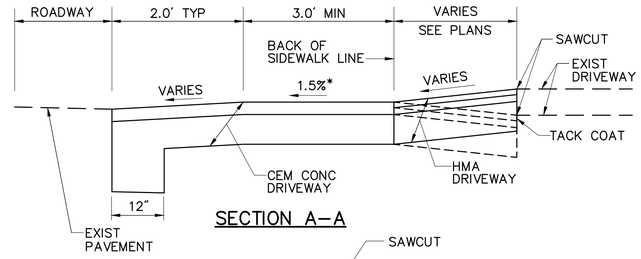




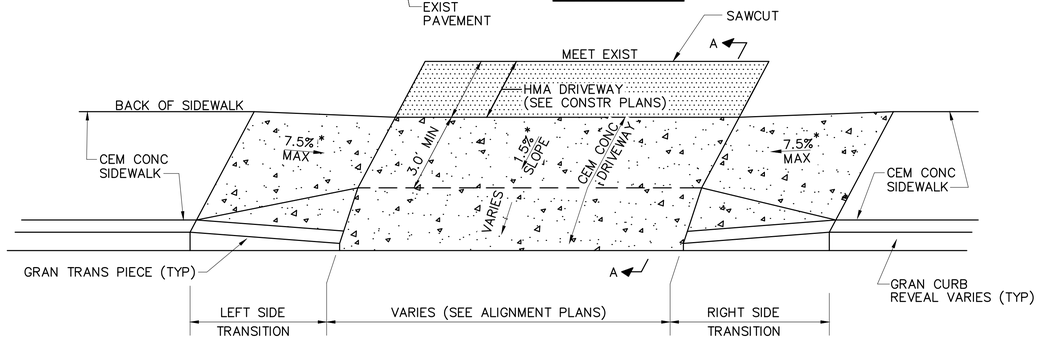
0 10 20 30 40
SCALE: 1" = 10'

LIMITS OF HMA DRIVEWAY

LIMITS OF CEM CONC DRIVEWAY



SECTION A–A



OBLIQUE VIEW

TRANSITION CURB FOR DRIVEWAYS W/O CURB RETURNS						
STATION	ROADWAY GUTTER	SIDEWALK WIDTH	LEFT SIDE		RIGHT SIDE	
			REVEAL	TRANSITION	REVEAL	TRANSITION
106+06.21 LT	0.02%	5.5'	5.3"±	7.67'	6.3"±	7.0'
108+79.87 RT	1.34%	4.8'	2.3"±	3.25'	2.1"±	4.5'

NOTE: SIDEWALK WIDTHS TAKEN FROM CENTER OF DRIVEWAY

*TOLERANCE FOR CONSTRUCTION ±0.5%

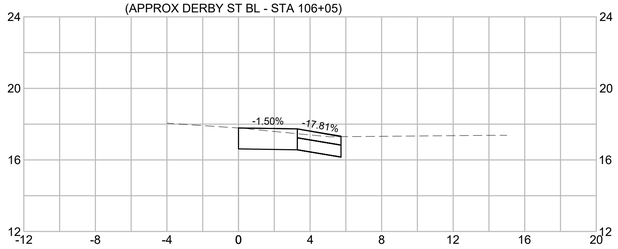
CEMENT CONCRETE DRIVEWAY

SCALE: N.T.S.

