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March 7, 2011

UN#11-097

Steven D. Foster, PE
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Office of Highway Development
Maryland State Highway Administration
707 N. Calvert Street, Mailstop C-302
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Subject: Calvert Cliffs Nuclear Power Plant Unit 3
Traffic Impact Study for Post Construction Conditions

Dear Mr. Foster:

Enclosed please find for your review and approval the *Traffic Impact Study at the Calvert Cliffs Nuclear Power Plant, "Post Construction" Conditions, Revision 0B*, dated March 1, 2011 (Enclosure).

If you have any questions regarding this transmittal, please contact me at (410) 470-5524 or Ed Miller of my staff at (443) 569-9220 or edward.a.miller@constellation.com.

Sincerely,

A handwritten signature in blue ink, appearing to read "D. Lutchenkov", with a long horizontal line extending to the right.

Dimitri Lutchenkov

Enclosure – Traffic Impact Study at the Calvert Cliffs Nuclear Power Plant, "Post Construction" Conditions, Revision 0B, March 1, 2011

cc: Terry Carlson – Director, Calvert County Department of Public Works
W. McFall - URS (w/o enclosure)
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UN#11-097

Enclosure
Traffic Impact Study at the
Calvert Cliffs Nuclear Power Plant,
"Post Construction" Conditions
Revision 0B
March 1, 2011



**Traffic Impact Study at the
Calvert Cliffs Nuclear Power Plant
“Post Construction” Conditions**



Prepared for
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March 1, 2011

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EXECUTIVE SUMMARY

The construction of a third unit adjacent to Calvert Cliffs Nuclear Power Plant has been in planning for some time, and the Combined License Application (COLA) and the associated Emergency Plan documents have been filed with the Nuclear Regulatory Commission (NRC). The Maryland PSC (Public Services Commission) has issued the CPCN (certificate of public convenience and necessity) related to this proposed unit.

This traffic impact study (TIS) defines the traffic impacts associated with the "post construction" conditions or normal operations of the new unit. This report is a supplement to the TIS submitted to Maryland State Highway Administration (MDSHA) that addressed conditions "during construction" of the new unit. An MOA (memorandum of agreement) or equivalent document between UniStar and SHA will be drafted for planning, engineering and construction of roadway improvements to mitigate the traffic impacts as defined in both these traffic studies. Given that mitigation concepts defined by the construction peak may already be in place by the Future Build year, SHA might decide to retain certain improvements. As such, the performance of the intersections with construction related improvements are also included in this report.

KLD has had the advantage of the involvement of the local office of URS in the process, leading to a sequence of discussions and working sessions with SHA that have led to a set of understandings that define the scope and study methodology. These were the basis of the submittal for the impact analysis "during construction" and the present submittal. Table ES-1 presents the study area.

Table ES-1: Intersections in the Study Area

1	MD 2/MD 4 Diverge
2	MD 231 & MD 2/MD 4
3	Calvert Beach Road/Ball Road & MD 2/MD 4
4	Calvert Cliffs Parkway & MD 2/MD 4
5	White Sands Drive & MD 2/MD 4
6	Nursery Road & MD 2/MD 4
7	Pardoe Road/HG Trueman Road & MD 2/MD 4
8	Cove Point Road & MD 2/MD 4

Future Build Conditions

In the "Future Build", 363 additional employees are required on site when the new unit is operational. The background traffic is taken to grow at 2% annually (based upon SHA direction).

Mitigation Alternatives

Intersections 5 through 8 in Table ES-1 did not require mitigation under both "during construction" and "post construction" conditions.

Intersections 2 through 4 required mitigation only in “during construction” and not during “post construction” condition. As indicated earlier, it will be SHA’s decision to retain the proposed mitigation that might be in place from the “post construction” conditions.

Intersection 1 (MD 2 and MD 4 diverge) requires mitigation during both the background cases in “post construction” “during construction”. The required mitigation are different and are discussed in this report.

The site access road intersection between White Sands Drive and Calvert Cliffs Parkway along MD 2/MD 4, proposed in the “during construction” condition, was a temporary break in access provided by SHA. This will be closed and the access to CC3 during normal operations will be a combination of Calvert Cliffs Parkway, White Sands Drive, and Nursery Road. This report presents four different alternatives for post construction to access the site, and all of these configurations are sufficient to handle the forecasted traffic demand in the “post construction” condition.

Summary

The most significant impacts occur in the “during construction” when a large daily construction staff travels to and from the site. The peak level of construction activity significantly overshadows the traffic generated by the CC3 post construction workforce and background growth through the intervening years. As such, it is very likely that mitigation will already be in place from the “during construction” for the “post construction” conditions.

This report presents the needed mitigation and design configurations for site access that sufficiently meet the forecasted traffic demand under the “post construction” condition. The report forms the basis for discussion with SHA to determine the final configurations of these intersections for the “post construction” conditions and will provide input for the MOA between SHA and UniStar.

1. INTRODUCTION

1.1. Project Objective

UniStar Nuclear Energy, LLC, through its subsidiary, Calvert Cliffs 3 Nuclear Project, LLC (collectively, UniStar), plans to expand the existing power generation site in Lusby which is located in Calvert County, Maryland. Calvert Cliffs Nuclear Power Plant (CCNPP) has 2 units currently operational and UniStar has proposed to construct one more unit (CC3) adjacent to the existing site.

The Combined License Application (COLA) and the associated Emergency Plan documents have been filed with the Nuclear Regulatory Commission (NRC) [1]. The Maryland PSC (Public Services Commission) has issued the CPCN (certificate of public convenience and necessity) related to this proposed unit.

Two separate documents have been prepared and submitted to SHA, to analyze the impacts related to CC3 at different points in time. The first TIS addressed the impacts during “construction” and has been submitted to Maryland State Highway Administration (MDSHA) [2]. This report is the second TIS addressing the “post construction” conditions.

