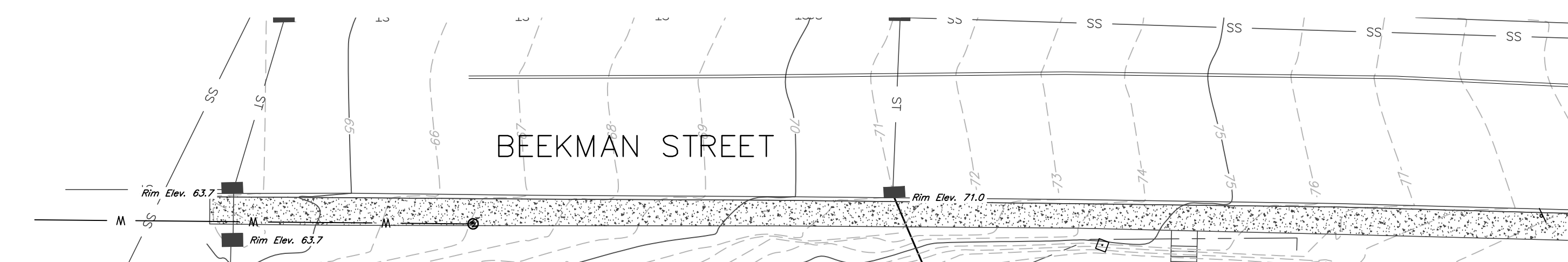


STRUCTURE	STRUCTURE DETAILS
EX SMH	RIM = 89.97 SMH5 TO EX SMH INV IN = 83.75
SMH1	RIM = 125.60 SMH1-SMH2 INV OUT = 120.80
SMH2	RIM = 129.96 SMH2-SMH3 INV OUT = 124.00
SMH3	RIM = 127.93 SMH1-SMH2 INV IN = 120.30 SMH2-SMH3 INV IN = 120.30 SMH3-SMH4 INV OUT = 120.20
SMH4	RIM = 118.68 SMH3-SMH4 INV IN = 113.90 SMH4-SMH5 INV OUT = 95.27
SMH5	RIM = 92.53 SMH4-SMH5 INV IN = 85.00 SMH5 TO EX SMH INV OUT = 84.90

PIPE NAME	LENGTH	SIZE AND MATERIAL	SLOPE
SMH1-SMH2	84 LF	8" SDR-35 PVC	0.59%
SMH2-SMH3	49 LF	8" SDR-35 PVC	7.51%
SMH3-SMH4	287 LF	8" SDR-35 PVC	2.19%
SMH4-SMH5	51 LF	8" SDR-26 PVC	20.00%
SMH5 TO EX SMH	81 LF	8" SDR-35 PVC	1.42%



INSPECTION SCHEDULE & LONG TERM MAINTENANCE OF STORMWATER STRUCTURES

CATCH BASINS AND SUMP:
ALL CATCH BASINS SHALL BE INSPECTED AFTER EACH STORM EVENT FOR SEDIMENT ACCUMULATION, AND DEBRIS, AND REMOVE AS NECESSARY. WHEN SEDIMENT ACCUMULATION WITHIN THE CATCH BASIN REACHES 1/2 OF THE SUMP DEPTH, IT SHALL BE REMOVED. ASSOCIATED PIPING SHALL BE INSPECTED ANNUALLY AND ACCUMULATED SEDIMENT SHALL BE REMOVED AS NEEDED.

UNDERGROUND DETENTION/INFILTRATION:
THE VORTEX UNITS SHALL BE INSPECTED QUARTERLY DURING THE FIRST YEAR OF OPERATION. THE MANUFACTURER RECOMMENDS THAT THE CDS UNITS BE INSPECTED BI-ANNUALLY (ONCE IN THE SPRING AND ONCE IN THE FALL). THE STRUCTURE SHALL BE VISUALLY INSPECTED FOR BLOCKAGE OR OBSTRUCTIONS IN THE INLET OR SEPARATION SCREEN. THE INSPECTION SHOULD ALSO QUANTIFY ACCUMULATION OF HYDROCARBONS, SEDIMENT AND TRASH WITHIN THE SYSTEM. INSPECTIONS AND MAINTENANCE SHALL BE PERFORMED BY QUALIFIED PERSONNEL WITH ADEQUATE TRAINING IN THESE TYPES OF UNITS. THE UNITS SHALL BE CLEANED BY VACUUM TRUCK ONCE A YEAR (EXCEPT FOR THE FIRST YEAR WHERE MORE FREQUENT CLEANINGS MAY BE REQUIRED).