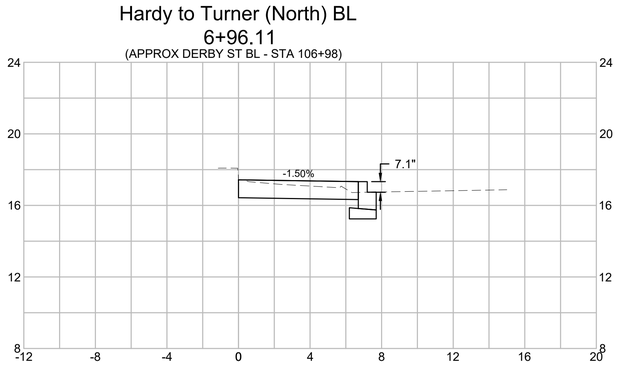
SALEM
DERBY STREET
CROSS SECTIONS
HARDY TO TURNER (NORTH)
SHEET 27 OF 33

13150.20_(XSEC).DWG Plotted on 28-Apr-2020 8:20 AM

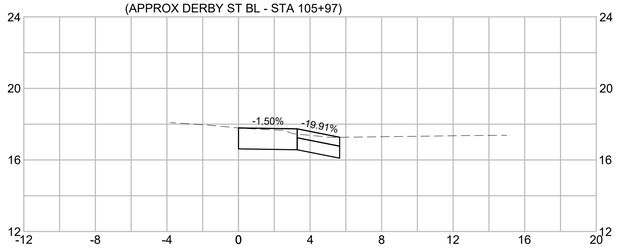
Hardy to Turner (North) BL
6+00
(APPROX DERBY ST BL - STA 106+05)



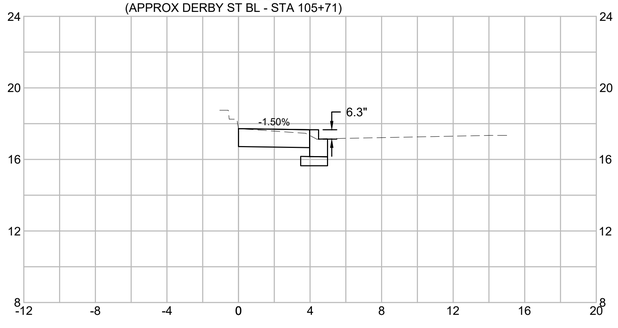
Hardy to Turner (North) BL
6+96.11
(APPROX DERBY ST BL - STA 106+98)



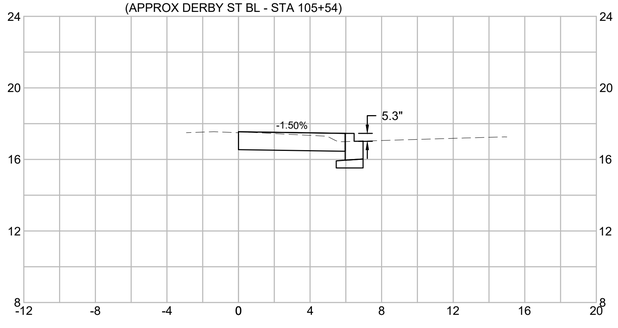
Hardy to Turner (North) BL
5+92.73
(APPROX DERBY ST BL - STA 105+97)



Hardy to Turner (North) BL
5+64.89
(APPROX DERBY ST BL - STA 105+71)



Hardy to Turner (North) BL
6+50
(APPROX DERBY ST BL - STA 105+54)