An MOA (memorandum of agreement) or equivalent document between UniStar and Maryland State Highway Administration (SHA) will be drafted for planning, engineering and construction of roadway improvements to mitigate the traffic impacts as defined in both these traffic studies. Given that mitigation concepts defined by the construction peak may already be in place by the Future Build year, SHA might decide to retain certain improvements. As such, the performance of the intersections with construction related improvements are also included in this report.

KLD has had the advantage of the involvement of the local office of URS in the process, leading to a sequence of discussions and working sessions with SHA that have led to a set of understandings that define the scope and study methodology, which were the basis of the submittal related to the impact analysis “during construction” conditions and the present submittal.

The TIS study area is shown in Figure 1.

A typical TIS includes analysis of the following traffic conditions:

- Existing
- Future No-Build (background),
- Future Build (build-out)

Given the nature and size of the construction effort related to building a nuclear reactor, it is the condition during the peak construction months/years that dominates the situation, and requires the most extensive mitigation. This report addresses the “post construction”

conditions and is a supplement to a separate report submitted that addressed the impacts “during construction”. The conditions with and without the new plant in the “post construction” conditions are designated as “Future Build” and “Future No-Build” scenarios, respectively, and are shown in Figure 2.

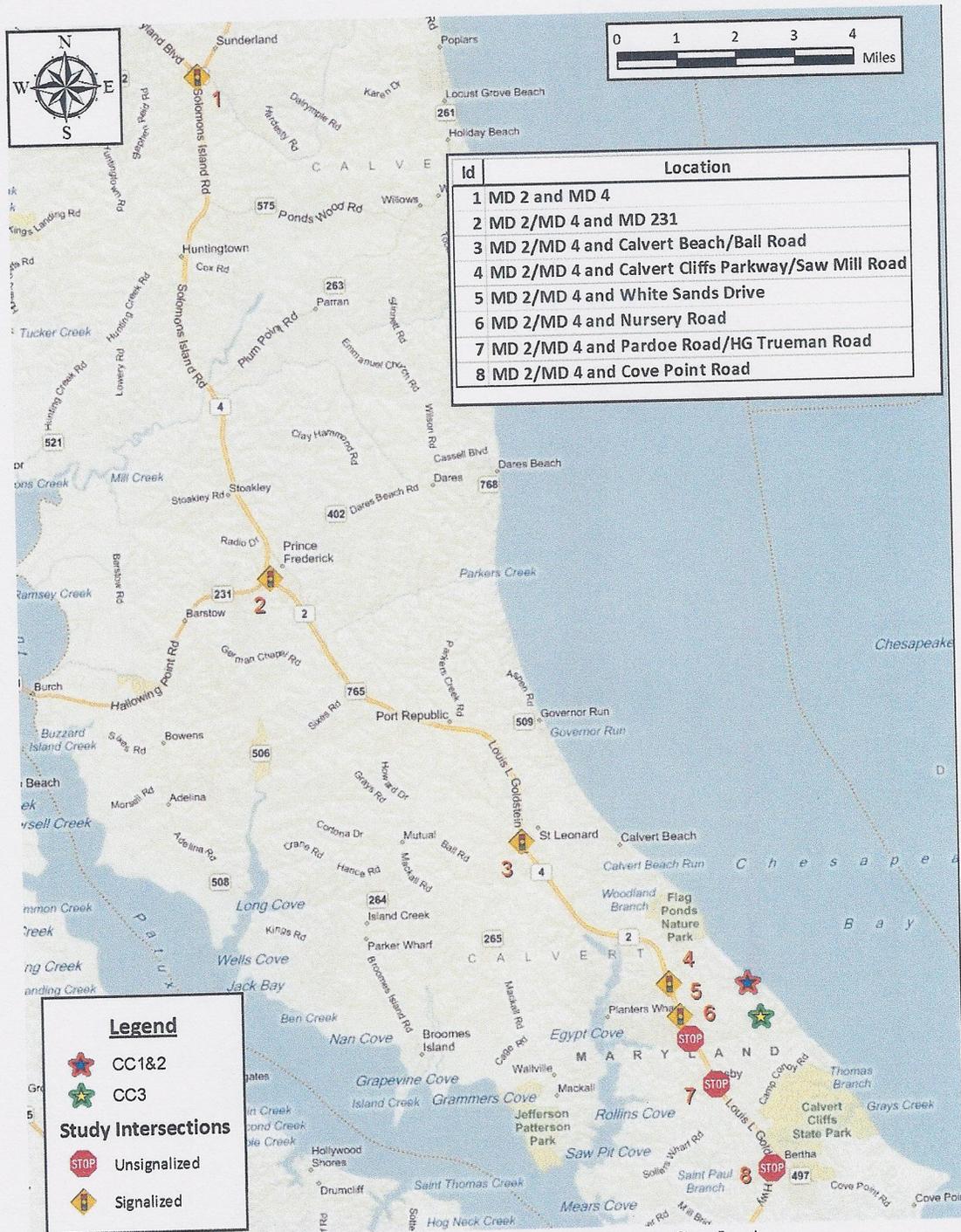


Figure 1 – CCNPP Site and Traffic Impact Study Area

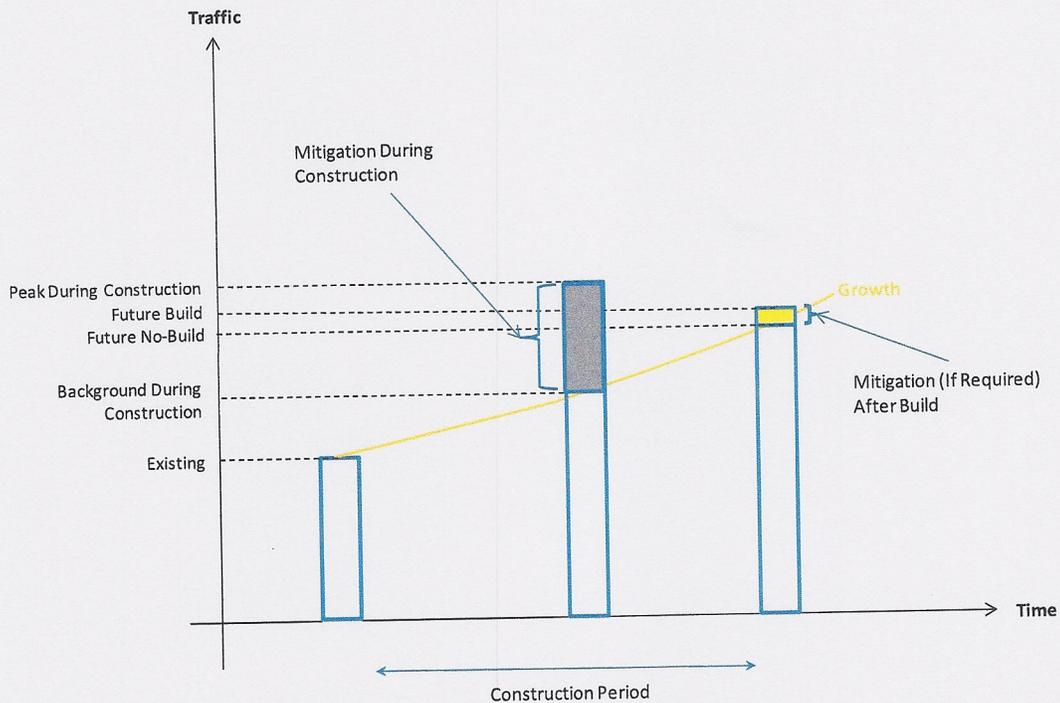


Figure 2 – Traffic Impact Analysis: Approach

1.2. Study Area

CCNPP is currently accessed via the intersection of Calvert Cliffs Parkway & MD 2/MD 4, the latter being the major thoroughfare in Calvert County.

The study area of this TIS is presented in Figure 1. It includes the following intersections along MD 2/MD 4:

- MD 2 and MD 4 (Signalized Intersection)
- MD 231 (Signalized Intersection)
- Calvert Beach Road (Signalized Intersection)
- Calvert Cliffs Parkway (Signalized Intersection)
- White Sands Drive (Signalized Intersection)
- Nursery Road (Unsignalized Intersection)
- Pardoe Road (Unsignalized Intersection)
- Cove Point Road (Unsignalized Intersection)

