COMMONWEALTH of VIRGINIA

DEBRA FERGUSON, Ph.D.
COMMISSIONER

DEPARTMENT OF
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September 23, 2014

The Honorable Walter A. Stosch, Co-Chair
The Honorable Charles Colgan, Co-Chair
Senate Finance Committee
10th Floor, General Assembly Building
910 Capitol Street
Richmond, VA 23219

Dear Senator Stosch and Senator Colgan:

Item 314.C. of the 2014 Special Session *Appropriation Act*, required the Commissioner of the Department of Behavioral Health and Developmental Services (DBHDS) to "*submit a report to the Governor and to the Chairmen of the House Appropriations and Senate Finance Committees on November 1, 2014, that provides information on any identified efficiencies and improvements in the quality of services associated with the new Western State Hospital facility.*"

Please find enclosed the report in accordance with Item 314.C. Staff at the department are available should you wish to discuss this request.

Sincerely,

Debra Ferguson, Ph.D.

Enc.

Cc: William A. Hazel, Jr., M.D.
Kathleen Drumwright
Joe Flores
Susan E. Massart
Daniel Herr
Donald Darr

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September 23, 2014

The Honorable S. Chris Jones, Chair
House Appropriations Committee
General Assembly Building
P.O. Box 406
Richmond, VA 23218

Dear Delegate Jones:

Item 314.C. of the 2014 Special Session *Appropriation Act*, required the Commissioner of the Department of Behavioral Health and Developmental Services (DBHDS) to "*submit a report to the Governor and to the Chairmen of the House Appropriations and Senate Finance Committees on November 1, 2014, that provides information on any identified efficiencies and improvements in the quality of services associated with the new Western State Hospital facility.*"

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September 23, 2014

The Honorable Terry McAuliffe, Governor
Commonwealth of Virginia
Patrick Henry Building
P.O. Box 1475
Richmond, VA 23218

Dear Governor McAuliffe:

Item 314.C. of the 2014 Special Session *Appropriation Act*, required the Commissioner of the Department of Behavioral Health and Developmental Services (DBHDS) to "*submit a report to the Governor and to the Chairmen of the House Appropriations and Senate Finance Committees on November 1, 2014, that provides information on any identified efficiencies and improvements in the quality of services associated with the new Western State Hospital facility.*"

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2014

Western State Hospital Efficiency Study

DBHDS & WSH Staff

Department of Behavioral Health and Developmental Services

11/1/2014

This report is prepared in compliance with Item 314, Paragraph C 2014 Special Session Virginia Acts of the General Assembly.

"The Commissioner of the Department of Behavioral Health and Developmental Services shall submit a report to the Governor and to the Chairmen of the House Appropriations and Senate Finance Committees on November 1, 2014, that provides information on any identified efficiencies and improvements in the quality of services associated with the new Western State Hospital facility."

BACKGROUND

Western State Hospital located in Staunton, Virginia is one of the state's three mental health hospitals. In 2013, the new building was finished and patients were successfully transitioned from the old facility to the new one. Minor elements and warrantee issues continue to be addressed during the one-year warrantee period provided in the contract.

The original framework of the project was to take the existing campus consisting of 23 buildings, (only eight of them were in use) and consolidate them into one structure. The buildings on the original campus were built in the 1950's to serve 2,000 patients with minimal emphasis on restorative treatments. These buildings no longer represented environments appropriate for delivering state-of-the-art mental health care which is heavily oriented to restorative therapies. Evidence-based-design yielded insights about how to design mental healthcare facilities for maximal effectiveness and healing impact on patients with the utmost support for staff. The older campus arrangement fell significantly short of ever effectively accommodating these markers for state-of-the-art design.

Additionally, a facility survey indicated that the buildings at Western State Hospital were in "poor" condition, and following that survey, there was virtually no improvement to the facilities due to the lack of funding for such upgrades. The buildings were about 45-60 years old, well past their effective life cycle. The heating, ventilating and air conditioning systems required extensive maintenance to keep them operational; the electrical systems were under sized for contemporary functions and demands; and the fire alarm systems were out of date and not addressable and most buildings were not sprinkled. Building insulation, windows and doors were not energy efficient resulting in high heating and cooling costs. In addition the building required around $60 million dollars in deferred maintenance projects representing half of the replacement cost of building the new facility. Such cost would have been incurred if the new facility had not been built.

