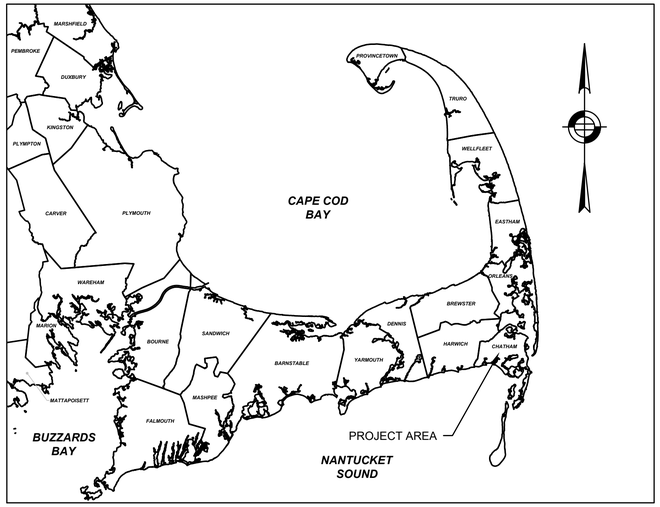
TOWN OF CHATHAM, MASSACHUSETTS

GEORGE RYDER ROAD MULTI-USE PATH

BARNSTABLE COUNTY

SEPTEMBER, 2023



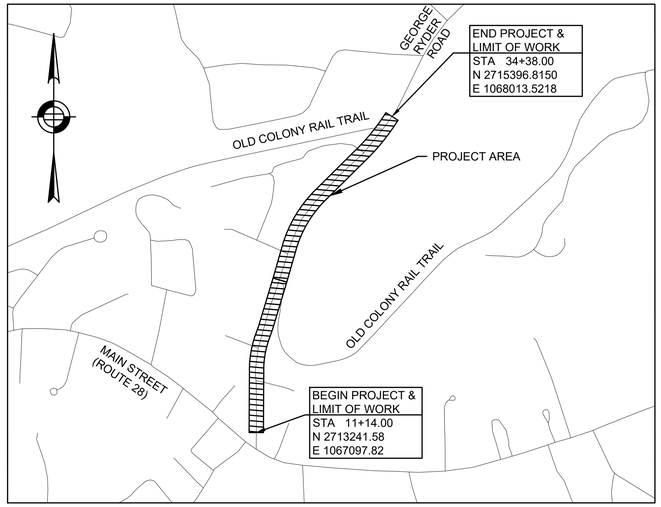
VICINITY MAP
NOT TO SCALE

TOWN OF CHATHAM INCORPORATED ★ JUNE 11 1712 ★ MASS.

TOWN PERSONNEL

TOWN MANAGER
JILL GOLDSMITH

DEPARTMENT OF PUBLIC WORKS DIRECTOR
ROBERT FALEY



LOCATION MAP
NOT TO SCALE

COMMONWEALTH OF MASSACHUSETTS
RICHARD E. LATINI
CIVIL
No. 41033
REGISTERED PROFESSIONAL ENGINEER

FINAL DESIGN

SEPTEMBER 2023

HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

THESE PLANS ARE SUPPLEMENTED BY THE OCTOBER 2017 MASSDOT 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.

DATE	DESCRIPTION	REV #
09/2023	FINAL DESIGN PLANS	1
08/2023	FINAL DESIGN PLANS	
05/2023	PRELIMINARY DESIGN PLANS	

GEORGE RYDER ROAD MULTI-USE PATH
TITLE SHEET & INDEX

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	1	45

9/22/2023 I:\20207\20207.01 completion\project drawing data\plan sheet files\Plan Sheet DWG\20207.01_HD(COVER).dwg
Last saved by: BMYERS
Printed by: Bridget Myers

GENERAL NOTES

1. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF ELECTRIC, TELEPHONE, AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES AT NO ADDITIONAL COST TO THE OWNER. IF THE CONTRACTOR ADJUSTS UTILITY COVERS IT SHALL BE DEEMED PART OF THE WORK AND THERE WILL BE NO ADDITIONAL COMPENSATION.

2. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DAMAGED BY THE CONTRACTOR'S OPERATIONS, INCLUDING STAGING AREAS, SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.

3. THE CONTRACTOR IS HEREBY NOTIFIED THAT ADDITIONAL WORK WITHIN THE PROJECT LIMITS MAY BE PERFORMED BY OTHERS.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INVESTIGATING AND CONFIRMING THAT ALL ITEMS TO BE REUSED ARE IN SERVICEABLE CONDITION. IF IT IS DEEMED THAT ANY ITEM IS NOT ABLE TO BE REUSED, THE CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING AND INCLUDE ESTIMATED COSTS TO INSTALL NEW.

5. TEMPORARY TRAFFIC CONTROL PLANS CONTAINED HEREIN ARE GIVEN AS A GUIDE FOR TYPICAL WORK ZONE TRAFFIC CONTROL APPLICATIONS FOR THE TYPES OF WORK ANTICIPATED FOR THIS PROJECT. THEY ARE NOT INTENDED TO COVER ALL POSSIBLE CONSTRUCTION OPERATIONS WHICH THE CONTRACTOR MAY CHOOSE TO EMPLOY. WORK ZONE TRAFFIC CONTROL FOR OTHER CONSTRUCTION OPERATIONS OR OTHER TRAFFIC SITUATIONS IF APPLICABLE SHALL BE IN ACCORDANCE WITH THE CURRENT MUTCD AND AS APPROVED OR DIRECTED BY RESIDENT ENGINEER.

6. THE CONTRACTOR SHALL ADJUST ALL EXISTING STRUCTURES WITHIN THE ACCESSIBLE SURFACE OF THE PROJECT LIMITS TO THE TOP MOST SURFACE OR THE STRUCTURE COVER SHALL BE FLUSH WITH THE CURB RAMP SURFACE.

7. THE CONTRACTOR SHALL PLACE SILT - SACKS AT ALL CATCH BASINS IN THE PROJECT LIMITS THROUGHOUT THE DURATION OF CONSTRUCTION.

8. DRAINAGE INLETS TO BE PROTECTED BY SILT SACK THROUGHOUT THE DURATION OF CONSTRUCTION.

SURVEY

1. THE SURVEY BASE PLAN WAS PREPARED BY A-PLUS CONSTRUCTION SERVICES CORP. IN DECEMBER 2022.

ALL UNDERGROUND UTILITIES AS SHOWN WERE COMPILED USING FIELD SURVEY INFORMATION AND AVAILABLE RECORD INFORMATION PROVIDED BY A-PLUS CONSTRUCTION SERVICES CORP. ON THE PLAN ENTITLES EXISTING CONDITIONS PLAN OF GEORGE RYDER ROAD CHATHAM, MA.

2. THE UNDERGROUND UTILITIES, AS SHOWN ON THE PLANS, HAVE BEEN COMPILED FROM RECORD PLANS, THE ACCURACY AND COMPLETENESS ARE NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE EXACT LOCATION, SIZE, TYPE, ETC. OF ALL UNDERGROUND UTILITIES THAT MAY BE AFFECTED BY THE WORK. AT LEAST 72 HOURS BEFORE DIGGING BEGINS THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT (888)344-7233. ALL TOWN OWNED UTILITY STRUCTURES WITHIN AREAS AFFECTED BY THE WORK SHALL BE ADJUSTED TO NEW LINE AND GRADE AS DIRECTED BY THE ENGINEER. ANY UTILITY POLES AND/OR GUY POLES WITHIN AREAS AFFECTED BY THE WORK SHALL BE REMOVED AND RESET BY THE RESPECTIVE UTILITY COMPANY. ALTERATIONS TO UTILITIES NOT OWNED BY THE TOWN SHALL BE MADE BY THE RESPECTIVE UTILITY OWNERS.

3. THE ELEVATIONS DEPICTED ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM (N.A.V.D) OF 1988 (USFT) SET BY A-PLUS CONSTRUCTION SERVICES CORP BY RTK GPS MEANS USING THE KeyNETGPS VTS NETWORK. CONTROL POINTS WERE CHECKED BY DIFFERENTIAL LEVELING.

4. THE FOLLOWING BENCHMARK INFORMATION WAS SET BY A-PLUS CONSTRUCITON SERVICES CORP:

TBM 1: X-CUT ELEV: 38.316'	TBM 2: MAG ELEV:43.073'
TBM 3: MAG ELEV: 51.098'	TBM 4: MAG ELEV: 52.100'
TBM 5: MAG ELEV: 51.610'	TBM 6: MAG ELEV:56.440'
TBM 7: MAG ELEV: 62.451'	TBM 8: MAG ELEV: 69.210'
TBM 9:X-CUT ELEV: 66.390	

5. THE CONTRACTOR SHALL FIELD VERIFY CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION.

TRAFFIC

1. THE MINIMUM MOUNTING HEIGHT OF POST-MOUNTED SIGNS, MEASURED VERTICALLY FROM THE BOTTOM OF THE SIGN TO THE TOP OF THE CURB OR SIDEWALK, OR TO THE ELEVATION OF THE NEAR EDGE OF THE TRAVELED WAY, SHALL BE 7 FEET UNLESS OTHERWISE SPECIFIED ON THE PLANS.

2. EXISTING TRAFFIC SIGNS WITHIN THE THE TOWN LAYOUT ARE TO BE RETAINED UNLESS OTHERWISE NOTED.

LANDSCAPE

1. PRIOR TO ONSET OF CONSTRUCTION, ENGINEER AND INVASIVE PLANT CONTRACTOR SHALL WALK PROJECT TO IDENTIFY INVASIVE PLANT LOCATIONS.

2. TREE PROTECTION SHALL BE INSTALLED AND APPROVED BY ENGINEER PRIOR TO ONSET OF CONSTRUCTION ACTIVITIES.

INDEX

GEORGE RYDER ROAD MULTI-USE PATH
GENERAL NOTES & INDEX

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD BY	APPRVD BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	2	45

9/27/2023 L:\2020\7\20207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\202207.01_HD(COVER).dwg
Jacob Cleveland

GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
CB		CATCH BASIN
		CATCH BASIN CURB INLET
		GUTTER INLET
FP	FP	FLAG POLE
MB	MB	MAIL BOX
		POST SQUARE
		POST CIRCULAR
WELL	WELL	WELL
EHH	EHH	ELECTRIC HANDHOLE
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
TBM #		TEMPORARY BENCHMARK
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
WG	WG	WATER GATE
DH		DRILL HOLE
EM		ELECTRIC METER
EPLP		ESCUTCHEON PIN IN LEAD PLUG
WF#		WETLAND FLAG
—OHW—	—OHW—	OVERHEAD CABLE/WIRE
		CURBING
—99—		CONTOURS (ON-THE-GROUND SURVEY DATA)
—99—		CONTOURS (PHOTOGRAMMETRIC DATA)
	D	UNDERGROUND DRAIN PIPE (DOUBLE LINE 24 INCH AND OVER)
	E	UNDERGROUND ELECTRIC DUCT (DOUBLE LINE 24 INCH AND OVER)
	G	UNDERGROUND GAS MAIN (DOUBLE LINE 24 INCH AND OVER)
	S	UNDERGROUND SEWER MAIN (DOUBLE LINE 24 INCH AND OVER)
	T	UNDERGROUND TELEPHONE DUCT (DOUBLE LINE 24 INCH AND OVER)
	W	UNDERGROUND WATER MAIN (DOUBLE LINE 24 INCH AND OVER)
		BALANCED STONE WALL
x	x	CHAIN LINK OR METAL FENCE
		WOOD FENCE
		SAWCUT LINE
		TOP OR BOTTOM OF SLOPE
		LIMIT OF EDGE OF PAVEMENT OR COLD PLANE AND OVERLAY
		STATE HIGHWAY LAYOUT
		TOWN OR CITY LAYOUT
		COUNTY LAYOUT
		TOWN OR CITY BOUNDARY LINE
		PROPERTY LINE OR APPROXIMATE PROPERTY LINE
		EASEMENT

PAVEMENT MARKINGS SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
	SL	STOP LINE (12" UNLESS OTHERWISE SPECIFIED)
	CW	CROSSWALK (12" LINES, 8' O.C., 12" LONGITUDINAL LINES @ 45°, 4' O.C.)
	YL	YIELD LINE
	BWL	6" BROKEN WHITE LINE, 10' MARK - 20' SKIP
	SWL	6" SOLID WHITE LINE
	SYL	6" SOLID YELLOW LINE
	DBYL	2-6" DOUBLE YELLOW LINE
	DWLEx	6" DOTTED WHITE LINE EXTENSION, 2' MARK - 6' SKIP
		12" SOLID WHITE GORE LINE (5' O.C. @ 45° UNLESS OTHERWISE SPECIFIED)
		12" SOLID YELLOW GORE LINE (20' O.C. @ 45° UNLESS OTHERWISE SPECIFIED)

TRAFFIC SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		SIGNAL POST
		MAST ARM
		PULL BOX (12"X12")
		CONDUIT
		TRAFFIC SIGN
		APS PEDESTRIAN PUSHBUTTON

ABBREVIATIONS

GENERAL

AADT	ANNUAL AVERAGE DAILY TRAFFIC
ABAN	ABANDON
ADJ	ADJUST
APPROX.	APPROXIMATE
A.C.	ASPHALT CONCRETE
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE
AUX	AUXILARY
BIT	BITUMINOUS
BC	BOTTOM OF CURB
BCB	BITUMINOUS CONCRETE BERM
BCC	BITUMINOUS CONCRETE CURB
BD	BOUND
BL (or ℄)	BASELINE
BLDG	BUILDING
BM	BENCHMARK
BO	BY OTHERS
BOS	BOTTOM OF SLOPE
BR	BRIDGE
BRK	BRICK
BWL	BROKEN WHITE LINE
BYL	BROKEN YELLOW LINE
CAB	CABINET
CB	CATCH BASIN
CBCI	CATCH BASIN WITH CURB INLET
CC	CEMENT CONCRETE
CCB	CAPE COD BERM
CCM	CEMENT CONCRETE MASONRY
CEM	CEMENT
CEN	CENTER
CI	CURB INLET
CIP	CAST IRON PIPE
CIT	CHANGE IN TYPE
CLF	CHAIN LINK FENCE
CL (or ℄)	CENTERLINE
CLF	CHAIN LINK FENCE
CMH	CABLE MANHOLE
CMP	CORRUGATED METAL PIPE
CSP	CORRUGATED STEEL PIPE
CO	COUNTY
CO BD	COUNTY BOUND
CON	CONIFEROUS
CONC	CONCRETE
CONT	CONTINUED
CONST	CONSTRUCTION
CPP	CORRUGATED PLASTIC PIPE
CR GR	CROWN GRADE
CSP	CORRUGATED STEEL PIPE
CULV	CULVERT
DBYL	DOUBLE YELLOW LINE
DEC	DECIDUOUS
DH	DRILL HOLE
DHV	DESIGN HOURLY VOLUME
DI	DROP INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DMH	DRAIN MANHOLE
DSK	DISK
DW	STEADY DON'T WALK - PORTLAND ORANGE
DWY	DRIVEWAY
ELEV (or EL)	ELEVATION
EMH	ELECTRIC MANHOLE
EMB	EMBANKMENT
EOP (or EP)	EDGE OF PAVEMENT
EPLP	ESCUTCHEON PIN IN LEAD PLUG
ETW	EDGE OF TRAVELED WAY
EXIST (or EX)	EXISTING
EXC	EXCAVATION
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
FDN.	FOUNDATION
FGS	FLAGSTONE
FL	FLOWLINE
FLDSTN	FIELDSTONE
GAR	GARAGE
GD	GROUND
GG	GAS GATE
GI	GUTTER INLET
GIP	GALVANIZED IRON PIPE
GMH	GAS MANHOLE
GRAN	GRANITE
GRAV	GRAVEL
GRD	GUARD
GRL	GUARDRAIL
HDW	HEADWALL
HMA	HOT MIX ASPHALT
HOR	HORIZONTAL
HYD	HYDRANT
INV	INVERT
IP	IRON PIPE

ABBREVIATIONS (CONT)

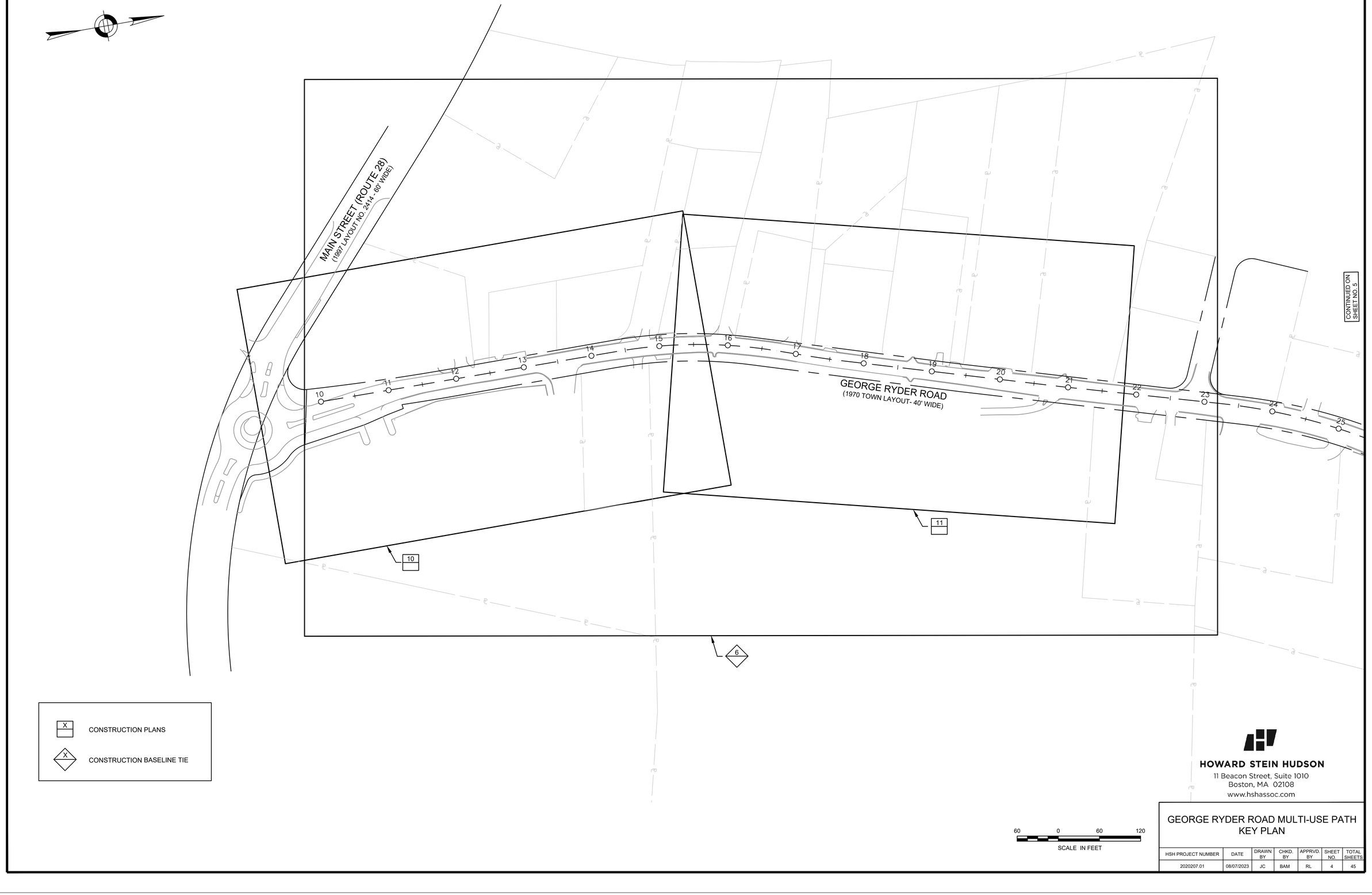
GENERAL

JB	JERSEY BARRIER
JCT	JUNCTION
L	LENGTH OF CURVE
LB	LEACHING BASIN
LO	LAYOUT
LP	LIGHT POLE
LSA	LANDSCAPED AREA
LT	LEFT
MAG	MAG NAIL
MAX	MAXIMUM
MB	MAILBOX
MH	MANHOLE
MHB	MASSACHUSETTS HIGHWAY BOUND
MIN	MINIMUM
NIC	NOT IN CONTRACT
NO.	NUMBER
OHW	OVERHEAD WIRE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PCR	PEDESTRIAN CURB RAMP
PED	PEDESTRIAN
P.G.L.	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
PK	PK NAIL
POC	POINT ON CURVE
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVATURE
PROJ	PROJECT
PROP	PROPOSED
PSB	PLANTABLE SOIL BORROW
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT
PWW	PAVED WATER WAY
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
RRFB	RECTANGULAR RAPID FLASHING BEACON
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
RT	RIGHT
SB	STONE BOUND
SGE	SLOPED GRANITE EDGING
SHLD	SHOULDER
SHLO	STATE HIGHWAY LAYOUT
SMH	SEWER MANHOLE
SPK	SPIKE
ST	STREET
STA	STATION
STN	STONE
SSD	STOPPING SIGHT DISTANCE
SW	SIDEWALK
SWL	SOLID WHITE LINE
T	TANGENT DISTANCE OF CURVE/TRUCK %
TAN	TANGENT
TEMP	TEMPORARY
TMH	TELEPHONE MANHOLE
TSC	TRAFFIC SIGNAL CONDUIT
TC	TOP OF CURB
TOS	TOP OF SLOPE
TYP	TYPICAL
UP	UTILITY POLE
VAR	VARIES
VERT	VERTICAL
VC	VERTICAL CURVE
VGC	VERTICAL GRANITE CURB
VLT	VAULT
WD	WOOD
WG	WATER GATE
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN
X-SECT	CROSS SECTION

GEORGE RYDER ROAD MULTI-USE PATH
LEGEND

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	3	45

9/27/2023 L:\2020\20207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\20207.01_HD(COVER).dwg
Jacob Cleveland



60 0 60 120

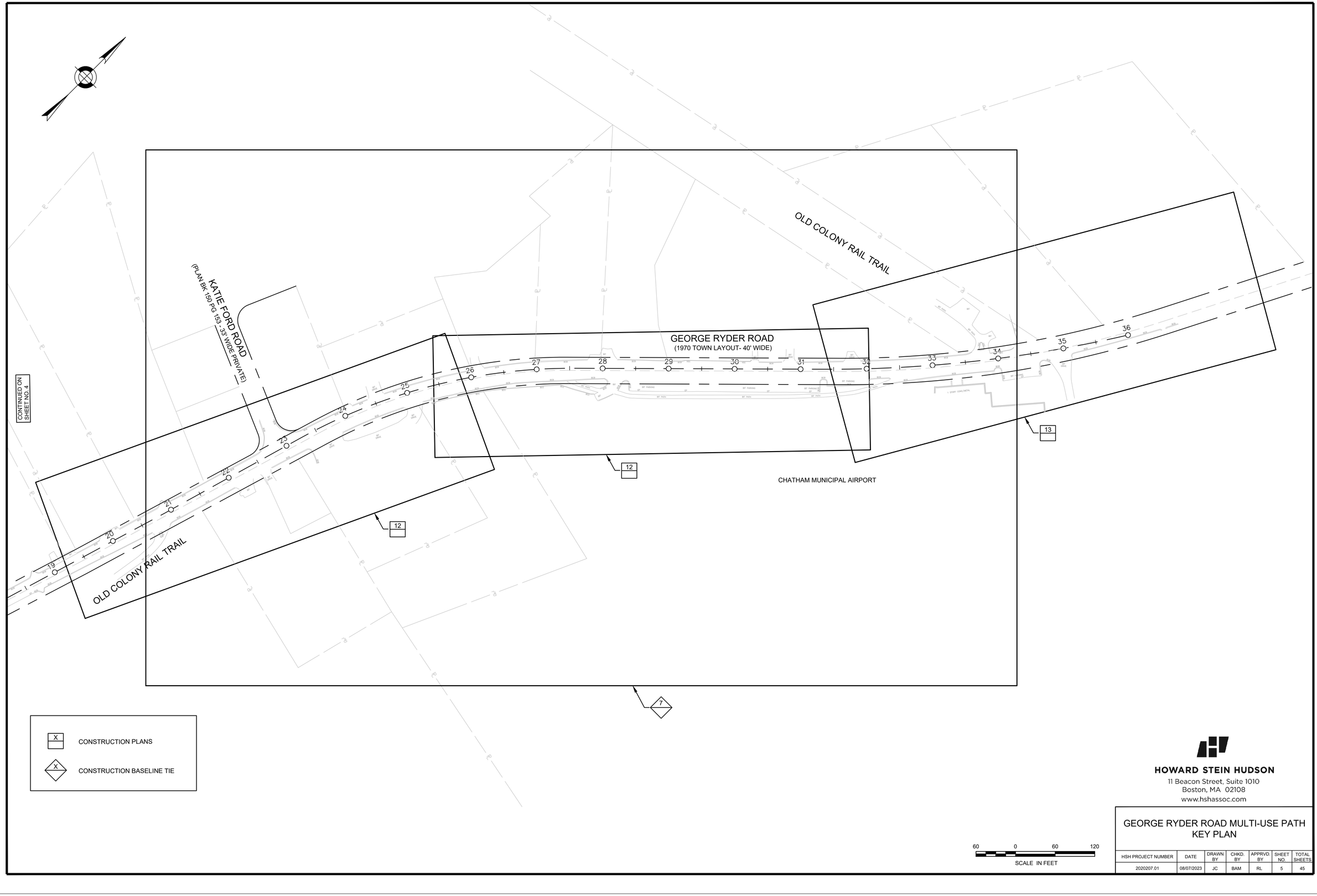
SCALE IN FEET

HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

GEORGE RYDER ROAD MULTI-USE PATH
KEY PLAN

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	4	45

9/27/2023 L:\2020\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.02_HDKEY1.dwg
Last Saved By: Jacob Cleveland
Full Name: Jacob Cleveland
Printed by: Jacob Cleveland

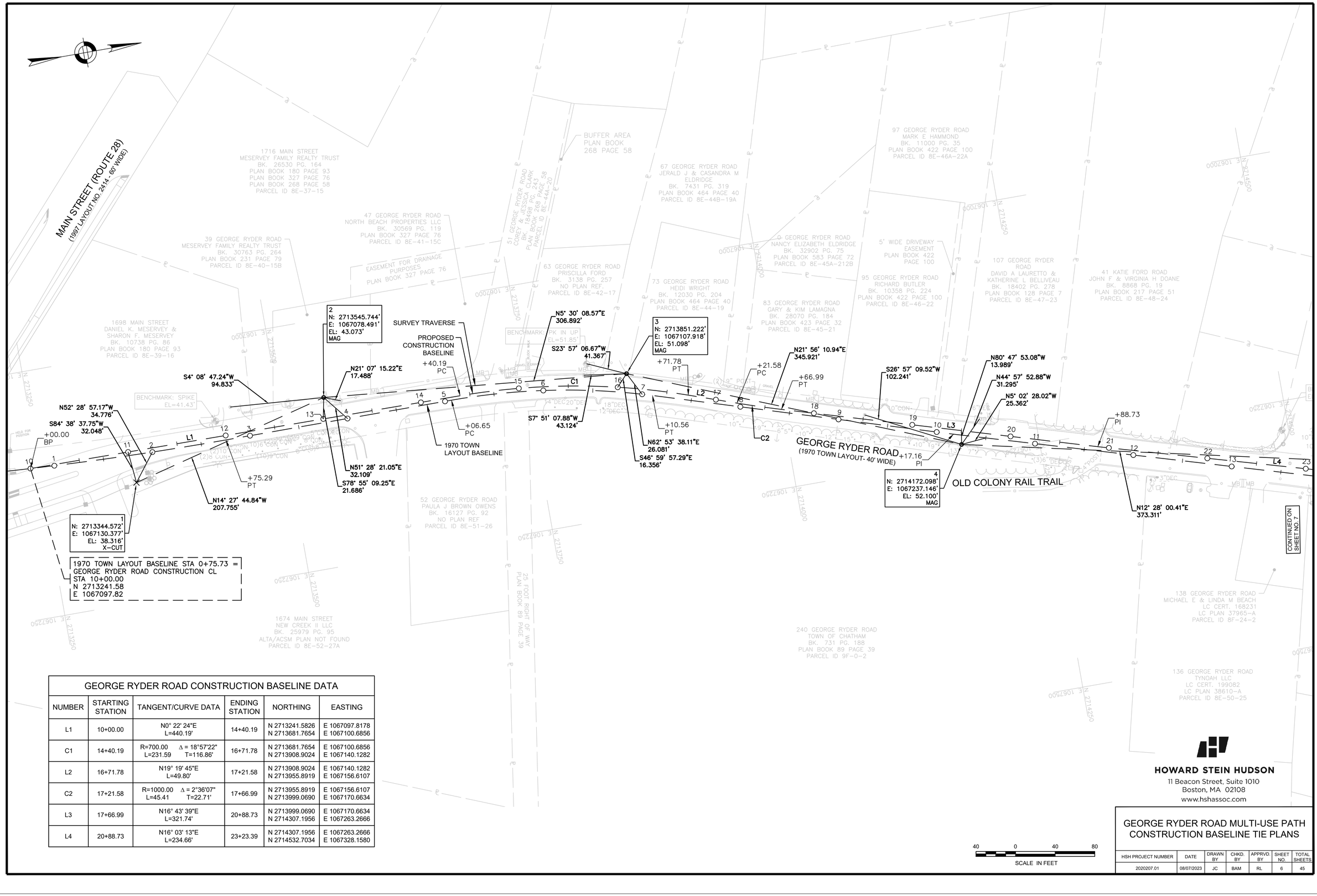


HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

GEORGE RYDER ROAD MULTI-USE PATH
KEY PLAN

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	5	45

9/27/2023 L:\2020\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.01_HD(KEY).dwg
Last saved by JCleveland
Printed by Jacob Cleveland