UNDERGROUND DETENTION/INFILTRATION:
THE UNDERGROUND DETENTION/INFILTRATION AREA SHALL BE INSPECTED MONTHLY FOR SEDIMENT AND DEBRIS ACCUMULATION. INFLOW PIPES, OUTLET STRUCTURES AND SPILLWAYS SHOULD ALSO BE INSPECTED FOR SEDIMENT AND DEBRIS ACCUMULATION. ANY ACCUMULATED SEDIMENT OR DEBRIS SHOULD BE REMOVED AS NECESSARY BY MEANS OF A VACUUM TRUCK. AFTER STORM EVENTS, THE UNDERGROUND DETENTION/INFILTRATION AREA'S DE-WATERING DURATION SHOULD ALSO BE MONITORED. IF IT TAKES LONGER THAN 24 HOURS TO DE-WATER, THE BASIN SHALL BE JET CLEANED TO PROVIDE FULL DE-WATERING IN 24 HOURS. SEDIMENT SHALL BE CLEANED OUT OF THE INFILTRATION BASIN ANNUALLY.

EXISTING UNDERGROUND UTILITY NOTES:

- CONTRACTOR SHALL DIG TEST PITS TO VERIFY LOCATION, SIZE AND PIPE MATERIAL OF EXISTING UNDERGROUND UTILITIES. IF ANY EXISTING UTILITIES ARE NOT IN THE LOCATION WHERE THEY ARE SHOWN ON THE PLAN, IT SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.
- GENERAL CONSTRUCTION NOTES:
1. ALL OTHER UTILITIES (TELEPHONE, ELECTRIC, GAS, CABLE, ETC.) SHALL BE INCORPORATED PRIOR TO CONSTRUCTION. ALL SUCH UTILITY DESIGNS SHALL BE DEVELOPED IN COOPERATION WITH THE RESPECTIVE UTILITY COMPANIES.
2. THE CONTRACTOR SHALL PERFORM A UTILITIES CALL-OUT PRIOR TO CONSTRUCTION TO VERIFY ALL UNDERGROUND UTILITY LOCATIONS BY CONTACTING UPPO @ 1-800-962-7962.
3. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS AND INVERTS OF ALL CATCH BASINS & STORM SEWER LINES, SANITARY MANHOLES & SEWER LINES, WATERLINES AND OTHER UNDERGROUND UTILITY LINES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOT ASSUME THAT ALL LOCATIONS AS SHOWN ON THE PLAN ARE CORRECT. INVESTIGATIVE TEST PITS MAY BE REQUIRED TO VERIFY LOCATIONS.
4. PIPE CONNECTIONS TO ALL CATCH BASINS SHALL BE MADE WATERTIGHT, WITH PARTICULAR ATTENTION BEING PAID TO CONNECTIONS LOCATED WITHIN 10 FEET OF SEWER MAINS (AND SERVICE LATERALS).

POST CONSTRUCTION NOTES:

- UPON COMPLETION OF CONSTRUCTION OF THE STORMWATER FACILITIES, AS-BUILT DRAWINGS OF ALL STORMWATER PRACTICES AND AN OPERATION AND MAINTENANCE PLAN MANUAL SHALL BE PROVIDED TO THE CITY OF BEACON.

STRUCTURE	STRUCTURE DETAILS
CB1	RIM = 125.50 SUMP = 121.60 CB1-CB2 INV OUT = 122.60
CB2	RIM = 125.50 SUMP = 121.20 YD3-CB2 INV IN = 122.30 CB1-CB2 INV IN = 122.30 CB2-CB3 INV OUT = 122.20
CB3	RIM = 124.80 SUMP = 120.60 CB2-CB3 INV IN = 121.70 CB3-CB5 INV OUT = 121.60
CB4	RIM = 125.76 SUMP = 121.80 YD4-CB4 INV IN = 122.90 CB4-CB5 INV OUT = 122.80
CB5	RIM = 124.18 SUMP = 118.00 CB3-CB5 INV IN = 121.20 CB4-CB5 INV IN = 121.20 CB5-CB6 INV OUT = 121.10
CB6	RIM = 122.00 SUMP = 118.00 CB5-CB6 INV IN = 119.10 CB6-CB7 INV IN = 119.00
CB7	RIM = 121.08 SUMP = 117.00 CB6-CB7 INV IN = 118.10 CB7-WQ1 INV IN = 118.00