These intersections are within twenty miles of the site access road in the north and four miles in the south direction. These locations were selected based on a series of discussions between UniStar, KLD, URS Corporation, and SHA.

Analysis of Level of Service (LOS), and Capacity

The ability of a roadway network to accommodate projected traffic volumes generated by the proposed development during its operation is assessed utilizing techniques to measure capacity and Level of Service (LOS). LOS is an ordinal scale that is defined from A to F with "A" being the best level of service. The different levels are defined in the latest edition of the Highway Capacity Manual (HCM 2000) [3], in terms of average delay for intersections and average travel speed for arterials. Typically, the LOS is determined for the Peak 1-hour within a given period as it represents "worst case" conditions.

Based on SHA guidelines [4]:

- All intersections will be analyzed using the SHA critical lane technique and factors. In certain circumstances other methodologies, including the Highway Capacity Manual (HCM), might be appropriate to identify operational problems;
- Any intersection with a CLV of 1450 vehicles/hour (vph) or less is considered acceptable, this corresponds to (Level of Service) LOS D.

2. BACKGROUND (FUTURE NO-BUILD) CONDITIONS

2.1. Regional Growth and Other Developments

The proposed unit is expected to be operational no later than 2020. This year is selected for the Future Build analyses. Based on the general background growth, SHA has specified an annual growth rate of 2.0%. This report uses this rate, compounded annually.

The traffic data used in the analysis for the earlier submittal ("during construction") conditions is also used as part of this submittal.

The Lusby Connector [5] & [6], a project completed in Fall of 2008, south of the study area, has been opened. This includes a connector roadway running east-west between MD 2/MD 4, MD 765 and MD 760. This was considered for its effect on the Future No-Build, Future Build and traffic operations during construction. No major reassignment is anticipated, given the north-south arrival paths anticipated.

As described earlier, the baseline estimated volumes were projected forward from the year collected to 2010 by 2.0%, compounded annually. Figure 3 presents the traffic volumes and turning movements at the study intersections during the AM and PM peak hours, in the Future No- Build conditions.

