The Estimate Approach

- Evaluate what materials are available
 - Is there a Soils Report?
 - Project Narrative/Synopsis sometimes only written outline of what needs to be included
 - Preliminary Plans typically architectural site plan; building floor plan; possibly elevations
 - Verify total project GSF; NSF (if applicable); total site acreage; desired # of units; etc.



- What other resources exist? Use what you have to create what you do not!
 - Soils report for a project at nearby location? Probably similar conditions.
 - Google Earth can be <u>scaled</u> and imported into Planswift to use as site plan
- Think about the region or municipality that you are in – familiarize yourself with atypical items



- Site Visit (ABSOLUTE MUST DO!!!)
 - Review Existing Conditions Structures, Pavements, Trees, Fences, etc.
 - Wet and Dry Utility Locations look for possible tie-in locations; overhead obstructions, etc.
 - Grades and Existing Elevations in relation to adjacent streets, buildings, etc.
 - Review surrounding buildings for things that may be indicative of cost does nearby landscaping seem extreme; are adjacent buildings flat roofs or pitched; is rooftop equipment screened; etc.



- Discuss and review questions with Owner (and design team if available)
 - Review total SF, anticipated structural system, level of finishes anticipated, any special systems or equipment considerations, etc.
 - Ask questions well in advance of deadline (don't wait until day before to ask 50 questions) – be proactive



The Estimate Approach

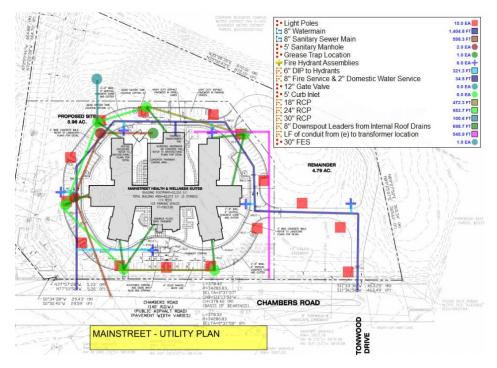
- Using Planswift to 'Create' plan documents
 - Use your knowledge to create what you typically have on a plans & specs project pretend you are the civil engineer, architect, owner, interior designer
 - Preliminary site plan can be utilized to determine layouts for site utilities, paving plan, preliminary landscaping plan, etc.
 - Preliminary floor plan can be utilized to create foundation/slab plan, roof framing plan (steel), roof plan, finish plans, etc.
 - Use building perimeter to determine skin material quantities use typical % from previous projects
 - REVIEW EXAMPLES

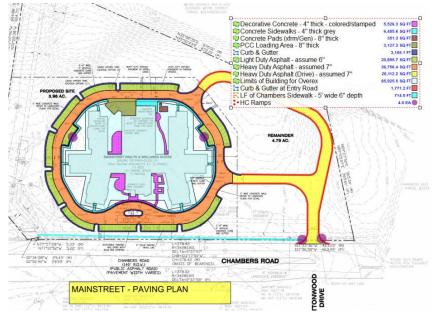


Completing quantity take off – PLANSWIFT (Usually by Project Engineer)