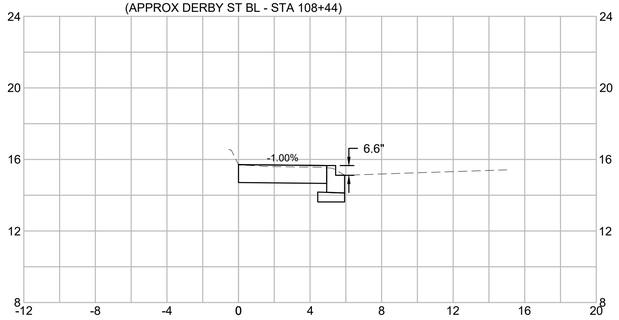


HOR. SCALE IN FEET
4 0 4 8
4 0 4 8
VER. SCALE IN FEET

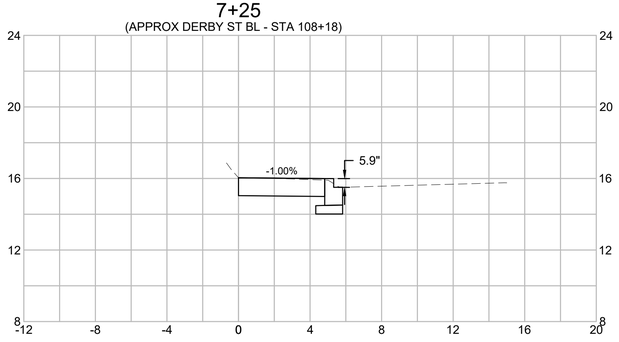
SALEM
DERBY STREET
CROSS SECTIONS
TURNER TO CARLTON
SHEET 28 OF 33

13150.20_(XSEC).DWG Plotted on 28-Apr-2020 8:20 AM

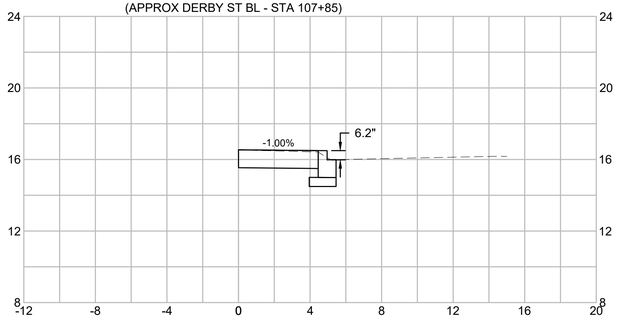
Turner to Carlton BL
7+50
(APPROX DERBY ST BL - STA 108+44)



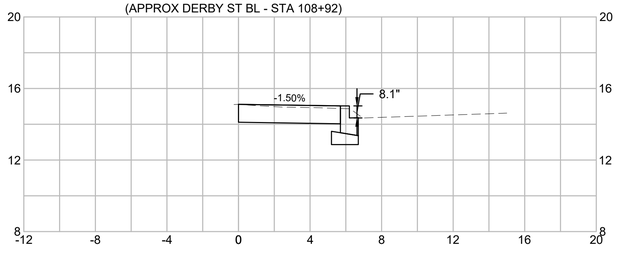
Turner to Carlton BL
7+25
(APPROX DERBY ST BL - STA 108+18)



Turner to Carlton BL
6+91.55
(APPROX DERBY ST BL - STA 107+85)



Turner to Carlton BL
8+00
(APPROX DERBY ST BL - STA 108+92)

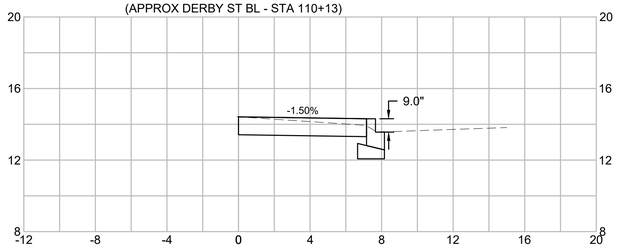


HOR. SCALE IN FEET
4 0 4 8
4 0 4 8
VER. SCALE IN FEET

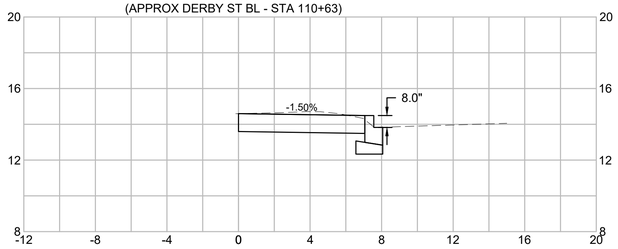
SALEM
DERBY STREET
CROSS SECTIONS
CARLTON TO BECKET
SHEET 29 OF 33

13150.20_(XSEC).DWG Plotted on 28-Apr-2020 8:20 AM

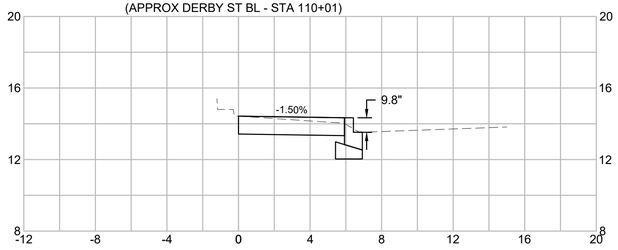
Carlton to Becket BL
8+00
(APPROX DERBY ST BL - STA 110+13)