GEORGE RYDER ROAD CONSTRUCTION BASELINE DATA					
NUMBER	STARTING STATION	TANGENT/CURVE DATA	ENDING STATION	NORTHING	EASTING
L1	10+00.00	N0° 22' 24"E L=440.19'	14+40.19	N 2713241.5826 N 2713681.7654	E 1067097.8178 E 1067100.6856
C1	14+40.19	R=700.00 Δ = 18°57'22" L=231.59 T=116.86'	16+71.78	N 2713681.7654 N 2713908.9024	E 1067100.6856 E 1067140.1282
L2	16+71.78	N19° 19' 45"E L=49.80'	17+21.58	N 2713908.9024 N 2713955.8919	E 1067140.1282 E 1067156.6107
C2	17+21.58	R=1000.00 Δ = 2°36'07" L=45.41 T=22.71'	17+66.99	N 2713955.8919 N 2713999.0690	E 1067156.6107 E 1067170.6634
L3	17+66.99	N16° 43' 39"E L=321.74'	20+88.73	N 2713999.0690 N 2714307.1956	E 1067170.6634 E 1067263.2666
L4	20+88.73	N16° 03' 13"E L=234.66'	23+23.39	N 2714307.1956 N 2714532.7034	E 1067263.2666 E 1067328.1580

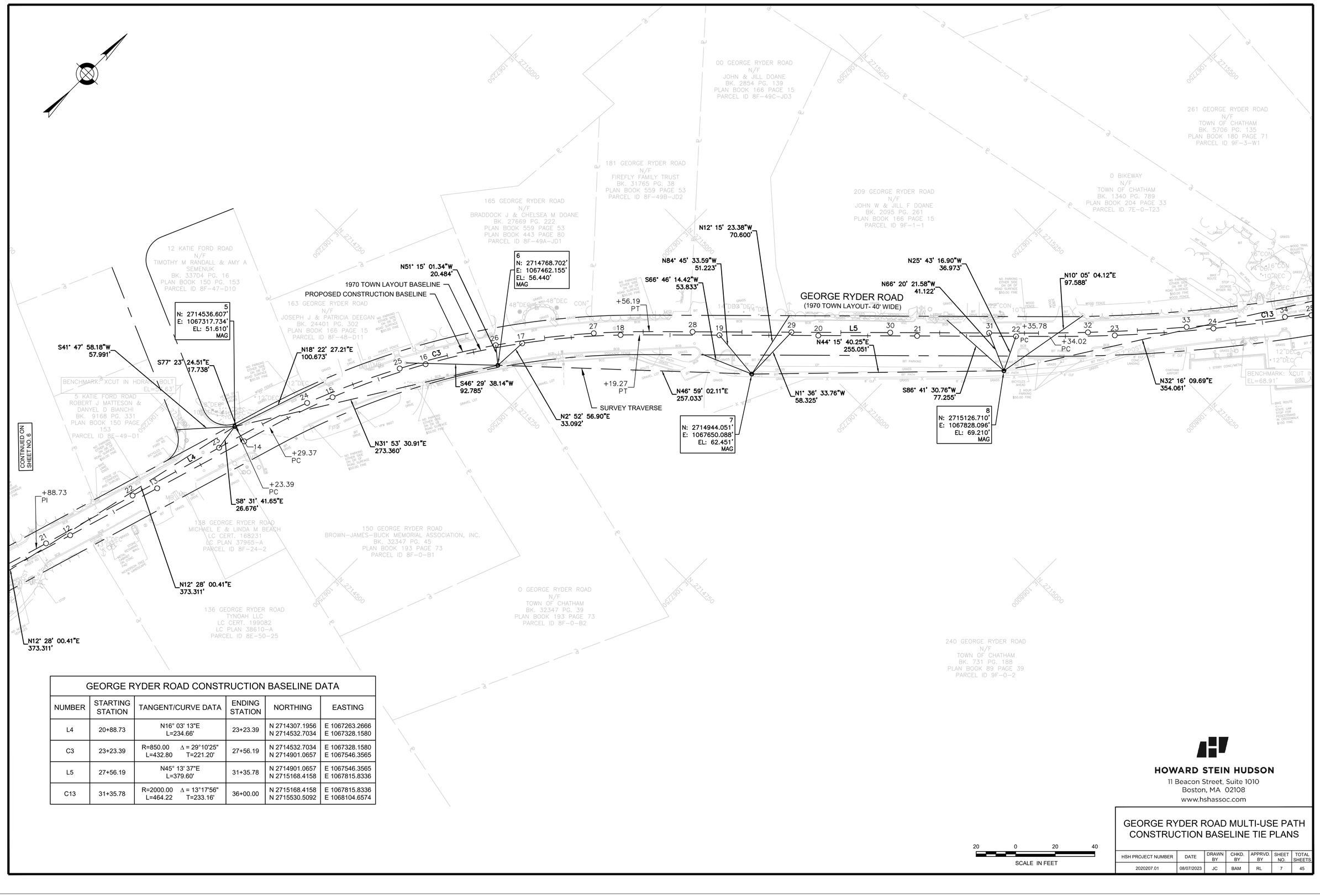
40 0 40 80
SCALE IN FEET

HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

GEORGE RYDER ROAD MULTI-USE PATH CONSTRUCTION BASELINE TIE PLANS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	6	45

9/27/2023 L:\2020\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.02_HD(BL TIE).dwg
Layout: Layout: BASE
Plotted by: Jacob Cleveland



GEORGE RYDER ROAD CONSTRUCTION BASELINE DATA					
NUMBER	STARTING STATION	TANGENT/CURVE DATA	ENDING STATION	NORTHING	EASTING
L4	20+88.73	N16° 03' 13"E L=234.66'	23+23.39	N 2714307.1956 N 2714532.7034	E 1067263.2666 E 1067328.1580
C3	23+23.39	R=850.00 Δ = 29°10'25" L=432.80 T=221.20'	27+56.19	N 2714532.7034 N 2714901.0657	E 1067328.1580 E 1067546.3565
L5	27+56.19	N45° 13' 37"E L=379.60'	31+35.78	N 2714901.0657 N 2715168.4158	E 1067546.3565 E 1067815.8336
C13	31+35.78	R=2000.00 Δ = 13°17'56" L=464.22 T=233.16'	36+00.00	N 2715168.4158 N 2715530.5092	E 1067815.8336 E 1068104.6574

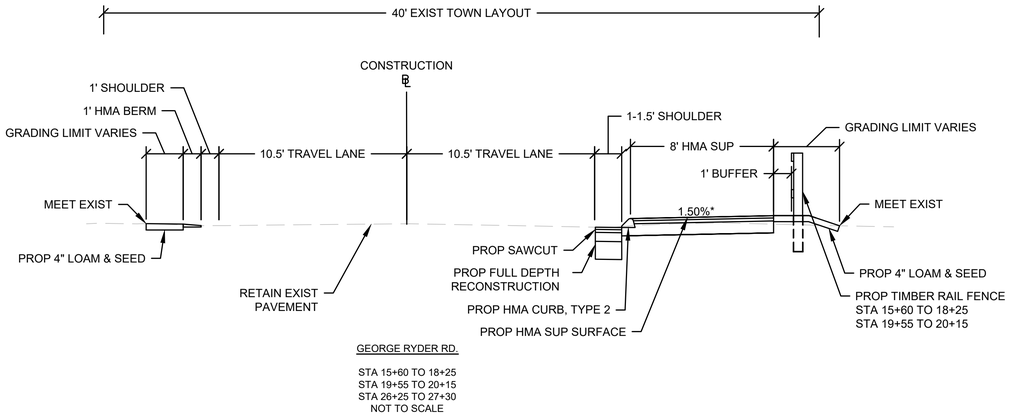
HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

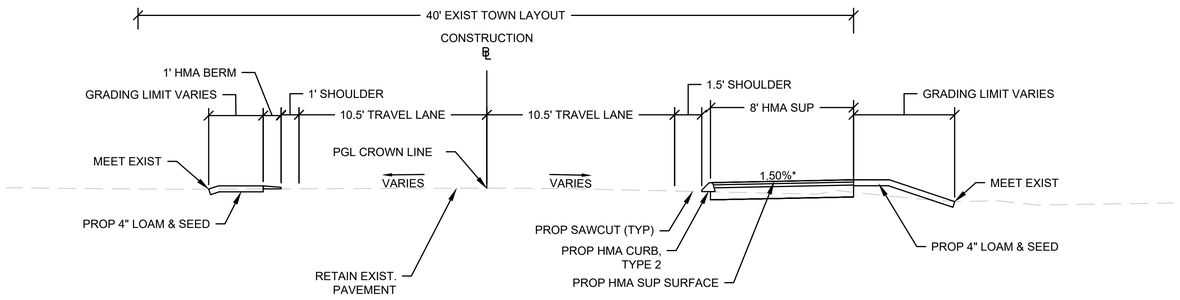
GEORGE RYDER ROAD MULTI-USE PATH CONSTRUCTION BASELINE TIE PLANS

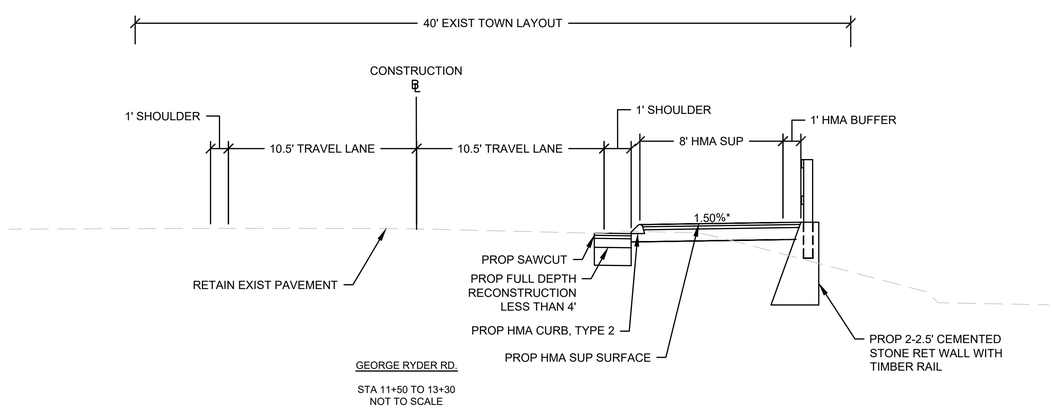
HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	7	45

20 0 20 40
SCALE IN FEET

9/27/2023 L:\2020\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.01_HDIBLTIE).dwg
Last Saved By: JCleveland
Printed by: Jacob Cleveland







PAVEMENT NOTES: GEORGE RYDER ROAD

CEMENT CONCRETE RAMPS, WALK SURFACE, LEVEL LANDING:

SURFACE COURSE:	4" CEMENT CONCRETE SURFACE COURSE OVER
SUB-BASE:	8" GRAVEL BORROW TYPE B

HMA SHARED USE PATH SURFACE:

SURFACE COURSE:	2" SUPERPAVE SURFACE COURSE 9.5 (SSC-9.5) OVER
INTERMEDIATE COURSE:	2" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC-12.5) OVER
BASE COURSE:	6" GRAVEL BORROW TYPE B

FULL DEPTH CONSTRUCTION LESS THAN 4' WIDE:

SURFACE COURSE:	2" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER
INTERMEDIATE COURSE:	2" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC-12.5) OVER
BASE COURSE:	6" HES CEMENT CONCRETE BASE OVER
SUB-BASE:	12" GRAVEL BORROW TYPE B

GRAVEL DRIVEWAYS:

SURFACE COURSE:	2" GRAVEL SURFACE COURSE OVER
BASE COURSE:	4" AGGREGATE BASE COURSE OVER

NOTES:

TACK COAT SHALL BE SPRAY APPLIED DOUBLE OVERLAP FOR UNIFORM COVERAGE AT A RATE CONSISTENT WITH STANDARD SPECIFICATION 450.43G(2) (BASE AND INTERMEDIATE COURSES PRIOR TO PAVING OVERLAY.

HOT APPLIED PAVEMENT JOINT ADHESIVE SHALL BE APPLIED OVER ALL SAWCUT JOINTS BETWEEN EXISTING PAVEMENT AND NEW HMA MATERIAL INCLUDED IN HMA CURB CONSTRUCTION. JOINT ADHESIVE SHALL BE IN ACCORDANCE WITH SECTION 450 OF THE STANDARD SPECIFICATIONS, AND SHALL BE PAID UNDER ITEM 453 HMA JOINT ADHESIVE.

ALL HMA, HMA FOR PATCHING, ASPHALT EMULSION FOR TACK COAT, AND HMA JOINT SEALANT SHALL BE IN ACCORDANCE WITH SECTION 450 QUALITY ASSURANCE OF HMA SPECIFICATION. THE ENGINEER SHALL IDENTIFY UNSOUND AREAS OF PAVEMENT TO BE PATCHED UNDER 451 HMA FOR PATCHING. HMA PATCHES SHALL COMPLY WITH MASSDOT STANDARD SPECIFICATION 450.43 C. PATCHES NOT TO EXCEED 4" DEPTH BELOW MILLED SURFACE OF PROPOSED WORK.

ENGINEER MAY AUTHORIZE USE OF NATIVE SOIL RATHER THAN GRAVEL. CONTRACTOR MUST REQUEST AND PROVIDE SOIL SAMPLES.

* = TOLERANCE FOR CONSTRUCTION ± 0.5% ON SIDEWALK SLOPES, DRIVEWAY SLOPES, AND PEDESTRIAN CURB RAMPS.

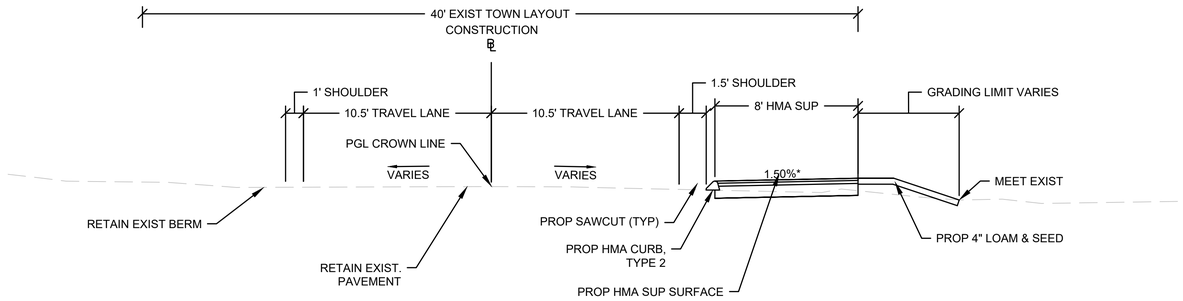
** = EXISTING GRAVEL DETERMINED TO BE SUITABLE BY THE ENGINEER SHALL REMAIN.

HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

GEORGE RYDER ROAD MULTI-USE PATH TYPICAL SECTIONS

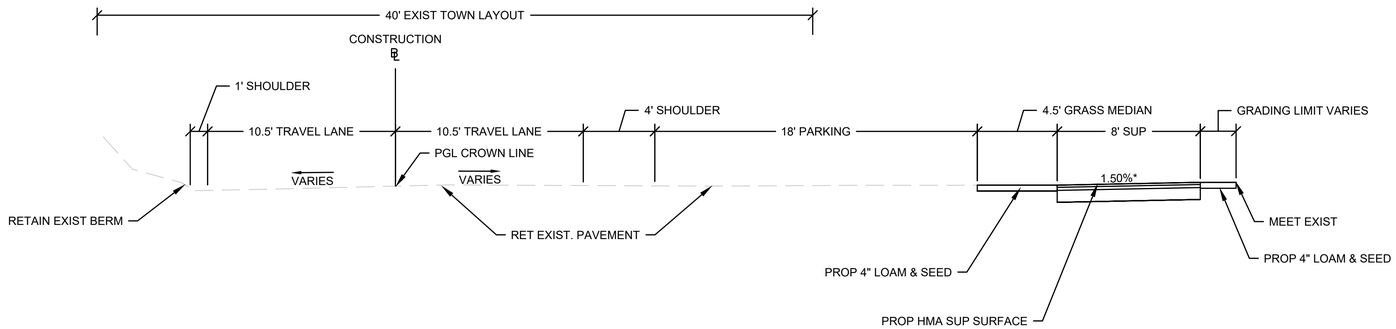
HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	8	45

9/27/2023 L:\2020\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.02_HD(TYP5).dwg
Last Saved By: JMYERS
Printed by: Jacob Cleveland



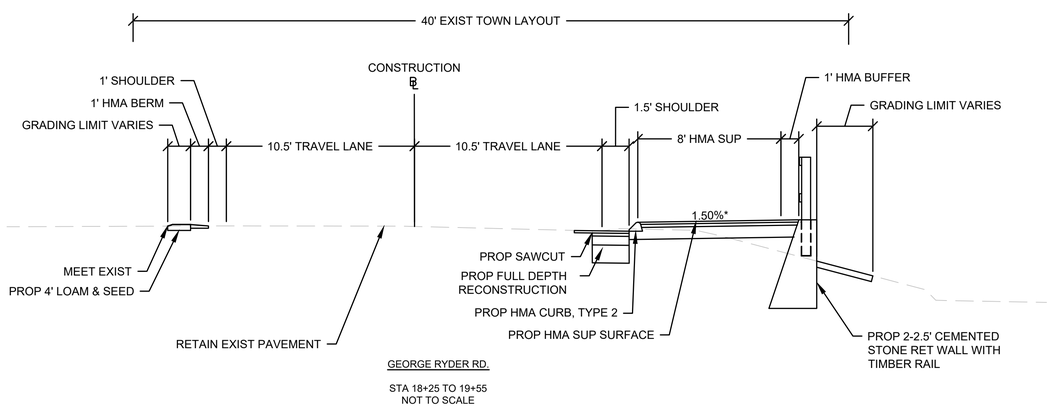
GEORGE RYDER RD.

STA 32+50 TO 33+50
NOT TO SCALE



GEORGE RYDER ROAD

STA 28+40 TO 31+20
NOT TO SCALE



GEORGE RYDER RD.

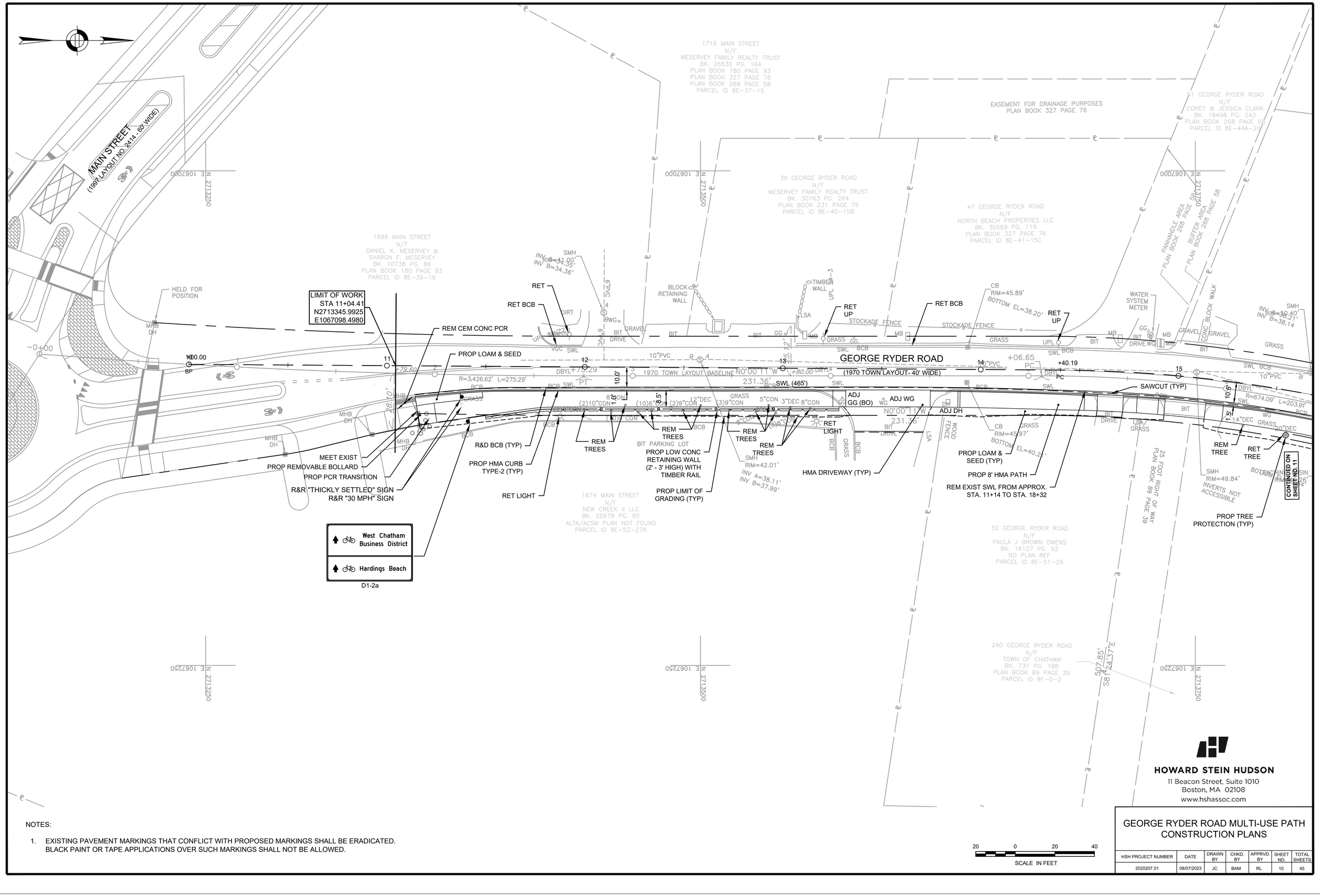
STA 18+25 TO 19+55
NOT TO SCALE

HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

GEORGE RYDER ROAD MULTI-USE PATH TYPICAL SECTIONS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	9	45

9/27/2023 L:\2020\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.01_HD(TYP5).dwg
Last Saved By: JMEYERS
Printed by: Jacob Cleveland



NOTES:

1. EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH PROPOSED MARKINGS SHALL BE ERADICATED. BLACK PAINT OR TAPE APPLICATIONS OVER SUCH MARKINGS SHALL NOT BE ALLOWED.

HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

GEORGE RYDER ROAD MULTI-USE PATH CONSTRUCTION PLANS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	10	45

8/27/2023 L:\2020\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWGS\2020207.02_HD(CONST).dwg
Layout: 10 - 22x34 ANSI D
User: jcleveland
Printed by: Jacob Cleveland

0 GEORGE RYDER ROAD
N/F
NANCY ELIZABETH ELDRIDGE
BK. 32902 PG. 75
PLAN BOOK 583 PAGE 72
PARCEL ID 8E-45A-212B

67 GEORGE RYDER ROAD
N/F
JERALD J & CASANDRA M ELDRIDGE
BK. 7431 PG. 319
PLAN BOOK 464 PAGE 40
PARCEL ID 8E-44B-19A

97 GEORGE RYDER ROAD
N/F
MARK E HAMMOND
BK. 11000 PG. 35
PLAN BOOK 422 PAGE 100
PARCEL ID 8E-46A-22A

107 GEORGE RYDER ROAD
N/F
DAVID A LAURETTO & KATHERINE L BELLIVEAU
BK. 18402 PG. 278
PLAN BOOK 128 PAGE 7
PARCEL ID 8E-47-23

41 KATIE FORD ROAD
N/F
JOHN F & VIRGINIA H DOANE
BK. 8868 PG. 19
PLAN BOOK 217 PAGE 51
PARCEL ID 8E-48-24

63 GEORGE RYDER ROAD
N/F
PRISCILLA FORD
BK. 3138 PG. 257
NO PLAN REF.
PARCEL ID 8E-42-17

73 GEORGE RYDER ROAD
N/F
HEIDI WRIGHT
BK. 12030 PG. 204
PLAN BOOK 464 PAGE 40
PARCEL ID 8E-44-19

83 GEORGE RYDER ROAD
N/F
GARY & KIM LAMAGNA
BK. 28070 PG. 184
PLAN BOOK 423 PAGE 32
PARCEL ID 8E-45-21

95 GEORGE RYDER ROAD
N/F
RICHARD BUTLER
BK. 10358 PG. 224
PLAN BOOK 422 PAGE 100
PARCEL ID 8E-46-22

240 GEORGE RYDER ROAD
N/F
TOWN OF CHATHAM
BK. 731 PG. 188
PLAN BOOK 89 PAGE 39
PARCEL ID 9F-0-2

5' WIDE DRIVEWAY EASEMENT PLAN BOOK 422 PAGE 100

GEORGE RYDER ROAD
(1970 TOWN LAYOUT- 40' WIDE)
LAYOUT BASELINE

OLD COLONY RAIL TRAIL

N 271400 E 1067000
N 271250 E 1067250
N 271400 E 1067250
N 271750 E 1067250

CONTINUED ON SHEET NO. 10

CONTINUED ON SHEET NO. 12

NOTES:

1. EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH PROPOSED MARKINGS SHALL BE ERADICATED. BLACK PAINT OR TAPE APPLICATIONS OVER SUCH MARKINGS SHALL NOT BE ALLOWED.
2. SEE CURB TIE, GRADING & DRAINAGE PLANS FOR RIM, INVERT, AND DRAINAGE STRUCTURE INFORMATION.
3. EXISTING WATER GATE AT STA 15+47 RT IS LOCATED ALONG THE PROPOSED HMA CURB. IF UNABLE TO ADJUST, CONTRACTOR SHALL PROVIDE A BREAK IN THE CURB AND USE HAND-WORK TO PAVE THE BERM BEHIND THE GATE.

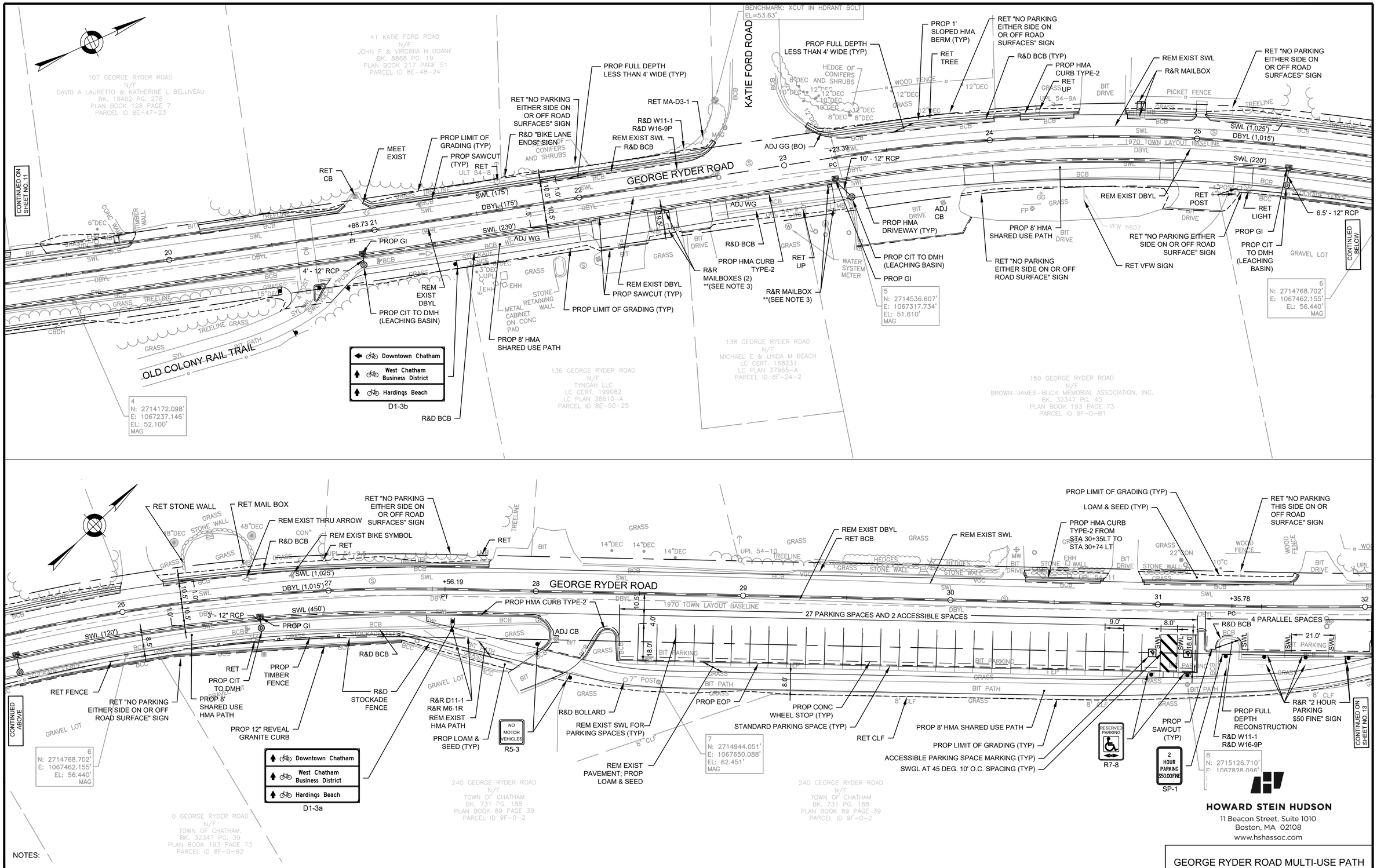
SCALE IN FEET
20 0 20 40

HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

GEORGE RYDER ROAD MULTI-USE PATH CONSTRUCTION PLANS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	11	45

9/29/2023 L:\20207\20207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\20207.02_HD(CONST).dwg
Last Saved By: BMYERS
Printed by: Bridget Myers



NOTES:

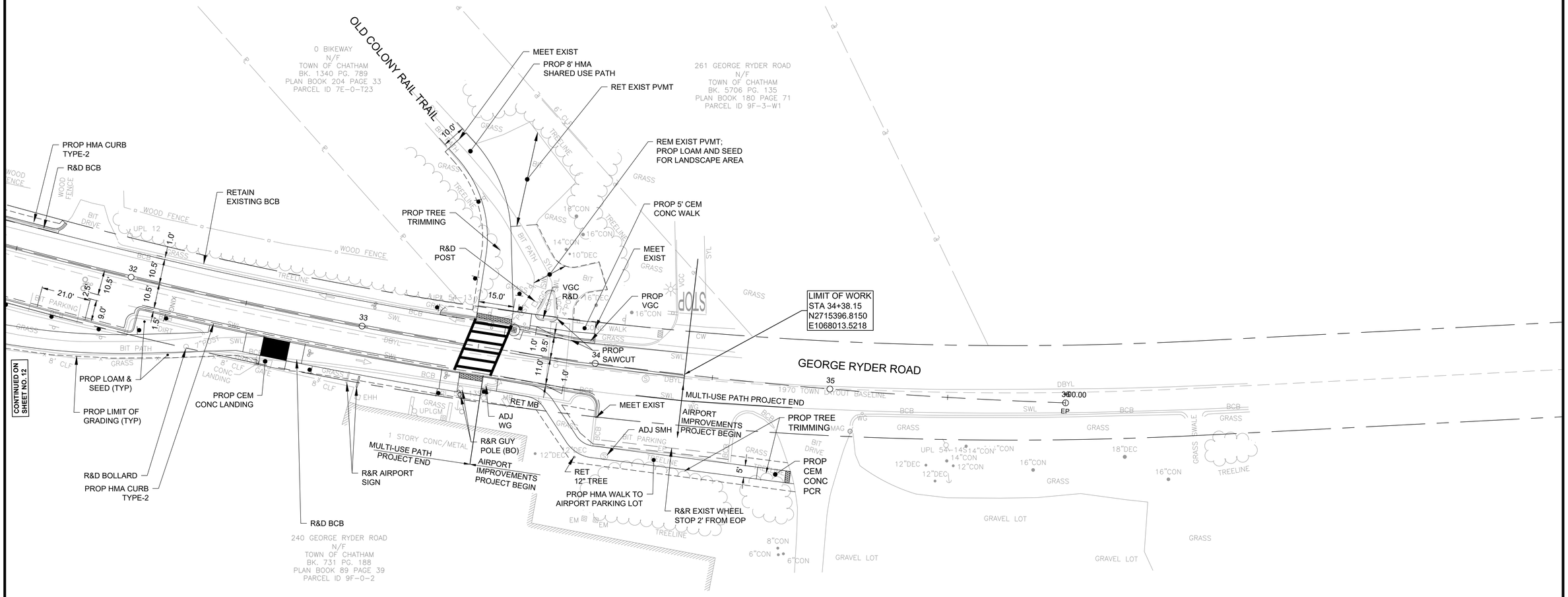
1. EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH PROPOSED MARKINGS SHALL BE ERADICATED. BLACK PAINT OR TAPE APPLICATIONS OVER SUCH MARKINGS SHALL NOT BE ALLOWED.
2. SEE CURB TIE, GRADING & DRAINAGE PLANS FOR RIM, INVERT, AND DRAINAGE STRUCTURE INFORMATION.
3. MAIL BOXES TO BE R&R AT EDGE OF CURB ALONG PATH SHOULD BE PLACED WITH MAILBOX OPENING FACING ON-COMING VEHICLE TRAVEL LANES AS TO NOT OBSTRUCT SHARED USE PATH.

HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

GEORGE RYDER ROAD MULTI-USE PATH CONSTRUCTION PLANS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	12	45

10/16/2023 L:\2020\2020207.01 completion\project drawing data\plan sheet files\Plan Sheet DWG\2020207.01_HD(CONST).dwg
Last saved by: BRIDGET
Printed by: Bridget Myers



LAYOUT AND MATERIALS VIEW

NOTES:

1. EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH PROPOSED MARKINGS SHALL BE ERADICATED. BLACK PAINT OR TAPE APPLICATIONS OVER SUCH MARKINGS SHALL NOT BE ALLOWED.
2. SEE CURB TIE, GRADING & DRAINAGE PLANS FOR RIM, INVERT, AND DRAINAGE STRUCTURE INFORMATION.
3. SEE SHEETS 18-19 FOR CHATHAM MUNICIPAL AIRPORT DRAINAGE DESIGN.

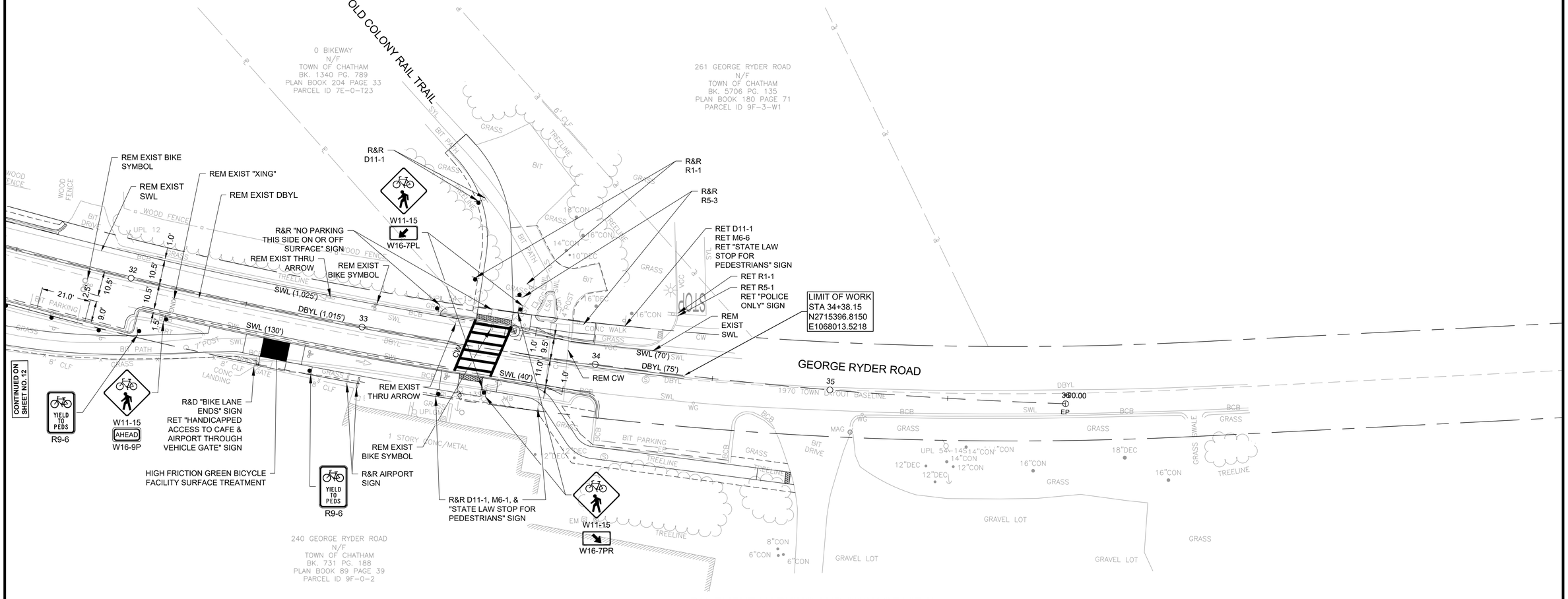
SCALE IN FEET: 20 0 20 40

HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

GEORGE RYDER ROAD MULTI-USE PATH CONSTRUCTION PLANS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	13	45

9/27/2023 L:\2020\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.01_HD(CONST).dwg
Last Saved By: JMEYER
Printed by: Jacob Cleveland



PAVEMENT MARKING AND SIGNAGE VIEW

NOTES:

1. EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH PROPOSED MARKINGS SHALL BE ERADICATED. BLACK PAINT OR TAPE APPLICATIONS OVER SUCH MARKINGS SHALL NOT BE ALLOWED.
2. SEE CURB TIE, GRADING & DRAINAGE PLANS FOR RIM, INVERT, AND DRAINAGE STRUCTURE INFORMATION.
3. SEE SHEETS 18-19 FOR CHATHAM MUNICIPAL AIRPORT DRAINAGE DESIGN.

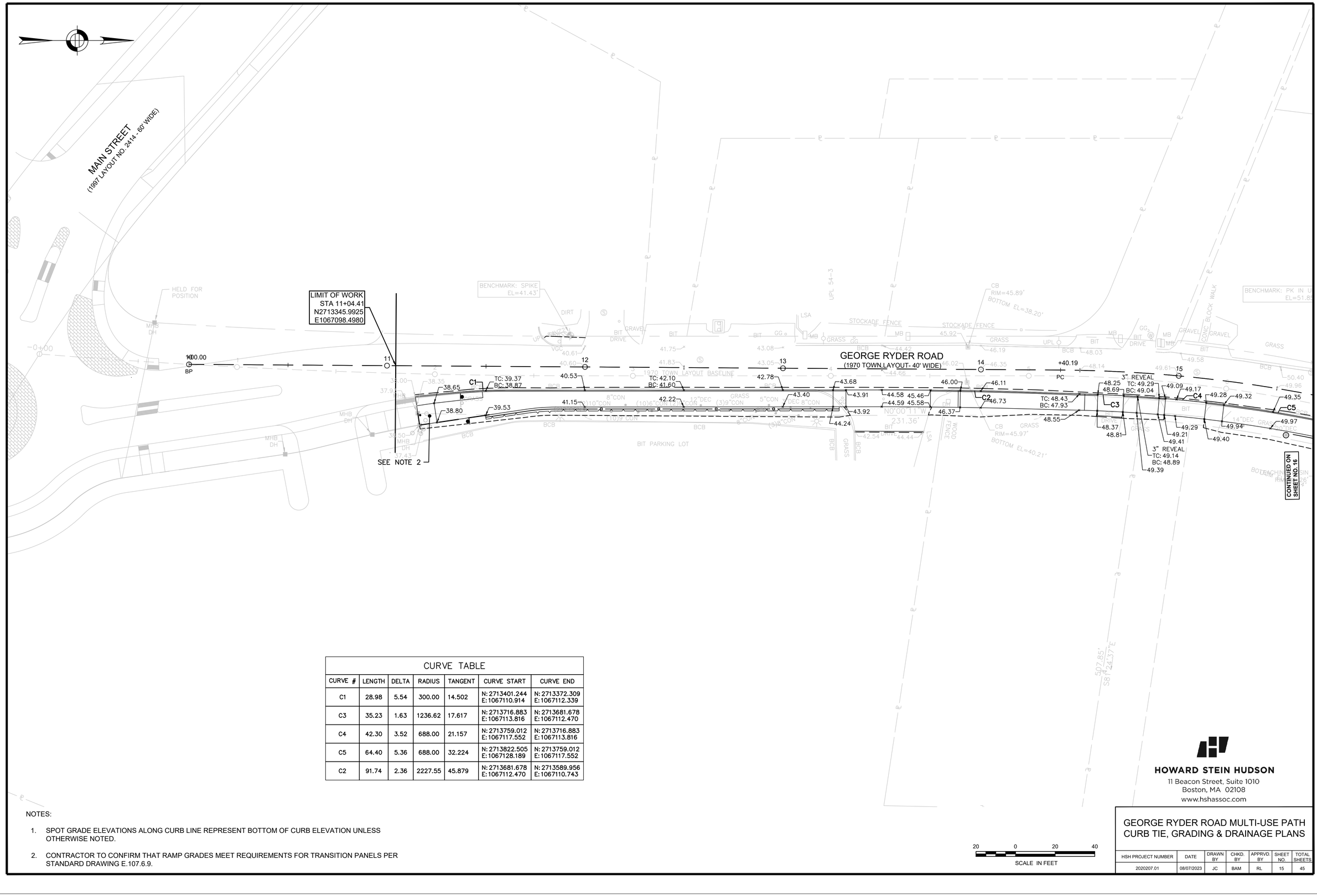
HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

SCALE IN FEET: 20 0 20 40

GEORGE RYDER ROAD MULTI-USE PATH CONSTRUCTION PLANS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	14	45

9/27/2023 L:\2020\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.01_HD(CONST).dwg
Last Saved by JACOB CLEVELAND
Printed by Jacob Cleveland



CURVE TABLE						
CURVE #	LENGTH	DELTA	RADIUS	TANGENT	CURVE START	CURVE END
C1	28.98	5.54	300.00	14.502	N: 2713401.244 E: 1067110.914	N: 2713372.309 E: 1067112.339
C3	35.23	1.63	1236.62	17.617	N: 2713716.883 E: 1067113.816	N: 2713681.678 E: 1067112.470
C4	42.30	3.52	688.00	21.157	N: 2713759.012 E: 1067117.552	N: 2713716.883 E: 1067113.816
C5	64.40	5.36	688.00	32.224	N: 2713822.505 E: 1067128.189	N: 2713759.012 E: 1067117.552
C2	91.74	2.36	2227.55	45.879	N: 2713681.678 E: 1067112.470	N: 2713589.956 E: 1067110.743

NOTES:

1. SPOT GRADE ELEVATIONS ALONG CURB LINE REPRESENT BOTTOM OF CURB ELEVATION UNLESS OTHERWISE NOTED.
2. CONTRACTOR TO CONFIRM THAT RAMP GRADES MEET REQUIREMENTS FOR TRANSITION PANELS PER STANDARD DRAWING E.107.6.9.

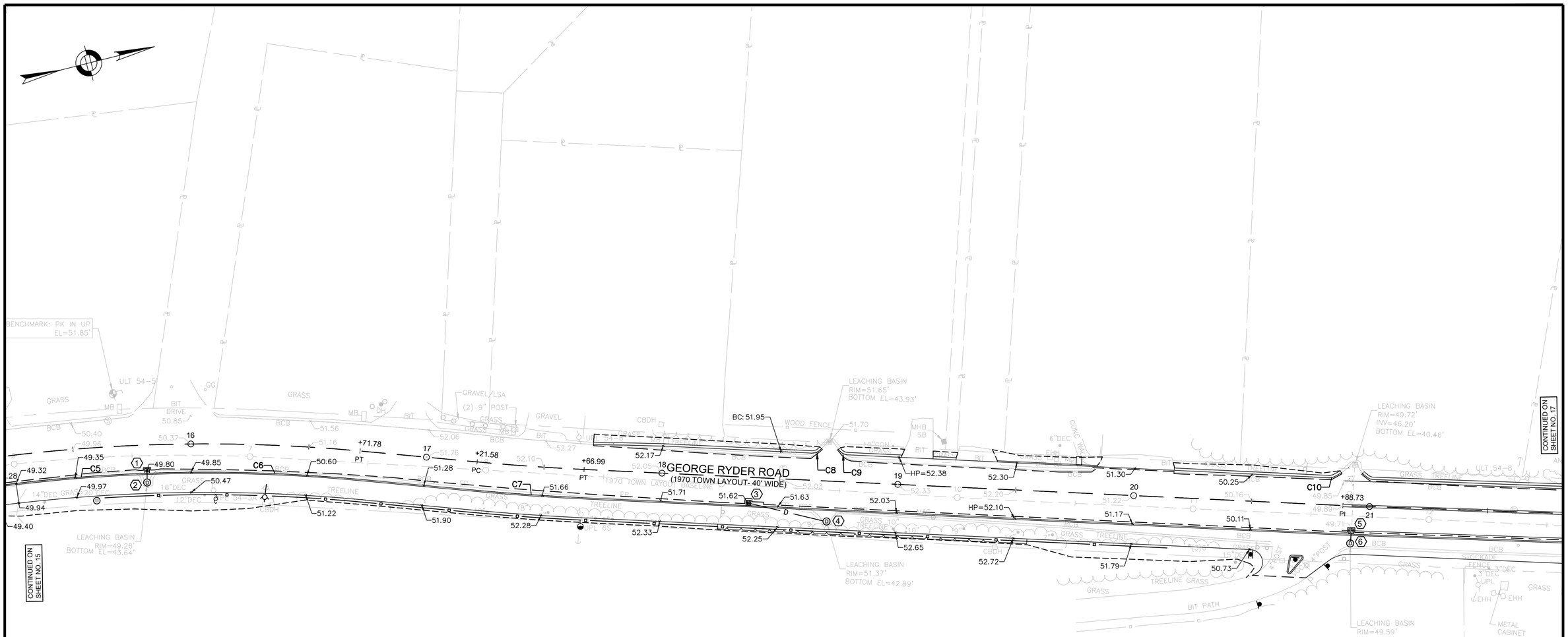
20 0 20 40
SCALE IN FEET

HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

GEORGE RYDER ROAD MULTI-USE PATH
CURB TIE, GRADING & DRAINAGE PLANS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	15	45

9/27/2023 L:\2020\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.02_HD(CTG).dwg
Last Saved by JCleveland
Plotted by: Jacob Cleveland
Printed by: Jacob Cleveland



CURVE TABLE						
CURVE #	LENGTH	DELTA	RADIUS	TANGENT	CURVE START	CURVE END
C5	64.40	5.36	688.00	32.224	N: 2713822.505 E: 1067128.189	N: 2713759.012 E: 1067117.552
C8	3.49	40.01	5.00	1.821	N: 2714094.192 E: 1067187.243	N: 2714097.607 E: 1067187.047
C9	4.24	48.56	5.00	2.255	N: 2714105.950 E: 1067189.012	N: 2714109.053 E: 1067191.709
C10	2.79	32.01	5.00	1.434	N: 2714304.268 E: 1067250.379	N: 2714307.026 E: 1067250.413
C6	85.69	7.14	688.00	42.898	N: 2713904.930 E: 1067151.452	N: 2713822.520 E: 1067128.192
C7	45.96	2.60	1012.00	22.982	N: 2713951.920 E: 1067167.934	N: 2713995.615 E: 1067182.156

DRAINAGE STRUCTURE DATA						
NO.	TYPE	STATION	RIM ELEV.	INV. IN	INV. OUT	REMARKS
1	GI	15+81 11.5' RT	49.80	-	46.34	
2	DMH	15+81 16.0' RT	50.38	46.29 (1)	-	CIT TO DMH (LEACHING BASIN)
3	GI	18+37 11.5' RT	51.62	-	48.70	
4	DMH	18+70 17.2' RT	52.34	48.37 (3)	-	CIT TO DMH (LEACHING BASIN)

NOTES:

1. SPOT GRADE ELEVATIONS ALONG CURB LINE REPRESENT BOTTOM OF CURB ELEVATION UNLESS OTHERWISE NOTED.

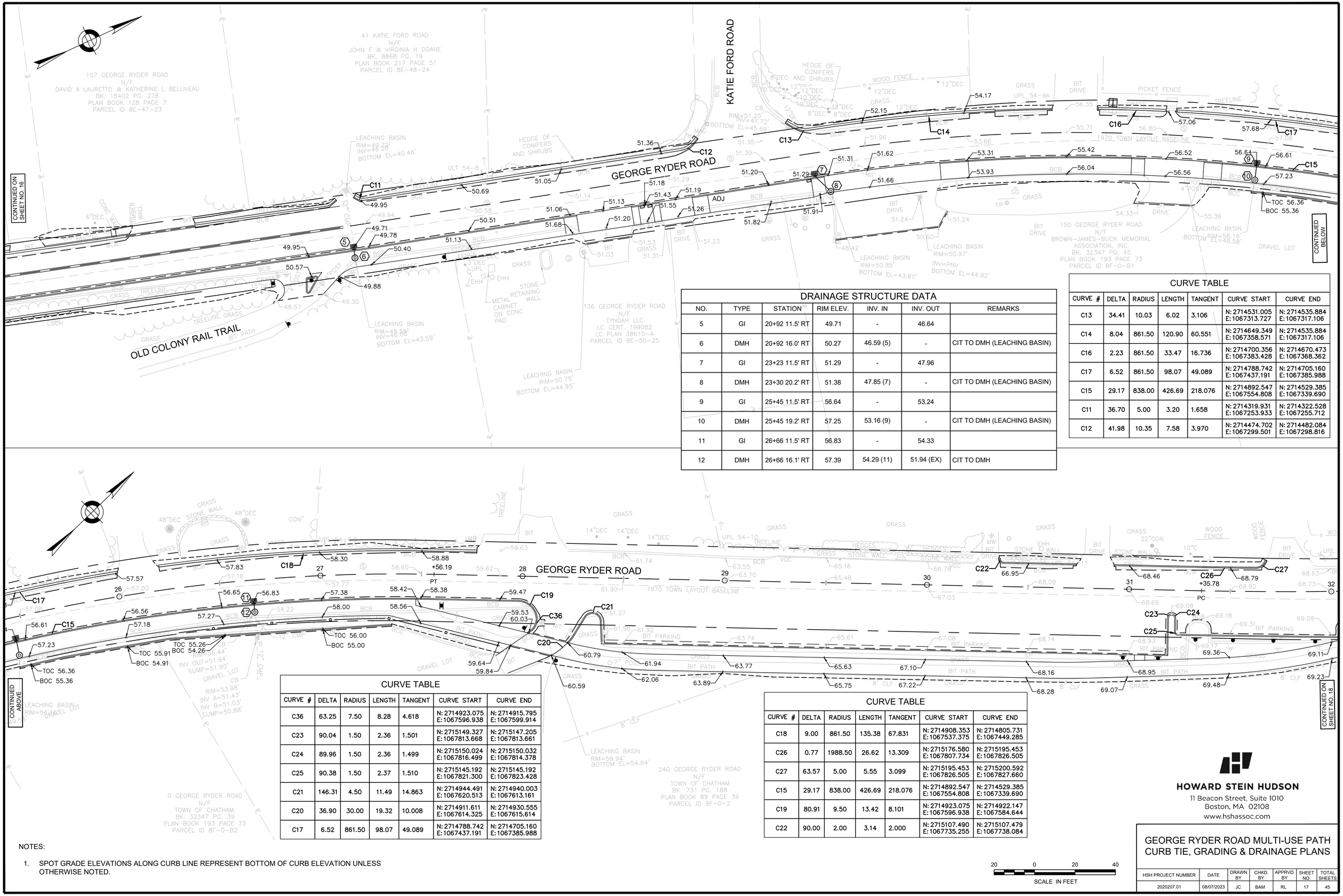
20 0 20 40
SCALE IN FEET

HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

GEORGE RYDER ROAD MULTI-USE PATH
CURB TIE, GRADING & DRAINAGE PLANS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	16	45

9/27/2023 L:\2020\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.02_HD(CTG).dwg
Last Saved by: JCleveland
Plotted by: Jacob Cleveland



DRAINAGE STRUCTURE DATA

NO.	TYPE	STATION	RIM ELEV.	INV. IN	INV. OUT	REMARKS
5	GI	20+92 11.5' RT	49.71	-	46.64	
6	DMH	20+92 16.0' RT	50.27	46.59 (5)	-	CIT TO DMH (LEACHING BASIN)
7	GI	23+23 11.5' RT	51.29	-	47.96	
8	DMH	23+30 20.2' RT	51.38	47.85 (7)	-	CIT TO DMH (LEACHING BASIN)
9	GI	25+45 11.5' RT	56.64	-	53.24	
10	DMH	25+45 19.2' RT	57.25	53.16 (9)	-	CIT TO DMH (LEACHING BASIN)
11	GI	26+66 11.5' RT	56.83	-	54.33	
12	DMH	26+66 16.1' RT	57.39	54.29 (11)	51.94 (EX)	CIT TO DMH

CURVE TABLE

CURVE #	DELTA	RADIUS	LENGTH	TANGENT	CURVE START	CURVE END
C13	34.41	10.03	6.02	3.106	N: 2714531.005 E: 1067313.727	N: 2714535.884 E: 1067317.106
C14	8.04	861.50	120.90	60.551	N: 2714649.349 E: 1067358.571	N: 2714535.884 E: 1067317.106
C16	2.23	861.50	33.47	16.736	N: 2714700.356 E: 1067383.428	N: 2714670.473 E: 1067368.362
C17	6.52	861.50	98.07	49.089	N: 2714788.742 E: 1067437.191	N: 2714705.160 E: 1067385.988
C15	29.17	838.00	426.69	218.076	N: 2714892.547 E: 1067554.808	N: 2714529.385 E: 1067339.690
C11	36.70	5.00	3.20	1.658	N: 2714319.931 E: 1067253.933	N: 2714322.528 E: 1067255.712
C12	41.98	10.35	7.58	3.970	N: 2714474.702 E: 1067299.501	N: 2714482.084 E: 1067298.816

CURVE TABLE

CURVE #	DELTA	RADIUS	LENGTH	TANGENT	CURVE START	CURVE END
C36	63.25	7.50	8.28	4.618	N: 2714923.075 E: 1067596.938	N: 2714915.795 E: 1067599.914
C23	90.04	1.50	2.36	1.501	N: 2715149.327 E: 1067813.668	N: 2715147.205 E: 1067813.661
C24	89.96	1.50	2.36	1.499	N: 2715150.024 E: 1067816.499	N: 2715150.032 E: 1067814.378
C25	90.38	1.50	2.37	1.510	N: 2715145.192 E: 1067821.300	N: 2715145.192 E: 1067823.428
C21	146.31	4.50	11.49	14.863	N: 2714944.491 E: 1067620.513	N: 2714940.003 E: 1067613.161
C20	36.90	30.00	19.32	10.008	N: 2714911.611 E: 1067614.325	N: 2714930.555 E: 1067615.614
C17	6.52	861.50	98.07	49.089	N: 2714788.742 E: 1067437.191	N: 2714705.160 E: 1067385.988

CURVE TABLE

CURVE #	DELTA	RADIUS	LENGTH	TANGENT	CURVE START	CURVE END
C18	9.00	861.50	135.38	67.831	N: 2714908.353 E: 1067537.375	N: 2714805.731 E: 1067449.285
C26	0.77	1988.50	26.62	13.309	N: 2715176.580 E: 1067807.734	N: 2715195.453 E: 1067826.505
C27	63.57	5.00	5.55	3.099	N: 2715195.453 E: 1067826.505	N: 2715200.592 E: 1067827.660
C15	29.17	838.00	426.69	218.076	N: 2714892.547 E: 1067554.808	N: 2714529.385 E: 1067339.690
C19	80.91	9.50	13.42	8.101	N: 2714923.075 E: 1067596.938	N: 2714922.147 E: 1067584.644
C22	90.00	2.00	3.14	2.000	N: 2715107.490 E: 1067735.255	N: 2715107.479 E: 1067738.084

NOTES:

1. SPOT GRADE ELEVATIONS ALONG CURB LINE REPRESENT BOTTOM OF CURB ELEVATION UNLESS OTHERWISE NOTED.

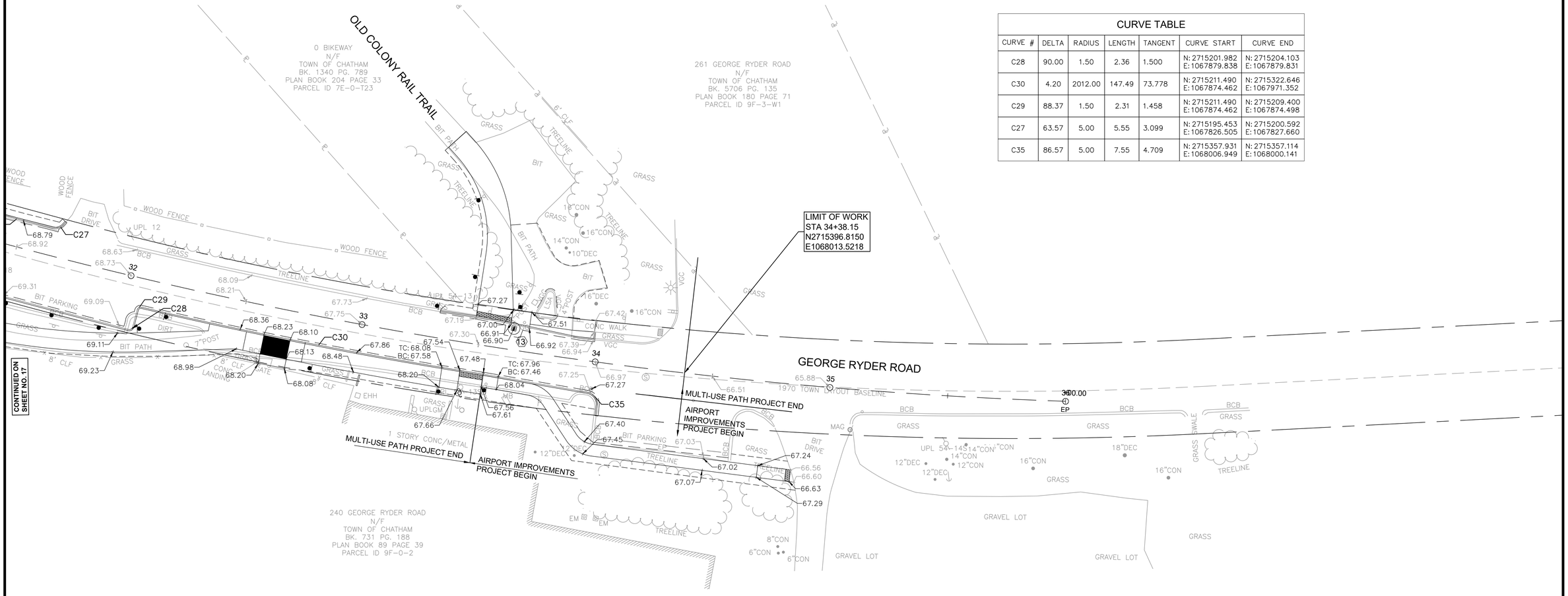
20 0 20 40
SCALE IN FEET

HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

GEORGE RYDER ROAD MULTI-USE PATH CURB TIE, GRADING & DRAINAGE PLANS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	17	45

9/27/2023 L:\2020\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.01_HDi(CTG).dwg
Last Saved By: Jacob Cleveland
Printed by: Jacob Cleveland



CURVE TABLE						
CURVE #	DELTA	RADIUS	LENGTH	TANGENT	CURVE START	CURVE END
C28	90.00	1.50	2.36	1.500	N: 2715201.982 E: 1067879.838	N: 2715204.103 E: 1067879.831
C30	4.20	2012.00	147.49	73.778	N: 2715211.490 E: 1067874.462	N: 2715322.646 E: 1067971.352
C29	88.37	1.50	2.31	1.458	N: 2715211.490 E: 1067874.462	N: 2715209.400 E: 1067874.498
C27	63.57	5.00	5.55	3.099	N: 2715195.453 E: 1067826.505	N: 2715200.592 E: 1067827.660
C35	86.57	5.00	7.55	4.709	N: 2715357.931 E: 1068006.949	N: 2715357.114 E: 1068000.141