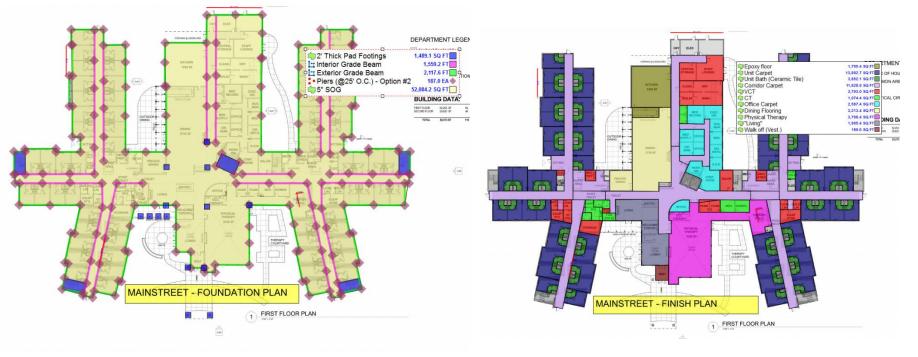
- Pull a previous estimate (both form & outline spec) that was similar to determine scopes of work, unit costs, etc. – schedule a meeting with your PE to identify and make a list of the items that need 'Take-off', assist them in identifying how to determine the quantity
- Teach PE's to complete takeoff with as much detail as possible. Label all items in extreme detail so when exported to Excel the information is easier to use – i.e. "Perimeter Foundation – assumed size 2.5'x1' with 8"x2' Stemwall"
- Takeoff Sheets should be printed and placed in the P-File folder or inserted into the Estimate/Bid Book if you have one at the stage of the project.













Estimate Form

- Utilize the estimate form to its full potential
- Important to complete page #1 in its entirety and accurately this assists you with cost/SF and other checking mechanisms throughout the estimate
- Typical project scopes of work are already outlined for you. DO NOT
 DELETE LINE ITEMS ON CONCEPTUAL ESTIMATES



The Estimate Assembly - Imputing takeoff quantities

- Simple conversions of takeoff to usable quantity i.e. SF of asphalt to SY or LF of foundation to CY of concrete.
- Teach Project Engineers to do the <u>MATH</u> inside the cell much easier to double check their work.

Detailed Descriptions

 Add detail to explain the scope assumptions to the reviewer – i.e. what thickness is it; what material are you assuming; etc. This helps the reviewer with unit cost verification.



Imputing Unit Costs

- Pulling unit costs from bids & similar estimates Compare the unit costs you are utilizing against similar unit costs; not only the material but the magnitude of the scope – i.e. the cost per SF for a 300,000 SF 60 MIL TPO roof is not comparable to a 10,000 SF 60 MIL TPO roof even though the assembly is exactly the same.
- Use good subs as a resource
 - Unit cost assistance for unfamiliar scopes new product; specialty items; etc
 - Unit costs for out of market projects things don't cost same in Chicago, IL vs.
 Wichita, KS



 Track data entry for your reviewer – if you are not sure what it costs, highlight it. A good practice is to utilize color coding similar to bid tabs to keep track of which takeoff quantities and/or unit costs 'NEED TO BE VERIFIED – TYPCIALLY RED"

ATINTE STOTUS OFTENMOTE	TOUIIOIIGE - (VET, VTE)	010,110	1,103,302			ILLINGIN SUBLOCAL	La	
- Site Work	Vess Excavating	232,891	0		BID		500 Paving and Surfacing	02500
- Site Work	1	Inc in 02200	64,942	28.50	SY	2,279	1/Acre Asphalt Paving Light Duty 3.5" + 6" in parking stalls	\$45,011 / Acre
- Site Work)	Inc in 02200	147,521	36.50	SY	4,042	520 Asphalt Paving Heavy Duty 4.5" + 6" in drive lanes	02520
- Site Work)	Inc in 02200	0		TON		529 Paving at maintenance drive	02529
- Site Work		15,000	10,000	10,000.00	AL	1	Asphalt Repairs/Sawcutting before finish course	
- Site Work			0		SY		Milling	
- Site Work			r 0		SY		Geotextile or Fabric	
- Site Work)	Inc in 02200	21,000	150.00	STALLS	140	528 Stripe per C301 and C302; details C900	02528
- Site Work)	Inc in 02200	5,000	5,000.00	EST	1	Signage per C301 and C302; details C900	
					STALLS	140 1	528 Stripe per C301 and C302; details C900	02528