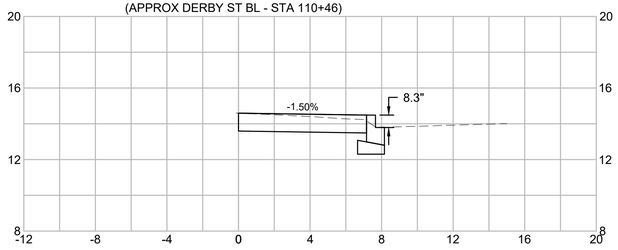
Carlton to Becket BL
8+50
(APPROX DERBY ST BL - STA 110+63)



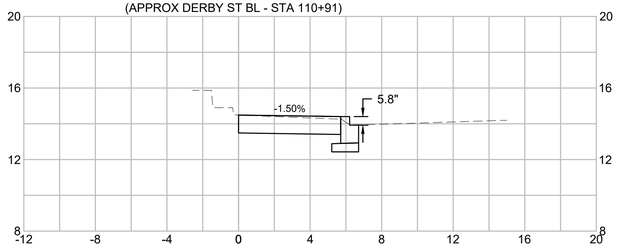
Carlton to Becket BL
7+87.43
(APPROX DERBY ST BL - STA 110+01)



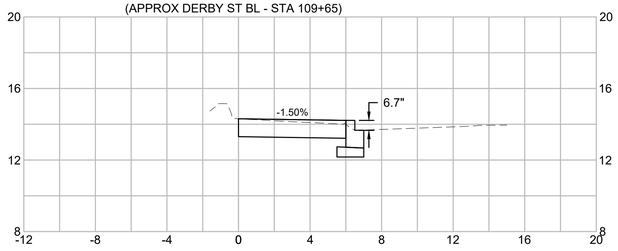
Carlton to Becket BL
8+33.11
(APPROX DERBY ST BL - STA 110+46)



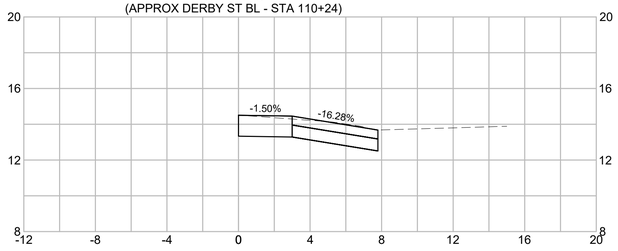
Carlton to Becket BL
8+80.92
(APPROX DERBY ST BL - STA 110+91)



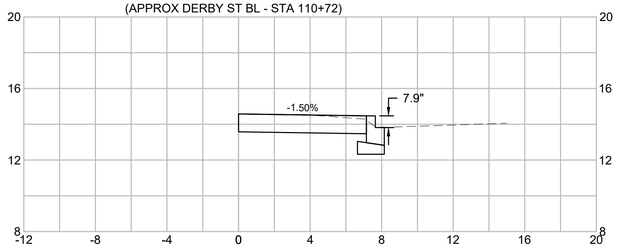
Carlton to Becket BL
7+50
(APPROX DERBY ST BL - STA 109+65)

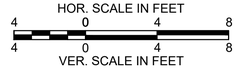


Carlton to Becket BL
8+11.31
(APPROX DERBY ST BL - STA 110+24)



Carlton to Becket BL
8+58.73
(APPROX DERBY ST BL - STA 110+72)