BUILDING EFFICIENCIES

The following table contrasts the differences between the old and the new site. This list includes efficiencies in labor, operations and maintenance and additionally highlights many of the new buildings features which improve service delivery, security and care of the patients.

Old Site	New Site
Multiple Buildings, as well as a 1 mile loop to get to all locations	Single Building; reduces number of vehicles, labor and maintenance costs for separate locations
Required transport of patients to treatment malls in multiple locations. Patients could only attend one mall.	Ease of movement within treatment malls due to new features (locks, security cameras, patient tracking devices) and only having one building
Facility features not adequate to prevent elopements which happened occasionally at the old site	Compact design and newer windows provide for improved security. No elopements to date
Large building area to maintain (460,000 sq. ft.)	New building has 360,000 sq. ft. The new building requires less maintenance, based solely on the reduced building area.
Old facility was harder to clean/maintain due to older building materials.	The facility is easier to maintain and clean due to investment in materials and finishes.
Old site had emergency backup power only for exit lights, emergency command center and limited circuits.	New building has backup power capable of serving the entire building, thus reducing operational risks associated with power outages.
"Gang" bathrooms and showers	Private bathrooms and showers increase the patients privacy and security
Old site had 358 acres to maintain	New site has 68 acres to maintain
Needed 54 non state vehicles to maintain facility	Facility requires fewer than 20 now
Multiple mechanical systems spread out over facility requiring maintenance	One centralized mechanical area housing all operations
Few buildings with fire sprinklers	New facility is fully developed with fire sprinklers reducing the fire risk at facility.
Old site had many pipes running all over the campus to the various buildings. Frequently had 2/3 water main breaks a year.	Newer and fewer pipes due to centralization of facility.
Storage facilities were not uniform causing loss of staff time due to inability to find supplies.	New facility stores and supplies are located in uniform areas making it easy for staff to find reducing loss staff time therefore enhancing standardization.
Old facility had no secure area to drop off individuals.	New facility has an enclosed admissions unit allowing for greater privacy and security
Windows in the old site were harder to maintain and clean and patients could more easily bypass them and elope.	Windows in new facility are lower maintenance and easier to clean due to design.
Old site was not designed to be energy efficient.	The new site meets the qualifications for LEED© Silver rating.
The old buildings had many places which were allowed to be in non-compliance because they were deemed to be unreasonable to change in the old buildings.	This building is FULLY compliant with ADA-Accessibility Guidelines.
In the old site unit sizes were fixed and patients had to be transferred to other units and other	The design of the new facility with residential units connected through multiple security doors allows

buildings.	unit size to be increased or decreased depending upon the population and patient acuity
Unit layouts and organization were not uniform.	All units are standardized to allow staff to easily and efficiently work within multiple units and not require additional orientation.
Old facility has a tray line system for food preparation.	Conversion of the food preparation system from a tray line to a pod system has created significant staff savings and improved speed of operation by allowing each of the pods to operated at its own speed without interrupting the flow of the entire tray line.
Old site discharged less filtered and higher volume amount of storm water.	Storm water is retained on site much longer and allowed to filter pollutants from the storm water stream. Thus the quality of the storm water discharge is far better and the volume or quantity is reduced.
Old facility had large boilers and chillers serving large sections of the facilities.	New building has many small compressors throughout the building, instead of one large chiller. Thus, if a compressor is out of service, it is only affecting a small portion of the hospital is without air-conditioning. There are multiple boilers which can provide the needed heat. The failure of any boiler will merely reduce the capacity, but heating will still be available to vital areas of the building.
There was limited access to outside space by the patients.	Each unit in the new facility has a 3 season's porch and an individual secured backyard to allow patients greater access to fresh air and time out of doors.

ENERGY EFFICIENCIES

The new building was designed to be more energy efficient and has many features designed to conserve energy usage. The following table displays the natural gas and electricity usage for the first six months of the year.

