



Memo

To Marilyn Timpone-Mohamed, ASLA, AICP
From Tim Fecker
Date December 28, 2011
Re: **1. Utility Plan Submission Review**
2. Construction Management Submission Review

1) The following is a response to comment #1 in the John Meyer Consulting memo dated December 14, 2011, regarding the Utility Plan Submission Review. All other items from the original November 15, 2011 have been satisfactorily addressed. The following is the history of this comment from the original letter and the current response.

Comment 1: We believe the Building Inspector would want the plumbing engineer to confirm that the existing internal sanitary sewers and sanitary sewer service line have adequate capacity to handle the additional wastewater flow as a requirement for a Building Permit.

1st Response (Memo of December 2, 2011): The mechanical and plumbing consultant has looked into the internal sanitary sewer waste line for the expansion. The project is proposing to connect to an existing sanitary waste line. The existing sanitary sewer line has a grade drip of 1/8" fall/ft. As defined in the NY Plumbing Code Table 710.1 (1), this existing line has a capacity of 700 fixture units. The existing "North Tower" of the hospital that is currently contributing to the sanitary line has a 500 fixture unit count. It has been determined that the fixture count for the expansion is 187. Upon completion of the expansion, the total figure count will be 687, below the 700 fixture unit count. Therefore, the existing sanitary line has sufficient capacity for the expansion.

Status from JMC on Dec 14, 2011: The response indicates that the internal sanitary line (whose diameter is not indicated) to which the North Tower discharges has adequate capacity. The response does not indicate whether the downstream remainder of the internal sanitary sewer infrastructure of the hospital, which discharges to the 8-inch service line at the south end of the hospital, has adequate capacity to handle the incremental flow.

Current response: On Wednesday, December 21, 2011, with the assistance of the Lawrence Hospital engineering department, we performed a verification of the downstream remainder of the sanitary sewer infrastructure of the hospital. It was determined that the entire hospital feeds a manhole in the center of the loading dock at the southwest side of the hospital campus. Within this manhole there is an incoming 8-inch service line which currently serves the Hospital North and West wings (the

6-inch line discussed in the 1st response above flows into this 8-inch line), and another incoming 6-inch service line which currently serves the Hospital South wing. Outflow from this manhole is a 12-inch line that flows to the Palmer road service line at the southwest corner of the property. The Palmer Hall building has a separate service line directly to the Palmer road service line and thus is not included in this analysis.

Therefore, the Plumbing Engineer prepared a thorough analysis of the entire hospital for comparison against the available capacity of the infrastructure described above. A plumbing fixture summary for the North, South, West and new expansion is attached for reference (see attached).

The total for the North and West Towers is calculated at 1020 sanitary fixture units. Assuming a safety factor of 25% to cover added fixtures, older higher flow fixtures, etc, this total becomes 1,275 sanitary fixture units. The existing 8" sanitary main line can accommodate up to 1,600 sanitary fixture units according to the NYS Plumbing Code Table 710.1 (1). The New Expansion is planned to connect to this same 8" sanitary line and will be adding approximately 174 sanitary fixture units for a new total of 1,449 sanitary fixture units.

The total for the South Tower is calculated at 1,035 sanitary fixture units. Assuming a safety factor of 25% to cover added fixtures, older higher flow fixtures, etc this total becomes 1,294 sanitary fixture units.

The existing 8" sanitary sewer line from the North and West Towers are drained into a manhole along with the 6" sanitary sewer line from the South Tower. The outflow from this manhole is a 12" sanitary line. Based on the calculated sanitary fixture units, this 12" sanitary line currently carries 2,569 sanitary fixture units. According to the NYS Plumbing Code Table 710.1 (1), a 12" sanitary main at 1/8" fall/ft can carry up to 8,300 sanitary fixture units.

Therefore, the additional 174 sanitary fixture units from the proposed expansion can be accommodated in both the existing 8" sanitary sewer main from the North and West Towers and the combined 12" sanitary sewer main from the North, West and South Towers.

2) The following is a response to comment #3 in the John Meyer Consulting memo dated December 14, 2011, regarding the Construction Management Submission Review. All other items from this memo have been satisfactorily addressed. The following is the history of this comment and the current response.