NOTES:

1. SPOT GRADE ELEVATIONS ALONG CURB LINE REPRESENT BOTTOM OF CURB ELEVATION UNLESS OTHERWISE NOTED.
2. SEE SHEET 18 FOR CHATHAM MUNICIPAL AIRPORT DRAINAGE DESIGN

DRAINAGE STRUCTURE DATA						
NO.	TYPE	STATION	RIM ELEV.	INV. IN	INV. OUT	REMARKS
13	LB	33+64 10.5' LT	66.90	-	-	LEACHING BASIN

20 0 20 40
SCALE IN FEET

HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

GEORGE RYDER ROAD MULTI-USE PATH CURB TIE, GRADING & DRAINAGE PLANS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	18	45

9/27/2023 L:\2020\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.01_HD(CTG).dwg
Last Saved By: JMEYER
Printed by: Jacob Cleveland

OLD COLONY RAIL TRAIL

0 BIKEWAY
N/F
TOWN OF CHATHAM
BK. 1340 PG. 789
PLAN BOOK 204 PAGE 33
PARCEL ID 7E-0-T23

261 GEORGE RYDER ROAD
N/F
TOWN OF CHATHAM
BK. 5706 PG. 135
PLAN BOOK 180 PAGE 71
PARCEL ID 9F-3-W1

240 GEORGE RYDER ROAD
N/F
TOWN OF CHATHAM
BK. 731 PG. 188
PLAN BOOK 89 PAGE 39
PARCEL ID 9F-0-2

GEORGE RYDER ROAD
1970 TOWN LAYOUT BASELINE

RET HYDRANT

ADJ WG

55 LF-6" PVC
S=0.02

CLEANOUT
INV=65.10

DOWNSPOUT
INV=65.25
OVERFLOW INV=68.50
(TYP-SEE DETAIL ON SHEET 20)

SUBSURFACE INFILTRATION SYSTEM
(SEE DETAIL)
12" PERF PVC PIPE
TOP OF STONE=66.75
TOP OF PIPE=65.75
BOTTOM OF PIPE=64.75
BOTTOM OF STONE=63.75
INV IN=64.00

39 LF-6" PVC
S=0.03

9
N: 2715426.085'
E: 1068017.129'
EL: 66.390'
X-CUT

SMH
RIM=66.76'
INV OUT=69.01'

SMH
RIM=67.72'
INV A=62.54'
INV B=64.44'

NO PARKING EITHER SIDE ON OR OF ROAD SURFACE $50.00 FINE

BIKE ROUTE
STOP GEORGE RYDER RD

BIKE ROUTE
<— STATE LAW
STOP FOR PEDESTRIANS
IN CROSSWALK
$100 FINE

WOOD TRAIL BULLETIN BOARD

NO MOTOR VEHICLES

STOP
DO NOT ENTER
POLICE ONLY BCB

WOOD SIGN POST
NO SIGN ATTACHED

GRAVEL LOT

1 STORY CONC/METAL

CHATHAM AIRPORT

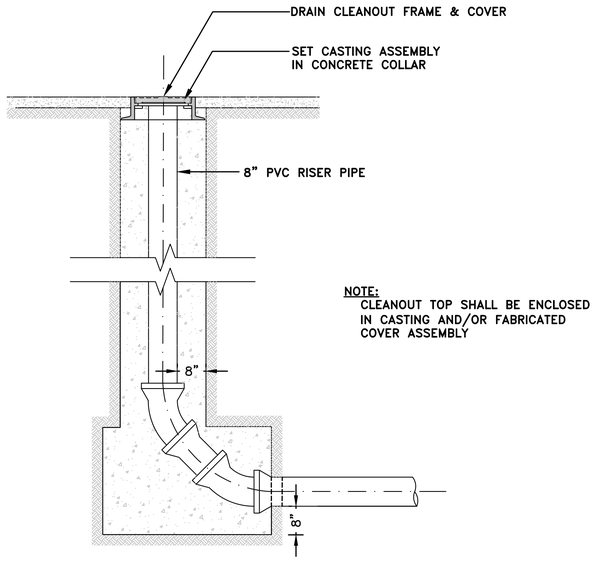
HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

SCALE IN FEET
20 0 20 40

GEORGE RYDER ROAD
AIRPORT IMPROVEMENTS
UTILITY PLANS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	19	45

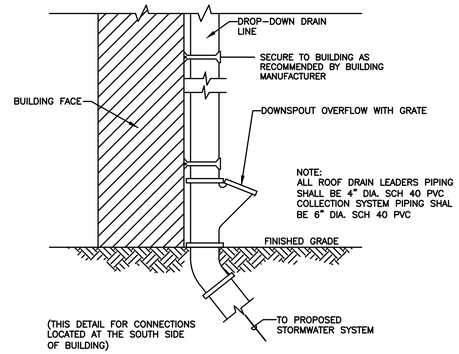
9/27/2023 L:\2020\2020207.03\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.03_HD(UT).dwg
Last Saved by: JBARNES
Printed by: Jacob Cleveland



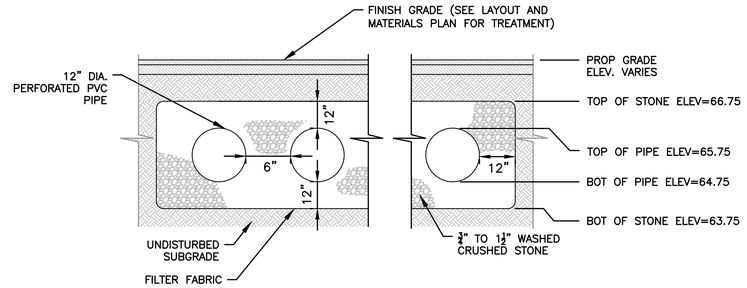
NOTE:
CLEANOUT TOP SHALL BE ENCLOSED IN CASTING AND/OR FABRICATED COVER ASSEMBLY

END OF LINE CLEANOUT

DRAIN CLEANOUT
NOT TO SCALE



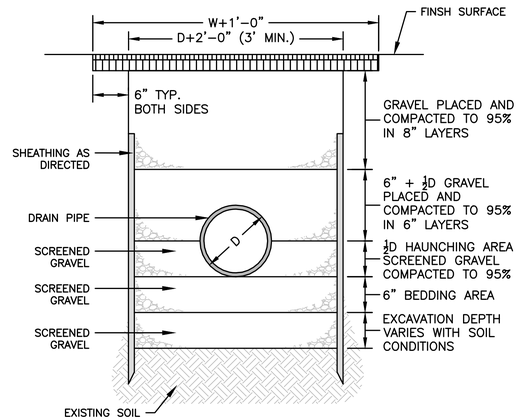
ROOF DRAIN LINE AND DROP-DOWN LEADER JUNCTION DETAIL
NOT TO SCALE



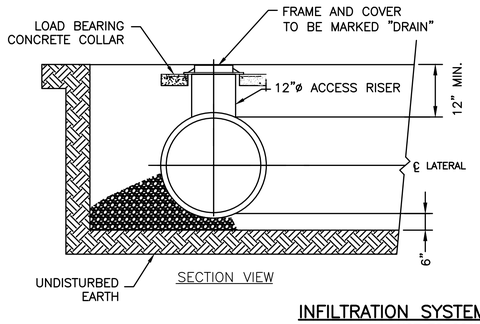
SECTION VIEW

NOTE: SYSTEM CONSISTS OF MIN. 20 LF OF 12" PERF PVC PIPE

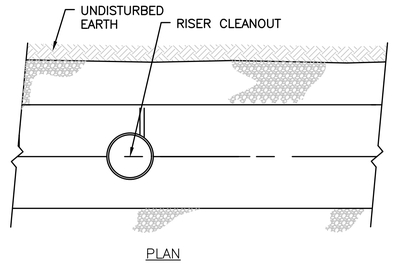
INFILTRATION SYSTEM
NOT TO SCALE



TRENCH DETAIL – DRAIN
NOT TO SCALE



SECTION VIEW



PLAN

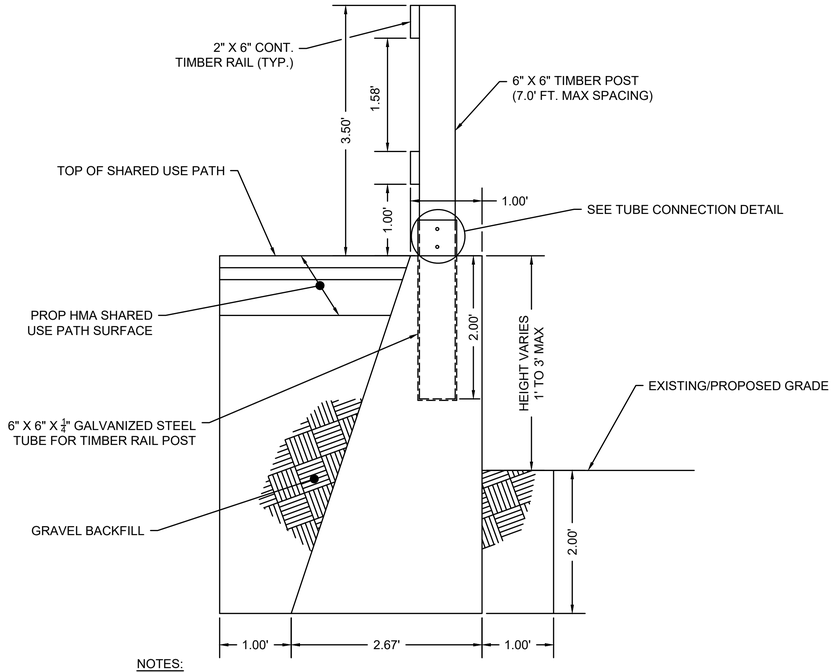
INFILTRATION SYSTEM CLEANOUT
NOT TO SCALE

HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

GEORGE RYDER ROAD
AIRPORT IMPROVEMENTS
UTILITY DETAILS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.03	06/29/2023	JBC	JD	RL	20	45

9/27/2023 L:\2020\2020207.03\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.03_HSUT DET1.dwg
Last Saved by JCleveland
Printed by: Jacob Cleveland



NOTES:

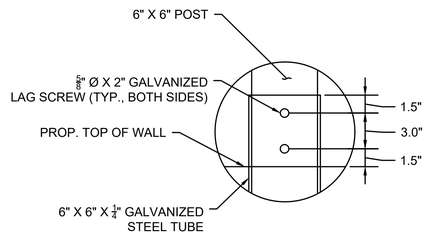
4000 PSI, 1.5 IN., 565 CEMENT CONCRETE (ITEM 901.) TO BE USED FOR THE WALL.

EXPANSION JOINTS TO BE PLACED 90' ON CENTER MAXIMUM WITH INTERMEDIATE CONSTRUCTION JOINTS PLACED AT 30' ON CENTER MAXIMUM.

TIMBER POSTS SHALL NOT BE CAST DIRECTLY WITHIN CONCRETE WALL. POSTS TO BE INSTALLED IN GALVANIZED STEEL TUBES AFTER CONCRETE HAS CURED.

LOW RETAINING WALL DETAIL

SCALE: 1" = 1'-0"



TUBE CONNECTION DETAIL

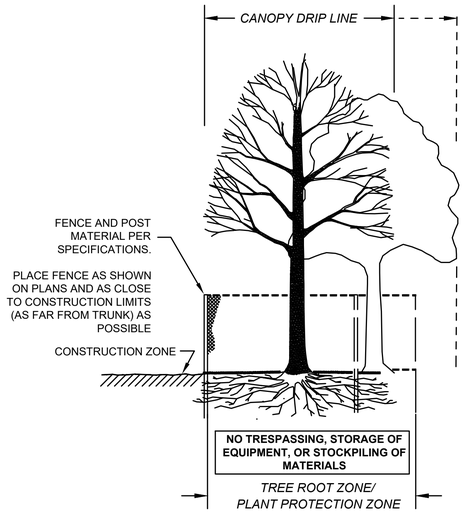
SCALE: N.T.S.

HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

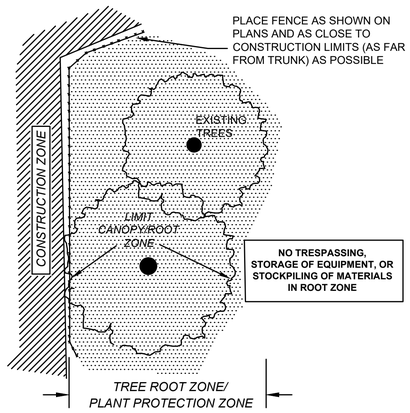
GEORGE RYDER ROAD MULTI-USE PATH
CONSTRUCTION DETAILS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	21	45

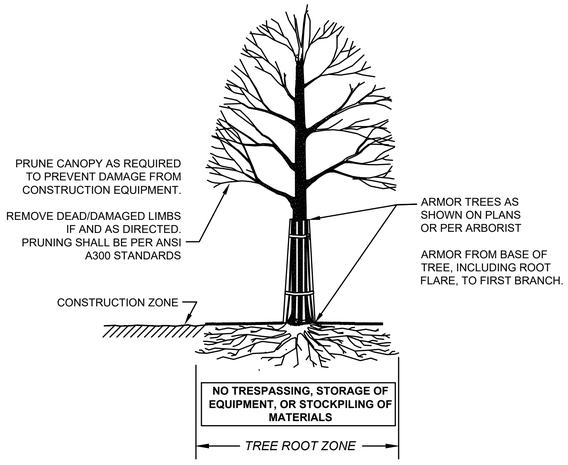
9/27/2023 L:\2020\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.02_HD(CONST DET).dwg
Last Saved by: JCleveland
Plotted by: Jacob Cleveland



SECTION - FENCE PROTECTION OF ROOT ZONE



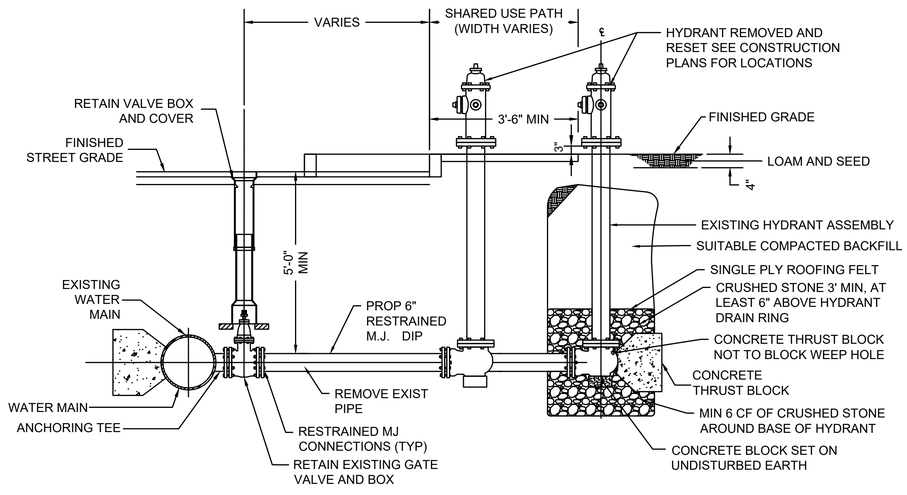
PLAN VIEW - FENCE PROTECTION OF ROOT ZONE



SECTION - TRUNK ARMORING & PRUNING

TREE PROTECTION DETAILS

NOT TO SCALE



DETAIL FOR HYDRANT REMOVED AND RESET

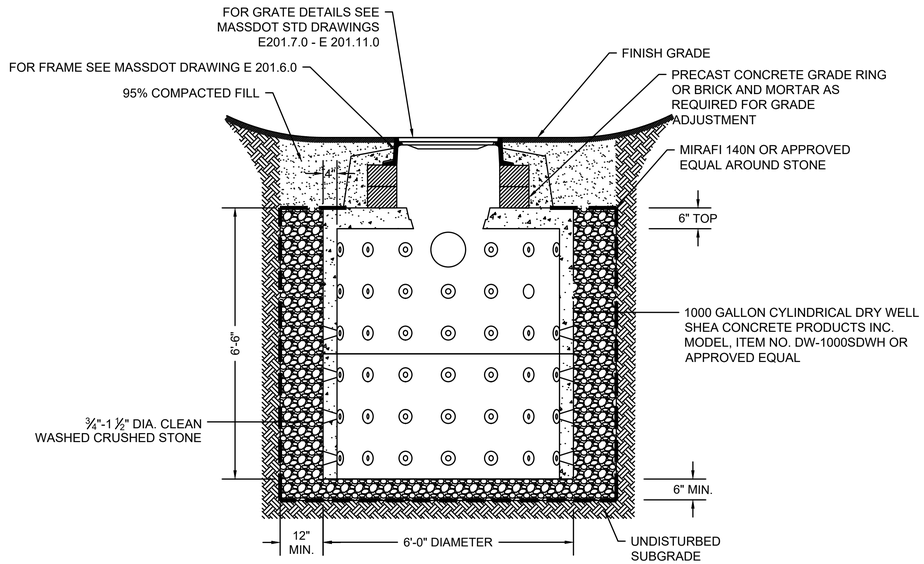
NOT TO SCALE

HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

GEORGE RYDER ROAD MULTI-USE PATH
CONSTRUCTION DETAILS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD BY	APPRVD BY	SHEET NO	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	22	45

8/27/2023 L:\2020\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.02_HD(CONST DET).dwg
Last Saved By: BMOSS
Printed by: Jacob Cleveland



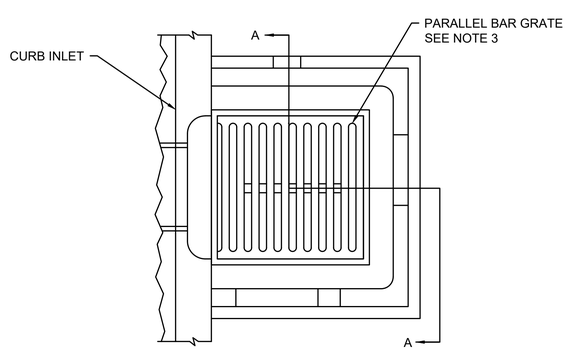
SECTION VIEW

NOTES:

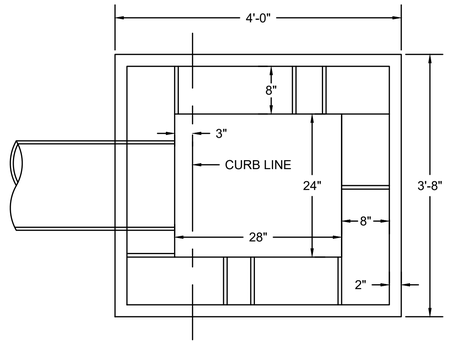
1. RATED FOR H-20 LOADING.
2. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.

LEACHING BASIN

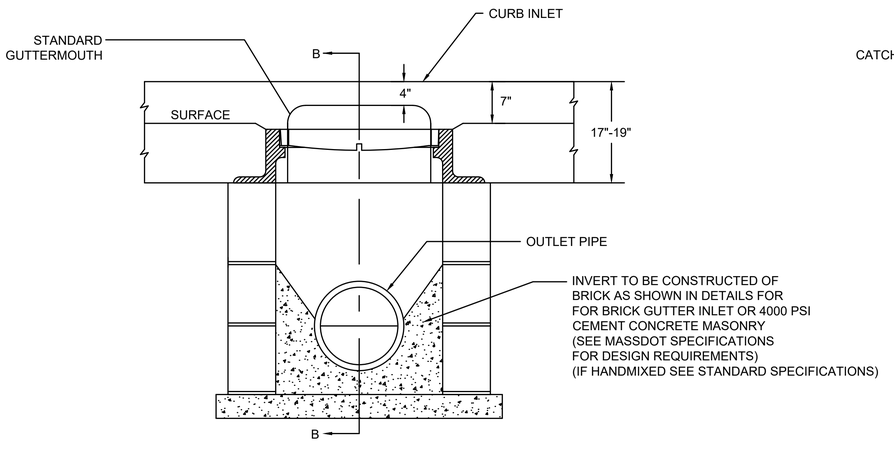
NOT TO SCALE



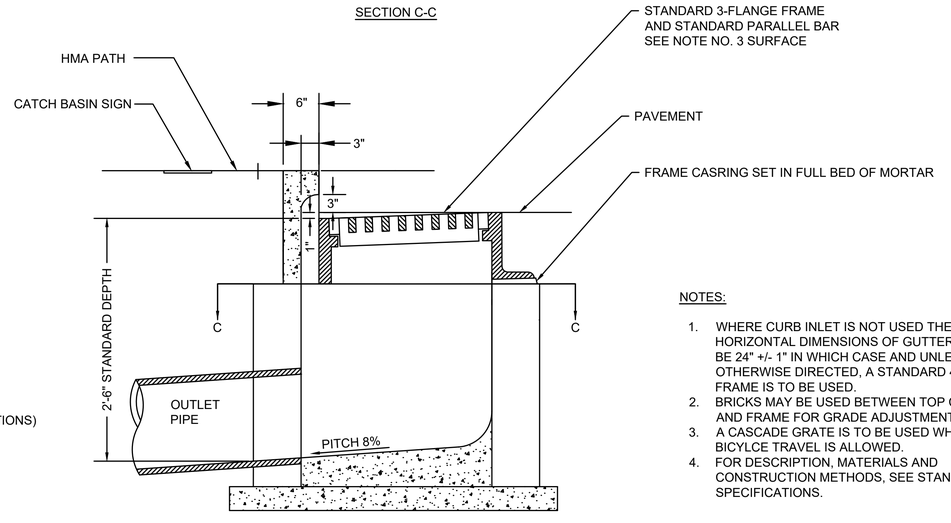
PLAN VIEW



SECTION C-C



SECTION A-A



SECTION B-B

NOTES:

1. WHERE CURB INLET IS NOT USED THE INSIDE HORIZONTAL DIMENSIONS OF GUTTER INLET TO BE 24" +/- 1" IN WHICH CASE AND UNLESS OTHERWISE DIRECTED, A STANDARD 4-FLANGE FRAME IS TO BE USED.
2. BRICKS MAY BE USED BETWEEN TOP COURSE AND FRAME FOR GRADE ADJUSTMENT.
3. A CASCADE GRATE IS TO BE USED WHERE BICYLCE TRAVEL IS ALLOWED.
4. FOR DESCRIPTION, MATERIALS AND CONSTRUCTION METHODS, SEE STANDARD SPECIFICATIONS.

GUTTER INLET

NOT TO SCALE

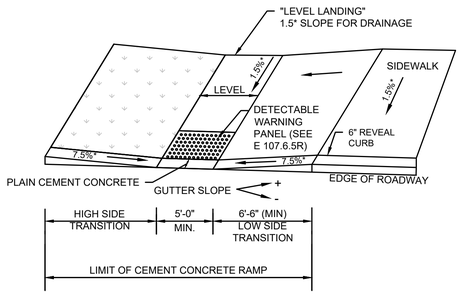
HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

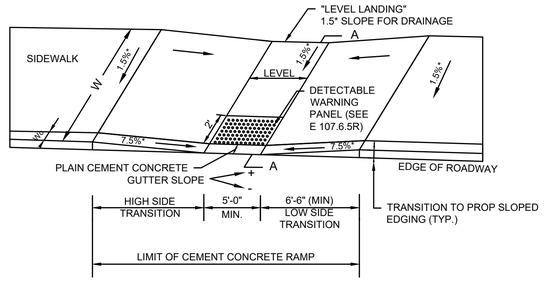
GEORGE RYDER ROAD MULTI-USE PATH
CONSTRUCTION DETAILS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	23	45

9/27/2023 L:\2020\7\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.02_HD(CONST DET).dwg
Last Saved By: JACOBSCLEVELAND
Printed by: Jacob Cleveland

PEDESTRIAN CURB RAMP											
RAMP #	ROADWAY ELEV. AT RAMP ℄	RAMP REFERENCE POINT			LENGTH OF PRIMARY RAMP	WIDTH OF SIDEWALK	WIDTH OF RAMP ENTRANCE	DEPTH OF LEVEL LANDING	TRANSITION		GUTTER SLOPE
		STREET	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	
1	67.5	GEORGE RYDER RD	33+48.97	11.5' RT	-	9.0'	10.0'	-	6.5'	7.7'	-0.50%
2	67.1	GEORGE RYDER RD	33+54.42	11.1' LT	-	5.5'	15.0'	-	-	7.7'	-0.50%

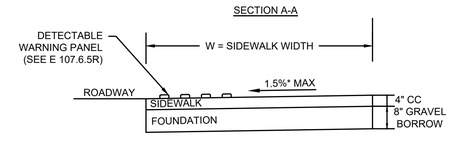




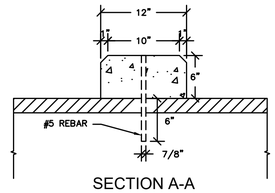
LEGEND:

HSL = HIGH SIDE TRANSITION (SEE E 107.9.0R)
W = SIDEWALK WIDTH
Wc = CURB WIDTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%

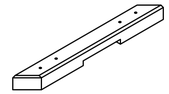
USEABLE SIDEWALK WIDTH PER AAB = W-WC



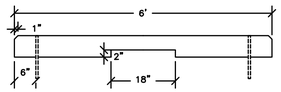
PEDESTRIAN CURB RAMP WITH DETECTABLE WARNING PANEL
NOT TO SCALE



SECTION A-A



ISOMETRIC

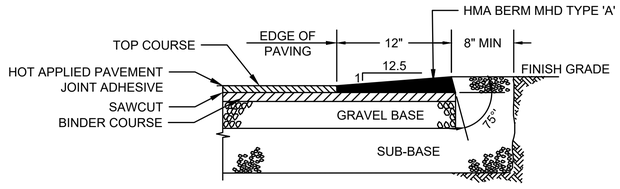


TYPICAL SECTION ELEVATION

PLAN

NOTES:
1. CONCRETE TO BE 5000 PSI, SULFATE RESISTANT WITH FIBER REINFORCEMENT.
2. UNITS TO BE SECURED USING #5 CORROSION RESISTANT REBAR HAND DRIVEN TO DEPTHS INDICATED.

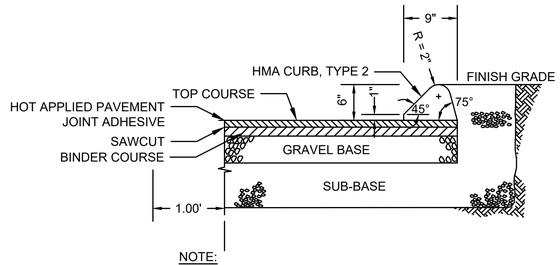
12" PRECAST CONCRETE WHEEL STOP
NOT TO SCALE



NOTE:
DETAIL DEVELOPED FROM MA HIGHWAY CONSTRUCTION STANDARDS DRAWING NUMBER 106.1.0R "BITUMINOUS CONCRETE BERM - TYPE 'A'

HOT APPLIED PAVEMENT JOINT ADHESIVE SHALL BE APPLIED OVER ALL SAWCUT JOINTS BETWEEN EXISTING PAVEMENT AND NEW HMA MATERIAL INCLUDED IN HMA CURB CONSTRUCTION. JOINT ADHESIVE SHALL BE IN ACCORDANCE WITH SECTION 450 OF THE STANDARD SPECIFICATIONS, AND SHALL BE PAID UNDER ITEM 453 HMA JOINT ADHESIVE.

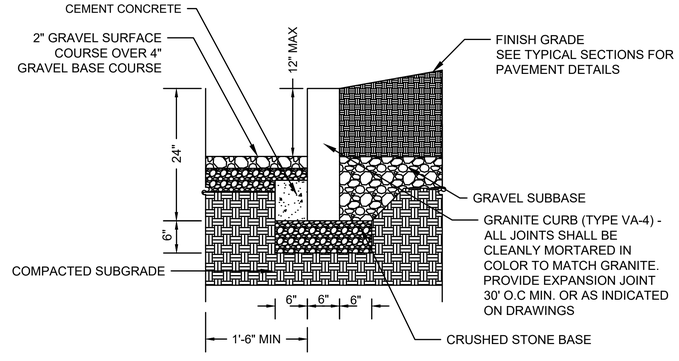
SLOPED HMA BERM/CURB
NOT TO SCALE



NOTE:
DETAIL DEVELOPED FROM MA HIGHWAY CONSTRUCTION STANDARDS DRAWING NUMBER E 106.2.0 "HOT MIX ASPHALT CURBS, TYPE 2"

HOT APPLIED PAVEMENT JOINT ADHESIVE SHALL BE APPLIED OVER ALL SAWCUT JOINTS BETWEEN EXISTING PAVEMENT AND NEW HMA MATERIAL INCLUDED IN HMA CURB CONSTRUCTION. JOINT ADHESIVE SHALL BE IN ACCORDANCE WITH SECTION 450 OF THE STANDARD SPECIFICATIONS, AND SHALL BE PAID UNDER ITEM 453 HMA JOINT ADHESIVE.

