MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

GREENFIELD CHEAPSIDE STREET / MONTAGUE CITY ROAD			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	1	102
PROJECT FILE NO.		609202	

TITLE SHEET & INDEX

PLAN AND PROFILE OF

RESURFACING AND RELATED WORK ON

CHEAPSIDE STREET / MONTAGUE CITY ROAD

IN THE CITY OF

GREENFIELD

FRANKLIN COUNTY

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.

75% SUBMITTAL

INDEX

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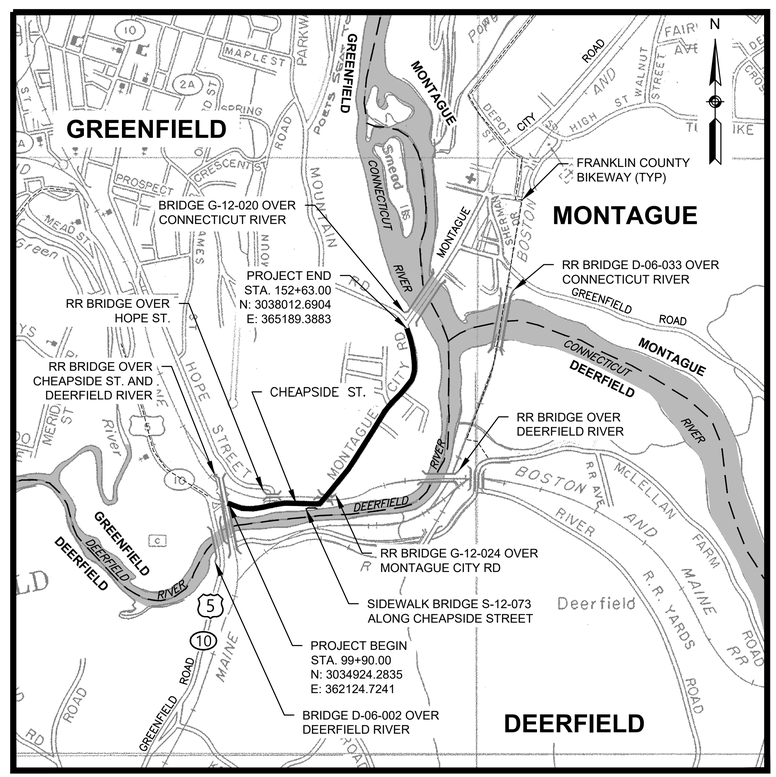

0 1500 3000 4500 6000

SCALE: 1" = 1500'

LENGTH OF PROJECT = 5537.44 FEET = 1.049 MILES

DESIGN DESIGNATION (MONTAGUE CITY ROAD)

DESIGN SPEED	35 MPH
ADT (2019)	6,040
ADT (2039)	7,370
K	10%
D	58%
T (PEAK HOUR)	N/A
T (AVERAGE DAY)	N/A
DHV	737
DDHV	427
FUNCTIONAL CLASSIFICATION	URBAN MINOR ARTERIAL

DATE	DESCRIPTION	REV #
07/28/2021	25% SUBMISSION	1

massDOT
Massachusetts Department of Transportation
Highway Division

APPROVED

CHIEF ENGINEER **DATE**

609202_HD01(TITLE-LEGEND).DWG Plotted on 9-Nov-2022 8:54 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
		CABLE MANHOLE
		DRAINAGE MANHOLE
		ELECTRIC MANHOLE
		GAS MANHOLE
		MISC MANHOLE
		SEWER MANHOLE
		TELEPHONE MANHOLE
		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
100 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
		HAY BALES/SILT FENCE
		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

TRAFFIC SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
1	1	CONTROLLER PHASE ACTUATED
		TRAFFIC SIGNAL HEAD (SIZE AS NOTED)
		WIRE LOOP DETECTOR (6' x 6' TYP UNLESS OTHERWISE SPECIFIED)
		VIDEO DETECTION CAMERA
		MICROWAVE DETECTOR
		PEDESTRIAN PUSH BUTTON, SIGN (DIRECTIONAL ARROW AS SHOWN) AND SADDLE
	*	EMERGENCY PREEMPTION CONFIRMATION STROBE LIGHT
		VEHICULAR SIGNAL HEAD
		VEHICULAR SIGNAL HEAD, OPTICALLY PROGRAMMED
		FLASHING BEACON
		PEDESTRIAN SIGNAL HEAD, (TYPE AS NOTED OR AS SPECIFIED)
RRSG	RRSG	RAILROAD SIGNAL
OR		SIGNAL POST AND BASE (ALPHA-NUMERIC DESIGNATION NOTED)
	20'	MAST ARM, SHAFT AND BASE (ARM LENGTH AS NOTED)
		HIGH MAST POLE OR TOWER
		SIGN AND POST
		SIGN AND POST (2 POSTS)
	20'	MAST ARM WITH LUMINAIRE
		OPTICAL PRE-EMPTION DETECTOR
		CONTROL CABINET, GROUND MOUNTED
		CONTROL CABINET, POLE MOUNTED
		FLASHING BEACON CONTROL AND METER PEDESTAL
		LOAD CENTER ASSEMBLY
		PULL BOX 12"x12" (OR AS NOTED)
		ELECTRIC HANDHOLE 12"x24" (OR AS NOTED)
		TRAFFIC SIGNAL CONDUIT

PAVEMENT MARKINGS SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		PAVEMENT ARROW - WHITE
ONLY	ONLY	LEGEND "ONLY" - WHITE
	SL	12" STOP LINE
	CW	CROSSWALK
	SWL	6" SOLID WHITE LINE
	SYL	6" SOLID YELLOW LINE
	BWL	6" BROKEN WHITE LINE (10' LINE, 30' SPACE)
	BYL	6" BROKEN YELLOW LINE (10' LINE, 30' SPACE)
	DWL	6" DOTTED WHITE LINE (3' LINE, 9' SPACE)
	DYL	6" DOTTED YELLOW LINE (3' LINE, 9' SPACE)
	DWLEx	6" DOTTED WHITE LINE EXTENSION (2' LINE, 6' SPACE)
	DYLEx	6" DOTTED YELLOW LINE EXTENSION (2' LINE, 6' SPACE)
	DBWL	6" DOUBLE WHITE LINE
	DBYL	6" DOUBLE YELLOW LINE

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
CIP	CAST IRON PIPE
CIT	CHANGE IN TYPE
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
PCR	PEDESTRIAN CURB RAMP
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

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

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LEGEND & ABBREVIATIONS

ABBREVIATIONS (cont.)

GENERAL

PVMT	PAVEMENT
PWW	PAVED WATERWAY
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
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
TYP	TYPICAL
UP	UTILITY POLE
VAR	VARIES
VERT	VERTICAL
VC	VERTICAL CURVE
WG	WATER GATE
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN
X-SECT	CROSS SECTION

TRAFFIC SIGNAL ABBREVIATIONS

CAB	CABINET
CCVE	CLOSED CIRCUIT VIDEO EQUIPMENT
DW	STEADY UPRAISED HAND
FDW	FLASHING UPRAISED HAND
FR	FLASHING CIRCULAR RED
FRL	FLASHING RED LEFT ARROW
FRR	FLASHING RED RIGHT ARROW
FY	FLASHING CIRCULAR YELLOW
FYL	FLASHING YELLOW LEFT ARROW
FYR	FLASHING YELLOW RIGHT ARROW
G	STEADY CIRCULAR GREEN
GL	STEADY GREEN LEFT ARROW
GR	STEADY GREEN RIGHT ARROW
GSL	STEADY GREEN SLASH LEFT ARROW
GSR	STEADY GREEN SLASH RIGHT ARROW
GV	STEADY GREEN VERTICAL ARROW
OL	OVERLAP
PED	PEDESTRIAN
PTZ	PAN, TILT, ZOOM
R	STEADY CIRCULAR RED
RL	STEADY RED LEFT ARROW
RR	STEADY RED RIGHT ARROW
TR SIG	TRAFFIC SIGNAL
TSC	TRAFFIC SIGNAL CONDUIT
W	STEADY WALKING PERSON
Y	STEADY CIRCULAR YELLOW
YL	STEADY YELLOW LEFT ARROW

609202_HD01(TITLE-LEGEND).DWG Plotted on 9-Nov-2022 8:54 AM

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CHEAPSIDE STREET / MONTAGUE CITY ROAD

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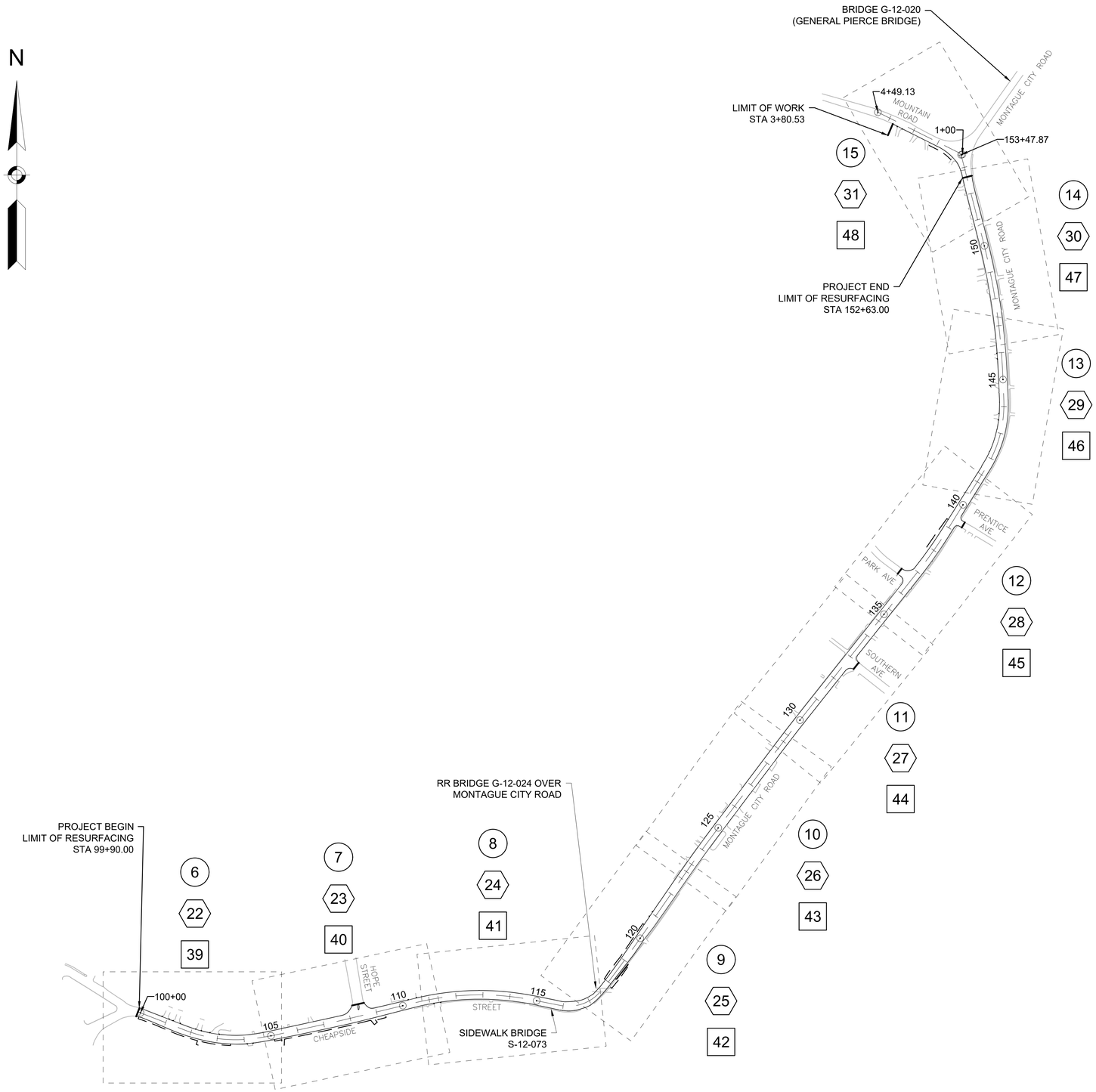
KEY PLAN



LEGEND

#	CONSTRUCTION PLANS
#	TRAFFIC SIGN & PAVEMENT MARKING PLANS
#	UTILITY & DRAINAGE PLANS

0 200 400 600 800
SCALE: 1" = 200'

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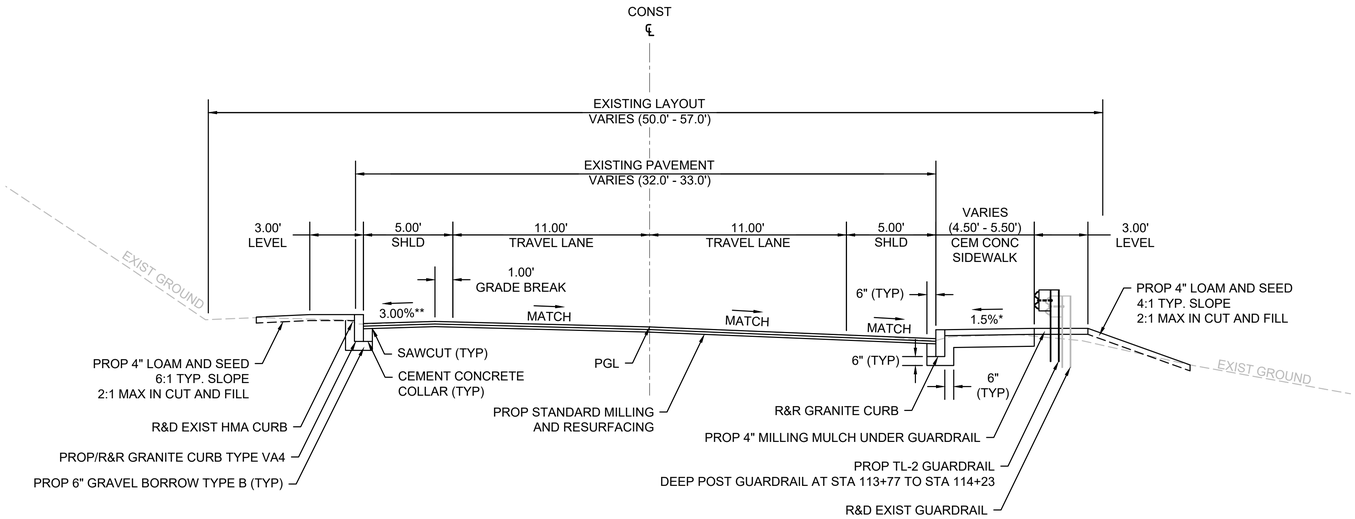
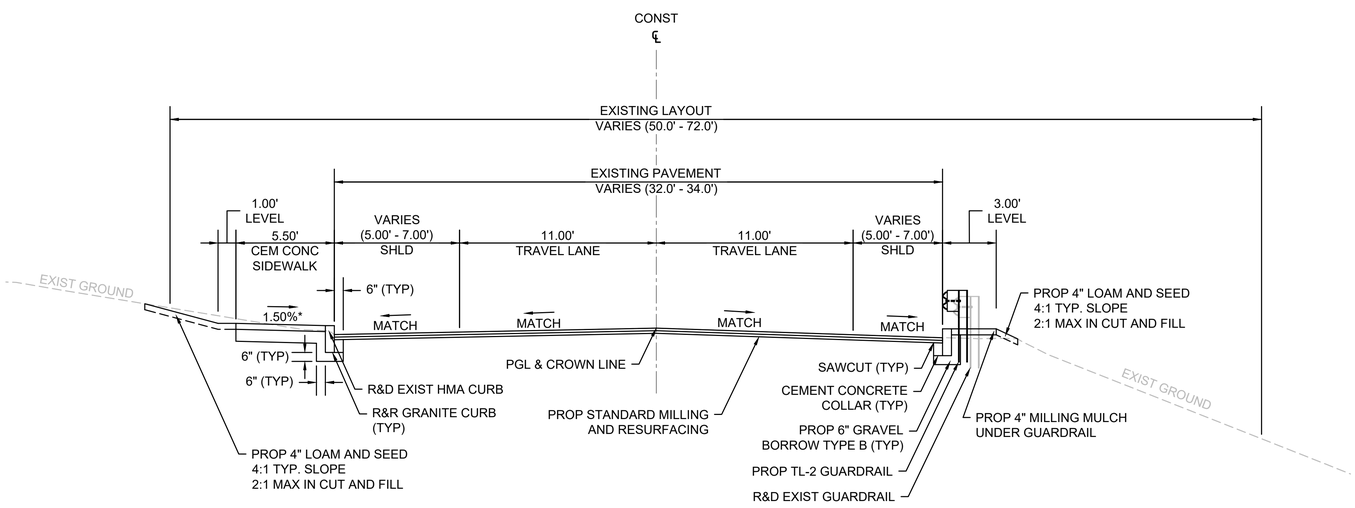


TYPICAL SECTION
CHEAPSIDE STREET & MONTAGUE CITY ROAD

STA 101+50 TO STA 105+00 (BANKING AT THE RIGHT)
STA 109+00 TO STA 114+58
STA 141+00 TO STA 146+50 (BANKING AT THE RIGHT)
SCALE: 1" = 4'
* TOLERANCE FOR CONSTRUCTION ±0.5%
** 1% SUPERELEVATION RATE FROM STA 101+50 TO STA 105+00



TYPICAL SECTION
CHEAPSIDE STREET & MONTAGUE CITY ROAD

STA 100+00 TO STA 101+50
STA 105+00 TO STA 109+00
STA 114+58 TO STA 115+75 (SIDEWALK AT THE RIGHT)
STA 138+87 TO STA 141+00 (SIDEWALK AT THE RIGHT)
STA 146+50 TO STA 152+63 (SIDEWALKS ON BOTH SIDES)
SCALE: 1" = 4'
*TOLERANCE FOR CONSTRUCTION ±0.5%

PAVEMENT NOTES:

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

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TYPICAL SECTIONS
SHEET 1 OF 2

PROPOSED STANDARD MILLING AND RESURFACING

SURFACE: 1¾" SUPERPAVE SURFACE COURSE - 12.5 POLYMER (SSC-12.5-P) OVER ASPHALT EMULSION FOR TACK COAT (RS-1H) AT 0.06 to 0.08 GAL/SY OVER
1¾" SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC-12.5) OVER ASPHALT EMULSION FOR TACK COAT (RS-1H) AT 0.07 to 0.09 GAL/SY OVER
3½" PAVEMENT STANDARD MILLING

NOTE: INTERMEDIATE COURSE SHALL BE PAVED IMMEDIATELY (WITHIN TWO WORKING DAYS) AFTER MILLING IS COMPLETED.

PROPOSED FULL-DEPTH ROADWAY WIDENING (LESS THAN 4' WIDE)

SURFACE: 1¾" SUPERPAVE SURFACE COURSE - 12.5 POLYMER (SSC-12.5-P) OVER ASPHALT EMULSION FOR TACK COAT (RS-1H) AT 0.06 to 0.08 GAL/SY OVER
1¾" SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC-12.5) OVER ASPHALT EMULSION FOR TACK COAT (RS-1H) AT 0.07 to 0.09 GAL/SY OVER

BASE: 6" CEMENT CONCRETE BASE COURSE (3000 PSI, 1½ - INCH, 470) OVER

SUBBASE: 8" GRAVEL BORROW (TYPE B)

PROPOSED CEMENT CONCRETE SIDEWALK / PEDESTRIAN CURB RAMP

SURFACE: 4" CEMENT CONCRETE (4000 PSI, ¾ - INCH, 610)

FOUNDATION: RETAIN EXISTING GRAVEL BORROW PROVIDED IT IS IN CLOSE CONFORMANCE WITH MATERIAL SPECIFICATION M.1.03.0 (TYPE B OR TYPE C), OTHERWISE
8" GRAVEL BORROW (TYPE B)

PROPOSED CEMENT CONCRETE DRIVEWAYS, SIDEWALK THROUGH DRIVEWAYS

SURFACE: 6" CEMENT CONCRETE (4000 PSI, ¾ - INCH, 610)

FOUNDATION: RETAIN EXISTING GRAVEL BORROW PROVIDED IT IS IN CLOSE CONFORMANCE WITH MATERIAL SPECIFICATION M.1.03.0 (TYPE B OR TYPE C), OTHERWISE
8" GRAVEL BORROW (TYPE B)

PROPOSED HOT MIX ASPHALT DRIVEWAYS

SURFACE: 1½" SUPERPAVE SURFACE COURSE - 9.5 (SSC-9.5) OVER ASPHALT EMULSION FOR TACK COAT (RS-1H) AT 0.06 to 0.08 GAL/SY OVER
2½" SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC-12.5) OVER

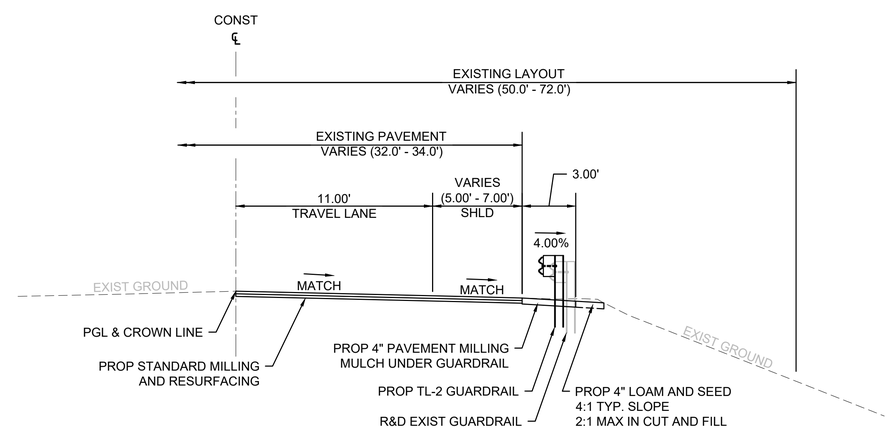
FOUNDATION: RETAIN EXISTING GRAVEL BORROW PROVIDED IT IS IN CLOSE CONFORMANCE WITH MATERIAL SPECIFICATION M.1.03.0 (TYPE B OR TYPE C), OTHERWISE
8" GRAVEL BORROW (TYPE B)

PROPOSED PERMANENT HMA TRENCH PATCH

SURFACE: 1¾" SUPERPAVE SURFACE COURSE - 12.5 POLYMER (SSC-12.5-P) OVER ASPHALT EMULSION FOR TACK COAT (RS-1H) AT 0.06 to 0.08 GAL/SY OVER
1¾" SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC-12.5) OVER ASPHALT EMULSION FOR TACK COAT (RS-1H) AT 0.07 to 0.09 GAL/SY OVER

BASE: 6" SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC-12.5) (COMPACTED IN TWO LAYERS) OVER

SUBBASE: 12" GRAVEL BORROW (TYPE B) OVER COMPACTED TRENCH BACKFILL



TYPICAL SECTION
CHEAPSIDE STREET

STA 100+45 TO STA 103+58 / STA 105+49 TO STA 108+67
SCALE: 1" = 4'
*TOLERANCE FOR CONSTRUCTION ±0.5%

609202_HD04(TYPICAL SECTION).DWG Plotted on 9-Nov-2022 8:51 AM

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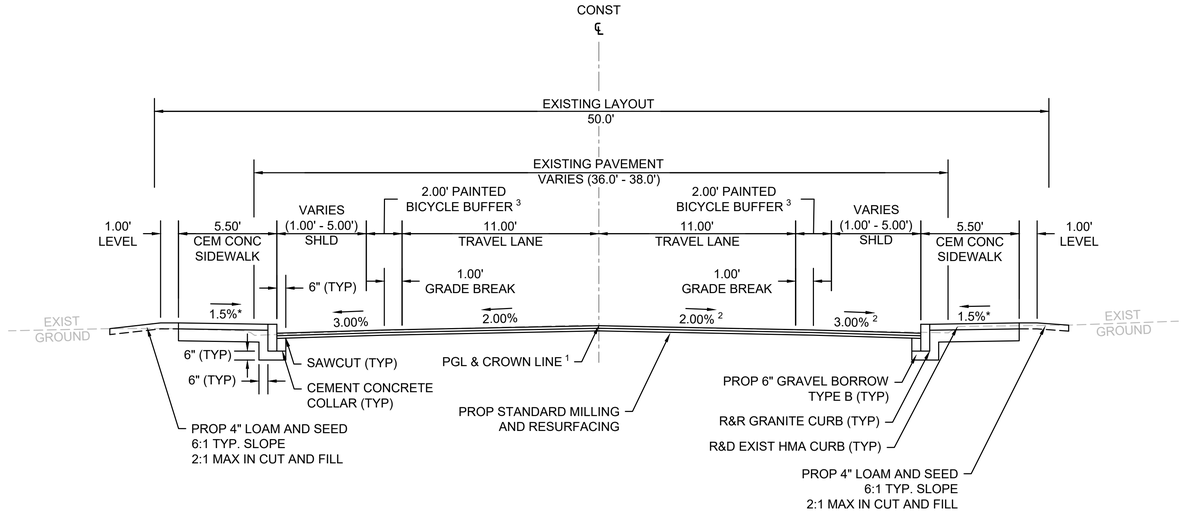
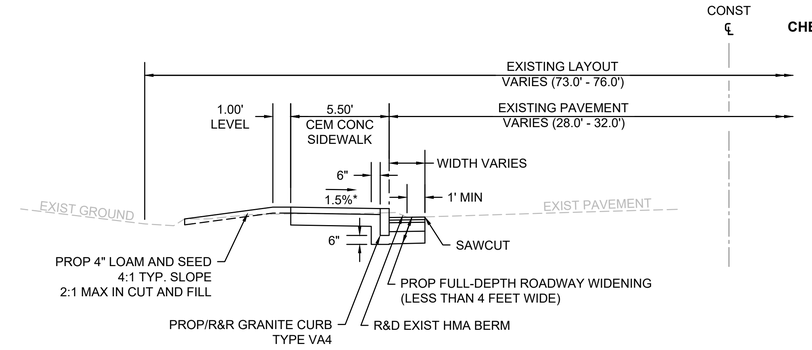
TYPICAL SECTIONS
SHEET 2 OF 2



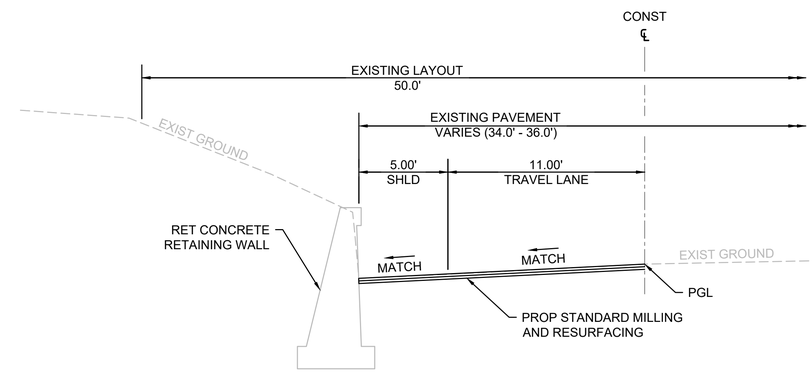
TYPICAL SECTION
MONTAGUE CITY ROAD

STA 119+41 TO STA 138+87
SCALE: 1" = 4'
* TOLERANCE FOR CONSTRUCTION ±0.5%
[1] PROP CROWN SHIFT IN AREA AROUND STA 124+50 TO STA 129+00
[2] 1.00% CROSS SLOPE FROM STA 135+00 TO STA 138+87
[3] NO PAINTED BICYCLE BUFFER FROM STA 119+25 TO STA 121+50



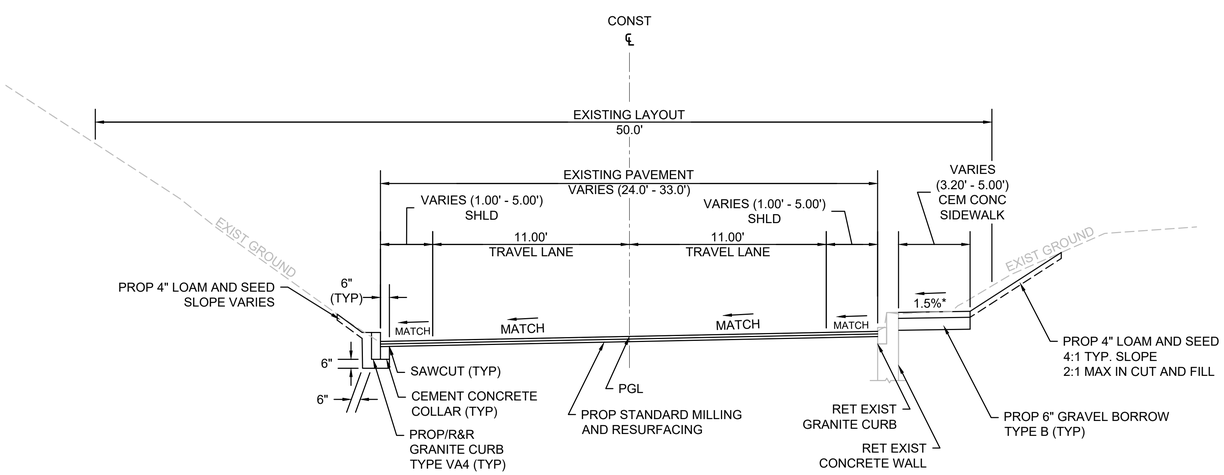
TYPICAL SECTION
MOUNTAIN ROAD

STA 1+00 TO STA 3+67
SCALE: 1" = 4'
*TOLERANCE FOR CONSTRUCTION ±0.5%



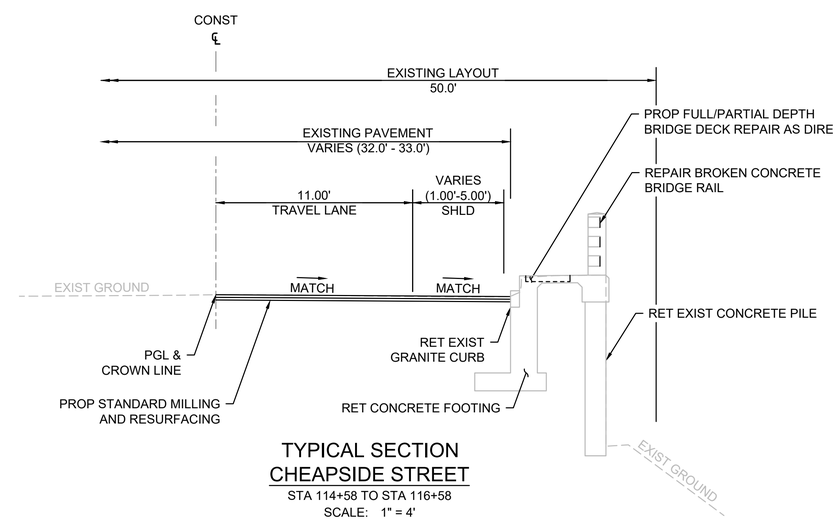
TYPICAL SECTION
MONTAGUE CITY ROAD

STA 141+61 TO STA 143+10
SCALE: 1" = 4'



TYPICAL SECTION
CHEAPSIDE STREET

STA 115+75 TO STA 119+41
SCALE: 1" = 4'
*TOLERANCE FOR CONSTRUCTION ±0.5%



TYPICAL SECTION
CHEAPSIDE STREET

STA 114+58 TO STA 116+58
SCALE: 1" = 4'

609202_HD04(TYPICAL SECTION).DWG Plotted on 9-Nov-2022 8:51 AM

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

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MA	--	6	102
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CONSTRUCTION PLANS

HIGHWAY GUARD DETAILS

STA 100+00 TO 100+34 RT — PROP TRANSITION TO NCHRP 350 GUARDRAIL, ITEM 628.21
STA 100+34 TO 102+73 RT — PROP GUARDRAIL, TL-2 (SINGLE FACED), ITEM 620.12
STA 102+73 TO 103+10 RT — PROP TANGENT END TREATMENT, TL-2, ITEM 627.82

TRAFFIC SIGNAL CONDUIT

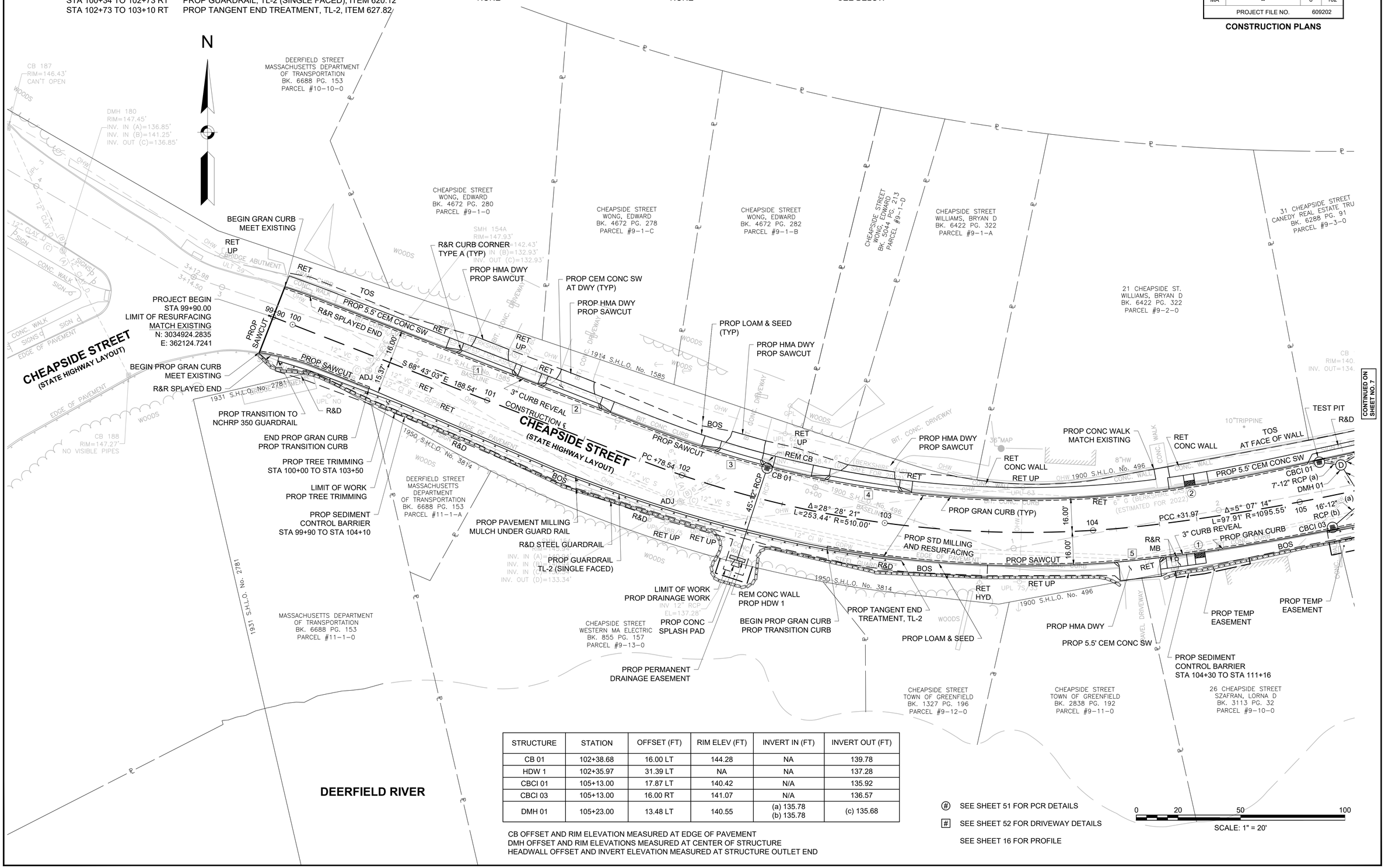
NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

