



CITY OF PORTSMOUTH, NH

MIDDLE STREET/MILLER AVENUE/SUMMER STREET TRAFFIC SIGNAL REPLACEMENT PROJECT CITY PROJECT #7122

FOR:
CITY OF PORTSMOUTH, NH
1 JUNKINS AVE
PORTSMOUTH, NH 03801

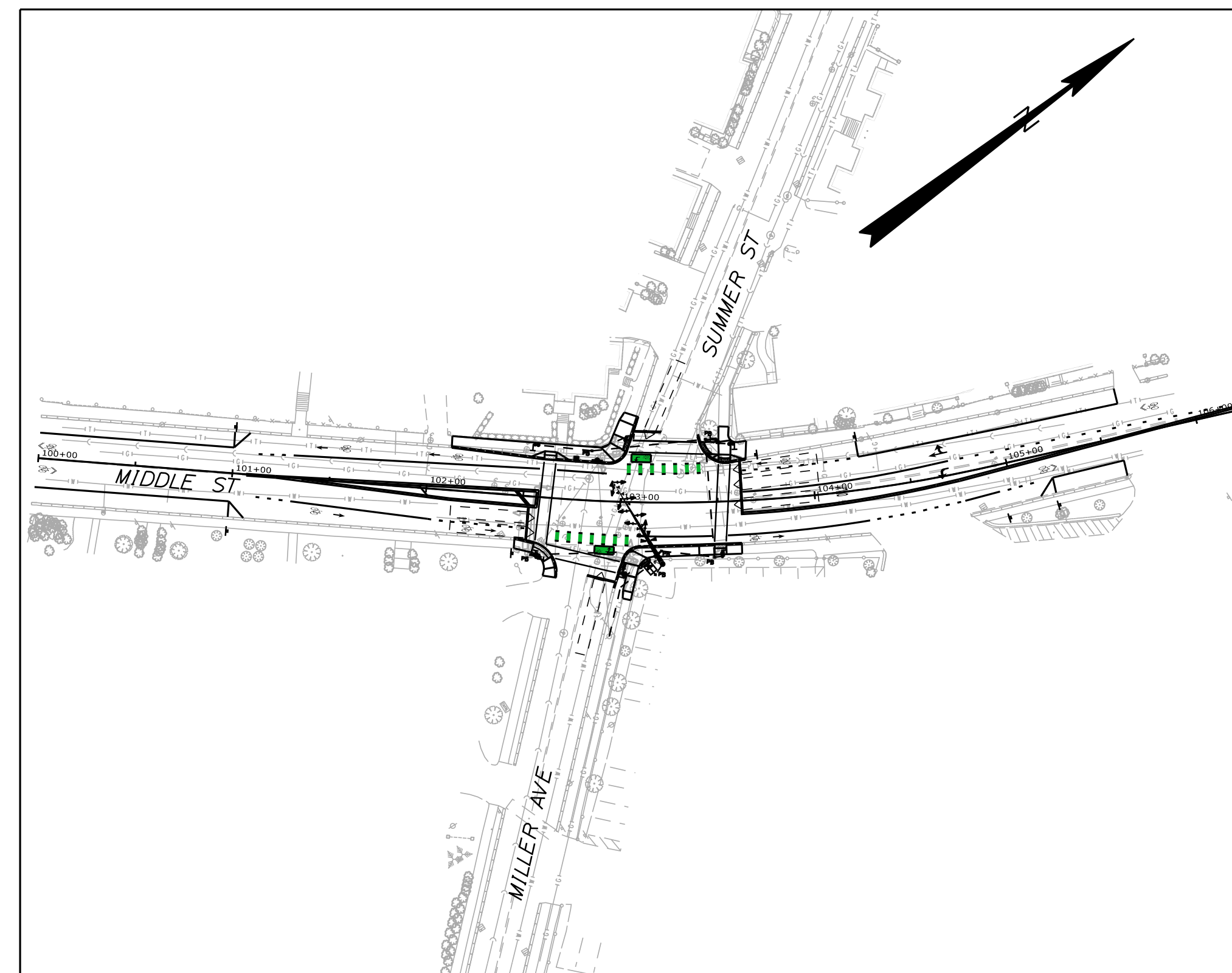
ENGINEER / SURVEYOR:



LOCATION MAP:



N.T.S.



1" = 60'

FINAL PS&E
DECEMBER 9, 2024

SHEET INDEX

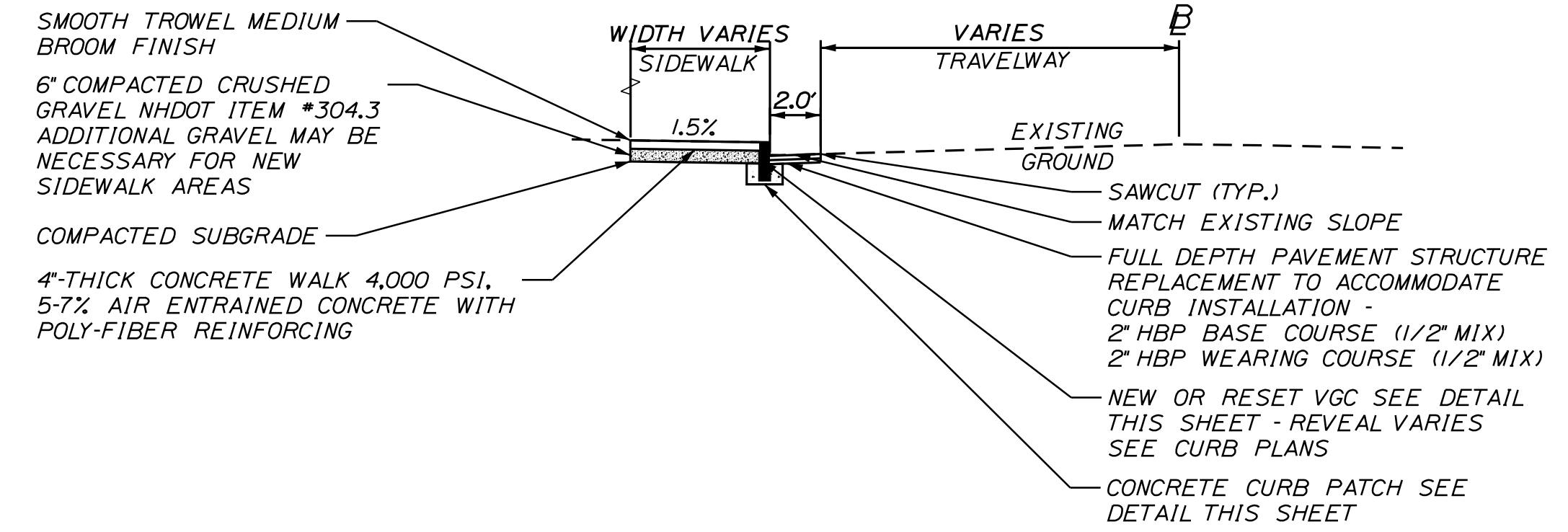
SHEET	DESCRIPTION
1	TITLE SHEET
2	GENERAL NOTES & DETAILS
3	GEOMETRIC PLAN
4-5	GENERAL PLANS
6-7	PAVEMENT MARKING PLANS & DETAILS
8	TRAFFIC SIGNAL NOTES
9-10	TRAFFIC SIGNAL PLANS