Comment 3: Locations for materials storage and stockpiles should be indicated on the plans, with adequate erosion and sediment controls where applicable.

Response: The Construction Logistics Plan sheet A103 has been revised to indicate a small topsoil location within the construction staging area. Everything within this zone will be bounded by adequate erosion and sediment controls as indicated on the Civil Drawing sheet C-07. However, as noted in the Construction management Plan, due to the limited amount of staging area, construction materials and

supplies will be brought to the site on an as-needed weekly basis; therefore, no long term material storage is anticipated in this area. After the shell building is enclosed, some supplies and materials for the interior finish-out will be stored within the shell space.

Status: We recommend that stone stabilization not be placed beneath the topsoil stockpile. The location of the silt fence in relation to the topsoil stockpile is not clear on Drawing C-07. Silt fence should be installed at the immediate perimeter of the stockpile.

Current response: Sheet C-07 and Sheet A106 have both been revised to indicate that there will be no stone stabilization underneath the topsoil stockpile, and both clearly indicate that the silt fence will be installed around the perimeter of the stockpile.

End of Memorandum

Attachments: Plumbing Fixture Calculation For:

- 1) New Addition
- 2) North and West Towers
- 3) South Tower

PLUMBING FIXTURE CALCULATION

Project Name LHC Bronxville New Expansion
 Project Number
 Date 12/21/2011

Fixture Type	Quantity	San FU Each	San FU Total	CW FU Each	CW FU Total	HW FU Each	HW FU Total	Water Total
Water Closet (Flush Valve)	10	6	60	10	100	0	0	100
Water Closet (Tank Type)		6	0	2	0	0	0	0
Urinal		4	0	5	0	0	0	0
Lavatory	11	1	11	2	22	2	22	44
Sink	12	2	24	2	24	2	24	48
Shower	2	2	4	2	4	2	4	8
Floor Drains	9	3	27	0	0	0	0	0
Mop Sinks	2	3	6	2	4	2	4	8
Flushing Rim Sinks	2	6	12	10	20	10	20	40
EWC's	2	1	2	1	2	0	0	2
Scrub Sinks	14	2	28	2	28	2	28	56
Total			174		204		102	306

PLUMBING FIXTURE CALCULATION

Project Name LHC Bronxville North and West Towers
 Project Number
 Date 12/21/2011

Fixture Type	Quantity	San FU Each	San FU Total	CW FU Each	CW FU Total	HW FU Each	HW FU Total	Water Total
Water Closet (Flush Valve)	45	6	270	10	450	0	0	450
Bathroom Group	57	6	342	2	114	0	0	114
Urinal	3	4	12	5	15	0	0	15
Lavatory	45	1	45	2	90	2	90	180
Sink	40	2	80	2	80	2	80	160
Shower	12	2	24	2	24	2	24	48
Floor Drains	45	3	135	0	0	0	0	0
Mop Sinks	7	3	21	2	14	2	14	28
Flushing Rim Sinks	6	6	36	10	60	10	60	120
EWC's	7	1	7	1	7	0	0	7
Scrub Sinks	12	2	24	2	24	2	24	48
Kitchen Sinks	12	2	24	2	24	2	24	48
Total			1020		902		316	1218

PLUMBING FIXTURE CALCULATION

Project Name LHC Bronxville South Tower
 Project Number
 Date 12/21/2011

Fixture Type	Quantity	San FU Each	San FU Total	CW FU Each	CW FU Total	HW FU Each	HW FU Total	Water Total
Water Closet (Flush Valve)	95	6	570	10	950	0	0	950
Water Closet (Tank Type)		6	0	2	0	0	0	0
Urinal	3	4	12	5	15	0	0	15
Lavatory	107	1	107	2	214	2	214	428
Sink	40	2	80	2	80	2	80	160
Shower	40	2	80	2	80	2	80	160
Floor Drains	30	3	90	0	0	0	0	0
Mop Sinks	7	3	21	2	14	2	14	28
Flushing Rim Sinks	6	6	36	10	60	10	60	120
EWC's	7	1	7	1	7	0	0	7
Scrub Sinks	12	2	24	2	24	2	24	48
Kitchen Sinks	4	2	8	2	8	2	8	16
Total			1035		1452		480	1932