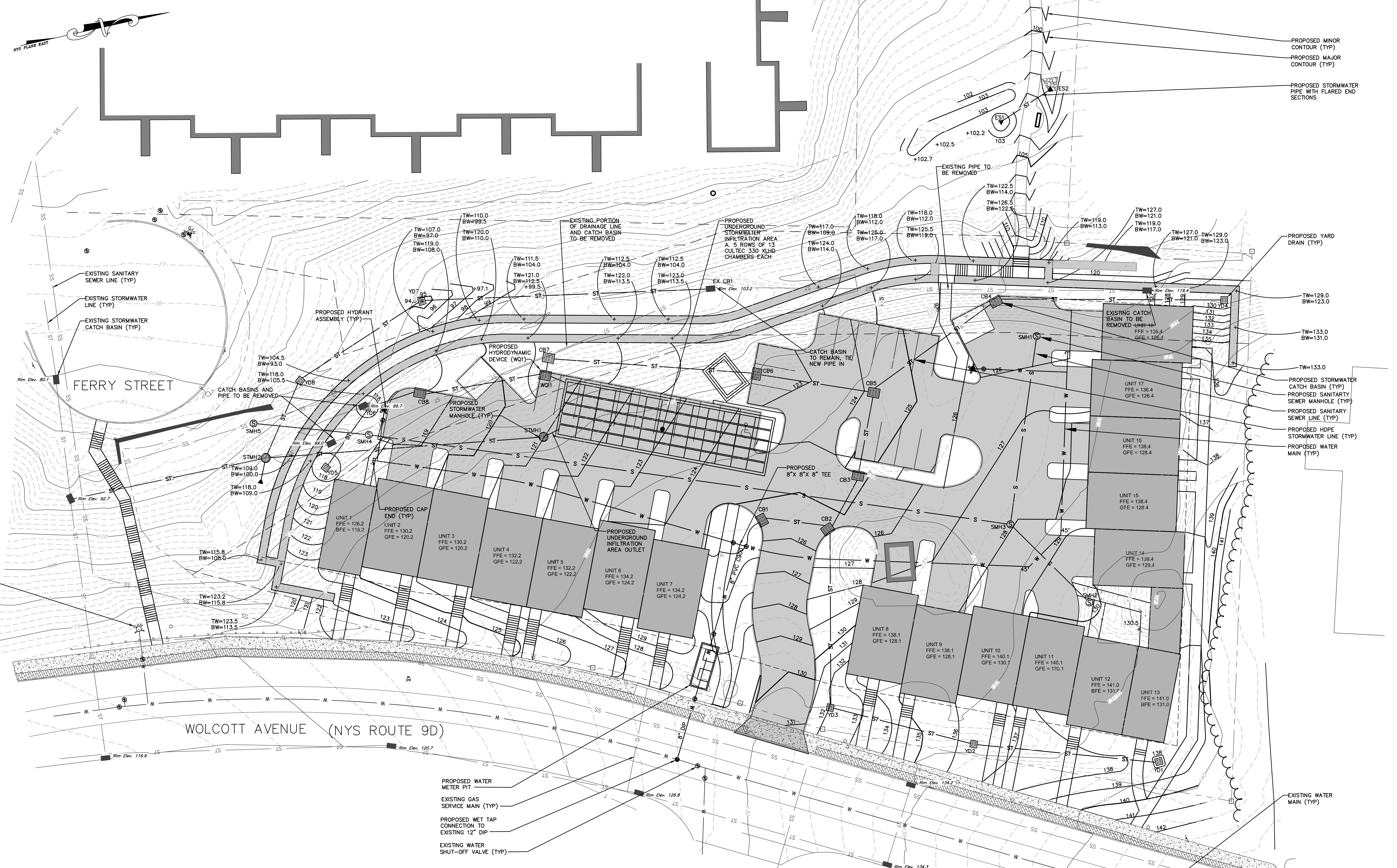
STRUCTURE	STRUCTURE DETAILS
CB8	RIM = 118.40 SUMP = 112.70 YD6-CB8 INV IN = 113.80 CB8-WQ1 INV OUT = 113.70
EX CB1	RIM = 103.16 SUMP = 88.92 EX CB1-YD7 INV OUT = 98.90
EX CB3	RIM = 81.86 SUMP = 76.84 STMH3-EX CB3 INV IN = 67.80 EX CB3 OUT INV OUT = 67.09
STMH1	RIM = 120.99 SUMP = 110.60 INF A OUT-STMH1 INV IN = 111.90 STMH1-STMH2 INV OUT = 111.60
STMH2	RIM = 100.07 SUMP = 88.60 YD8-STMH2 INV IN = 89.60 STMH1-STMH2 INV IN = 89.70 STMH2-EX CB2 INV OUT = 89.60
STMH3	RIM = 84.60 SUMP = 77.50 INF B(1)-STMH3 INV IN = 79.50 INF B(2)-STMH3 INV IN = 80.30 STMH3-EX CB3 INV OUT = 73.30
WQ1	RIM = 120.50 SUMP = 110.50 CB7-WQ1 INV IN = 117.60 CB8-WQ1 INV IN = 113.10 WQ1-CULTEC INV OUT = 113.10