PLAN LEGEND

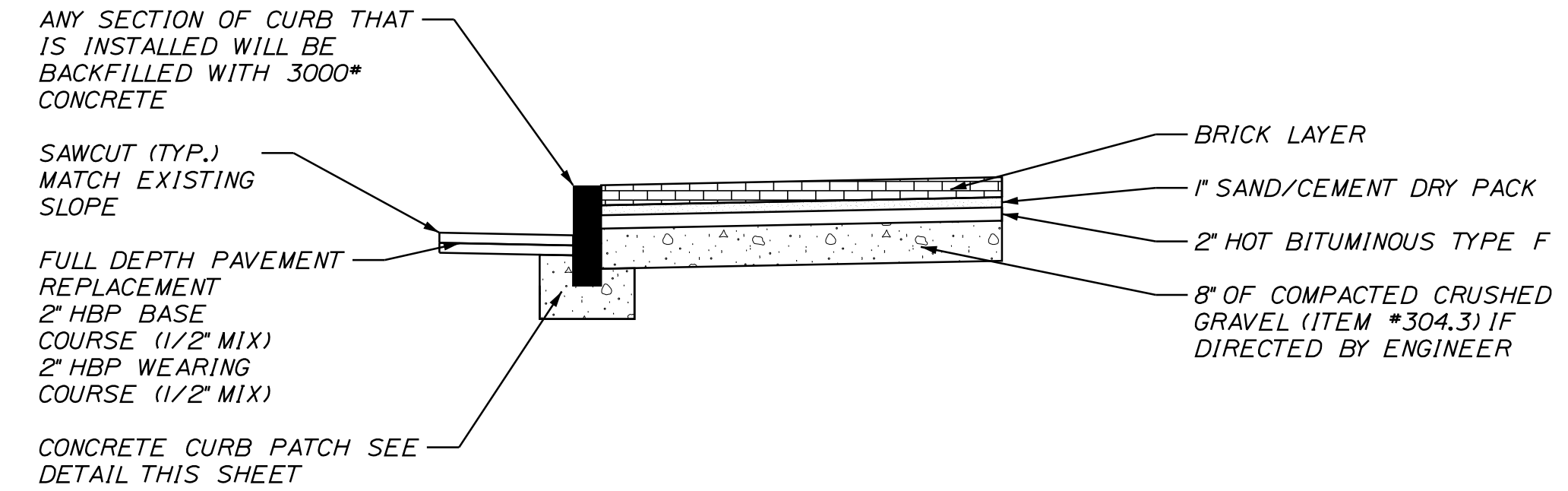
Town, County, State	-----	Catch Basins	Existing	Proposed
Property Lines	-----	Manholes	Existing	Proposed
R/W Lines-Existing	-----	Proposed Underdrain	----->	
R/W Lines-Proposed	-----	Proposed Ditch	----->	
Culvert-Existing	-----	Existing Ditch	----->	
Culvert-Proposed	-----	Utility Poles	Existing	Proposed
Curbing Existing	-----	Fire Hydrants	Existing	Proposed
Curbing Proposed	-----	Existing Water Line	-----	
Sloped	-----	Existing San. Sewer	-----	
Outline of Bodies of Water	-----	Existing San. Sewer Manhole	-----	
Exposed Bedrock	-----	Guardrail-Existing	-----	
Buildings	-----	Guardrail-Proposed	-----	
Trees	Conifer	Guardrail-Cable, Other	-----	
Tree Line	-----	Centerline-Existing	-----	
Clearing Limit Line	-----	Centerline-Proposed	-----	
Railroad	-----	Travelway-Existing	-----	
ROW Monument	-----	Travelway-Proposed	-----	
Boring	HB-XXX-###	Probe	P-#.X	
Pavement Core	PC-#	### = Depth		
Test Pit	TP-XXX-###	X = W (Weathered Rock)		
		R (Refusal)		
		NR (No Refusal)		
		EXIST	PROP	
Fiber Optic Cable	-----	-----	-----	
Signal Conduit	-----	-----	-----	
Pedestrian Signal Head w/ Pushbutton	-----	-----	-----	
Pedestrian Signal Post w/ equipment	-----	-----	-----	
Steel Strain Pole	-----	-----	-----	
Mast Arm Pole	-----	-----	-----	
Luminaire	-----	-----	-----	
Preemption Receiver	-----	-----	-----	
Signal Head (no Backplate)	-----	-----	-----	
Signal Head (w/ Backplate)	-----	-----	-----	
Confirmation Strobe	-----	-----	-----	
Mast Arm Mounted Sign	-----	-----	-----	
Controller Cabinet	-----	-----	-----	
Meter Pedestal	-----	-----	-----	
Pullbox	-----	-----	-----	
Video Detection Camera	-----	-----	-----	
Video Detection Camera (360°)	-----	-----	-----	
Advance Detection	-----	-----	-----	
Stop Bar Advance Detection	-----	-----	-----	
Detection Zone (& ID)	-----	-----	-----	

GENERAL NOTES

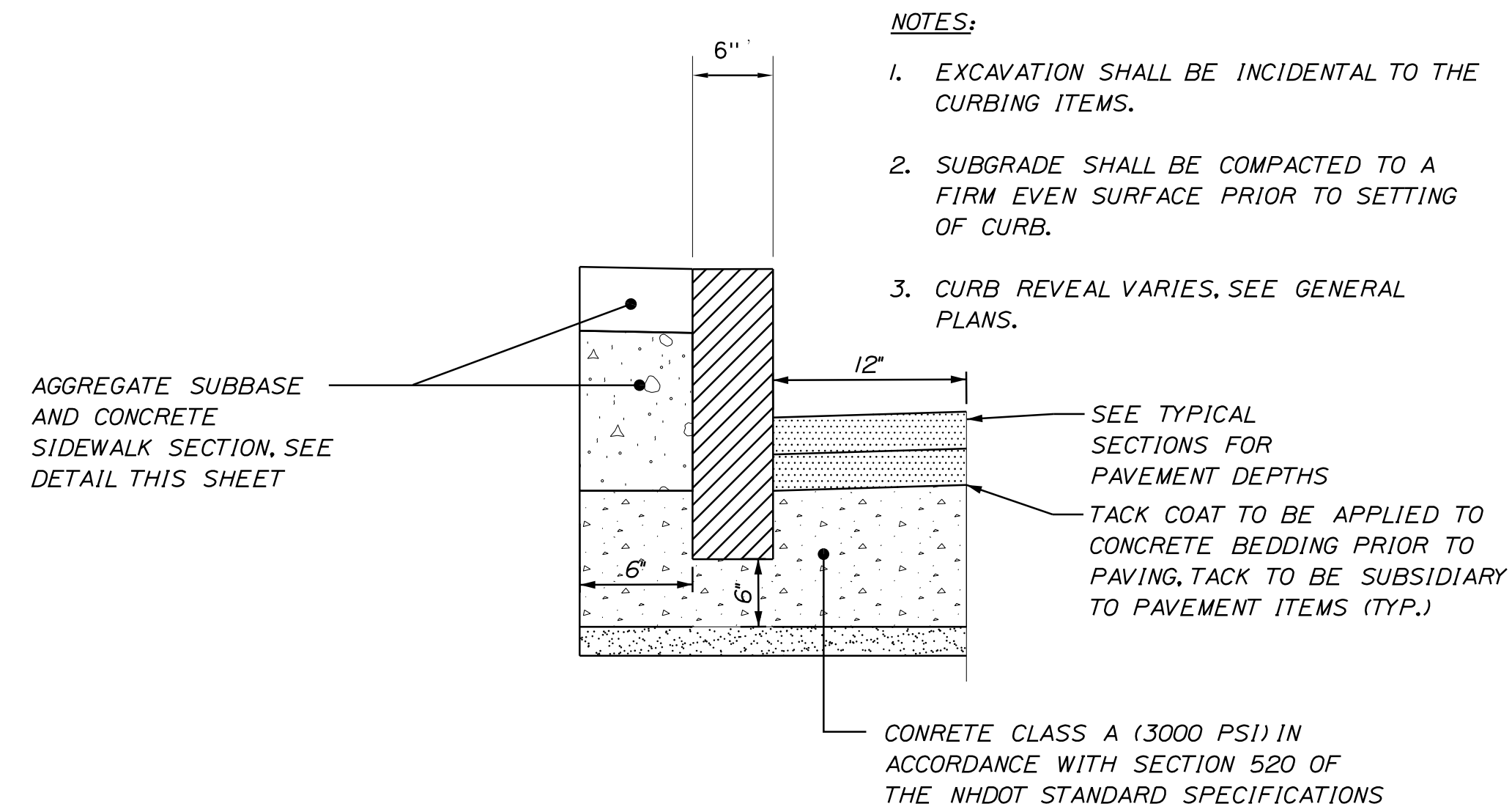
- FOR STANDARD PLANS, SEE DEPARTMENT OF TRANSPORTATION WEBSITE AT: WWW.NH.GOV/DOT/ORG/PROJECTDEVELOPMENT/HIGHWAYDESIGN/STANDARDPLANS/INDEX.HTM.
- NO EXISTING MONUMENTS, BOUNDS, OR BENCHMARKS SHALL BE DISTURBED WITHOUT FIRST MAKING PROVISIONS FOR RELOCATION.
- PERFORM ALL WORK WITHIN THE EXISTING RIGHT-OF-WAY, UNLESS OTHERWISE SHOWN ON THE PLANS OR AS ORDERED BY THE ENGINEER.
- ALL WORK UNDER THIS CONTRACT TO BE GOVERNED BY NHDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2016 EDITION WITH THE LATEST REVISIONS AND UPDATES.
- MAINTENANCE OF TRAFFIC SHALL BE PER THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (MUTCD), LATEST EDITION.
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT EXISTING UTILITY LOCATIONS AND/OR ELEVATIONS ARE APPROXIMATE. THE CONTRACTOR IS HEREBY CAUTIONED THAT ALL EXISTING SUBSURFACE LINES AND STRUCTURES MAY NOT BE SHOWN. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT DIG SAFE AT LEAST THREE (3) BUT NOT MORE THAN THIRTY (30) DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION.
- SIDEWALK CURB RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH NHDOT STANDARD 'SIDEWALK CURB RAMP DETAILS' SHEETS I-9.
- STATIONS REFERENCED ARE APPROXIMATE.