SEE BELOW



STRUCTURE	STATION	OFFSET (FT)	RIM ELEV (FT)	INVERT IN (FT)	INVERT OUT (FT)
CB 01	102+38.68	16.00 LT	144.28	NA	139.78
HDW 1	102+35.97	31.39 LT	NA	NA	137.28
CBCI 01	105+13.00	17.87 LT	140.42	N/A	135.92
CBCI 03	105+13.00	16.00 RT	141.07	N/A	136.57
DMH 01	105+23.00	13.48 LT	140.55	(a) 135.78 (b) 135.78	(c) 135.68

CB OFFSET AND RIM ELEVATION MEASURED AT EDGE OF PAVEMENT
DMH OFFSET AND RIM ELEVATIONS MEASURED AT CENTER OF STRUCTURE
HEADWALL OFFSET AND INVERT ELEVATION MEASURED AT STRUCTURE OUTLET END

(#) SEE SHEET 51 FOR PCR DETAILS

[#] SEE SHEET 52 FOR DRIVEWAY DETAILS

SEE SHEET 16 FOR PROFILE

CONTINUED ON SHEET NO. 7

609202_HD05\CONSTRUCTION PLANS\.DWG Plotted on 9-Nov-2022 11:13 AM

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

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MA	--	7	102
PROJECT FILE NO.	609202		

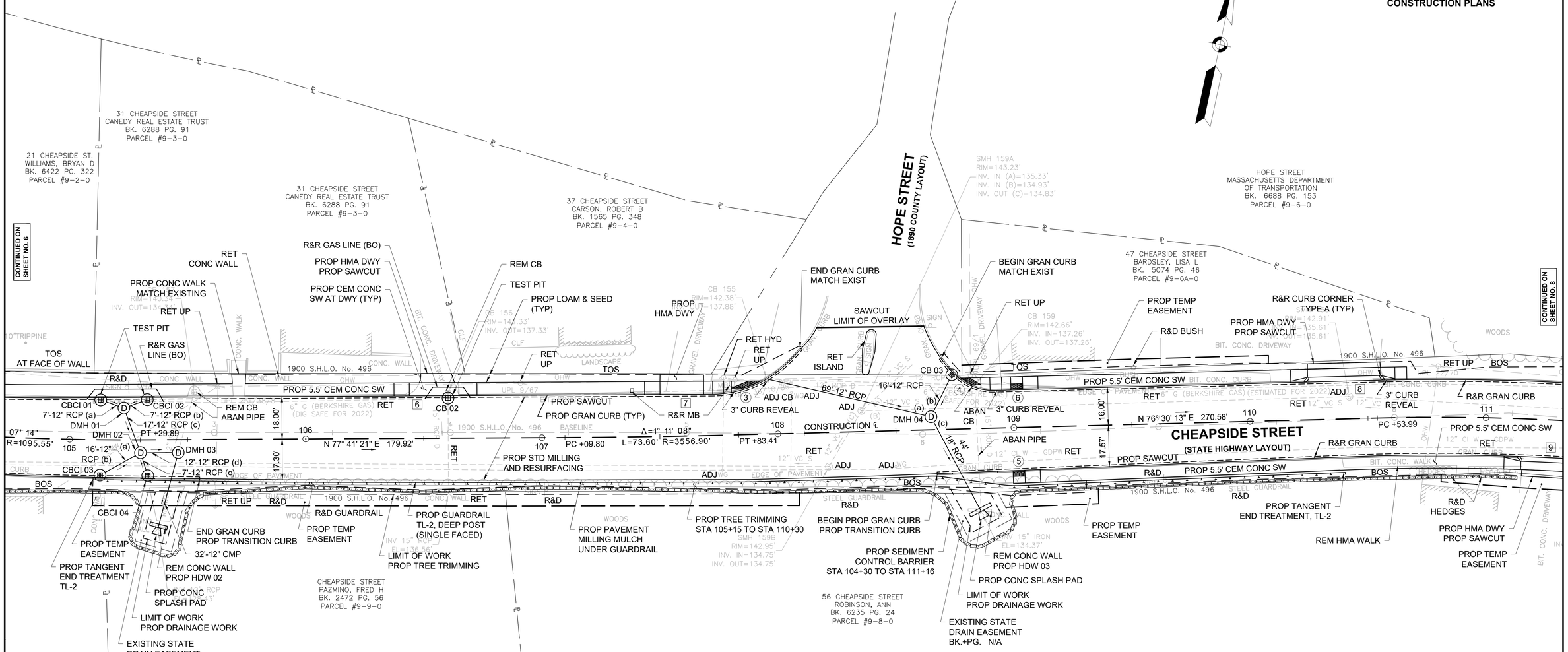
CONSTRUCTION PLANS

HIGHWAY GUARD DETAILS
STA 105+10 TO 105+47 RT PROP TANGENT END TREATMENT, TL-2, ITEM 627.82
STA 105+47 TO 110+03 RT PROP GUARDRAIL, TL-2, DEEP POST, ITEM 620.131
STA 110+03 TO 110+40 RT PROP TANGENT END TREATMENT, TL-2, ITEM 627.82

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
SEE BELOW



STRUCTURE	STATION	OFFSET (FT)	RIM ELEV (FT)	INVERT IN (FT)	INVERT OUT (FT)
CBCI 01	105+13.00	17.87 LT	140.42	N/A	135.92
CBCI 02	105+33.00	18.00 LT	140.42	N/A	135.92
CBCI 03	105+13.00	16.00 RT	141.07	N/A	136.57
CBCI 04	105+33.00	16.22 RT	141.01	N/A	136.51
DMH 01	105+23.00	13.48 LT	140.55	(a) 135.78 (b) 135.78	(c) 135.68
DMH 02	105+30.00	5.48 RT	141.01	(a) 135.34 (b) 136.25 (c) 136.37	(d) 135.24
DMH 03	105+45.98	5.50 RT	141.08	135.00	134.90
HDW 02	105+37.32	37.22 RT	N/A	N/A	129.00
CB 02	106+60.38	18.00 LT	141.59	N/A	137.33
CB 155 (EXIST)	107+95.78	23.23 LT	142.38	N/A	137.88
CB 03	108+75.04	23.80 LT	142.75	N/A	138.25
DMH 04	108+65.00	5.50 LT	143.29	(a) 136.87 (b) 137.93	(c) 135.37
HDW 03	108+85.22	35.16 RT	N/A	N/A	134.37

CB OFFSET AND RIM ELEVATION MEASURED AT EDGE OF PAVEMENT
DMH OFFSET AND RIM ELEVATIONS MEASURED AT CENTER OF STRUCTURE
HEADWALL OFFSET AND INVERT ELEVATION MEASURED AT STRUCTURE OUTLET END

(#) SEE SHEET 51 FOR PCR DETAILS
[#] SEE SHEET 52 FOR DRIVEWAY DETAILS
SEE SHEET 16 FOR PROFILE

0 20 50 100
SCALE: 1" = 20'

609202_HD05(CONSTRUCTION PLANS).DWG Plotted on 9-Nov-2022 11:14 AM

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	8	102
PROJECT FILE NO.	609202		

CONSTRUCTION PLANS

HIGHWAY GUARD DETAILS

STA 111+60 TO 111+97 RT PROP TANGENT END TREATMENT, TL-2, ITEM 627.82
STA 111+97 TO 112+22 RT PROP GUARDRAIL, TL-2, ITEM 620.12
STA 112+22 TO 112+59 RT PROP TANGENT END TREATMENT, TL-2, ITEM 627.82

TRAFFIC SIGNAL CONDUIT

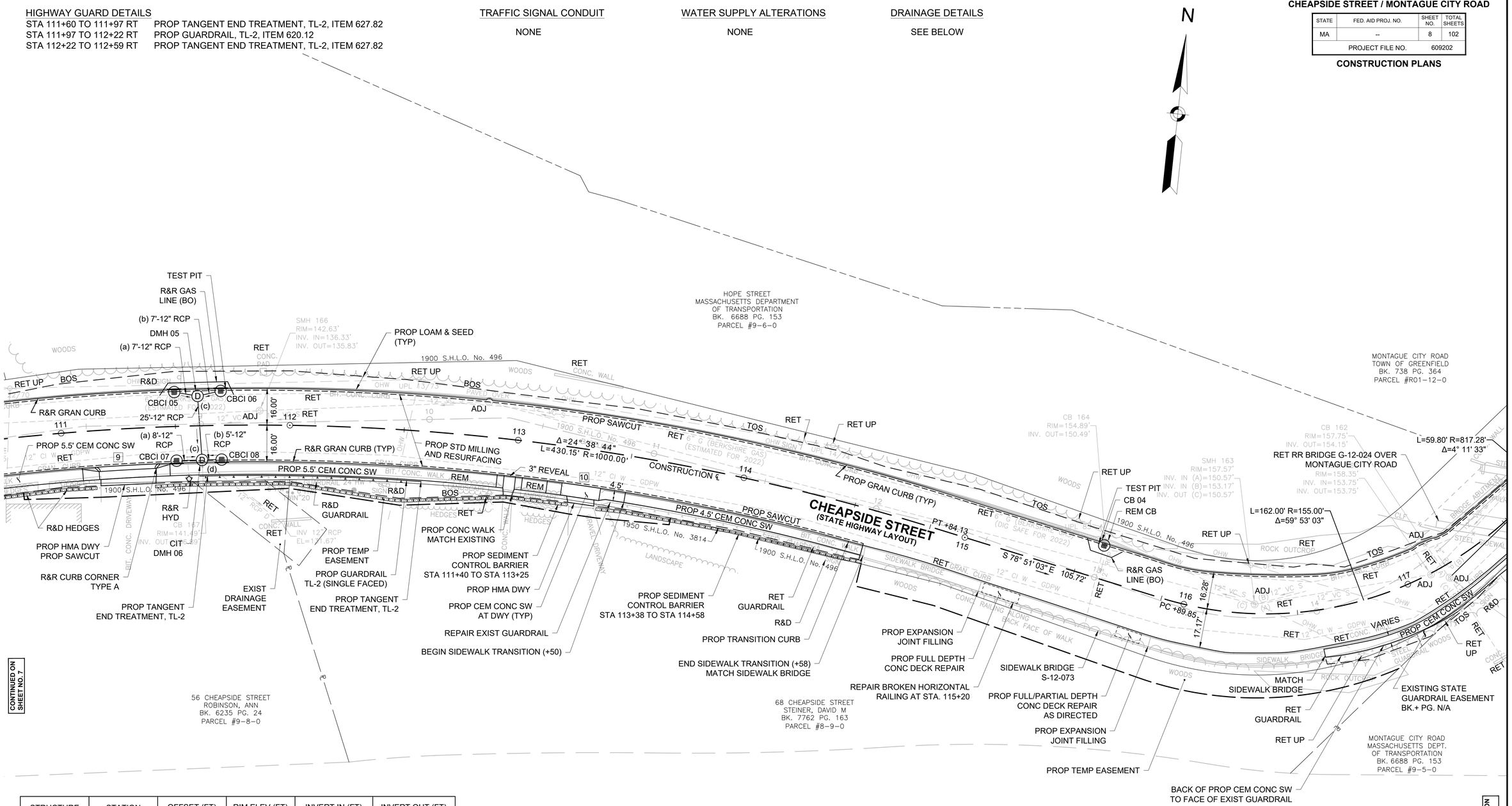
NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

SEE BELOW



STRUCTURE	STATION	OFFSET (FT)	RIM ELEV (FT)	INVERT IN (FT)	INVERT OUT (FT)
CBCI 05	111+50.00	16.00 LT	142.68	N/A	138.18
CBCI 06	111+70.00	16.00 LT	143.00	N/A	138.50
CBCI 07	111+50.00	16.00 RT	141.57	N/A	137.07
CBCI 08	111+70.00	16.00 RT	141.85	N/A	137.35
DMH 05	111+60.00	13.00 LT	142.77	(a) 138.04 (b) 138.36	(c) 137.94
CIT DMH 06	111+61.29	15.00 RT	141.49	(a) 136.91 (b) 137.44 (c) 137.25	(d) EXIST
CB 04	115+59.21	15.60 LT	155.04	N/A	150.49

CB OFFSET AND RIM ELEVATION MEASURED AT EDGE OF PAVEMENT
DMH OFFSET AND RIM ELEVATIONS MEASURED AT CENTER OF STRUCTURE

(#) SEE SHEET 51 FOR PCR DETAILS

[#] SEE SHEET 52 FOR DRIVEWAY DETAILS

SEE SHEET 17 FOR PROFILE

0 20 50 100
SCALE: 1" = 20'

609202_HD05\CONSTRUCTION PLANS\.DWG Plotted on 9-Nov-2022 11:14 AM

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	9	102
PROJECT FILE NO.	609202		

CONSTRUCTION PLANS

HIGHWAY GUARD DETAILS
NONE

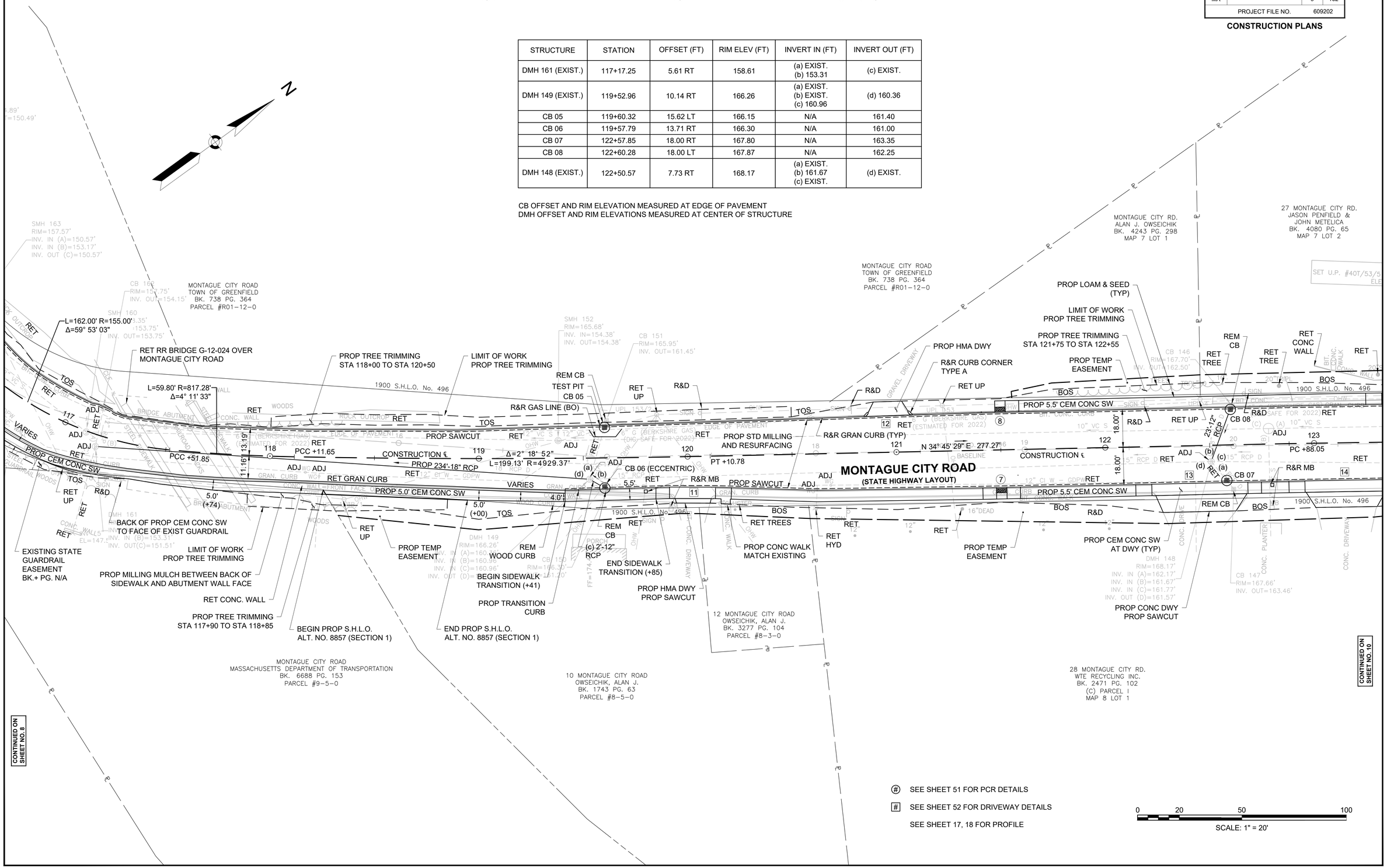
TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
SEE BELOW

STRUCTURE	STATION	OFFSET (FT)	RIM ELEV (FT)	INVERT IN (FT)	INVERT OUT (FT)
DMH 161 (EXIST.)	117+17.25	5.61 RT	158.61	(a) EXIST. (b) 153.31	(c) EXIST.
DMH 149 (EXIST.)	119+52.96	10.14 RT	166.26	(a) EXIST. (b) EXIST. (c) 160.96	(d) 160.36
CB 05	119+60.32	15.62 LT	166.15	N/A	161.40
CB 06	119+57.79	13.71 RT	166.30	N/A	161.00
CB 07	122+57.85	18.00 RT	167.80	N/A	163.35
CB 08	122+60.28	18.00 LT	167.87	N/A	162.25
DMH 148 (EXIST.)	122+50.57	7.73 RT	168.17	(a) EXIST. (b) 161.67 (c) EXIST.	(d) EXIST.

CB OFFSET AND RIM ELEVATION MEASURED AT EDGE OF PAVEMENT
DMH OFFSET AND RIM ELEVATIONS MEASURED AT CENTER OF STRUCTURE



609202_HD05(CONSTRUCTION PLANS).DWG Plotted on 9-Nov-2022 11:14 AM

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	10	102
PROJECT FILE NO.	609202		

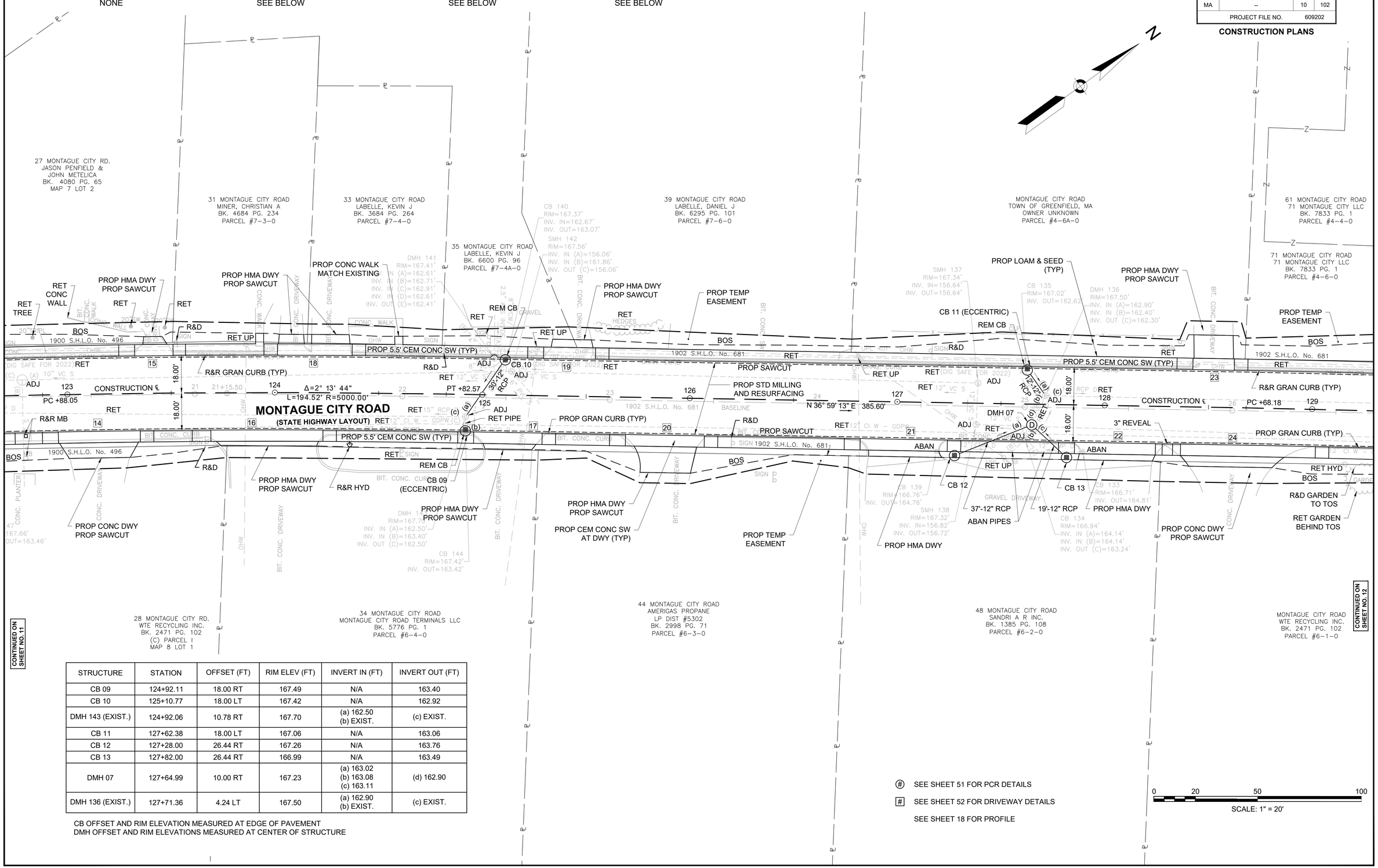
CONSTRUCTION PLANS

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
SEE BELOW

WATER SUPPLY ALTERATIONS
SEE BELOW

DRAINAGE DETAILS
SEE BELOW



STRUCTURE	STATION	OFFSET (FT)	RIM ELEV (FT)	INVERT IN (FT)	INVERT OUT (FT)
CB 09	124+92.11	18.00 RT	167.49	N/A	163.40
CB 10	125+10.77	18.00 LT	167.42	N/A	162.92
DMH 143 (EXIST.)	124+92.06	10.78 RT	167.70	(a) 162.50 (b) EXIST.	(c) EXIST.
CB 11	127+62.38	18.00 LT	167.06	N/A	163.06
CB 12	127+28.00	26.44 RT	167.26	N/A	163.76
CB 13	127+82.00	26.44 RT	166.99	N/A	163.49
DMH 07	127+64.99	10.00 RT	167.23	(a) 163.02 (b) 163.08 (c) 163.11	(d) 162.90
DMH 136 (EXIST.)	127+71.36	4.24 LT	167.50	(a) 162.90 (b) EXIST.	(c) EXIST.

CB OFFSET AND RIM ELEVATION MEASURED AT EDGE OF PAVEMENT
DMH OFFSET AND RIM ELEVATIONS MEASURED AT CENTER OF STRUCTURE

(#) SEE SHEET 51 FOR PCR DETAILS

[#] SEE SHEET 52 FOR DRIVEWAY DETAILS

SEE SHEET 18 FOR PROFILE

609202_HD05\CONSTRUCTION PLANS\.DWG Plotted on 9-Nov-2022 11:14 AM

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	11	102
PROJECT FILE NO.	609202		

CONSTRUCTION PLANS

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

SEE BELOW

WATER SUPPLY ALTERATIONS

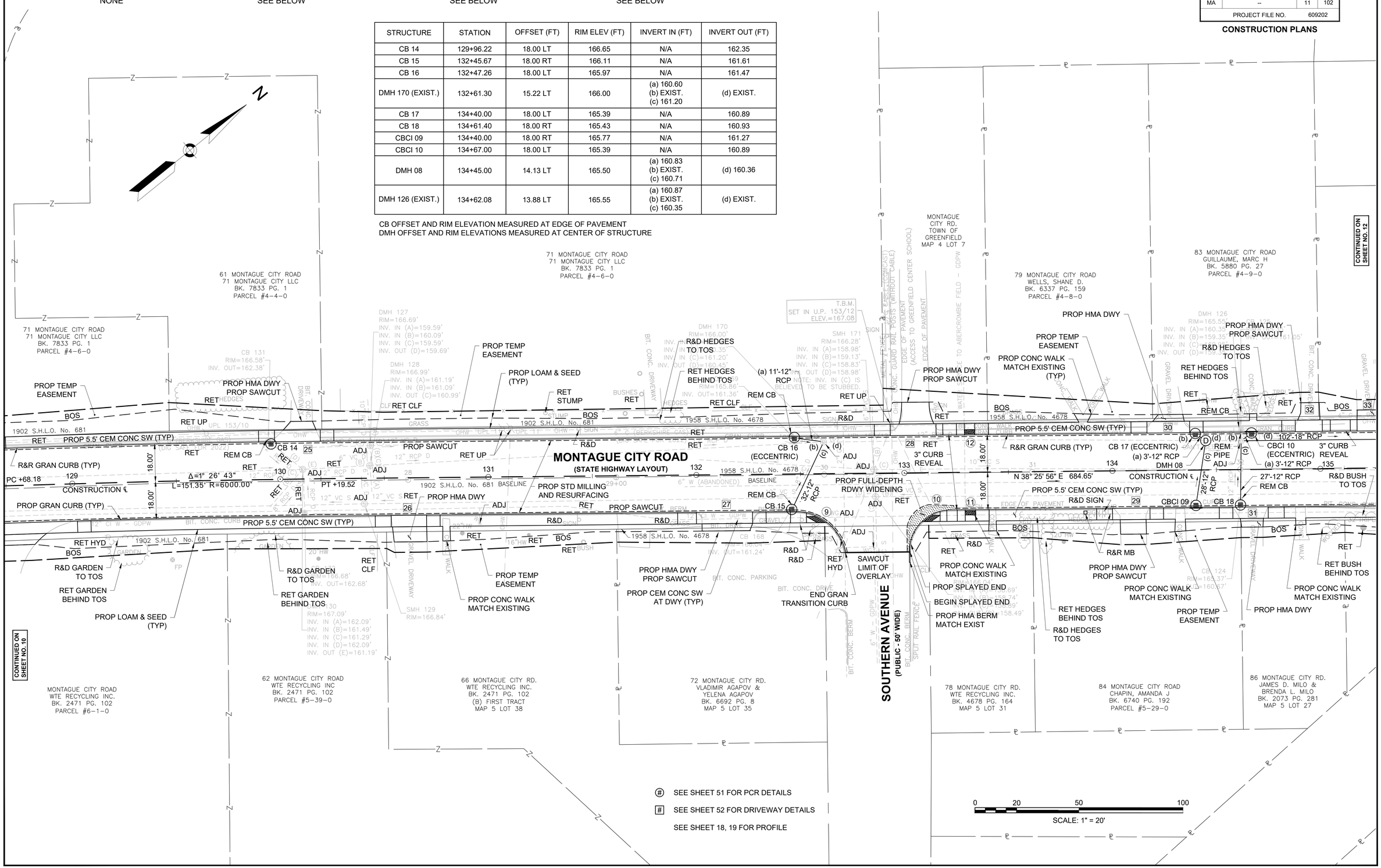
SEE BELOW

DRAINAGE DETAILS

SEE BELOW

STRUCTURE	STATION	OFFSET (FT)	RIM ELEV (FT)	INVERT IN (FT)	INVERT OUT (FT)
CB 14	129+96.22	18.00 LT	166.65	N/A	162.35
CB 15	132+45.67	18.00 RT	166.11	N/A	161.61
CB 16	132+47.26	18.00 LT	165.97	N/A	161.47
DMH 170 (EXIST.)	132+61.30	15.22 LT	166.00	(a) 160.60 (b) EXIST. (c) 161.20	(d) EXIST.
CB 17	134+40.00	18.00 LT	165.39	N/A	160.89
CB 18	134+61.40	18.00 RT	165.43	N/A	160.93
CBCI 09	134+40.00	18.00 RT	165.77	N/A	161.27
CBCI 10	134+67.00	18.00 LT	165.39	N/A	160.89
DMH 08	134+45.00	14.13 LT	165.50	(a) 160.83 (b) EXIST. (c) 160.71	(d) 160.36
DMH 126 (EXIST.)	134+62.08	13.88 LT	165.55	(a) 160.87 (b) EXIST. (c) 160.35	(d) EXIST.

CB OFFSET AND RIM ELEVATION MEASURED AT EDGE OF PAVEMENT
DMH OFFSET AND RIM ELEVATIONS MEASURED AT CENTER OF STRUCTURE



609202_HD05(CONSTRUCTION PLANS).DWG Plotted on 9-Nov-2022 11:14 AM

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	12	102
PROJECT FILE NO.	609202		

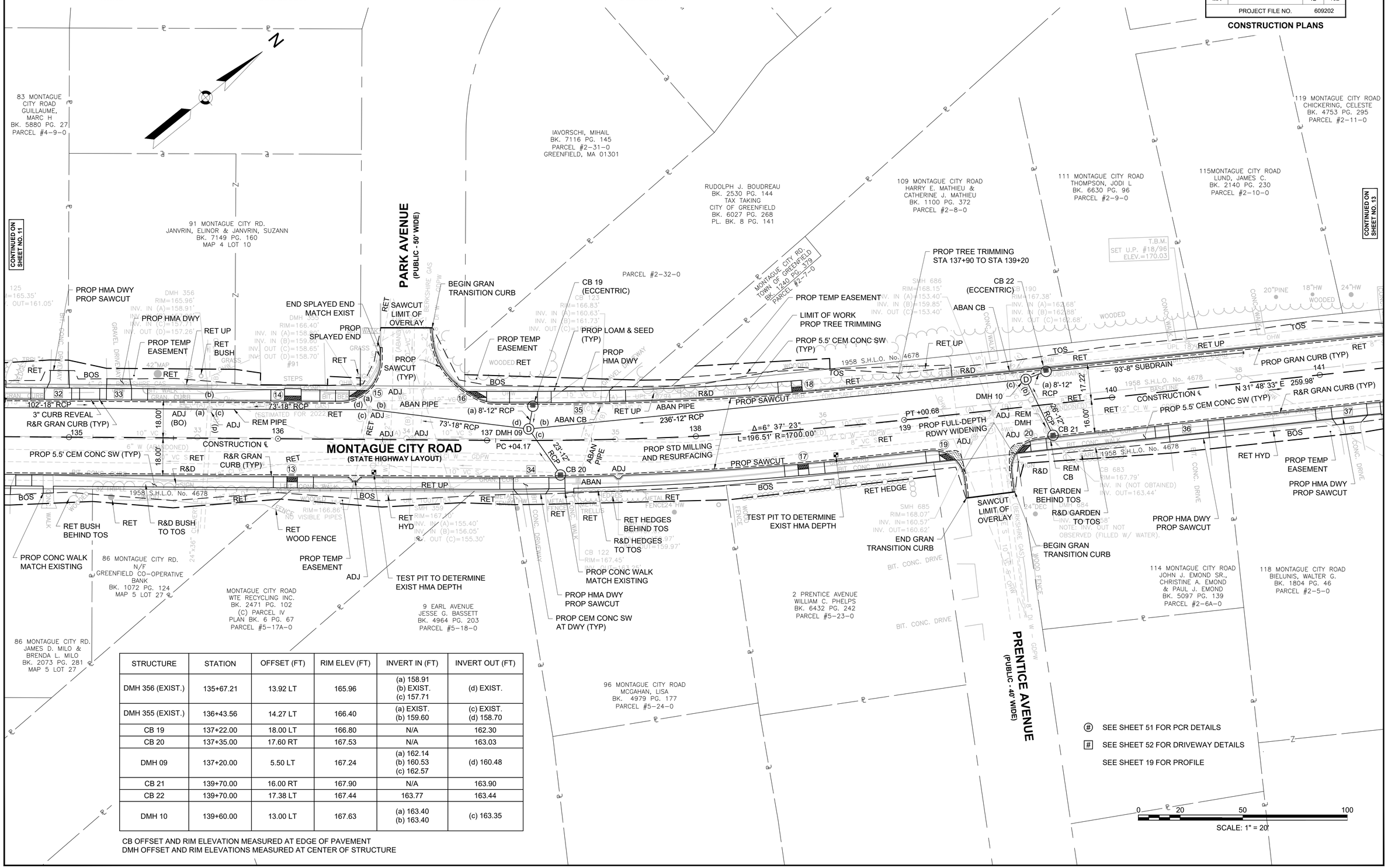
CONSTRUCTION PLANS

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
SEE BELOW

WATER SUPPLY ALTERATIONS
SEE BELOW

DRAINAGE DETAILS
SEE BELOW



STRUCTURE	STATION	OFFSET (FT)	RIM ELEV (FT)	INVERT IN (FT)	INVERT OUT (FT)
DMH 356 (EXIST.)	135+67.21	13.92 LT	165.96	(a) 158.91 (b) EXIST. (c) 157.71	(d) EXIST.
DMH 355 (EXIST.)	136+43.56	14.27 LT	166.40	(a) EXIST. (b) 159.60	(c) EXIST. (d) 158.70
CB 19	137+22.00	18.00 LT	166.80	N/A	162.30
CB 20	137+35.00	17.60 RT	167.53	N/A	163.03
DMH 09	137+20.00	5.50 LT	167.24	(a) 162.14 (b) 160.53 (c) 162.57	(d) 160.48
CB 21	139+70.00	16.00 RT	167.90	N/A	163.90
CB 22	139+70.00	17.38 LT	167.44	163.77	163.44
DMH 10	139+60.00	13.00 LT	167.63	(a) 163.40 (b) 163.40	(c) 163.35

CB OFFSET AND RIM ELEVATION MEASURED AT EDGE OF PAVEMENT
DMH OFFSET AND RIM ELEVATIONS MEASURED AT CENTER OF STRUCTURE

609202_HD05(CONSTRUCTION PLANS).DWG Plotted on 9-Nov-2022 11:14 AM

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	13	102
PROJECT FILE NO.	609202		

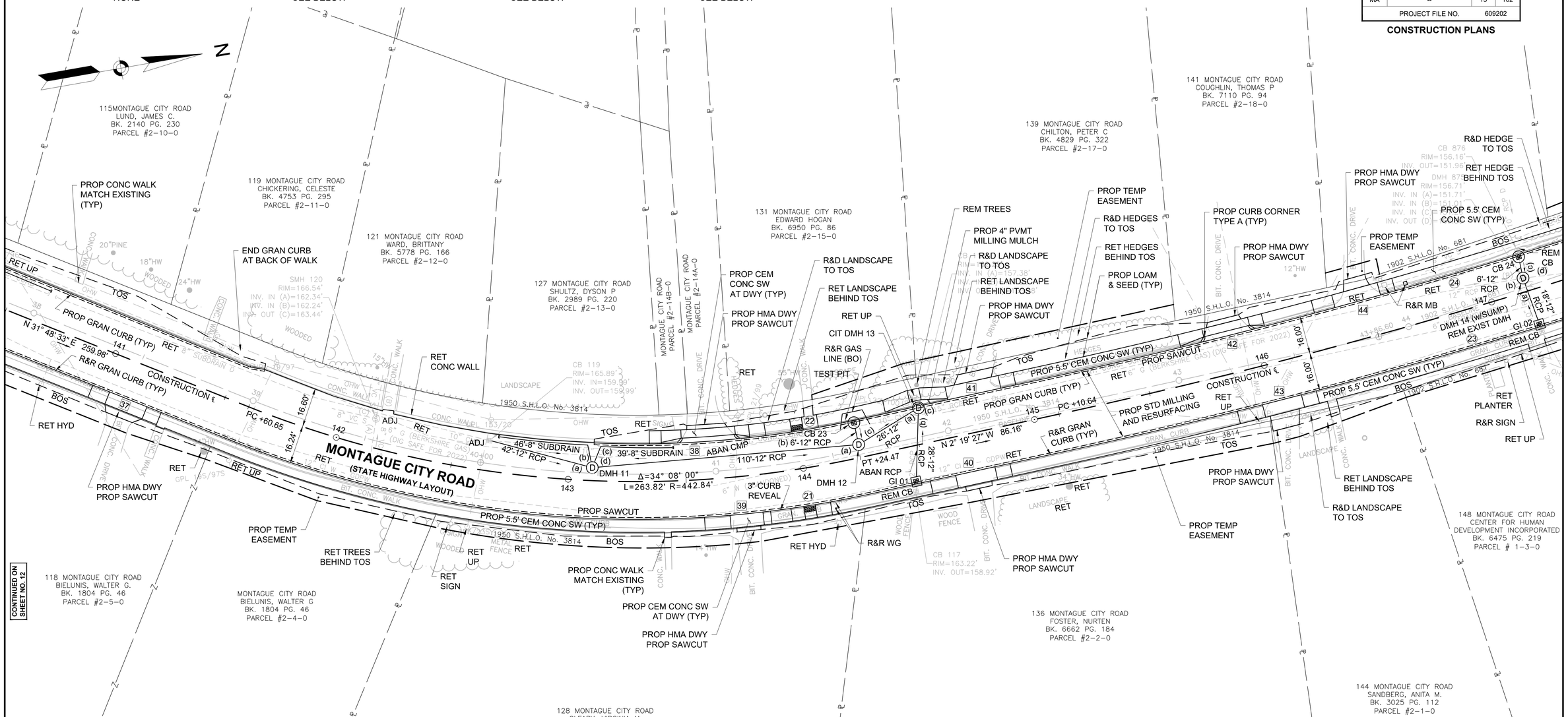
CONSTRUCTION PLANS

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
SEE BELOW

WATER SUPPLY ALTERATIONS
SEE BELOW

DRAINAGE DETAILS
SEE BELOW



STRUCTURE	STATION	OFFSET (FT)	RIM ELEV (FT)	INVERT IN (FT)	INVERT OUT (FT)
CB 119 (EXIST.)	144+64.64	13.81 LT	165.89	159.99	159.99
DMH 11	143+10.00	5.50 LT	165.74	(a) 159.15 (b) 160.60 (c) 160.60	(d) 159.05
CB 23	144+25.00	16.00 LT	162.96	N/A	158.46
DMH 12	144+25.00	5.50 LT	163.46	(a) 156.75 (b) 158.34	(c) 156.65
GI 01	144+45.52	16.00 RT	163.21	N/A	160.71
CIT DMH 13	144+53.04	15.32 LT	162.33	(a) 156.03 (b) 157.38	(c) 155.57
GI 02	147+16.60	16.00 RT	156.75	N/A	154.25
CB 24	147+16.62	16.00 LT	156.39	N/A	151.89
DMH 14	147+15.67	5.82 LT	156.71	(a) 153.89 (b) 151.01 (c) 151.77	(d) 150.86

