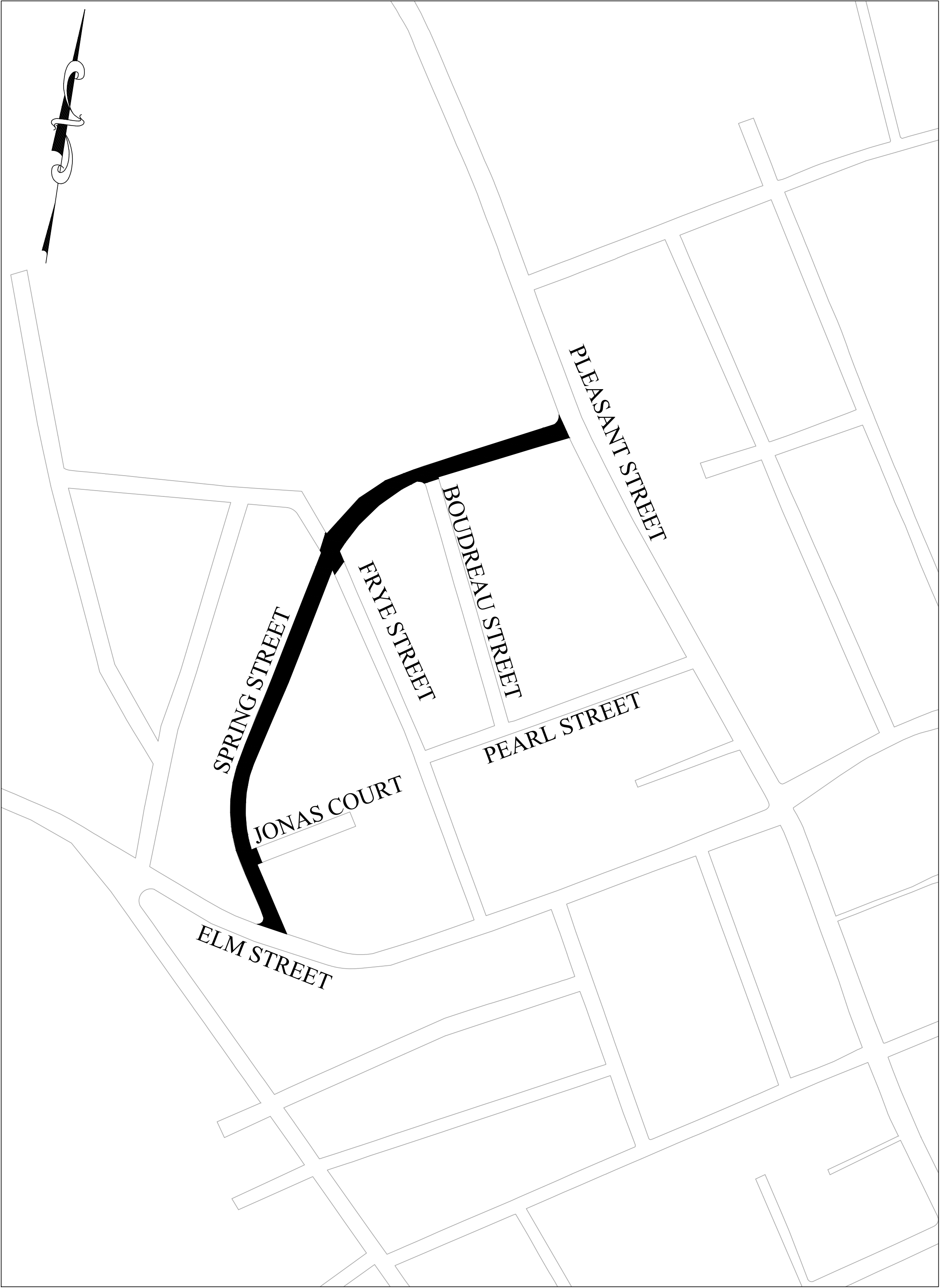


RECONSTRUCTION OF SPRING STREET & APPURTENANT WORK

COVER SHEET-----	1
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LOCUS
1"=100'

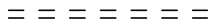
PREPARED BY: City of Marlborough
Department of Public Works
Engineering Division
135 Neil Street
Marlborough, MA 01752

CONTRACT NO. ED 2023-16
JULY 26, 2023

UNLESS OTHERWISE PROVIDED FOR IN THE PROJECT SPECIFICATIONS, THE FOLLOWING DOCUMENTS SHALL GOVERN THE CONSTRUCTION ON THIS PROJECT:

- THE 2023 MHD STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES....AS AMENDED
- THE 2006 PROJECT DEVELOPMENT & DESIGN GUIDE....AS AMENDED
- THE OCTOBER 2017 CONSTRUCTION STANDARD DETAILS HIGHWAY DIVISION AND ANY AMENDMENTS THERETO
- THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1)

RIGHT OF WAY	
EXISTING CONTOUR (MAJOR)	— 100 —
EXISTING CONTOUR (MINOR)	— 98 —
PROPOSED CONTOUR (MAJOR)	100
PROPOSED CONTOUR (MINOR)	98
PROPERTY LINE	— P —
EASEMENT LINE	— E —
TREELINE	~~~~~
CHAIN LINK FENCE	— X —
GAURDRAIL	— □ — □ — □ — □ —
WATER LINE	W
SEWER LINE	S
GAS LINE	G
DRAIN LINE	D
UNDERGROUND ELECTRIC	UGE
TELECOMMUNICATIONS	T
OVERHEAD WIRES	OWH
HYDRANT	WV ⋈
GAS VALVE	GV ⋈
WATER VALVE	WV ⋈
STORM SEWER MANHOLE	Ⓢ
ELECTRIC MANHOLE	Ⓔ
SANITARY SEWER MANHOLE	Ⓢ
TELECOMMUNICATIONS MANHOLE	Ⓣ
WATER MANHOLE	Ⓦ
CATCH BASIN	⌘
SIGN & POST	— T —
UTILITY POLE	⌘
WATER SHUTOFF	⌘ ⌘
WATER MAIN CAP	⌘
WATER MAIN TEE	⌘
SHRUB	⌘
TREE	⌘
HANDHOLD	⌘
F.E.O.	⌘
IRON PIN (FND)	⌘
GUY POLE	⌘
TRAFFIC LIGHT	⌘
SPOT ELEVATION (EXISTING)	100.50 x
SPOT ELEVATION (PROPOSED)	100.50
TOP/BOTTOM OF CURB	TC/BC
TOP/BOTTOM OF WALL	TW/BW
FLOW ARROW	— V —
SILT FENCE / HAY BALES	— —
GUARD RAIL	— — — — —
FENCE	— — — — —
MAILBOX	⌘
APPROXIMATE BORE LOCATION	⌘ B-1
PAVEMENT ARROWS AND LEGENDS	⌘ ⌘ ⌘
CROSS WALK, 1' WHITE LINES	CW
STOP LINE, 1' WHITE LINE, 4' BEHIND CW	SL

	CONTROLLER CABINET W/ CONC. PAD
	MAST ARM FOUNDATION (SCALE OF BLOCK=DIA. IN INCHES)
	MAST ARM (LENGTH NOTED)
	SIGNAL POST FOUNDATION (HEIGHT NOTED)
	PULL BOX
	ELECTRIC HAND HOLE
	VEHICULAR SIGNAL HEAD
	PEDESTRIAN SIGNAL HEAD
	MAST ARM MOUNTED SIGN
	VIDEO DETECTION CAMERA
	VIDEO DETECTION ZONE (SIZE NOTED)
	EMERGENCY PREEMPTION DETECTOR
	EMERGENCY PREEMPTION CONFIRMATION STROBE
	PEDESTRIAN PUSH BUTTON
	TRAFFIC SIGNAL CONDUIT
	YIELD LINE - WHITE
	BICYCLE DETECTOR - WHITE
	BICYCLE LANE - WHITE
	"SHARROW" - WHITE
	BOULDER