4\"/>



BRICK SIDEWALK DETAIL ITEM# 608.5 NOT TO SCALE



GRANITE CURB DETAIL (NOT TO SCALE)

PLS OR PE
PROGRESS PRINT

PLS OR PE
NOT FOR CONSTRUCTION

DESIGNED	CHECKED
GRS	BRL
1 GRS 12/09/24 FINAL PLANS, SPECIFICATIONS, AND ESTIMATE REVISED WITHOUT THE USER'S SIGNATURE AND WITHOUT LIABILITY OF SEBAGO TECHNICS, INC. DATE: STATUS:	

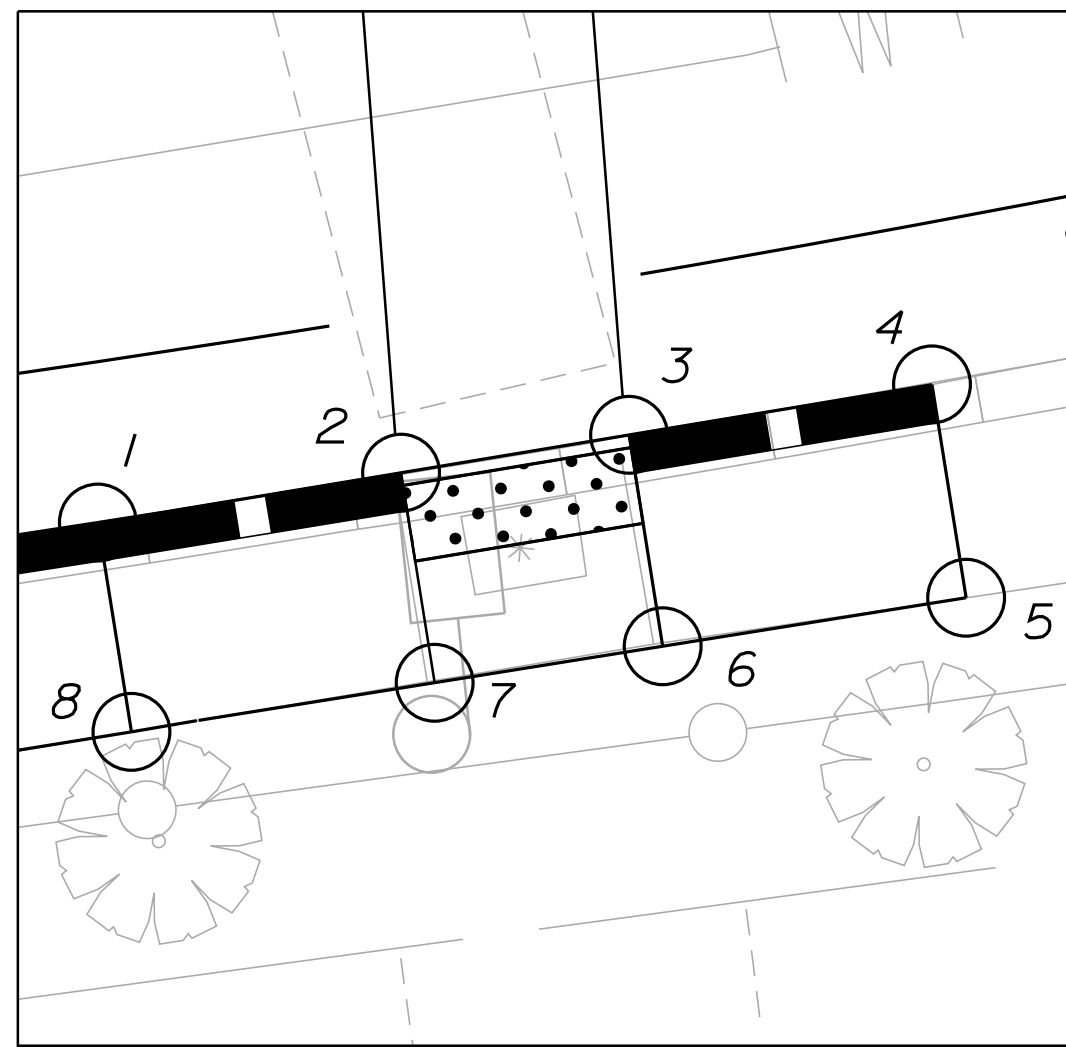
SEBAGO
TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

GENERAL NOTES
OF: MIDDLE ST. @ SUMMER ST.
PORTSMOUTH, NH
FOR: CITY OF PORTSMOUTH
1 JUNKINS AVE
PORTSMOUTH, NH 03801

PROJECT NO.	SCALE
21183	N.T.S.

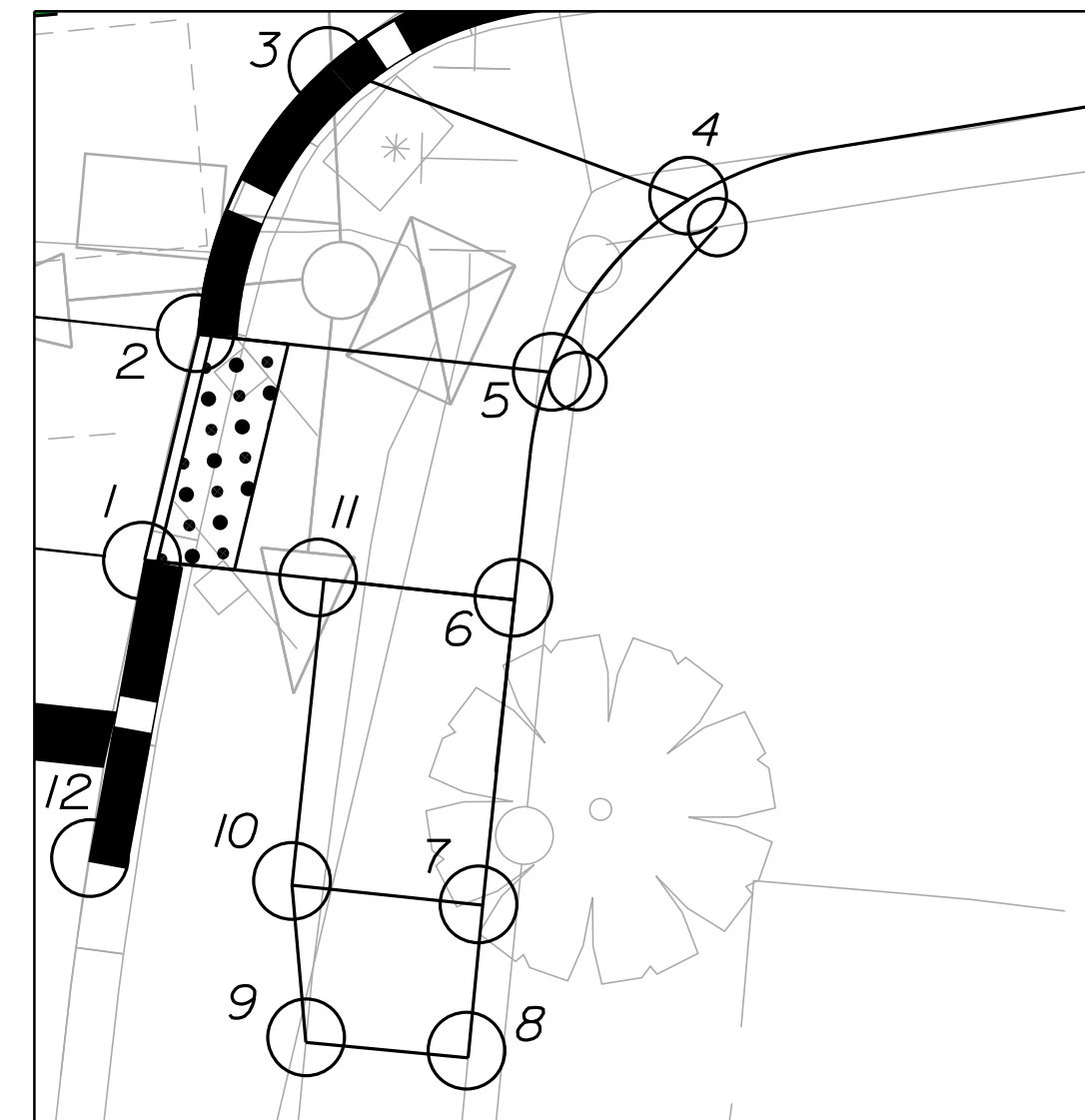
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DETAIL 1