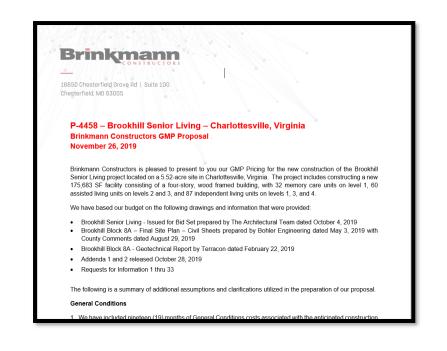


The Estimate Review:

- Review the estimate as a whole prior to reviewing it with anyone else review each division to determine if all anticipated scope is covered – fill in the scope gaps – Compare the 'big-picture' cost per gross SF; cost per LF of perimeter; etc to similar projects in terms of product type and overall size.
- Think about things that dictate why a particular scope might not compare exactly to another i.e. site coverage ratio is different OR the gross area to perimeter skin ratio is poor OR the gross SF per unit is vastly different
- Schedule and review the estimate internally



 Often the first interaction or information we ever provide to a new potential client is a conceptual estimate – it needs to speak to our aptitude; be detailed; and be professional in appearance





- Brinkmann's standard deliverable for a 'conceptual estimate'
 - Provide cover letter (preferred with new clients) or professional email explaining the provided information highlighting the big picture and major items that warrant brief explanation.
 - Clean version of Estimate Schedule of Values (Client Summary)
 - **EVERY** estimate must be accompanied by an outline specification
 - **EVERY** estimate must be accompanied by qualifications



Schedule of Values

- Ensure formatting & numbering is pristine
- Incorporate detail into the scope of work descriptions – helps client for quick understanding of scope – line item allowances.

			Se	hedule of Value
lottesville, ¥A				
	COST/BED 211 Bedr	COST/UNIT	COST/SF 175.643 SF	SUBTOTA
	\$9,970	179 Unitr \$11,752	\$11.97	\$2,103,62
	\$5,434	\$6,406	\$6.53	\$1,146,58
IAL CONDITIONS SUBTOTAL:	\$15,404	\$1\$,15\$	\$1\$.50	\$3,250,201
	\$0	\$0	\$0.00	******
	\$5,523	\$6,511	\$6.63	\$1,165,38
	\$1,178	\$1,388	\$1.41	\$248,46
	\$95	\$112	\$0.11	\$20,00
	\$763	\$899	\$0.92	\$160,94
	\$303	\$451	\$0.46	\$80.71
	\$390	\$460	\$0.47	\$82,38
	\$1,637	\$1,930	\$1.97	\$345,38
	\$0	\$0	\$0.00	
	\$320	\$377	\$0.38	\$67,46
	\$1,559	\$1,837	\$1.97	\$328,90
	\$2,422	\$2,855	\$2.91	\$511,10
	\$1,623	\$1,913	\$1.95	\$342,45
SITE WORK SUBTOTAL:	\$15, \$92	\$18,733	\$19.09	\$3,353,185
	\$0	\$0	\$0.00	
	\$0	\$0	\$0.00	
	\$1,987	\$2,343	\$2.39	\$419,36
	\$3,415	\$4,026	\$4.10	\$720,65
	\$0	\$0	\$0.00	
	\$2,430	\$2,864	\$2.92	\$512,65
	\$2,871	\$3,384	\$3.45	\$605,69
	\$16,560	\$19,520	\$19.89	\$3,494,093
	\$8,691	\$10,245	\$10.44	\$1,833,80
	\$3,357	\$3,957	\$4.03	\$708,23
	\$6,911	\$8,147	\$8.30	\$1,458,32
	\$2,693	\$3,175	\$3.23	\$568,29
	\$556	\$655	\$0.67	\$117,32
	\$807	\$952	\$0.97	\$170,34
	\$4,701	\$5,542	\$5.65	\$991,99
	\$6,117	\$7,210	\$7.35	\$1,290,61
	\$10,129	\$11,940	\$12.17	\$2,137,31
	\$581	\$684	\$0.70	\$122,50
	\$4,764	\$5,616	\$5.72	\$1,005,25
	\$3,282	\$3,868	\$3.94	\$692,44
	\$2,540	\$2,993	\$3.05	\$535,83
	\$3,081	\$3,631	\$3.70	\$650,00
	\$3,400	\$4,008	\$4.08	\$717,42
	\$829	\$978	\$1.00	\$175,00
	\$2,995	\$3,531	\$3.60	\$632,00
	\$2,360	\$2,782	\$2.83	\$497,99
	\$10,812	\$12,745	\$12.99	\$2,281,42
	\$11,948	\$14,084	\$14.35	\$2,521,05
	\$20,641	\$24,331	\$24.79	\$4,355,18
BUILDING SUBTOTAL:	\$138,459	\$163,211	\$166.29	\$29,214,\$14
	\$3,514	\$4,142	\$4.22	\$741,36
	\$0	\$0	\$0.00	\$
	\$1,505	\$1,774	\$1.81	\$317,51
	\$8,739	\$10,301	\$10.50	\$1,843,85
REQUIREMENTS SUBTOTAL:	\$13,757	\$16,216	\$16.52	\$2,902,726
	L REQUIREMENTS SUBTOTAL: TOTAL:			