NATURAL GAS

Begin	End	OLD SITE Volume (dekatherm)	NEW SITE Volume (dekatherm)
1/1/2014	1/31/2014	5,905.00	1,614.20
2/1/2014	2/28/2014	3,799.00	1,217.60
3/1/3014	3/31/2014	5,784.00	1,108.30

4/1/2014	4/30/2014	2,938.00	546.90
5/1/2014	5/31/2014	1,742.00	359.90
6/1/2014	6/30/2014	1,166.00	313.80
TOTAL		21,334.00	5,160.70

ELECTRICITY

Begin	**End**	**OLD SITE Volume (KWH)**	**NEW SITE Volume (KWH)**
1/1/2014	1/31/2014	408,000.00	629,280.00
2/1/2014	2/28/2014	369,600.00	564,480.00
3/1/3014	3/31/2014	384,000.00	577,200.00
4/1/2014	4/30/2014	355,200.00	548,400.00
5/1/2014	5/31/2014	513,600.00	633,600.00
6/1/2014	6/30/2014	628,800.00	627,120.00
TOTAL		2,659,200.00	3,580,080.00

The new site uses nearly 75 percent less natural gas than the older site. However, the new site appears to be using nearly 30 percent more electricity. Unfortunately, at this time, there is only six months worth of data to compare to the previous year. A full year and time series comparison is needed to understand the exact savings which could be generated from the new building. For example, there are many features in the building that will help save on energy such as scheduled shutdowns for areas not in use at night, motion sensor lights so that lights are not left on unnecessarily, multiple energy efficient HVAC units, and individual zones to monitor/manage temperatures. These new features will give the staff great control in being able to save energy and monitor its usage and consumption as the staff continues to learn about these systems and optimizes practices. Additionally, this past winter was one of the coldest on record in Virginia. These totals may not be a fair representation of what most years will look like. Until the systems operate through all climatic seasons, comparisons are somewhat difficult.

One other way to analyze the overall energy usage is to convert one of the above forms of energy into another. The table on the next page shows all the energy converted in (KWH).

	Old Site	New Site
Natural Gas (dth)	21,334.00	5,160.70
Natural Gas (dth) Converted to Electricity (KWH)	5,100,341	1,235,280
Total KWH (dth conversion + KWH)	5,100,341 + 2,659,200 = 7,759,541	1,235,280 + 3,580,080 = 4,815,360

If viewed under this analysis, WSH is using significantly less ***energy*** to run the new hospital as compared to the old site.

COST RELATED EFFICIENCIES

As part of the original proposal, a better designed facility would result in less staff and a more energy efficient building. Western State Hospital, like many facilities over the last six years has had to cope with a multitude of budget reductions. At the start of the project the WSH budget was reduced by $633,075 to reflect the impact of the new hospital. During the construction of the project, staffing levels were allowed to diminish, along with a slightly lower patient population.

The following table outlines the rest of the reductions in their budget over the last six years.

YEAR DESCRIPTION	Amount	FTE'S lost
2012 Revenue Shortfall	$ (1,154,324)	15.00
2011 Pharmacy/Direct-Support Staff Reduction	$ (551,534)	
2011 Worker's Comp Increase not funded	$ (373,590)	
2011 Pharmacy Part D reduction (estimated)	$ (175,000)	
2010 Revenue Reduction	$ (2,493,602)	33.00
2010 Unanticipated reduction related to fringes	$ (268,000)	
2009 Human Resource Consolidation	$ (127,000)	1.00
2009 Revenue Reduction Round 2	$ (231,041)	
2008 Revenue Reduction Round 1	$ (486,855)	8.00
2008 Reduction of New Hospital	$ (633,075)	11.00
TOTAL	$ (6,494,021)	68.00

The new facility has been operational 10 months and despite having a seven percent reduction in their Full Time Equivalent staff (FTEs or salaried employees) since 2009, WSH has been dealing with an increasing rate of admissions and discharges. The admissions and discharge process requires a significant amount of staff time. Thus, an increase in admissions and discharges is an increase in workload for many different areas of the hospital. (Physician, admissions, nursing, social work, psychology, clerical, psychosocial rehab to name a few). If not for the new facility, the hospital may not have been able to effectively absorb the impact of a greater number of admissions and discharges (flow-through).

Admissions

Admissions	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
6 MONTH AVERAGE(Jan-June)	57.5	52	47.66	49.83	45.16	62.5

The number of admissions has increased compared to prior years. WSH has been able to cope with these challenges due, in part, to the efficiencies the building allows in staffing.

Discharges

Discharges	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
6 MONTH AVERAGE (Jan-June)	54.83	47.83	47.50	49.33	44.67	57.00

Discharge planning requires multiple professional staff to plan for and meet specified discharge criteria and also requires additional coordination of external/local resources (i.e.-CSB's) to ensure that the probability of a successful discharge is maximized. WSH has been averaging a high level of discharges compared to historic trends, but has been able to continue a high level of service due in part to the efficiencies gained in the new hospital building.