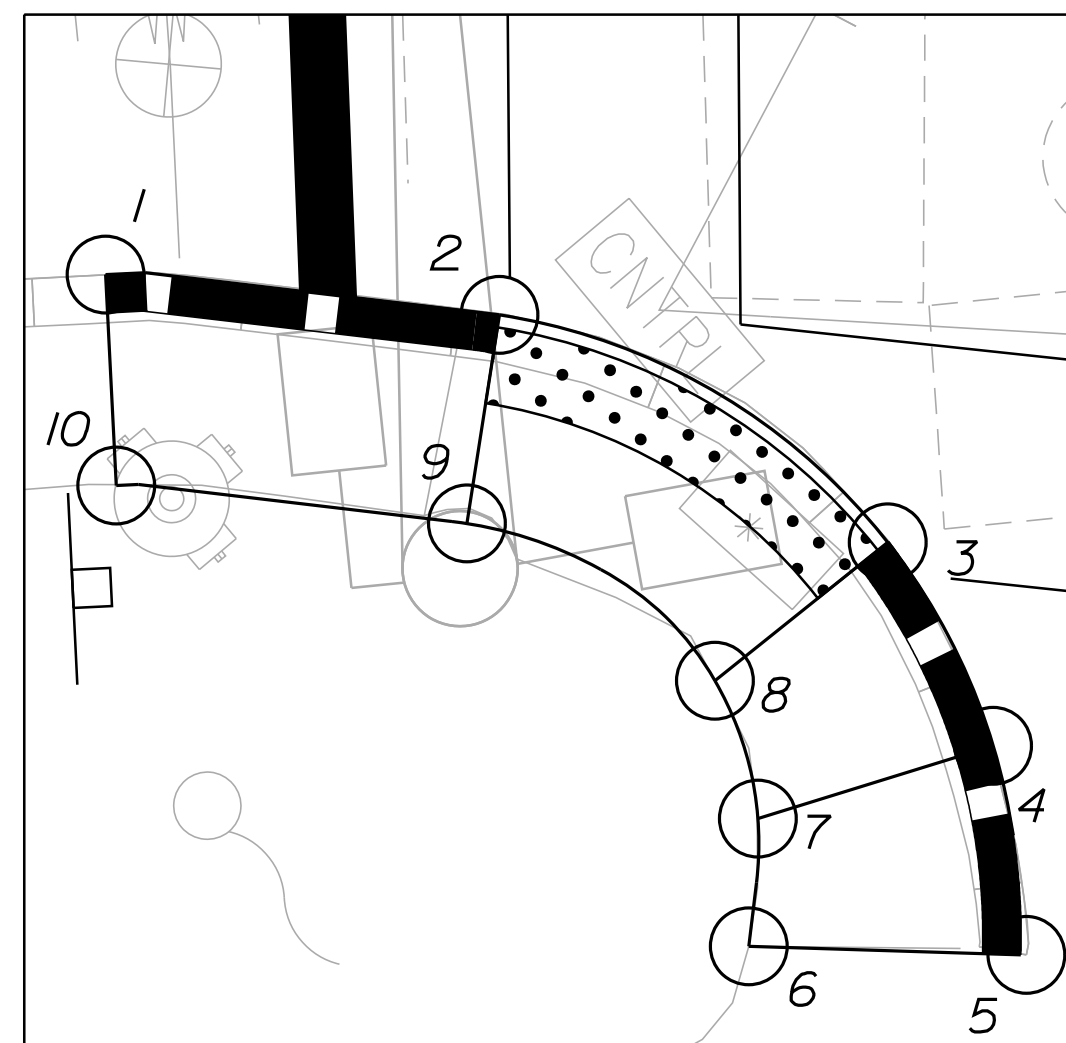
DETAIL 1 SPOT GRADES				
POINT	STATION	OFFSET	ELEV. 1	ELEV. 2
1	103+40.01	21.7' RT	18.43'	18.67'
2	103+47.79	21.6' RT	18.30'	-
3	103+53.64	21.5' RT	18.25'	-
4	103+61.42	21.6' RT	18.21'	18.48'
5	103+61.33	27.2' RT	-	18.52'
6	103+53.61	27.1' RT	-	18.33'
7	103+47.80	27.1' RT	-	18.38'
8	103+40.08	27.2' RT	-	18.72'

DETAIL 2



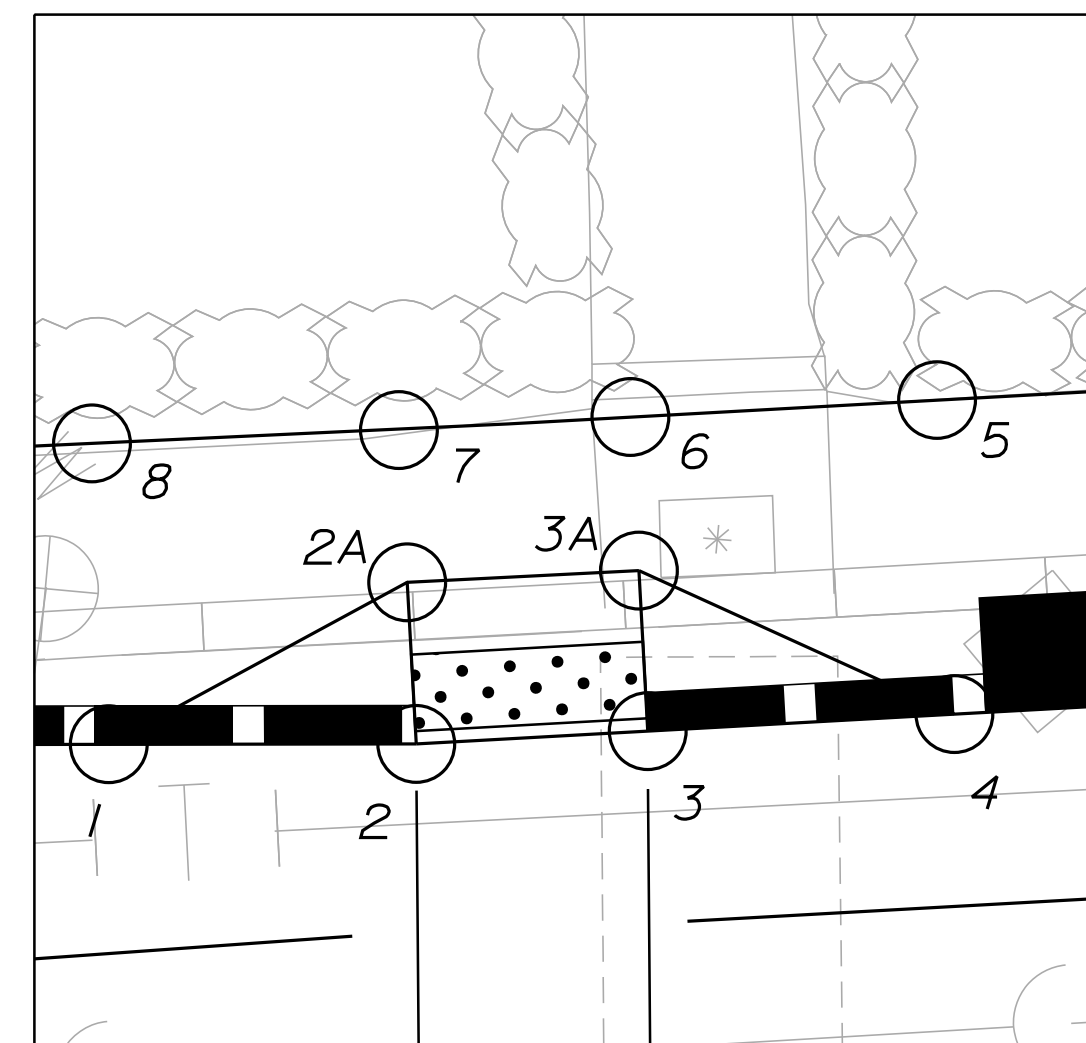
DETAIL 2 SPOT GRADES				
POINT	STATION	OFFSET	ELEV. 1	ELEV. 2
1	102+99.80	36.6' RT	18.20'	-
2	103+01.67	30.9' RT	18.40'	-
3	103+05.60	24.3' RT	18.55'	18.80'
4	103+14.23	28.7' RT	-	18.95'
5	103+10.30	32.8' RT	-	18.54'
6	103+08.84	38.6' RT	-	18.35'
7	103+07.27	46.4' RT	-	19.00'
8	103+06.53	50.4' RT	-	18.96'
9	103+02.63	49.5' RT	-	18.88'
10	103+02.66	45.4' RT	-	18.93'
11	103+04.18	37.6' RT	-	18.27'
12	102+97.74	44.3' RT	18.03'	18.51'

