

Critical Factual Assumptions – Sources, Calculations, and Contradictions¹

There are significant difficulties in attempting to respond to Costco's application, in large part because a) the application has no single location in which the critical numbers needed to analyze its assertions are listed, b) many of the critical numbers are omitted entirely, or there is no stated basis given for the number stated, or one can only deduce the number by calculating it from other values, and/or c) there are contradictory values given for the same critical numbers. If one is to make any reasoned review of the application, the first thing one must have is reliable numbers and agreement on which ones will be used. Moreover, in order to make valid comparisons between the three reference stations used at various points in the application (Beltsville, Elkridge, and Sterling), one must have the same numbers for each.

On the current state of the application, it is difficult in many cases, and impossible in others, to arrive at reliable numbers and make the comparison. To illustrate the difficulties, and to make a start at deriving that set of comparables, the discussion below sets out these various numbers, gives the location in the application from which the number is derived, and states whether the number is stated in the application, or if it is calculated from other numbers. It notes where the relevant number does not exist at all, and it further lists various competing values where the application uses more than one number. As should be apparent from this listing, trying to create a coherent picture of this application is a difficult, if not impossible, task in its current form. Hopefully, this listing will be of some assistance to Planning Staff in identifying contradictions to be resolved, and omissions to be filled in.

¹ This paper was prepared by Karen Cordry, 10705 Torrance Drive, Silver Spring, MD. 20902

Assumptions

| Assumption | Source | Derived From |
|---|-------------------|---|
| MALL IN GENERAL | | |
| 1. Mall area – 1.5 million feet retail 194,000 office | Ex. B, p. 1 | Ex. P, page 5 – Leased area chart |
| 2. Mall visitors – <i>wholly contradictory (approximately 50% difference)</i> | | |
| 13,500 weekday | Ex. O, p. 3 | Stated, no indication where this is derived from. |
| 17,500 weekend | Ex. O, p. 3 | |
| 18,000 weekday | Ex. T, p. 4 | Stated, no indication where numbers derive from |
| 24,000 weekend | Ex. T, p. 4 | |
| 40,000 holiday peak | Ex. T, p. 4 | |
| 3. Station– total visitors per day | | |
| Approx. 1,1000 per day extra | <i>Not stated</i> | Calculated from Ex. O, p. 12, calculating additional 70 trips per hour new to the station. Multiplied by 15.5 = 1085. |
| Total trips | <i>Not stated</i> | <i>Guesstimate – 12 million gallons per year (see below), divided by 365 days divided by a 12 gallon average fill-up equals 2740 a day.</i> |
| 4. Store visitors per day | <i>Not stated</i> | <i>Cannot be calculated based on numbers given, so no way to assess added growth versus the various daily numbers</i> |

cited above.

5. Store visitors peak time (Costco + Dicks) Ex. P, p. 17 Estimated based on Elkridge for Costco and
Peak morning - 83 arrive Wheaton Plaza for Dicks.
Peak evening – 360 arrive Gives only maximum, not total daily impact.

SURROUNDING AREA; DESIGN FEATURES

1. Green wall – *Major contradictions as to height (8 feet versus 14) and length (stopping at west edge versus east edge of store); the application has no explanation for the contradictions or reasons for the change*

Height

8-feet

Ex. B, p. 2

Company intention

Ex. O, p. 5, 6, 17, 22

Repeatedly refers to “8-foot wall,” no reference to 14' segment

Env. Report, p. 101

Refers to 8-foot wall.

Ex. 10, Supp. Filing

This is the equivalent of Ex. J before. It now no longer shows any 14 foot segment all.

14-feet

Ex. H, p. 3

Illustration of wall shows panels clearly substantially higher (i.e., 14') than the approx. 8' width marked

Ex. J, p. 1

Legend refers to 14' and 8' segments

Ex. J, p. 5

Green wall description; panels show they are taller than

wide. “Sight lines have been analyzed and green walls are proposed at specific heights and locations to help screen those views.” Also used for sound dampening.

Ex. J, p. 10

Legend defines 14' and 8' heights, shows 8' from Peregoy to roughly the west edge of store, 14' feet to past east edge.