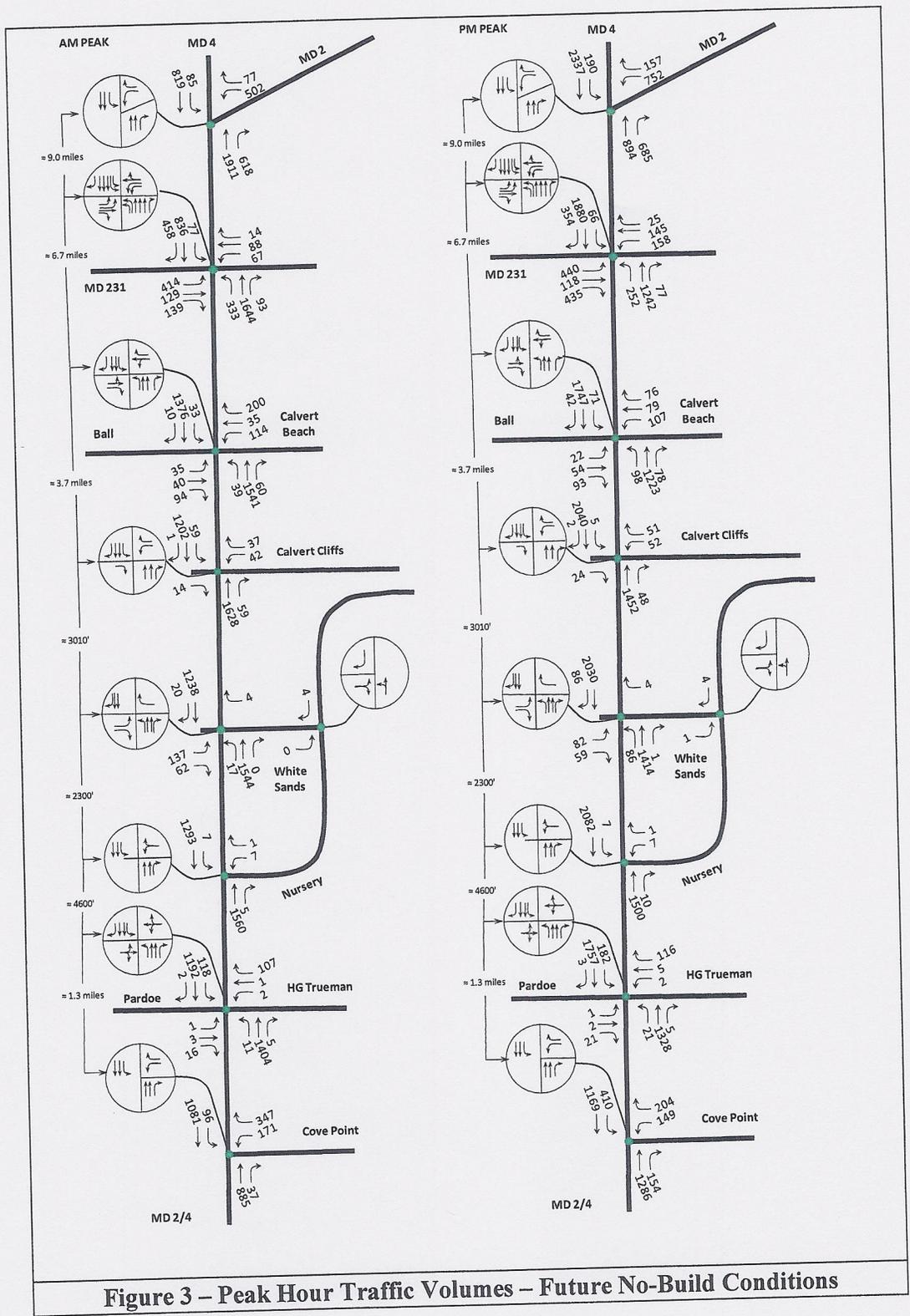


Figure 3 – Peak Hour Traffic Volumes – Future No-Build Conditions

Table 1 presents the LOS and CLV for the intersections under the future no-build condition.

Table 1 – Intersection LOS: Future No-Build (2020) Conditions

<i>Intersection</i>	<i>CLV</i>		<i>LOS</i>	
	<i>AM</i>	<i>PM</i>	<i>AM</i>	<i>PM</i>
MD 2/MD 4 diverge	1639	1434	F	D
MD 2/MD 4 diverge (Concept 1)	1438	1386	D	D
MD 2/MD 4 diverge (Concept 2)	1076	1273	B	C
MD 231 & MD 2/MD 4	1054	1338	B	D
Calvert Beach/Ball Road & MD 2/MD 4	1105	1321	B	D
Calvert Cliffs Parkway & MD 2/MD 4	996	856	A	A
White Sands Drive & MD 2/MD 4	835	1285	A	C
Nursery Road & MD 2/MD 4	873	1153	A	C
Pardoe Road & MD 2/MD 4	1020	1134	B	B
Cove Point Road & MD 2/MD 4	845	1266	A	C

Table 1 indicates that all intersections would be operating acceptably in the Future No-Build, except MD 2 and MD 4 in the AM peak. This is addressed further in Section 3, which discusses the “Future Build” situation in 2020.

Appendix A presents the worksheets with the LOS calculations for the Future No-Build conditions.

3. FUTURE BUILD CONDITIONS

Trip Generation and Site Access

The additional traffic expected on the roadways includes the new employees expected on site during normal operations of CC3. However, this traffic will be impacted by the “bi-annual” outage at the existing units CC1&2, the duration of which is typically one month (February). The outage staffs for the existing units access their site using Calvert Cliffs Parkway. The following sections discuss these two elements and the related trip generation.

3.1. Site Trip Generation -- Operational Staff for CC3

The new unit will require 363 additional personnel upon completion. Assuming average vehicle occupancy of 1.0 for these employees, the number of daily trips expected to be generated are 200 (2*100) trips in months 1-26 and 726 (2*363) trips in the remaining months. These employees will be distributed over the day and directionally as discussed Section 3.4.

3.2. Outage Staff – Maintenance and Refueling

The existing two units currently operate on a 24-month outage schedule, with an outage at each unit lasting a month, and staggered by one year. Outages now begin in February.

Each outage is expected to have an outage workforce of 750 personnel on site. These personnel work on the same shift schedule as the existing employees (2 shifts 6AM-6PM, 6PM-6AM) and will be distributed across the day and directionally assigned similar to the operational staff (Section 3.4).

Assuming average vehicle occupancy of 1.0 for these employees, 1500 (750*2) daily trips are expected to be generated each February. These trips are part of the existing traffic, but need to be considered because they affect the traffic arriving at CC3.