DETAIL 3



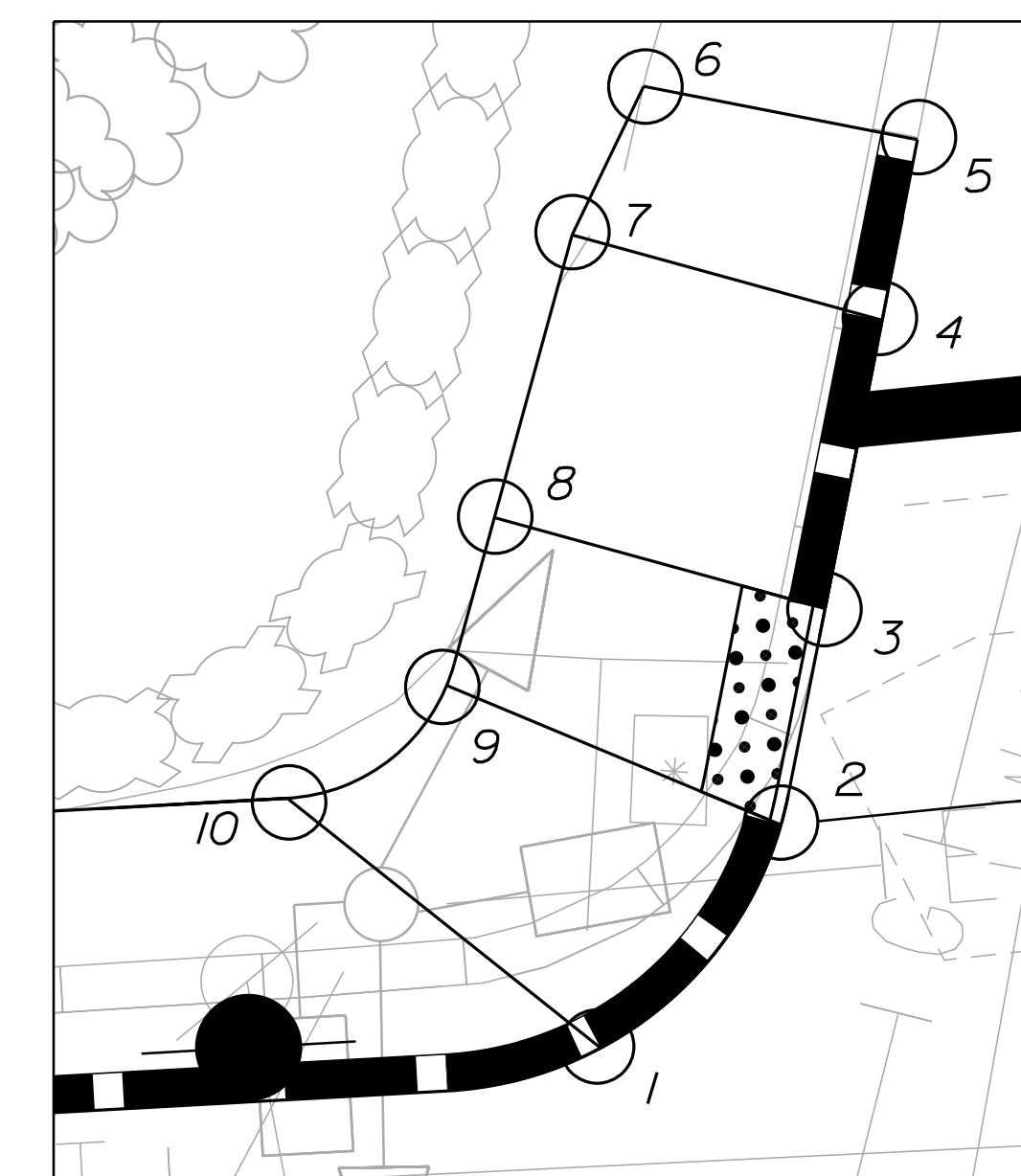
DETAIL 3 SPOT GRADES				
POINT	STATION	OFFSET	ELEV. 1	ELEV. 2
1	102+47.21	21.8' RT	18.91'	19.24'
2	102+57.51	23.3' RT	18.91'	-
3	102+67.18	29.7' RT	18.34'	-
4	102+69.55	35.2' RT	18.06'	18.31'
5	102+70.10	40.6' RT	17.95'	-
6	102+63.10	40.1' RT	-	18.39'
7	102+63.50	36.7' RT	-	18.42'
8	102+62.55	33.1' RT	-	18.45'
9	102+56.30	28.7' RT	-	18.97'
10	102+47.22	27.3' RT	-	19.37'