PROPOSED FULL DEPTH RECLAMATION
SURFACE: 4.25" HOT MIX ASPHALT
(1.5" SUPERPAVE SURFACE COURSE - 9.5 (SSC-9.5)
2.5" SUPERPAVE INTERMEDIATE COURSE - 12.5 (SSC-12.5))
ASPHALT EMULSION FOR TACK COAT AT 0.05 GAL/SY OVER
INTERMEDIATE COURSE
SUBBASE: 12" SUBBASE FOR RECLAIM

SURFACE: 4" CEMENT CONCRETE
AIR ENTRAINED 4,000 PSI, $\frac{3}{4}$ ", 610
SUBBASE: GRAVEL BORROW TYPE C

SURFACE: 6" CEMENT CONCRETE
AIR ENTRAINED 4000 PSI, $\frac{3}{4}$ ", 610
SUBBASE: GRAVEL BORROW TYPE C

ABAN= ABANDON
 ADJ= ADJUST
 APPROX.= APPROXIMATE
 BL= BASELINE
 BYCL= BROKEN YELLOW CENTER LINE
 CATV= CABLE TELEVISION
 CB= CATCH BASIN
 CEM.= CEMENT
 CHDPE= CORRUGATED HIGH DENSITY POLYETHYLENE
 CIT= CHANGE IN TYPE
 CL= CENTERLINE
 CMP= CORRUGATED METAL PIPE
 CO= CLEAN OUT
 CONC= CONCRETE
 DIP= DUCTILE IRON PIPE
 DMH= DRAIN MANHOLE
 DWP= DETECTABLE WARNING PANEL
 DYCL= DOUBLE YELLOW CENTERLINE
 ELEC.= ELECTRIC
 ELEV. OR EL.= ELEVATION
 EOP= EDGE OF PAVEMENT
 EX= EXISTING

F&G= FRAME & GRATE
FM= FORCE MAIN
GG= GAS GATE
GI= GUTTER INLET
GUY= GUY WIRE
HH= HAND HOLE
HMA= HOT MIX ASPHALT
HYD= HYDRANT

MAX.= MAXIMUM
 MIN.= MINIMUM
 N.T.S.= NOT TO SCALE
 OHW= OVERHEAD WIRE
 PCP= PLAIN CONCRETE PIPE
 PL= PROPERTY LINE
 PROP= PROPOSED

RCP= REINFORCED CONCRETE PIPE
REM.= REMOVE
REMOD.= REMODEL
RET.= RETAIN
RIM.= RIM ELEVATION
R&R= REMOVE AND RESET
R&S= REMOVE AND STACK
ROW= RIGHT OF WAY

SMH= SEWER MANHOLE
SW= SIDEWALK
SWEL= SOLID WHITE EDGE LINE
SYCL= SOLID YELLOW CENTER LINE
TCB= TRAFFIC CONTROL BOX
TYP= TYPICAL

VCP= VITRIFIED CLAY PIPE
WCR= WHEELCHAIR RAMP
WG= WATER GATE
WGL= WHITE GUIDE LINE
YGL= YELLOW GUIDE LINE

1. BASE PLANS AND TOPOGRAPH INFORMATION WERE PREPARED FOR AVAILABLE DATA COMPILED BY THE CITY OF MORGANBORO, DEPARTMENT OF PUBLIC WORKS, ENGINEERING DIVISION.
2. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE CITY 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 PROTECT ANY AND ALL UNDERGROUND UTILITIES.
3. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH PROPOSED WORK, THE TYPE, LOCATION, ELEVATION, AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE CITY ENGINEER FOR RESOLUTION OF THE CONFLICT.
4. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
5. THE TERM "PROPOSED" (PROP.) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS OR WHERE APPLICABLE, AND APPROVED BY THE CITY ENGINEER, RE-USE EXISTING MATERIALS SUCH AS THOSE IDENTIFIED AS "REMOVE AND RESET" (R&R).
6. THE CONTRACTOR SHALL NOT ALLOW DEWATERING TO BE DIRECTLY DISCHARGED INTO WETLANDS. SEDIMENTATION BASINS SHALL BE CONSTRUCTED AS NECESSARY. NO WORK SHALL TAKE PLACE UNTIL SUCH SUE TO SILT SACS HAVE BEEN PLACED/INSTALLED IN EXISTING CATCH BASINS AND APPROVED BY THE CITY ENGINEER.
7. CONTRACTOR IS RESPONSIBLE FOR THE PROPER REMOVAL AND DISPOSAL OF ALL EXCESS MATERIALS SUCH AS PIPES AND SIGNS NOT PROPOSED FOR REUSE ON THIS PROJECT AT NO ADDITIONAL COST TO THE OWNER.
8. IT IS CRITICAL THAT THE CONTRACTOR STAY WITHIN THE RIGHT-OF-WAY LAYOUT OR LIMIT OF WORK AS SHOWN ON THE DRAWINGS.
9. UTILITY SERVICE CONNECTIONS TO HOUSES AND BUSINESSES ARE NOT SHOWN OR ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING REPAIRS MADE TO ANY UTILITY SERVICES DISTURBED DURING EXCAVATION AT NO ADDITIONAL COMPENSATION.
10. GAS MAINS AND TELEPHONE LINES ARE ASSUMED TO HAVE 3 FEET OF COVER UNLESS NOTED OTHERWISE. WATER MAINS ARE ASSUMED TO HAVE 5 FEET OF COVER UNLESS NOTED OTHERWISE. IT IS NOT WARRANTED THAT ALL UTILITIES ARE SHOWN OR THAT THEY ARE PLACED AT THESE ASSUMED DEPTHS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE RELOCATION OF ANY CONFLICTING UTILITIES WITH THE RESPECTIVE UTILITY COMPANY. RELOCATION OF UTILITIES AND/OR THEIR RELOCATION TO ACCOMMODATE THE NEW WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. FOR THE COST INFORMATION CONCERNING RELOCATION OF UTILITIES SEE SPECIFICATIONS GENERAL CONDITIONS 55.4 NOTICE TO UTILITIES.
11. ALL EXISTING STATE, COUNTY, CITY, AND TOWN LINES AND PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATION ARE NOT GUARANTEED.
12. ALL UNDERGROUND UTILITY WORK MUST BE COMPLETED AND TEMPORARILY PAVED AT THE END OF EACH WEEK OR PRIOR TO ANY RAIN EVENTS UNLESS OTHERWISE APPROVED BY THE ENGINEER.
13. THE CONTRACTOR SHALL PROVIDE FOR SAFE AND ORDERLY PASSAGE OF VEHICULAR AND PEDESTRIAN TRAFFIC IN AREAS UNDER CONSTRUCTION.
14. THE CONTRACTOR SHALL COORDINATE ALL ARRANGEMENTS FOR THE ALTERATION AND/OR ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE, AND ANY OTHER PRIVATE UTILITY.
15. ALL EROSION CONTROLS MUST BE CHECKED/REPAIRED, AND ANY SILTATION REMOVED AFTER EACH RAIN EVENT.
16. NO EQUIPMENT, VEHICLE, OR CONSTRUCTION MATERIALS SHALL BE STORED OUTSIDE OF THE DESIGNATED WORK AREAS DURING EITHER WORKING OR NON-WORKING HOURS. THE LOCATION FOR ANY STORAGE OF EQUIPMENT BY THE CONTRACTOR DURING NON-WORKING HOURS SHALL BE APPROVED BY THE CITY.
17. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING PROPER AND ADEQUATE TRENCH SHORING AND BRACING AT ALL TIMES IN ACCORDANCE WITH RECOMMENDED/REQUIRED SAFETY STANDARDS
18. ALL EXISTING CONCRETE, HMA MAKS OR PAVERS TO ABUTTING PROPERTIES SHALL BE REMOVED AND REPLACED IN KIND A REQUIRED TO TRANSITION TO PROPOSED GRADES.
19. BACKFILL SHALL BE UNIFORMLY DISTRIBUTED IN SUCCESSIVE LAYERS, EACH LAYER BEING THOROUGHLY COMPACTED BEFORE SUCCEEDING LAYER IS PLACED. THE ENTIRE WIDTH OF THE TRENCH SHALL BE MECHANICALLY OR HAND TAMPED IN SIX (6) INCH MINIMUM OF TWO (2) FEET ABOVE UTILITY INSTALLATION, AND MECHANICALLY TAMPED THE REMAINDER OR THE FILL IN LIFT DEEPER GREATER THAN SIX (6) INCHES. THE TOP LAYER OF BACKFILL SHALL BE FOURTEEN (14) INCHES (IN A TEMPORARY TRENCH), AN TWELVE (12) INCHES (IN A PERMANENT TRENCH) OF GRAVEL COMPACTED TO 97% OF MAXIMUM DENSITY.
20. ALL STRUCTURES TO BE REMODELED UNLESS OTHERWISE NOTED.
21. ALL SEEDING WORK SHALL BE CARRIED OUT BY AN APPROVED SPRAYING MACHINE SPECIFICALLY USED FOR THIS WORK AND PLACED BY HAND.
22. ALL DRIVEWAYS SHALL BE SAW-CUT AT BLENDING LIMITS SHOWN, OR AS DIRECTED BY THE ENGINEER.
23. THE SURFACE OF CEMENT CONCRETE SIDEWALK AND PEDESTRIAN CURB RAMP PANELS SHALL BE BROOM FINISHED AND BORN WITH A 1.5" FINISHING TROWEL.
24. MULCH FOR BLENDING DISTURBED AREAS SHALL MATCH EXISTING.
25. ROADWAY GRADE TO BE ADJUSTED TO ENSURE SIDEWALKS MEET ADA REQUIREMENTS
26. SIDEWALK CROSS SLOPES SHALL BE AS SHOWN ON PROPOSED TYPICAL SECTIONS.
27. ALL SERVICE BOXES TO BE ADJUSTED UNLESS OTHERWISE NOTED.
28. ALL CASTINGS TO BE REMOVED & DISCARDED AND REPLACED UNLESS OTHERWISE NOTED.