3.3. Site Trip Distribution

The staff size for the existing 2 units is 833 employees. The geographic distribution of the current staff by county is presented in Appendix B. This data indicates that approximately 50% of the traffic arrives from the south along MD 2/MD 4 and the remaining 50% arrive from the north along MD 2/MD 4. Figure 4 represents the arrival and departure distribution of the power plant employees across the workday along Calvert Cliffs Parkway (EB – East Bound – Into site, WB – West Bound – From Site). The vehicle trips related to the employees at CC1&2 are part of the background traffic counts.

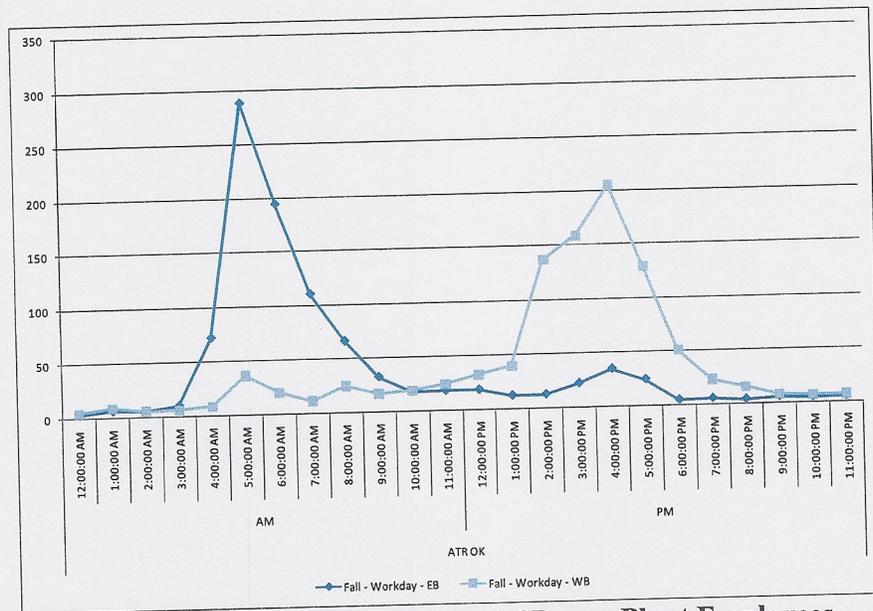


Figure 4 – Temporal Distribution of Power Plant Employees

The 726 new trips anticipated on site per day at CC3 will be assigned based on the temporal distribution (24-hour) shown in Figure 4 and a 50-50 directional split onto MD

2/MD 4. The resulting trip generation of the operations staff at the new unit during the peak hours is the following:

AM Peak Hour (veh/hour): IN = 71, OUT = 9

PM Peak Hour (veh/hour): IN = 13, OUT = 75

3.4. Site Trip Assignment

Figure 5 presents the traffic volumes and turning movements in the Future No- Build conditions for AM and PM peak hours excluding the section on MD 2/MD 4 between Calvert Cliffs Parkway and Nursery Road. Within this region, four trip assignment alternatives have been considered. Each provides access to CC3 from MD 2/4 via a subset of the set of intersections that includes Calvert Cliffs Parkway, White Sands Drive, and Nursery Road. The various routings are governed by how Nursery Road and Calvert Cliffs Parkway are connected with the CC3 parking lot. A description of each alternative is provided below and an illustration of the path assignments in each alternative is shown in Figure 6.

Alternative 1

All CC3 traffic uses Calvert Cliffs Parkway. There is no access from CC3 to Nursery Road.

Alternative 2

CC3 traffic can access both Calvert Cliffs Parkway and Nursery Road via White Sands Drive. There will be no exit from CC3 onto Nursery Road. Traffic entering CC3 from the north must turn left onto Calvert Cliffs Parkway. Traffic entering CC3 from the south turns right at White Sands Drive. All traffic exiting CC3 will use Calvert Cliffs Parkway.

Alternative 3

Calvert Cliffs Parkway is not accessible from CC3. White Sands Drive is converted to a fully signalized intersection, and all traffic enters/exits CC3 via this intersection. Figure 7 shows an illustration of the proposed redesign of this intersection.

Alternative 4

Calvert Cliffs Parkway is not accessible from CC3, and no intersection modifications are made at White Sands Drive. All traffic into/out of CC3 uses Nursery road except for traffic exiting to the north, which turns right at White Sands Drive.