CB OFFSET AND RIM ELEVATION MEASURED AT EDGE OF PAVEMENT
DI OFFSET AND RIM ELEVATION MEASURED AT EDGE OF PAVEMENT
DMH OFFSET AND RIM ELEVATIONS MEASURED AT CENTER OF STRUCTURE

(#) SEE SHEET 51 FOR PCR DETAILS

[#] SEE SHEET 52 FOR DRIVEWAY DETAILS

SEE SHEET 19, 20 FOR PROFILE

0 20 50 100
SCALE: 1" = 20'

609202_HD05(CONSTRUCTION PLANS).DWG Plotted on 9-Nov-2022 11:15 AM

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	14	102
PROJECT FILE NO.	609202		

CONSTRUCTION PLANS

HIGHWAY GUARD DETAILS

STA 152+25 TO 152+62 RT	PROP TANGENT END TREATEMENT, TL-2, ITEM 627.82
STA 152+62 TO 152+96 RT	PROP TRANSITION TO NCHRP 350 GUARDRAIL, ITEM 628.21
STA 152+38 TO 152+75 LT	PROP TANGENT END TREATEMENT, TL-2, ITEM 627.82
STA 152+75 TO 152+93 LT	PROP GUARDRAIL, TL-2, ITEM 620.12
STA 152+93 TO 153+30 LT	PROP TANGENT END TREATEMENT, TL-2, ITEM 627.82

TRAFFIC SIGNAL CONDUIT

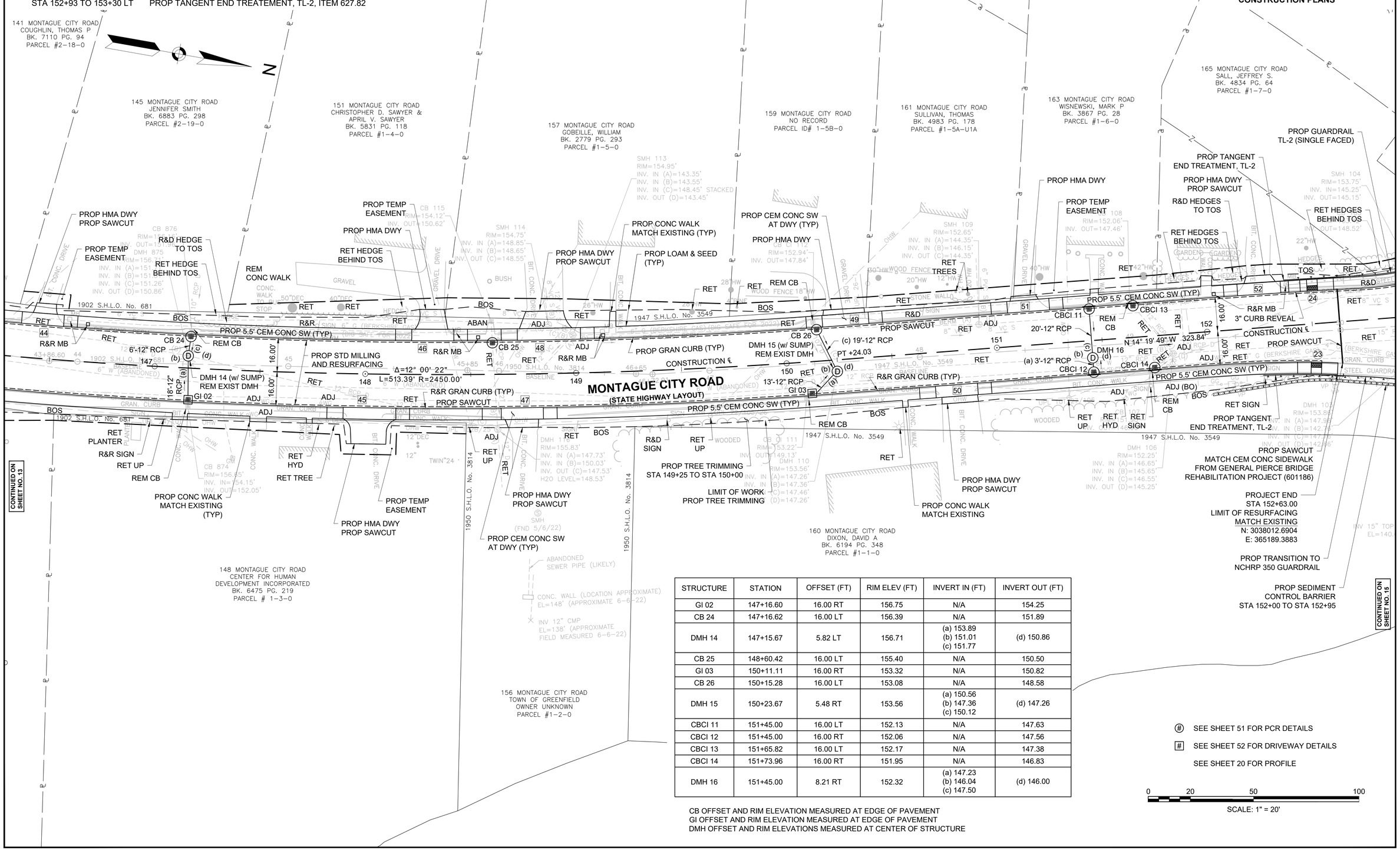
NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

SEE BELOW



STRUCTURE	STATION	OFFSET (FT)	RIM ELEV (FT)	INVERT IN (FT)	INVERT OUT (FT)
GI 02	147+16.60	16.00 RT	156.75	N/A	154.25
CB 24	147+16.62	16.00 LT	156.39	N/A	151.89
DMH 14	147+15.67	5.82 LT	156.71	(a) 153.89 (b) 151.01 (c) 151.77	(d) 150.86
CB 25	148+60.42	16.00 LT	155.40	N/A	150.50
GI 03	150+11.11	16.00 RT	153.32	N/A	150.82
CB 26	150+15.28	16.00 LT	153.08	N/A	148.58
DMH 15	150+23.67	5.48 RT	153.56	(a) 150.56 (b) 147.36 (c) 150.12	(d) 147.26
CBCI 11	151+45.00	16.00 LT	152.13	N/A	147.63
CBCI 12	151+45.00	16.00 RT	152.06	N/A	147.56
CBCI 13	151+65.82	16.00 LT	152.17	N/A	147.38
CBCI 14	151+73.96	16.00 RT	151.95	N/A	146.83
DMH 16	151+45.00	8.21 RT	152.32	(a) 147.23 (b) 146.04 (c) 147.50	(d) 146.00

CB OFFSET AND RIM ELEVATION MEASURED AT EDGE OF PAVEMENT
GI OFFSET AND RIM ELEVATION MEASURED AT EDGE OF PAVEMENT
DMH OFFSET AND RIM ELEVATIONS MEASURED AT CENTER OF STRUCTURE

(#) SEE SHEET 51 FOR PCR DETAILS

[#] SEE SHEET 52 FOR DRIVEWAY DETAILS

SEE SHEET 20 FOR PROFILE

0 20 50 100

SCALE: 1" = 20'

609202_HD05(CONSTRUCTION PLANS).DWG Plotted on 9-Nov-2022 11:15 AM

HIGHWAY GUARD DETAILS

STA 152+25 TO 152+62 RT	PROP TANGENT END TREATEMENT, TL-2, ITEM 627.82
STA 152+62 TO 152+96 RT	PROP TRANSITION TO NCHRP 350 GUARDRAIL, ITEM 628.21
STA 152+38 TO 152+75 LT	PROP TANGENT END TREATEMENT, TL-2, ITEM 627.82
STA 152+75 TO 152+93 LT	PROP GUARDRAIL, TL-2, ITEM 620.12
STA 152+93 TO 153+30 LT	PROP TANGENT END TREATEMENT, TL-2, ITEM 627.82

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

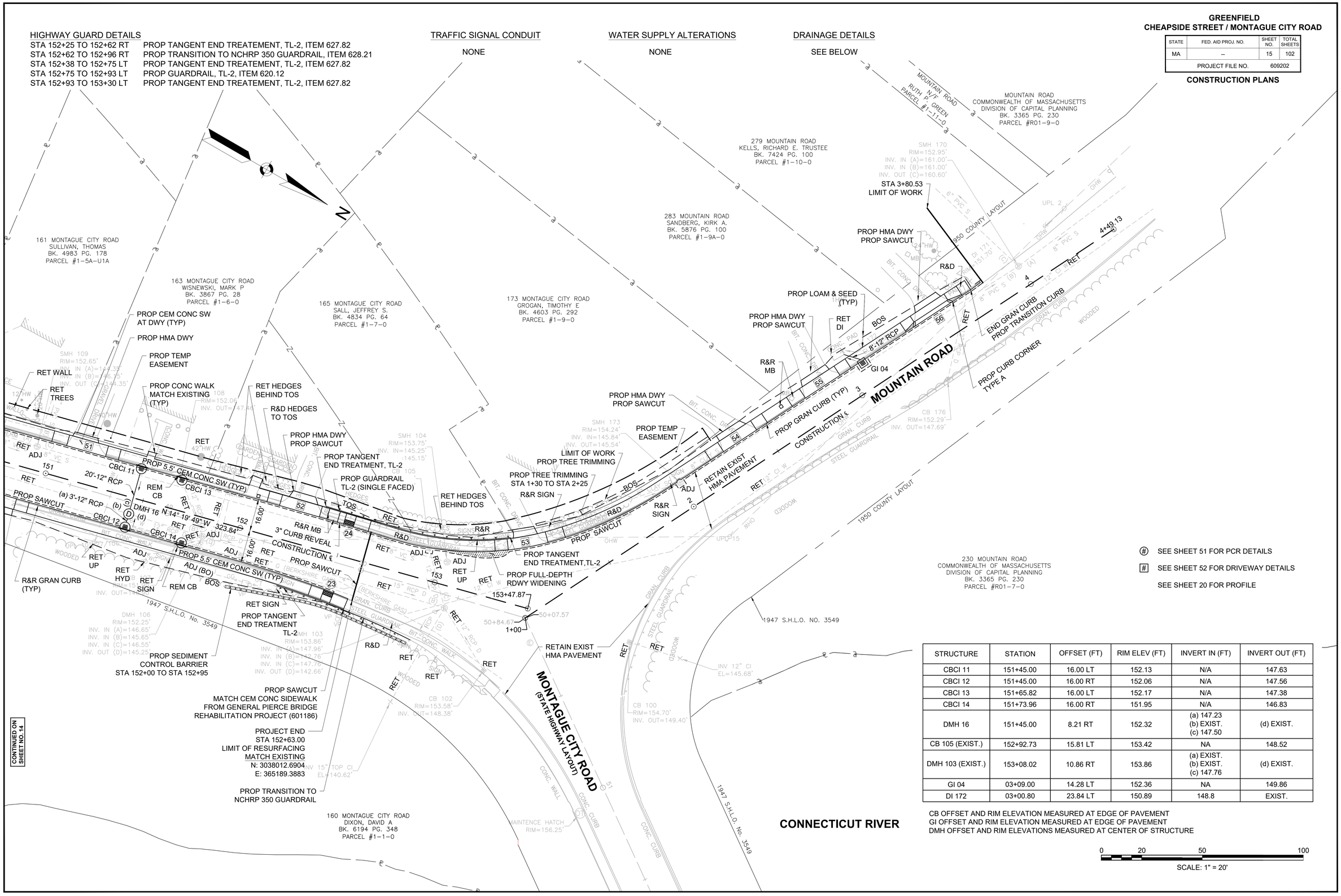
DRAINAGE DETAILS

SEE BELOW

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	15	102
PROJECT FILE NO.		609202	

CONSTRUCTION PLANS



STRUCTURE	STATION	OFFSET (FT)	RIM ELEV (FT)	INVERT IN (FT)	INVERT OUT (FT)
CBCI 11	151+45.00	16.00 LT	152.13	N/A	147.63
CBCI 12	151+45.00	16.00 RT	152.06	N/A	147.56
CBCI 13	151+65.82	16.00 LT	152.17	N/A	147.38
CBCI 14	151+73.96	16.00 RT	151.95	N/A	146.83
DMH 16	151+45.00	8.21 RT	152.32	(a) 147.23 (b) EXIST. (c) 147.50	(d) EXIST.
CB 105 (EXIST.)	152+92.73	15.81 LT	153.42	NA	148.52
DMH 103 (EXIST.)	153+08.02	10.86 RT	153.86	(a) EXIST. (b) EXIST. (c) 147.76	(d) EXIST.
GI 04	03+09.00	14.28 LT	152.36	NA	149.86
DI 172	03+00.80	23.84 LT	150.89	148.8	EXIST.

CB OFFSET AND RIM ELEVATION MEASURED AT EDGE OF PAVEMENT
GI OFFSET AND RIM ELEVATION MEASURED AT EDGE OF PAVEMENT
DMH OFFSET AND RIM ELEVATIONS MEASURED AT CENTER OF STRUCTURE

(#) SEE SHEET 51 FOR PCR DETAILS

[#] SEE SHEET 52 FOR DRIVEWAY DETAILS

SEE SHEET 20 FOR PROFILE

0 20 50 100

SCALE: 1" = 20'

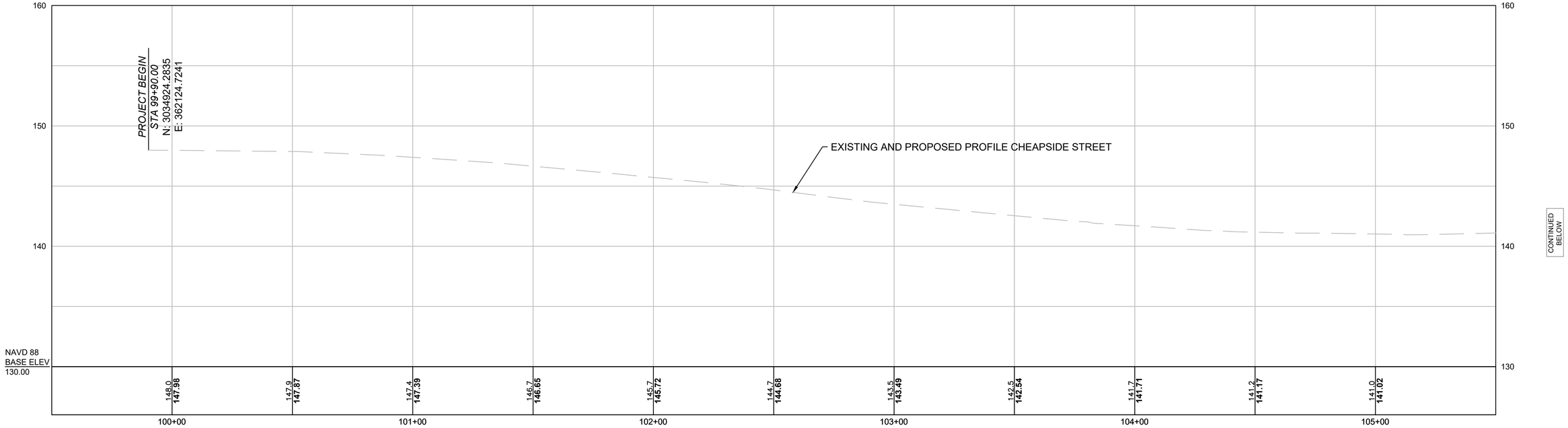
609202_HD05(CONSTRUCTION PLANS).DWG Plotted on 9-Nov-2022 11:15 AM

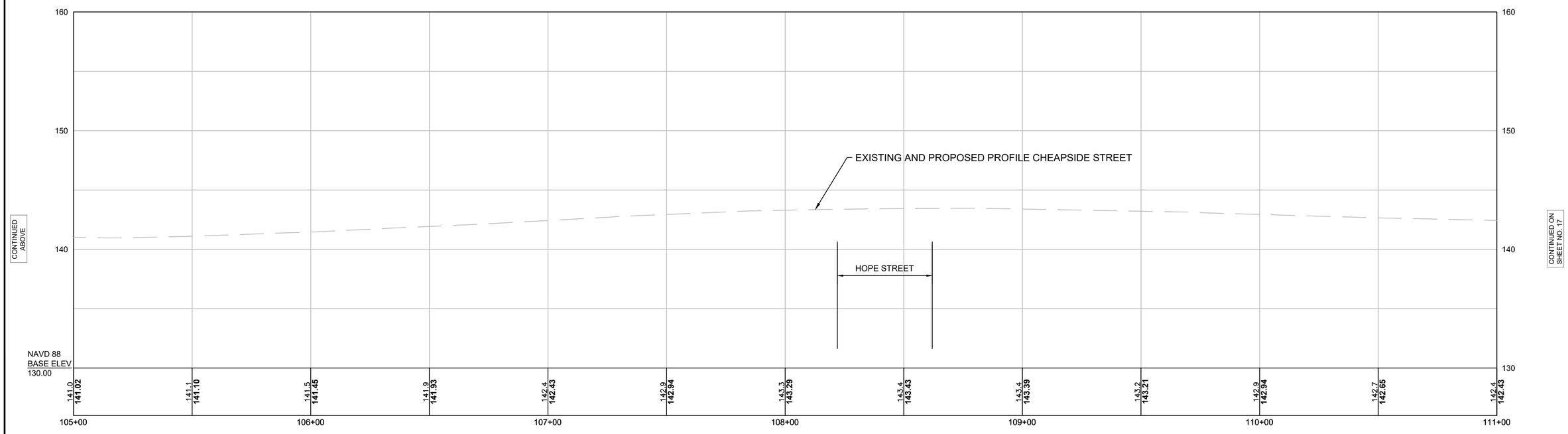
GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	16	102
PROJECT FILE NO.	609202		

NOTES:
1. PROFILE REPRESENTS THE EXISTING ROADWAY GRADE AND IS PROVIDED FOR INFORMATION ONLY.
2. PROPOSED WORK INVOLVES MILLING AND RESURFACING AND NO CHANGES IN PROFILE ELEVATION ARE PROPOSED.

PROFILE - SHEET 1 OF 6





FOR CONSTRUCTION PLANS:
SEE SHEET NOS. # - #

HOR. SCALE IN FEET
20 0 20 40
4 0 4 8
VER. SCALE IN FEET

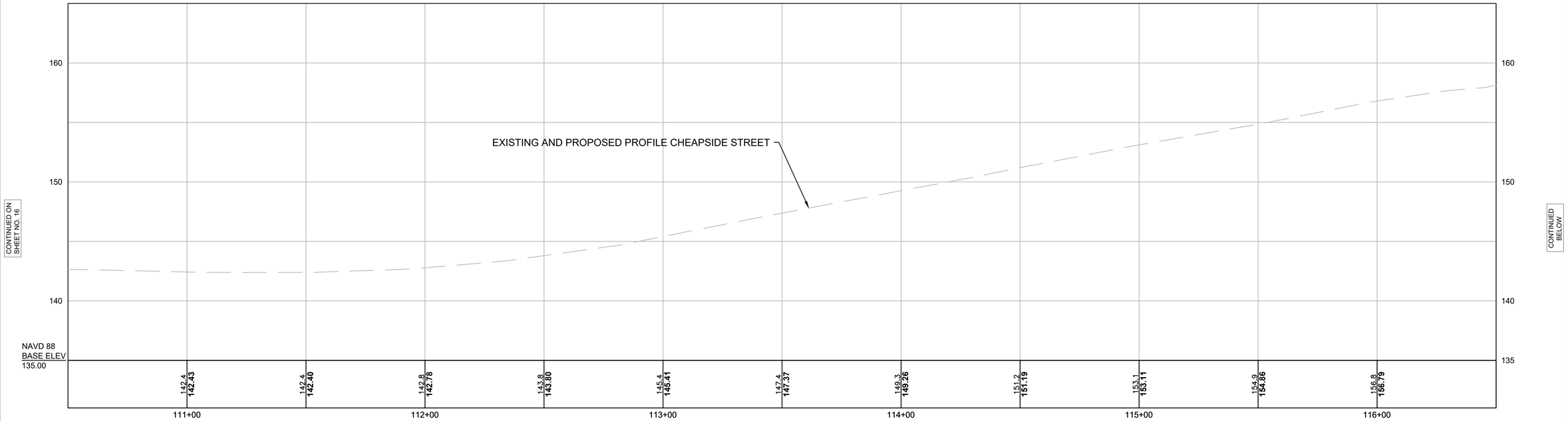
609202_HD06(PROFILES).DWG Plotted on 9-Nov-2022 11:15 AM

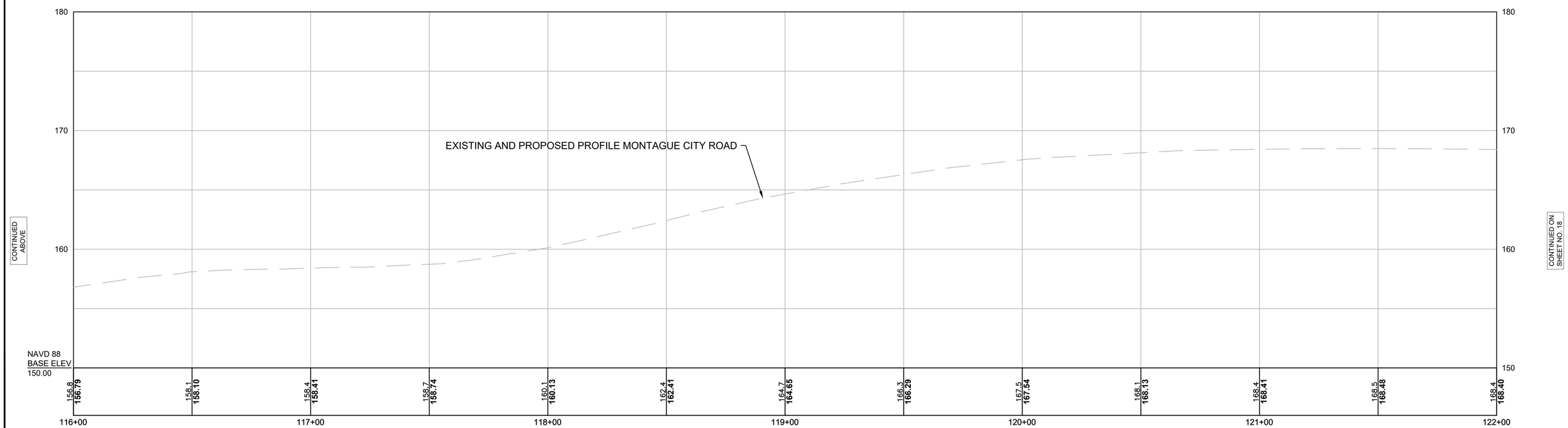
NOTES:
1. PROFILE REPRESENTS THE EXISTING ROADWAY GRADE AND IS PROVIDED FOR INFORMATION ONLY.
2. PROPOSED WORK INVOLVES MILLING AND RESURFACING AND NO CHANGES IN PROFILE ELEVATION ARE PROPOSED.

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	17	102
PROJECT FILE NO.	609202		

PROFILE - SHEET 2 OF 6





FOR CONSTRUCTION PLANS:
SEE SHEET NOS. # - ##

HOR. SCALE IN FEET
20 0 20 40
4 0 4 8
VER. SCALE IN FEET

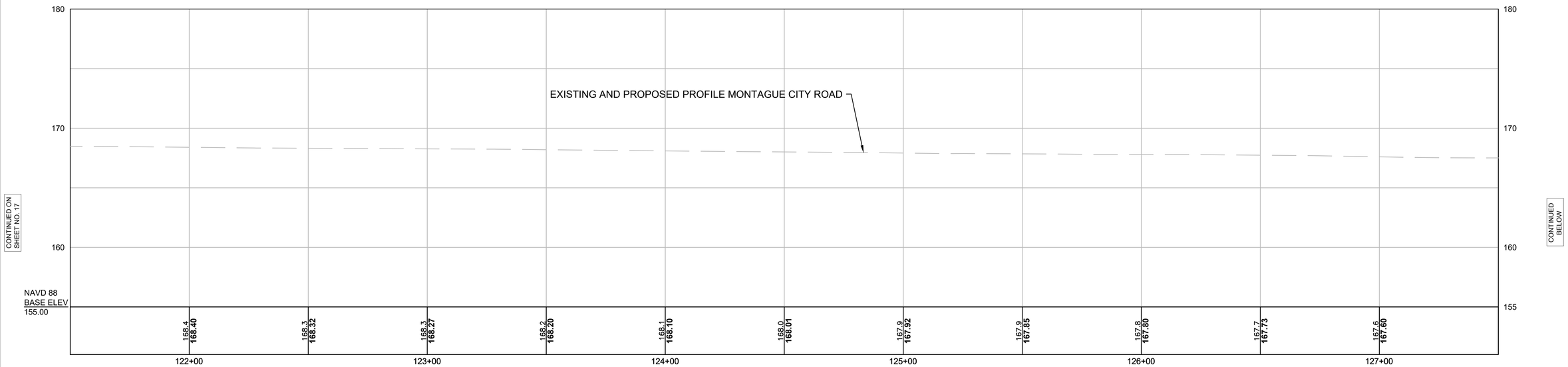
609202_HD06(PROFILES).DWG Plotted on 9-Nov-2022 11:15 AM

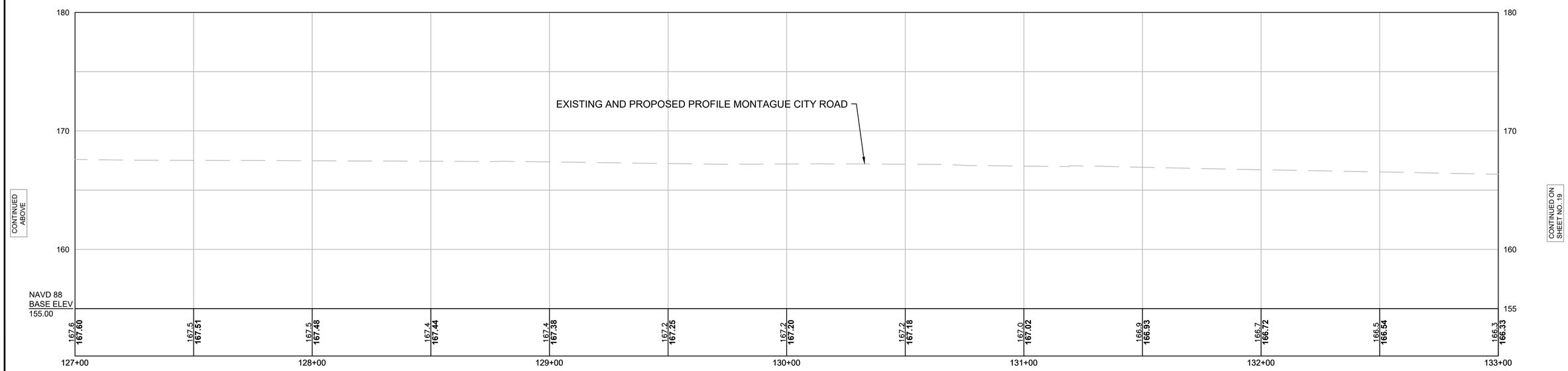
GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	18	102
PROJECT FILE NO.	609202		

NOTES:
1. PROFILE REPRESENTS THE EXISTING ROADWAY GRADE AND IS PROVIDED FOR INFORMATION ONLY.
2. PROPOSED WORK INVOLVES MILLING AND RESURFACING AND NO CHANGES IN PROFILE ELEVATION ARE PROPOSED.

PROFILE - SHEET 3 OF 6





FOR CONSTRUCTION PLANS:
SEE SHEET NOS. ## - ##

HOR. SCALE IN FEET
20 0 20 40
4 0 4 8
VER. SCALE IN FEET

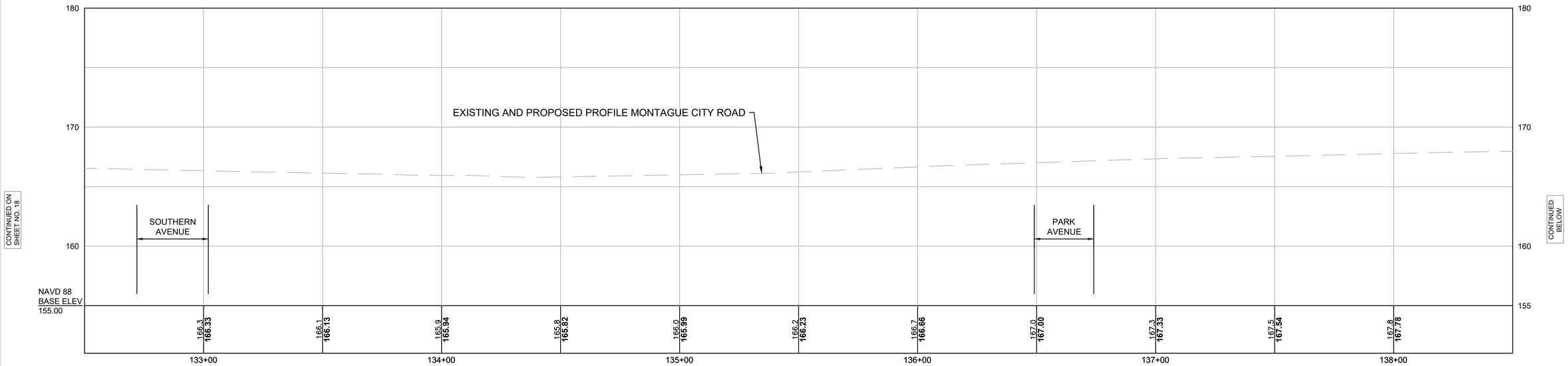
609202_HD06(PROFILES).DWG Plotted on 9-Nov-2022 11:15 AM

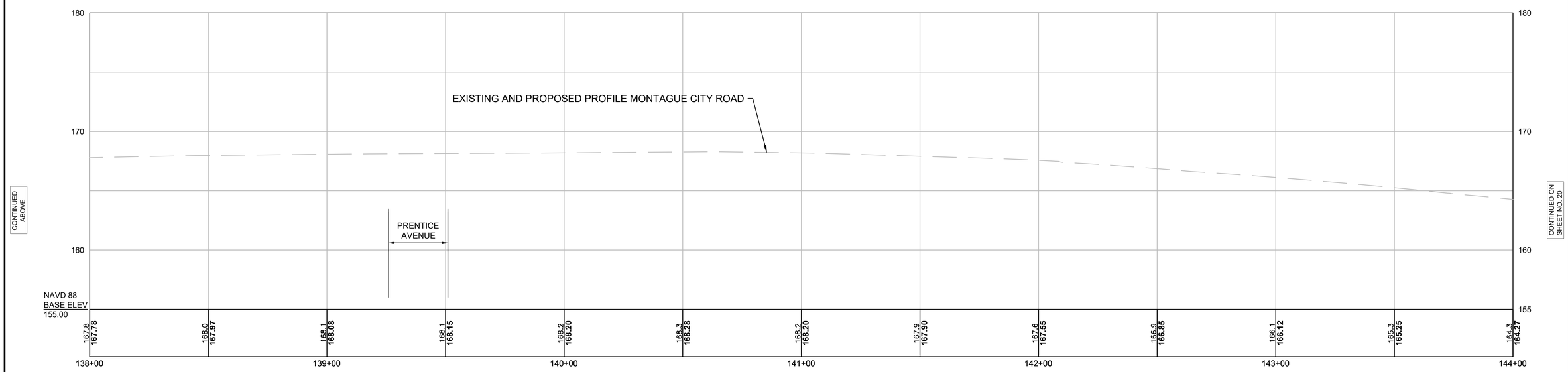
GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	19	102
PROJECT FILE NO.	609202		

PROFILE - SHEET 4 OF 6

NOTES:
1. PROFILE REPRESENTS THE EXISTING ROADWAY GRADE AND IS PROVIDED FOR INFORMATION ONLY.
2. PROPOSED WORK INVOLVES MILLING AND RESURFACING AND NO CHANGES IN PROFILE ELEVATION ARE PROPOSED.