HMA CURB, TYPE 2
NOT TO SCALE



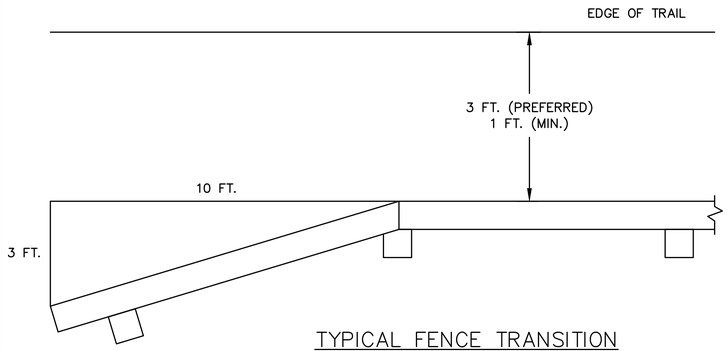
12" REVEAL VERTICAL GRANITE CURB
NOT TO SCALE

HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

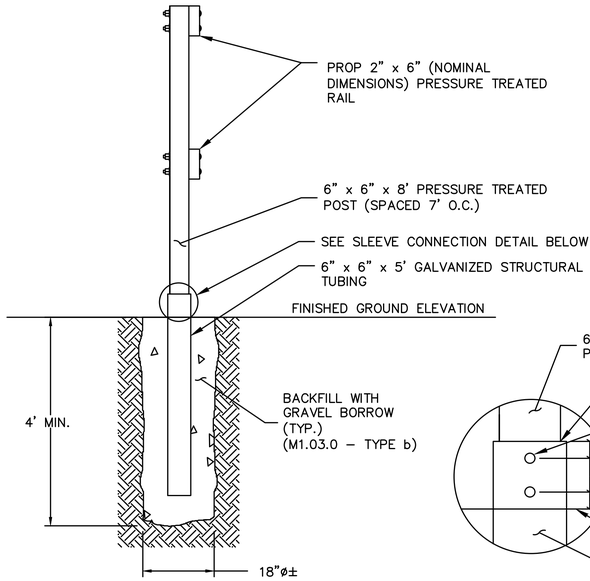
GEORGE RYDER ROAD MULTI-USE PATH CONSTRUCTION DETAILS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD BY	APPRVD BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	24	45

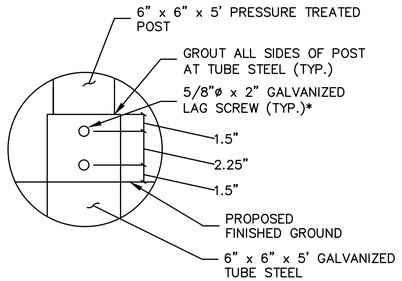
9/27/2023 L:\2020\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.01_HD(CONST DET).dwg
Last Saved By: BMYERS
Printed by: Jacob Cleveland



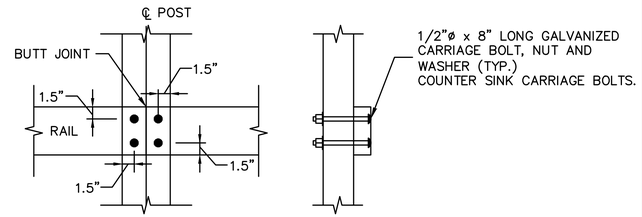
TYPICAL FENCE TRANSITION
AT FENCE APROACHES
N.T.S.



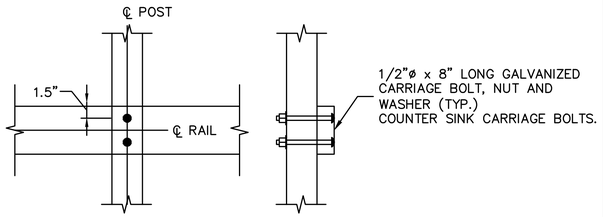
TIMBER RAIL FENCE
TUBE STEEL SLEEVE
N.T.S.
FOR USE IN SATURATED LOCATIONS



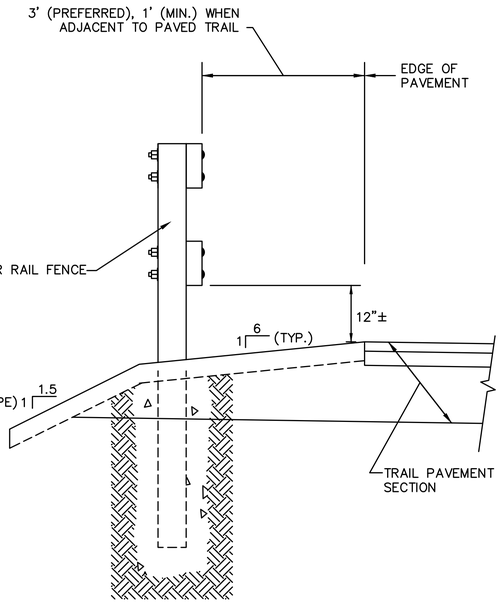
*SAME SCREWS OPPOSITE SIDE.
SLEEVE CONNECTION DETAIL
N.T.S.



ELEVATION SECTION
BUTT JOINT CONNECTION
N.T.S.



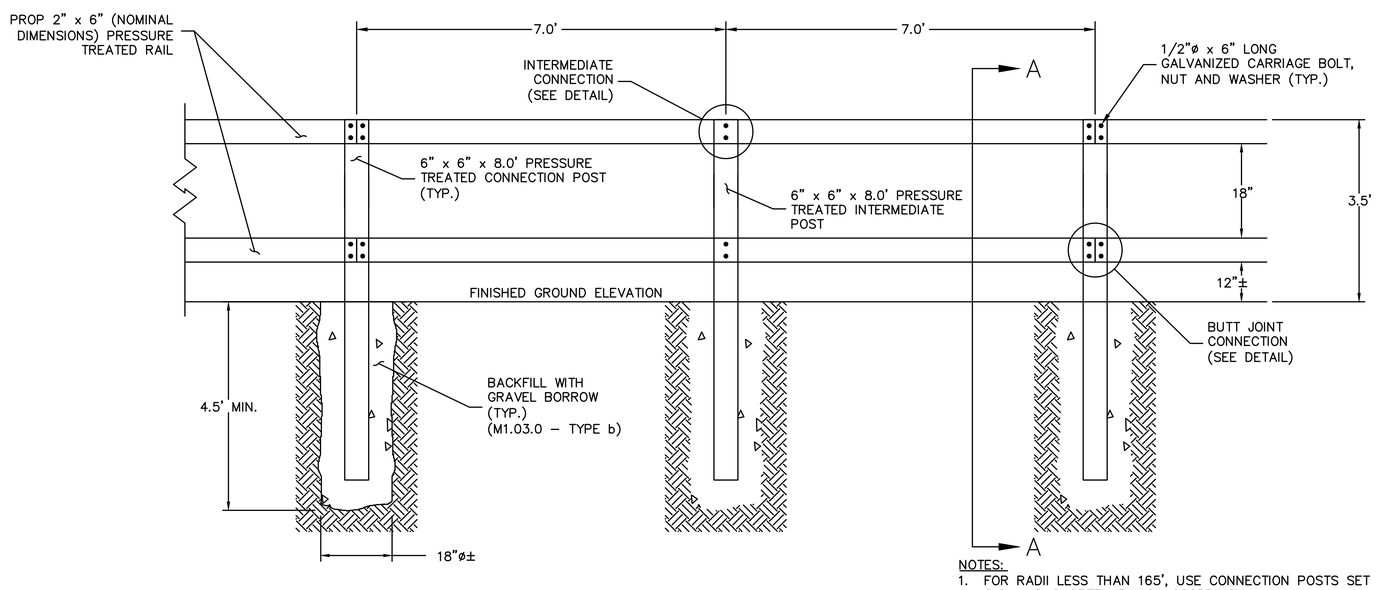
ELEVATION SECTION
INTERMEDIATE CONNECTION
N.T.S.



SECTION A–A

SUGGESTED TIMBER RAIL FENCE CONSTRUCTION SEQUENCE

1. AUGER OR DIG POST HOLE TO REQUIRED DIMENSIONS.
2. IF GROUND IS SATURATED, USE TUBE STEEL SLEEVE. SEE DETAIL ON THIS SHEET.
3. BACKFILL BOTTOM 6"± OF HOLE WITH GRAVEL AND COMPACT THOROUGHLY.
4. SET POST AND HOLD PLUMB DURING BACKFILLING.
5. BACKFILL WITH GRAVEL IN 12" LIFTS. COMPACT EACH LIFT THOROUGHLY.
6. CLAMP RAILS TO POSTS AND FIELD DRILL BOLT HOLES.
7. SET BOLTS, WASHERS AND NUTS.
8. IF CCA PRESSURE TREATED LUMBER IS NOT READILY AVAILABLE AT THE TIME OF CONSTRUCTION OR IT IS DEEMED ENVIRONMENTALLY UNACCEPTABLE FOR COMMERCIAL USES BY THE EPA, USE ACQ PRESSURE TREATED LUMBER.



TIMBER RAIL FENCE ELEVATION
N.T.S.
SEE PLANS FOR LOCATIONS

NOTES:
1. FOR RADII LESS THAN 165', USE CONNECTION POSTS SET AT 7.0' O.C. AND SHORTEN RAILS ACCORDINGLY.

HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

GEORGE RYDER ROAD MULTI-USE PATH CONSTRUCTION DETAILS

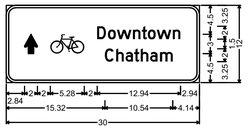
HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	24	45

9/27/2023 L:\2020\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.01_HD(CONST DET).dwg
Last Saved By: JACOBC
Printed by: Jacob Cleveland

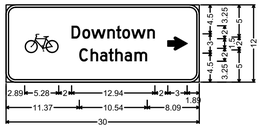
TRAFFIC SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN WIDTH	SIZE OF SIGN HEIGHT	TEXT	TEXT DIMENSIONS (INCHES) LETTER HEIGHT	TEXT DIMENSIONS (INCHES) VERTICAL SPACING	TEXT DIMENSIONS (INCHES) ARROW RTE. MKR.	NUMBER OF SIGNS REQUIRED	COLOR BACK-GROUND	COLOR LEGEND	COLOR BORDER	POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	TOTAL AREA (S.F.)
D1-1	30"	12"	Downtown Chatham	(1)	(1)	(1)	1	GREEN	WHITE	WHITE	P5 (1)	2.50	2.50
D1-1R	30"	12"	Downtown Chatham				1	GREEN	WHITE	WHITE	P5 (1)	2.50	2.50
D1-2A	36"	24"	West Chatham Business District Hardings Beach				1	GREEN	WHITE	WHITE	MOUNT W/D1-1 (1)	6.00	6.00
D1-3A	42"	24"	Downtown Chatham West Chatham Business District Hardings Beach				1	GREEN	WHITE	WHITE	P5 (1)	7.00	7.00
D1-3B	42"	24"	Downtown Chatham West Chatham Business District Hardings Beach				1	GREEN	WHITE	WHITE	P5 (1)	7.00	7.00
D1-3C	42"	24"	West Chatham Business District Hardings Beach Chatham Municipal Airport				1	GREEN	WHITE	WHITE	P5 (1)	7.00	7.00
D11-1	24"	18"	BIKE ROUTE	(2)	(2)	(2)	1	GREEN	WHITE	WHITE	P5 (1)	3.00	3.00
M6-6	21"	15"					1	GREEN	WHITE	WHITE	MOUNT W/D11-1 (1)	2.19	2.19
M6-6L	21"	15"					1	GREEN	WHITE	WHITE	MOUNT W/D11-1 (1)	2.19	2.19
R5-3	24"	24"	NO MOTOR VEHICLES				2	WHITE	BLACK	BLACK	P5 (2)	4.00	8.00
R7-8	12"	18"	RESERVED PARKING				2	WHITE	BLUE/ GREEN	GREEN	P5 (2)	1.50	3.00
R9-6	9"	18"	YIELD TO PEDS				2	WHITE	BLACK	BLACK	P5 (1)/ MOUNT W/D1-1 (1)	1.13	2.25
SP-1	12"	18"	2 HOUR PARKING $50.00 FINE	(1)	(1)	(1)	1	WHITE	GREEN	GREEN	P5 (1)	1.50	1.50
W11-15	30"	30"		(2)	(2)	(2)	5	FLUORESCENT YELLOW GREEN	BLACK	BLACK	P5 (3)/ MOUNT W/ W11-15 (2)	6.25	31.25
W16-7PL	24"	12"					2	FLUORESCENT YELLOW GREEN	BLACK	BLACK	MOUNT W/ W11-15 (2)	2.00	4.00
W16-7PR	24"	12"					2	FLUORESCENT YELLOW GREEN	BLACK	BLACK	MOUNT W/ W11-15 (2)	2.00	4.00
W16-9P	24"	12"	AHEAD				1	FLOURESCENT YELLOW GREEN	BLACK	BLACK	MOUNT W/ W11-15 (1)	2.00	2.00

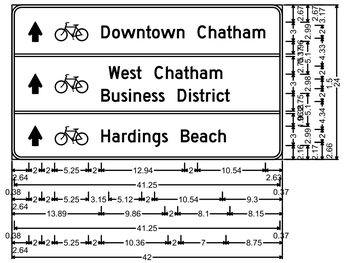
(1) SEE DETAILS TO RIGHT.
(2) SEE MUTCD 2009 EDITION, 2004/2012 STD. HWY. SIGNS AND SECTION M9.30.0. TYPE III OF THE MASSDOT STANDARD SPECIFICATION FOR TEXT DIMENSIONS AND COLOR.



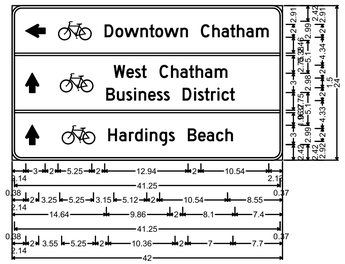
D1-1;
1.50" Radius, 0.38" Border, White on, Green;
Standard Arrow Custom 3.00" X 2.00" 90°;
Symbol RG025; "Downtown", D 2K;
"Chatham", D 2K;



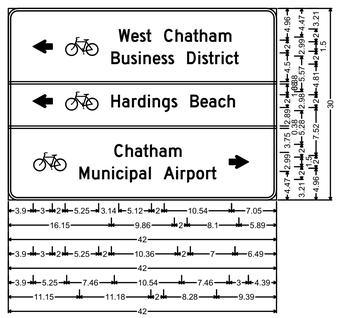
D1-1R;
1.50" Radius, 0.38" Border, White on, Green;
Symbol RG025; "Downtown", D 2K;
"Chatham", D 2K;
Standard Arrow Custom 3.00" X 2.00" 0°;



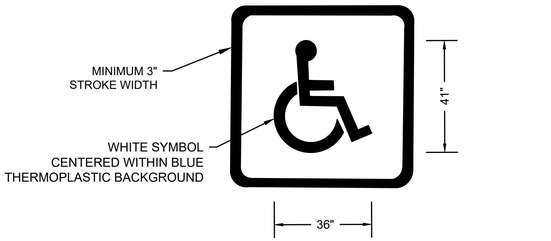
D1-3a;
1.50" Radius, 0.38" Border, White on, Green;
Standard Arrow Custom 3.00" X 2.00" 90°; Symbol RG025;
"Downtown Chatham", D 2K;
Standard Arrow Custom 3.00" X 2.00" 90°; Symbol RG025;
"West Chatham", D 2K; "Business District", D 2K;
Standard Arrow Custom 3.00" X 2.00" 90°; Symbol RG025;
"Hardings Beach", D 2K;



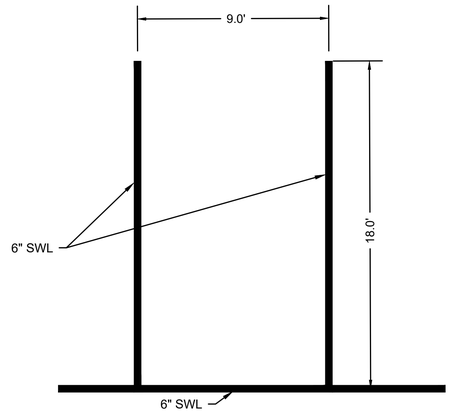
D1-3b;
1.50" Radius, 0.38" Border, White on, Green;
Standard Arrow Custom 3.00" X 2.00" 180°; Symbol RG025;
"Downtown Chatham", D 2K;
Standard Arrow Custom 3.00" X 2.00" 90°; Symbol RG025;
"West Chatham", D 2K; "Business District", D 2K;
Standard Arrow Custom 3.00" X 2.00" 90°; Symbol RG025;
"Hardings Beach", D 2K;



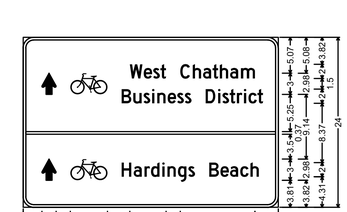
D1-3c;
1.50" Radius, 0.38" Border, White on, Green;
Standard Arrow Custom 3.00" X 2.00" 180°; Symbol RG025;
"West Chatham", D 2K; "Business District", D 2K;
Standard Arrow Custom 3.00" X 2.00" 180°; Symbol RG025;
"Hardings Beach", D 2K; Symbol RG025; "Chatham", D 2K;
"Municipal Airport", D 2K; Standard Arrow Custom 3.00" X 2.00" 0°;



ACCESSIBLE PARKING SPACE MARKING
NOT TO SCALE



STANDARD PARKING SPACE
NOT TO SCALE



D1-2a;
1.50" Radius, 0.38" Border, White on, Green;
Standard Arrow Custom 3.00" X 2.00" 90°;
Symbol RG025; "West Chatham", D 2K;
"Business District", D 2K;
Standard Arrow Custom 3.00" X 2.00" 90°;
Symbol RG025; "Hardings Beach", D 2K;

SP-1;
1.5" Radius, 0.4" Border, 0.4" Indent, Green on, White;
"2", C 2K specified length;
"HOUR", C 2K specified length;
"PARKING", C 2K specified length;
"$50.00 FINE", C 2K 15% spacing;

HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

20 0 20 40
SCALE IN FEET

GEORGE RYDER ROAD MULTI-USE PATH CONSTRUCTION DETAILS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	26	45

9/27/2023 L:\2020\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.01_HD(CONSET DET).dwg
Last Saved By: Jacob Cleveland
Printed by: Jacob Cleveland

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. ALL EXISTING PAVEMENT MARKINGS WHICH CONFLICT WITH THE PROPOSED TEMPORARY MARKINGS SHALL BE REMOVED.
4. TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
5. 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.
6. SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, CHANNELIZING DEVICES, BARRIERS, AND CRASH ATTENUATORS MUST PASS THE CRITERIA SET FORTH IN "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH).
7. THE FIRST TEN REFLECTORIZED DRUMS IN A LANE MERGE OR LANE TAPER SHALL BE MOUNTED WITH SEQUENTIAL FLASHING LIGHTS.
8. DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
9. MINIMUM LANE WIDTH IS TO BE 11 FEET (OR EXISTING) UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS OR MEDIAN BARRIER.
10. ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.
11. VEHICLE ACCESS SHALL BE MAINTAINED BY LIMITING DURATIONS AND IMPACTS AS BEST AS PRACTICAL WHERE DRIVEWAYS ARE PROPOSED TO REMAIN ACCESSIBLE DURING THE STAGE OF CONSTRUCTION.
12. REFER TO SHEET 2 GENERAL NOTES FOR ADDITIONAL NOTES REGARDING TEMPORARY TRAFFIC CONTROL PLANS.

SUGGESTED ADVANCE WARNING SIGN MINIMUM SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS		
	A	B	C
LOCAL OR LOW VOLUME ROADWAY	350 FEET	350 FEET	350 FEET
MOST OTHER ROADWAYS	500 FEET	500 FEET	500 FEET
EXPRESSWAY/FREEWAY	1,000 FEET	1,500 FEET	2,640 FEET

BASED ON: TABLE 6C-1 MUTCD LATEST EDITION

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

DISTANCES ARE SHOWN IN FEET. 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.

TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES

TYPE OF TAPER	TAPER LENGTH
MERGING TAPER	AT LEAST L
SHIFTING TAPER	AT LEAST 0.5L
SHOULDER TAPER	AT LEAST 0.33L
ONE-LANE, TWO-WAY TRAFFIC TAPER	50 FEET MINIMUM, 100 FEET MAXIMUM
DOWNSTREAM TAPER	50 FEET MINIMUM, 100 FEET MAXIMUM

NOTE: USE TABLE 6C-4 SHOWN BELOW TO CALCULATE L
SOURCE: TABLE 6C-3 2009 MUTCD

STOPPING SIGHT DISTANCE AS A FUNCTION OF SPEED

POSTED SPEED (MPH)	LENGTH (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

SOURCE: TABLE 6C-2 2009 MUTCD

FORMULAS FOR DETERMINING TAPER LENGTHS

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

SOURCE: TABLE 6C-4 2009 MUTCD

WHERE: L = TAPER LENGTH IN FEET

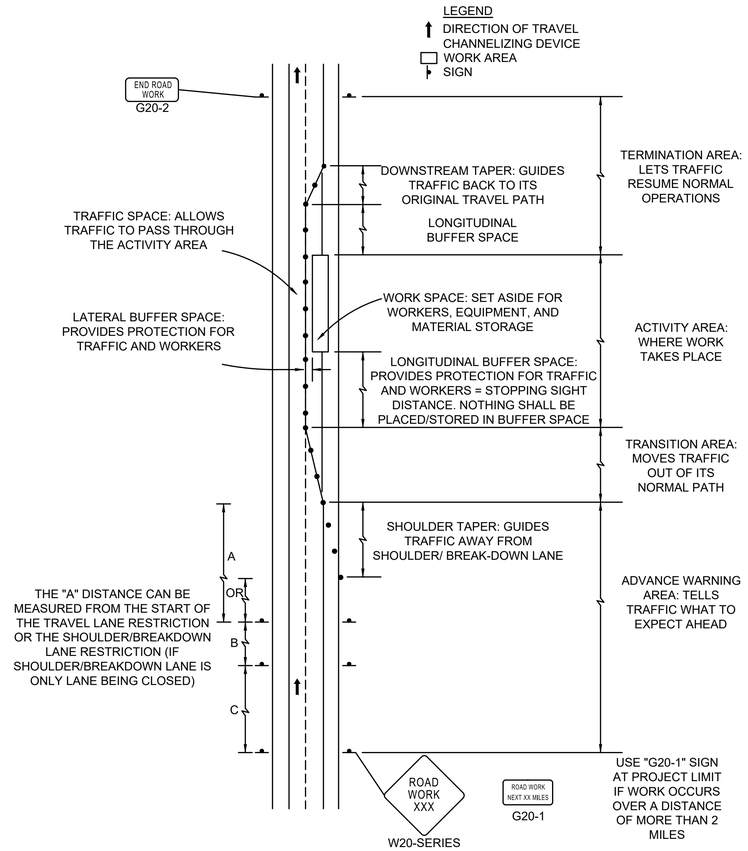
W = WIDTH OF OFFSET IN FEET

S = POSTED SPEED LIMIT, OR OFF-PEAK 85TH-PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED IN MPH

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

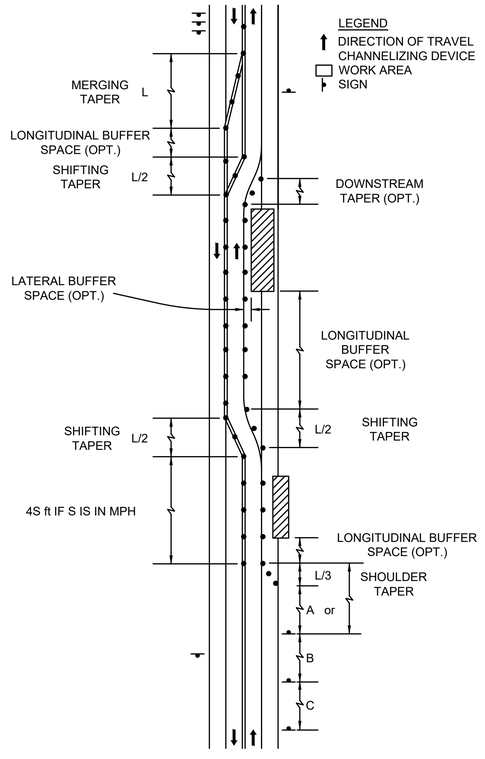
THE DISTANCES IN THE ABOVE CHART REPRESENT THE MINIMAL VALUES FOR BUFFER SPACING.

WORKZONE DISTANCES



COMPONENT PARTS OF A TEMPORARY TRAFFIC CONTROL (TTC) ZONE (FIGURE GEN-4 MOD)

NOT TO SCALE



TYPES OF TAPERS AND BUFFER SPACES (FIGURE GEN-5 MOD)

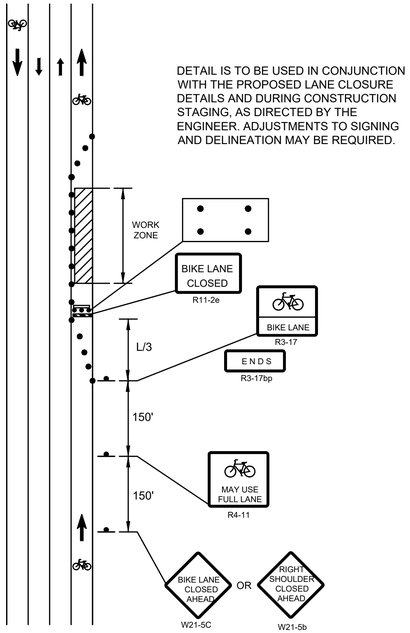
NOT TO SCALE

HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

GEORGE RYDER ROAD MULTI-USE PATH
TEMPORARY TRAFFIC CONTROL DETAILS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	GSH	BAM	RL	27	45

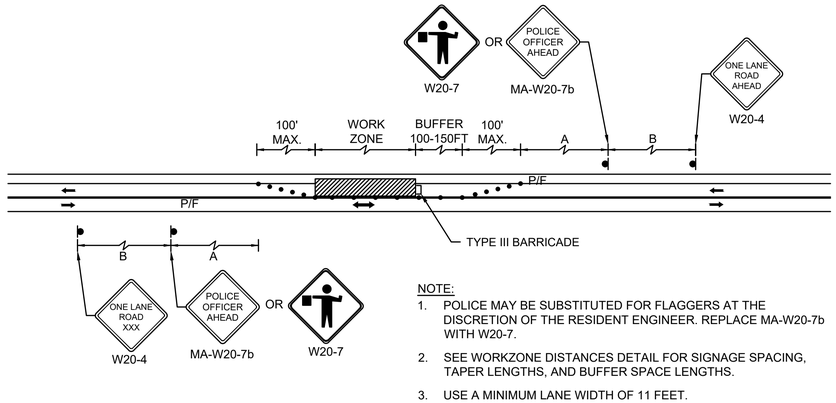
9/27/2023 L:\2020\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.02_TR(TCP DET).dwg
Last Saved By: Christopher Cleveland
Printed by: Jacob Cleveland



DETAIL IS TO BE USED IN CONJUNCTION WITH THE PROPOSED LANE CLOSURE DETAILS AND DURING CONSTRUCTION STAGING, AS DIRECTED BY THE ENGINEER. ADJUSTMENTS TO SIGNING AND DELINEATION MAY BE REQUIRED.

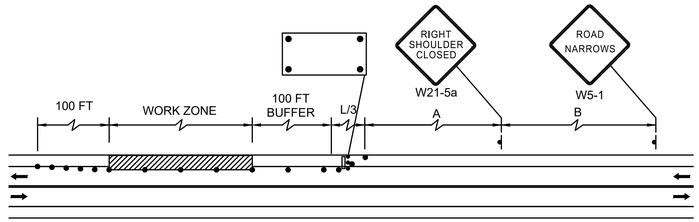
(USE WITH EXISTING MARKED BIKE LANE ONLY)

BICYCLE LANE CLOSURE WITHOUT DETOUR
(FIGURE BIK-1)
NOT TO SCALE



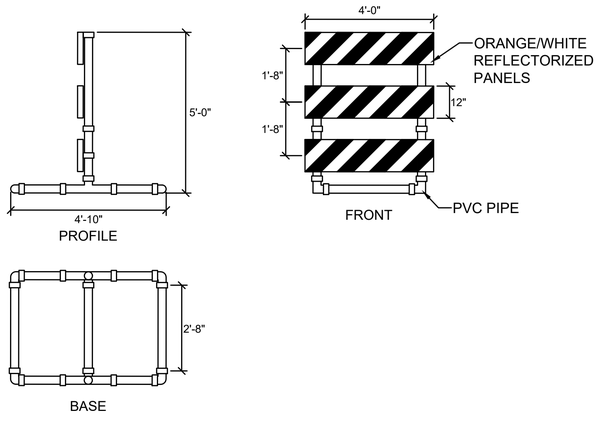
NOTE:
1. POLICE MAY BE SUBSTITUTED FOR FLAGGERS AT THE DISCRETION OF THE RESIDENT ENGINEER. REPLACE MA-W20-7b WITH W20-7.
2. SEE WORKZONE DISTANCES DETAIL FOR SIGNAGE SPACING, TAPER LENGTHS, AND BUFFER SPACE LENGTHS.
3. USE A MINIMUM LANE WIDTH OF 11 FEET.

TWO LANE ROAD ONE LANE ALTERNATING TRAFFIC WITH FLAGGERS DETAIL
(FIGURE TLR-5)
NOT TO SCALE



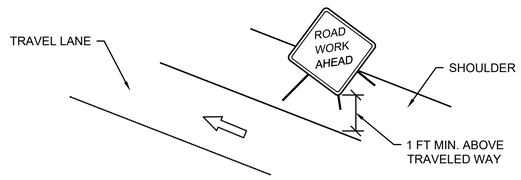
NOTE:
1. SEE WORKZONE DISTANCES DETAIL FOR SIGNAGE SPACING, TAPER LENGTHS, AND BUFFER SPACE LENGTHS.
2. USE A MINIMUM LANE WIDTH OF 11 FEET.