FTE's

6 MONTH AVERAGE	2009	2010	2011	2012	2013	2014
FTE	703.75	654.68	638.73	631.23	644.43	649.00
MONTHLY CENSUS	227.17	224.17	230.67	219.83	220.00	219.17*

*It should be noted that census on September 1st of this year was 234 and FTE's on that date were 648 (adjusted for CCCA security) Also, the average census July was 232.

When FTE's are compared to the average monthly census, it appears that WSH's census is lower than past years. This is misleading due to the fact that WSH tried to hold down their census prior to relocating to their new site. Currently, WSH has been running near capacity with census due to the recent statutory changes which has increased the number of TDO admissions significantly. In summary, WSH has already achieved savings in their staffing costs associated with the design and improvements of the building, despite facing significant pressures due to higher than normal admissions and discharges.

OTHER BUDGET PRESSURES

WSH has also had to keep up with the growing costs to pilot the implementation of the Electronic Medical Record system These costs include training costs and subsequent overtime to backfill shifts. Additionally, the specialized infrastructure introduced at Western including automated building access controls and tracking and individualized duress systems have increased the infrastructure support costs

to third parties (this was newly funded beginning FY2015). WSH also has been experiencing a higher number of individuals needing medical care outside of WSH. These services include treatments for cancer, delivery of babies, and swallowing objects to name a few. From a budgeted amount of $568K in FY2014, WSH spent almost $1.5 million in FY2014. Of significance is the fact that a significant portion of these costs were incurred within 30 days of admission which speaks directly to the increased medical acuity of the clients served. Pharmacy costs have also increased due to the availability of newer medications and general price increases. In addition, as part of the increasing flow through (more patient days due to higher admissions/discharges) costs naturally increase based solely on the number of patient days.

INFLATION

It is also important to point out the above staffing analysis does not consider overall inflation growth. When inflation is considered, WSH's buying power since 2008 has decreased by $5.5 million dollars. If that is included WSH has achieved a significant amount of savings to run the operation.

2008 WSH EXPENDITURES	2014 ADJUSTED FOR INFLATION	LOSS OF BUYING POWER
$52,329,134	$57,928,978	$5,599,844

Exact dollar for dollar efficiencies cannot be clearly identified due to the number of budget cuts, lost FTE's and inflation pressures that do no tie directly to the building of the new facility. However, WSH is currently serving a higher number of admissions and their current census is close to capacity. They have only been able to achieve this because of the new facility and the efficiencies which the building allows in staffing and other related costs.

IMPROVED TREATMENT OUTCOMES

Another method to measure WSH efficiencies is the improved treatment outcomes as a result of the new facility.

Recovery Oriented Design to Reduce Patient Distress and Aggression

The new building was designed to reduce the patients' distress and aggression. This was achieved by the following design elements.

1. Single patient rooms with private baths and locks- The new building allows patients to have their own private bedroom and bathroom. The door to the bedroom is managed electronically and a "tag" is assigned to each patient allowing only the individual patient to safely/securely enter the room (staff also can access the room with a key). Any other patient entering another person's room generates an alarm. This gives the individuals a feeling of privacy and increases safety. Patients cannot intrude into the private space of other patients or gain access to their private belongings which helps maintain a calm, safe milieu.

2. Increase in natural light and viewing of nature- The new building has a significant increase in the number of windows, providing greater sunlight as well as viewing the beautiful scenes around the hospital. These types of elements in the design help patients feel less distress and create a sense of openness.

3. Patient Access to Doors- The new facility allows patients the ability to access some doors while restricting others. This gives the patients greater freedom of movement around the hospital as well as cutting back the amount of time that staff needs to manage doors. With an increase in mobility around the facility patients will feel less confined and able to function more independently which is a goal of recovery.

4. Distribution of medication- Patients will avoid waiting in lines for medication like the old facility. The patients are now able to speak to staff at the window. Additionally, the old facility distribution of medication happened in common rooms. This led to altercations among the patients. This is alleviated by the new design for medication distribution areas in the hospital.

5. Psychological rehabilitation provided in one building – At the old facility, there were multiple treatment malls separated in different buildings. Patients could only be assigned to one mall which did not always meet all their individualized recovery needs. The patients had to be transported (sometimes by vehicle) and sometimes wait for treatment as a result of having to be transported. The new design has all the malls adjacent and interconnected, allowing for patients to attend the malls and groups most suited to their recovery needs. More classes are accessible to all patients.