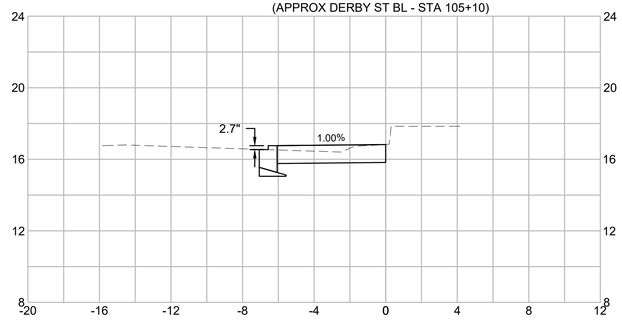




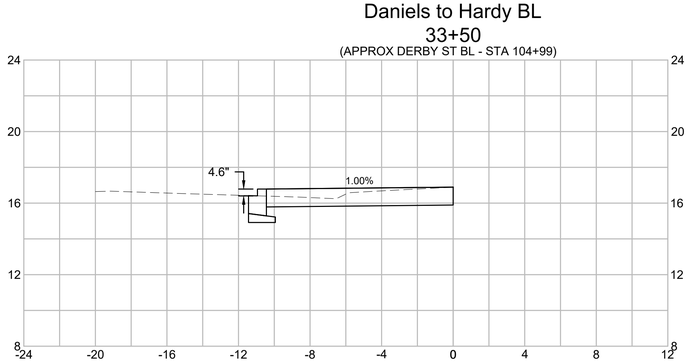
SALEM
DERBY STREET
CROSS SECTIONS
DANIELS TO HARDY
SHEET 30 OF 33

13150.20_(XSEC).DWG Plotted on 28-Apr-2020 8:20 AM

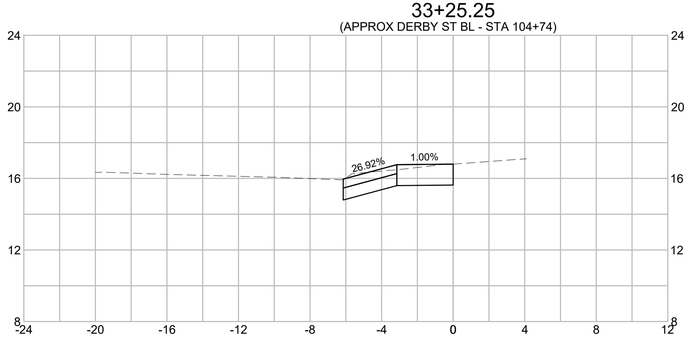
Daniels to Hardy BL
33+65.09
(APPROX DERBY ST BL - STA 105+10)



Daniels to Hardy BL
33+50
(APPROX DERBY ST BL - STA 104+99)



Daniels to Hardy BL
33+25.25
(APPROX DERBY ST BL - STA 104+74)