TWO LANE ROAD SHOULDER CLOSED
(FIGURE TLR-1)
NOT TO SCALE

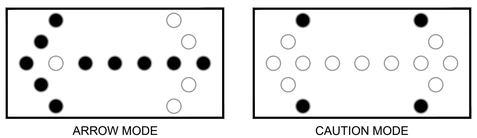


TYPE III BARRICADE

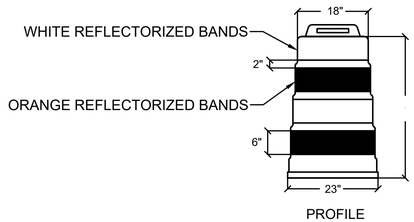
TYPE III BARRICADES SHALL MEET MUTCD REQUIREMENTS (CURRENT EDITION)



SIGN MOUNTING DETAIL
(HIGHWAY SHOULDER)
NOT TO SCALE



FLASHING ARROW PANEL
NOT TO SCALE



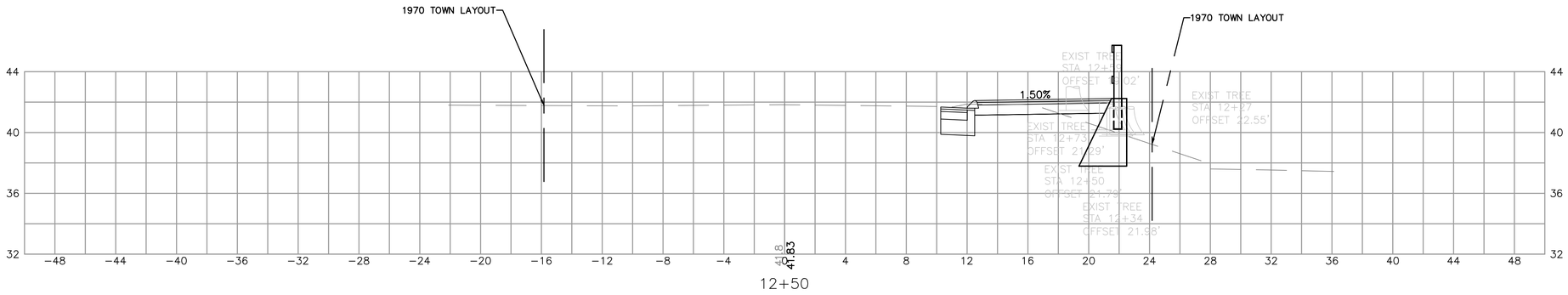
CONSTRUCTION DRUM
NOT TO SCALE

HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

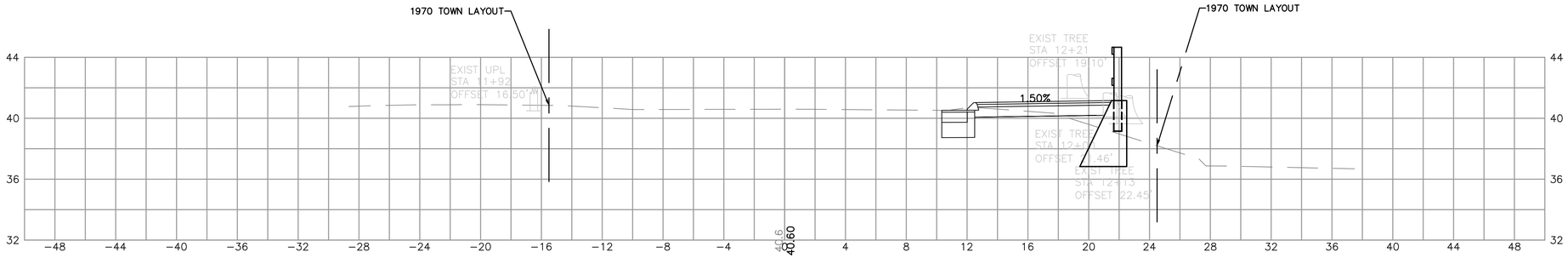
GEORGE RYDER ROAD MULTI-USE PATH
TEMPORARY TRAFFIC CONTROL DETAILS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	GSH	BAM	RL	28	45

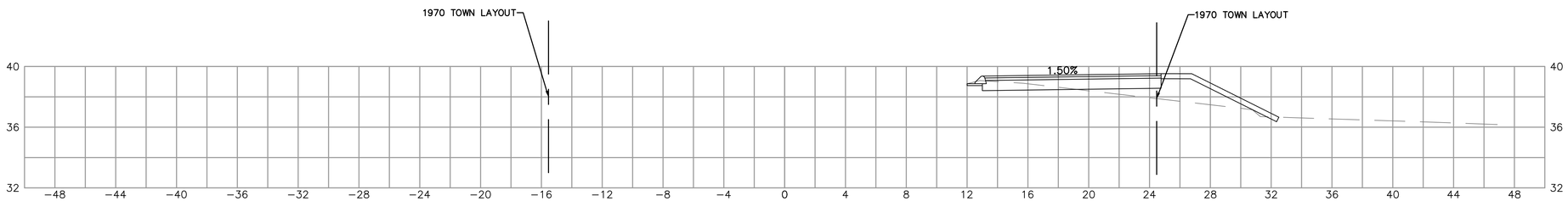
9/27/2023 L:\2020\7\2020710 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020710_TRITCP DET).dwg
Layout: Layout1 Plotted: 27-SEP-23 07:45
Printed by: Jacob Cleveland



12+50



12+00



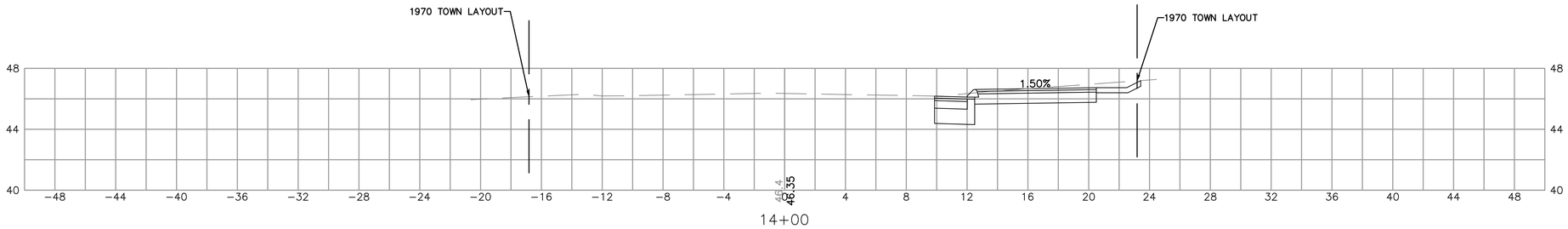
11+50

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

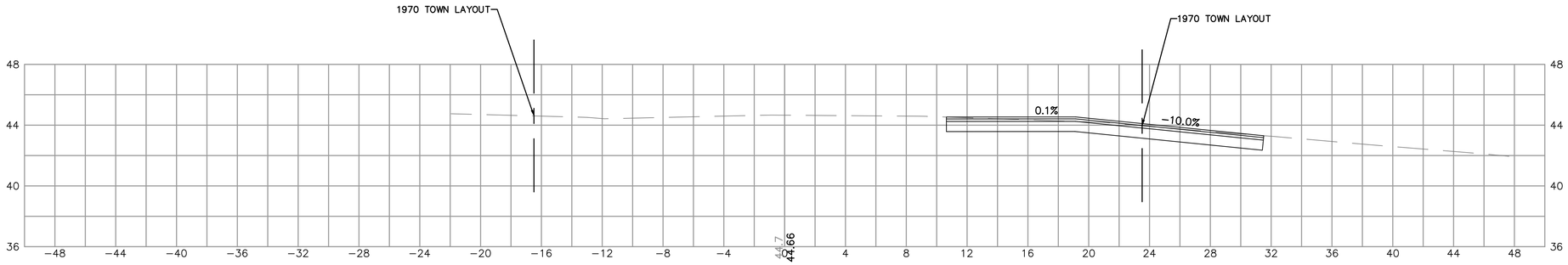
GEORGE RYDER ROAD MULTI-USE PATH
CROSS SECTIONS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	29	45

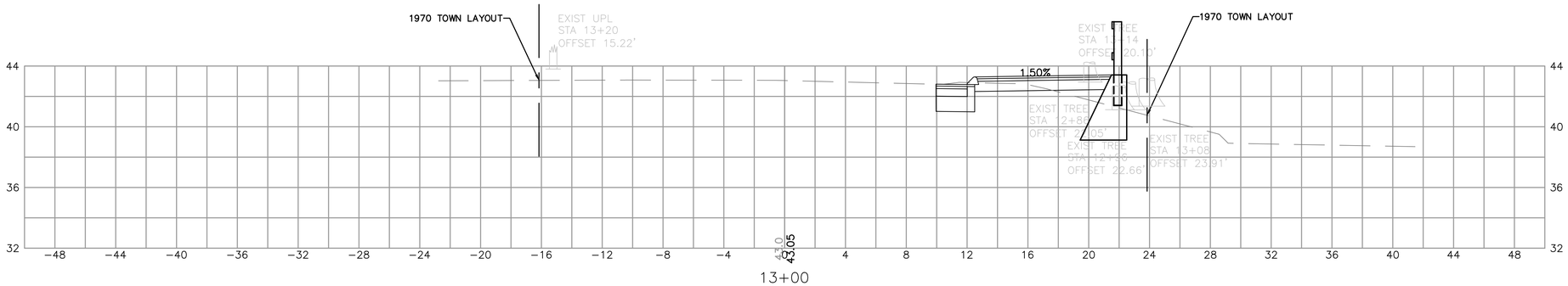
9/27/2023 L:\2020\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.02_HDXSEC).dwg
Last Saved by: JMORRIS
Printed by: Jacob Cleveland



14+00



13+50



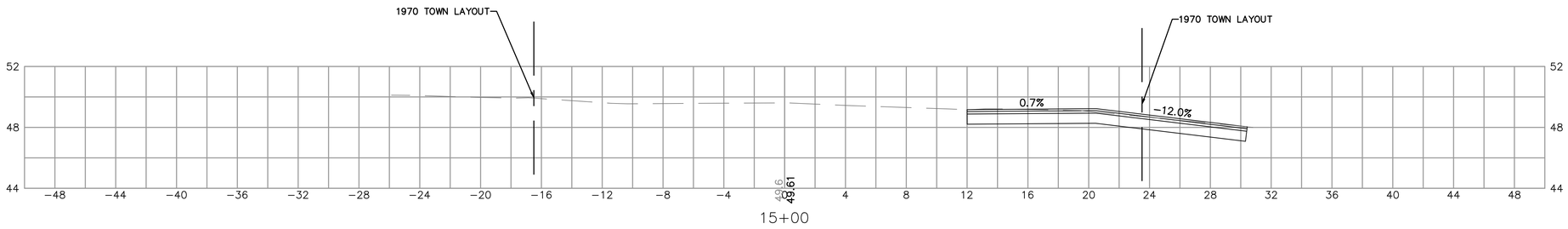
13+00

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

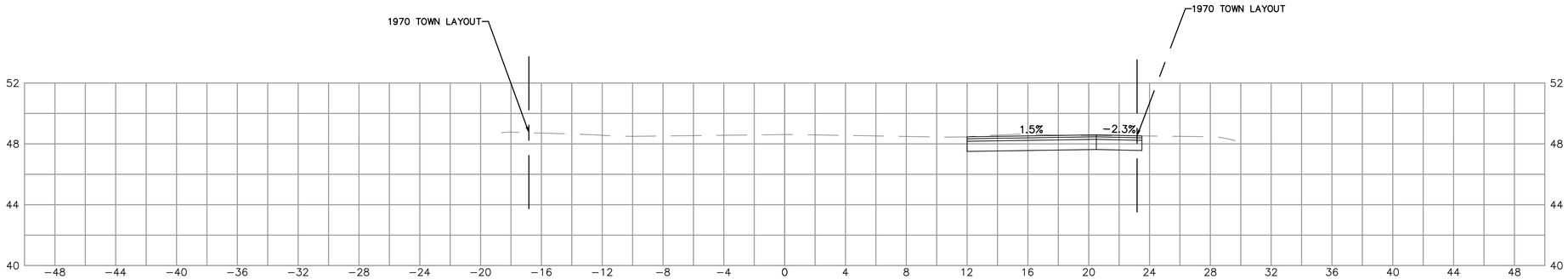
GEORGE RYDER ROAD MULTI-USE PATH
CROSS SECTIONS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	30	45

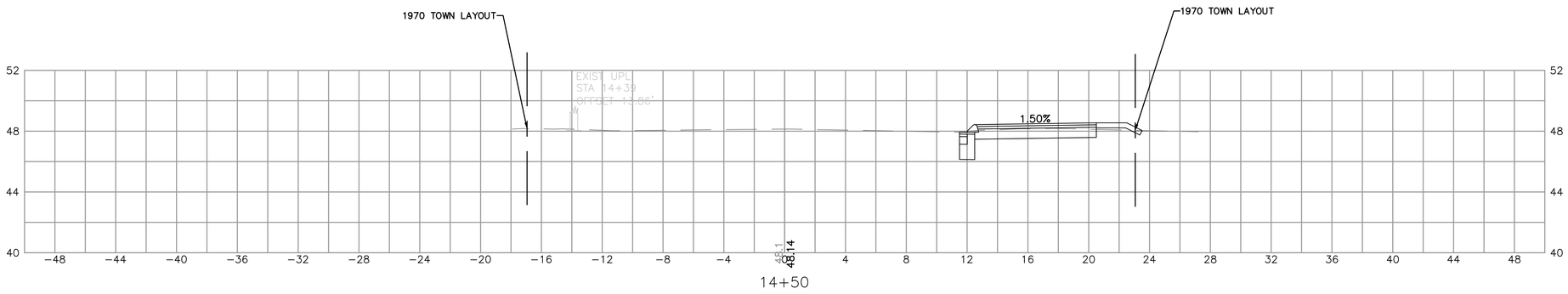
9/27/2023 L:\2020\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.02_HDXSEC).dwg
Last Saved by: JMORRIS
Plotted by: Jacob Cleveland



15+00



14+65



14+50

NOTE:

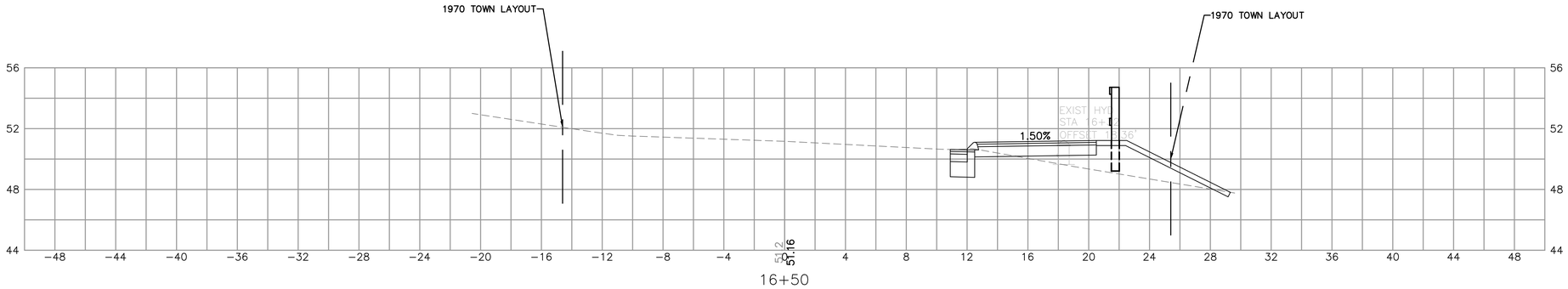
1. CONTRACTOR TO CONFIRM GRADES IN THE FIELD FOR DRIVEWAY AT 15+00. DRIVEWAY GRADES NOT TO EXCEED 12%

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

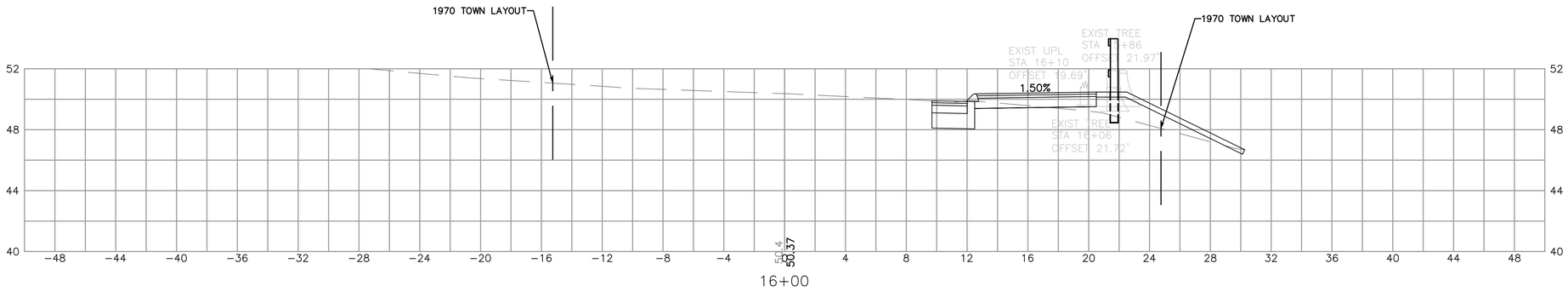
GEORGE RYDER ROAD MULTI-USE PATH
CROSS SECTIONS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	31	45

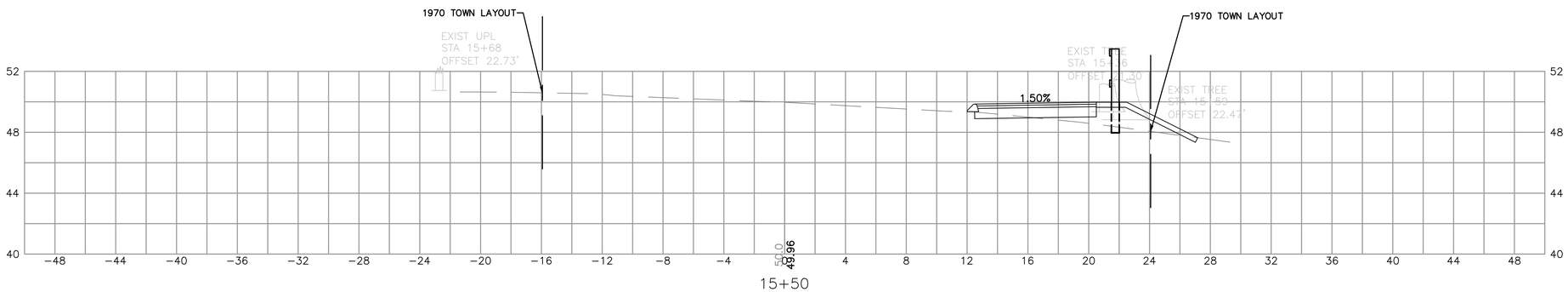
9/27/2023 L:\2020\7\20207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.02_HDXSEC).dwg
Last Saved By: JMcGee
Printed by: Jacob Cleveland



16+50



16+00



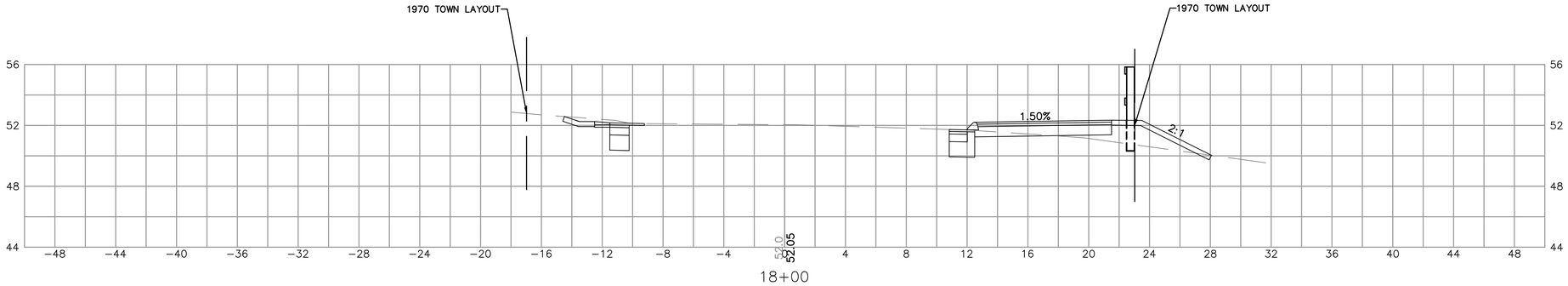
15+50

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

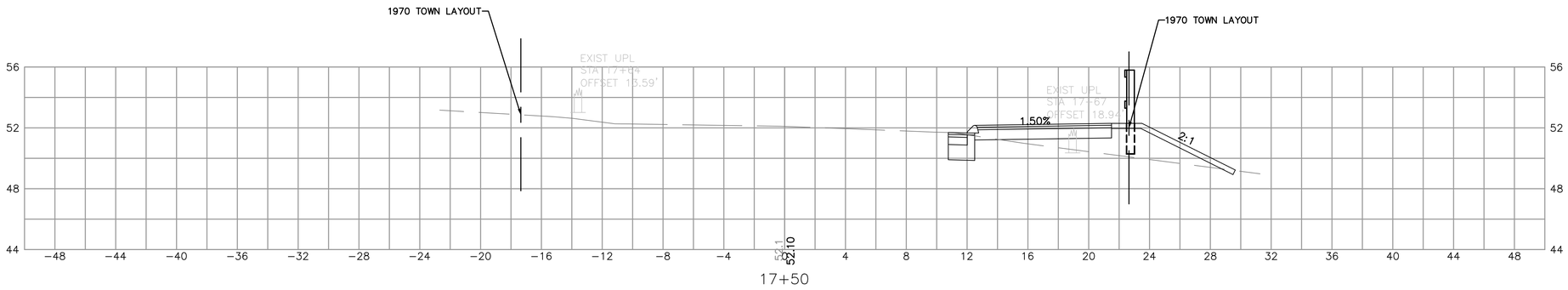
GEORGE RYDER ROAD MULTI-USE PATH
CROSS SECTIONS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	32	45

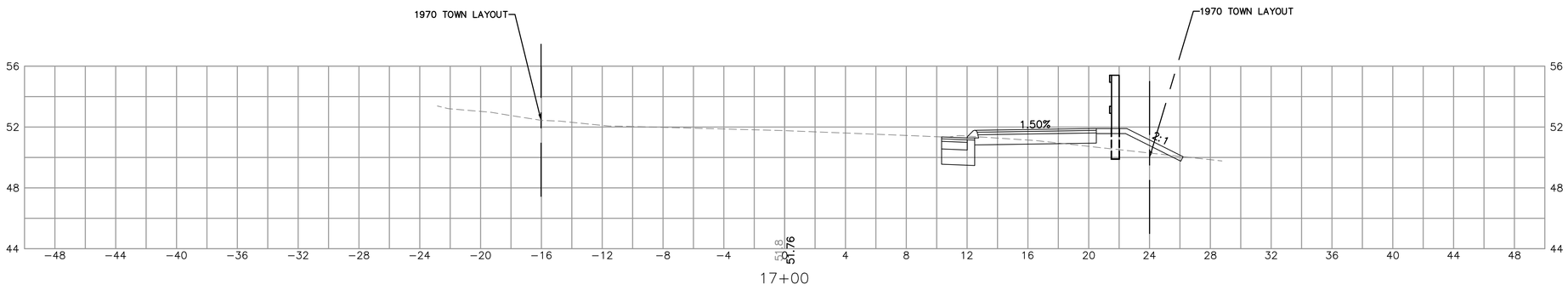
9/27/2023 L:\2020\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.02_HDXSEC).dwg
Last Saved by: MEYERS
Printed by: Jacob Cleveland



18+00



17+50



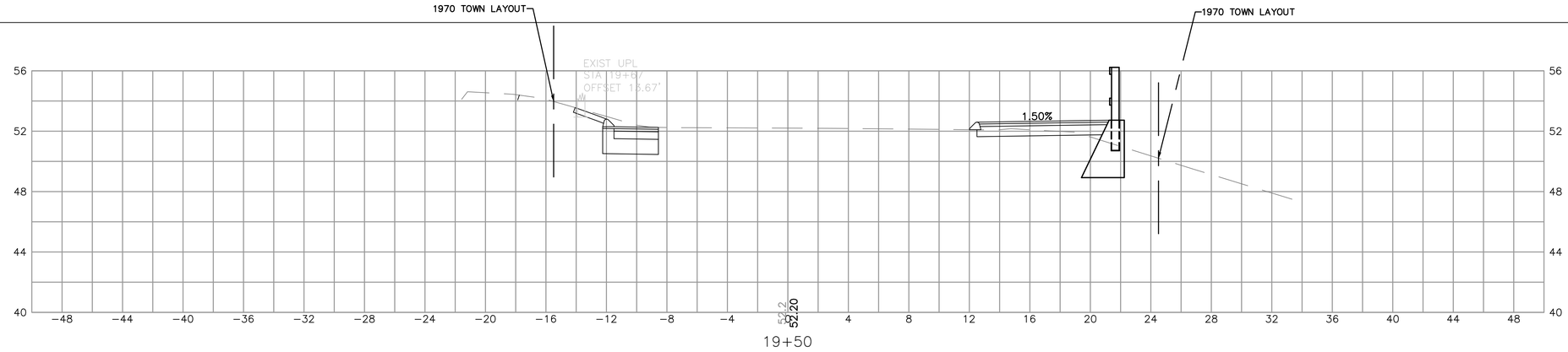
17+00

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

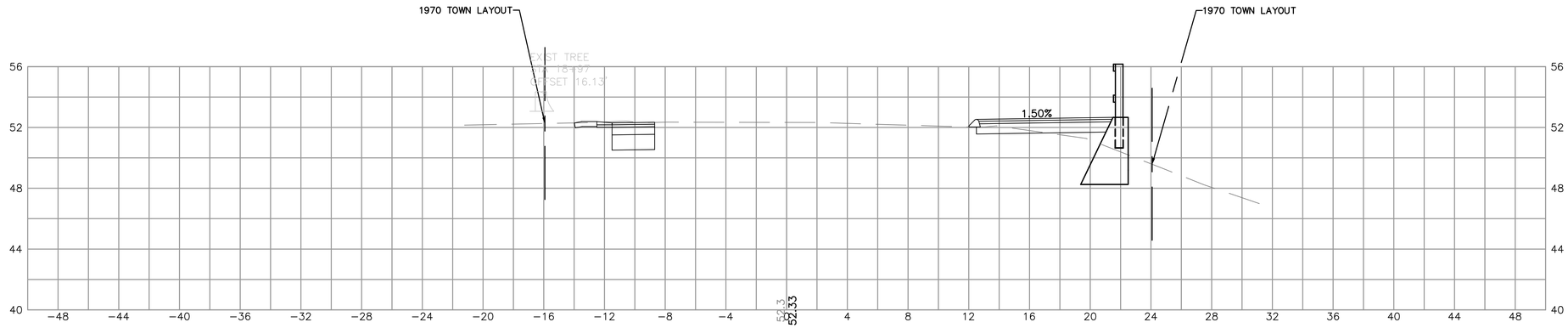
GEORGE RYDER ROAD MULTI-USE PATH CROSS SECTIONS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	33	45

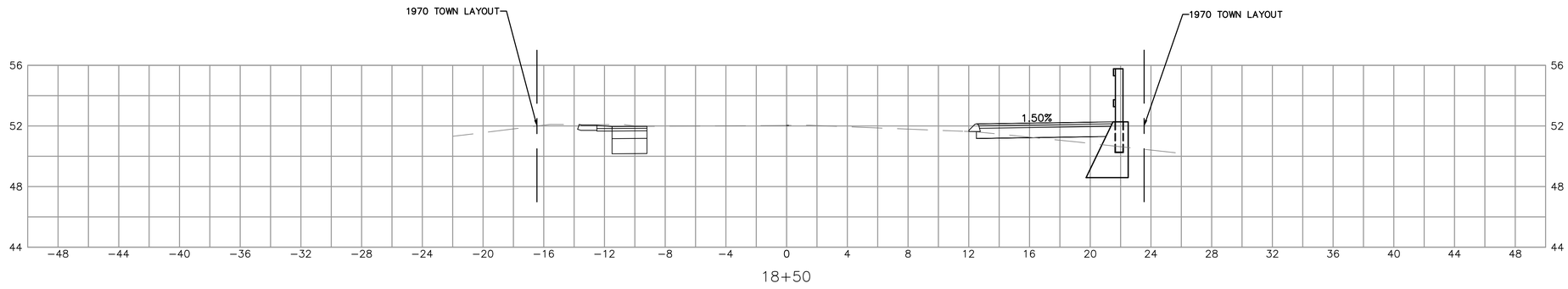
9/27/2023 L:\2020\7\20207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.02_HDXSEC).dwg
Last Saved by: MMOSS
Printed by: Jacob Cleveland



19+50



19+00



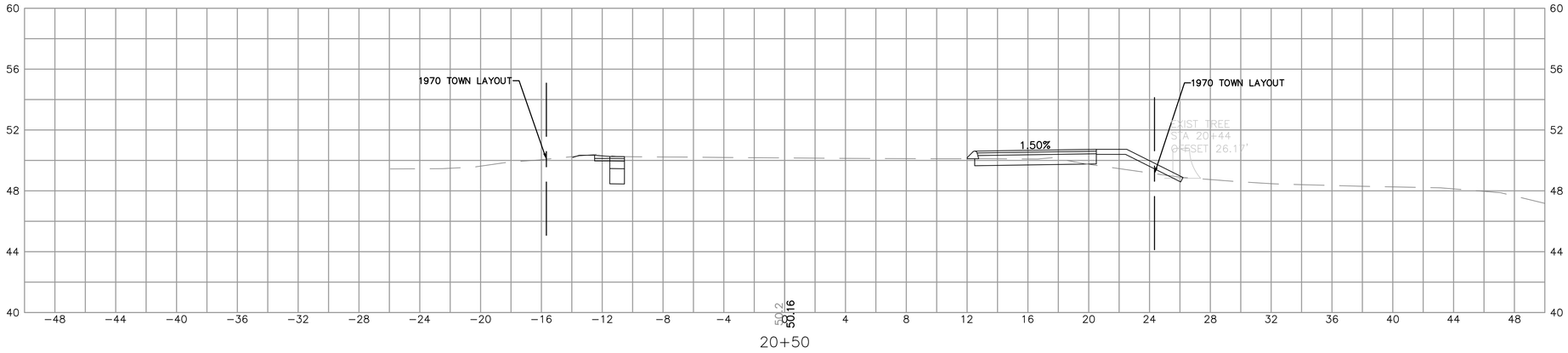
18+50

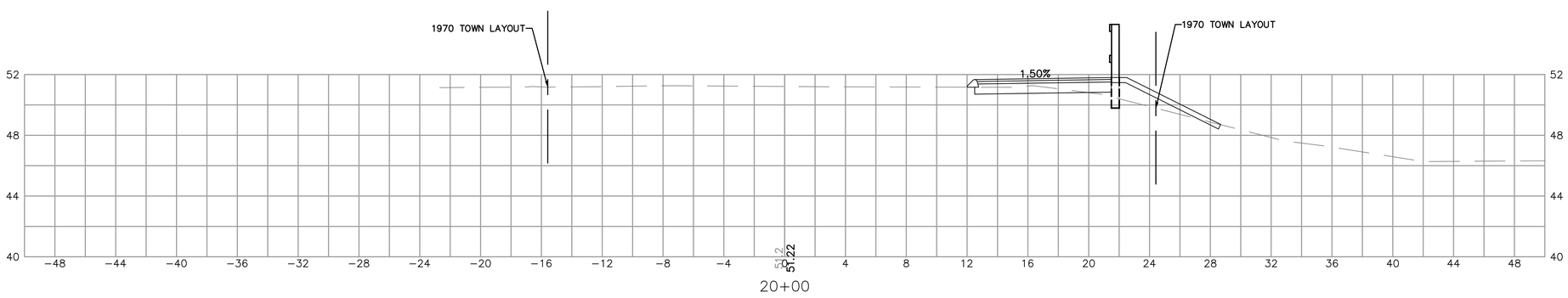
HOR. SCALE IN FEET
4 0 4 8
VER. SCALE IN FEET
4 0 4 8