FOR CONSTRUCTION PLANS:
SEE SHEET NOS. ## - ##

HOR. SCALE IN FEET
20 0 20 40
4 0 4 8
VER. SCALE IN FEET

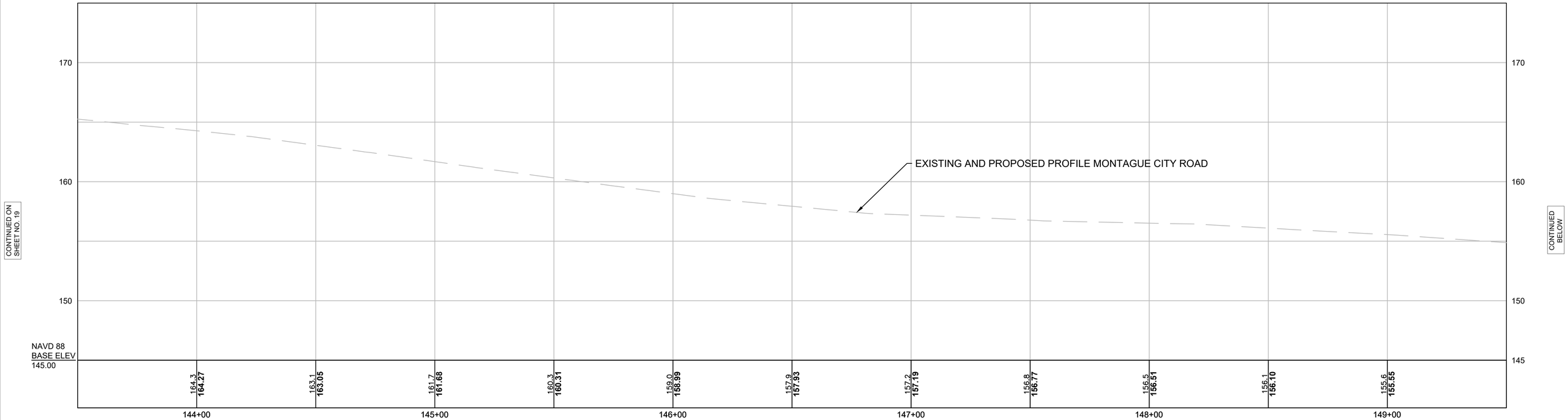
609202_HD06(PROFILES).DWG Plotted on 9-Nov-2022 11:15 AM

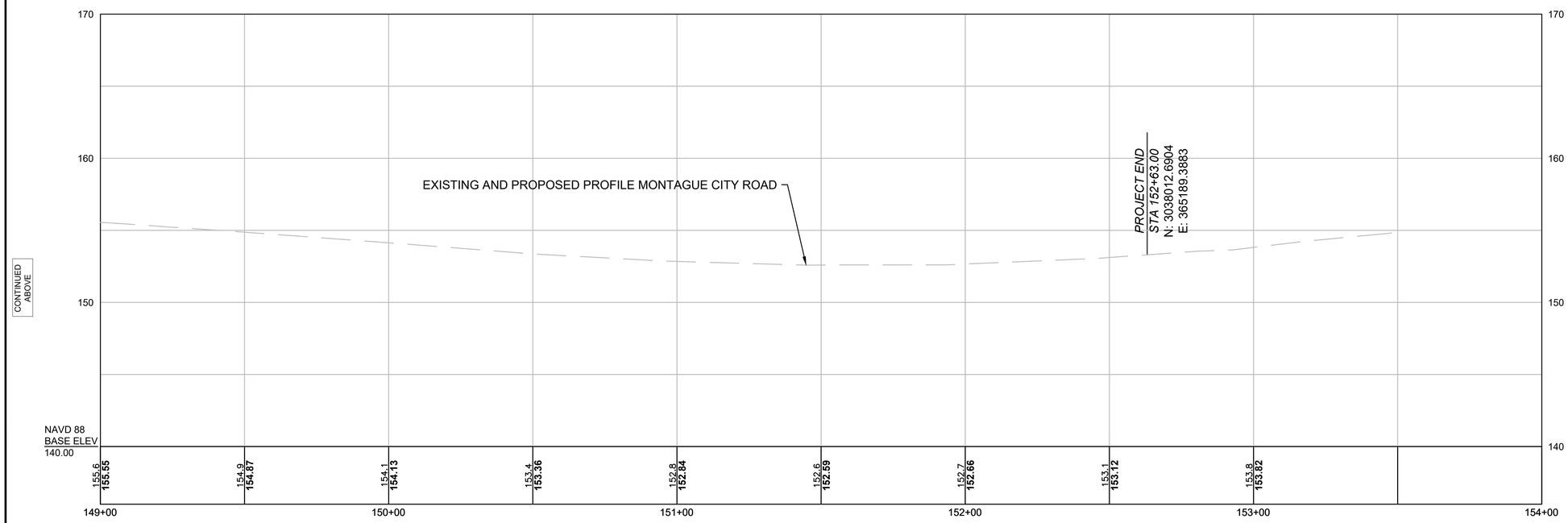
GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	20	102
PROJECT FILE NO.	609202		

NOTES:
1. PROFILE REPRESENTS THE EXISTING ROADWAY GRADE AND IS PROVIDED FOR INFORMATION ONLY.
2. PROPOSED WORK INVOLVES MILLING AND RESURFACING AND NO CHANGES IN PROFILE ELEVATION ARE PROPOSED.

PROFILE - SHEET 5 OF 6





FOR CONSTRUCTION PLANS:
SEE SHEET NOS. ## - ##

HOR. SCALE IN FEET
20 0 20 40
4 0 4 8
VER. SCALE IN FEET

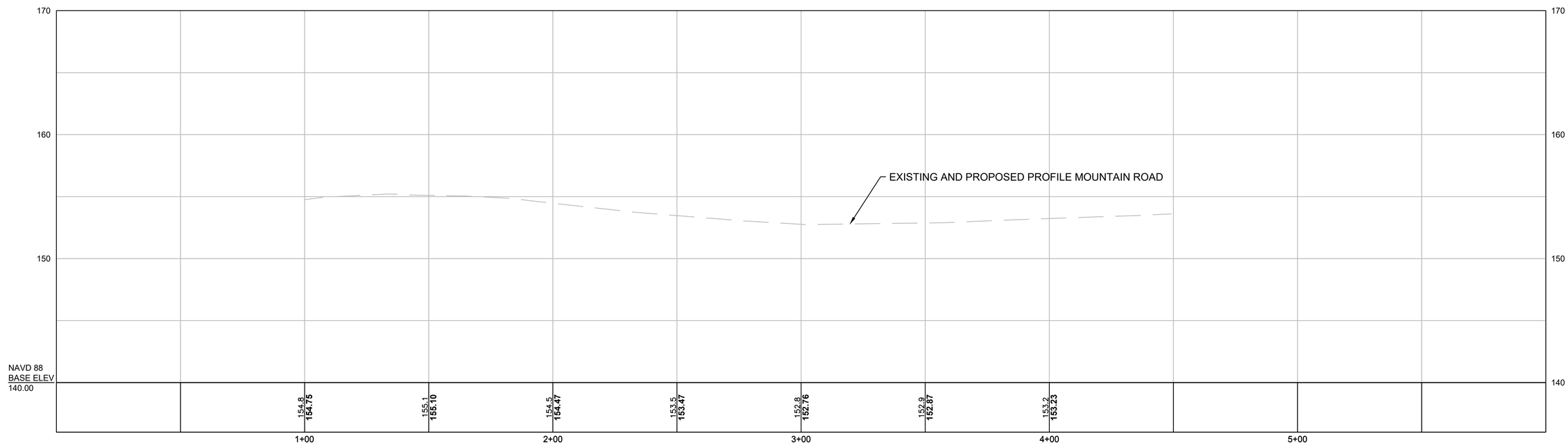
609202_HD06(PROFILES).DWG Plotted on 9-Nov-2022 11:15 AM

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	21	102
PROJECT FILE NO.	609202		

PROFILE - SHEET 6 OF 6

NOTES:
1. PROFILE REPRESENTS THE EXISTING ROADWAY GRADE AND IS PROVIDED FOR INFORMATION ONLY.
2. PROPOSED WORK INVOLVES MILLING AND RESURFACING AND NO CHANGES IN PROFILE ELEVATION ARE PROPOSED.



FOR CONSTRUCTION PLANS:
SEE SHEET NO. ##

HOR. SCALE IN FEET
20 0 20 40
4 0 4 8
VER. SCALE IN FEET

609202_HD06(PROFILES).DWG Plotted on 9-Nov-2022 11:15 AM

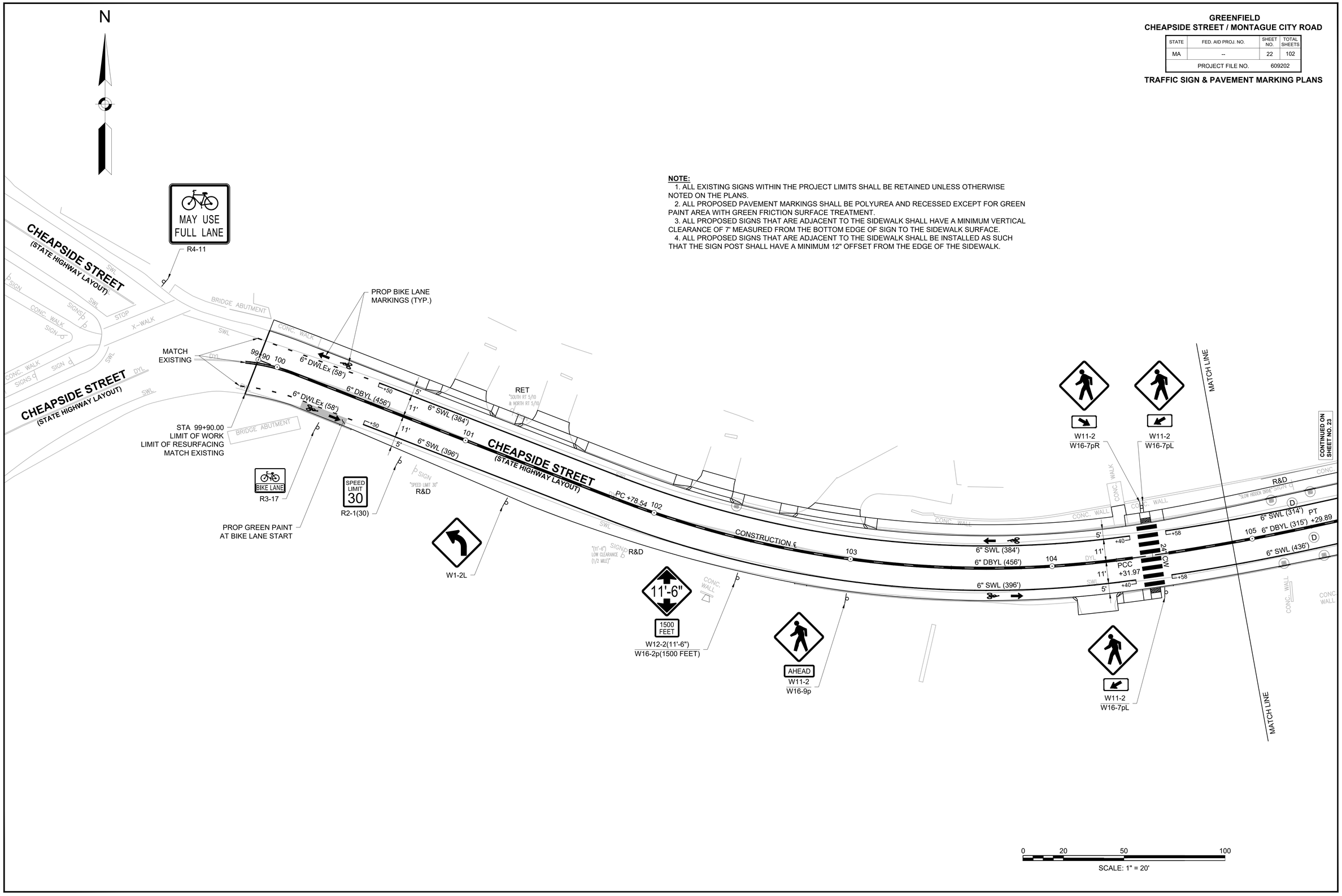
GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	22	102
PROJECT FILE NO.		609202	

TRAFFIC SIGN & PAVEMENT MARKING PLANS

NOTE:

1. ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE RETAINED UNLESS OTHERWISE NOTED ON THE PLANS.
2. ALL PROPOSED PAVEMENT MARKINGS SHALL BE POLYUREA AND RECESSED EXCEPT FOR GREEN PAINT AREA WITH GREEN FRICTION SURFACE TREATMENT.
3. ALL PROPOSED SIGNS THAT ARE ADJACENT TO THE SIDEWALK SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 7' MEASURED FROM THE BOTTOM EDGE OF SIGN TO THE SIDEWALK SURFACE.
4. ALL PROPOSED SIGNS THAT ARE ADJACENT TO THE SIDEWALK SHALL BE INSTALLED AS SUCH THAT THE SIGN POST SHALL HAVE A MINIMUM 12" OFFSET FROM THE EDGE OF THE SIDEWALK.

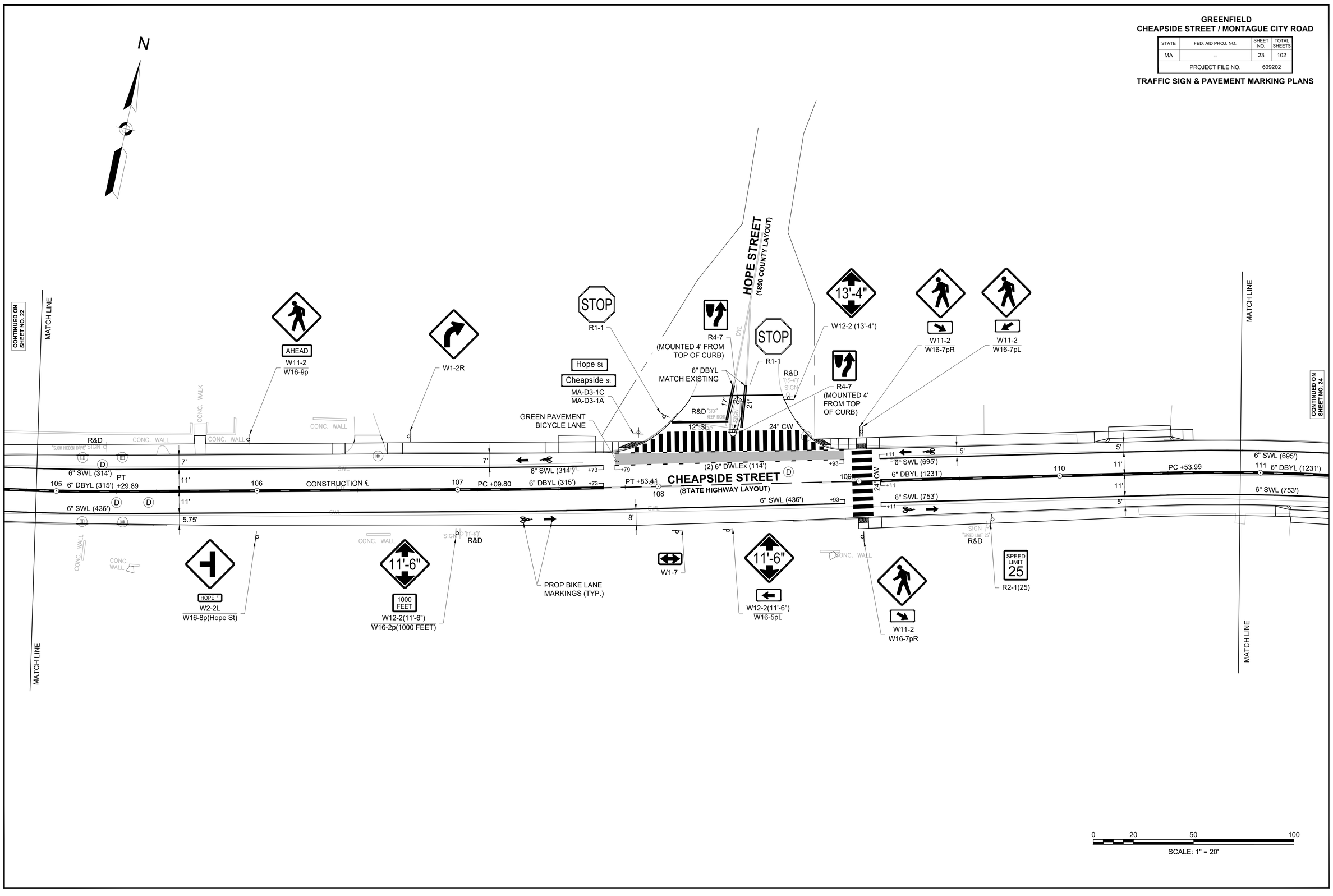


609202_HD09(SIGNS AND PAVEMENT MARKINGS).DWG Plotted on November 9, 2022 11:15 AM

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	23	102
PROJECT FILE NO.		609202	

TRAFFIC SIGN & PAVEMENT MARKING PLANS

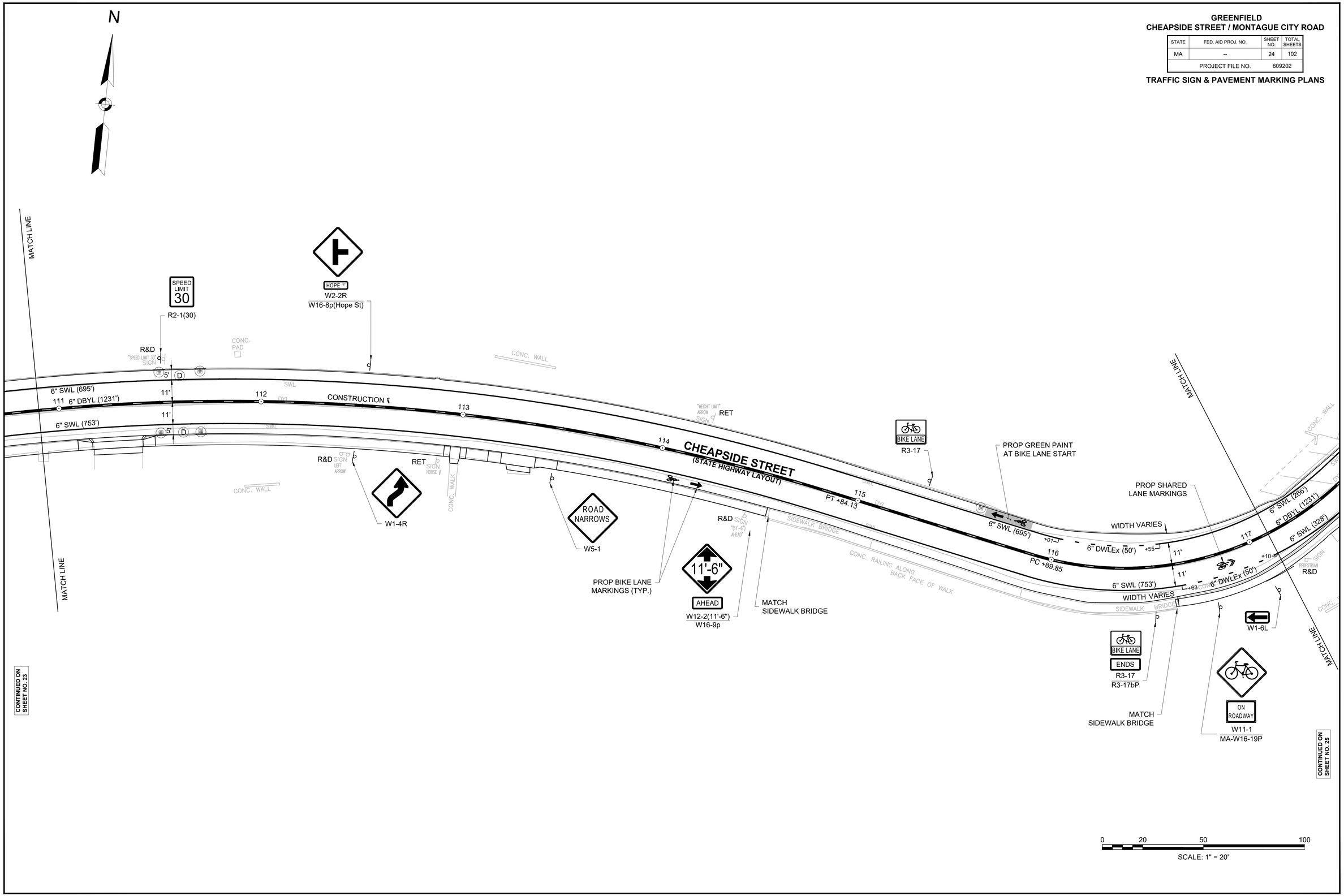


609202_HD09(SIGNS AND PAVEMENT MARKINGS).DWG Plotted on November 9, 2022 11:15 AM

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	24	102
PROJECT FILE NO.		609202	

TRAFFIC SIGN & PAVEMENT MARKING PLANS

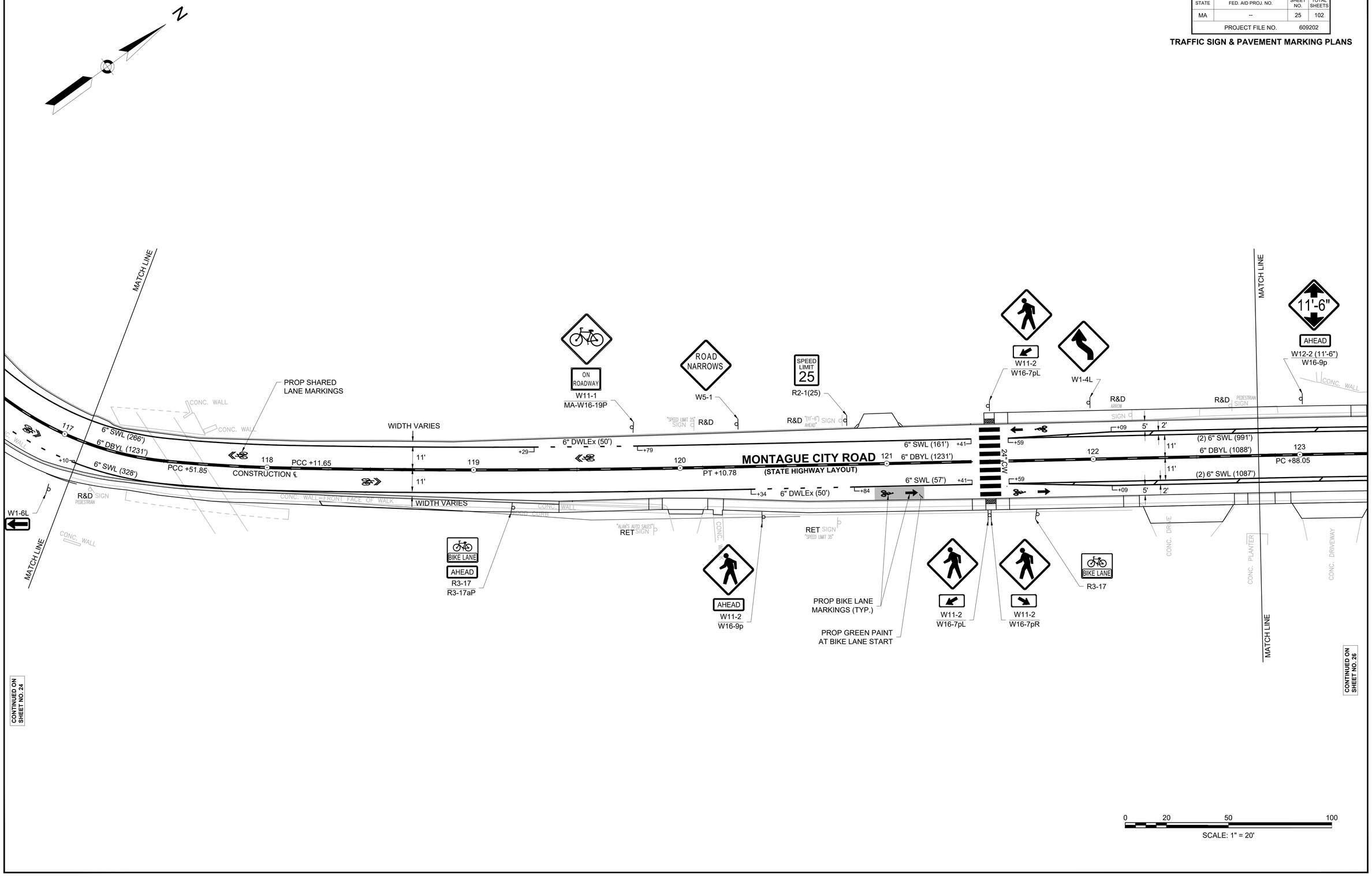


609202_HD09(SIGNS AND PAVEMENT MARKINGS).DWG Plotted on November 9, 2022 11:15 AM

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	25	102
PROJECT FILE NO.		609202	

TRAFFIC SIGN & PAVEMENT MARKING PLANS



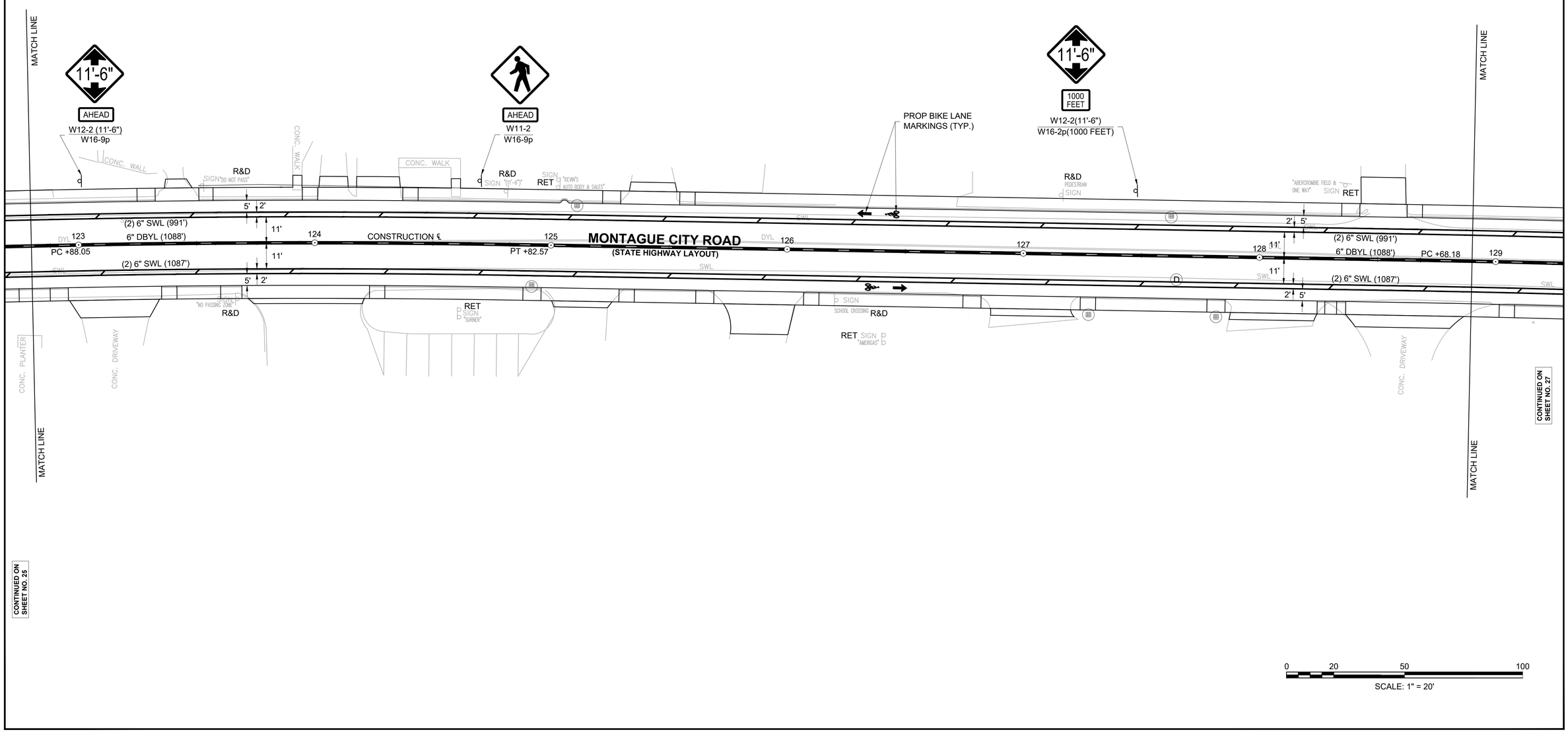
609202_HD09(SIGNS AND PAVEMENT MARKINGS).DWG Plotted on November 9, 2022 11:15 AM

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	26	102
PROJECT FILE NO.		609202	

TRAFFIC SIGN & PAVEMENT MARKING PLANS

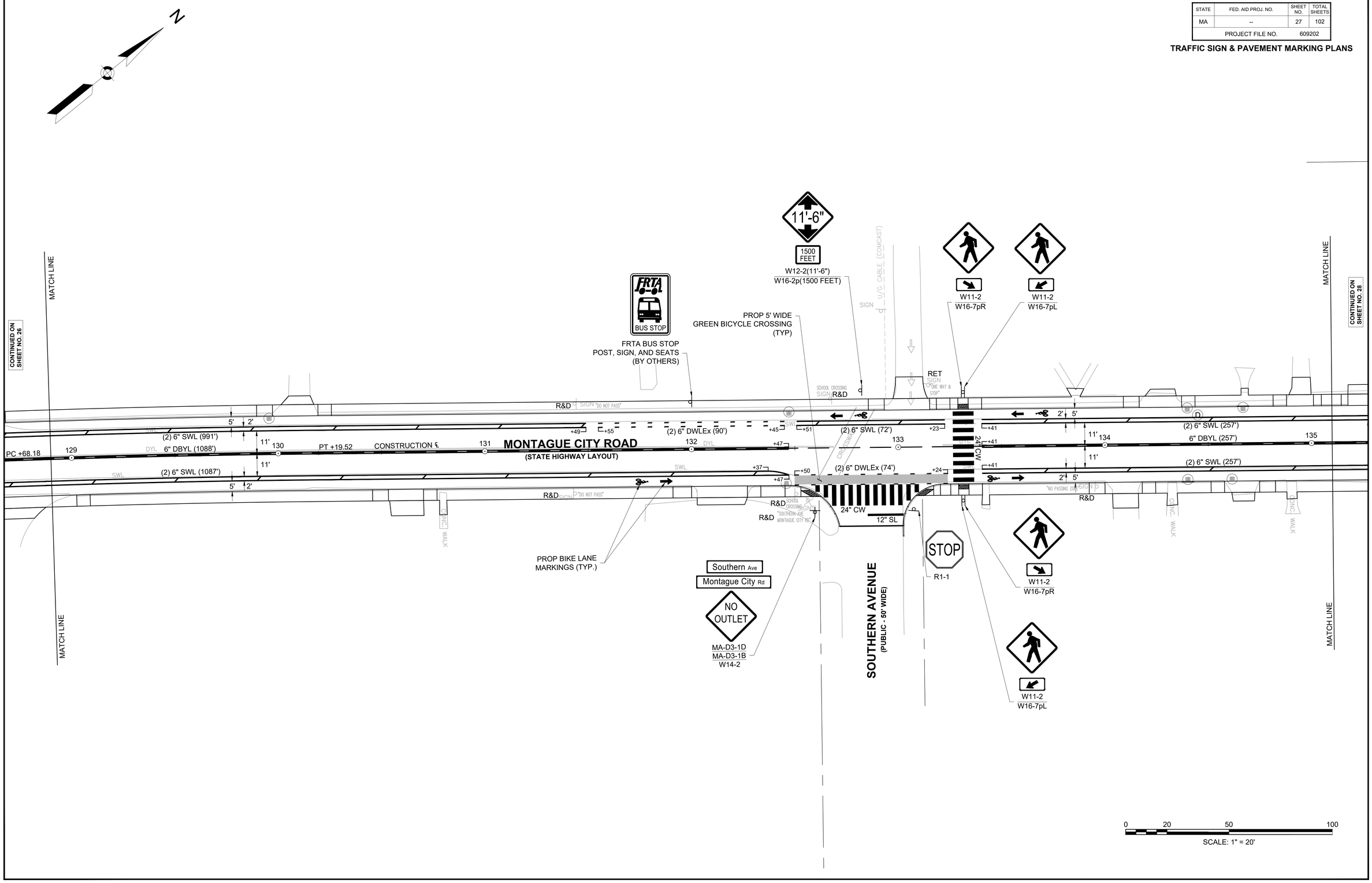
609202_HD09(SIGNS AND PAVEMENT MARKINGS).DWG Plotted on November 9, 2022 11:16 AM



GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	27	102
PROJECT FILE NO.		609202	

TRAFFIC SIGN & PAVEMENT MARKING PLANS

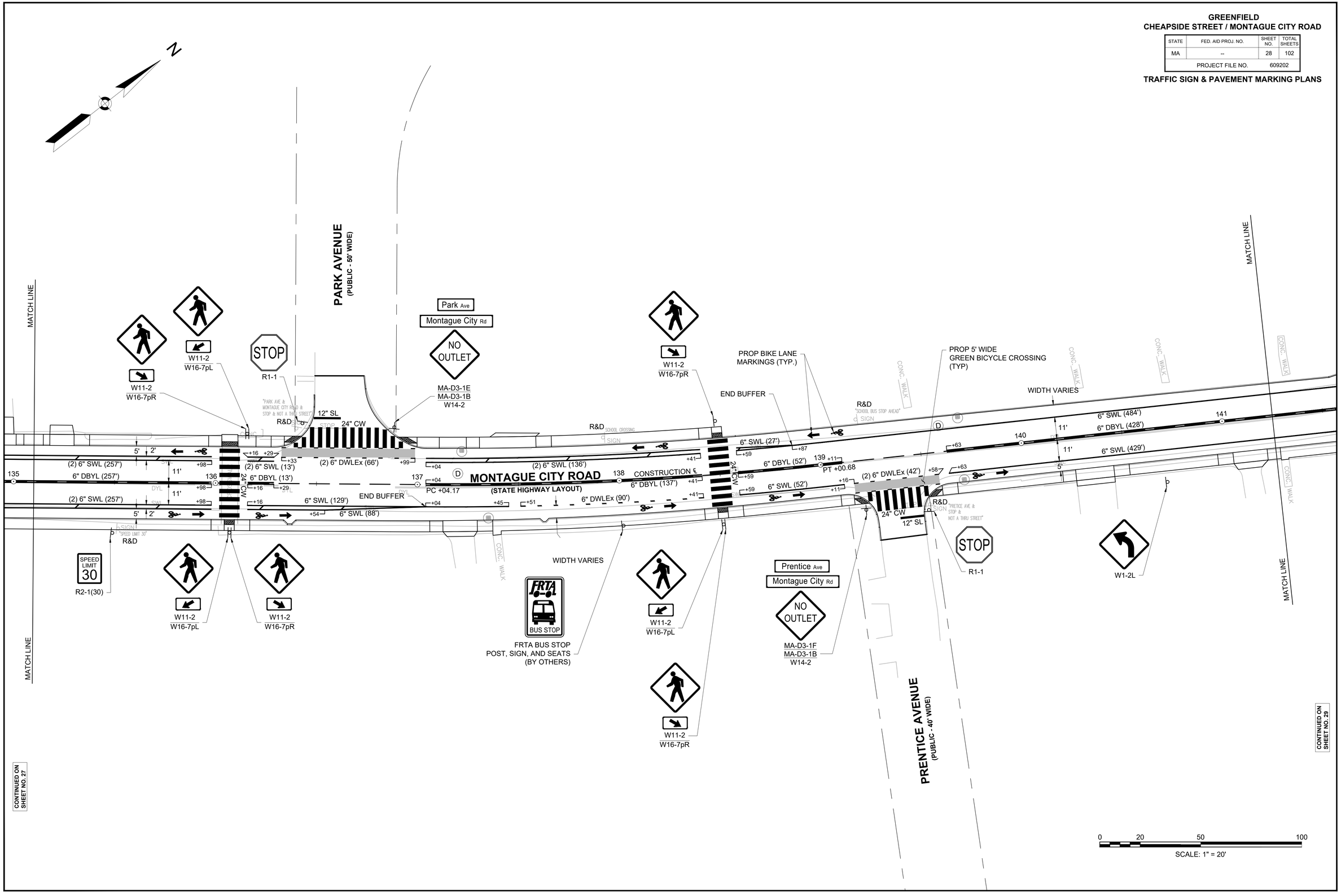


609202_HD09(SIGNS AND PAVEMENT MARKINGS).DWG Plotted on November 9, 2022 11:16 AM

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	28	102
PROJECT FILE NO.		609202	