Ex. J, p. 11

Sections make explicitly clear the different heights, and use of wall to block store views as well

Env. Report

Appendix, p. 374 – shows areas of 14' wall, not just 8'

Ex. T, p. 5

“screen wall ranging in height from 8 to 14 feet” used to screen homes and protect their value

Length

To east edge of store

Ex. J, p. 9

Analyzes sight lines for homes to the store (consistent with using the wall to block views of the store in addition to the station). Shows wall from past Peregoy to east edge of store.

Ex. J, p. 10

Clearly shows wall past the east edge of store

Ex. J, p. 11

See sections showing extension of wall to east edge.

Ex. O, p. 5

“Wall will be constructed . . . from directly west of the Filling Station to *southeast of the Costco Warehouse*. (See Exhibit I).” (Ex. J is probably actually meant.) “The screen wall . . . ensures that neither the Filling Station, nor

the Property, *nor the Mall Parcel itself*, will be visible from the residences . . . even from the second floor windows. (This can only occur if the wall extends past the west edge of the warehouse.)

| | | |
|-----------------------|-------------------------|--|
| store | Env. Report, App. , 374 | Shows wall apparently extending to about east edge of although store is not shown on this drawing. |
| | Ex. T, p. 5 | Wall extends “from the warehouse” to block views. |
| To west edge of store | Env. Report, p. 103 | Shows wall ending at about the mid-point of warehouse. |
| | Ex. 10, supp. filing | Now shows <i>no</i> wall by the store. <i>There is no explanation in any exhibits as to the reason for these changes or why they were not made until after the original application was filed.</i> |

2. Acoustical issues – *Contradictions as to wall is or is not needed for noise reduction*

| | | |
|------------------------|----------------------------|---|
| Wall needed for sound | Ex. J., p. 5 | Green wall and acoustic panels will be strategically placed on the wall to absorb sounds from the mall. |
| Wall not really needed | Supp. Filing, Ex. 3, p. 6. | Wall is really just for screening; break in terrain already reduces noise impacts (although that break does not apply to upper floors of houses.) |

3. Pedestrian Path/Ring Road

| | | |
|---------------------------|-------------|----------|
| New 6' wide path, parking | Ex. I, p. 2 | Pictured |
|---------------------------|-------------|----------|

8' wide, one traffic lane E,
two traffic lanes W, from
Faulkner to Torrance Drive.

One lane of traffic will be
removed from the ring road

Ex. P, p. 4

Stated, see Ex. 1(D) of Ex. P. (Ex. H, p. 3)

4. Pedestrian Access – *Contradictions between claim of no pedestrian connection and reality of well-established path over “Mt. McComas”*

“No pedestrian connections
[directly] to the *Property* from
south or west.” “areas are separated
and distinct . . . with no interaction.
(Notes pedestrian access points to mall
as a whole)

Ex. O, p. 6

Stated by applicant

Filling station with wall will not in
any way restrict neighboring development
in that there is no shared connection

Ex. O, p. 17

Stated by applicant

“There is no vehicular or pedestrian
connection between the *Mall Parcel* and
the residential area

Ex. O, p. 19

N.B. – this contradicts this exhibit’s own prior statements about pedestrian access points to the mall itself. It is also contrary to the fact that there is indeed a pedestrian path to the Filling Station, see below. And see statement at page 21 describing the connection to the school.

Chart showing pedestrian counts at Mt. McComas

See letter filed by John Jenkins showing clearly delineated pedestrian paths between the mall and Mt. McComas and rest of neighborhood. We understand Planning Staff are requiring that this pathway be maintained.

5. Traffic Flow – *Contradictory as to whether traffic will flow in one direction or create crossovers back into the ring road*

Traffic flow generally exits to west

Ex. K, p. 1

N.B., short arrow points east with no indication where cars will proceed to in that direction.

Traffic has a choice of exiting west to the ring road or turn east, and then south to the ring road.

Ex. O, p.4

Traffic can turn west and exit directly to the ring
N.B. – the latter traffic flow will leave cars trying to integrate into, or, worse, cut across the incoming traffic to the station from the east..

All traffic will, after fueling, “exit north out to the Ring Road or to a parking space.” “Thus, there is an orderly flow of vehicles at the Filling Station.”

Ex. O, p. 21

Note, this says all traffic will go north, and will not flow back into the ring road on the south.

“All cars will enter the station from the south and after getting gas proceed north out to the Ring Road.”