DETAIL 4



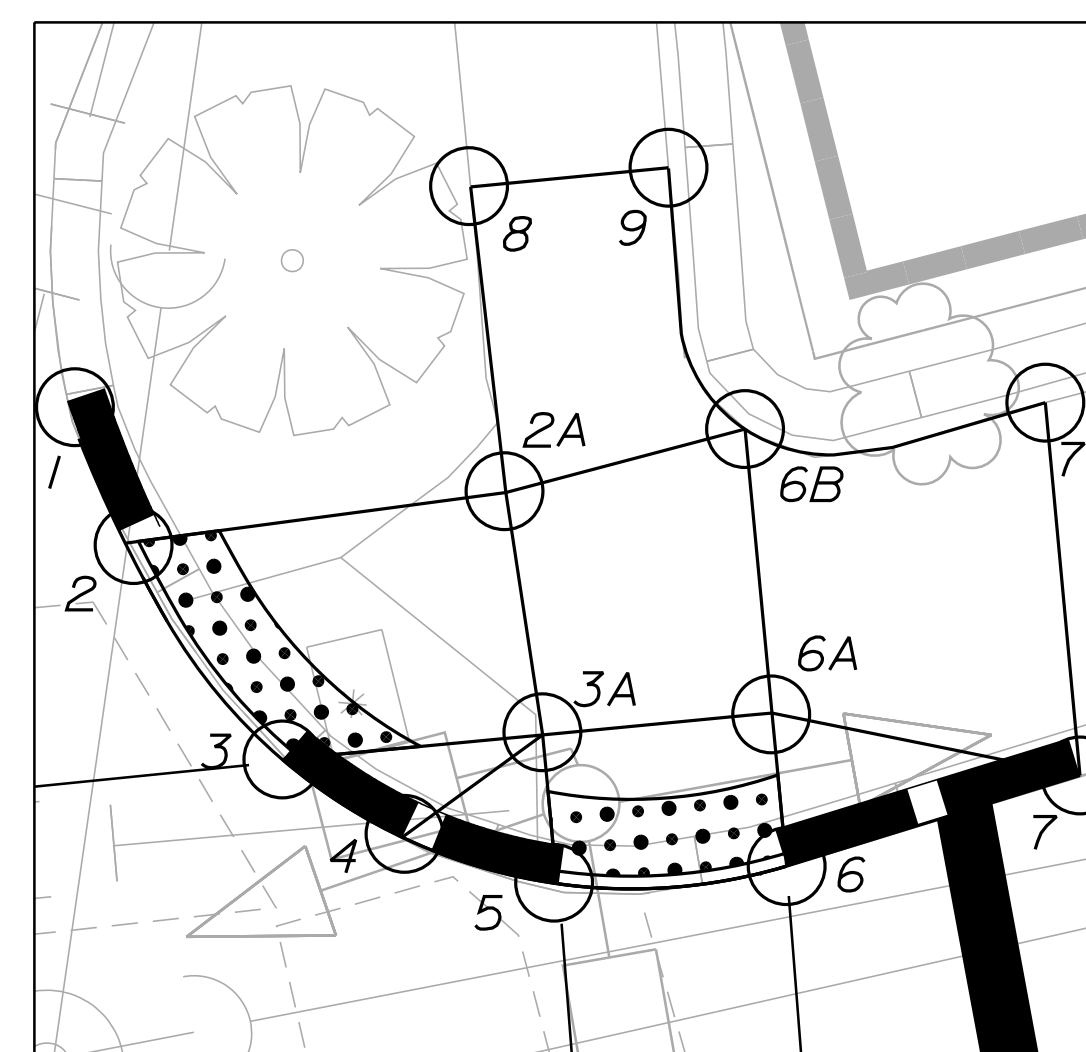
DETAIL 4 SPOT GRADES				
POINT	STATION	OFFSET	ELEV. 1	ELEV. 2
1	102+51.38	19.9' LT	19.13'	19.38'
2	102+59.39	19.5' LT	19.09'	-
2A	102+59.35	23.7' LT	-	19.41'
3	102+65.42	19.6' LT	19.02'	-
3A	102+65.39	23.7' LT	-	19.30'
4	102+73.62	19.6' LT	18.88'	19.13'
5	102+73.64	27.8' LT	-	19.21'
6	102+65.36	27.7' LT	-	19.36'
7	102+59.32	27.7' LT	-	19.47'
8	102+51.32	27.7' LT	-	19.46'

DETAIL 5



DETAIL 5 SPOT GRADES				
POINT	STATION	OFFSET	ELEV. 1	ELEV. 2
1	102+96.89	20.1' LT	18.66'	18.91'
2	103+02.50	25.7' LT	18.49'	-
3	103+04.33	31.4' LT	18.41'	-
4	103+06.78	39.1' LT	18.38'	18.63'
5	103+08.33	43.9' LT	18.34'	18.66'
6	103+00.59	46.0' LT	-	18.94'
7	102+98.14	42.2' LT	-	18.76'
8	102+95.21	34.7' LT	-	18.55'
9	102+93.45	30.3' LT	-	18.64'
10	102+88.70	27.6' LT	-	19.07'

DETAIL 6



DETAIL 6 SPOT GRADES				
POINT	STATION	OFFSET	ELEV. 1	ELEV. 2
1	103+40.07	34.8' LT	18.02'	18.18'
2	103+41.05	30.9' LT	18.01'	-
2A	103+51.48	30.7' LT	-	18.59'
3	103+44.38	24.7' LT	18.05	-
3A	103+51.40	24.3' LT	-	18.47
4	103+47.24	22.3' LT	18.10'	18.43'
5	103+51.18	20.4' LT	18.15'	-
6	103+57.28	19.9' LT	18.18'	-
6A	103+57.59	23.9' LT	-	18.51'
6B	103+58.16	31.3' LT	-	18.60'
7	103+65.44	20.9' LT	18.13'	18.38'
7A	103+66.33	30.6' LT	-	18.46'
8	103+51.88	38.7' LT	-	18.40'
9	103+57.32	38.4' LT	-	18.46'

NOTES:

- RAMPS HAVE BEEN DESIGNED WITH THE INTENT TO COMPLY WITH NHDOT STANDARD "SIDEWALK CURB RAMP DETAILS" AND THE CONTRACTOR IS INSTRUCTED TO PAY SPECIAL ATTENTION TO THE MAXIMUM SLOPES PROVIDED IN THAT GUIDANCE.
- ELEVATION 1 IS PROVIDED FOR ROADWAY ELEVATIONS AND ELEVATION 2 FOR SIDEWALK ELEVATIONS.

PLS OR PE
PROGRESS PRINT

NOT FOR CONSTRUCTION

DESIGNED	CHECKED
GRS	BRL
1 GRS 12/09/24 FINAL PLANS, SPECIFICATIONS, AND ESTIMATE	
REV. BY: DATE: STATUS:	
THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.	

SEBAGO
TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4
South Plainfield, NJ 07080
Tel: 207-209-2100

GENERAL PLAN - DETAILS
OF: MIDDLE ST. @ SUMMER ST.
PORTSMOUTH, NH
FOR: CITY OF PORTSMOUTH
1 JUNKINS AVE.
PORTSMOUTH, NH 03801

PROJECT NO.	SCALE
21183	1" = 5'

PLS OR PE
PROGRESS PRINT

PLS OR PE
NOT FOR CONSTRUCTION

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GRS	BRL
1 GRS 12/09/24 FINAL PLANS, SPECIFICATIONS, AND ESTIMATE	
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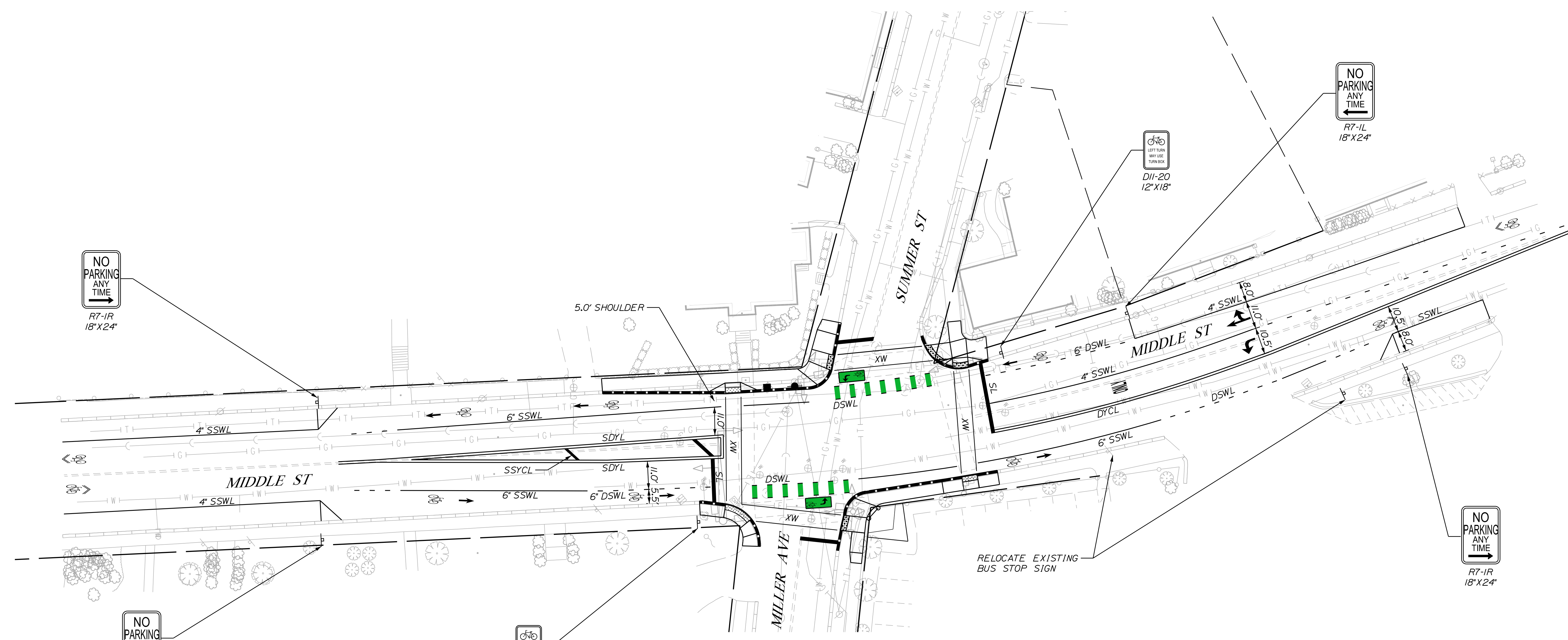
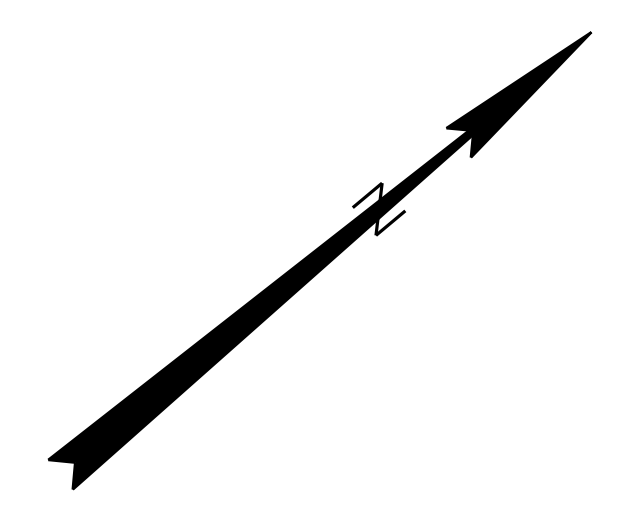
PAVEMENT MARKING PLAN
OF:
MIDDLE ST. @ SUMMER ST.
PORTSMOUTH, NH

