

HIGHPOINT ENGINEERING, INC.
LAND PLANNING
PERMIT EXPEDITING
CIVIL ENGINEERING
CONSULTING

www.HighpointEng.com

CLIENT:
Berkeley Partners
1 WASHINGTON MALL | Suite 701
BOSTON, MA 02108

CONSULTANT:



5-11-2023

WAREHOUSE/INDUSTRIAL DEVELOPMENT

100/200 FINANCIAL PARK
FRANKLIN, MA

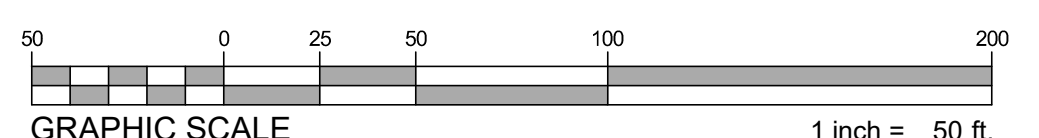
OWNER/APPLICANT: BERKELEY PARTNERS

SYMBOL LEGEND			
	EXISTING ELEVATION CONTOUR		DOUBLE GRATE CATCH BASIN
	PROPOSED ELEVATION CONTOUR		PROPOSED STORM DRAIN
	PROPOSED SPOT ELEVATION		PROPOSED ELECTRICAL TRANSFORMER
	PROPOSED TO/CB ELEVATIONS		PROPOSED RIP RAP
	PROPOSED TW/BW ELEVATIONS		PROPOSED SEWER MANHOLE
	PROPOSED CATCH BASIN		PROPOSED RETAINING WALL
	PROPOSED DRAIN MANHOLE		TEST PIT LOCATION