STRUCTURE	STRUCTURE DETAILS
YD1	RIM = 137.70 SUMP = 133.80 YD1-YD2 INV OUT = 134.80
YD2	RIM = 136.34 SUMP = 132.30 YD1-YD2 INV IN = 133.40 YD2-YD3 INV OUT = 133.30
YD3	RIM = 132.07 SUMP = 128.00 YD2-YD3 INV IN = 129.10 YD3-CB2 INV OUT = 129.00
YD4	RIM = 129.00 SUMP = 125.10 YD4-CB4 INV OUT = 126.10
YD5	RIM = 117.50 SUMP = 113.60 YD5-YD6 INV OUT = 114.60
YD7	RIM = 84.50 SUMP = 80.50 EX CB1-YD7 INV IN = 91.60 YD7-YD8 INV OUT = 91.50
YD8	RIM = 82.20 SUMP = 85.34 YD8-YD8 INV IN = 89.80 YD8-STMH2 INV OUT = 89.80

PIPE NAME	LENGTH	SIZE AND MATERIAL	SLOPE
CB1-CB2	29 LF	15" CORR HDPE	1.02%
CB2-CB3	27 LF	15" CORR HDPE	1.83%
CB3-CB5	37 LF	15" CORR HDPE	1.07%
CB4-CB5	68 LF	15" CORR HDPE	2.37%
CB5-CB6	53 LF	15" CORR HDPE	3.80%
CB6-CB7	93 LF	15" CORR HDPE	0.97%
CB7-WQ1	8 LF	15" CORR HDPE	5.07%
CB8-WQ1	56 LF	15" CORR HDPE	1.07%
ES1-ES2	25 LF	15" CORR HDPE	1.22%

PIPE NAME	LENGTH	SIZE AND MATERIAL	SLOPE
EX CB1-YD7	128 LF	15" CORR HDPE	5.70%
INF A OUT-STMH1	8 LF	12" CORR HDPE	1.32%
INF B(1)-STMH3	32 LF	4" CORR HDPE	4.69%
INF B(2)-STMH3	32 LF	4" CORR HDPE	4.69%
STMH1-STMH2	124 LF	15" CORR HDPE	17.72%
STMH2-EX CB2	87 LF	15" CORR HDPE	1.04%
STMH3-EX CB3	37 LF	15" CORR HDPE	14.91%
WQ1-CULTEC	11 LF	15" CORR HDPE	19.27%
YD1-YD2	82 LF	15" CORR HDPE	1.70%

PIPE NAME	LENGTH	SIZE AND MATERIAL	SLOPE
YD2-YD3	66 LF	15" CORR HDPE	6.39%
YD3-CB2	79 LF	15" CORR HDPE	8.47%
YD4-CB4	101 LF	15" CORR HDPE	3.16%
YD5-YD6	33 LF	15" CORR HDPE	1.22%
YD6-CB8	24 LF	15" CORR HDPE	1.24%
YD7-YD8	64 LF	15" CORR HDPE	2.64%
YD8-STMH2	38 LF	15" CORR HDPE	0.53%



Grading And Utility Plan
Scale: 1" = 20'

RECOMMENDED FOR APPROVAL:

MAYOR OF THE CITY OF BEACON _____ DATE _____

APPROVED BY RESOLUTION OF THE CITY COUNCIL OF THE CITY OF BEACON

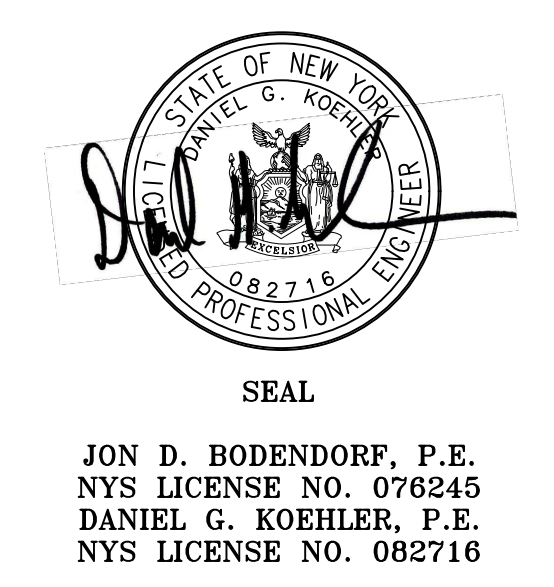
ON THE _____ DAY OF _____ 20____

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE _____ DAY OF _____ 20____ SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAN, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____ 20____ BY _____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.



NO.	DATE	DESCRIPTION	BY