GEORGE RYDER ROAD MULTI-USE PATH
CROSS SECTIONS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	34	45

9/27/2023 L:\2020\7\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.02_HD(XSEC).dwg
Last Saved By: JACOBS
Printed by: Jacob Cleveland



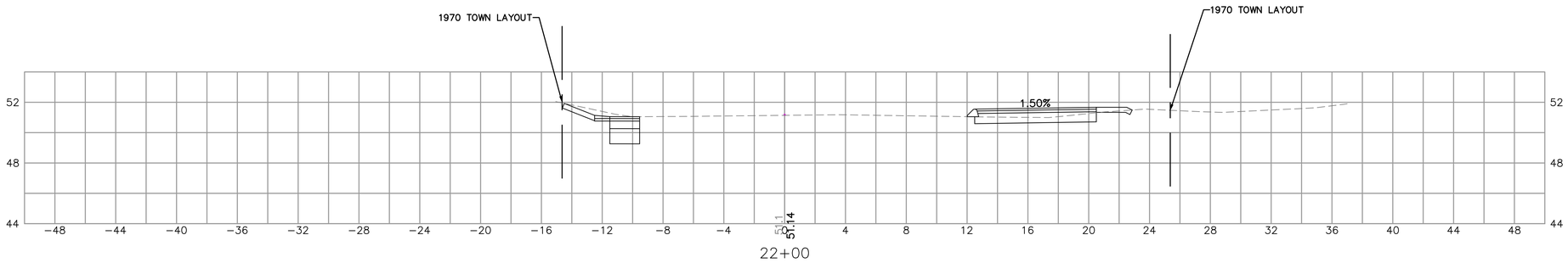


HOR. SCALE IN FEET
4 0 4 8
4 0 4 8
VER. SCALE IN FEET

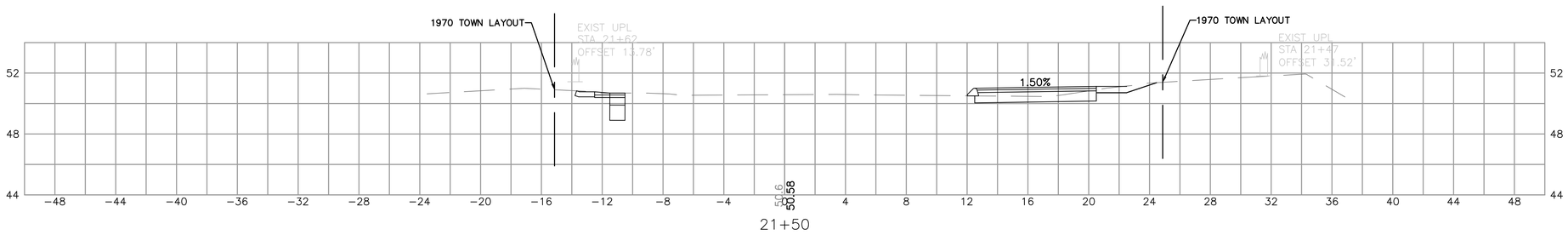
GEORGE RYDER ROAD MULTI-USE PATH
CROSS SECTIONS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	35	45

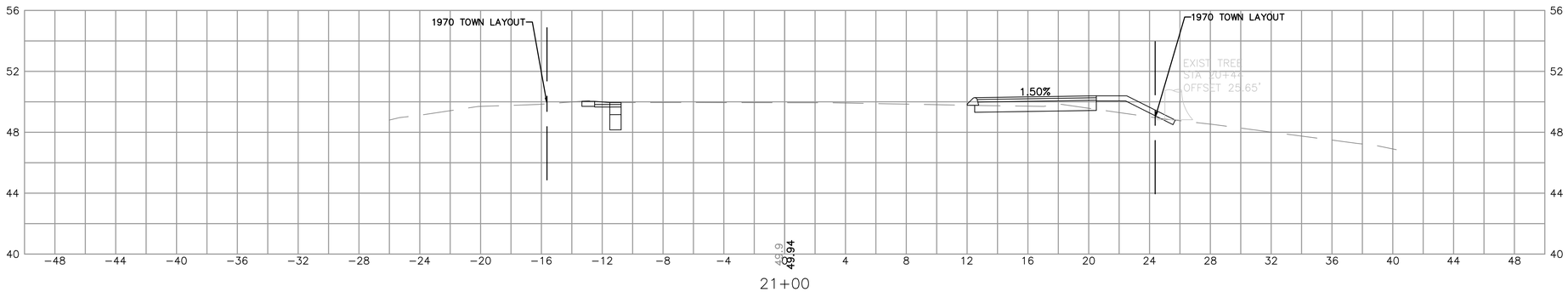
9/27/2023 L:\2020\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.02_HDXSEC).dwg
Last Saved By: JMEYERS
Printed by: Jacob Cleveland



22+00



21+50



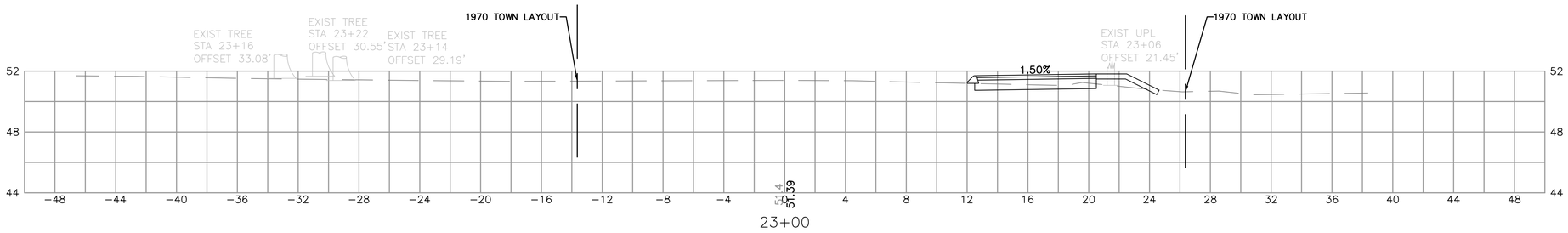
21+00

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

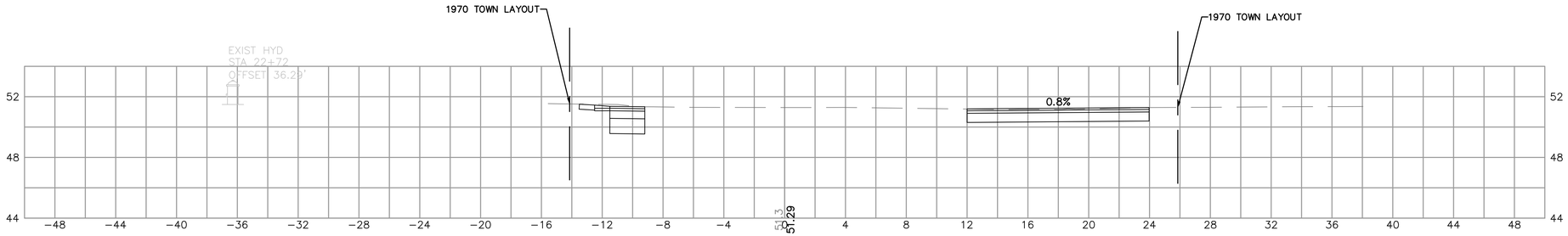
GEORGE RYDER ROAD MULTI-USE PATH CROSS SECTIONS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	36	45

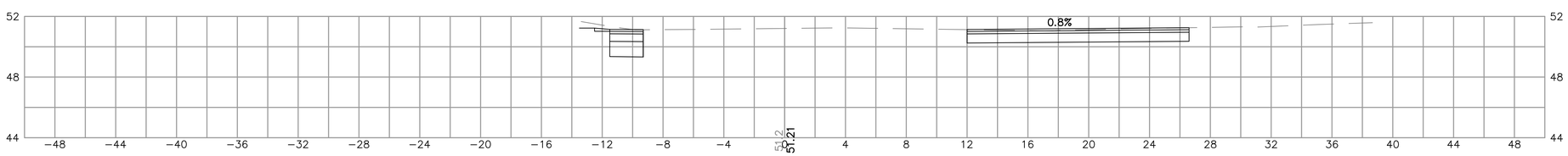
9/27/2023 L:\2020\7\20207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.01_HDXSEC).dwg
Last Saved By: JMYERS
Plotted by: Jacob Cleveland



23+00



22+50



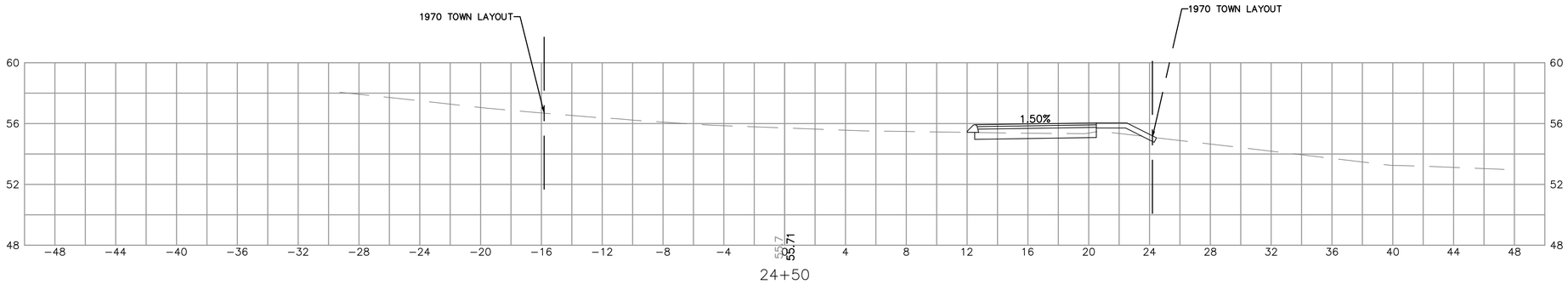
22+16.7

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

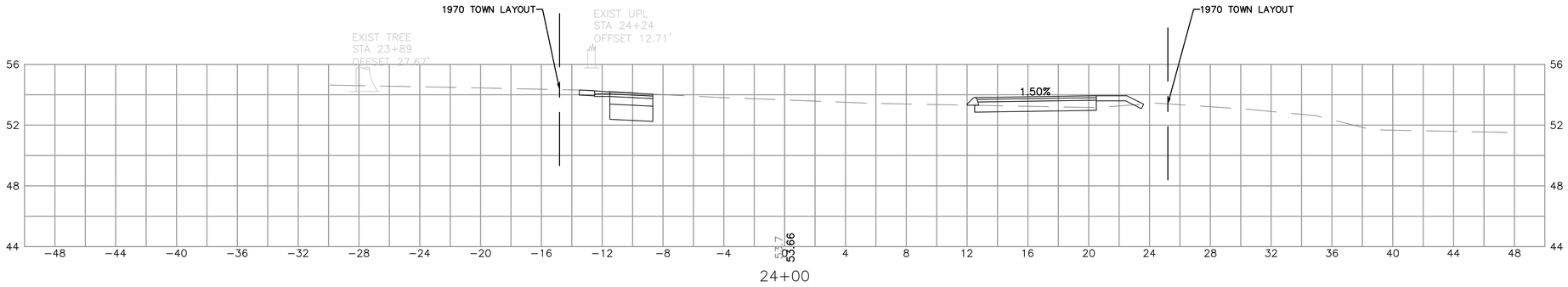
GEORGE RYDER ROAD MULTI-USE PATH
CROSS SECTIONS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	37	45

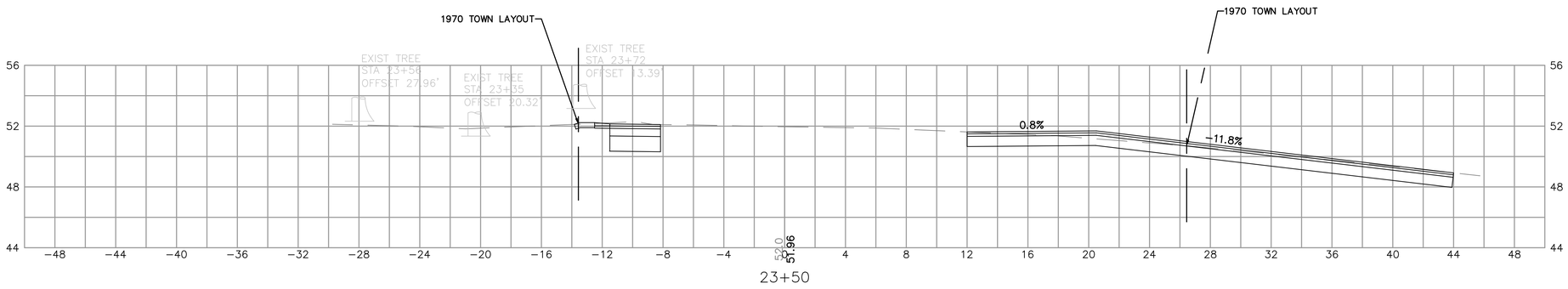
9/27/2023 L:\2020\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.01_HDXSEC.dwg
Last Saved by: BAM0308
Printed by: Jacob Cleveland



24+50



24+00



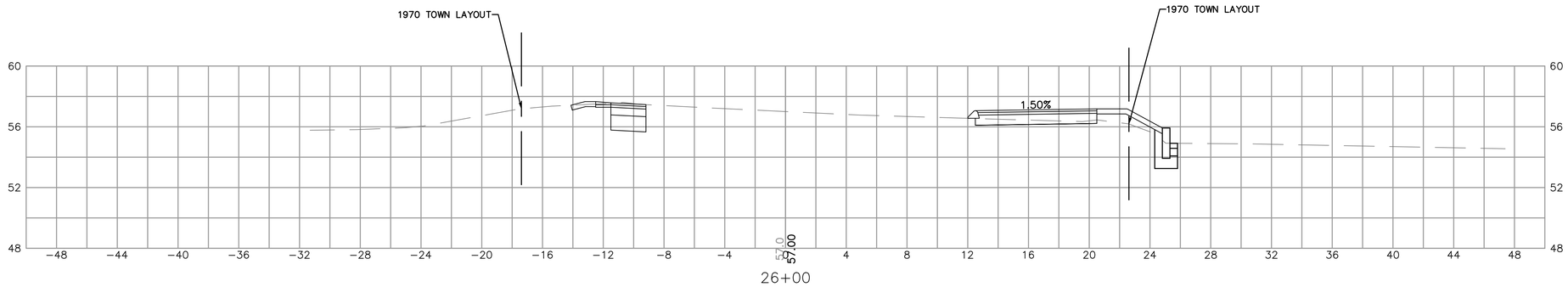
23+50

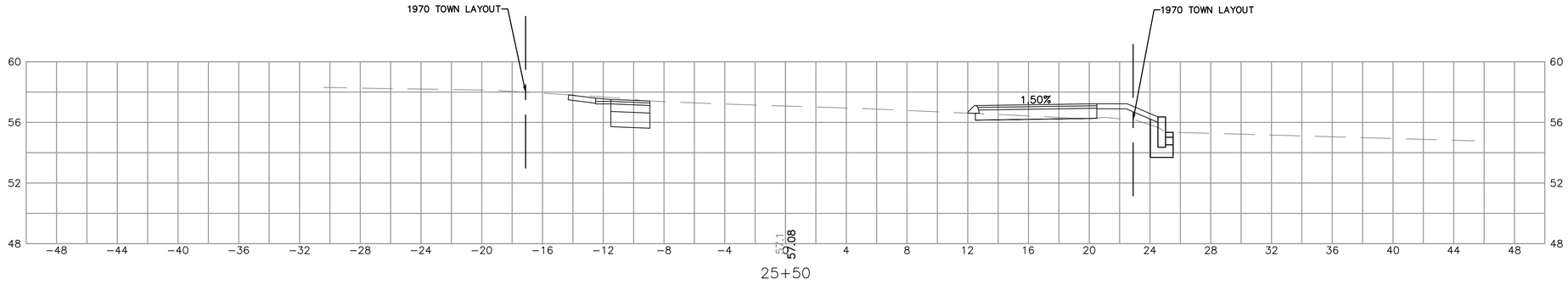
HOR. SCALE IN FEET
4 0 4 8
VER. SCALE IN FEET
4 0 4 8

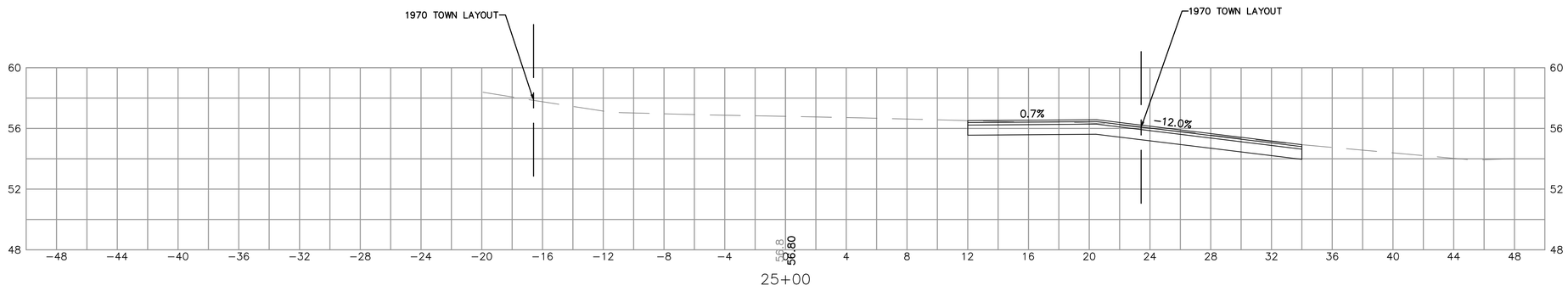
GEORGE RYDER ROAD MULTI-USE PATH
CROSS SECTIONS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	38	45

9/27/2023 L:\2020\7\20207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.01_HDXSEG.dwg
Last Saved by: JMYERS
Printed by: Jacob Cleveland





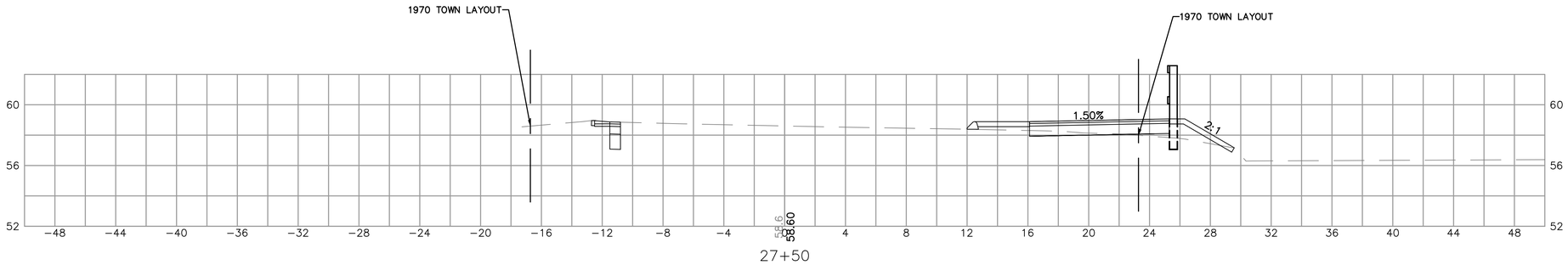


HOR. SCALE IN FEET
4 0 4 8
VER. SCALE IN FEET
4 0 4 8

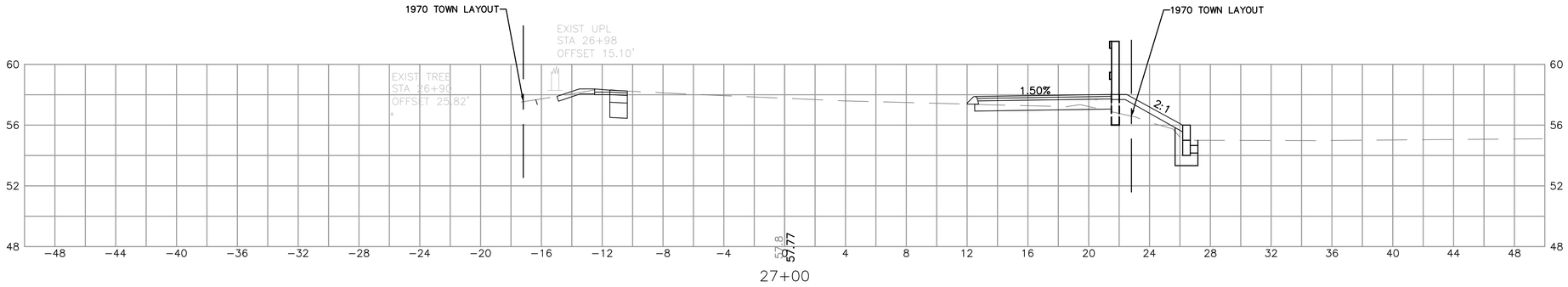
GEORGE RYDER ROAD MULTI-USE PATH
CROSS SECTIONS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	39	45

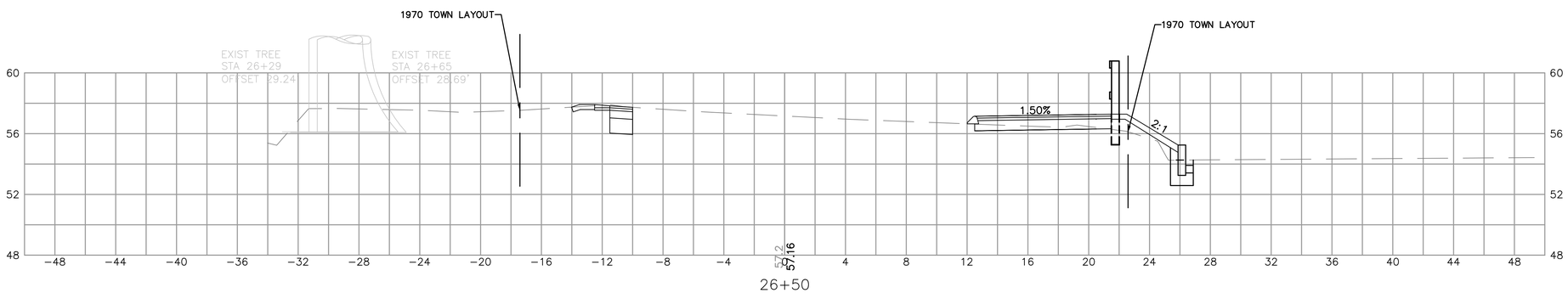
9/27/2023 L:\2020\7\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.01_HDXSEC).dwg
Last Saved By: JMYERS
Printed by: Jacob Cleveland



27+50



27+00



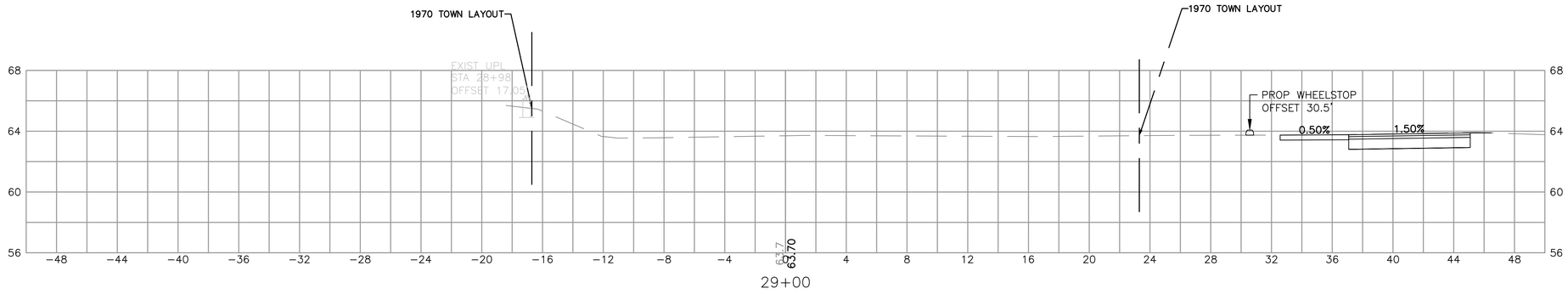
26+50

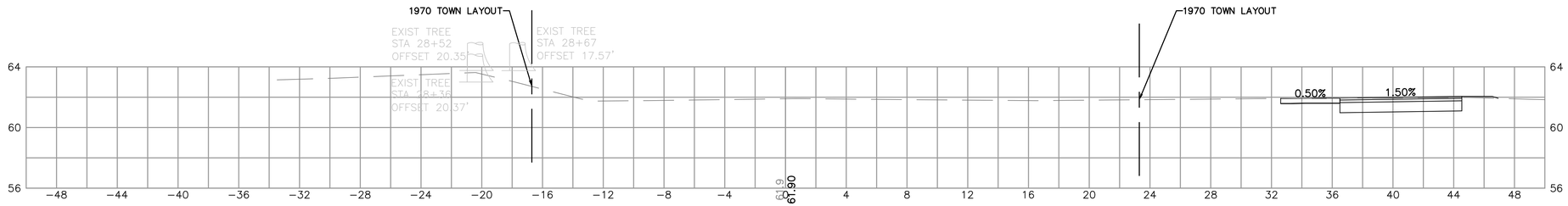
HOR. SCALE IN FEET
4 0 4 8
4 0 4 8
VER. SCALE IN FEET

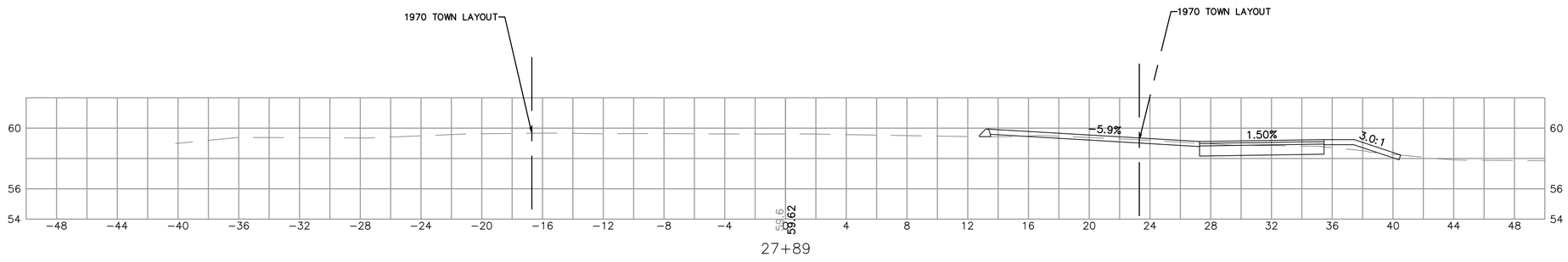
GEORGE RYDER ROAD MULTI-USE PATH
CROSS SECTIONS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	40	45

9/27/2023 L:\2020\7\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.01_HD(XSEC).dwg
Last Saved By: JMORRIS
Printed by: Jacob Cleveland