TRAFFIC SIGN & PAVEMENT MARKING PLANS

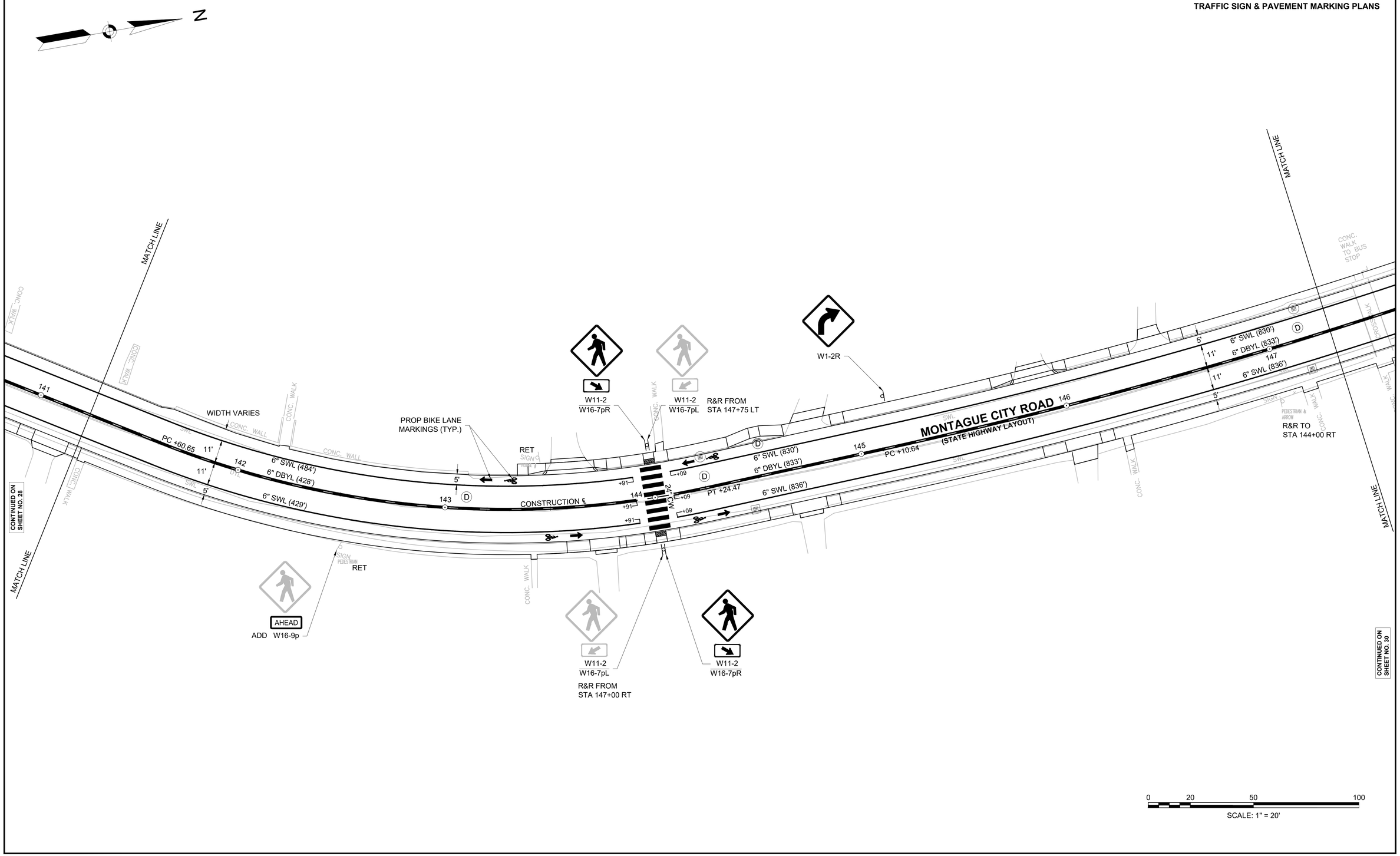


609202_HD09(SIGNS AND PAVEMENT MARKINGS).DWG Plotted on November 9, 2022 11:16 AM

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	29	102
PROJECT FILE NO.		609202	

TRAFFIC SIGN & PAVEMENT MARKING PLANS

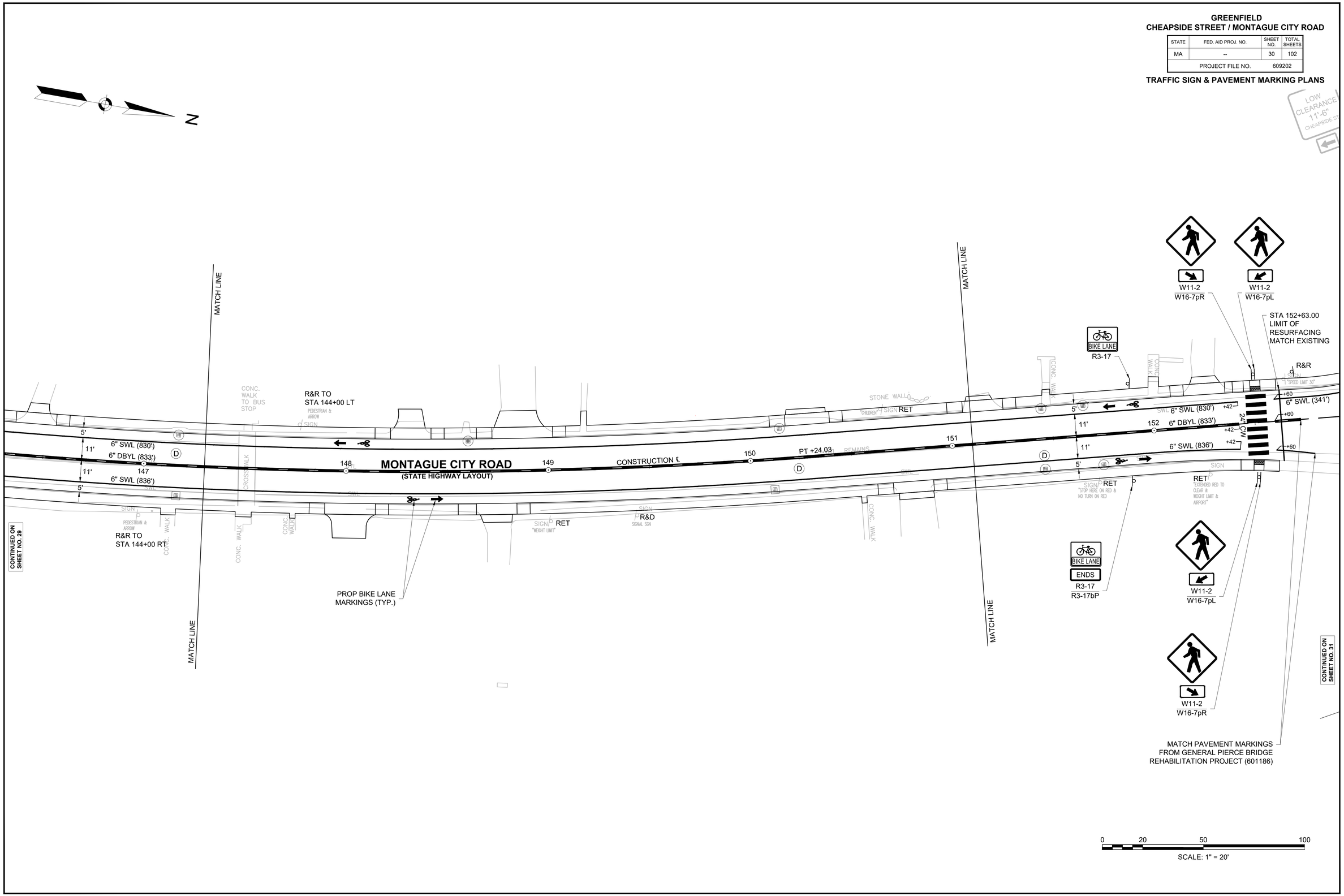


609202_HD09(SIGNS AND PAVEMENT MARKINGS).DWG Plotted on November 9, 2022 11:16 AM

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	30	102
PROJECT FILE NO.		609202	

TRAFFIC SIGN & PAVEMENT MARKING PLANS

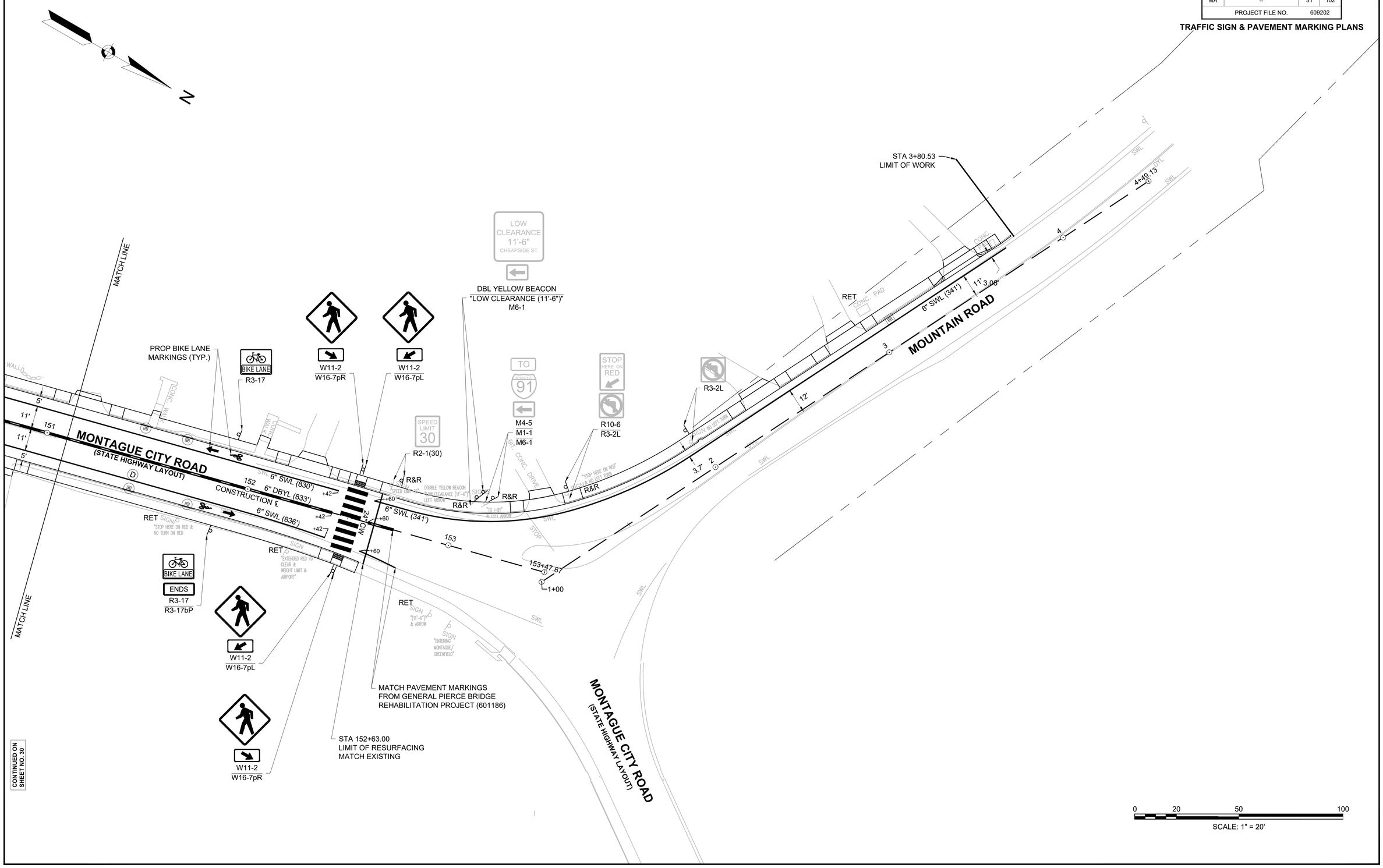


609202_HD09(SIGNS AND PAVEMENT MARKINGS).DWG Plotted on November 9, 2022 11:16 AM

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	31	102
PROJECT FILE NO.		609202	

TRAFFIC SIGN & PAVEMENT MARKING PLANS



609202_HD09(SIGNS AND PAVEMENT MARKINGS).DWG Plotted on November 9, 2022 11:16 AM

TRAFFIC SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN (INCHES) WIDTH	SIZE OF SIGN (INCHES) HEIGHT	TEXT	TEXT DIMENSIONS (INCHES) LETTER HEIGHT	TEXT DIMENSIONS (INCHES) VERTICAL SPACING	TEXT DIMENSIONS (INCHES) ARROW RTE MKR.	NUMBER OF SIGNS REQ'D	COLOR BACK-GROUND	COLOR LEGEND	COLOR BORDER	(POST SIZE) AND NUMBER REQUIRED	UNIT AREA (S.F.)	TOTAL AREA (S.F.)
R1-1	30	30	STOP	10C	10 10	NA	5	RED	WHITE	WHITE	(P5) 5 REQ'D	5.18	25.90
R2-1	24	30	SPEED LIMIT 25	4E 4E 10E	4 2 2 4	NA	2	WHITE	BLACK	BLACK	(P5) 2 REQ'D	5.00	10.00
R2-1	24	30	SPEED LIMIT 30	4E 4E 10E	4 2 2 4	NA	3	WHITE	BLACK	BLACK	(P5) 3 REQ'D	5.00	15.00
R3-17	30	24	BIKE LANE	GRAPHIC 5C	1.5 2.5	NA	7	WHITE	BLACK	BLACK	(P5) 7 REQ'D	5.00	35.00
R3-17aP	30	12	AHEAD	5D	3.5 3.5	NA	1	WHITE	BLACK	BLACK	1 REQ'D MOUNT w/R3-17	2.50	2.50
R3-17bP	30	12	ENDS	5D	3.5 3.5	NA	2	WHITE	BLACK	BLACK	2 REQ'D MOUNT w/R3-17	2.50	5.00
R4-7	24	30		GRAPHIC	NA	KEEP RIGHT	2	WHITE	BLACK	BLACK	(P5) 1 REQ'D 1 REQ'D MOUNT w/R1-1	5.00	10.00
R4-11	30	30	MAY USE FULL LANE	GRAPHIC 4C 4C	3.125 2.5 2.5 3.875	NA	1	WHITE	BLACK	BLACK	(P5) 1 REQ'D	6.25	6.25
W1-2L	36	36		GRAPHIC	NA	LEFT CURVE	2	YELLOW	BLACK	BLACK	(P5) (U-CHANNEL) 2 REQ'D	9.00	18.00
W1-2R	36	36		GRAPHIC	NA	RIGHT CURVE	2	YELLOW	BLACK	BLACK	(P5) (U-CHANNEL) 2 REQ'D	9.00	18.00
W1-4L	36	36		GRAPHIC	NA	LEFT REVERSE CURVE	1	YELLOW	BLACK	BLACK	(P5) (U-CHANNEL) 1 REQ'D	9.00	9.00
W1-4R	36	36		GRAPHIC	NA	RIGHT REVERSE CURVE	1	YELLOW	BLACK	BLACK	(P5) (U-CHANNEL) 1 REQ'D	9.00	9.00
W1-6L	48	24		GRAPHIC	NA	ONE DIRECTION LARGE ARROW	1	YELLOW	BLACK	BLACK	(2 - P5) 1 REQ'D	8.00	8.00
W1-7	48	24		GRAPHIC	NA	TWO DIRECTION LARGE ARROW	1	YELLOW	BLACK	BLACK	(2 - P5) 1 REQ'D	8.00	8.00

IDENTIFICATION NUMBER	SIZE OF SIGN (INCHES) WIDTH	SIZE OF SIGN (INCHES) HEIGHT	TEXT	TEXT DIMENSIONS (INCHES) LETTER HEIGHT	TEXT DIMENSIONS (INCHES) VERTICAL SPACING	TEXT DIMENSIONS (INCHES) ARROW RTE MKR.	NUMBER OF SIGNS REQ'D	COLOR BACK-GROUND	COLOR LEGEND	COLOR BORDER	(POST SIZE) AND NUMBER REQUIRED	UNIT AREA (S.F.)	TOTAL AREA (S.F.)
W2-2L	30	30		GRAPHIC	NA	LEFT SIDE ROAD	1	YELLOW	BLACK	BLACK	(P5) 1 REQ'D	6.25	6.25
W2-2R	30	30		GRAPHIC	NA	RIGHT SIDE ROAD	1	YELLOW	BLACK	BLACK	(P5) 1 REQ'D	6.25	6.25
W5-1	36	36	ROAD NARROWS	6D 6D	3.5	NA	1	YELLOW	BLACK	BLACK	(P5) (U-CHANNEL) 1 REQ'D	9.00	9.00
W11-1	30	30		GRAPHIC	NA	NA	2	YELLOW	BLACK	BLACK	(P5) 2 REQ'D	6.25	12.50
W11-2	30	30		GRAPHIC	NA	NA	30	FLUORES-CENT YELLOW/ GREEN	BLACK	BLACK	(P5) 30 REQ'D	6.25	187.50
W12-2 (11'-6")	36	36	11'-6"	GRAPHIC 12D GRAPHIC	NA	LOW CLEARANCE	7	YELLOW	BLACK	BLACK	(P5) (U-CHANNEL) 7 REQ'D	9.00	63.00
W12-2 (13'-4")	36	36	13'-4"	GRAPHIC 12D GRAPHIC	NA	LOW CLEARANCE	1	YELLOW	BLACK	BLACK	(P5) (U-CHANNEL) 1 REQ'D	9.00	9.00
W14-2	30	30	NO OUTLET	6D 6D	4	NA	3	YELLOW	BLACK	BLACK	3 REQ'D MOUNT w/STREET NAME SIGN	6.25	18.75
W16-2P (1000 FEET)	24	18	1000 FEET	5D 5D	3 2 3	NA	2	YELLOW	BLACK	BLACK	2 REQ'D MOUNT w/W12-2 (11'-6")	3.00	6.00
W16-2P (1500 FEET)	24	18	1500 FEET	5D 5D	3 2 3	NA	2	YELLOW	BLACK	BLACK	2 REQ'D MOUNT w/W12-2 (11'-6")	3.00	6.00
W16-5pL	24	18		GRAPHIC	NA	SUPPLEM-ENTAL ARROW (PLAQUE)	1	YELLOW	BLACK	BLACK	1 REQ'D MOUNT w/W12-2 (11'-6")	3.00	3.00
W16-7pL	24	12		GRAPHIC	NA	DOWNWARD DIAGONAL ARROW (PLAQUE)	12	FLUORES-CENT YELLOW/ GREEN	BLACK	BLACK	12 REQ'D MOUNT w/W11-2	2.00	24.00
W16-7pR	24	12		GRAPHIC	NA	DOWNWARD DIAGONAL ARROW (PLAQUE)	14	FLUORES-CENT YELLOW/ GREEN	BLACK	BLACK	14 REQ'D MOUNT w/W11-2	2.00	28.00
W16-8P	18	8	HOPE ST	4B/2B	2 2	NA	2	YELLOW	BLACK	BLACK	2 REQ'D MOUNT w/W12-2 (11'-6")	1.00	2.00

609202_HD09(SIGNS AND PAVEMENT MARKINGS).DWG Plotted on November 9, 2022 11:16 AM

TRAFFIC SIGN SUMMARY

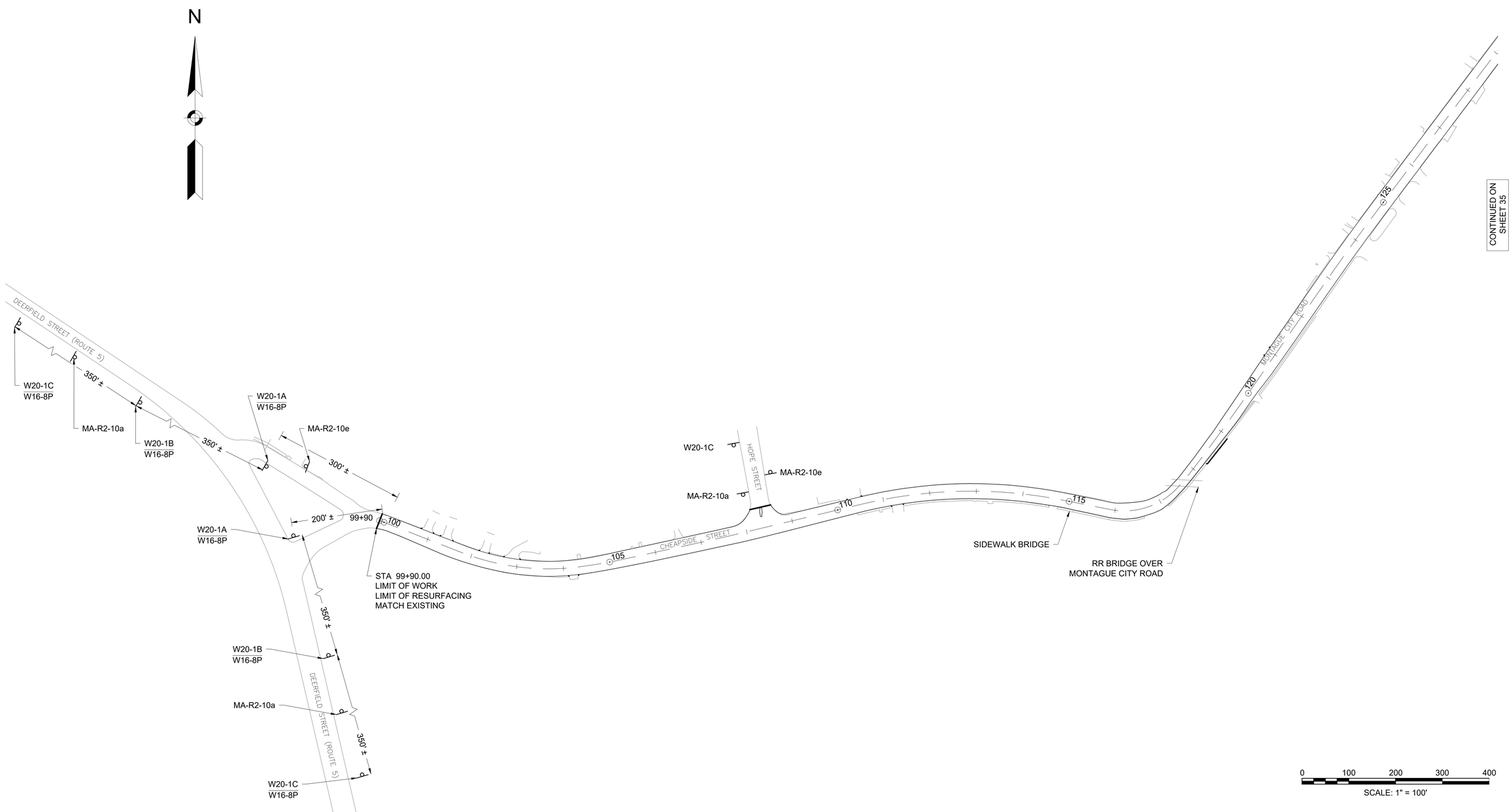
IDENTIFI-CATION NUMBER	SIZE OF SIGN (INCHES)		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQ'D	COLOR			(POST SIZE) AND NUMBER REQUIRED	UNIT AREA (S.F.)	TOTAL AREA (S.F.)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE MKR.		BACK-GROUND	LEGEND	BORDER			
W16-9P	24	12	AHEAD	5C	3.5 3.5	NA	2	YELLOW	BLACK	BLACK	2 REQ'D MOUNT w/W12-2	2.00	4.00
W16-9P	24	12	AHEAD	5C	3.5 3.5	NA	4	FLUORES-CENT YELLOW/ GREEN	BLACK	BLACK	4 REQ'D MOUNT w/W11-2	2.00	8.00
MA-W16-19P	24	18	ON ROADWAY	4C 4C	3.5 3 3.5	NA	2	YELLOW	BLACK	BLACK	2 REQ'D MOUNT w/W11-1	3.00	6.00
MA-D3-1A	54	12	Cheapside St	6D/4D	3 3.25	NA	1	GREEN	WHITE	WHITE	(P5) 1 REQ'D	4.50	4.50
MA-D3-1B	72	12	Montague City Rd	6D/4D	3 3.25	NA	3	GREEN	WHITE	WHITE	(P5) 3 REQ'D	6.00	18.00
MA-D3-1C	36	12	Hope St	6D/4D	3 3.25	NA	1	GREEN	WHITE	WHITE	1 REQ'D MOUNT w/MA-D3-1A	3.00	3.00
MA-D3-1D	54	12	Southern Ave	6D/4D	3 3	NA	1	GREEN	WHITE	WHITE	1 REQ'D MOUNT w/MA-D3-1B	4.50	4.50
MA-D3-1E	36	12	Park Ave	6D/4D	3 3	NA	1	GREEN	WHITE	WHITE	1 REQ'D MOUNT w/MA-D3-1B	3.00	3.00
MA-D3-1F	54	12	Prentice Ave	6D/4D	3 3	NA	1	GREEN	WHITE	WHITE	1 REQ'D MOUNT w/MA-D3-1B	4.50	4.50

609202_HD09(SIGNS AND PAVEMENT MARKINGS).DWG Plotted on November 9, 2022 11:16 AM

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	34	103
PROJECT FILE NO.		609202	

TEMPORARY TRAFFIC CONTROL PLANS
SHEET 1 OF 4

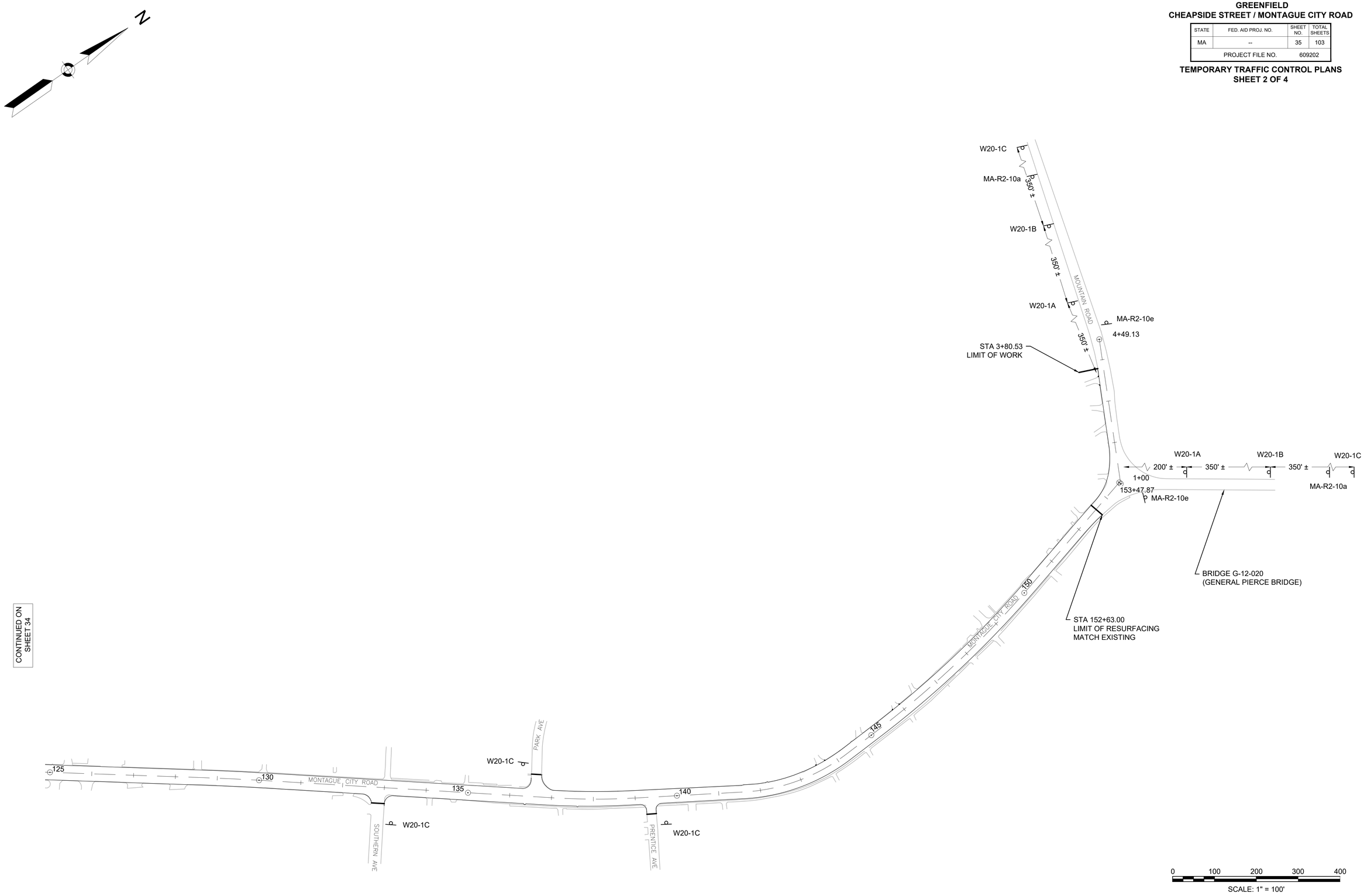


609202_HD04(TYPICAL SECTION).DWG Plotted on 9-Nov-2022 8:04 AM

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	35	103
PROJECT FILE NO.		609202	

TEMPORARY TRAFFIC CONTROL PLANS
SHEET 2 OF 4



609202_HD04(TYPICAL SECTION).DWG Plotted on 9-Nov-2022 8:04 AM

NOTES:

1. ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS, UNLESS SUPERCEDED BY THESE PLANS.
2. ALL SIGN LEGENDS, BORDERS, AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD.
3. TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
4. TEMPORARY CONSTRUCTION SIGNING, BARRICADES, AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM THE HIGHWAY OR COVERED WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.
5. SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, CHANNELIZING DEVICES, BARRIERS, AND CRASH ATTENUATORS MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES" AND/OR "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH).
6. CONTRACTORS 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 CONDUIT INSTALLATION, EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT, AND SIMILAR OPERATIONS.
7. THE FIRST TEN PLASTIC DRUMS OF A TAPER SHALL BE MOUNTED WITH SEQUENTIAL FLASHING LIGHTS.
8. THE ADVISORY SPEED LIMIT, IF REQUIRED, SHALL BE DETERMINED BY THE ENGINEER.
9. DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
10. MAXIMUM SPACING OF TRAFFIC DEVICES IN A TAPER (DRUMS OR CONES) IS EQUAL IN FEET TO THE SPEED LIMIT IN MPH.
11. MINIMUM LANE WIDTH IS TO BE 11 FEET UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS OR MEDIAN BARRIER.
12. ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.

LEGEND:

- ● REFLECTORIZED PLASTIC DRUM OR 36" CONE
- P/F POLICE/FLAGGER DETAIL
- TYPE III BARRICADE
- CHANGEABLE MESSAGE SIGN
- ARROW BOARD
- WORK ZONE
- DIRECTION OF TRAFFIC
- IMPACT ATTENUATOR
- MEDIAN BARRIER
- MEDIAN BARRIER WITH WARNING LIGHTS
- WORK VEHICLE
- TRUCK MOUNTED ATTENUATOR
- TRAFFIC OR PEDESTRIAN SIGNAL
- SIGN

THE IDEAL CAPACITY OF A MAJOR HIGHWAY IS GENERALLY CONSIDERED TO BE 1900 PASSENGER CARS PER HOUR PER LANE (PCPHPL). IN WORK ZONES ON A MULTI-LANE DIVIDED HIGHWAY, THE FOLLOWING VOLUME GUIDELINES HAVE BEEN SUGGESTED:

MEASURED AVERAGE WORK ZONE CAPACITIES

NUMBER OF LANES		NUMBER OF STUDIES	AVERAGE CAPACITY	
NORMAL (EXISTING)	OPEN (TO TRAFFIC)		VPH	VPHPL
3	1	7	1,170	1,170
2	1	8	1,340	1,340
5	2	8	2,740	1,370
4	2	4	2,960	1,480
3	2	9	2,980	1,490
4	3	4	4,560	1,520

Source: Dudek, C., Notes on Work Zone Capacity and Level of Service. Texas Transportation Institute, Texas A&M University, College Station, Texas (1984)

BY OBTAINING HOURLY TRAFFIC COUNTS FOR A PARTICULAR ROADWAY (WITH A MINIMUM OF A 48-HOUR AUTOMATIC TRAFFIC RECORDER (ATR) COUNT), THIS WILL HELP TO DETERMINE AT WHAT TIMES OF THE DAY OR NIGHT A CERTAIN NUMBER OF LANES MAY BE CLOSED.

SUGGESTED WORK ZONE WARNING SIGN SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS **		
	A	B	C
LOCAL OR LOW VOLUME ROADWAYS*	350 (100)	350 (100)	350 (100)
MOST OTHER ROADWAYS*	500 (150)	500 (150)	500 (150)
FREEWAYS AND EXPRESSWAYS*	1,000 (300)	1,500 (450)	2,640 (800)

* ROAD TYPE TO BE DETERMINED BY MASSDOT OFFICE OF TRANSPORTATION PLANNING.

** DISTANCES ARE SHOWN IN FEET (METERS). THE COLUMN HEADINGS A, B, AND C ARE THE DIMENSIONS SHOWN IN THE DETAIL/ TYPICAL SETUP FIGURES. THE A DIMENSION IS THE DISTANCE FROM THE TRANSITION OR POINT OF RESTRICTION TO THE FIRST SIGN. THE B DIMENSION IS THE DISTANCE BETWEEN THE FIRST AND SECOND SIGNS. THE C DIMENSION IS THE DISTANCE BETWEEN THE SECOND AND THIRD SIGNS. (THE "THIRD" SIGN IS THE FIRST ONE TYPICALLY ENCOUNTERED BY A DRIVER APPROACHING A TEMPORARY TRAFFIC CONTROL (TTC) ZONE.)

THE "THIRD" SIGN ABOVE IS TYPICALLY REFERRED TO AS AN "ADVANCE WARNING" SIGN ON THE TTCP SETUPS. THESE ADVANCE WARNING SIGNS ARE LOCATED PRIOR TO THE PROJECT LIMITS ON ALL APPROACHES (i.e. THE W20-1 SERIES (ROAD WORK XX FT) SIGNS), AND USUALLY REMAIN FOR THE DURATION OF THE PROJECT. ADDITIONAL SIGNS (i.e. "RIGHT LANE CLOSED 1 MILE" AND "LEFT LANE CLOSED 1 MILE") HAVE BEEN SHOWN IN SOME FIGURES AS EXAMPLES OF REINFORCEMENT SIGN PLACEMENT BUT ARE USED IN RARE OCCASIONS.

THE FIRST AND SECOND WARNING SIGNS ABOVE ARE REFERRED TO AS THE OPERATIONAL (DAY-TO-DAY) WORK ZONE SIGNS AND MAY BE MOVED DEPENDING ON WHERE THE SPECIFIC ROADWAY WORK FOR THAT DAY IS LOCATED.

MA-R2-10a SIGNS SHALL BE PLACED BETWEEN THE SECOND AND THIRD SIGNS AS DESCRIBED ABOVE.

MA-R2-10a, MA-R2-10e, AND W20-1 SERIES SIGNS ARE TO BE INCLUDED ON ALL DETAILS/TYPICAL SETUPS.

Based on: Table 6C-1 MUTCD LATEST EDITION

STOPPING SIGHT DISTANCE AS A FUNCTION OF SPEED

SPEED* (mph)	DISTANCE (ft)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730
75	820

*POSTED SPEED, OFF-PEAK 85TH-PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED

THESE VALUES MAY BE USED TO DETERMINE THE LENGTH OF LONGITUDINAL BUFFER SPACES.

THE DISTANCES IN THE ABOVE CHART REPRESENT THE MINIMAL VALUES FOR BUFFER SPACING.

Source: Table 6C-2 MUTCD LATEST EDITION

CONVENTIONAL ROADWAY- A STREET OR HIGHWAY OTHER THAN A LOW-VOLUME ROAD, EXPRESSWAY, OR FREEWAY.

EXPRESSWAY- A DIVIDED HIGHWAY WITH PARTIAL CONTROL OF ACCESS.

FREEWAY- A DIVIDED HIGHWAY WITH FULL CONTROL OF ACCESS.

LOW-VOLUME ROAD- A FACILITY LYING OUTSIDE OF BUILT-UP AREAS OF CITIES, TOWNS, AND COMMUNITIES, AND IT SHALL HAVE A TRAFFIC VOLUME OF LESS THAN 400 AADT. IT SHALL NOT BE A FREEWAY, EXPRESSWAY, INTERCHANGE RAMP, FREEWAY SERVICE ROAD OR A ROAD ON A DESIGNATED STATE HIGHWAY SYSTEM.