Ex. P, p. 29

Again, all traffic is to go north

“Two area poly sources were used to represent cars exiting the gas pump to travel to the Ring Road, half are set up to travel to the west and the other to the east

Env. Study, p. 18

*This report shows **half** of the traffic trying to loop back into the existing station traffic trying to enter the station. Such cross-traffic is likely to severely increase congestion at the station.*

and loop south to exit nearby the entrance

6. Tanker Delivery Parking

Original application drawings Not shown

Designated space on west edge,
south of kiosk Ex. O, p. 5

New application drawings Supp. Filing, Ex.7

N.B. – appears to show truck entering and parking in traffic aisle, adjacent to station; if this is correct, there is no discussion of how cars parked in those spaces will be able to exit if truck arrives while they are there.

STATION CHARACTERISTICS

1. Products Sold Ex. O, p. 4 Stated

WHEATON– gas only, nothing else
“not even water and a brush for
washing windows.” Reg., premium only

“sell gasoline and nothing else” Ex. O, p. 11 Stated

BELTSVILLE, ELKRIDGE, STERLING Not said, assumed to be the same

2. Volume of Sales -- *Numerous contradictions*

WHEATON

| | | |
|--|-----------------------|---|
| 10 million gpy | Ex. O, p. 11 | Costco estimate |
| 12 million gpy (worst case scenario) | Ex. P, p. 20 | Costco estimate |
| 12 million gpy | Env. Study, p. 5 | Costco estimate |
| 9 million gpy– “used 12 million gpy “although Costco’s expectation is that approximately 9 million gallons/year will be sold | Env. Study, p. 12 | Costcom estimate N.B. – prior to this application, it is our recollection that Costco always used a 12 million figure |
| 10.4 million gpy | Env. Study, p. 12,121 | If Sterling is <i>actually</i> 13.5 million gallons, then 30% less would be 10.4 million gpy; <i>no basis given in Env. Study for these different numbers</i> N.B. – 12 million figure is same as for Beltsville despite Wheaton having 2.5 times as many households; figures of 9 million, 10, or 10.6 million gallons are even more disproportiona. The same can be said of Elkridge; this station has 2.5 times as many households, yet there is a suggestion that it may sell only marginally more than that area |

ELKRIDGE

“Columbia [Elkridge] store is the 2nd highest gas volume on the east coast.

Ex. P, p. 20

No volume stated; no source given

8 million gpy

Ex. P, p. 21

Stated as actual

Columbia is, in fact, no more than 3rd largest (and will be 4th if Wheaton is built), based on figures quoted here.

Based on these figures, Beltsville and Sterling are larger, and Wheaton would be as well.

BELTSVILLE

12 million gpy

Ex. Q, p. 3-9

Calculated, based on 4.2 to 4.8 million gpy

equal
35-40% of volume; 100% = 12 million;
never stated explicitly

STERLING

15.6 million gpy; not stated but estimated to be 30% higher than Wheaton (that volume not stated either)

Env. Study, p. 7

Estimated – Would calculate to 15.6 million gpy if Wheaton is 12 million gpy

13.5 million gpy

Env. Study, p. 121, 122
147, 148

Actual stated to be 37,000 gallons per day; times 365 days – 13.5 million gallons; note that 3 of the 4 days listed were well above 37,000, so unclear if this figure is right.

3. Gallons per pump estimate

WHEATON

12 million/16 pumps = 750,000

Calculated from Ex. P, pp. 20

ELKRIDGE

8 million/12 pumps = 666,667

Calculated from Ex. P, p. 21

BELTSVILLE

12 million/12 pumps = 1,000,000

Calculated from Ex. Q, p. 3-9

4. Queueing

CA stores, 90th % = 3 cars,
4 minutes per car, 12 minutes in line

Ex. P, p. 21, App. A

Derived from Appendix A

Time cited is only from time car pulls
up to pump until it pulls away; no time
included for moving from idling spot
up to the pump

Ex. P, p. 53, App. A

Description of actual measurements.

Times in queue calculated based on other
calculated figures

Ex. P, p. 53, App. A

Observed CA queue lengths (*not specified in
Appendix*) used with calculated average time
at pump to calculate idling time.