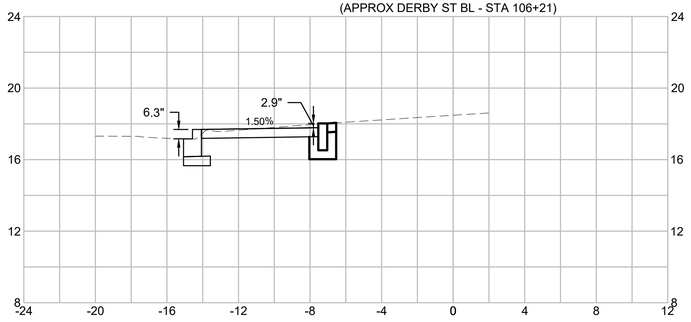


HOR. SCALE IN FEET
4 0 4 8
4 0 4 8
VER. SCALE IN FEET

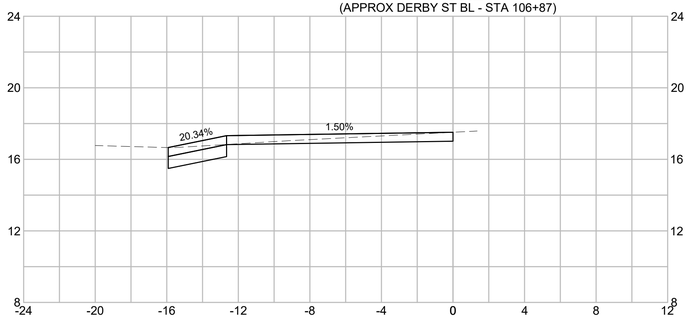
SALEM
DERBY STREET
CROSS SECTIONS
HARDY TO TURNER (SOUTH)
SHEET 31 OF 33

13150.20_(XSEC).DWG Plotted on 28-Apr-2020 8:20 AM

Hardy to Turner (South) BL
41+00
(APPROX DERBY ST BL - STA 106+21)

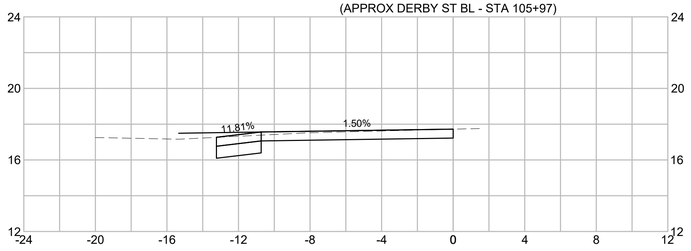


Hardy to Turner (South) BL
41+66.24
(APPROX DERBY ST BL - STA 106+87)

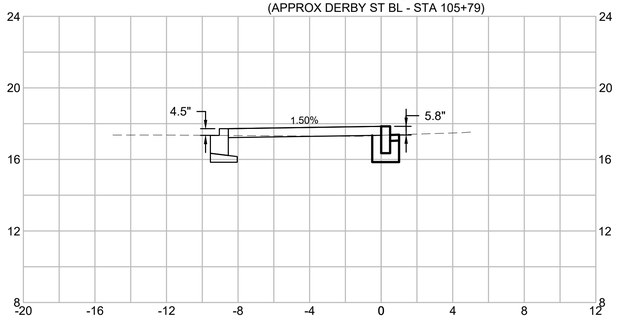


Hardy to Turner (South) BL
41+15
(APPROX DERBY ST BL - STA 106+36)

Hardy to Turner (South) BL
40+76.64
(APPROX DERBY ST BL - STA 105+97)



Hardy to Turner (South) BL
40+50
(APPROX DERBY ST BL - STA 105+79)