DEPARTMENT OF
PUBLIC
WORKS

REVISIONS

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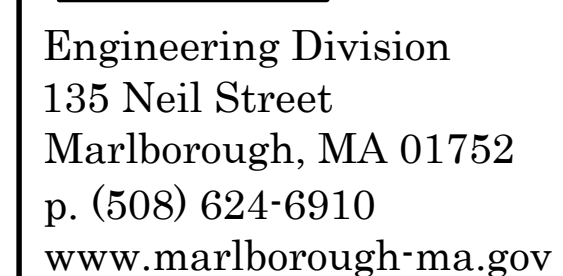
Drawn By: AS Designed By: AS Checked By: MLD Approved By: TD

RECONSTRUCTION OF SPRING STREET AND APPURTENANT WORK

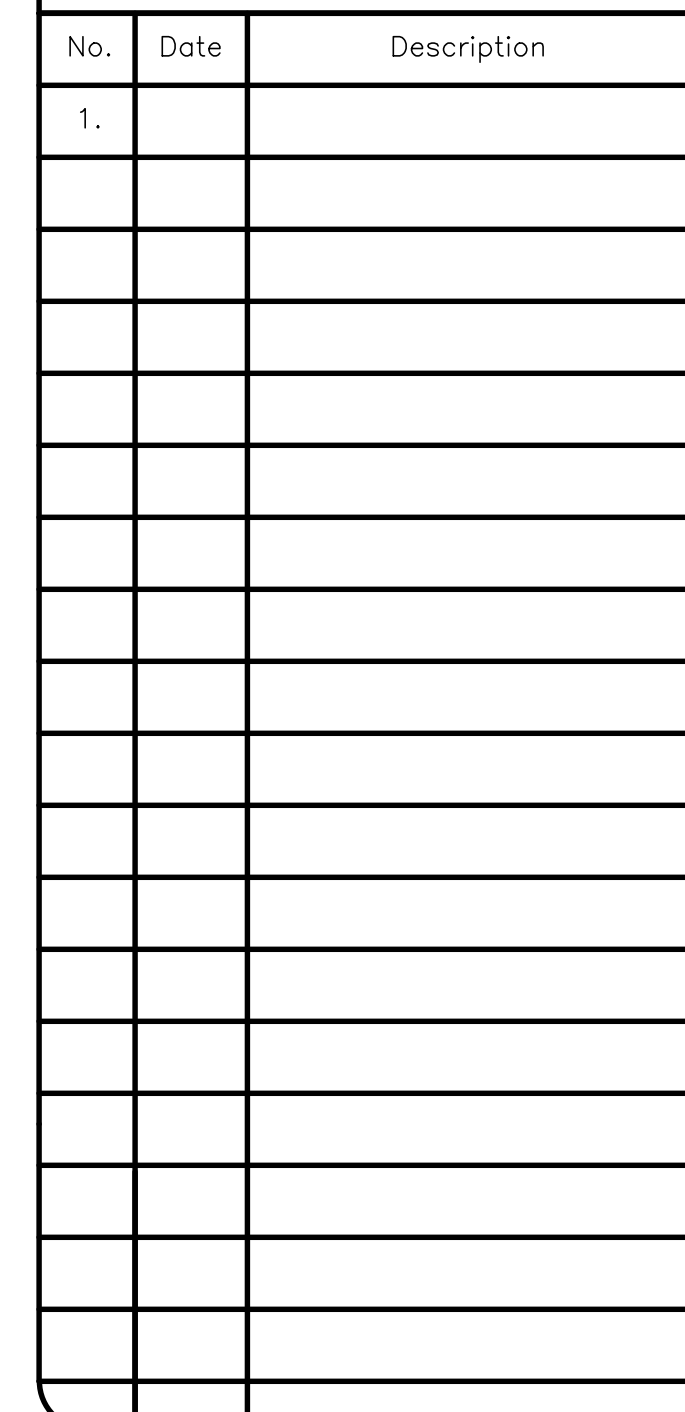
CONSTRUCTION NOTES AND LEGENDS

Scale: N.T.S.

2



STA 0+00 TO STA. 3+30
STA 8+00 TO STA. 10+00
N.T.S



Project Title:

RECONSTRUCTION OF
SPRING STREET AND
APPURTENANT WORK

Sheet Title:

SPRING STREET TYPICAL SECTIONS

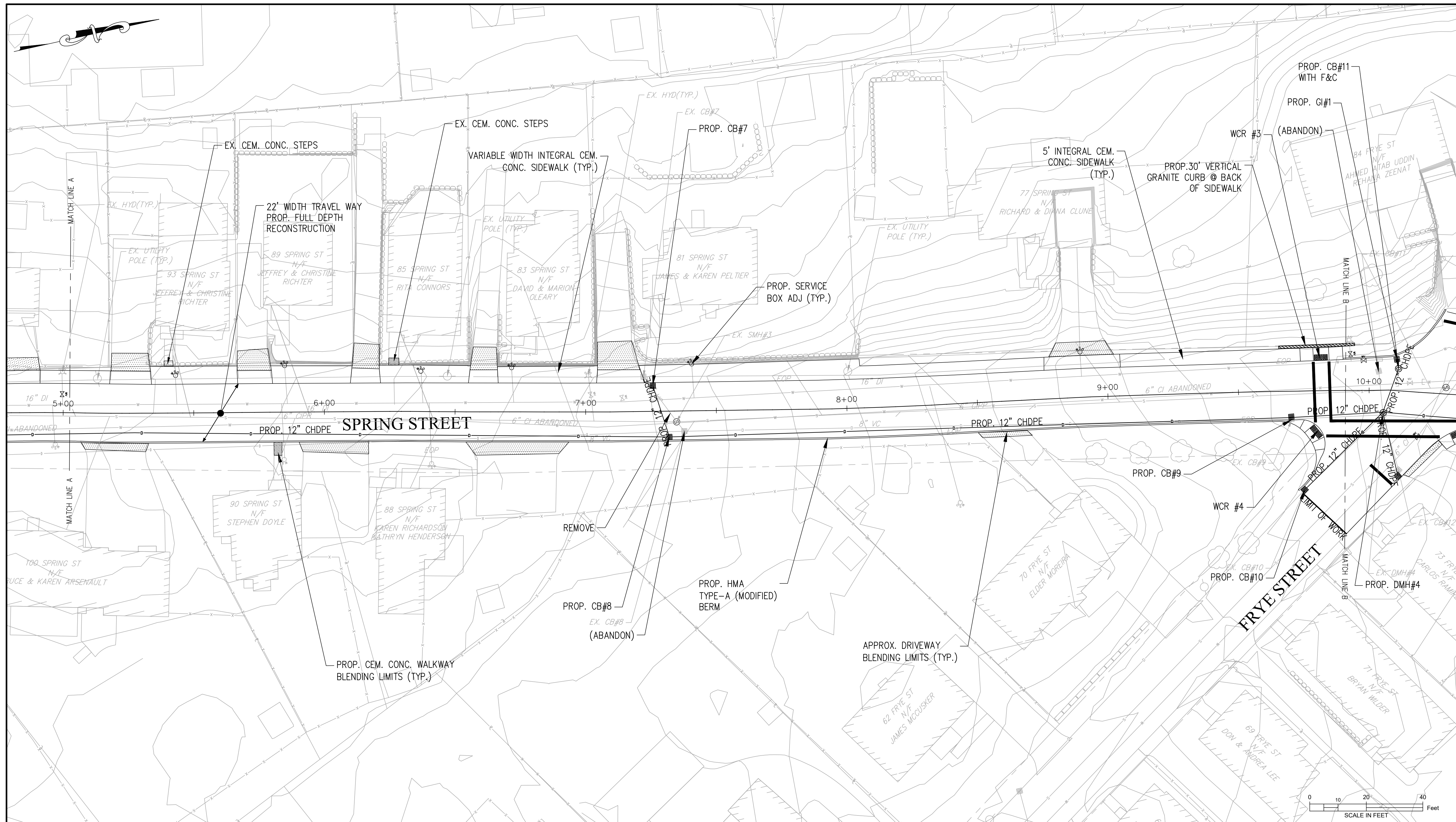
Contract No:
ED-2023-16

Date: 7/26/2023

Scale: N.T.S.

Sheet No.:

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1. CEMENT CONC. HMA & BRICK WALKWAY BLENDING LIMITS ARE APPROXIMATE ON THE PLAN AND WILL BE FIELD DETERMINED BY THE ENGINEER.
2. THE SURFACE OF CEMENT CONCRETE SIDEWALK AND WHEELCHAIR RAMPS PANELS SHALL BE BROOM FINISHED AND BORDERED WITH A 1.5" FINISHING TROWEL.
3. ALL GRASS SEED SHALL SPREAD USING A HYDRO-MULCHING MACHINE APPROVED BY THE CITY ENGINEER AND NOT PLACED BY HAND.
4. DRIVEWAY SAWCUT AND BLENDING LIMITS ARE APPROXIMATE ON THE PLAN AND WILL BE FIELD DETERMINED BY THE CITY'S ENGINEER.
5. ALL CASTING TO BE REMOVED & DISCARDED AND REPLACED UNLESS OTHERWISE NOTED.
6. ALL SEWER & DRAINAGE STRUCTURES ARE TO BE REMODELED UNLESS OTHERWISE NOTED.
7. ALL PIPES @ STRUCTURES TO BE ABANDONED SHALL BE PLUGGED.
8. ALL EX. DRAIN PIPES OUTSIDE OF PROPOSED TRENCH LIMITS TO BE REMOVED.

[illegible]

MANHOLE & CATCH BASIN STRUCTURE TABLES

SPRING STREET – SHEET 1

STRUCTURE ID	STATION	RIM ELEV.	INV.	INV. IN ELEV.	INV. OUT ELEV.	REMARKS
PROP. CB#1	ELM ST	535.87			(DMH#1) 531.87	
EX. CB#1	ELM ST	535.87			(DMH#1) 531.87	
PROP. DMH#1	0+11.34	534.56		(ELM ST) 530.68 (CB#1) 530.72	(CB#2) 530.01	
EX. DMH#1	0+30.20	534.56		(ELM CB) 530.68 (CB#1) 530.72	(CB#2) 530.01	
PROP. CB#2	0+57.34	530.05		(DMH#1) 527.94	(CB#3) 526.81	
EX. CB#2	0+57.34	530.05		(DMH#1) 527.94	(CB#3) 526.81	
PROP. CB#3	1+75.50	527.36		(CB#2) 524.76	(DMH JONAS) 524.36	
EX. CB#3	1+75.50	527.36		(CB#2) 524.76	(DMH JONAS) 524.36	
PROP. CB#4	1+94.37	527.10			(DMH#2) 525.15	
EX. CB#4	1+97.16	527.10			(DMH#2) 525.15	
EX. DMH#2	2+00.05	527.37		(CB#4) 523.57	(DMH JONAS) 524.37	
PROP. DMH#2	2+00.95	527.37		(CB#4) 523.57	(DMH JONAS) 524.37	
EX. DMH JONAS	2+00.95	527.05		(CB#3) 523.60 (DMH#2) 523.05	(JONAS) 522.75	
EX. SMH#1	2+85.88	526.73		(UNK) 519.75 (SS#104) 523.28	(SMH#2) 520.09	
PROP. CB#5	3+69.35	526.32			(CB#6) 522.20	
EX. CB#5	3+70.19	526.32			(CB#6) 522.48	
PROP. CB#6	3+87.96	526.03		(CB#5) 521.80	(DMH#3) 521.71	
EX. CB#6	3+88.20	526.03		(CB#5) 522.3	(CB#8) 522.15	
EX. SMH#2	4+10.46	526.46		(SMH#1) 519.46	(SMH#3) 519.44	
PROP. DMH#3	4+22.58	526.46		(CB#6) 521.08	(CB#8) 520.98	

SPRING STREET – SHEET 2

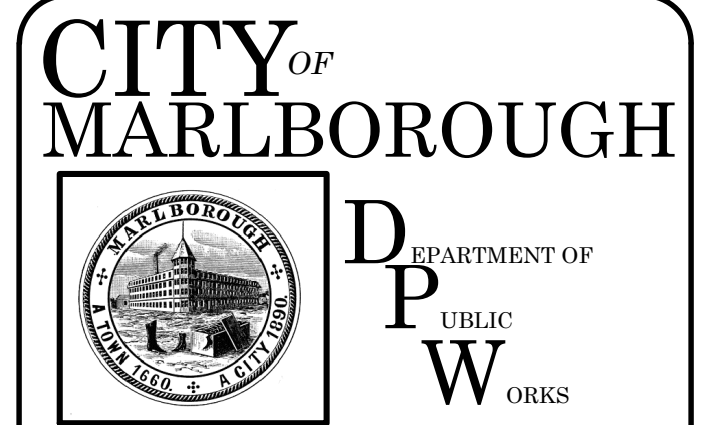
STRUCTURE ID	STATION	RIM ELEV.	INV.	INV. IN ELEV.	INV. OUT ELEV.	REMARKS
EX. CB#7	7+22.30	519.93			(CB#8) 516.6	
PROP. CB#7	7+26.34	519.93			(CB#8) 515.81	
EX. SMH#3	7+34.66	519.74		(SMH#2) 512.04	(SMH#4) 511.99	
PROP. CB#8	7+31.51	519.74		(DMH#3) 515.44 (CB#7) 515.52	(CB#9) 515.34	
EX. CB#8	7+37.39	519.55		(CB#6) 516.44 (CB#7) 516.44	(CB#9) 516.44	
PROP. CB#9	9+69.51	510.73		(CB#8) 506.23	(DMH#4) 506.13	
EX. CB#9	9+69.79	510.73		(CB#8) 506.91	(DMH#4) 506.57	
PROP. CB#10	9+74.64	510.61			(DMH#4) 506.46	
EX. CB#10	9+74.64	510.61				