IMPROVED STAFF SAFETY AND SECURITY OUTCOMES

Another measure of WSH improvement is to consider the improvement in staff safety and security. The following are features of the new hospital which enhance or improvement these outcomes.

Safety Features and Room Designs to Improve Staff Safety and Security

1. Eliminated Blind-spots in Patient Bedrooms- At the old hospital, some of the bedrooms were designed in such a way that patients could hide from view of the staff without going into the room completely. The new building eliminates this by being able to view the entire room by taking only one step into the room. Additionally, the bathroom lights are “motion sensory” so it is clear to see if a patient is in the bathroom during nightly checks.

2. Greater Presence of Security in the Hospital and on the Units- The new facility is only one building compared to the multiple buildings at the old site. This allows security to put much greater focus on security and safety inside the building with patients and staff versus outside the building. Having only one building allows for the security walk-throughs to be more frequent. By providing more security resource to the units, security is more familiar with the staff and patients on the units as well as the milieu dynamics. This provides patients greater sense of security/safety. The increased security reduces the feeling of fear and isolation of the staff workers.

3. All Units in One Building – In the old site there were single units in a building, leaving some units more distant from assistance when help was needed as staff would need to come from another building causing a delay in response. With all the units in one building staff are readily available from above, next to, or below the unit needing help. This results in more staff available to respond quickly in an emergency, either medical or behavioral.

4. Cameras- The new building is equipped with additional cameras, allowing for greater observation by security and reducing blind spots. These cameras are also able to assist the hospital during investigations adding a new dimension to documentation.

5. Integrated Nursing Stations/Team Center and Medication Rooms- The new facility has consolidated many areas which use to be separate. Members of the staff are able to work together, as opposed to the old facility, where some functions were isolated because of the way the buildings were designed.

6. Duress System- The new security system also allows for staff, to call, at any time they are in duress. Knowing they are only a tap of a button away from contacting help greatly reduces the anxiety experienced by some members of staff. Additionally, the system identifies the employee and location of the duress which speeds up the response time.

7. Single Point of Entry- The new facility has a metal detector and a single point of visitor entry. This allows staff to know who is coming and going from the facility and let them control it at a greater level than the previous building. This reduces confusion and fear that comes from staff not knowing or being able to control who is entering the facility. Also, the patient entrance is via an enclosed sally port which allows for patient transfer out of the sight of the public and in a controlled area where the security staff can be focused during a potentially difficult transfer and contain any situation, before entering the building. This ensures that the Security Department and Information Center are able to sign individuals into the facility and inspect for any contraband.

MEASUREMENTS OF OUTCOMES

The new facility has now been open for ten months (Nov 2013 –August 2014). Very soon after the move to the new facility, Western State experienced a significant increase in its demand for services secondary to the anticipated and actual changes in TDO laws and admission policies. This makes comparison and measurement of outcomes and the impact made by the new facility more difficult. Even without data for a full year at the new site, it is clear that the rate of admissions and discharges has increased significantly over this past fiscal year. When comparing the first six months of fiscal year 2014 to the second six months it is clear demand is up since the move to the new hospital.

Fiscal Year	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Total Admissions	667	620	557	585	530	671
Total Discharges	667	620	538	598	539	651

Fiscal Year 2014	**Admissions**	**Discharges**
6 MONTH TOTAL (July – Dec)	296	309
6 MONTH TOTAL (Jan-June)	375	340

Higher Patient Acuity

The data below illustrates the significant increase in the numbers of Temporary Detention Orders (TDO's) admissions and increased requirement for direct observation which together demonstrates the hospital is serving a higher acuity patient population.

TDOs	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
6 MONTH TOTAL (Jan-June)	65	50	79	74	57	106

Patients admitted on TDO come from the jails (forensic) and directly from the community (civil) most often very acutely ill and on NO medication. Frequently their behavioral presentation is complicated by chronic medical issues as well.

Additionally, the amount of direct observation hours has nearly doubled as compared to previous years. Direct observations are required when a patient needs one on one oversight and care in order to prevent self harm or possible aggression towards others or to ensure adequate monitoring for medical purposes. The resource required to manage this translates from 11.8 FTE's in 2013 to 19 FTE's in 2014 or a 61 percent increase. This increased resource requirement negatively impacts WSH's ability to achieve required hours per patient day as its standard of care in nursing. Due to the higher acuity and the impact on the unit milieu, overtime costs increase as well. These factors in part can contribute to increases in restraint usage and employee injuries. The physical layout of the building that enhances both security and observation allows for staff to better absorb the additional treatment needs.