Source: MUTCD LATEST EDITION

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	36	103
PROJECT FILE NO.	609202		

TEMPORARY TRAFFIC CONTROL PLANS
SHEET 3 OF 4

TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES

TYPE OF TAPER	TAPER LENGTH (L)*
MERGING TAPER	AT LEAST L
SHIFTING TAPER	AT LEAST 0.5L
SHOULDER TAPER	AT LEAST 0.33L
ONE-LANE, TWO-WAY TRAFFIC TAPER	50 FT MIN. 100 FT MAX.
DOWNSTREAM TAPER	50 FT MIN. 100 FT MAX. PER LANE

Source: Table 6C-3 MUTCD LATEST EDITION

FORMULAS FOR DETERMINING TAPER LENGTHS

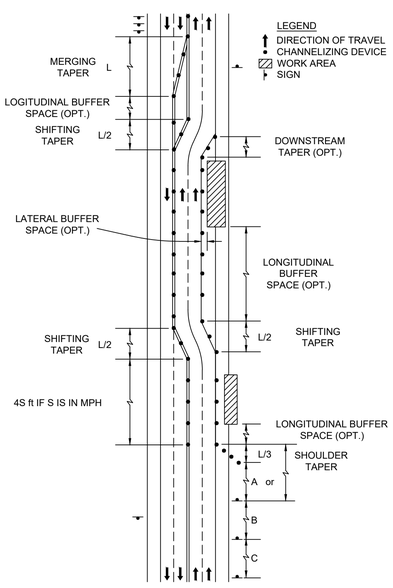
SPEED LIMIT (S)	TAPER LENGTH (L) FEET
40 MPH OR LESS	$L = \frac{WS^2}{60}$
45 MPH OR MORE	L= WS

WHERE: L = TAPER LENGTH IN FEET (METERS)

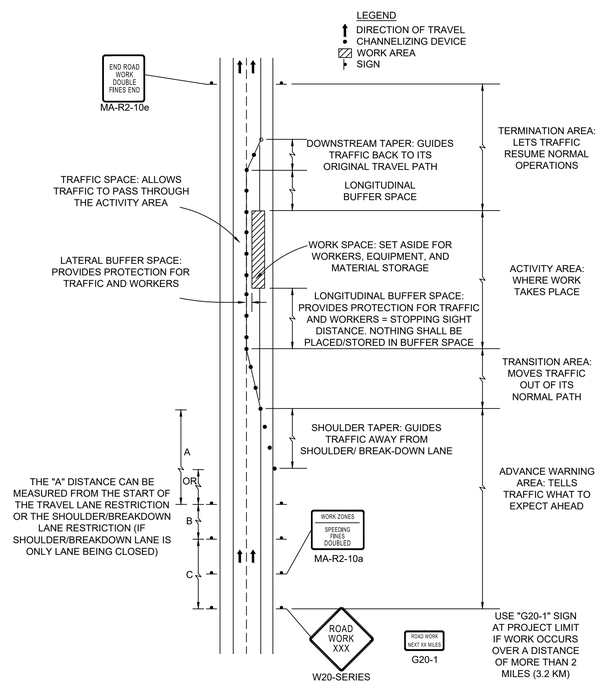
W = WIDTH OF OFFSET IN FEET (METERS)

S = POSTED SPEED LIMIT, OR OFF-PEAK 85TH-PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICAPATED OPERATING SPEED IN MPH (KM/H)

Source: Table 6C-4 MUTCD LATEST EDITION



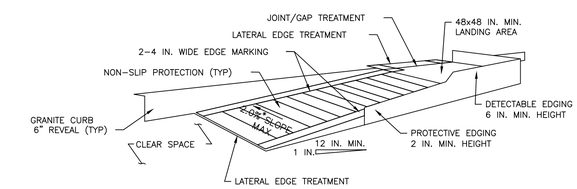
TYPES OF TAPERS AND BUFFER SPACES



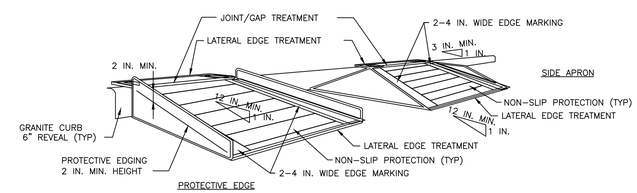
COMPONENT PARTS OF A TEMPORARY TRAFFIC CONTROL (TTC) ZONE

NOTES:

1. CURB RAMPS SHALL BE 60 IN. MINIMUM WIDTH WITH A FIRM, STABLE AND NON-SLIP SURFACE.
2. PROTECTIVE EDGING WITH A 2 IN. MINIMUM HEIGHT SHALL BE INSTALLED WHEN THE CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6 IN. OR GREATER OR HAS A SIDE APRON SLOP STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN THE CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3 IN. OR MORE.
3. DETECTABLE EDGING WITH 6 IN. MINIMUM HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
4. CURB RAMPS AND LANDINGS SHOULD HAVE A 1:50 (2%) MAX CROSS-SLOPE.
5. CLEAR SPACE OF 48x48 IN. MINIMUM SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
6. THE CURB RAMP WALKWAY EDGE SHALL BE MARKED WITH A CONTRASTING COLOR 2 TO 4 IN. WIDE MARKING. THE MARKING IS OPTIONAL WHERE COLOR CONTRASTING EDGING IS USED.
7. WATER FLOW IN THE GUTTER SYSTEM SHALL HAVE MINIMAL RESTRICTION.
8. LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 0.5 IN. WIDTH.
9. CHANGES BETWEEN SURFACE HEIGHTS SHOULD NOT EXCEED 0.5 IN. LATERAL EDGES SHOULD BE VERTICAL UP TO 0.25 IN. HIGH, AND BEVELED AT 1:2 BETWEEN 0.25 IN. AND 0.5 IN. HEIGHT.



TEMPORARY CURB RAMP - PARALLEL TO CURB



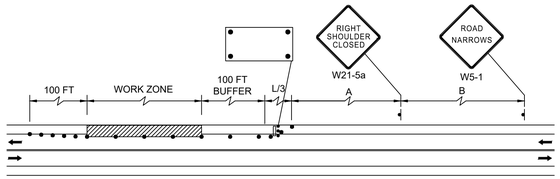
TEMPORARY CURB RAMP - PERPENDICULAR TO CURB

609202_HD04(TYPICAL SECTION).DWG Plotted on 9-Nov-2022 8:04 AM

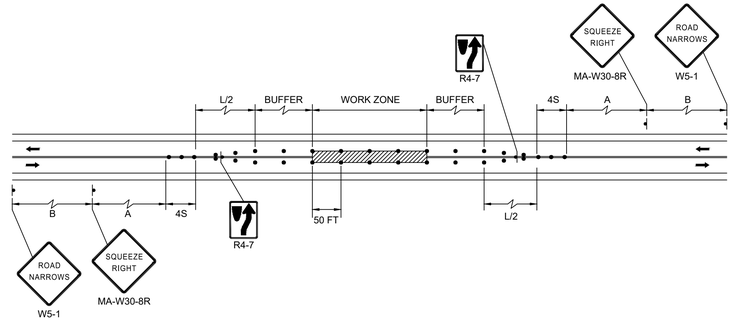
GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	##	103
PROJECT FILE NO.	609202		

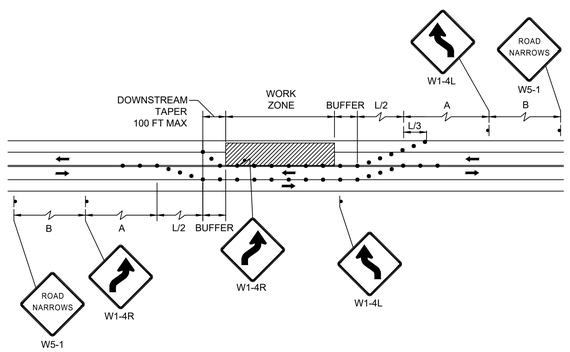
TEMPORARY TRAFFIC CONTROL PLANS
SHEET 4 OF 4



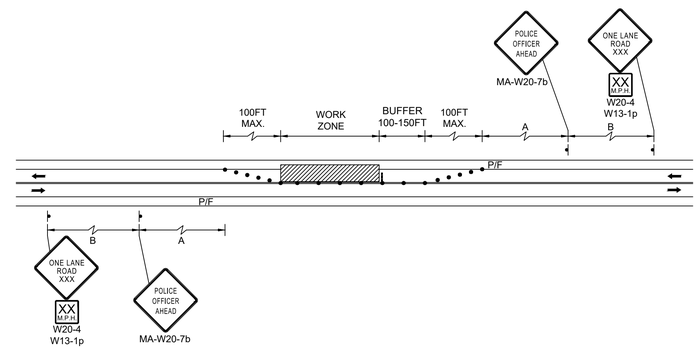
TWO LANE ROAD SHOULDER CLOSED



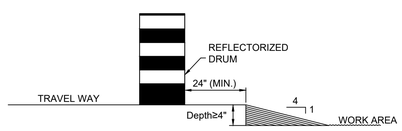
TWO LANE ROAD CENTER OF ROAD CLOSURE



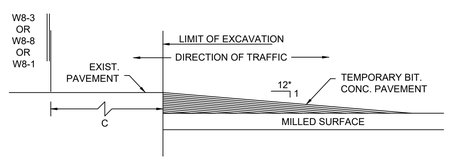
TWO LANE ROAD SHOULDER AND TRAVEL LANE CLOSED



TWO LANE ROAD ONE LANE ALTERNATING TRAFFIC



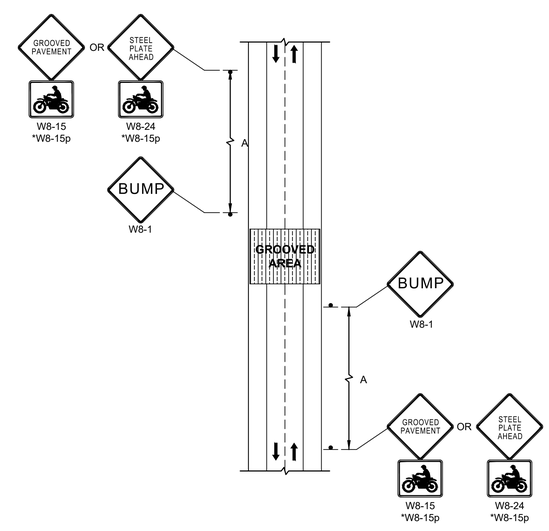
LATERAL DROP-OFF DETAIL
NOT TO SCALE



LONGITUDINAL DROP-OFF DETAIL
NOT TO SCALE

* - INCREASE SLOPE RATIO FOR HIGHER SPEEDS

LATERAL AND LONGITUDINAL DROP-OFF DETAILS



*FOR SYMBOL SEE MUTCD LATEST EDITION FIGURE 6F-4

TWO LANE ROAD SCARIFIED PAVEMENT/STEEL PLATE

609202_HD04(TYPICAL SECTION).DWG Plotted on 9-Nov-2022 8:04 AM

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	39	103
PROJECT FILE NO.	609202		

TEMPORARY TRAFFIC CONTROL PLAN
SIGN SUMMARY

TRAFFIC CONTROL SIGN SUMMARY

IDENTIFI-CATION NUMBER	SIZE OF SIGN (INCHES)		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQ'D	COLOR			UNIT AREA (S.F.)	TOTAL AREA (S.F.)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE MKR.		BACK-GROUND	LEGEND	BORDER		
R4-7	24	30		NA	NA	KEEP RIGHT	2	WHITE	BLACK	BLACK	5.00	10.00
W1-4R	36	36		NA	NA	SHIFT RIGHT	4	FLUOR-ESCENT ORANGE	BLACK	BLACK	9.00	36.00
W1-4L	36	36		NA	NA	SHIFT LEFT	4	FLUOR-ESCENT ORANGE	BLACK	BLACK	9.00	36.00
W5-1	36	36		6D 6D	4	NA	4	FLUOR-ESCENT ORANGE	BLACK	BLACK	9.00	36.00
W8-1	36	36		10D	NA	NA	4	FLUOR-ESCENT ORANGE	BLACK	BLACK	9.00	36.00
W8-15	36	36		6C	2.625	NA	4	FLUOR-ESCENT ORANGE	BLACK	BLACK	9.00	36.00
W13-1P	24	24		10E 4E	2.75	NA	4	FLUOR-ESCENT ORANGE	BLACK	BLACK	4.00	16.00
W16-8P	28	8		4B	2.625	NA	6	FLUOR-ESCENT ORANGE	BLACK	BLACK	1.56	9.33
W16-8P	32	8		4B	2.625	NA	6	FLUOR-ESCENT ORANGE	BLACK	BLACK	1.78	10.67
W20-1A	36	36		5D 5D 5D	3.682 3.682	NA	4	FLUOR-ESCENT ORANGE	BLACK	BLACK	9.00	36.00
W20-1B	36	36		5D 5D 5D	3.682 3.682	NA	4	FLUOR-ESCENT ORANGE	BLACK	BLACK	9.00	36.00
W20-1C	36	36		5D 5D 5D	3.682 3.682	NA	8	FLUOR-ESCENT ORANGE	BLACK	BLACK	9.00	72.00
W20-4	36	36		5C 5C 5C	2.25 2.25	NA	4	FLUOR-ESCENT ORANGE	BLACK	BLACK	9.00	36.00
W20-5R	36	36		5C 5C 5C	2.75 2.75	NA	4	FLUOR-ESCENT ORANGE	BLACK	BLACK	9.00	36.00

IDENTIFI-CATION NUMBER	SIZE OF SIGN (INCHES)		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQ'D	COLOR			UNIT AREA (S.F.)	TOTAL AREA (S.F.)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE MKR.		BACK-GROUND	LEGEND	BORDER		
W20-7	48	48		NA	NA	NA	4	FLUOR-ESCENT ORANGE	BLACK	BLACK	16.00	64.00
MA-W20-7b	36	36		5C 5C 5C	3 3	NA	4	FLUOR-ESCENT ORANGE	BLACK	BLACK	9.00	36.00
MA-W30-8R	36	36		6C 6C	4	NA	4	FLUOR-ESCENT ORANGE	BLACK	BLACK	9.00	36.00
MA-R2-10a	48	36		4D 4D 4D 6D	3.25 1.75 3 2.5 3 4.5	NA	8	FLUOR-ESCENT ORANGE WHITE	BLACK	BLACK	12.00	96.00
MA-R2-10e	36	48		5C 5C 5C 5C	6 4 4 4 4 6	NA	8	FLUOR-ESCENT ORANGE WHITE	BLACK	BLACK	12.00	96.00

609202_HD04(TYPICAL SECTION).DWG Plotted on 9-Nov-2022 8:04 AM

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	39	102
PROJECT FILE NO.		609202	

UTILITY & DRAINAGE PLANS

609202_HD13(UTILITY PLANS).DWG Plotted on November 9, 2022 11:16 AM

HIGHWAY GUARD DETAILS

STA 100+00 TO 100+34 RT PROP TRANSITION TO NCHRP 350 GUARDRAIL, ITEM 628.21
STA 100+34 TO 102+73 RT PROP GUARDRAIL, TL-2 (SINGLE FACED), ITEM 620.12
STA 102+73 TO 103+10 RT PROP TANGENT END TREATMENT, TL-2, ITEM 627.82

TRAFFIC SIGNAL CONDUIT

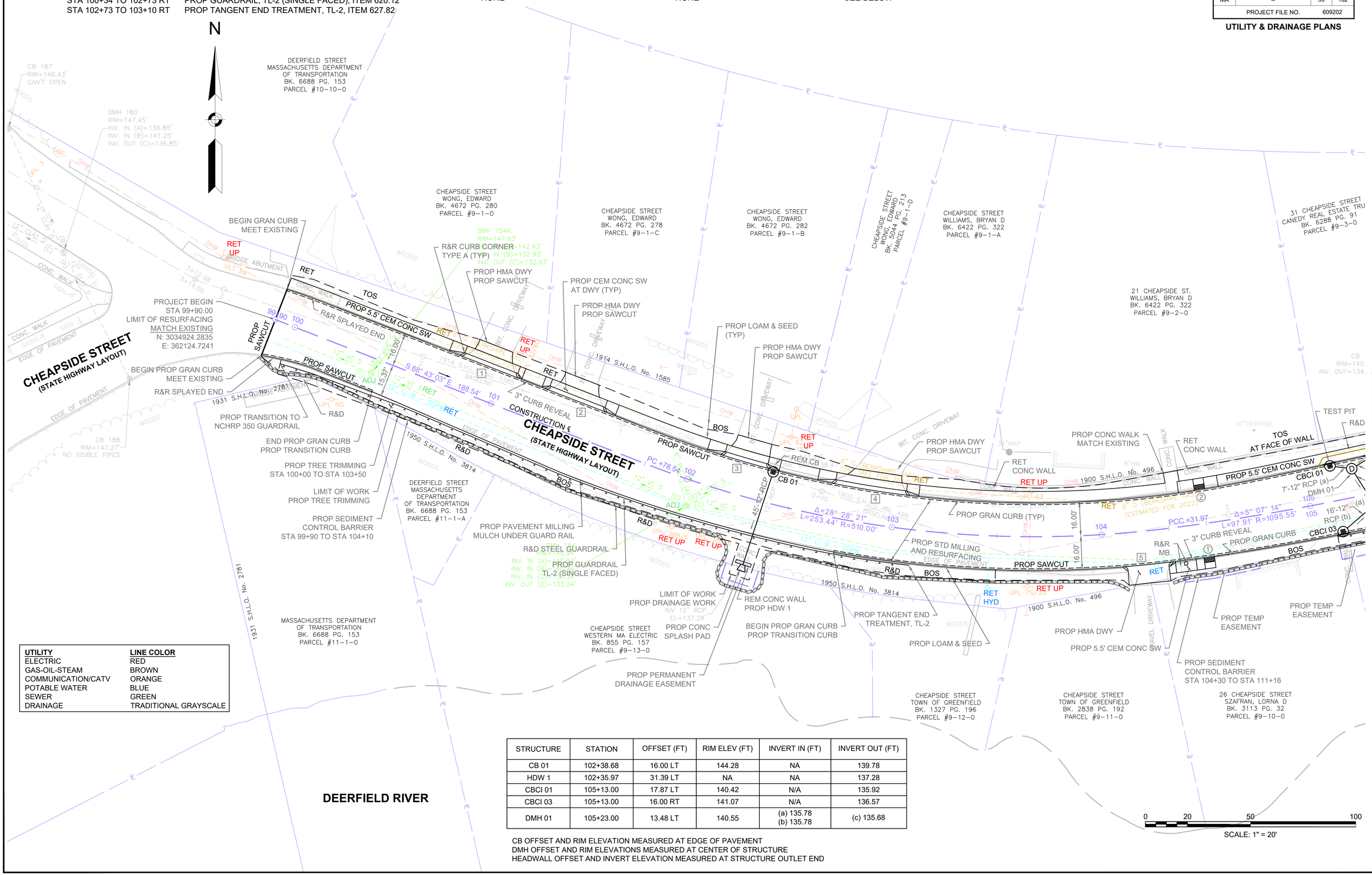
NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

SEE BELOW



UTILITY	LINE COLOR
ELECTRIC	RED
GAS-OIL-STEAM	BROWN
COMMUNICATION/CATV	ORANGE
POTABLE WATER	BLUE
SEWER	GREEN
DRAINAGE	TRADITIONAL GRAYSCALE

STRUCTURE	STATION	OFFSET (FT)	RIM ELEV (FT)	INVERT IN (FT)	INVERT OUT (FT)
CB 01	102+38.68	16.00 LT	144.28	NA	139.78
HDW 1	102+35.97	31.39 LT	NA	NA	137.28
CBCI 01	105+13.00	17.87 LT	140.42	N/A	135.92
CBCI 03	105+13.00	16.00 RT	141.07	N/A	136.57
DMH 01	105+23.00	13.48 LT	140.55	(a) 135.78 (b) 135.78	(c) 135.68

CB OFFSET AND RIM ELEVATION MEASURED AT EDGE OF PAVEMENT
DMH OFFSET AND RIM ELEVATIONS MEASURED AT CENTER OF STRUCTURE
HEADWALL OFFSET AND INVERT ELEVATION MEASURED AT STRUCTURE OUTLET END

CONTINUED ON SHEET NO. 40

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	40	102
PROJECT FILE NO.	609202		

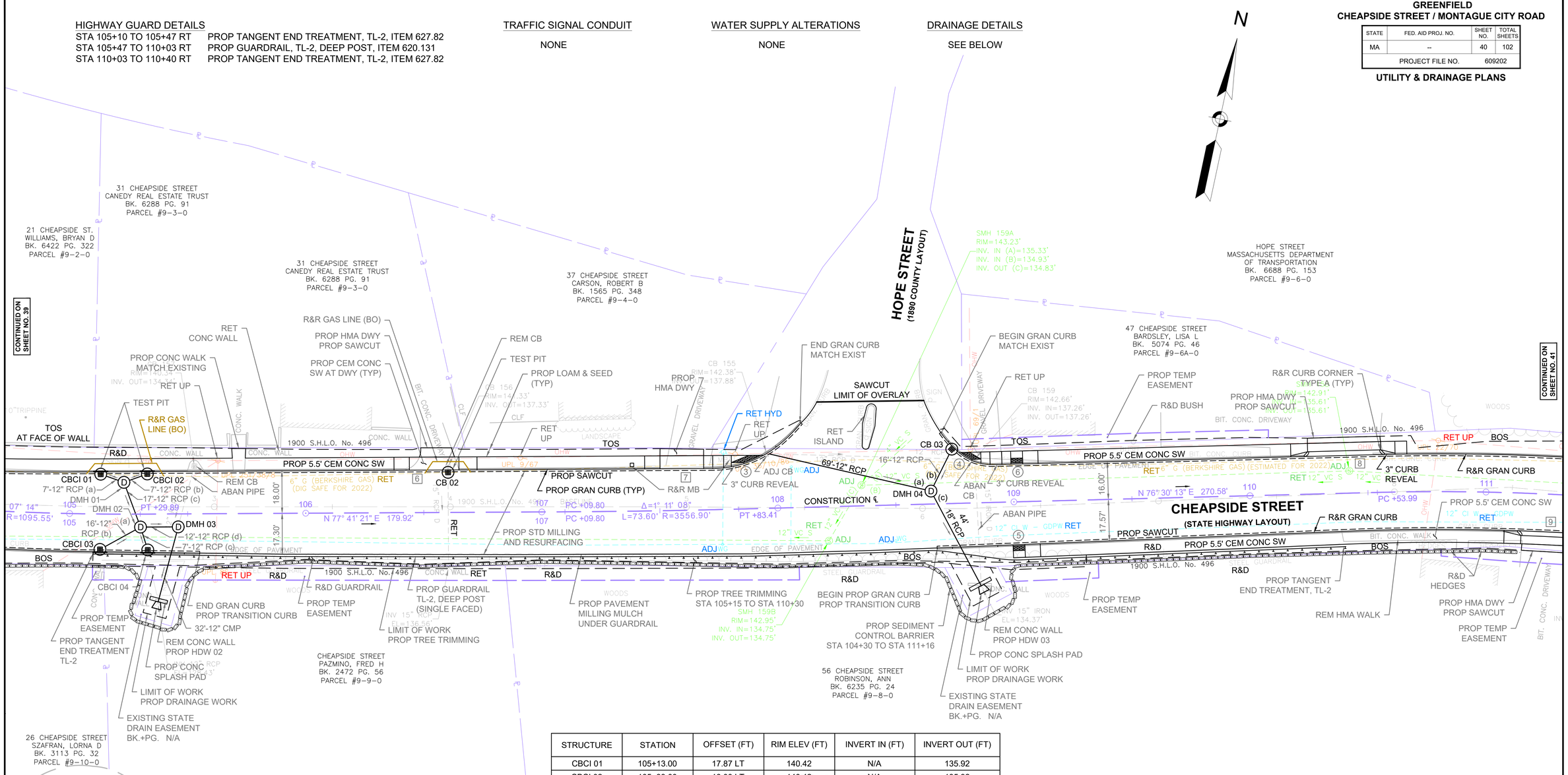
UTILITY & DRAINAGE PLANS

HIGHWAY GUARD DETAILS
STA 105+10 TO 105+47 RT PROP TANGENT END TREATMENT, TL-2, ITEM 627.82
STA 105+47 TO 110+03 RT PROP GUARDRAIL, TL-2, DEEP POST, ITEM 620.131
STA 110+03 TO 110+40 RT PROP TANGENT END TREATMENT, TL-2, ITEM 627.82

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
SEE BELOW



STRUCTURE	STATION	OFFSET (FT)	RIM ELEV (FT)	INVERT IN (FT)	INVERT OUT (FT)
CBCI 01	105+13.00	17.87 LT	140.42	N/A	135.92
CBCI 02	105+33.00	18.00 LT	140.42	N/A	135.92
CBCI 03	105+13.00	16.00 RT	141.07	N/A	136.57
CBCI 04	105+33.00	16.22 RT	141.01	N/A	136.51
DMH 01	105+23.00	13.48 LT	140.55	(a) 135.78 (b) 135.78	(c) 135.68
DMH 02	105+30.00	5.48 RT	141.01	(a) 135.34 (b) 136.25 (c) 136.37	(d) 135.24
DMH 03	105+45.98	5.50 RT	141.08	135.00	134.90
HDW 02	105+37.32	37.22 RT	N/A	N/A	129.00
CB 02	106+60.38	18.00 LT	141.59	N/A	137.33
CB 155 (EXIST)	107+95.78	23.23 LT	142.38	N/A	137.88
CB 03	108+75.04	23.80 LT	142.75	N/A	138.25
DMH 04	108+65.00	5.50 LT	143.29	(a) 136.87 (b) 137.93	(c) 135.37
HDW 03	108+85.22	35.16 RT	N/A	N/A	134.37

CB OFFSET AND RIM ELEVATION MEASURED AT EDGE OF PAVEMENT
DMH OFFSET AND RIM ELEVATIONS MEASURED AT CENTER OF STRUCTURE
HEADWALL OFFSET AND INVERT ELEVATION MEASURED AT STRUCTURE OUTLET END

UTILITY	LINE COLOR
ELECTRIC	RED
GAS-OIL-STEAM	BROWN
COMMUNICATION/CATV	ORANGE
POTABLE WATER	BLUE
SEWER	GREEN
DRAINAGE	TRADITIONAL GRAYSCALE

0 20 50 100
SCALE: 1" = 20'

609202_HD13(UTILITY PLANS).DWG Plotted on November 9, 2022 11:16 AM

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	41	102
PROJECT FILE NO.	609202		

UTILITY & DRAINAGE PLANS

609202_HD13(UTILITY PLANS).DWG Plotted on November 9, 2022 11:17 AM

HIGHWAY GUARD DETAILS

STA 111+60 TO 111+97 RT	PROP TANGENT END TREATMENT, TL-2, ITEM 627.82
STA 111+97 TO 112+22 RT	PROP GUARDRAIL, TL-2, ITEM 620.12
STA 112+22 TO 112+59 RT	PROP TANGENT END TREATMENT, TL-2, ITEM 627.82
STA 113+40 TO 113+77 RT	PROP TANGENT END TREATMENT, TL-2, ITEM 627.82
STA 113+77 TO 114+23 RT	PROP GUARDRAIL, TL-2, DEEP POST (SINGLE FACED), ITEM 620.131
STA 114+23 TO 114+60 RT	PROP TRANSITION TO RIGID BARRIER (SINGLE FACED), ITEM 628.22
STA 116+59 TO 116+94 RT	PROP TRANSITION TO RIGID BARRIER (SINGLE FACED), ITEM 628.22
STA 116+94 TO 117+06 RT	PROP GUARDRAIL, TL-2, ITEM 620.12
STA 117+06 TO 117+31 RT	PROP TRANSITION TO BRIDGE RAIL (BACK OF SIDEWALK), ITEM 628.24

TRAFFIC SIGNAL CONDUIT

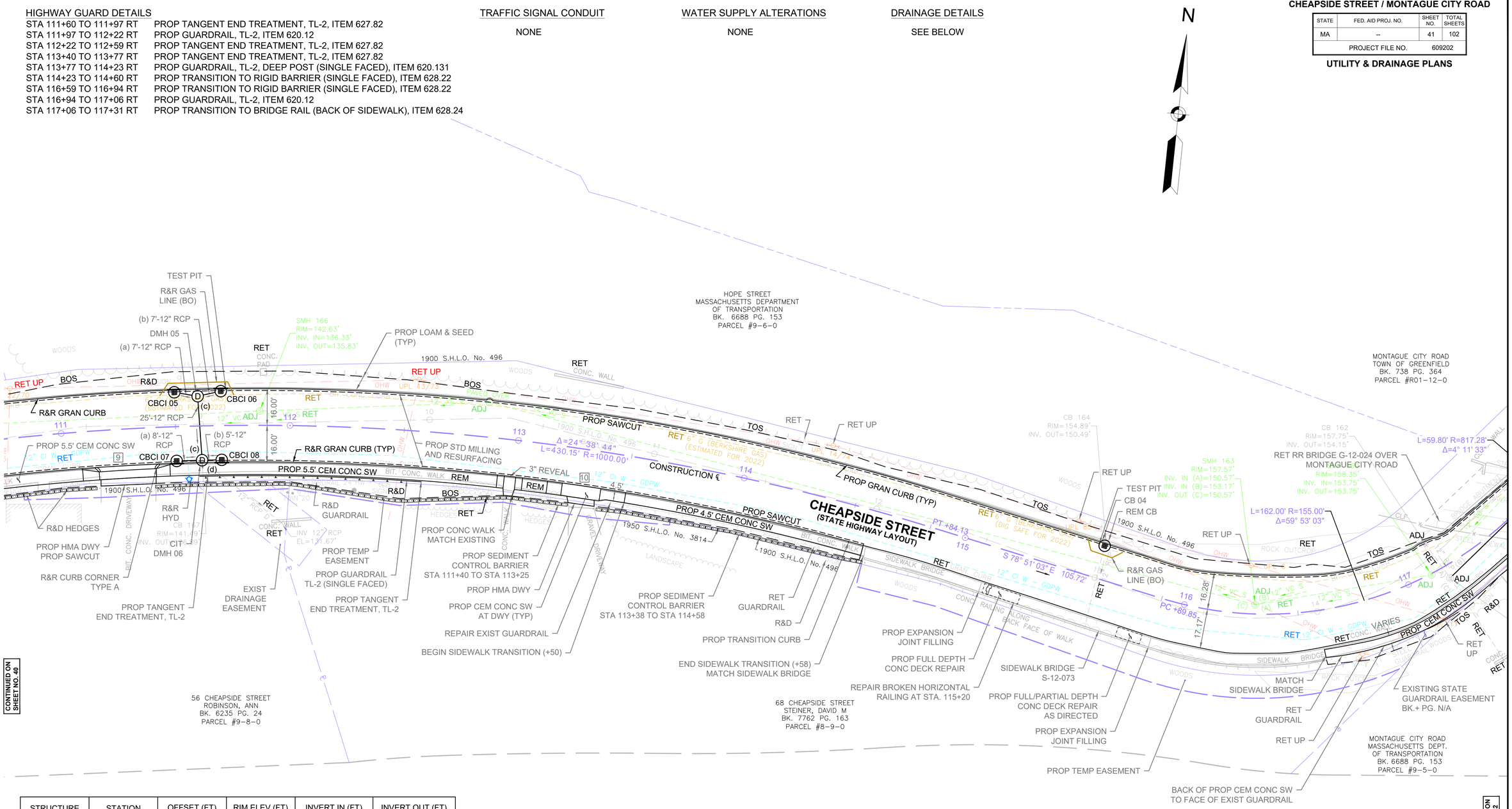
NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

SEE BELOW



STRUCTURE	STATION	OFFSET (FT)	RIM ELEV (FT)	INVERT IN (FT)	INVERT OUT (FT)
CBCI 05	111+50.00	16.00 LT	142.68	N/A	138.18
CBCI 06	111+70.00	16.00 LT	143.00	N/A	138.50
CBCI 07	111+50.00	16.00 RT	141.57	N/A	137.07
CBCI 08	111+70.00	16.00 RT	141.85	N/A	137.35
DMH 05	111+60.00	13.00 LT	142.77	(a) 138.04 (b) 138.36	(c) 137.94
CIT DMH 06	111+61.29	15.00 RT	141.77	(a) 136.91 (b) 137.44 (c) 137.25	(c) 136.89
CB 04	115+59.21	15.60 LT	155.04	N/A	150.49

CB OFFSET AND RIM ELEVATION MEASURED AT EDGE OF PAVEMENT
DMH OFFSET AND RIM ELEVATIONS MEASURED AT CENTER OF STRUCTURE

UTILITY	LINE COLOR
ELECTRIC	RED
GAS-OIL-STEAM	BROWN
COMMUNICATION/CATV	ORANGE
POTABLE WATER	BLUE
SEWER	GREEN
DRAINAGE	TRADITIONAL GRAYSCALE

0 20 50 100
SCALE: 1" = 20'

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	42	102
PROJECT FILE NO.	609202		

UTILITY & DRAINAGE PLANS

609202_HD13(UTILITY PLANS).DWG Plotted on November 9, 2022 11:17 AM

HIGHWAY GUARD DETAILS

STA 116+94 TO 117+06 RT	PROP GUARDRAIL, TL-2, ITEM 620.12
STA 117+06 TO 117+31 RT	PROP TRANSITION TO BRIDGE RAIL (BACK OF SIDEWALK), ITEM 628.24
STA 118+14 TO 118+48 RT	PROP TRANSITION TO BRIDGE RAIL (BACK OF SIDEWALK), ITEM 628.24
STA 118+48 TO 118+85 RT	PROP TANGENT END TREATMENT, TL-2, ITEM 627.82

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

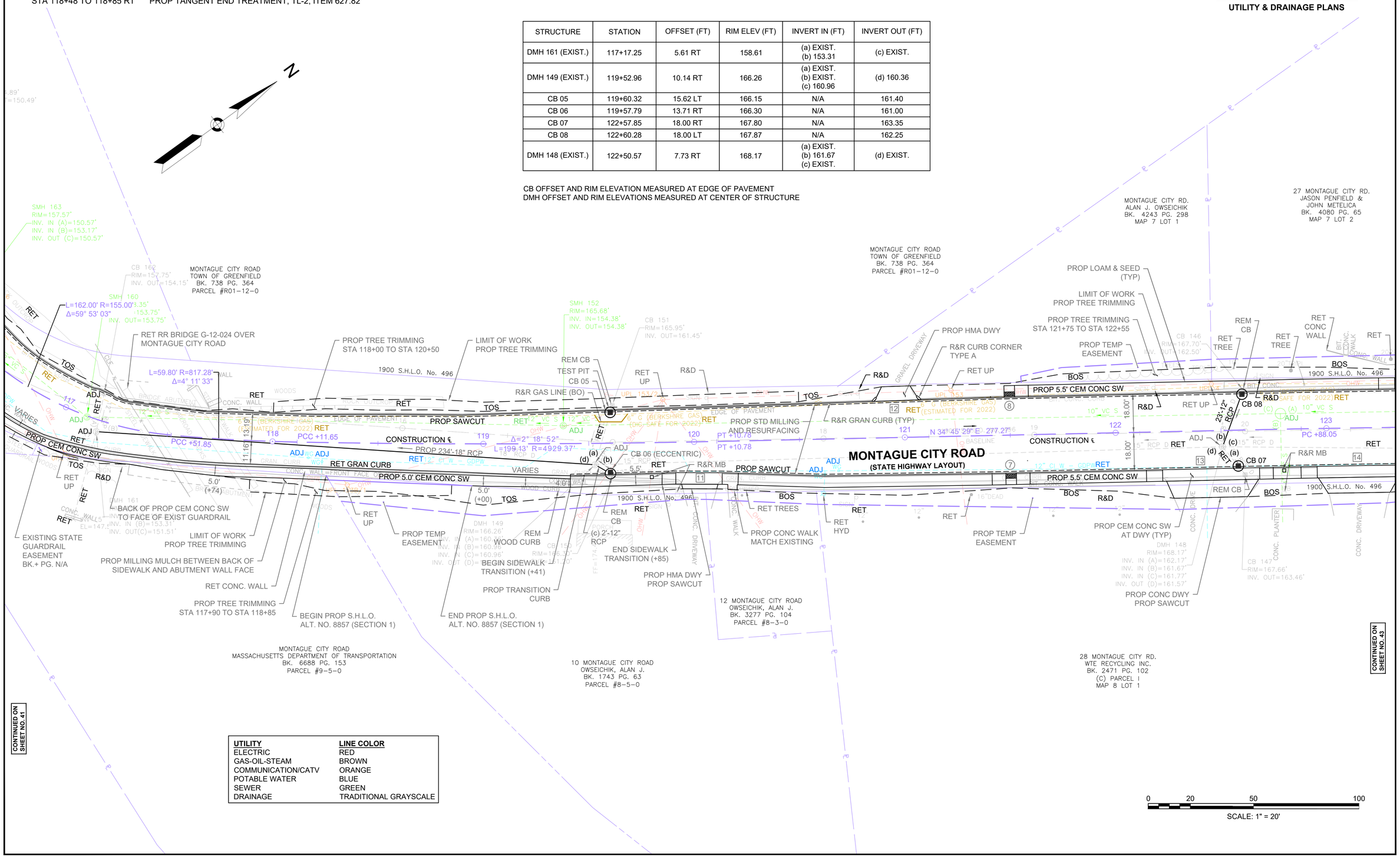
NONE

DRAINAGE DETAILS

SEE BELOW

STRUCTURE	STATION	OFFSET (FT)	RIM ELEV (FT)	INVERT IN (FT)	INVERT OUT (FT)
DMH 161 (EXIST.)	117+17.25	5.61 RT	158.61	(a) EXIST. (b) 153.31	(c) EXIST.
DMH 149 (EXIST.)	119+52.96	10.14 RT	166.26	(a) EXIST. (b) EXIST. (c) 160.96	(d) 160.36
CB 05	119+60.32	15.62 LT	166.15	N/A	161.40
CB 06	119+57.79	13.71 RT	166.30	N/A	161.00
CB 07	122+57.85	18.00 RT	167.80	N/A	163.35
CB 08	122+60.28	18.00 LT	167.87	N/A	162.25
DMH 148 (EXIST.)	122+50.57	7.73 RT	168.17	(a) EXIST. (b) 161.67 (c) EXIST.	(d) EXIST.