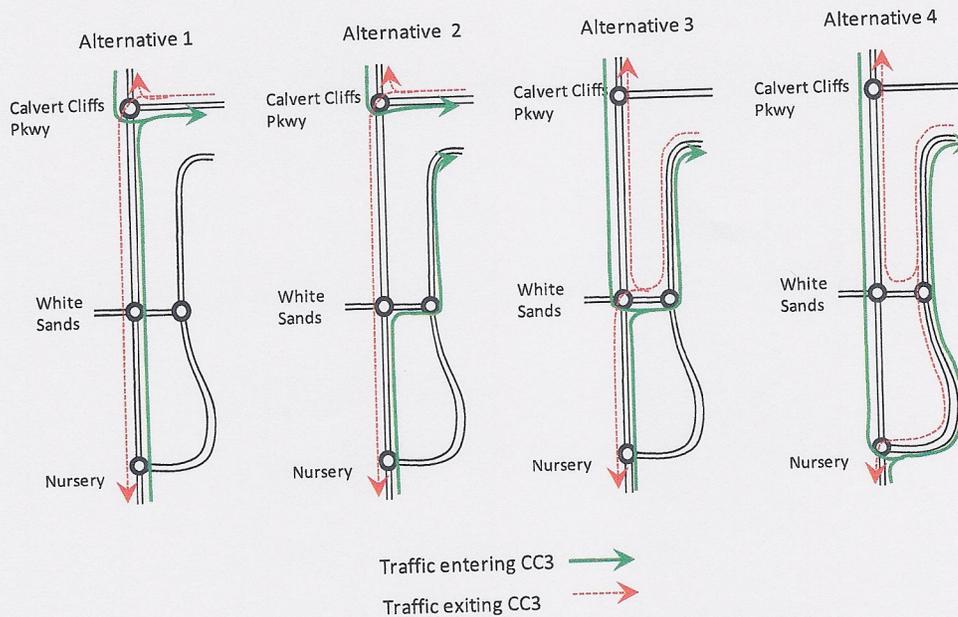


Figure 6 – Illustration of CC3 Access Alternatives

3.5. LOS by Intersection

Each intersection is analyzed with the existing configuration and also with residual mitigation measures derived from the construction phase when applicable. As discussed earlier, the volumes at the intersections along MD 2/MD 4 at Calvert Cliffs Parkway, White Sands Drive, and Nursery Road are influenced by the differing trip assignments shown in Figure 6. At these locations, the LOS is further broken down by each of the 4 alternatives under the Future Build scenario. Appendix C presents the worksheets with the LOS calculations for the Future Build conditions.

3.5.1. MD 2/MD 4 diverge

Two mitigation options were considered for this intersection for the Construction conditions:

Concept 1, would achieve a LOS E under the 2016 Construction Condition as discussed in the earlier submittal [2]. While Concept 1 does not achieve SHA's goal of LOS D during the construction peak, we believe that it is a viable option to consider for both the construction and operation phase durations. Concept 1 matches the No Build 2016 Condition LOS E in the AM, and it achieves LOS D for the future build 2020 condition while an LOS F arises in the future no-build 2020 Conditions. Concept 1 would also have less environmental and right-of-way impacts and a lower construction cost than Concept 2. Concept 2, would achieve a LOS D under the 2016 construction condition; however the impacts and costs are higher than Concept 1.

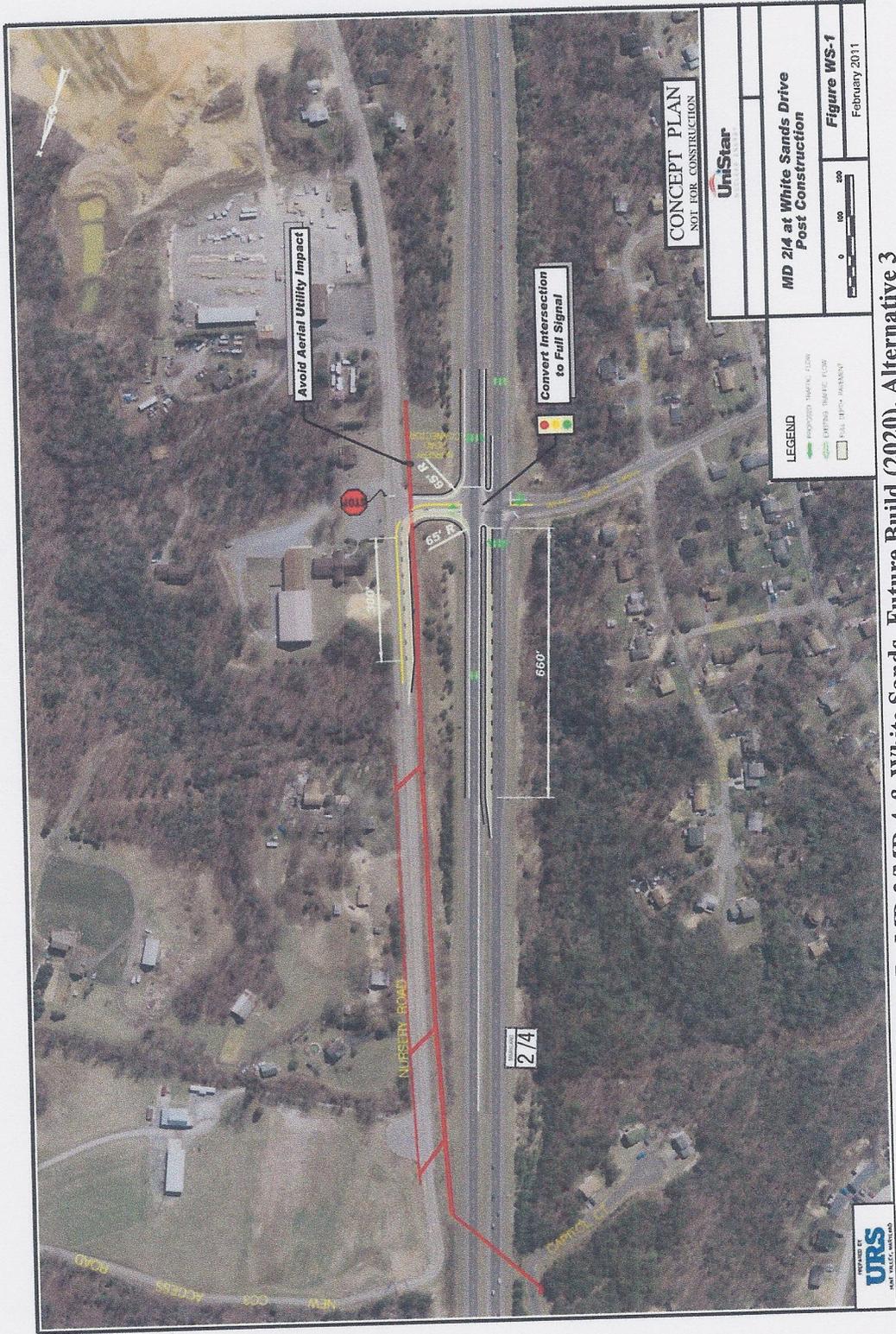


Figure 7 - MD 2/MD 4 & White Sands, Future Build (2020), Alternative 3

Because SHA would have a reason to address improvements at this intersection even in the Future No- Build, it is appropriate to discuss cost sharing as part of the MOA. For present purposes, however, Concepts 1 or 2 can address the impacts in 2020, both with and without the forecasted traffic demand.