FOR:
CITY OF PORTSMOUTH
1 JUNKINS AVE.
PORTSMOUTH, NH 03801

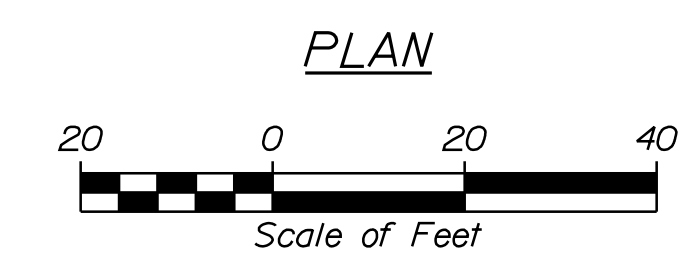
PROJECT NO. 21183 SCALE 1" = 20'

SHEET 6 OF 10

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SIGN/PVMT. MARKING LEGEND	
SYMBOL	DESCRIPTION
SSWL	SOLID SINGLE WHITE LINE
DSWL	6" DASHED SINGLE WHITE LINE
SDYL	4" SOLID DOUBLE YELLOW LINE
SSYCL	12" SOLID SINGLE YELLOW CHEVRON LINE
SSWCL	12" SOLID SINGLE WHITE CHEVRON LINE
SL	18" STOP LINE
XW	6" SSWL (SEE DETAILS)
R	REMOVE SIGN
L	LEAVE SIGN
R-R	REMOVE AND RELOCATE SIGN
R-S	REMOVE AND SALVAGE SIGN
→	BIKE LANE MARKING (SEE DETAILS)
→	BIKE SHARED LANE MARKING (SEE DETAILS)



LIST OF MAJOR ITEMS

EQUIPMENT AND WORK ITEMS (ITEM 616.191)	QTY.
FURNISH AND INSTALL P-44 NEMA TRAFFIC SIGNAL CABINET MOUNTED ON NEW FOUNDATION W/ NEW ANCILLARY EQUIPMENT AND ATC CONTROLLER W/ LATEST FIRMWARE	1 EA
FURNISH AND INSTALL ONE-WAY, 3-SECTION, 12-INCH BLACK TRAFFIC SIGNAL HEADS WITH LED MODULES, TUNNEL VISORS AND 5-INCH LOUVERED BACK PLATES WITH 2 INCH RETROREFLECTIVE BORDERS MOUNTED ON MAST ARM	7 EA
FURNISH AND INSTALL ONE-WAY, 3-SECTION, 12-INCH BLACK TRAFFIC SIGNAL HEADS WITH LED MODULES, TUNNEL VISORS AND 5-INCH LOUVERED BACK PLATES WITH 2 INCH RETROREFLECTIVE BORDERS MOUNTED ON POLE	1 EA
FURNISH AND INSTALL ONE-WAY, 4-SECTION, 12-INCH BLACK TRAFFIC SIGNAL HEADS WITH LED MODULES, TUNNEL VISORS AND 5-INCH LOUVERED BACK PLATES WITH 2 INCH RETROREFLECTIVE BORDERS MOUNTED ON MAST ARM	1 EA
FURNISH AND INSTALL ONE-WAY, 16 X 18-INCH LED SIDE OF POLE MOUNTED BLACK COUNTDOWN PEDESTRIAN SIGNAL HEAD	3 EA
FURNISH AND INSTALL ONE-WAY, 16 X 18-INCH LED TOP OF POST MOUNTED BLACK COUNTDOWN PEDESTRIAN SIGNAL HEAD	5 EA
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9'X15' RIO-3e INFORMATIONAL SIGN	8 EA
FURNISH AND INSTALL 8' PEDESTAL POLE W/ FOUNDATION	6 EA
FURNISH AND INSTALL 10' PEDESTAL POLE W/ FOUNDATION	1 EA
FURNISH AND INSTALL MIOVISION 360° VIDEO DETECTION CAMERA SYSTEM	1 LS
FURNISH AND INSTALL 4-CHANNEL PREEMPTION PHASE SELECTOR WITH SYSTEM CHASSIS	1 EA
FURNISH AND INSTALL LIGHT-BASED PREEMPTION RECEIVERS WITH DETECTOR CABLE	4 EA
FURNISH AND INSTALL PREEMPTION CONFIRMATION RED STROBE WITH CABLE	1 EA
FURNISH AND INSTALL MAST ARM MOUNTED SIGNS	6 EA
FURNISH AND INSTALL 50-FOOT MAST ARM W/ FOUNDATION	1 EA
FURNISH AND INSTALL 3" STEEL CONDUIT (ITEM 614.33)	10 LF
FURNISH AND INSTALL 14" CONCRETE PULL BOX (ITEM 614.511)	6 EA
FURNISH AND INSTALL 3" PVC SCH. 40 CONDUIT (ITEM 614.73114)	376 LF

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

BID ALTERNATE 1

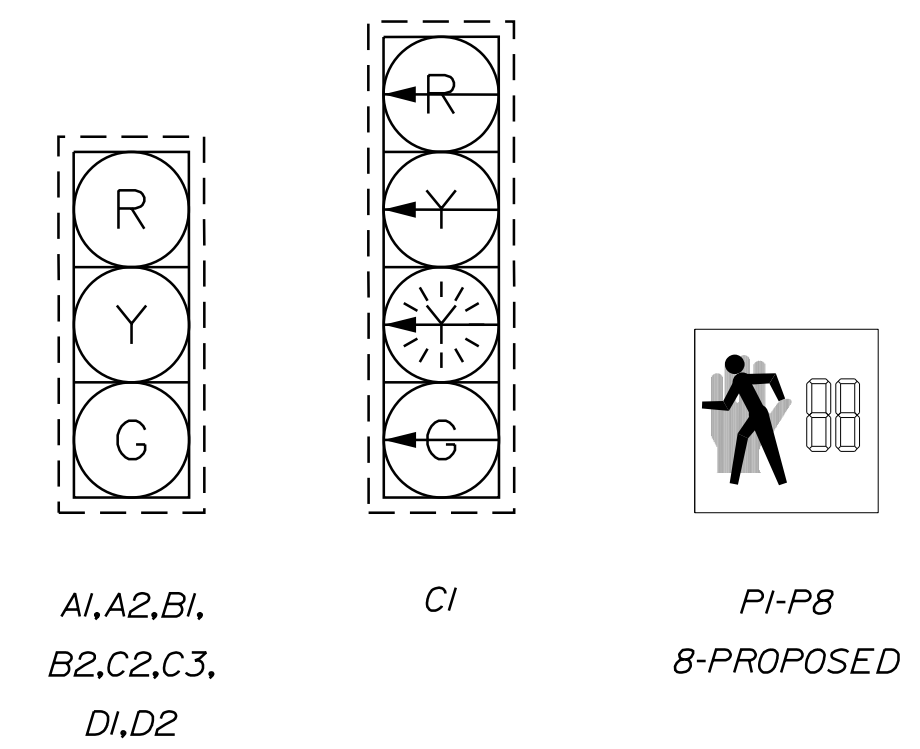
EQUIPMENT AND WORK ITEMS	QTY.
OBLITERATE PAVE. MARKING LINE, 12" WIDE & UNDER (ITEM 632.911)	500 LF

NOTE:
ALL EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED AND DISCARDED.