CB OFFSET AND RIM ELEVATION MEASURED AT EDGE OF PAVEMENT
DMH OFFSET AND RIM ELEVATIONS MEASURED AT CENTER OF STRUCTURE



UTILITY	LINE COLOR
ELECTRIC	RED
GAS-OIL-STEAM	BROWN
COMMUNICATION/CATV	ORANGE
POTABLE WATER	BLUE
SEWER	GREEN
DRAINAGE	TRADITIONAL GRAYSCALE

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	43	102
PROJECT FILE NO.	609202		

UTILITY & DRAINAGE PLANS

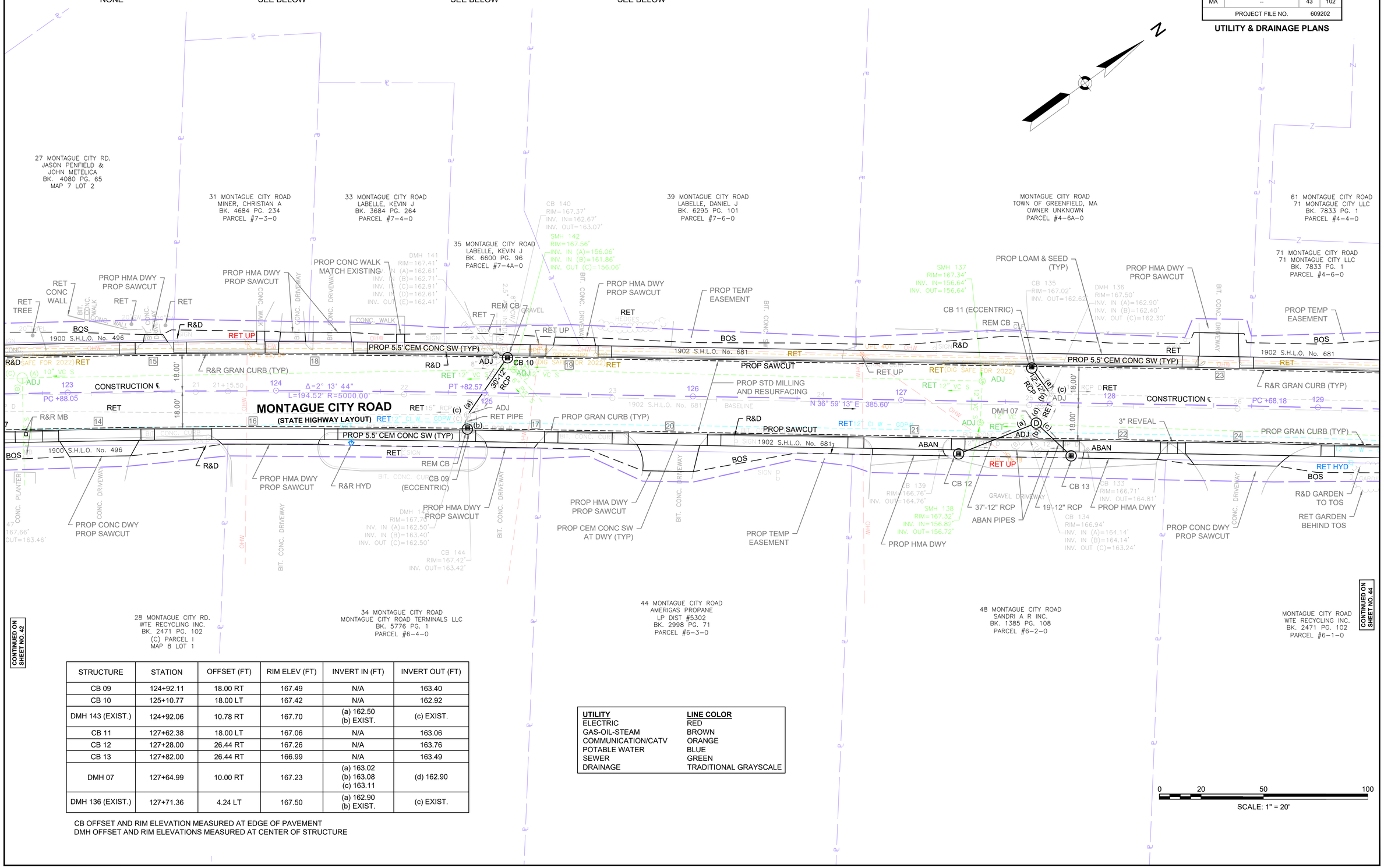
609202_HD13(UTILITY PLANS).DWG Plotted on November 9, 2022 11:17 AM

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
SEE BELOW

WATER SUPPLY ALTERATIONS
SEE BELOW

DRAINAGE DETAILS
SEE BELOW



STRUCTURE	STATION	OFFSET (FT)	RIM ELEV (FT)	INVERT IN (FT)	INVERT OUT (FT)
CB 09	124+92.11	18.00 RT	167.49	N/A	163.40
CB 10	125+10.77	18.00 LT	167.42	N/A	162.92
DMH 143 (EXIST.)	124+92.06	10.78 RT	167.70	(a) 162.50 (b) EXIST.	(c) EXIST.
CB 11	127+62.38	18.00 LT	167.06	N/A	163.06
CB 12	127+28.00	26.44 RT	167.26	N/A	163.76
CB 13	127+82.00	26.44 RT	166.99	N/A	163.49
DMH 07	127+64.99	10.00 RT	167.23	(a) 163.02 (b) 163.08 (c) 163.11	(d) 162.90
DMH 136 (EXIST.)	127+71.36	4.24 LT	167.50	(a) 162.90 (b) EXIST.	(c) EXIST.

CB OFFSET AND RIM ELEVATION MEASURED AT EDGE OF PAVEMENT
DMH OFFSET AND RIM ELEVATIONS MEASURED AT CENTER OF STRUCTURE

UTILITY	LINE COLOR
ELECTRIC	RED
GAS-OIL-STEAM	BROWN
COMMUNICATION/CATV	ORANGE
POTABLE WATER	BLUE
SEWER	GREEN
DRAINAGE	TRADITIONAL GRAYSCALE

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	39	102
PROJECT FILE NO.	609202		

UTILITY & DRAINAGE PLANS

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

SEE BELOW

WATER SUPPLY ALTERATIONS

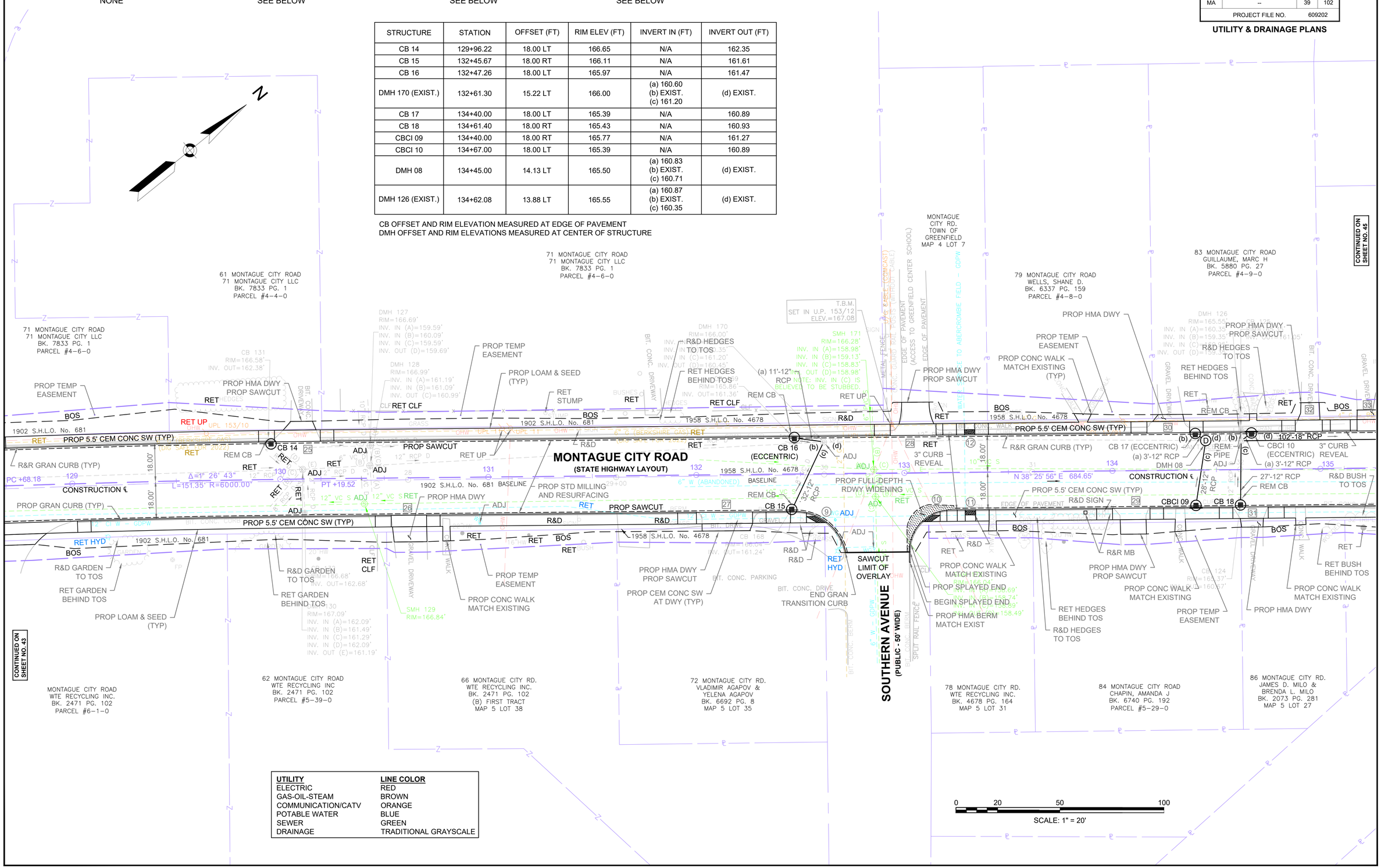
SEE BELOW

DRAINAGE DETAILS

SEE BELOW

STRUCTURE	STATION	OFFSET (FT)	RIM ELEV (FT)	INVERT IN (FT)	INVERT OUT (FT)
CB 14	129+96.22	18.00 LT	166.65	N/A	162.35
CB 15	132+45.67	18.00 RT	166.11	N/A	161.61
CB 16	132+47.26	18.00 LT	165.97	N/A	161.47
DMH 170 (EXIST.)	132+61.30	15.22 LT	166.00	(a) 160.60 (b) EXIST. (c) 161.20	(d) EXIST.
CB 17	134+40.00	18.00 LT	165.39	N/A	160.89
CB 18	134+61.40	18.00 RT	165.43	N/A	160.93
CBCI 09	134+40.00	18.00 RT	165.77	N/A	161.27
CBCI 10	134+67.00	18.00 LT	165.39	N/A	160.89
DMH 08	134+45.00	14.13 LT	165.50	(a) 160.83 (b) EXIST. (c) 160.71	(d) EXIST.
DMH 126 (EXIST.)	134+62.08	13.88 LT	165.55	(a) 160.87 (b) EXIST. (c) 160.35	(d) EXIST.

CB OFFSET AND RIM ELEVATION MEASURED AT EDGE OF PAVEMENT
DMH OFFSET AND RIM ELEVATIONS MEASURED AT CENTER OF STRUCTURE



UTILITY	LINE COLOR
ELECTRIC	RED
GAS-OIL-STEAM	BROWN
COMMUNICATION/CATV	ORANGE
POTABLE WATER	BLUE
SEWER	GREEN
DRAINAGE	TRADITIONAL GRAYSCALE

609202_HD13(UTILITY PLANS).DWG Plotted on November 9, 2022 11:17 AM

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	45	102
PROJECT FILE NO.	609202		

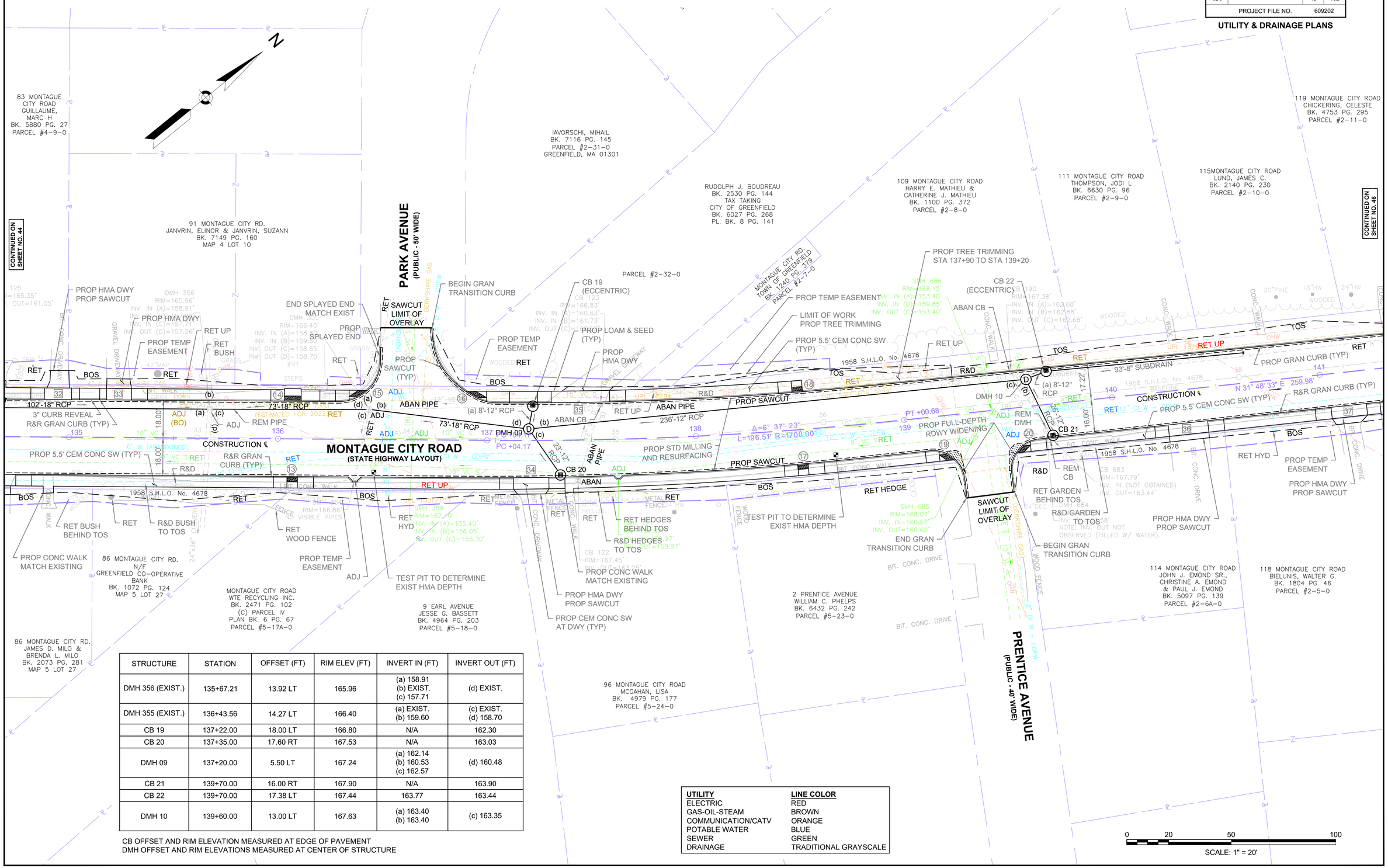
UTILITY & DRAINAGE PLANS

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
SEE BELOW

WATER SUPPLY ALTERATIONS
SEE BELOW

DRAINAGE DETAILS
SEE BELOW



STRUCTURE	STATION	OFFSET (FT)	RIM ELEV (FT)	INVERT IN (FT)	INVERT OUT (FT)
DMH 356 (EXIST.)	135+67.21	13.92 LT	165.96	(a) 158.91 (b) EXIST. (c) 157.71	(d) EXIST.
DMH 355 (EXIST.)	136+43.56	14.27 LT	166.40	(a) EXIST. (b) 159.60	(c) EXIST. (d) 158.70
CB 19	137+22.00	18.00 LT	166.80	N/A	162.30
CB 20	137+35.00	17.60 RT	167.53	N/A	163.03
DMH 09	137+20.00	5.50 LT	167.24	(a) 162.14 (b) 160.53 (c) 162.57	(d) 160.48
CB 21	139+70.00	16.00 RT	167.90	N/A	163.90
CB 22	139+70.00	17.38 LT	167.44	163.77	163.44
DMH 10	139+60.00	13.00 LT	167.63	(a) 163.40 (b) 163.40	(c) 163.35

CB OFFSET AND RIM ELEVATION MEASURED AT EDGE OF PAVEMENT
DMH OFFSET AND RIM ELEVATIONS MEASURED AT CENTER OF STRUCTURE

UTILITY	LINE COLOR
ELECTRIC	RED
GAS-OIL-STEAM	BROWN
COMMUNICATION/CATV	ORANGE
POTABLE WATER	BLUE
SEWER	GREEN
DRAINAGE	TRADITIONAL GRAYSCALE

609202_HD13(UTILITY PLANS).DWG Plotted on November 9, 2022 11:17 AM

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	46	102
PROJECT FILE NO.	609202		

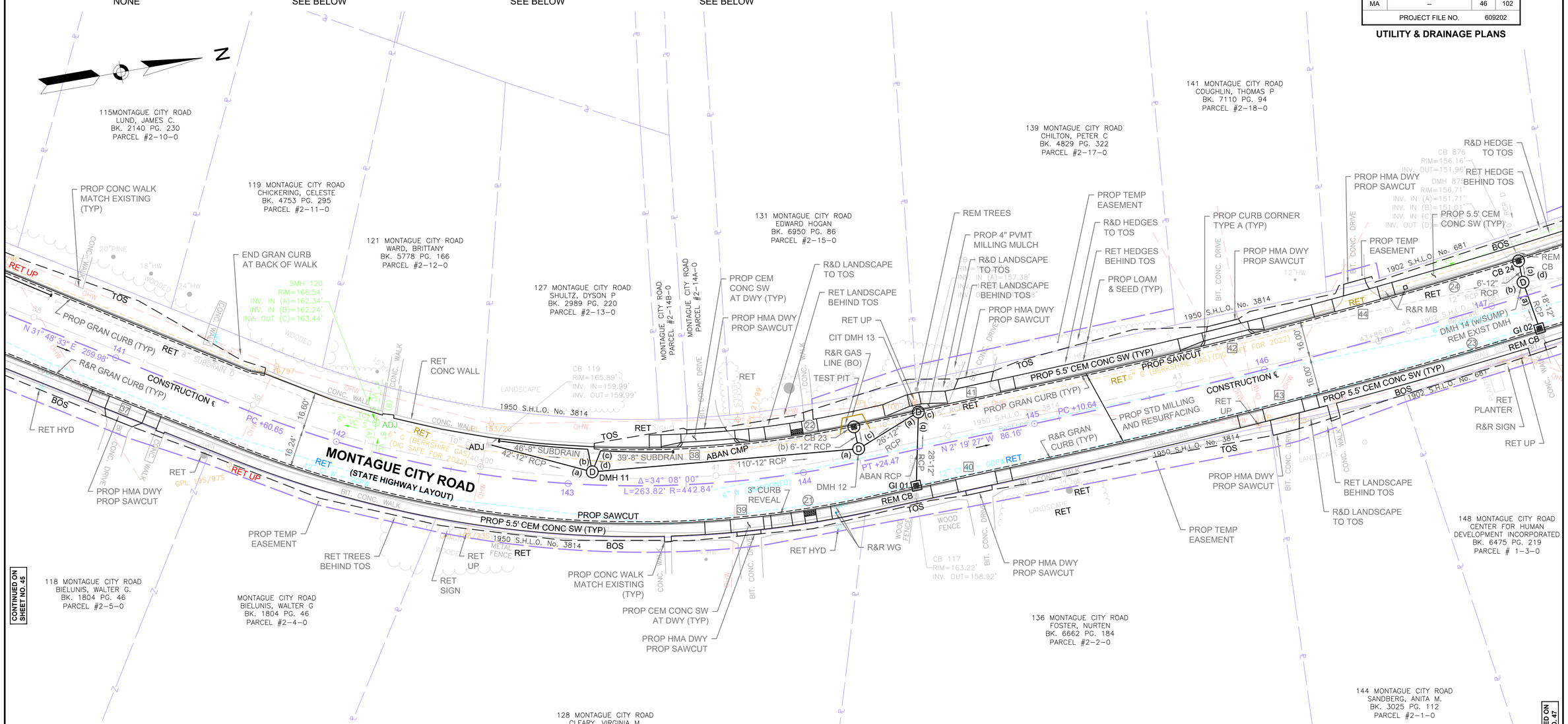
UTILITY & DRAINAGE PLANS

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
SEE BELOW

WATER SUPPLY ALTERATIONS
SEE BELOW

DRAINAGE DETAILS
SEE BELOW



STRUCTURE	STATION	OFFSET (FT)	RIM ELEV (FT)	INVERT IN (FT)	INVERT OUT (FT)
CB 119 (EXIST.)	144+64.64	13.81 LT	165.89	159.99	159.99
DMH 11	143+10.00	5.50 LT	165.74	(a) 159.15 (b) 160.60 (c) 160.60	(d) 159.05
CB 23	144+25.00	16.00 LT	162.96	N/A	158.46
DMH 12	144+25.00	5.50 LT	163.46	(a) 156.75 (b) 158.34	(c) 156.65
GI 01	144+45.52	16.00 RT	163.21	N/A	160.71
CIT DMH 13	144+53.04	15.32 LT	162.33	(a) 156.03 (b) 157.38	(b) EXIST.
GI 02	147+16.60	16.00 RT	156.75	N/A	154.25
CB 24	147+16.62	16.00 LT	156.39	N/A	151.89
DMH 14	147+15.67	5.82 LT	156.71	(a) 153.89 (b) 151.01 (c) 151.77	(d) 150.86

CB OFFSET AND RIM ELEVATION MEASURED AT EDGE OF PAVEMENT
DI OFFSET AND RIM ELEVATION MEASURED AT EDGE OF PAVEMENT
DMH OFFSET AND RIM ELEVATIONS MEASURED AT CENTER OF STRUCTURE

UTILITY	LINE COLOR
ELECTRIC	RED
GAS-OIL-STEAM	BROWN
COMMUNICATION/CATV	ORANGE
POTABLE WATER	BLUE
SEWER	GREEN
DRAINAGE	TRADITIONAL GRAYSCALE

0 20 50 100
SCALE: 1" = 20'

609202_HD13(UTILITY PLANS).DWG Plotted on November 9, 2022 11:18 AM

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	47	102
PROJECT FILE NO.	609202		

UTILITY & DRAINAGE PLANS

HIGHWAY GUARD DETAILS

STA 152+25 TO 152+62 RT	PROP TANGENT END TREATEMENT, TL-2, ITEM 627.82
STA 152+62 TO 152+96 RT	PROP TRANSITION TO NCHRP 350 GUARDRAIL, ITEM 628.21
STA 152+38 TO 152+75 LT	PROP TANGENT END TREATEMENT, TL-2, ITEM 627.82
STA 152+75 TO 152+93 LT	PROP GUARDRAIL, TL-2, ITEM 620.12
STA 152+93 TO 153+30 LT	PROP TANGENT END TREATEMENT, TL-2, ITEM 627.82

TRAFFIC SIGNAL CONDUIT

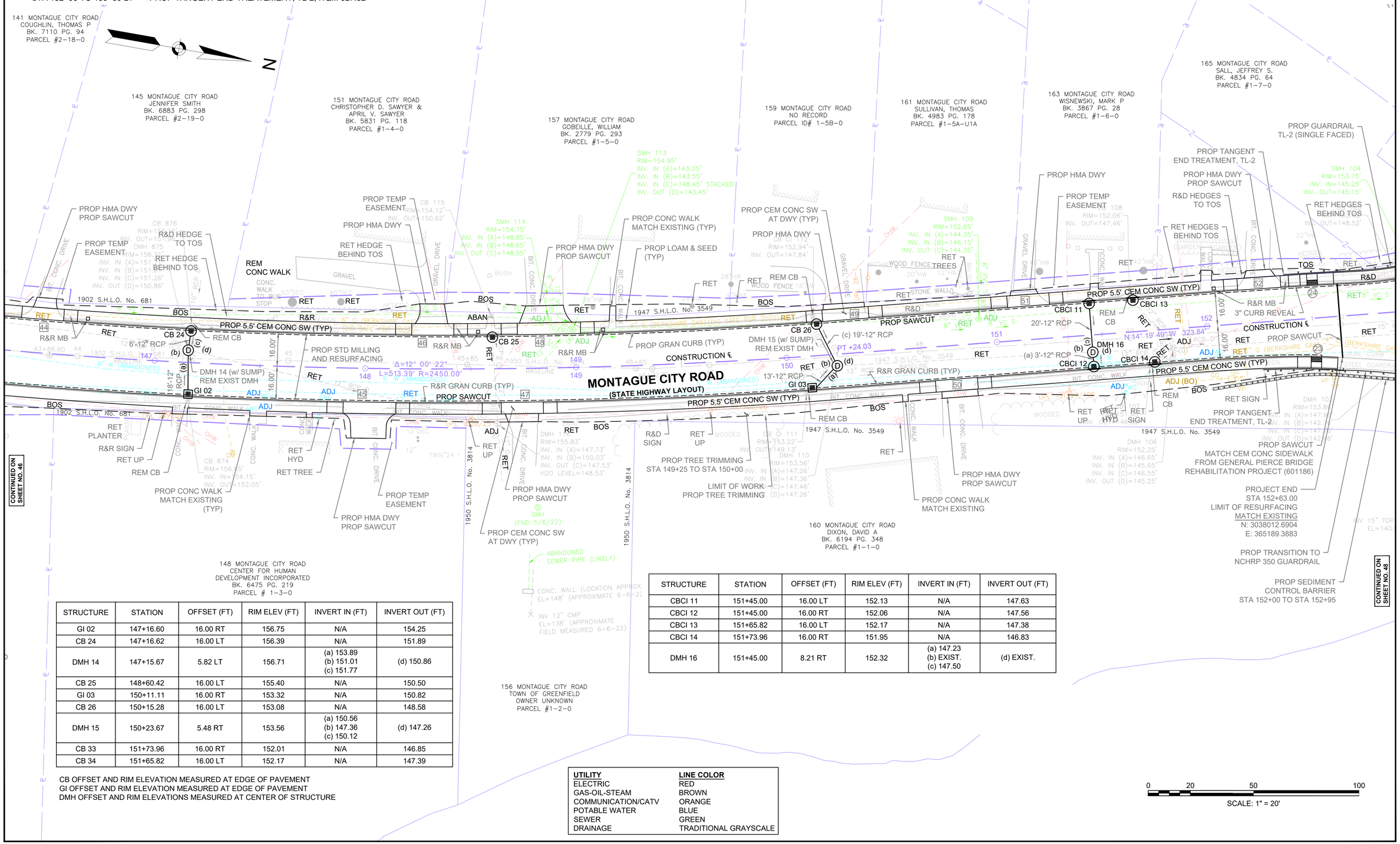
NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

SEE BELOW



STRUCTURE	STATION	OFFSET (FT)	RIM ELEV (FT)	INVERT IN (FT)	INVERT OUT (FT)
GI 02	147+16.60	16.00 RT	156.75	N/A	154.25
CB 24	147+16.62	16.00 LT	156.39	N/A	151.89
DMH 14	147+15.67	5.82 LT	156.71	(a) 153.89 (b) 151.01 (c) 151.77	(d) 150.86
CB 25	148+60.42	16.00 LT	155.40	N/A	150.50
GI 03	150+11.11	16.00 RT	153.32	N/A	150.82
CB 26	150+15.28	16.00 LT	153.08	N/A	148.58
DMH 15	150+23.67	5.48 RT	153.56	(a) 150.56 (b) 147.36 (c) 150.12	(d) 147.26
CB 33	151+73.96	16.00 RT	152.01	N/A	146.85
CB 34	151+65.82	16.00 LT	152.17	N/A	147.39

CB OFFSET AND RIM ELEVATION MEASURED AT EDGE OF PAVEMENT
GI OFFSET AND RIM ELEVATION MEASURED AT EDGE OF PAVEMENT
DMH OFFSET AND RIM ELEVATIONS MEASURED AT CENTER OF STRUCTURE

STRUCTURE	STATION	OFFSET (FT)	RIM ELEV (FT)	INVERT IN (FT)	INVERT OUT (FT)
CBCI 11	151+45.00	16.00 LT	152.13	N/A	147.63
CBCI 12	151+45.00	16.00 RT	152.06	N/A	147.56
CBCI 13	151+65.82	16.00 LT	152.17	N/A	147.38
CBCI 14	151+73.96	16.00 RT	151.95	N/A	146.83
DMH 16	151+45.00	8.21 RT	152.32	(a) 147.23 (b) EXIST. (c) 147.50	(d) EXIST.

UTILITY	LINE COLOR
ELECTRIC	RED
GAS-OIL-STEAM	BROWN
COMMUNICATION/CATV	ORANGE
POTABLE WATER	BLUE
SEWER	GREEN
DRAINAGE	TRADITIONAL GRAYSCALE

609202_HD13(UTILITY PLANS).DWG Plotted on November 9, 2022 11:18 AM

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	48	102
PROJECT FILE NO.	609202		

UTILITY & DRAINAGE PLANS

HIGHWAY GUARD DETAILS

STA 152+25 TO 152+62 RT	PROP TANGENT END TREATEMENT, TL-2, ITEM 627.82
STA 152+62 TO 152+96 RT	PROP TRANSITION TO NCHRP 350 GUARDRAIL, ITEM 628.21
STA 152+38 TO 152+75 LT	PROP TANGENT END TREATEMENT, TL-2, ITEM 627.82
STA 152+75 TO 152+93 LT	PROP GUARDRAIL, TL-2, ITEM 620.12
STA 152+93 TO 153+30 LT	PROP TANGENT END TREATEMENT, TL-2, ITEM 627.82

TRAFFIC SIGNAL CONDUIT

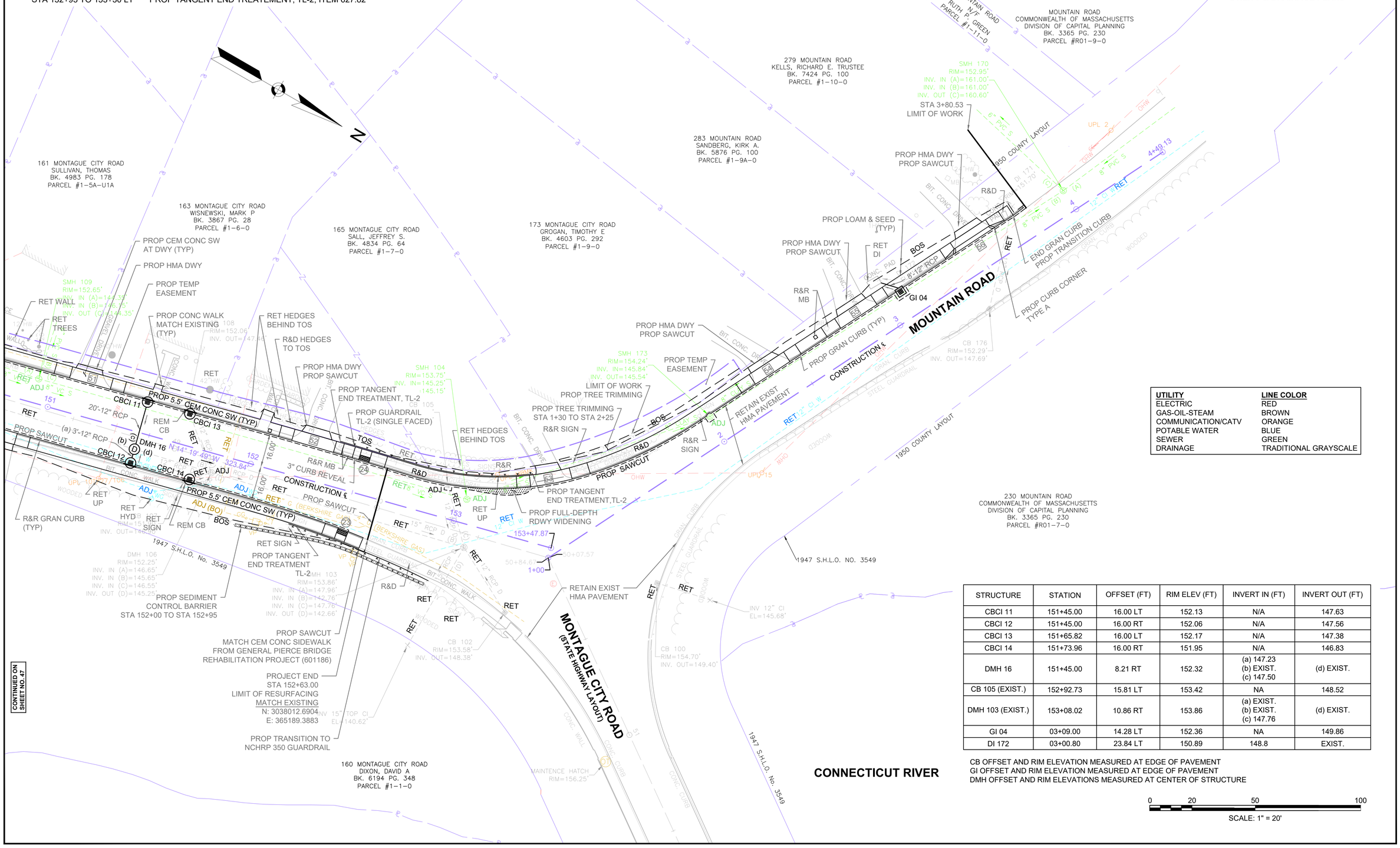
NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

SEE BELOW



UTILITY	LINE COLOR
ELECTRIC	RED
GAS-OIL-STEAM	BROWN
COMMUNICATION/CATV	ORANGE
POTABLE WATER	BLUE
SEWER	GREEN
DRAINAGE	TRADITIONAL GRAYSCALE

STRUCTURE	STATION	OFFSET (FT)	RIM ELEV (FT)	INVERT IN (FT)	INVERT OUT (FT)
CBCI 11	151+45.00	16.00 LT	152.13	N/A	147.63
CBCI 12	151+45.00	16.00 RT	152.06	N/A	147.56
CBCI 13	151+65.82	16.00 LT	152.17	N/A	147.38
CBCI 14	151+73.96	16.00 RT	151.95	N/A	146.83
DMH 16	151+45.00	8.21 RT	152.32	(a) 147.23 (b) EXIST. (c) 147.50	(d) EXIST.
CB 105 (EXIST.)	152+92.73	15.81 LT	153.42	NA	148.52
DMH 103 (EXIST.)	153+08.02	10.86 RT	153.86	(a) EXIST. (b) EXIST. (c) 147.76	(d) EXIST.
GI 04	03+09.00	14.28 LT	152.36	NA	149.86
DI 172	03+00.80	23.84 LT	150.89	148.8	EXIST.