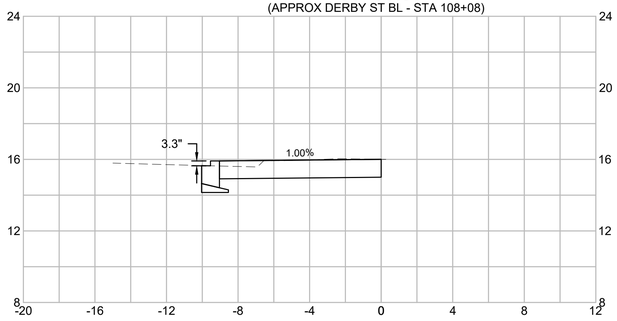


HOR. SCALE IN FEET
4 0 4 8
4 0 4 8
VER. SCALE IN FEET

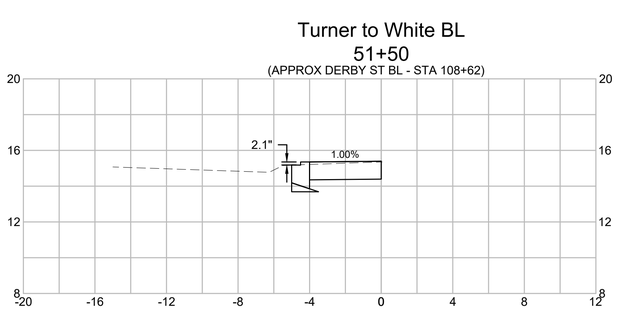
SALEM
DERBY STREET
CROSS SECTIONS
TURNER TO WHITE
SHEET 32 OF 33

13150.20_(XSEC).DWG Plotted on 28-Apr-2020 8:20 AM

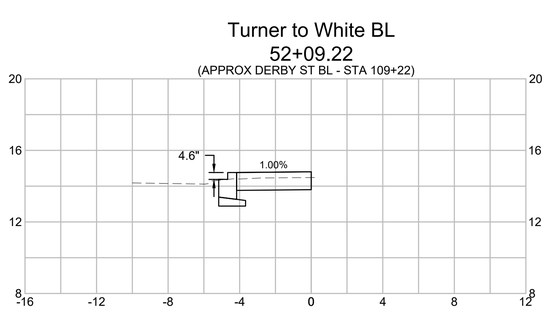
Turner to White BL
50+95.53
(APPROX DERBY ST BL - STA 108+08)



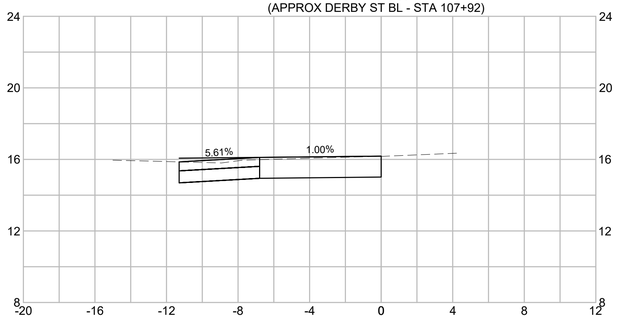
Turner to White BL
51+50
(APPROX DERBY ST BL - STA 108+62)



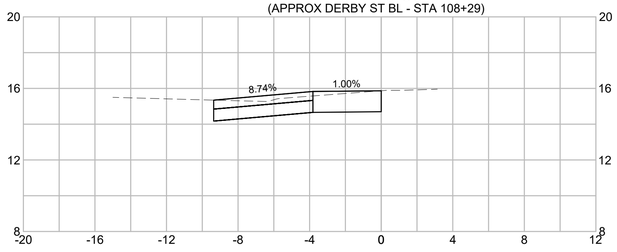
Turner to White BL
52+09.22
(APPROX DERBY ST BL - STA 109+22)



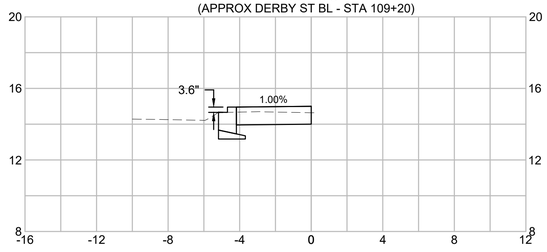
Turner to White BL
50+78.71
(APPROX DERBY ST BL - STA 107+92)



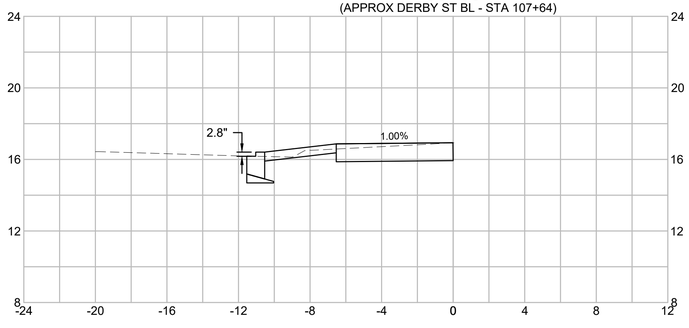
Turner to White BL
51+16.33
(APPROX DERBY ST BL - STA 108+29)