Elkridge results – only 13.17 average

Ex. P, p. 22

Actual, Appendix A.

| | | | |
|----|---|--|---|
| | cars per hour, weekday peak hour | App. A., p. 63 | |
| | Time per vehicle, Elkridge = 4.56 minutes per car at 13.17 cars per hour | | Calculated (60 min/13.17 cars) from App. A |
| | Maximum processing = 14.25 cars/hr | | Calculated (171 cars/12 pumps) from App A |
| | Minimum time per car = 4.21 minutes | | Calculated (60/14.25 min.) from App. A |
| | Actual queueing study at Elkridge = 3.67-4.87 cars per lane | Ex 3 to Need Analysis Actual by Karen Cordry | |
| | Actual time in line = 18.24-21 | | Calculated (3.67, rounded to 4, times 4.56 -- 4.87, rounded to 5, times 4.2) |
| | Beltsville – no queueing studies done Satellite photos show as many as 78 cars; long lines very common. | Exhibit 4A to Need Analysis Visual observation by Karen Cordry | |
| | Wheaton – likely lines will be between Elkridge and Beltsville | | Calculated, based on volume per pump pump numbers for Elkridge, Beltsville, and Wheaton |
| 5. | Queueing space for 42 cars at Wheaton Tanker Deliveries Stated | Ex. P, p. 21 | Stated |
| | WHEATON – 1-5 a day | Ex. O, p. 5 | Estimated in report |
| | BELTSVILLE – ? | | <i>Not stated</i> |

| | | | |
|----|--|-------------------|--|
| | ELKRIDGE – 4-6 per day | Ex. P, p. 21 | Stated as actual |
| | STERLING – ? | | <i>Not stated</i> |
| 6. | Calc. Daily Volume/Tanker Deliveries (9,000 – gallon tanker size) (using 365 day year) | | <i>Contradictions, number expected versus number stated above, N.B. – difference between Wheaton and Elkridge</i> |
| | Wheaton – 12 million gallons/365 = 32877 TPD | 3.653 | Calculated (12 million gallons, Ex. P, p. 20); consistent with 1-5 trucks stated above. |
| | Elkridge – 8 million gallons/365 = 21917 TPD | 2.44 | <i>Not consistent with 4-8 trucks stated above; should only need 2.5 trucks per day. Or else volume at Wheaton will be much higher.</i> |
| | Beltsville | Not listed | <i>Could estimate same as Wheaton if same volume</i> |
| | Sterling | Not listed | <i>If daily average is 37,000 gallons per Env. Study, should be 4.11 trucks per day. Again, inconsistent with statement about Elkridge .</i> |
| 7. | Operating Hours | | |
| | WHEATON | | |
| | 6-9:30 M-F (15.5 x 5) | Ex. B, p. 2 | Company intention |
| | 6-7:00 S-S (13 x 2) | Ex. O, p. 4 | Stated |
| | Total = 103.5 per week | Not listed | Calculated |
| | BELTSVILLE | <i>Not stated</i> | <i>Same?</i> |

ELKRIDGE *Not stated* *Same?*

STERLING *Not stated* *Same?*

8. Area Purchases *No basis for number stated; no attempt to determine existing market*

Average household purchase is 1,012 gallons per year Ex. Q, p. 3-6 Number is merely asserted, no source given for the amount set forth

No attempt to determine existing resident purchases within the area *Omitted entirely*

Possible purchase calculation, 1,012 gallons times 37,382 households = 37.83 million gallons Calculated based on Ex. Q, p. 3-6 and 4-3; however, as noted, there is no basis for the 1,012 gallon figure

No attempt to estimate business or pass-by traffic. *Omitted entirely.*

Possible calculation – a pure guess. One can add in 50% of the resident purchases and come up with 57 million gallons. *Pure guesswork.*

COMPETING STATIONS

Wheaton – *Contradiction as to number and location of stations*
None within the "Surrounding Neighborhood" (Defined as only Ex. O, p. 8

Derived from Exhibit Q

the mall)

Six within the Sector Plan

Ex. O, p. 8

Derived from Exhibit Q

Most other stations have service bays (80%) and/or some service; 11 have convenience store

Derived from Exhibit Q.