CB OFFSET AND RIM ELEVATION MEASURED AT EDGE OF PAVEMENT
GI OFFSET AND RIM ELEVATION MEASURED AT EDGE OF PAVEMENT
DMH OFFSET AND RIM ELEVATIONS MEASURED AT CENTER OF STRUCTURE

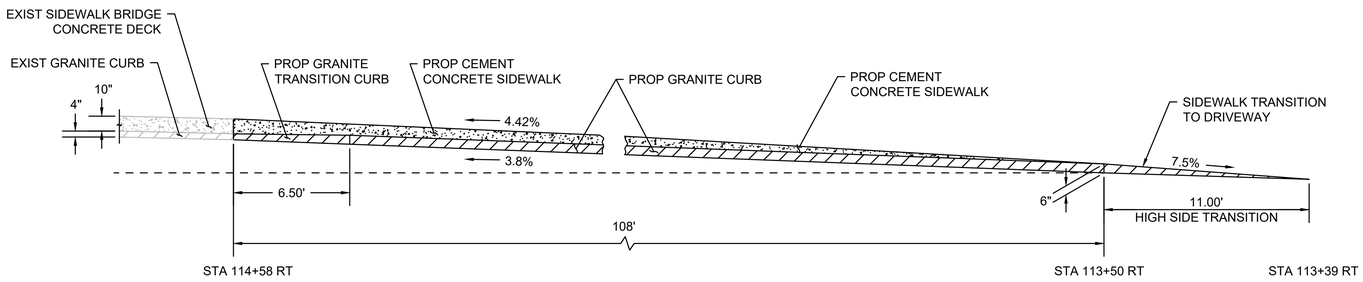
0 20 50 100
SCALE: 1" = 20'

609202_HD13(UTILITY PLANS).DWG Plotted on November 9, 2022 11:18 AM

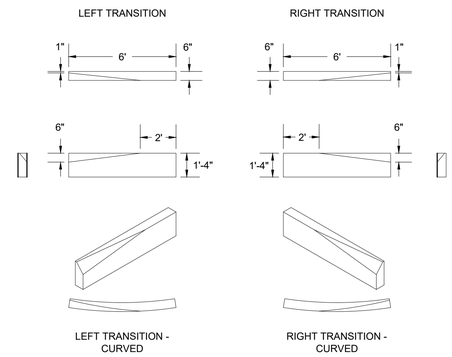
GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	49	102
PROJECT FILE NO.	609202		

CONSTRUCTION DETAILS



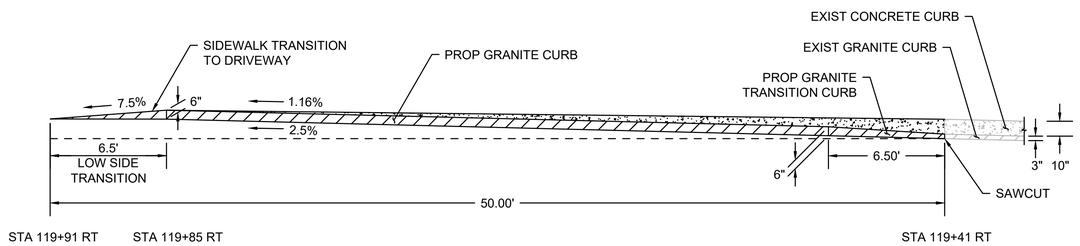
SIDEWALK TRANSITION ELEVATION VIEW
STA. 113+50 RT TO STA. 114+58 RT
NOT TO SCALE



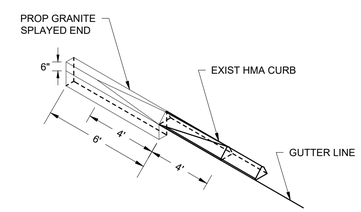
NOTES:

1. LENGTH DIMENSIONS (6' OR 2') SHALL HAVE A TOLERANCE OF ±1".
2. ALL OTHER DIMENSIONS SHALL HAVE A TOLERANCE OF ±½"

GRANITE CURB - SPLAYED END DETAIL
NOT TO SCALE

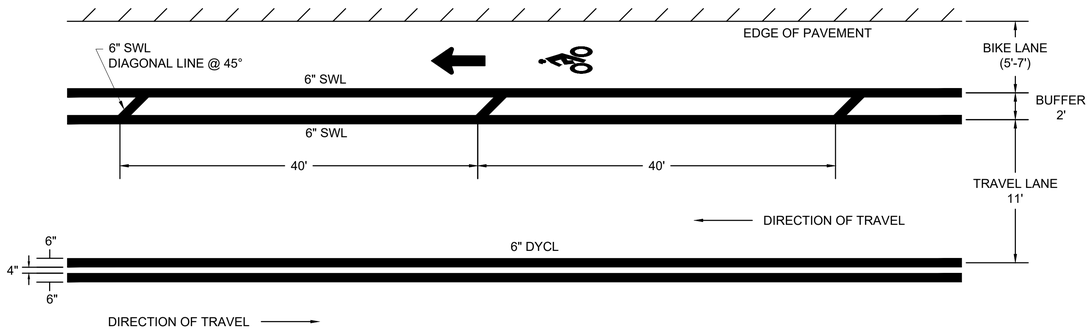


SIDEWALK TRANSITION ELEVATION VIEW
STA. 119+41 RT TO STA. 119+85 RT
NOT TO SCALE

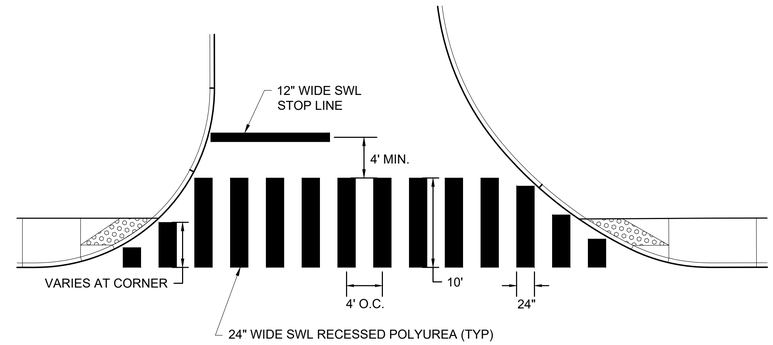


DETAIL OF GRANITE SPLAYED END
TO EXIST HMA CURB
NOT TO SCALE

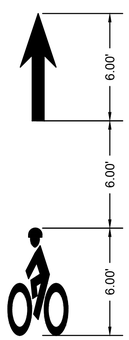
609202_HD15(CONSTRUCTION DETAILS).DWG Plotted on 9-Nov-2022 11:18 AM



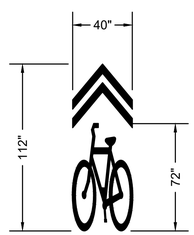
BICYCLE LANE MARKING DETAILS
NOT TO SCALE



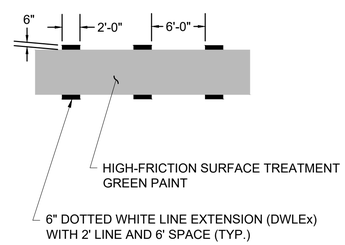
TYPICAL CROSSWALK MARKING AT INTERSECTION
NOT TO SCALE



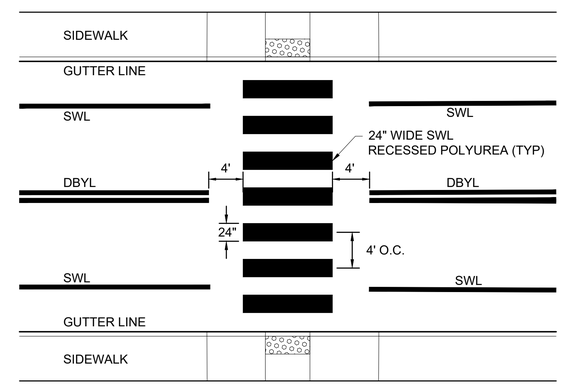
HELMETED BIKE LANE MARKING DETAIL
NOT TO SCALE



SHARED LANE "SHARROW" MARKING DETAIL
NOT TO SCALE



GREEN BICYCLE LANE MARKING THROUGH INTERSECTION
NOT TO SCALE



CONTINENTAL CROSSWALK MARKING
NOT TO SCALE

GREEN PAVEMENT BICYCLE LANE NOTES:

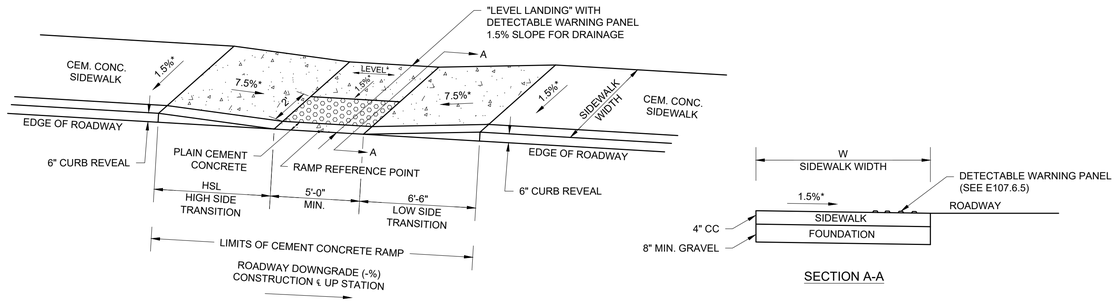
1. MARK 5' - 7' WIDE BICYCLE LANE AT INTERSECTIONS, WITH GREEN PAVEMENT MARKING.
   1.1. MARK BOTH SIDES OF BIKE LANE WITH 6" SOLID WHITE BICYCLE LANE LINE (SWL) OR DOTTED WHITE LANE LINE EXTENSION (DWLEx).
   1.2. OMIT RIGHT SIDE LANE LINE WHERE BIKE LANE RUNS ALONG CURB OR EDGE OF PAVEMENT.
2. SOLID GREEN LANE SHALL CONTINUE THROUGH INTERSECTIONS WITH BORDERING DOTTED WHITE MARKINGS ALONGSIDE (2' DASH, 6' SPACE).
3. INSTALL BIKE LANE SYMBOL AND ARROW AT THE BEGINNING OF GREEN PAVEMENT, AT THE BEGINNING OF THE TYPICAL BICYCLE LANE AND AT 500' INTERVALS.

CROSSWALK NOTE:
THE LAYOUT OF THE CROSSWALK SHALL BEGIN AT THE ROADWAY CENTERLINE TO PLACE THE CROSSWALK BARS OUTSIDE THE PATH OF TRAVEL TO INCREASE LONGEVITY OF THE CROSSWALK MARKINGS. THE FINAL STRIPE AT EACH SIDE OF THE ROAD GUTTER MAY BE REDUCED IN WIDTH TO 1' DEPENDING ON OVERALL ROAD WIDTH IN RELATION TO THE LAYOUT SCHEME.

609202_HD15(CONSTRUCTION DETAILS).DWG Plotted on 9-Nov-2022 11:18 AM

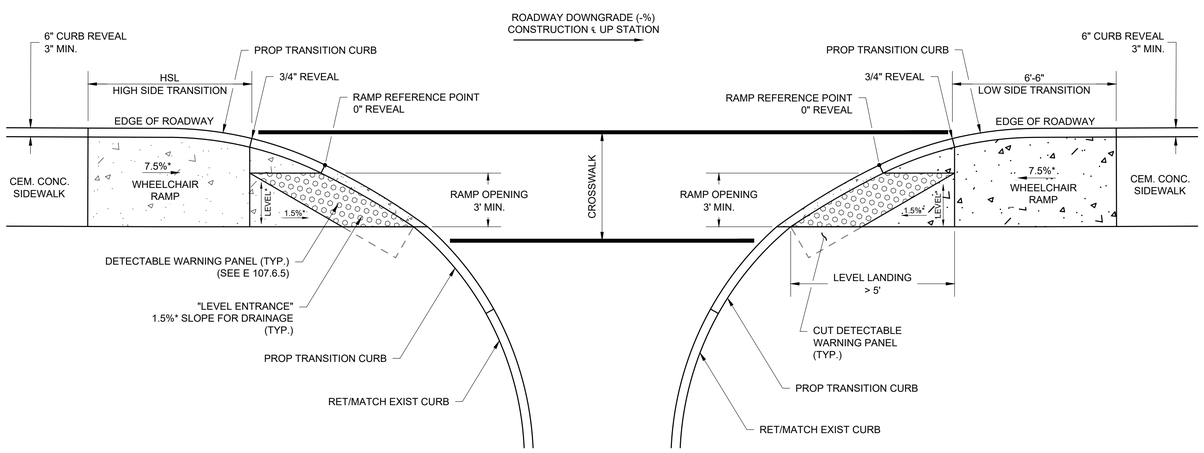
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	51	102
PROJECT FILE NO.	609202		

PEDESTRIAN CURB RAMP DETAILS



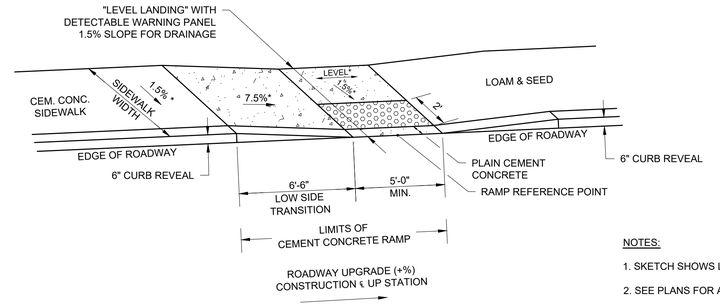
WHEELCHAIR RAMP ON NARROW SIDEWALK
REFER TO MASSDOT STD. DTL. E 107.2.1
NOT TO SCALE

PCR NO.	RAMP REFERENCE POINT		SIDEWALK WIDTH	RAMP ENTRANCE WIDTH	ROADWAY GUTTER SLOPE	TRANSITION LENGTH	
	STREET LOCATION	STATION LOCATION				LEFT SIDE	RIGHT SIDE
2	21 CHEAPSIDE ST	104+49.07, 16.16' LT	5.5'	5.0'	-0.20%	7'-8"	6'-6"
6	47 CHEAPSIDE ST	109+01.66, 16.50' LT	5.5'	5.0'	-0.30%	3'-10" **	6'-6"
7	28 MONTAGUE CITY RD	121+50.00, 18.00' RT	5.5'	5.0'	-0.30%	6'-6"	7'-8"
11	78 MONTAGUE CITY RD	133+31.55, 18.00' RT	5.5'	5.0'	-0.50%	6'-6"	3'-10" **
12	79 MONTAGUE CITY RD	133+31.55, 18.00' LT	5.5'	5.0'	-0.40%	3'-10" **	6'-6"
13	86 MONTAGUE CITY RD	136+06.95, 18.00' RT	5.5'	5.0'	+0.70%	7'-8"	6'-6"
14	91 MONTAGUE CITY RD	136+06.95, 18.00' LT	5.5'	8.0'	+1.90%	6'-6"	9'-0"
17	2 PRENTICE AVE	138+50.00, 16.43' RT	5.5'	5.0'	+0.40%	7'-8"	6'-6"
21	128 MONTAGUE CITY RD	144+00.00, 16.00' RT	5.5'	5.0'	-2.10%	6'-6"	5'-6" **
22	131 MONTAGUE CITY RD	144+00.00, 16.00' LT	5.5'	5.0'	-2.20%	11'-0"	6'-6"
23	160 MONTAGUE CITY RD	152+50.63, 18.21' RT	5.5'	5.0'	+0.70%	7'-8"	6'-6"
24	165 MONTAGUE CITY RD	152+51.25, 15.56' LT	5.5'	5.0'	+0.50%	3'-3" **	7'-8"



WHEELCHAIR RAMP FOR ONE CONTINUOUS DIRECTION OF PEDESTRIAN TRAVEL
REFER TO MASSDOT STD. DTL. E 107.6.0
NOT TO SCALE

PCR NO.	RAMP REFERENCE POINT		WIDTH OF SIDEWALK	RAMP ENTRANCE WIDTH	ROADWAY GUTTER SLOPE	TRANSITION LENGTH
	STREET LOCATION	STATION LOCATION				
3	HOPE ST INTERSECTION	107+86.17, 19.21' LT	5.5'	3'	+1.00%	3'-3" **
4	HOPE ST INTERSECTION	108+82.71, 17.97' LT	5.5'	3'	+0.70%	3'-10" **
9	SOUTHERN AVE INT.	132+56.87, 20.04' RT	5.5'	3'	-0.70%	7'-8"
10	SOUTHERN AVE INT.	133+13.17, 20.05' RT	5.5'	3'	-0.20%	3'-3" **
15	PARK AVE INTERSECTION	136+37.68, 20.05 LT	5.5'	3'	+0.90%	6'-6"
16	PARK AVE INTERSECTION	136+95.46, 19.99 LT	5.5'	3'	+2.20%	11'-0"
19	PRENTICE AVE INT.	139+18.26, 18.07' RT	5.5'	3'	+0.50%	6'-6"
20	PRENTICE AVE INT.	139+55.24, 18.07' RT	5.5'	3'	+0.30%	7'-8"



NOTES:

1. SKETCH SHOWS LEFT SIDE RAMP. REVERSE SKETCH FOR RIGHT SIDE RAMPS.
2. SEE PLANS FOR ADDITIONAL LOCATION INFORMATION

WHEELCHAIR RAMP ON NARROW SIDEWALK (ONE SIDE TRANSITION)
NOT TO SCALE

PCR NO.	RAMP REFERENCE POINT		SIDEWALK WIDTH	RAMP ENTRANCE WIDTH	ROADWAY GUTTER SLOPE	TRANSITION LENGTH	
	STREET LOCATION	STATION LOCATION				LEFT SIDE	RIGHT SIDE
1	26 CHEAPSIDE ST	104+49.07, 16.00' RT	5.5'	5.0'	-0.40%	3'-10" **	N/A
5	56 CHEAPSIDE ST	109+01.66, 18.16' RT	5.5'	5.0'	-0.30%	N/A	6'-6"
8	28 MONTAGUE CITY RD	121+50.00, 18.00' LT	5.5'	5.0'	+0.10%	7'-8"	N/A
18	109 MONTAGUE CITY RD	138+50.00, 18.00' LT	5.5'	5.0'	+0.40%	6'-6"	N/A

LEGEND:

HSL = HIGH SIDE TRANSITION LENGTH, (SEE E 107.9.0)

* = TOLERANCE FOR CONSTRUCTION ±0.5%

** = 3" CURB REVEAL

PEDESTRIAN CURB RAMP NOTES:

1. "-" ROADWAY GUTTER SLOPE DOWNGRADE WHEN FACING CONSTRUCTION CENTERLINE UP STATION
   "+" ROADWAY GUTTER SLOPE UPGRADE WHEN FACING CONSTRUCTION CENTERLINE UP STATION
2. TRANSITION LENGTHS ARE BASED ON EXISTING ROADWAY GUTTER SLOPES AND A CURB REVEAL OF 6 INCHES, UNLESS OTHERWISE NOTED.
3. THE CONTRACTOR SHALL VERIFY ALL ROADWAY GUTTER SLOPES AND ALL EXISTING DETAILS BEFORE CONSTRUCTION OF TRANSITION CURBS. THE CONTRACTOR SHALL VERIFY RADIUS OF CURVATURE BEFORE ORDERING TRANSITION CURB OR SPLAYED END CURB.
4. DETECTABLE WARNING PANELS ARE REQUIRED ON ALL PROPOSED PEDESTRIAN CURB RAMPS AND SHALL BE INSTALLED IN ACCORDANCE WITH CONSTRUCTION STANDARD DRAWING E 107.6.5.
5. DETECTABLE WARNING PANEL LOCATED NOT LESS THAN 6" OR MORE THAN 24" FROM ROADWAY EDGE (GUTTER LINE). TRUNCATED DOMES TO BE ALIGNED WITH DIRECTION OF TRAVEL. ALL DETECTABLE WARNING PANELS SHALL BE "SAFETY YELLOW" IN COLOR.
6. *TOLERANCE FOR CONSTRUCTION ±0.5% TYP.

609202_HD15(CONSTRUCTION DETAILS).DWG Plotted on 9-Nov-2022 11:18 AM

GREENFIELD
CHEAPSIDE STREET / MONTAGUE CITY ROAD

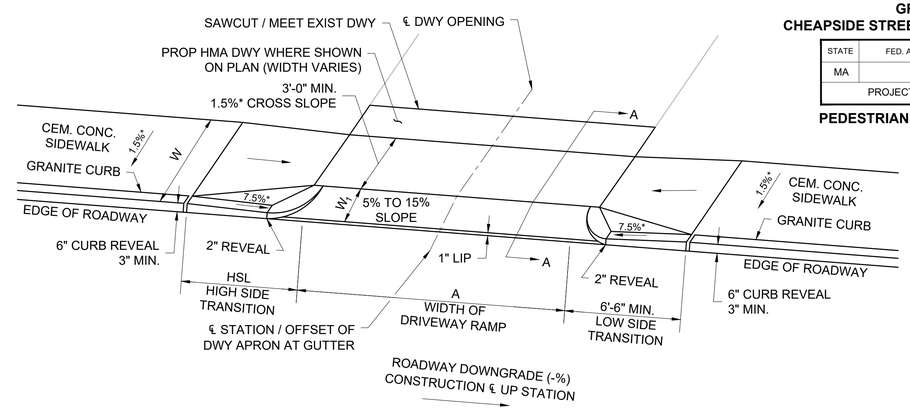
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	--	52	102
PROJECT FILE NO.	609202		

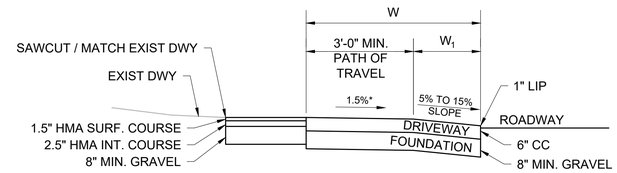
PEDESTRIAN CURB RAMP DETAILS

DWY #	LOCATION	DWY REFERENCE POINT ℄		WIDTH OF SIDEWALK (W)	LENGTH OF DWY APRON (W_1)	PATH OF TRAVEL (3.00' MIN.)	WIDTH OF DRIVEWAY RAMP (A)	ROADWAY GUTTER SLOPE	TRANSITION LENGTH	
		STATION	OFFSET						LEFT SIDE	RIGHT SIDE
1	CHEAPSIDE STREET	100+93.17	16.00' LT	5.50'	2.50'	3.00'	26.00'	-1.00%	7'-8"	3'-3" **
2	CHEAPSIDE STREET	101+37.08	16.00' LT	5.50'	2.50'	3.00'	27.00'	-0.90%	3'-10" **	6'-6"
3	CHEAPSIDE STREET	102+24.26	16.00' LT	5.50'	2.50'	3.00'	20.00'	-1.20%	9'-0"	6'-6"
4	21 CHEAPSIDE STREET	102+87.18	16.01' LT	5.50'	2.50'	3.00'	33.00'	-1.40%	9'-0"	6'-6"
5	26 CHEAPSIDE STREET***	104+20.48	16.00' RT	5.50'	N/A	N/A	19.50'	-0.60%	3'-3" **	N/A
8	47 CHEAPSIDE STREET	110+40.39	16.00' LT	5.50'	2.50'	3.00'	30.00'	-0.20%	7'-8"	6'-6"
9	56 CHEAPSIDE STREET	111+28.12	16.00' RT	5.50'	2.50'	3.00'	24.50'	-0.10%	6'-6"	7'-8"
12	MONTAGUE CITY RD***	120+96.41	17.47' LT	N/A	N/A	N/A	19.00'	+0.00%	N/A	N/A
25	61 MONTAGUE CITY RD	130+08.46	18.00' LT	5.50'	2.50'	3.00'	21.00'	0.00%	6'-6"	6'-6"
38	131 MONTAGUE CITY RD	143+60.64	16.00' LT	5.50'	2.50'	3.00'	22.00'	-1.70%	9'-0"	6'-6"
42	141 MONTAGUE CITY RD	145+88.10	16.00' LT	5.50'	2.50'	3.00'	19.00'	-2.60%	11'-0"	6'-6"
56	279 MOUNTAIN RD	03+51.34	14.13' LT	5.50'	2.50'	3.00'	19.00'	+0.40%	6'-6"	7'-8"

SIDEWALK THROUGH DRIVEWAYS NOTES:

1. "-" ROADWAY GUTTER SLOPE DOWNGRADE WHEN FACING CONSTRUCTION CENTERLINE UP STATION
   "+" ROADWAY GUTTER SLOPE UPGRADE WHEN FACING CONSTRUCTION CENTERLINE UP STATION
2. TRANSITION LENGTHS ARE BASED ON EXISTING ROADWAY GUTTER SLOPES AND A CURB REVEAL OF 6 INCHES, UNLESS OTHERWISE NOTED.
3. THE CONTRACTOR SHALL VERIFY ALL ROADWAY GUTTER SLOPES AND ALL EXISTING DETAILS BEFORE CONSTRUCTION OF TRANSITION CURBS. THE CONTRACTOR SHALL VERIFY RADIUS OF CURVATURE BEFORE ORDERING TRANSITION CURB OR SPLAYED END CURB.
4. ** = 3" CURB REVEAL
   *** = HMA DRIVEWAY APRON



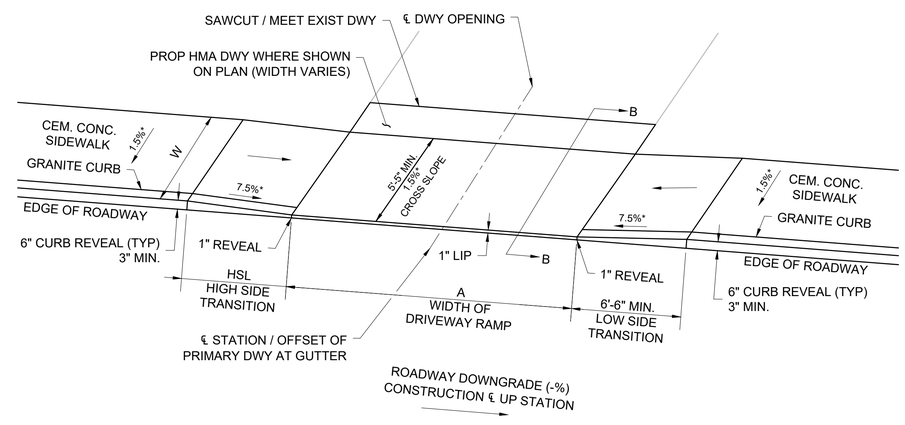


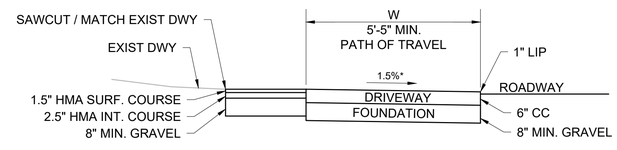
SECTION A-A

NOTES:
HSL = HIGH SIDE FRONT TRANSITION LENGTH (SEE E 107.9.0)
W = SIDEWALK WIDTH
W_1 = DRIVEWAY APRON WIDTH
CC = CEMENT CONCRETE
HMA = HOT MIX ASPHALT
* = TOLERANCE FOR CONSTRUCTION ±0.5%

SIDEWALK THROUGH DRIVEWAYS WITH CURB RETURNS
REFER TO MASSDOT STD. DTL. E 107.8.0
NOT TO SCALE

DWY #	LOCATION	DWY REFERENCE POINT ℄		WIDTH OF SIDEWALK (W)	WIDTH OF DRIVEWAY RAMP (A)	ROADWAY GUTTER SLOPE	TRANSITION LENGTH	
		STATION	OFFSET				LEFT SIDE	RIGHT SIDE
6	31 CHEAPSIDE STREET	106+54.50	18.00' LT	5.50'	21.00'	+0.50%	6'-6"	7'-8"
7	37 CHEAPSIDE STREET	107+59.40	17.66' LT	5.50'	19.00'	+0.20%	6'-6"	3'-10" **
10	68 CHEAPSIDE STREET	113+30.42	16.00' RT	5.50'	17.00'	+2.30%	11'-0"	6'-6"
11	10 MONTAGUE CITY RD	120+02.03	14.64' RT	5.50'	14.00'	+0.80%	7'-8"	6'-6"
13	28 MONTAGUE CITY RD	122+44.87	18.00' RT	5.50'	46.00'	-0.10%	6'-6"	7'-8"
14	28 MONTAGUE CITY RD	123+15.07	18.00' RT	5.50'	39.50'	-0.30%	6'-6"	7'-8"
15	27 MONTAGUE CITY RD	123+42.45	18.00' LT	5.50'	18.50'	-0.10%	7'-8"	6'-6"
16	34A MONTAGUE CITY RD	123+96.15	18.00' RT	5.50'	54.00'	-1.20%	6'-6"	9'-0"
17	34B MONTAGUE CITY RD	125+12.64	18.00' RT	5.50'	33.00'	-0.10%	6'-6"	7'-8"
18	31/33 MONTAGUE CITY RD	124+19.18	18.00' LT	5.50'	36.00'	0.00%	6'-6"	6'-6"
19	39 MONTAGUE CITY RD	125+41.68	18.00' LT	5.50'	25.00'	-0.50%	7'-8"	6'-6"
20	44 MONTAGUE CITY RD	125+88.32	18.00' RT	5.50'	38.00'	-0.20%	6'-6"	7'-8"
21	48A MONTAGUE CITY RD	127+03.44	18.00' RT	5.50'	38.00'	-0.80%	6'-6"	7'-8"
22	48B MONTAGUE CITY RD	128+05.26	18.00' RT	5.50'	37.00'	-0.30%	3'-3" **	7'-8"
23	MONTAGUE CITY RD	128+52.15	18.00' LT	5.50'	19.00'	-0.20%	6'-6"	6'-6"
24	MONTAGUE CITY RD	128+69.34	18.00' RT	5.50'	65.00'	-0.70%	6'-6"	3'-10" **
25	61 MONTAGUE CITY RD	130+08.46	18.00' LT	5.50'	21.00'	-0.40%	7'-8"	6'-6"
26	66 MONTAGUE CITY RD	130+61.88	18.00' RT	5.50'	16.50'	-0.20%	6'-6"	7'-8"
27	72 MONTAGUE CITY RD	132+14.32	18.00' RT	5.50'	24.00'	-1.60%	6'-6"	9'-0"
28	71 MONTAGUE CITY RD	133+04.42	18.00' LT	5.50'	22.00'	-0.20%	7'-8"	3'-3" **
29	84 MONTAGUE CITY RD	134+08.87	18.00' RT	5.50'	18.00'	-0.30%	6'-6"	7'-8"
30	83 MONTAGUE CITY RD	134+26.87	18.00' LT	5.50'	20.50'	-0.20%	7'-8"	6'-6"
31	86 MONTAGUE CITY RD	134+66.19	18.00' RT	5.50'	17.00'	+0.40%	7'-8"	6'-6"
32	83 MONTAGUE CITY RD	134+94.60	18.00' LT	5.50'	11.00'	+0.40%	6'-6"	3'-10" **
33	91 MONTAGUE CITY RD	135+23.80	18.00' LT	5.50'	11.00'	+0.60%	3'-3" **	7'-8"
34	96 MONTAGUE CITY RD	137+21.05	17.74' RT	5.50'	17.00'	+0.10%	7'-8"	6'-6"
35	MONTAGUE CITY RD	137+45.03	18.00' LT	5.50'	28.00'	+0.40%	6'-6"	7'-8"
36	114 MONTAGUE CITY RD	140+34.77	16.00' RT	5.50'	19.00'	+0.30%	7'-8"	6'-6"
37	118 MONTAGUE CITY RD	141+12.17	16.00' RT	5.50'	17.00'	-0.50%	6'-6"	7'-8"
39	128 MONTAGUE CITY RD	143+74.03	16.00' RT	5.50'	14.00'	-2.10%	3'-3" **	11'-0"
40	136 MONTAGUE CITY RD	144+70.84	16.00' RT	5.50'	17.00'	-2.20%	6'-6"	11'-0"
41	139 MONTAGUE CITY RD	144+77.40	16.00' LT	5.50'	23.00'	-2.50%	11'-0"	6'-6"
43	144 MONTAGUE CITY RD	146+03.60	16.00' RT	5.50'	17.00'	-2.20%	6'-6"	11'-0"
44	145 MONTAGUE CITY RD	146+45.42	16.00' LT	5.50'	20.00'	-2.00%	9'-0"	6'-6"
45	148 MONTAGUE CITY RD	148+02.24	16.00' RT	5.50'	25.00'	-0.30%	6'-6"	7'-8"
46	151 MONTAGUE CITY RD	148+31.94	16.00' LT	5.50'	20.00'	-0.60%	7'-8"	6'-6"
47	156 MONTAGUE CITY RD	148+74.21	16.00' RT	5.50'	20.00'	-1.40%	6'-6"	9'-0"
48	157 MONTAGUE CITY RD	148+87.46	16.00' LT	5.50'	30.00'	-0.40%	7'-8"	6'-6"
49	159 MONTAGUE CITY RD	150+29.33	16.00' LT	5.50'	22.00'	-0.40%	7'-8"	6'-6"
50	160 MONTAGUE CITY RD	150+79.51	16.00' RT	5.50'	20.00'	-0.40%	6'-6"	7'-8"
51	163 MONTAGUE CITY RD	151+16.28	16.00' LT	5.50'	20.00'	-0.40%	7'-8"	6'-6"
52	165 MONTAGUE CITY RD	152+26.00	15.87' LT	5.50'	20.50'	+0.80%	6'-6"	3'-10" **
53	173 MONTAGUE CITY RD	01+20.67	28.46' LT	5.50'	20.00'	+1.20%	6'-6"	9'-0"
54	173 MOUNTAIN RD	02+37.12	14.54' LT	5.50'	19.50'	-1.00%	7'-8"	6'-6"
55	283 MOUNTAIN RD	02+86.01	14.36' LT	5.50'	20.50'	-0.70%	7'-8"	6'-6"





SECTION B-B

NOTES:
HSL = HIGH SIDE FRONT TRANSITION LENGTH (SEE E 107.9.0)
W = SIDEWALK WIDTH
CC = CEMENT CONCRETE
HMA = HOT MIX ASPHALT
* = TOLERANCE FOR CONSTRUCTION ±0.5%

SIDEWALK THROUGH DRIVEWAYS WITHOUT DRIVEWAY APRON
NOT TO SCALE

609202_HD15(CONSTRUCTION DETAILS).DWG Plotted on 9-Nov-2022 11:18 AM