Direct Observation Hours	**2010**	**2011**	**2012**	**2013**	**2014**
6 MONTH TOTAL (Jan-June)	20,291	15,317	25,627	24,562	39,555

Discharge Average Length of Stay

Discharge ALOS	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
6 MONTH AVERAGE(Jan-June)	109.83	146.66	134.16	155.16	122.83	122.66

The average length of stay is lower since 2010. One could surmise that rates increased as a result of previous budget reductions and that it took "time" to adjust to fewer available resources. . The higher rate of admissions impacts the necessity to maintain available beds for those requiring psychiatric care most. In that the facility has only been open a few months, it is somewhat premature to conclusively say that the new facility has a direct impact on a decreasing Discharge ALOS, but given the higher rate of admissions and TDO's, a continuing decrease in the rate may be attributable to the new facility.

Patient Days

Patient Days	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
6 MONTH AVERAGE Monthly Days (Jan-June)	6848.17	6768.00	6958.33	6672.17	6645.83	6612.33

The Hospital had 703 FTE's in 2009 compared to 656 (including seven new Security positions assigned to the Commonwealth Center for Children and Adolescents). The patient day decrease of 236 days from 2009 to 2014 (or three percent decline) is far less than the seven percent reduction in FTE's over the same period. Additionally, the census has increased from an average of 219 in the first six months of this year to 234 as of August 29th. This trend of increased patient census represents approximately a 95 percent utilization of total beds. The ability to provide care and treatment for an increasing patient population (with increased medical and psychiatric acuity) would not likely have been managed will without the new facility as the design assists with the treatment and security of our patients.

The above statistics shows that WSH is facing a population which is higher in acuity and intensity. Despite this, the staff seems to appreciate the new features of the building as described below.

STAFF COMMENTS

In May 2014, clinical, administrative, and support staff were all asked to give feedback on the new facility via a safety survey form.

Three of questions centered on the new hospital. They are as follows:

1. When duress alarms are activated, staff from other areas responds (95 percent Agree / 2 percent Disagree)

2. I feel the new hospital environment supports patient safety (65 percent Agree / 17 percent Disagree)

3. I feel the new hospital environment supports staff safety (58 percent Agree/13 percent Disagree)

From these measures, it can be concluded that the new facility is measuring up to its design on helping staff feel safer about their work.

Additionally the staff was asked for some open ended comments. The specific element that they are asked to respond to is ***"the new hospital environment supports patient and staff safety."*** Here are some of the comments that endorse the safety and overall physical environment of the new hospital.

- "I enjoy being part of the new Western State Hospital. I enjoy doing work and being a part of the hospital and recovery. Thank you!"
- "Safety in parking lots is very good-well lit."
- "Better lighting at new hospital."
- "Nursing stations that allow for patient observation is definitely a plus."
- "Private courtyards for patients are very comforting and appreciated."
- "Private bedroom/bathrooms are awesome."
- "Designated dining areas and lounge areas for patients is awesome."
- "Dining prep room is good. Auto lights in patient bathrooms are great and energy conscious".
- "Staff break rooms are excellent."
- "Overall layout is a great improvement."
- "Much safer environment in my opinion."
- "Love the increased safety of staff badges with excellent response from neighboring staff."
- "I love the new hospital. I have worked at WSH for 30 years. I love my job."

CONCLUSION

WSH has identified efficiencies related to staffing (-68 FTE), transportation (-30 Vehicles), and energy (3.8 million KWH). Safety and security improvements have also been identified for both the patients and staff in the new facility. Moreover, the hospital design provides a much more recovery focused environment for all those being served. There is freedom of movement for clients within the building due to enhanced electronic security features providing for a least restrictive environment and access to individualized treatment programming within a secure facility. Despite the ongoing challenges WSH faces as TDOs increase and more challenging patients present for treatment, the design and organization of the building allows for increased provision of treatment to meet the increased need. It should also be noted that as part of the design the option for additional expansion was accommodated, should increased demand for services and additional efficiency of departmental operation be required.

Other facilities, not just within Virginia, have contacted Western State about the design and features incorporated into the planning as it is a leading psychiatric facility in being state of the art in security systems, energy systems and network infrastructure. Western State is also taking the lead as the pilot agency for the electronic medical record implementation for the department – another transformative step. These factors lead one to believe that this facility through its design and organization would be the model for future planning and design as the department must replace aging facilities.