Hours of operation – 2/3 are 24 hours; most of rest are open 6am-11pm, 17 hours

Exhibit O, p. 12

Derived from Exhibit Q

25 other stations in 7-minute drive
General description of stations and amenities

Ex. Q, p. 3-1-4. Ex. 3-1

TPA

Corrections – 1 less station in Glenmont, 1 more at Four Corners

Ex.2 to report of Karen Cordry

Direct observation

Only very impressionistic description of impact on other stations

Ex. Q, p. 3-7-8

TPA

No attempt to determine existing capacity

Omitted entirely

No attempt to determine existing sales

Omitted entirely

No attempt to determine volume that would be lost by stations to Costco

Omitted entirely

Existing pumping capacity – 225 million gpy

Ex. 2 to Need Analysis by Karen Cordry

Estimated based on calculations on chart for maximum pumping capacity;

pumping capacity based on calculations above about maximum likely throughput at station; the chart also shows an alternative set of calculations for 14.25 cars per hour creating a capacity of 243 million gpy.

No attempt to determine % use of capacity for existing stores or Costco

Need report omits any attempt to determine this figure; based on other numbers one can try to arrive at a reasonable figure.

Existing stores – $57/225 = 25$ Ex.2 to report
 $57/241 = 23.65$ of Karen Cordry

Calculated based on guesstimates above

Costco – $12/13.57 = 88.44\%$ Ex. 2 to report
 $12/14.50 = 82.75\%$ of Karen Cordry

Calculated based on estimated 12 million sales divided by calc. maximum volumes.

Overall station volumes – decreased
by 7.1% (10,000 stations) from 1997-2007 Ex. Q, p. 3-8

PRICE COMPETITION

Costco observed prices for all stations
in Wheaton on Oct. 21, 2010, Sept. 2, 2011,
and Sept. 8, 2012 Ex. Q, p. 3-4-5; App. F

Beltsville to study area – lower than all Ex. Q, p. 3-5, App. F

stations surveyed on several dates

| | | |
|--|--|--|
| Study of prices over extended time period | Ex. 5 to Nees Analysis by Karen Cordry | Compiled through Gas Buddy; screen shots provided to Staff |
| Savings for consumer if save 28 cents per gallon times 1,012 gallons = \$283. Diff.is based on average of <i>all</i> stations, and 1,012 gallons | Ex. Q, p. 3-6 | <i>No basis for 1,012 gallon figure; no attempt to compare low prices to low prices.</i> |

AREA DEMOGRAPHICS

1. Transit Use - *Possible contradictions between County transit numbers and Need Report*

| | | |
|--|---|---|
| “much higher proportion that use transit rather than driving” than county | Sector Plan (selected portions included as Exhibit M, but not most pages) P. 13 NI (NI = “not included”) | Actual – from county |
| Current transit use by residents to work is 52%, three times the County average. Goal for employees coming <i>to</i> Wheaton is 30%. | Sector Plan, p. 69 NI | Actual – from county . |
| “Most residents (58.9%) report that they drive to work alone. Nearly one in four residents take public transit. | Ex. Q, p. 2-6 | Differences may relate to areas being described – sector plan area versus drive times; but Needs Report applicant’s failure to include those relevant portions of Sector Plan is striking, since they show the very successful TOD work done in |

close proximity to Metro

- 2. Population size/households
 - Wheaton – 105,000 now Ex. Q, p. 2-1
 - 11% increase in Kens./ Wheaton area by 2040 Ex. Q, p. 2-4
 - 104,518; 37,382 households Ex. Q, p. 4-3 TPA
 - Beltsville – 44,445, 15,484 Ex. Q, p. 4-3 TPA
 - Elkridge – 41,244, 15,753 Ex. Q, p. 4-3 TPA
- 3. Age
 - Wheaton – 38.6 now Ex. Q, p. 2-3
 - 40 in 2010 Prior Applic. Need Study, Oct. 2010, Sec. 2-3 Sources Claritas and TPA Same
- 4. Employment – grow by 22.4% through 2040 Ex. Q, p. 2-7 County forecasts
- 5. Road traffic, various counts Ex. Q, p. 2-8 Md. DOT, TPA

SECTOR PLAN – *Strategic Omission*

Exhibit O, p. 9 Stated

1. Assertion that Sector Plan does not assume any rezoning of mall, existence of station would not interfere in any way with

Sector Plan goals, and notes that CR zones would not work with the mall.

2. Actual Sector Plan statement
“

P. 48 (this text omitted)

The main mall portion of the property could be rezoned for mixed-use development as part of the comprehensive rewrite of the County’s Zoning Ordinance underway at the time of Plan adoption.”

N.B. – while CR zones would not work,

Sector Plan clearly still envisions other changes. Prior versions of Sector Plan discussed the main mall. See discussion in filing by Donna Savage