SPRING STREET - SHEET 3

STRUCTURE ID	STATION	RIM ELEV.	INV.	INV. IN ELEV.	INV. OUT ELEV.	REMARKS
EX. CB#11	10+03.70	509.69			(DMH#4) 505.19	
EX. DMH#4	10+05.18	509.51				DMH PAVE OVER
PROP. DMH#4	10+05.18	508.83		(CB#9) 504.13 (CB#11) 504.23 (CB#12) 504.53 (CB#10) 504.58	(CB#13) 504.08	6 FT DIA. DMH STRUCTURE
PROP. GI#1	10+10.54	509.69			(CB#11) 507.19	
PROP. CB#11	10+11.26	509.69		(GI#1) 507.09	(DMH#4) 505.19	F&C
EX. CB#12	10+10.32	509.22			(DMH#4) 505.60	
PROP. CB#12	10+11.39	509.22			(DMH#4) 505.07	
EX. SMH#4	10+29.15	508.83		(SMH#3) 501.45 (FRYE) 502.73	(SMH#5) 501.43 (FRYE) 501.47	
PROP. CB#13	11+39.91	504.17		(DMH#4) 499.57	(CB#15) 499.37	
EX. CB#13	11+41.02	504.17		(DMH#4) 500.09	(CB#15) 499.79	
EX. SMH#5	11+89.59	503.49		(SMH#4) 498.74	(SMH#6) 498.79	
EX. CB#14	12+82.79	502.00			(CB#15) 497.52	
PROP. CB#14	12+83.62	502.00			(CB#15) 497.52	
EX. CB#15	12+84.16	501.38		(CB#13) 496.10 (CB#14) 496.02 (CB#17) 496.50	(17 SPRING ST) 495.16	F&G TO F&C
EX. CB#15	12+84.16	501.38		(CB#13) 496.1 (CB#14) 496.02 (CB#16) 496.48 (GI#2) 498.78	(17 SPRING ST) 495.16	F&G TO F&C
PROP. GI#2	12+84.99	501.38			(CB#15) 498.88	
PROP. CB#16	13+35.77	501.66		(GI#3) 499.06 (CB#17) 497.20 (CB#18) 496.89	(CB#15) 496.86	F&C
PROP. GI#3	13+35+87	501.66			(CB#16) 499.16	
EX. CB#16	13+36.41	501.66		(CB#18) 497.8	(CB#15) 497.66	
EX. CB#17	13+57.86	500.51		(EX. CB#16) 498.55	(CB#16) 498.45	
EX. CB#17	13+57.86	500.51		(EX. CB#16) 498.55	(CB#16) 498.45	
PROP. CB#18	14+13.19	501.72		(GI#4) 499.12 (CB#19) 497.47	(CB#16) 497.05	F&C
PROP. GI#4	14+13.19	501.72			(CB#18) 499.22	
EX. CB#18	14+24.71	501.72		(CB#19) 498.55	(CB#16) 498.45	

SPRING STREET – SHEET 4

STRUCTURE ID	STATION	RIM ELEV.	INV.	INV. IN ELEV.	INV. OUT ELEV.	REMARKS
PROP. CB#19	14+39.83	501.7			(CB#18) 497.65	
EX. CB#19	14+48.28	501.7			(CB#18) 499.36	



Engineering Division
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Marlborough, MA 01752
p. (508) 624-6910
www.marlborough-ma.gov

REVISIONS

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Drawn By: AS Designed By: AS Checked By: MJD Approved By: TD

Project Title:

RECONSTRUCTION OF SPRING STREET AND APPURTENANT WORK

Sheet Title:

SPRING STREET DRAINAGE DESIGN TABLES

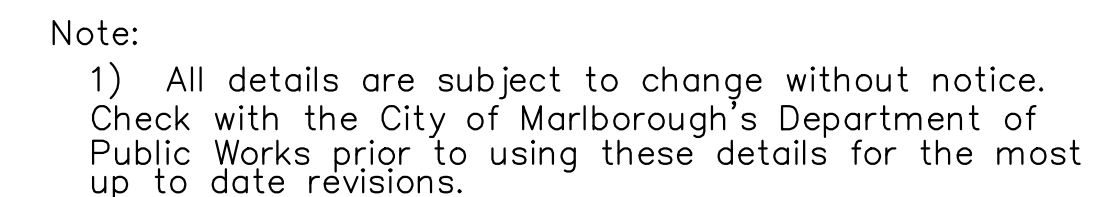
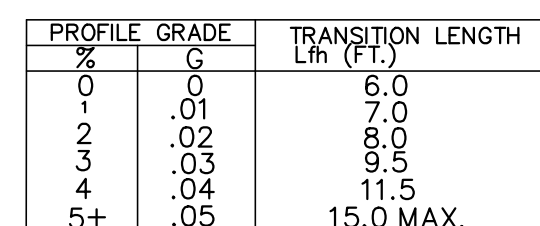
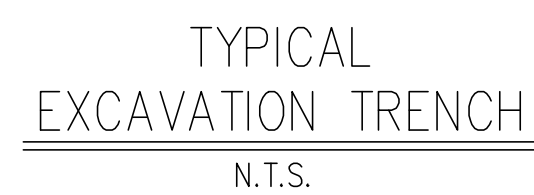
Contract No:
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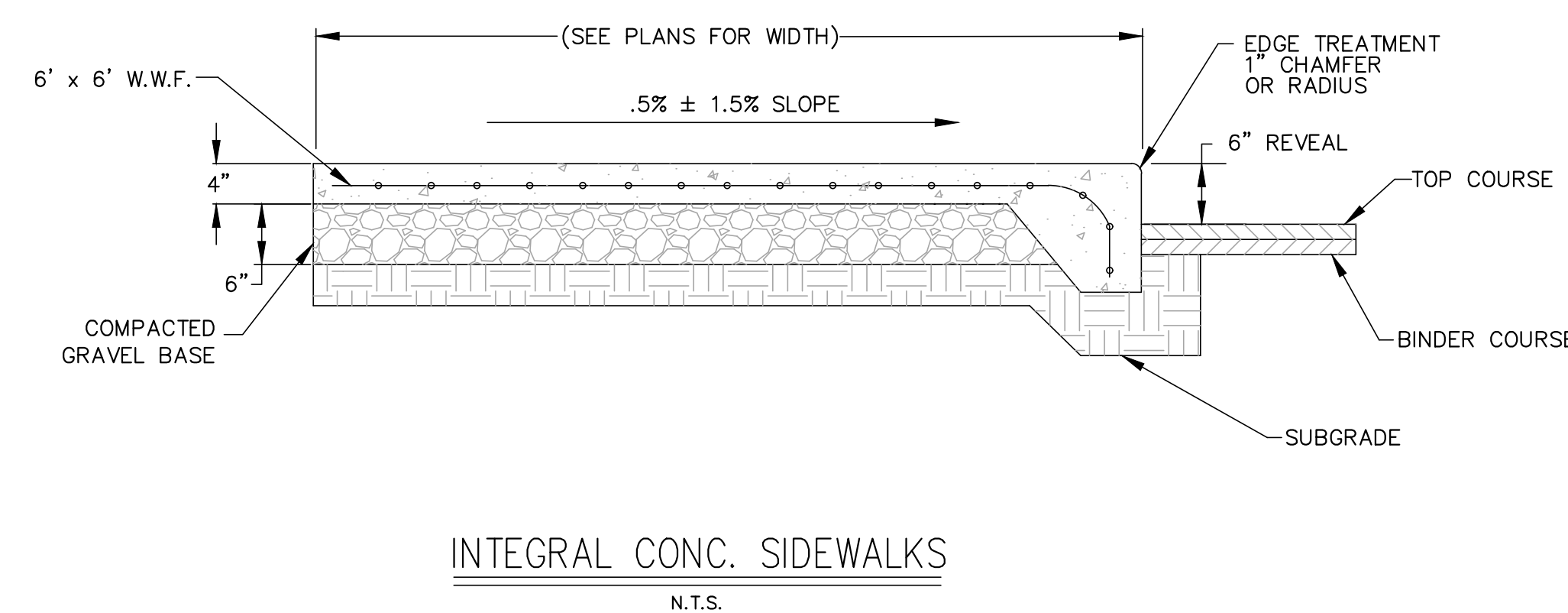
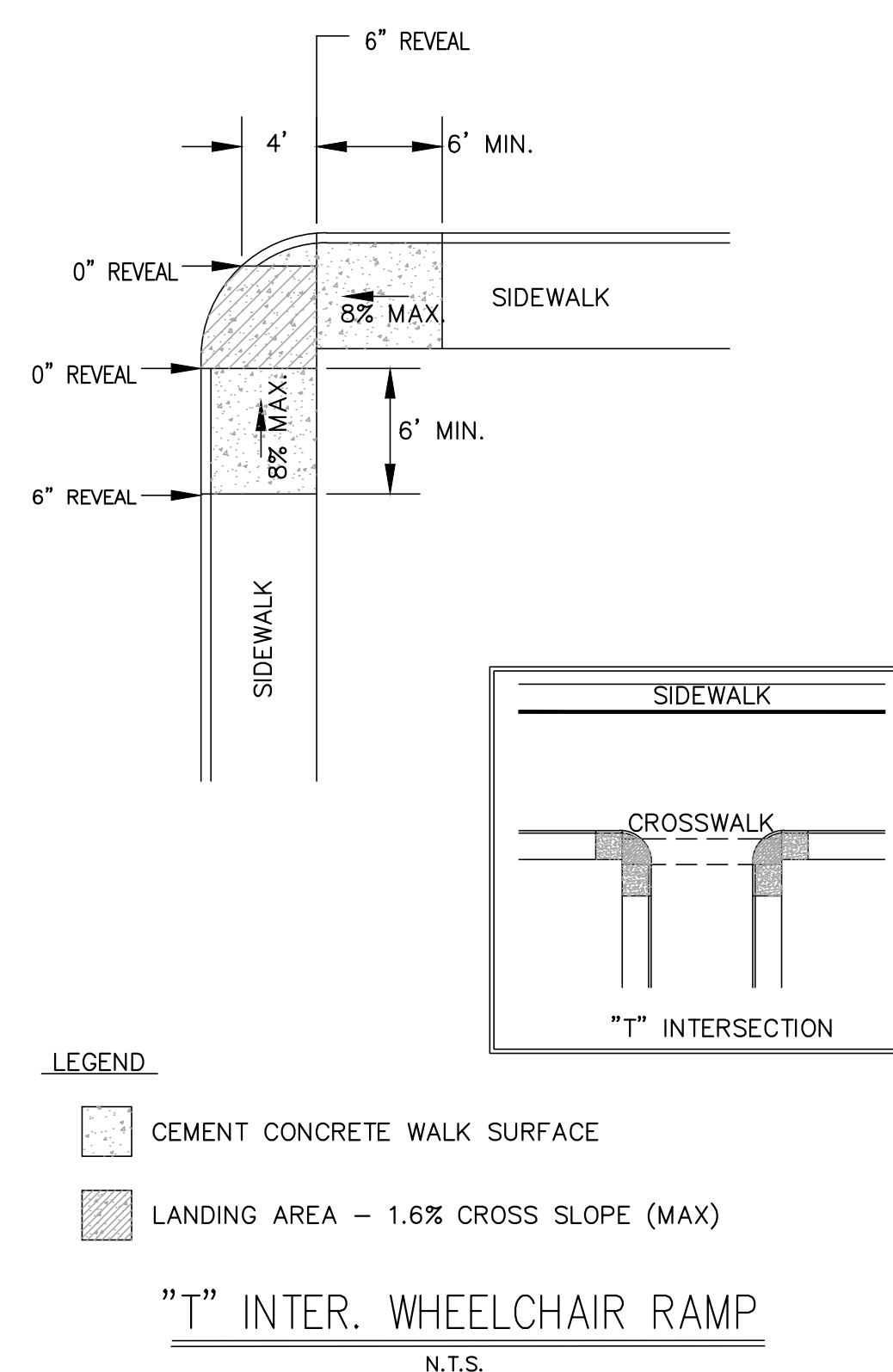
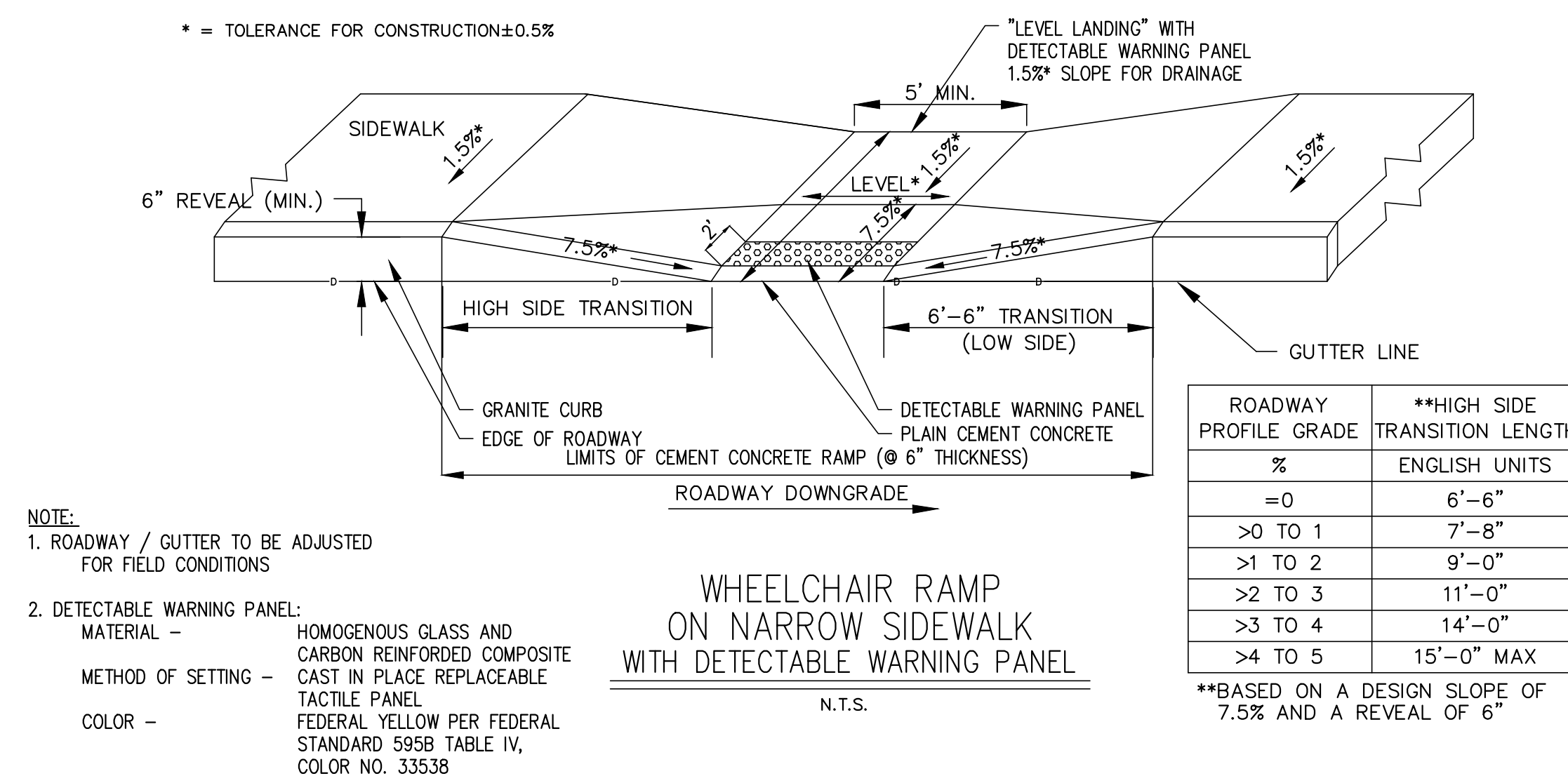
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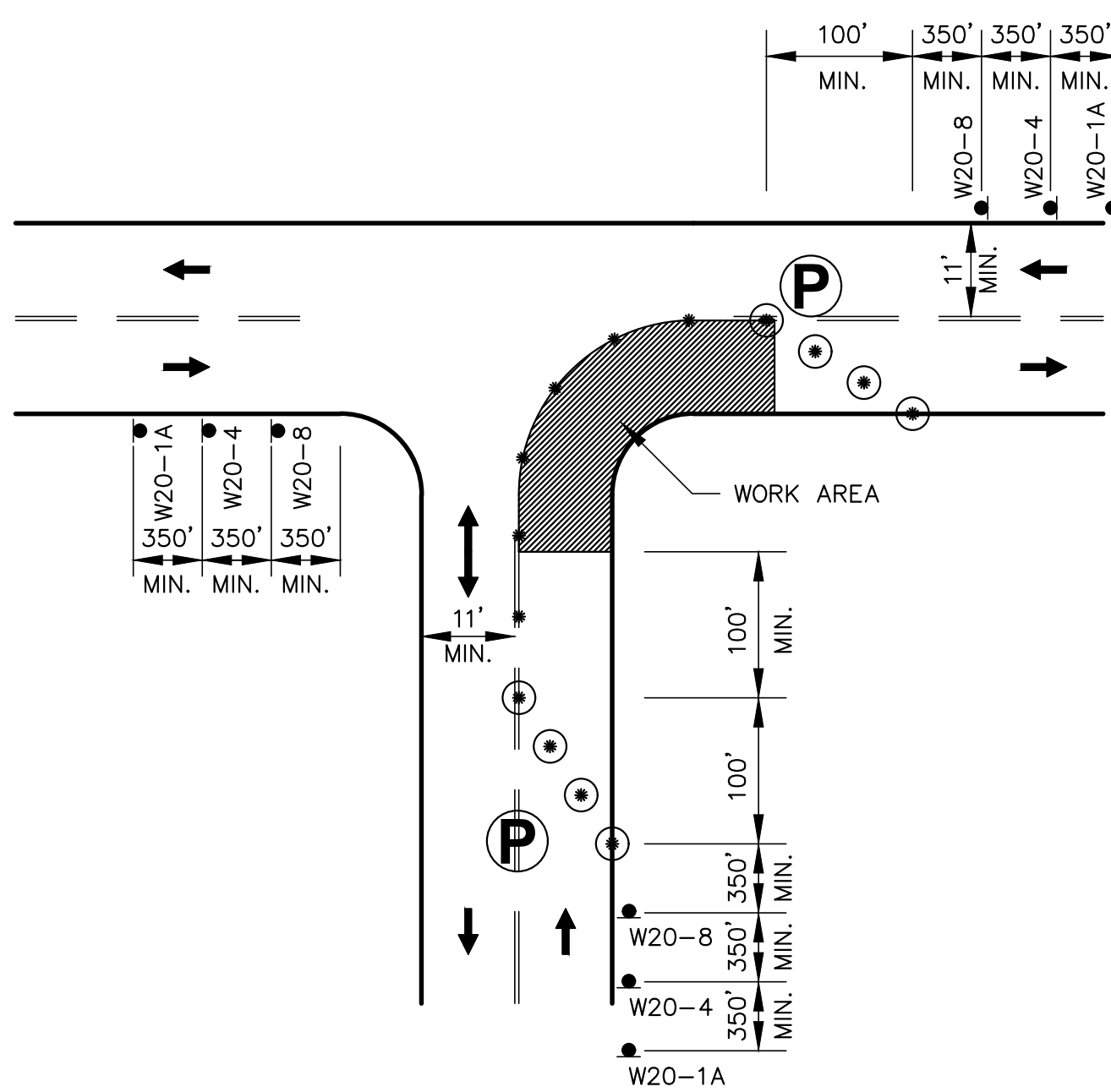
TYPICAL DETAILS