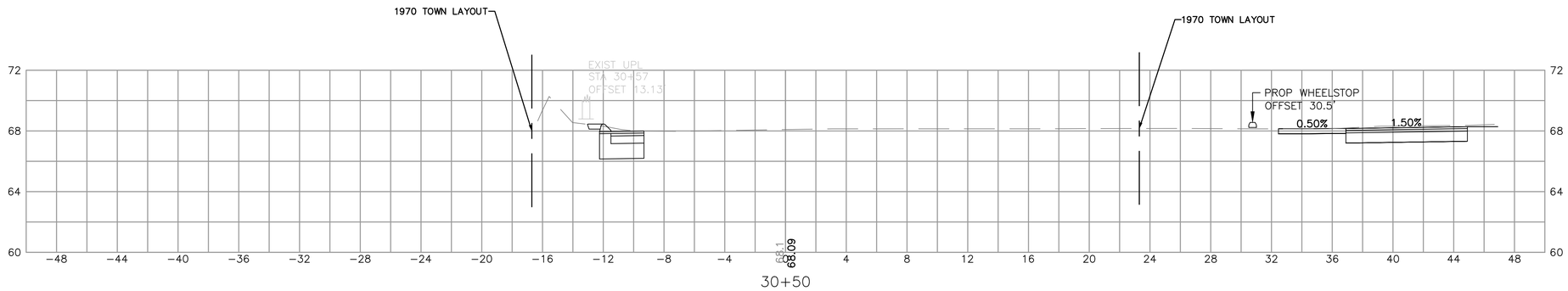


HOR. SCALE IN FEET
4 0 4 8
4 0 4 8
VER. SCALE IN FEET

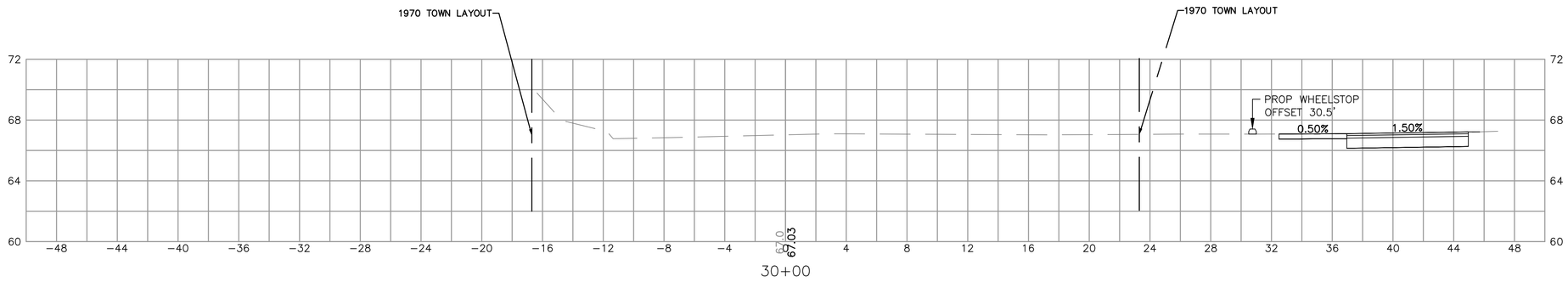
GEORGE RYDER ROAD MULTI-USE PATH
CROSS SECTIONS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	4.1	45

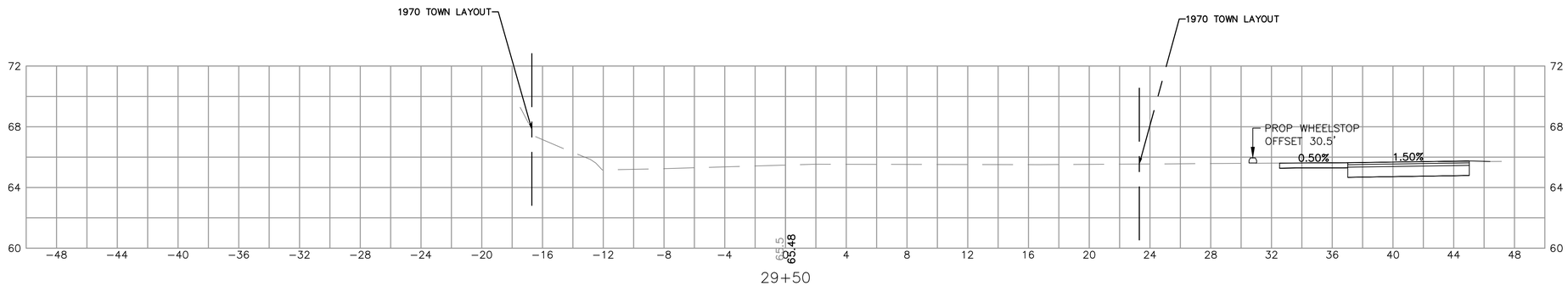
9/27/2023 L:\2020\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.01_HD\XSEC1.dwg
Last Saved by: JCleveland
Plotted by: Jacob Cleveland



30+50



30+00



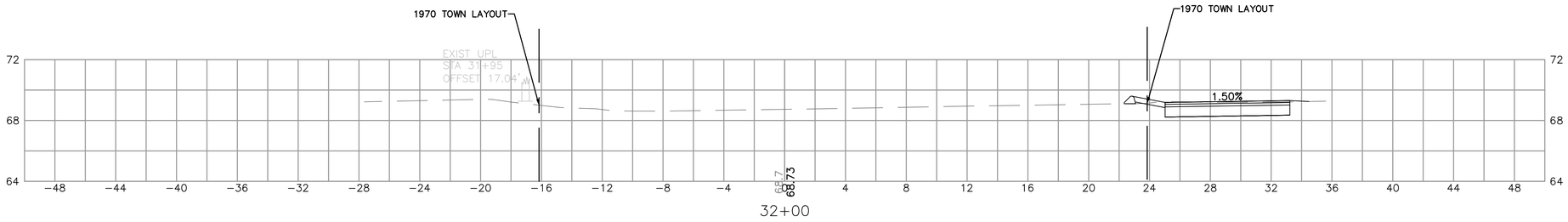
29+50

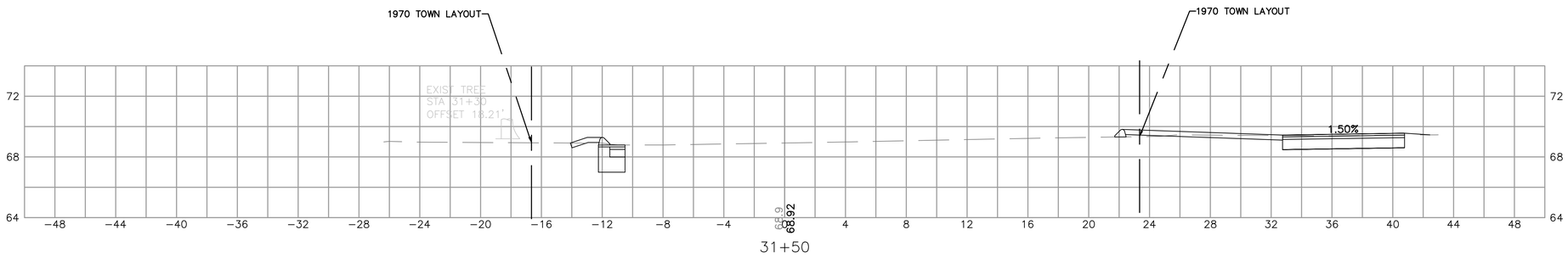
HOR. SCALE IN FEET
4 0 4 8
4 0 4 8
VER. SCALE IN FEET

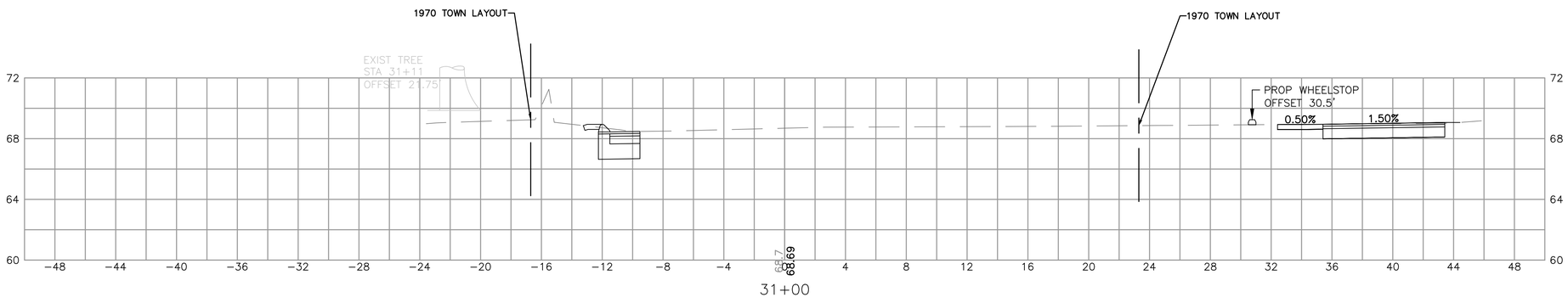
GEORGE RYDER ROAD MULTI-USE PATH
CROSS SECTIONS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	42	45

9/27/2023 L:\2020\7\20207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020701_HDXSEC).dwg
Last Saved By: JMORRIS
Plotted by: Jacob Cleveland





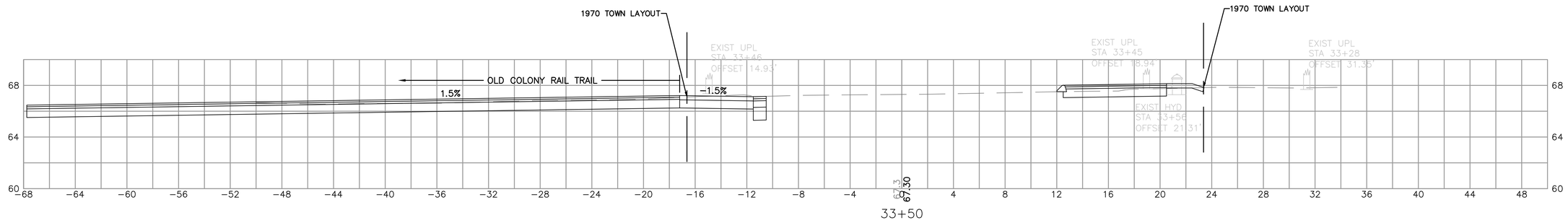


HOR. SCALE IN FEET
4 0 4 8
4 0 4 8
VER. SCALE IN FEET

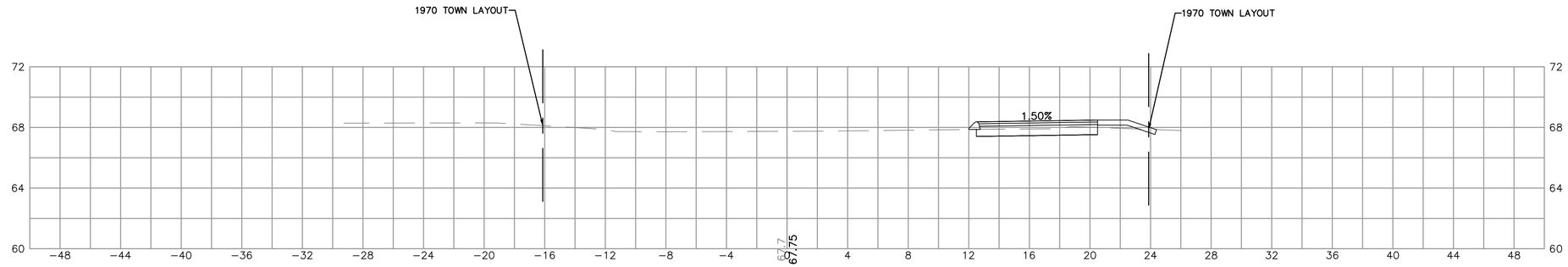
GEORGE RYDER ROAD MULTI-USE PATH
CROSS SECTIONS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	43	45

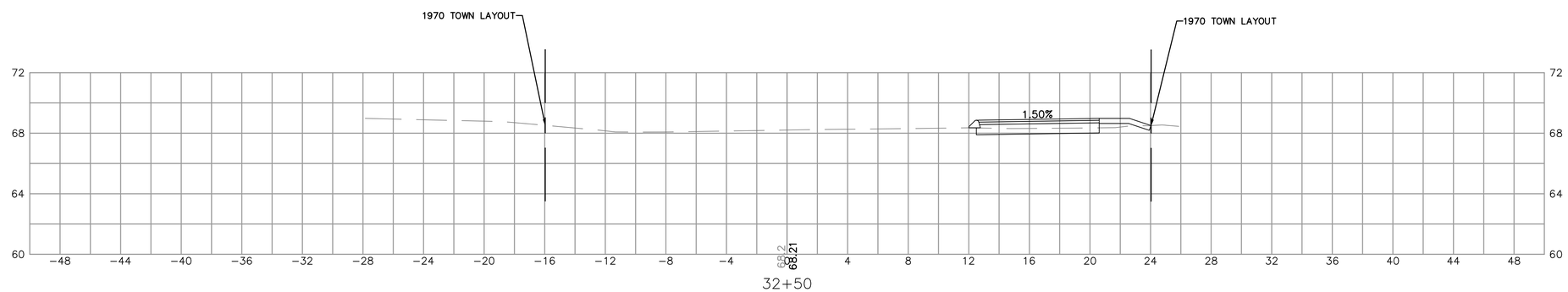
9/27/2023 L:\2020\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.01_HDXSEC).dwg
Last Saved By: MMOSS
Plotted by: Jacob Cleveland



33+50



33+00



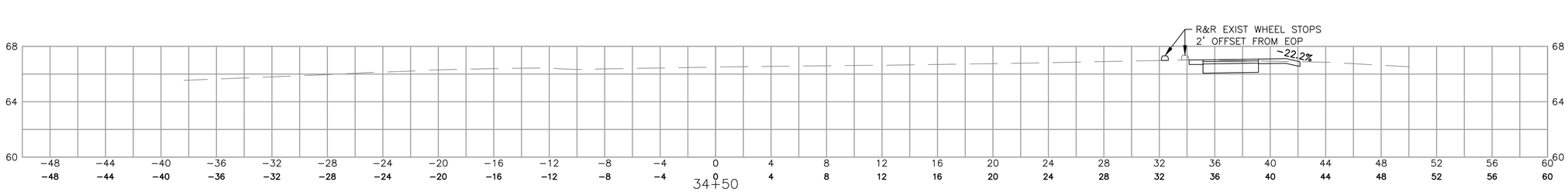
32+50

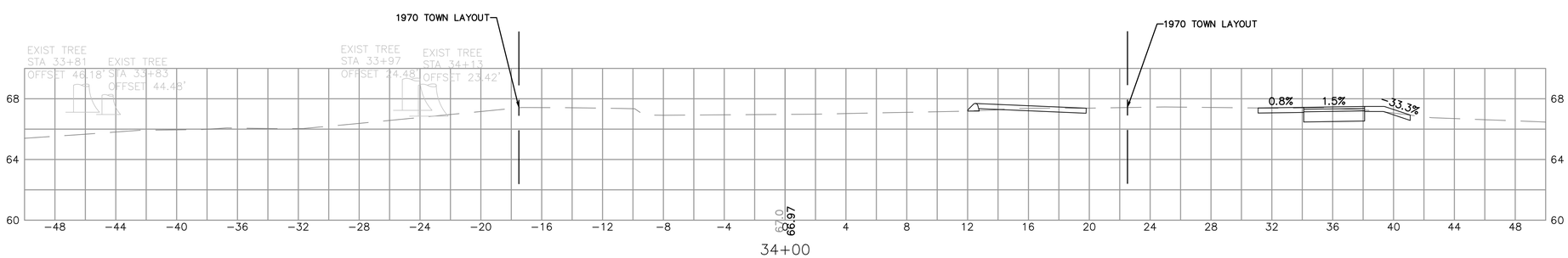
HOR. SCALE IN FEET
4 0 4 8
4 0 4 8
VER. SCALE IN FEET

GEORGE RYDER ROAD MULTI-USE PATH
CROSS SECTIONS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	44	45

9/27/2023 L:\2020\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.01_HDXSEC).dwg
Last Saved by: JMEYERS
Printed by: Jacob Cleveland



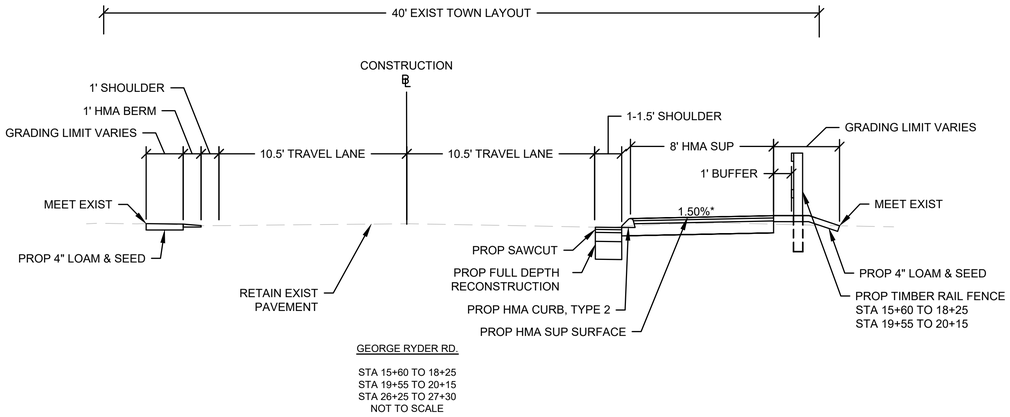


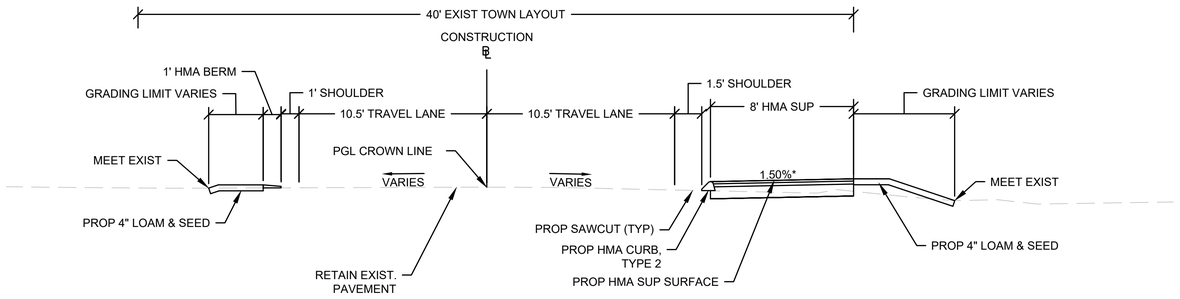
HOR. SCALE IN FEET
4 0 4 8
4 0 4 8
VER. SCALE IN FEET

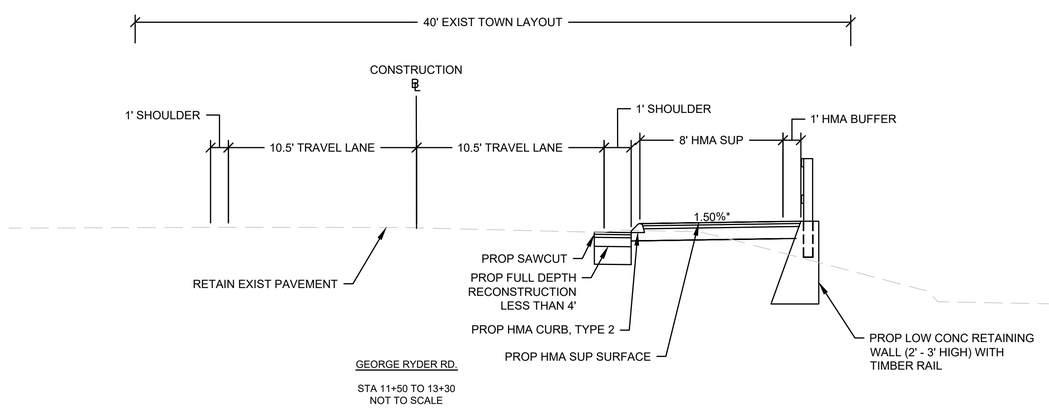
GEORGE RYDER ROAD MULTI-USE PATH
CROSS SECTIONS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	45	45

9/27/2023 L:\2020\2020207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\2020207.01_HD\XSEC\.dwg
Last Saved by: JACOBS
Printed by: Jacob Cleveland







PAVEMENT NOTES: GEORGE RYDER ROAD

CEMENT CONCRETE RAMPS, WALK SURFACE, LEVEL LANDING:

SURFACE COURSE:	4" CEMENT CONCRETE SURFACE COURSE OVER
SUB-BASE:	8" GRAVEL BORROW TYPE B

HMA SHARED USE PATH SURFACE:

SURFACE COURSE:	2" SUPERPAVE SURFACE COURSE 9.5 (SSC-9.5) OVER
INTERMEDIATE COURSE:	2" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC-12.5) OVER
BASE COURSE:	6" GRAVEL BORROW TYPE B

FULL DEPTH CONSTRUCTION LESS THAN 4' WIDE:

SURFACE COURSE:	2" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER
INTERMEDIATE COURSE:	2" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC-12.5) OVER
BASE COURSE:	6" HES CEMENT CONCRETE BASE OVER
SUB-BASE:	12" GRAVEL BORROW TYPE B

GRAVEL DRIVEWAYS:

SURFACE COURSE:	2" GRAVEL SURFACE COURSE OVER
BASE COURSE:	4" AGGREGATE BASE COURSE OVER

NOTES:

TACK COAT SHALL BE SPRAY APPLIED DOUBLE OVERLAP FOR UNIFORM COVERAGE AT A RATE CONSISTENT WITH STANDARD SPECIFICATION 450.43G(2) (BASE AND INTERMEDIATE COURSES PRIOR TO PAVING OVERLAY.

HOT APPLIED PAVEMENT JOINT ADHESIVE SHALL BE APPLIED OVER ALL SAWCUT JOINTS BETWEEN EXISTING PAVEMENT AND NEW HMA MATERIAL INCLUDED IN HMA CURB CONSTRUCTION. JOINT ADHESIVE SHALL BE IN ACCORDANCE WITH SECTION 450 OF THE STANDARD SPECIFICATIONS, AND SHALL BE PAID UNDER ITEM 453 HMA JOINT ADHESIVE.

ALL HMA, HMA FOR PATCHING, ASPHALT EMULSION FOR TACK COAT, AND HMA JOINT SEALANT SHALL BE IN ACCORDANCE WITH SECTION 450 QUALITY ASSURANCE OF HMA SPECIFICATION. THE ENGINEER SHALL IDENTIFY UNSOUND AREAS OF PAVEMENT TO BE PATCHED UNDER 451 HMA FOR PATCHING. HMA PATCHES SHALL COMPLY WITH MASSDOT STANDARD SPECIFICATION 450.43 C. PATCHES NOT TO EXCEED 4" DEPTH BELOW MILLED SURFACE OF PROPOSED WORK.

ENGINEER MAY AUTHORIZE USE OF NATIVE SOIL RATHER THAN GRAVEL. CONTRACTOR MUST REQUEST AND PROVIDE SOIL SAMPLES.

* = TOLERANCE FOR CONSTRUCTION ± 0.5% ON SIDEWALK SLOPES, DRIVEWAY SLOPES, AND PEDESTRIAN CURB RAMPS.

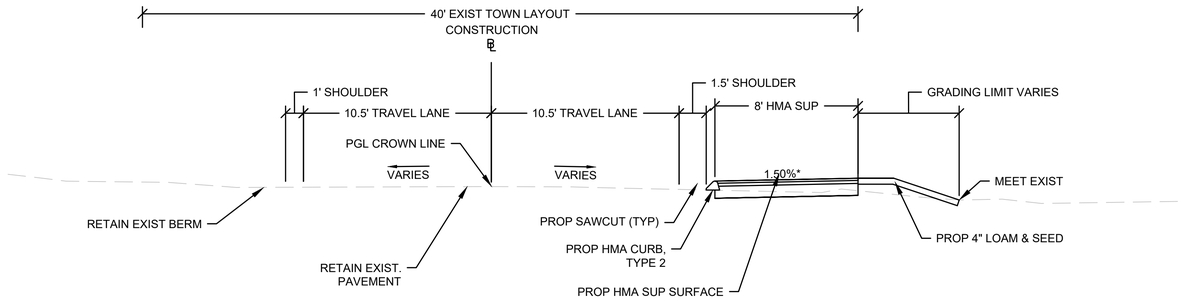
** = EXISTING GRAVEL DETERMINED TO BE SUITABLE BY THE ENGINEER SHALL REMAIN.

HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

GEORGE RYDER ROAD MULTI-USE PATH
TYPICAL SECTIONS

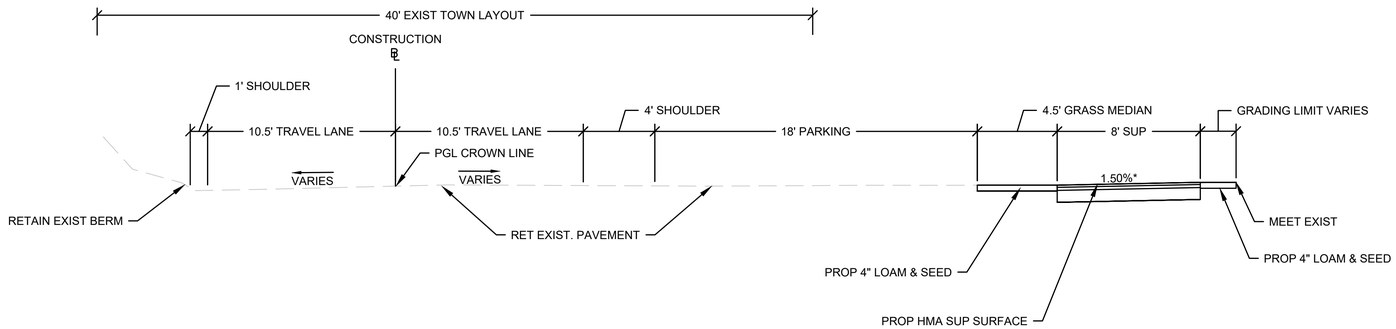
HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	8	45

11/10/2023 L:\20207\20207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\20207.02_HD(TYPS).dwg
Last Saved By: BMYERS
Printed by: Bridget Myers



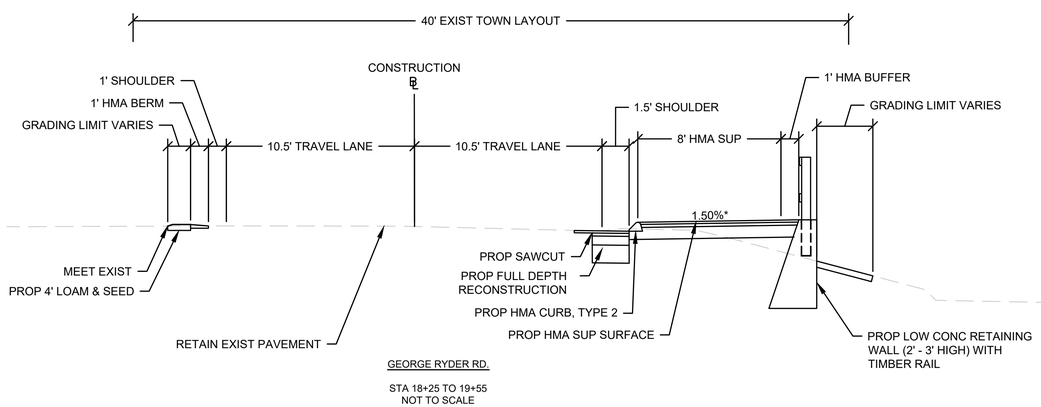
GEORGE RYDER RD.

STA 32+50 TO 33+50
NOT TO SCALE



GEORGE RYDER ROAD

STA 28+40 TO 31+20
NOT TO SCALE



GEORGE RYDER RD.

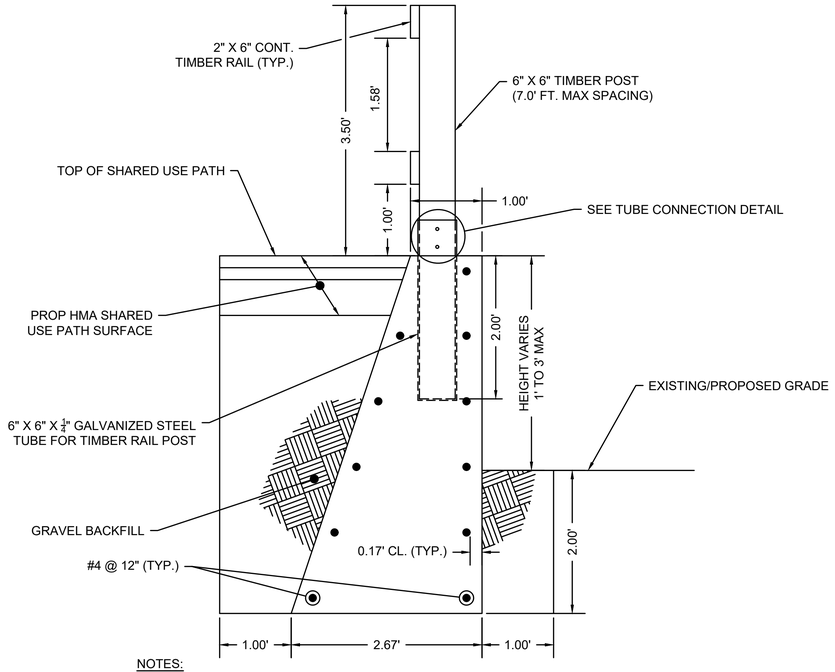
STA 18+25 TO 19+55
NOT TO SCALE

HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

GEORGE RYDER ROAD MULTI-USE PATH TYPICAL SECTIONS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	9	45

11/10/2023 L:\20207\20207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\20207.01_HD(TYPS).dwg
Layout: Layout1
Printed by: Bridget Myers



NOTES:

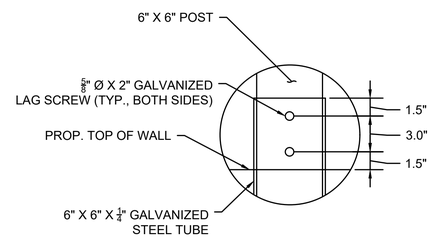
4000 PSI, 1.5 IN., 565 CEMENT CONCRETE (ITEM 901.) TO BE USED FOR THE WALL. REINFORCING BARS SHALL BE CONSIDERED INCIDENTAL TO THE WALL.

EXPANSION JOINTS TO BE PLACED 90' ON CENTER MAXIMUM WITH INTERMEDIATE CONSTRUCTION JOINTS PLACED AT 30' ON CENTER MAXIMUM.

TIMBER POSTS SHALL NOT BE CAST DIRECTLY WITHIN CONCRETE WALL. POSTS TO BE INSTALLED IN GALVANIZED STEEL TUBES AFTER CONCRETE HAS CURED.

LOW RETAINING WALL DETAIL

SCALE: 1" = 1'-0"



TUBE CONNECTION DETAIL

SCALE: N.T.S.

HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

GEORGE RYDER ROAD MULTI-USE PATH
CONSTRUCTION DETAILS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2020207.01	08/07/2023	JC	BAM	RL	21	45

11/10/2023 L:\20207\20207.01 Completion\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\20207.02_HD(CONST DET).dwg
Last Saved By: JESSE.PRAAME
Printed by: Bridget Myers