Table 2 – Intersection LOS: MD 2 and MD 4: 2020 Conditions

<i>Mitigation Detail</i>	<i>CLV</i>				<i>LOS</i>			
	<i>Future No-Build</i>		<i>Future Build</i>		<i>Future No-Build</i>		<i>Future Build</i>	
	<i>AM</i>	<i>PM</i>	<i>AM</i>	<i>PM</i>	<i>AM</i>	<i>PM</i>	<i>AM</i>	<i>PM</i>
None	1639	1434	1649	1446	F	D	F	D
Concept 1: Remove Maryland-T, Add one SBT and one WBL lane	1438	1386	1444	1388	D	D	D	D
Concept 2: Remove Maryland-T, Add NBT, SBT and 2 WBL lanes	1076	1273	1081	1275	B	C	B	C

3.5.2.MD 2/MD 4 and MD 231

This intersection operates acceptably at all times of day in both the Future No-Build and Future Build scenarios as seen in Table 3. Additional mitigation was recommended at this intersection for the construction phase. The residual benefit of continuing operation with the mitigated design is provided below.

Table 3 – Intersection LOS: MD 2/MD 4 and MD 231: 2020 Conditions

<i>Mitigation Detail</i>	<i>CLV</i>				<i>LOS</i>			
	<i>Future No-Build</i>		<i>Future Build</i>		<i>Future No-Build</i>		<i>Future Build</i>	
	<i>AM</i>	<i>PM</i>	<i>AM</i>	<i>PM</i>	<i>AM</i>	<i>PM</i>	<i>AM</i>	<i>PM</i>
None	1054	1338	1056	1340	B	D	B	D
Restripe EB thru lane as left+thru, add receiver for EB right, restripe SB as shared thru+right lanes, restripe left lane on WB approach as shared thru+left, add an exclusive westbound right turn lane	1018	1209	1020	1211	B	C	B	C

3.5.3.MD 2/MD 4 and Calvert Beach/Ball Road

As is the case above, the intersection of MD 2/MD 4 & Calvert Beach Road operates acceptably at all times of day in both the Future No-Build and Future Build scenarios as seen in Table 4. Additional mitigation was recommended at this intersection for the

construction phase. The residual benefit of continuing operation with the mitigated design is also shown below.

Table 4 – Intersection LOS: MD 2/MD 4 and Calvert Beach Road: 2020 Conditions

<i>Mitigation Detail</i>	<i>CLV</i>				<i>LOS</i>			
	<i>Future No-Build</i>		<i>Future Build</i>		<i>Future No-Build</i>		<i>Future Build</i>	
	<i>AM</i>	<i>PM</i>	<i>AM</i>	<i>PM</i>	<i>AM</i>	<i>PM</i>	<i>AM</i>	<i>PM</i>
None	1105	1321	1107	1324	B	D	B	D
Add NBT and SBT	873	1059	875	1061	A	B	A	B

3.5.4. MD 2/MD 4 and Calvert Cliffs Parkway

The intersection of MD 2/MD 4 & Calvert Cliffs Parkway operates acceptably at all times of day during the Future No-Build and under all alternatives in the Future Build scenario as seen in Table 5. Additional mitigation was recommended at this intersection for the Construction scenario. The residual benefit of continuing operation with the mitigated design is also shown below.

Table 5 – Intersection LOS: MD 2/MD 4 and Calvert Cliffs Parkway: 2020 Conditions

<i>Mitigation Detail</i>	<i>CLV</i>									
	<i>Future No-Build</i>		<i>Future Build</i>							
	<i>AM</i>	<i>PM</i>	<i>Alternative 1</i>		<i>Alternative 2</i>		<i>Alternative 3</i>		<i>Alternative 4</i>	
	<i>AM</i>	<i>PM</i>	<i>AM</i>	<i>PM</i>	<i>AM</i>	<i>PM</i>	<i>AM</i>	<i>PM</i>	<i>AM</i>	<i>PM</i>
None	996	856	1035	896	1035	896	999	876	999	876
Add NBT	752	638	792	679	792	679	754	653	754	653

3.5.5. MD 2/MD 4 and White Sands Drive

The intersection of MD 2/MD 4 & White Sands Drive operates acceptably at all times of day during the Future No-Build. The mitigation listed in Table 6 is that design shown earlier in Figure 7. All alternatives operate acceptably in the Future Build scenario.

Table 6 – Intersection LOS: MD 2/MD 4 and White Sands Drive: 2020 Conditions

<i>Mitigation Detail</i>	<i>CLV</i>									
	<i>Future No-Build</i>		<i>Future Build</i>							
	<i>AM</i>	<i>PM</i>	<i>Alternative 1</i>		<i>Alternative 2</i>		<i>Alternative 3</i>		<i>Alternative 4</i>	
	<i>AM</i>	<i>PM</i>	<i>AM</i>	<i>PM</i>	<i>AM</i>	<i>PM</i>	<i>AM</i>	<i>PM</i>	<i>AM</i>	<i>PM</i>
None	835	1285	838	1305	838	1305			855	1288
Signalize intersection, add 1 SBL, 1 WBL	990	1286					1022	1320		

3.5.6. MD 2/MD 4 and Nursery Road

The intersection of MD 2/MD 4 & Nursery Road operates acceptably at all times of day during the Future No-Build and under all alternatives in the Future Build scenario as seen in Table 7.