DRAIN SCHEDULE		DRAIN SCHEDULE		DRAIN SCHEDULE		DRAIN SCHEDULE	
STRUCTURE	ELEV.	STRUCTURE	ELEV.	STRUCTURE	ELEV.	STRUCTURE	ELEV.
AD-1 15' AREA DRAIN	RIM = 250.50 INV OUT = 247.50 (RG#1 TEE)	CB-14 SINGLE GRATE	RIM = 255.27 INV IN = 252.00 (BLDG 1 - SOUTH 2) INV OUT = 248.90 (WQU-3)	DMH-8 4' DIA. DMH	RIM = 257.53 INV IN = 250.50 (BLDG 1 - SOUTH 2) INV IN = 251.90 (DMH-1) INV OUT = 251.80 (SWM-4 IN (2))	DMH-18 5' DIA. DMH	RIM = 257.50 INV IN = 246.50 (DMH-11) INV IN = 255.00 (EX. BLDG 3 - SE) INV OUT = 251.90 (DMH-10)
AD-2 15' AREA DRAIN	RIM = 250.50 INV IN = 247.50 (RG#1 TEE)	CB-15 SINGLE GRATE	RIM = 254.18 INV OUT = 249.30 (WQU-3)	DMH-9 4' DIA. DMH	RIM = 257.55 INV IN = 250.50 (BLDG 2 - SOUTH) INV IN = 250.50 (EX. DMH 25) INV OUT = 250.40 (DMH-10)	DMH-20 5' DIA. DMH	RIM = 259.22 TOP OF SYSTEM = 253.93 BOTTOM OF SYSTEM = 250.25 INV IN = 251.00 (18" RCP - WQU-4) ESHWG = 240.80"
CB-1 SINGLE GRATE	RIM = 259.50 INV OUT = 254.20 (EX. WQI-25)	CB-16 SINGLE GRATE	RIM = 251.29 INV OUT = 249.30 (WQU-2)	DMH-10 5' DIA. DMH	RIM = 258.06 INV IN = 249.40 (DMH-9) INV IN = 251.70 (DMH-18) INV IN = 253.89 (EX. CB-1) INV OUT = 249.30 (DMH-6)	DMH-21 4' DIA. DMH	RIM = 260.17 INV IN = 255.10 (CB-6) INV IN = 255.10 (DMH-23) INV OUT = 255.00 (DMH-16)
CB-3 SINGLE GRATE	RIM = 260.49 INV OUT = 258.00 (DMH-5)	CB-17 SINGLE GRATE	RIM = 255.65 INV OUT = 249.30 (WQU-3)	DMH-11 4' DIA. DMH	RIM = 257.27 INV IN = 254.30 (EX. BLDG 3 - NE) INV OUT = 252.60 (DMH-18)	DMH-22 4' DIA. DMH	RIM = 252.94 INV IN = 247.05 (DMH-20) INV IN = 249.09 (SWM-1 IN (1))
CB-6 DOUBLE GRATE	RIM = 260.01 INV OUT = 255.20 (DMH-21)	CB-19 DOUBLE GRATE	RIM = 255.63 INV OUT = 253.25 (DMH-15)	DMH-12 4' DIA. DMH	RIM = 257.76 INV IN = 254.20 (BLDG 2 - NORTH 3) INV IN = 254.10 (DMH-13)	EX. DMH 25 4' DIA. DMH	RIM = 258.35 INV IN = 253.60 (EX. WQI-25) INV IN = 247.70 (CB-10) INV OUT = 251.40 (DMH-9)
CB-8 DOUBLE GRATE	RIM = 255.62 INV OUT = 252.50 (DMH-15)	DMH-1 4' DIA. DMH	RIM = 257.53 INV IN = 253.30 (BLDG 1 - SOUTH 3) INV OUT = 253.20 (DMH-8)	DMH-13 4' DIA. DMH	RIM = 257.76 INV IN = 252.90 (BLDG 2 - NORTH 2) INV IN = 252.90 (DMH-12) INV OUT = 252.80 (DMH-17)	WQU-2 CONTECH CDS2015-5	RIM = 258.35 INV IN = 253.60 (EX. WQI-25) INV IN = 247.70 (CB-10) INV OUT = 251.40 (DMH-9)
CB-9 DOUBLE GRATE	RIM = 255.62 INV OUT = 252.50 (DMH-15)	DMH-4 4' DIA. DMH	RIM = 257.53 INV IN = 256.30 (DMH-5) INV OUT = 256.20 (DMH-16)	DMH-15 4' DIA. DMH	RIM = 256.61 INV IN = 252.20 (CB-8) INV IN = 252.20 (CB-9) INV IN = 252.20 (CB-19) INV OUT = 252.00 (WQU-4)	WQU-3 CONTECH CDS2015-4	RIM = 258.35 INV IN = 248.60 (CB-15) INV IN = 248.60 (CB-14) INV IN = 248.60 (CB-17) INV OUT = 248.50 (DMH-20)
CB-10 SINGLE GRATE	RIM = 252.61 INV OUT = 248.20 (WQU-2)	DMH-5 4' DIA. DMH	RIM = 260.81 INV IN = 257.80 (CB-3) INV OUT = 257.50 (DMH-4)	DMH-16 4' DIA. DMH	RIM = 260.88 INV IN = 255.40 (DMH-21) INV IN = 255.40 (DMH-4) INV OUT = 253.70 (WQU-4)	WQU-4 CONTECH CASCADE CS-6	RIM = 257.32 INV IN = 251.80 (DMH-15) INV IN = 251.80 (DMH-16) INV OUT = 251.70 (SWM-2 IN (4))
CB-13 SINGLE GRATE	RIM = 252.16 INV OUT = 248.20 (WQU-2)	DMH-6 4' DIA. DMH	RIM = 259.77 INV IN = 249.00 (DMH-10) INV OUT = 248.90 (DMH-20)	DMH-17 4' DIA. DMH	RIM = 257.46 INV IN = 251.80 (DMH-13) INV OUT = 251.70 (SWM-2 IN (3))		