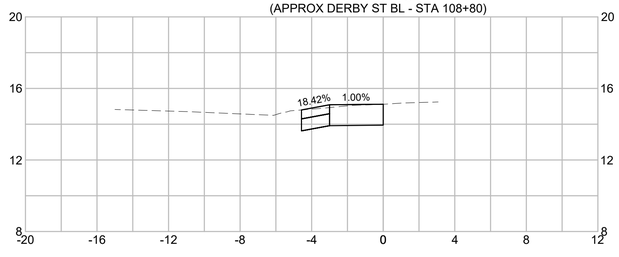
Turner to White BL
52+00
(APPROX DERBY ST BL - STA 109+20)

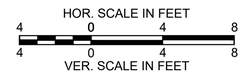


Turner to White BL
50+50
(APPROX DERBY ST BL - STA 107+64)



Turner to White BL
51+67.37
(APPROX DERBY ST BL - STA 108+80)

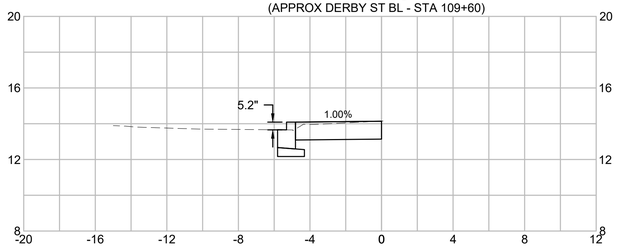




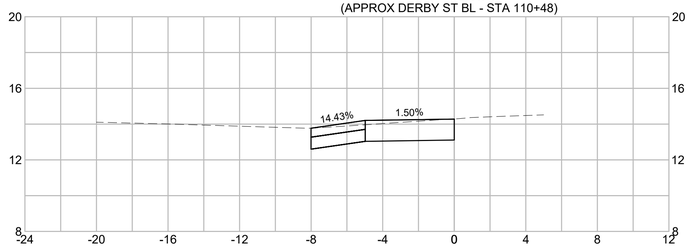
SALEM
DERBY STREET
CROSS SECTIONS
WHITE TO BLANEY
SHEET 33 OF 33

13150.20_(XSEC).DWG Plotted on 28-Apr-2020 8:20 AM

Turner to White BL
52+50
(APPROX DERBY ST BL - STA 109+60)

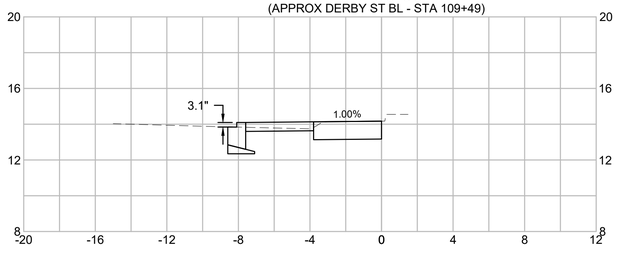


White to Blaney BL
61+02.81
(APPROX DERBY ST BL - STA 110+48)

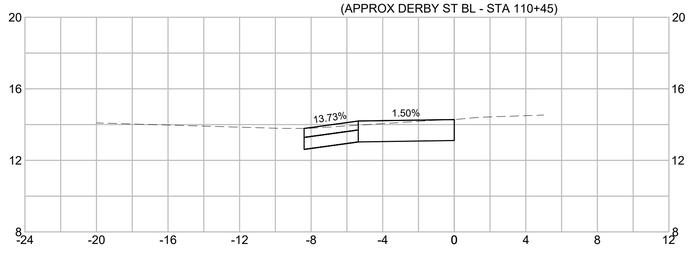


HOR. SCALE IN FEET
4 0 4 8
4 0 4 8
VER. SCALE IN FEET

Turner to White BL
52+38.05
(APPROX DERBY ST BL - STA 109+49)



White to Blaney BL
61+00
(APPROX DERBY ST BL - STA 110+45)



White to Blaney BL
61+50
(APPROX DERBY ST BL - STA 110+95)