Contract No: ED-2023-16	Sheet No.: 10
Date: 07/26/2023	
Scale: N.T.S.	



IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS			COLOR			UNIT AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW	BACK- GROUND	LEGEND	BORDER	
W20-1D	48"	48"		MUTCD STANDARD DETAIL			MUTCD STANDARD DETAIL			16.0
W20-1A	48"	48"								16.0
W20-1B	48"	48"								16.0
W20-1C	48"	48"								16.0
W20-4	48"	48"								16.0
W20-7b	48"	48"								16.0
W20-8	48"	48"								16.0
G20-2	36"	18"								4.5
R11-2	48"	30"								10.0
W5-1	48"	48"								16.0
W1-4L	30"	30"								6.25
W1-4R	30"	30"								6.25
M4-8A	24"	18"								3.0
M4-9L	30"	24"								5.0
M4-9R	30"	24"								5.0
M4-9V	30"	24"								5.0
W20-2	48"	48"								16.0

SINGLE DIRECTION TRAFFIC FLOW ARROW		LANE DELINEATOR	
DOUBLE DIRECTION TRAFFIC FLOW ARROW		CONE	
TRAFFIC MANAGEMENT SIGN		POLICE DETAIL	
TRAFFIC BARREL / DRUM		SPECIAL LIGHTING UNIT	
CHANGEABLE MESSAGE SIGN		PROPOSED WORK AREA	



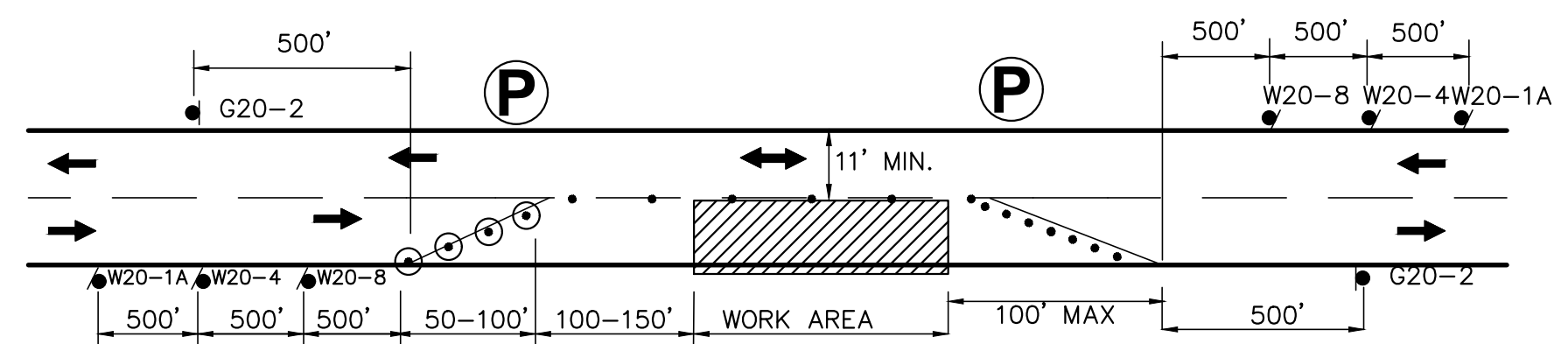
NOTE:

1. ADVANCE WARNING SIGN PLACEMENT TO BE ADJUSTED AS NECESSARY.
2. ALL DRUMS AND CONES TO BE SPACED @ 20' O.C.

The diagram shows a cross-section of a beam with a central gap. A vertical line on the left is labeled 'W20-1D'. A horizontal line at the top is labeled 'N.T.S.'. A horizontal line at the bottom is labeled 'TEMPORARY STEEL PLATE'. A vertical line on the right is labeled 'LIMIT OF STEEL PLATE'. A horizontal dimension line between the vertical lines is labeled '100\''. A hatched rectangular area is shown on the right side of the gap, with an arrow pointing to it from the label 'TEMPORARY STEEL PLATE'.