Table 7 – Intersection LOS: MD 2/MD 4 and Nursery Road: 2020 Conditions

Mitigation Detail	CLV									
	Future No-Build		Future Build							
	AM	PM	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
None	873	1153	893	1173	893	1173	893	1173	914	1190

3.5.7. MD 2/MD 4 and Pardoe Road

As shown in Table 8, MD 2/MD 4 & Pardoe Road operates acceptably at all times of day in both the Future No-Build and Future Build scenarios.

Table 8 – Intersection LOS: MD 2/MD 4 and Pardoe Road: 2020 Conditions

Mitigation Detail	CLV				LOS			
	Future No-Build		Future Build		Future No-Build		Future Build	
	AM	PM	AM	PM	AM	PM	AM	PM
None	1020	1134	1040	1155	B	B	B	C

3.5.8. MD 2/MD 4 and Cove Point Road

As is the case above, MD 2/MD 4 & Cove Point Road operates acceptably at all times of day in both the Future No-Build and Future Build scenarios as seen in Table 9.

Table 9 – Intersection LOS: MD 2/MD 4 and Cove Point Road: 2020 Conditions

Mitigation Detail	CLV				LOS			
	Future No-Build		Future Build		Future No-Build		Future Build	
	AM	PM	AM	PM	AM	PM	AM	PM
None	845	1266	854	1270	A	C	A	C

4. SUMMARY

A summary of the analysis (LOS, CLV) and mitigation is shown in Table 10.

The most significant impacts occur in the “during construction” when a large daily construction staff travels to and from the site. The peak level of construction activity significantly overshadows the traffic generated by the CC3 post construction workforce and background growth through the intervening years. As such, it is very likely that

mitigation will already be in place from the “during construction” for the “post construction” conditions.

This report presents the needed mitigation and design configurations for site access that sufficiently meet the forecasted traffic demand under the “post construction” condition. The report forms the basis for discussion with SHA to determine the final configurations of these intersections for the “post construction” conditions and will provide input for the MOA between SHA and UniStar.

5. REFERENCES

- [1] <http://www.nrc.gov/reactors/new-reactors/col/calvert-cliffs.html>
- [2] Traffic Impact Study at the Calvert Cliffs Nuclear Power Plant, Draft Final Report, Rev 3, Feb 2, 2011, KLD Engineering PC, TR#427
- [3] HCM 2000, Highway Capacity Manual, Transportation Research Board, Washington DC, July 2005
- [4] STATE HIGHWAY ACCESS MANUAL - ENGINEERING ACCESS PERMITS DIVISION - January 2004
<http://www.marylandroads.com/OHD/accesspermits.pdf> as accessed August 31, 2009
- [5] Lusby Traffic Study Report, November 2005, STV / G&O Joint Venture
- [6] http://www.marylandroads.com/OPPEN/Lusby_Transportation_Study.pdf
As downloaded on October 9, 2009

Table 1: Summary of Calvert Cliffs Nuclear Power Plant Site Access Mitigation Measures

Intersection	Mitigation Detail
MD 1 and MD 4	None
MD 2 and MD 4	Remove Maryland T, Add SBT WBL lane
MD 2 and MD 4 and MD 21	Remove Maryland T, Add NBT and 2 WB lanes
MD 2 and MD 4 and MD 21	None
MD 2 and MD 4 and MD 21	Restripe EB from bus to left-turn add median for EB right, restripe as shown their right lanes, restrip lane on WB approach at intersection left, add an exclusive west right turn lane
MD 2 and MD 4 and Calvert Beach	None
MD 2 and MD 4 and Calvert Cliffs	Add low SBT and one NBT lane
MD 2 and MD 4 and White Sands Drive	None
MD 2 and MD 4 and Nursery Road	Add one NBT lane
MD 2 and MD 4 and Parker Road	None
MD 2 and MD 4 and Cape Point Road	None

Note: Highlighted cells correspond to intersections that have a CLV greater than 1.50

Table 10 – Summary of Conditions (CLV)

Intersection	Mitigation Detail	Future No-Build		Future Build							
				Alt 1		Alt 2		Alt 3		Alt 4	
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
MD 2 and MD 4	None	1639	1434	1649	1446	1649	1446	1649	1446	1649	1446
	Remove Maryland-T, Add SBT and WBL lane	1438	1386	1444	1388	1444	1388	1444	1388	1444	1388
	Remove Maryland-T, Add NBT, SBT and 2 WBL lanes	1076	1273	1081	1275	1081	1275	1081	1275	1081	1275
	None	1054	1338	1056	1340	1056	1340	1056	1340	1056	1340
MD 2/MD 4 and MD 231	Restripe EB thru lane as left+thru, add receiver for EB right, restripe SB as shared thru+right lanes, restripe left lane on WB approach as shared thru+left, add an exclusive westbound right turn lane	1018	1209	1020	1211	1020	1211	1020	1211	1020	1211
	None	1105	1321	1107	1324	1107	1324	1107	1324	1107	1324
Calvert Beach	Add one SBT and one NBT lane	873	1059	875	1061	875	1061	875	1061	875	1061
MD 2/MD 4 and Calvert Cliffs	None	996	856	1035	896	1035	896	999	876	999	876
	Add one NBT lane	732	638	792	679	792	679	754	653	754	653
MD 2/MD 4 and White Sands Drive	None	835	1285	838	1305	838	1305			855	1288
	Remove Maryland-T, 1 SBL, 1 WBL, 1 WBR							1022	1320		
MD 2/MD 4 and Nursery Road	None	873	1153	893	1173	893	1173	893	1173	914	1190
MD 2/MD 4 and Pardoe Road	None	1020	1134	1040	1155	1040	1155	1040	1155	1040	1155
MD 2/MD 4 and Cove Point Road	None	845	1266	854	1270	854	1270	854	1270	854	1270

Note: Highlighted cells correspond to locations that have a CLV greater than 1450