SUB-SURFACE INFILTRATION SYSTEM SCHEDULE		
STRUCTURE	SYSTEM ELEV.	SYSTEM CONNECTIONS
SWM-1: ACF R-TANK SD-9 38.12' x 95.49' 1,014 TOTAL CHAMBERS (26 ROWS x 39 CHAMBERS)	TOP OF STONE = 251.31 TOP OF SYSTEM = 250.31 BOTTOM OF SYSTEM = 243.75 INV IN = 246.50 (3-18" HDPE - SWM-4) INV IN = 246.50 (2-18" HDPE - SWM-7) ESHWG = 240.80"	
SWM-2: ACF R-TANK SD-5 203.39' x 36.81' 2,125 TOTAL CHAMBERS (25 ROWS x 85 CHAMBERS)	TOP OF STONE = 254.93 TOP OF SYSTEM = 253.93 BOTTOM OF SYSTEM = 250.25 INV IN = 250.50 (18" RCP - WQU-4) INV IN = 251.00 (18" RCP - DMH-8) INV IN = 251.00 (18" RCP - BLDG 1 - SOUTH 1) ESHWG = 240.80"	
SWM-3: ACF R-TANK SD-7 165.51' x 47.99' 2,175 TOTAL CHAMBERS (32 ROWS x 68 CHAMBERS)	TOP OF STONE = 250.36 TOP OF SYSTEM = 249.36 BOTTOM OF SYSTEM = 244.25 INV IN = 247.10 (3-24" HDPE - SWM-4) INV IN = 247.10 (5-24" HDPE - SWM-2) ESHWG = 241.30"	
SWM-4: ACF R-TANK SD-8 191.32' x 58.49' 3,160 TOTAL CHAMBERS (40 ROWS x 79 CHAMBERS)	TOP OF STONE = 250.09 TOP OF SYSTEM = 249.09 BOTTOM OF SYSTEM = 243.25 INV IN = 246.40 (3-24" HDPE - SWM-5) INV IN = 246.50 (3-18" HDPE - SWM-3) INV IN = 247.30 (12" RCP - WQU-2) INV IN = 247.45 (15" HDPE - RG #2) ESHWG = 241.30"	
SWM-5: ACF R-TANK SD-6 120.94' x 63.74' 2,156 TOTAL CHAMBERS (44 ROWS x 49 CHAMBERS)	TOP OF STONE = 250.65 TOP OF SYSTEM = 249.65 BOTTOM OF SYSTEM = 245.25 INV IN = 246.30 (8-24" HDPE - DMH-3) INV IN = 246.40 (5-24" HDPE - SWM-4) INV IN = 247.45 (15" HDPE - RG #2) ESHWG = 241.30"	
SWM-6: ACF R-TANK SD-4 109.56' x 15.81' 405 TOTAL CHAMBERS (9 ROWS x 45 CHAMBERS)	TOP OF STONE = 260.20 TOP OF SYSTEM = 249.20 BOTTOM OF SYSTEM = 256.25 INV IN = 257.85 (1-12" HDPE - DMH-25) INV IN = 256.24 (24" RCP - DMH-19) ESHWG = 253.30"	
SWM-7: ACF R-TANK SD-9 67.34' x 39.43' 729 TOTAL CHAMBERS (27 ROWS x 27 CHAMBERS)	TOP OF STONE = 252.30 TOP OF SYSTEM = 251.30 BOTTOM OF SYSTEM = 244.75 INV IN = 246.50 (2-18" HDPE - SWM-1) INV IN = 246.40 (30" RCP - DMH-22) INV IN = 248.55 (18" RCP - EX. DMH-23(1)) ESHWG = 241.80"	

* ESHGW DATA INTERPRETED FROM EXISTING MONITOR WELL READINGS TAKEN ON MARCH 26, 2023 BY McARDLE GANNON ASSOCIATES WITH A 1.3 FT FRIMPETER ADJUSTMENT APPLIED TO THE WELL READINGS.



REV DATE DESCRIPTION

ISSUE TYPE:
PERMIT SET

ISSUE DATE:
05/11/2023

PROJECT NUMBER:
22051

DRAWN BY: JJP/JMP
CHECKED BY: DJH

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SHEET TITLE:
GRADING & DRAINAGE PLAN

SHEET NUMBER:
C401

ISSUED FOR: PERMIT