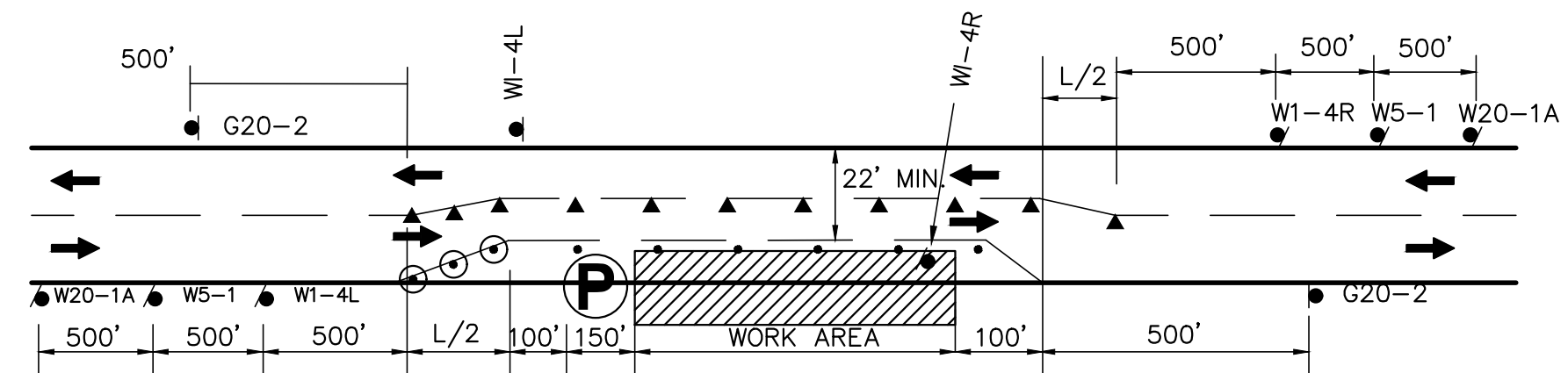
N.T.S.

1. ALL CONSTRUCTION SIGNING, DRUMS, BARRICADES AND OTHER DEVICES SHALL CONFORM WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AS AMENDED.
2. ALL DRUMS SHALL BE APPROXIMATELY PLACED AND MOVED AS NECESSARY TO MAINTAIN ADEQUATE ABUTTER ACCESS AT ALL TIMES. 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.
3. THE CONTRACTOR SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT AND SIMILAR OPERATIONS.
4. DURING WORK IN INTERSECTIONS A MINIMUM OF ONE LANE OF ALTERNATING TRAFFIC SHALL BE ALLOWED TO PASS AT ALL TIMES. (POLICE DETAILS SHALL BE PRESENT DURING THIS WORK.)
5. GRADE SEPARATIONS IN EXCESS OF 2" DURING NON-WORKING HOURS WILL REQUIRE DELINEATION BY USE OF DRUMS.
6. EXCAVATION EDGES IN EXCESS OF 4" DEEP SHALL BE PROTECTED DURING NON-WORKING HOURS BY BACKFILLING WITH A WEDGE OF GRAVEL OR SOIL TO COMPACTED 4:1 SLOPE.
7. 11' MINIMUM TRAVEL LANE WIDTHS SHALL BE MAINTAINED AT ALL TIMES.
8. NON-ESSENTIALS TRAFFIC CONTROL DEVICES SHALL BE COVERED OR REMOVED DURING NON-WORKING HOURS.
9. TRAFFIC MANAGEMENT SHALL INCLUDE CONSIDERATIONS FOR PEDESTRIANS ACCESS AT ALL TIMES.
10. NO SIGNAGE SHALL BE INSTALLED ON UTILITY POLES OR OTHER PRIVATE PROPERTY UNLESS CONTRACTOR RECEIVES WRITTEN PERMISSION FROM OWNER AND PROVIDES A COPY OF SAID AGREEMENT TO THE ENGINEER.
11. SPECIFIC SIGNAGE SHALL BE USED WHEN TEMPORARY TRENCH PLATES ARE INSTALLED. (SEE DETAIL ON THIS SHEET).
12. TRAFFIC MANAGEMENT PLAN REPRESENTS MINIMUM REQUIREMENTS. CONTRACTOR TO BE SOLELY RESPONSIBLE FOR TRAFFIC MANAGEMENT AND SAFETY IN WORK ZONE AREAS. DETOUR SHALL ONLY BE ESTABLISHED AND/OR ALTERED BY WITH THE APPROVAL OF THE ENGINEER.
13. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE RESPECTIVE PUBLIC SERVICE CORPORATIONS OR OFFICIALS OF THEIR INTENTIONS AT LEAST ONE WEEK IN ADVANCE OF THE COMMENCEMENT OF OPERATIONS. THE CONTRACTOR MAY HAVE TO COORDINATE ON A DAILY BASIS IF THE DETOUR OR WORK ZONES HAVE CHANGED. FOR A LIST OF SAID CORPORATIONS PLEASE SEE THE CONTRACT DOCUMENTS "GENERAL CONDITIONS".



N.T.S.

NOTE: THIS DETAIL SHOWS A RIGHT LANE CLOSURE DETAIL. THIS DETAIL CAN ALSO BE USED FOR LEFT LANE CLOSURES, WITH THE SIGN PLACEMENT REVERSED AS APPROPRIATE.



N.T.S.

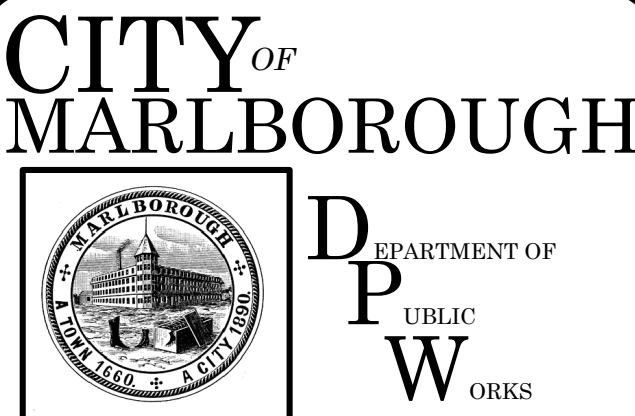
NOTE: THIS DETAIL SHOWS A RIGHT LANE CLOSURE DETAIL. THIS DETAIL CAN ALSO BE USED FOR LEFT LANE CLOSURES, WITH THE SIGN PLACEMENT REVERSED AS APPROPRIATE.

L=WS²/60 (FEET) FOR 40 MPH OR LESS
L=WS FOR 45 MPH OR MORE

W=WIDTH OF OFFSET (FT)
S= POSTED SPEED LIMIT (MPH)

N.T.S.

ALL DRUMS AND SIGNS ARE SHOWN AS THEY SHOULD APPEAR DURING THE WORKING DAY, OR WHILE OPERATING IN THE WORK ZONE.



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Drawn By: AS Designed By: AS Checked By: MLD Approved By: TD

Project Title:

RECONSTRUCTION OF SPRING STREET AND APPURTENANT WORK

Sheet Title:

TRAFFIC MANAGEMENT

Contract No:
ED-2023-16

Date: 07/26/2023

Scale: N.T.S.

Sheet No.:

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