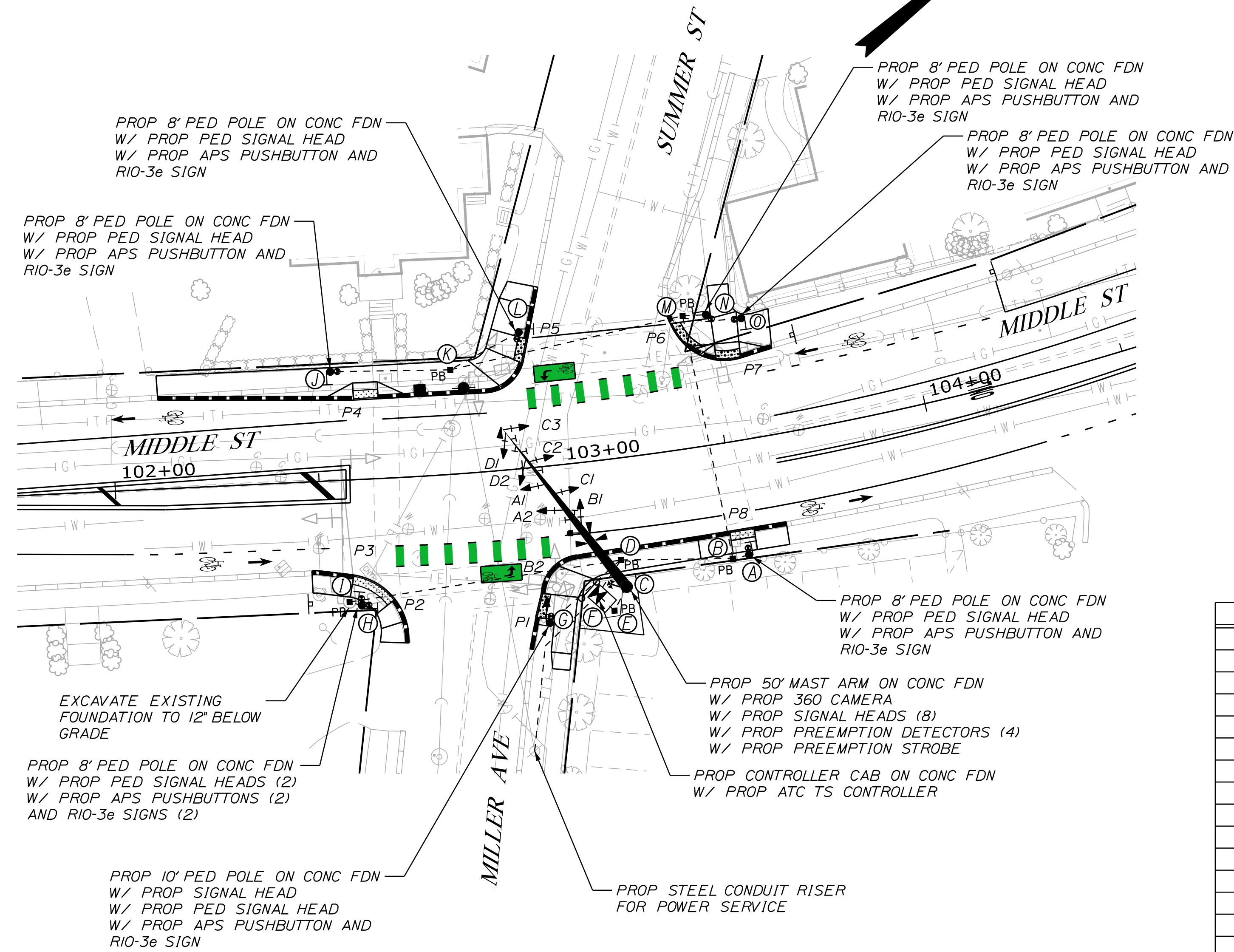
CONDUIT SCHEDULE

FROM-TO	TYPE	LENGTH (FT)
A-B	3" PVC SCH 40	5
B-D	3" PVC SCH 40	28
B-M	3" PVC SCH 40	61
C-E	3" PVC SCH 40	7
D-F	3" PVC SCH 40	11
D-G	3" PVC SCH 40	24
D-I	3" PVC SCH 40	68
E-F	3" PVC SCH 40	6
F-POWER	3" STEEL	10
F-POWER	3" PVC SCH 40	32
H-I	3" PVC SCH 40	4
J-K	3" PVC SCH 40	30
K-L	3" PVC SCH 40	20
K-M	3" PVC SCH 40	59
M-N	3" PVC SCH 40	6
M-O	3" PVC SCH 40	15

PROPOSED INDICATIONS



NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES



PROPOSED FOUNDATION SCHEDULE

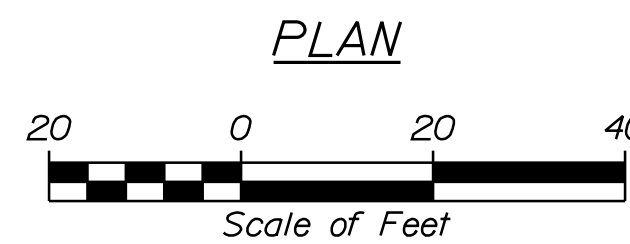
I.D.	DESCRIPTION	FOUNDATION	STATION O/S
A	8' PEDESTAL POLE	TSFND	103+51.42 28.1' RT
B	14" PULL BOX	PB	103+47.52 28.4' RT
C	50' MAST ARM	TYPE 2	103+21.81 31.6' RT
D	14" PULL BOX	PB	103+21.23 24.9' RT
E	14" PULL BOX	PB	103+18.30 37.0' RT
F	CONTROLLER CABINET	CCFND	103+14.82 32.6' RT
G	10' PEDESTAL POLE	TSFND	103+3.00 38.3' RT
H	8' PEDESTAL POLE	TSFND	102+59.04 30.9' RT
I	14" PULL BOX	PB	102+56.06 29.9' RT
J	8' PEDESTAL POLE	TSFND	102+54.01 26.7' LT
K	14" PULL BOX	PB	102+84.04 25.6' LT
L	8' PEDESTAL POLE	TSFND	103+02.26 33.4' LT
M	14" PULL BOX	PB	103+44.49 32.3' LT
N	8' PEDESTAL POLE	TSFND	103+50.44 31.8' LT
O	8' PEDESTAL POLE	TSFND	103+59.15 29.5' LT

TSFND = CONCRETE FOUNDATION FOR PEDESTALS CONSTRUCTED IN ACCORDANCE WITH NHDOT SIGNAL AND LIGHTING STANDARDS SL-2

PB = 14-INCH CONCRETE PULL BOX CONSTRUCTED IN ACCORDANCE WITH NHDOT SIGNAL AND LIGHTING STANDARD SL-1

TYPE * = TRAFFIC SIGNAL MAST ARM FOUNDATION CONSTRUCTED IN ACCORDANCE WITH NHDOT TRAFFIC SIGNAL STANDARD TS-1, TS-2, OR TS-3 AS APPLICABLE.

CCFND = CONCRETE FOUNDATION FOR CONTROLLER CABINETS IN ACCORDANCE WITH NHDOT SIGNAL AND LIGHTING STANDARDS SL-2



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75 John Roberts Rd.
Suite 4
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Tel: 207-209-2100

TRAFFIC SIGNAL PLAN
OF:
MIDDLE ST. @ SUMMER ST.
PORTSMOUTH, NH
FOR:
CITY OF PORTSMOUTH
1 JUNKINS AVE.
PORTSMOUTH, NH 03801

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