Schedule of Values

- Provide list of possible value engineering savings
- Provide possible alternate/additive costs that we don't necessarily believe should be included in the base budget



Distribution to the Client

Outline Specification Development

- Important document for us and the owner clarifies the scope we have anticipated – may be used to identify scope for a tenant/lease agreement
- Highlight the big pictures square footage; dimensions; building height; etc.
- List information provided that was utilized
- We have many outline specifications already prepared for nearly every market sector and project type pull an old example or use as a template



Outline Specification Development

- Use as much detail as possible without too much info you want them to read it, not be completely overloaded with information
- Detail inclusions that need to be clarified as allowances or specifically excluded from the scope of work
- Include takeoff exhibits if they will help clarify scope in particular if we intend to go to a design/build model.

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Hazelwood Tradeport – Spec 4 and Infrastructure – Hazelwood, MC Outline Specification and Clarifications April 10, 2019 Page 3

Paving/Site Concrete

Site Paving

- We have included standard duty asphalt pavement in the employee/customer parking lot. Standard duty
 pavement section is 1-1/2' asphalt surface course over 2" asphalt base course over 8" of aggregate base.
- We have included heavy duty asphalt pavement in the truck court. Heavy duty pavement section is 1-1/2" asphalt surface course over 4" asphalt base course over 10" of aggregate base.
- We have included trailer parking asphalt pavement. Trailer parking asphalt pavement section is 1-1/2' asphalt surface course over 3" asphalt base course over 8" of aggregate base.
- Asphalt is currently bid at the asphalt index cost of \$45/ton, and is subject to change with the index.
 We have included 8" thick non-reinforced concrete pavement over 4" of aggregate base for the 80' wide
- dock apron.
- 6. All granular base will be 1° minus, not Modot Type 5 rock
- We have included dolly pad pavement at the truck court.
 We have included 4" thick concrete sidewalks on prepared subgrade.
- We have included 4" thick concrete sidewalks on prepared subgrade.
 We have included 6"x 18" non-reinforced vertical curb. Curbs will be poured monolithically with concrete payements where acclicable.
- All asphalt mix designs are based on St. Louis County specifications.
- All concrete is based on 4,000 PSI mix design with fly ash.
- All concrete pavement joints will be sawcut 15" on center max, and all joints will be filled with hot tar sealant.
- 13. We have not included hot water service costs in our base bid.
- 14. We have not included the costs associated with concrete accelerators or covering the subgrade or concrete pours with insulated blankets.

Public Paving

- 15. We have included concrete paving and Cul-de-sacs for the extension of Tradeport Drive, Tradeport Commerce Ct, and Tradeport Industrial Ct. We have included 8' wide asphalt shoulders along these streets.
- 16. We have included transverse and longitudinal dowel bars for the public paving
- 17. We have included cost for public street signage and striping. No speed limit signs or bike lane signs are ourrently shown.
- 18. We have not included hot water service costs in our base bid.
- We have not included the costs associated with concrete accelerators or covering the subgrade or concrete pours with insulated blankets.

Sanitary Sewer

- Public Sanitary Extension
- 1. A have not included any deep well dewatering for deep utility work, but believe it will be needed.
- We have included the extension of the gravity flow sanitary as shown down Tradeport Dr and Tradeport Industrial Ct, which is based on the SS Revision Sheets sent by Stock & Associates on 4.2.19.
- We have included subgrade remediation underneath the sanitary sever extension for the public main per PSI's recommendation.

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CLARIFICATIONS & EXCLUSIONS

- Should be included as the final section of the outline specification.
- If outline specification is not provided for some reason (i.e. we have more detailed drawings) – this document must still be included.
- See separate handout of Brinkmann's standard clarifications and exclusions page – can be easily modified.

Brinkmann CLARIFICATIONS 1. Budget pricing does not include cost associated with any future pricing increases caused by government and/or unforeseen changes including but not limited to taxing, tariffs, etc. 2. We exclude all building permit & plan review fees, use taxes, inspection fees (less re-inspections caused by contractor), or other permit related fees as these are anticipated to be paid directly by the Owner. Allowances have been provided for Construction Permit costs only 3. We exclude all tap fees, impact fees, use fees, connection fees, or other development fees which may be assessed by authorities having jurisdiction (AHJs). All construction costs and fees associated with the installation, modification, or removal of any dry utility on or offsite including natural gas, primary electric, phone, cable, fiber optic, Public Street lighting, or other special services are to be coordinated by Contractor and paid for by Owner. 5. All Third Party Quality Assurance Testing Services (construction materials testing) including IBC required special inspections shall be coordinated by the Contractor and paid for by the Owner. We have allowed for preliminary geotechnical investigative studies as are anticipated to be part of the design costs. See alternate allowance costs provided for CMT.

- 8. We have not included any provisions for environmental studies; handling, removal, and/or disposal of hazardous materials or other environmental concerns, including but not limited to the resulting schedule delays should such be encountered once we have commenced with onsite work.
- We have not included any offsile improvements including but not limited to utility extensions, storm water quality or conveyance to existing improvements offsile, borrow/export sites, or adjacent roadway improvements/extensions.
- 8. We exclude the unloading, handling, storage, installation, set-up, and waste management associated with all tenant/owner (Umited furniture, fixtures, and equipment (FEE) unless specified otherwise, as this will be completed by the Owner or Owner's wand(of). This shall include tub ta not limited for furniture, artwork, racking, appliances, unfixed equipment, trash compactors, etc. We exclude all decorative tenant building signage, labeling, and monumer signage - assumed by Owner.
- 9. Based on the provided anticipated schedule; we have not included any provisions for winter conditions or schedule impacts should such be encountered. Additionally, we have allowed for (10) critical path weather days which are incorporated into the schedule to be tracked upon commencement of construction – should such be exceeded a day for day extension of the construction shall be granted.
- 10. We have not included the cost of equipment/wiring for data/phone/cable systems, security systems (access control, CCTV, intrusion detection), or other special systems such as lightning protection, PA systems, etc which we anticipated would be contracted directly by owner with vendor if desired.
- We exclude all cost associated with wildlife habitat concerns such as remediation or relocation as well as all pest control measures such as termite treatment.
- 12. We exclude any and all Factory Mutual Requirements
- 13. We exclude extended maintenance periods or monitoring agreements for any scope of work including but not limited to landscaping, fire alarm monitoring, etc.
- 14. We exclude radon testing as well as preventative mitigation systems and/or remediation of such
- 15. We exclude cathodic protection of site water lines.

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