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SITE SPECIFIC
QUALITY CONTROL PLAN
- Work Safely - Communicate Clearly
- Build it Right - Document Accurately

Contractor:

TILT WALL COMPANY

Date Prepared:
___/___/___

Prepared by:		Office Phone:	
Project Name:		Project #:	
Location:			
Scope of Services:			

Project Start: ___/___/___, Finish: ___/___/___

Subcontractor Quality Team

Owner (Responsible for the overall QA/QC Program for the company)		**Phone #:**		**Email:**
Program Manager (Responsible for this project's Job Specific Quality Control Plan)		**Phone #:**		**Email:**
Site Quality Representative (Responsible for all inspections and field documentation for this Quality Control Plan)		**Phone #:**		**Email:**

Quality Assurance Plan

The principle objective of this Quality Control Plan is to provide our customer with the specified materials and high Quality workmanship that meets or exceeds their expectations. We will ensure our checklists are properly utilized and turned into Hoar Construction daily. All issues found with our work will be remediated per the approved corrective action and completed in the expected period. All third party testing will be performed per the contract documents, product manufacturers' requirements and the jurisdiction's requirements. Photos of specific conditions will be taken, dated and organized as required.

This Site Specific Quality Control Plan has been established to ensure that all work performed by employees or tiered subcontractors of _____ meet all contractual and regulatory requirements. Our Quality Team (defined above) takes total responsibility for the implementation of this program and its success for our scope of work on this project.

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Quality Control Checklist

Date:
Company Name:
Weather Conditions:

Material Storage and Handling	Yes	No
Reinforcing steel: Keep out of mud, store on poly, and prevent excessive scaling.		
Stone base: Ensure material is not too dry or too wet per Geotech recommendation.		
Forms: Keep clean of debris, store on dunnage and cover with poly to keep dry.		
Vapor barrier: Keep clean of debris and rolled until installation, prevent punctures.		
Ready mix concrete: Ensure mix conforms to project specifications, utilize temperature		
Admixtures and procedures as required by ACI and project engineer as necessary.		
Curing compound: Keep container sealed until use, prevent contamination, store		
Above 40°, agitate as required before use.		
Surface retarder: Keep container sealed until use, prevent contamination, store above 40° reduce with water and agitate as required before use.		

Task Description: Foundations	Yes	No
The subgrade has been proof-rolled, verified for correct elevation, and certified.		
appropriate building corners, benchmarks, and points to perform layout have been provided		
Anchor bolt layout plan provided.		
GC provided stoned lay-down area and stoned access roads to all areas of work.		
Foundation spoils dump location provided.		
Concrete truck wash-out location with good stoned access provided.		
Layout column grid lines, building perimeters, verify benchmark.		
Excavate footings to dimensions shown on plans. Verify weather for extents of daily excavation.		
termite treatment has been applied prior to placement of reinforcement		
Install reinforcement as required per plans.		
Verify reinforcement has correct lap splices.		
Verify reinforcement has appropriate clearances within excavation.		
Set, level, and plumb anchor bolts templates and embeds, if necessary.		
Schedule inspections with Geotech and appropriate governing municipality.		
Concrete pour is based on positive inspection results.		
Verify ready mix is per approved mix design and for specific use.		
If additional mix water is needed, only supplier's QC representative is authorized to add		
Geotech took samples if necessary		
Concrete placed via truck chute is kept as close to needed placement point as possible, concrete never to fall from chute more than 4' unless proper precautions are taken		

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Task Description: Re Foundations	Yes	No
Bulkhead continuous at daily stop point, ensure reinforcing is run thru bulkhead and is enough for appropriate lap splice.		
Consolidate concrete around reinforcing, bolts, embeds, forms and excavation sides with appropriate vibrator, have working backup vibrator within reasonable distance of pour location.		
Float finish surface. Trowel finish surface where necessary for embeds, drift pins, benchmarks, and layout points.		
Shoot in anchor bolts prior to concrete setting up, if necessary		
Set one nut on each column pad to correct column bearing elevation, if necessary.		
Document work in Project Daily Report, advise GC on issues, progress/delays.		

Task Description: Slab on Grade	Yes	No
The subgrade has been proof-rolled verified for correct elevation,		
Appropriate building corners benchmarks, and points to perform layout provided.		
GC provided stoned lay-down area and stoned access roads to all areas of work. Adequate access is provided for 90-120CY/hour delivery rate in addition to all pumps, screeds, and finishing equipment.		
concrete truck wash-out location with good stoned access provided		
Discuss with GC the size, duration of pour, placement of pumps, trucks, screeds, and equipment during pour.		
Inspect subgrade for any obvious issues prior to stone placement.		
Verify with Geotech and GC that subgrade is acceptable for stone base placement.		
Verify with GC that all trades are complete with under-slab scope. Discuss with GC specifics of other scopes under slab for safety and quality control.		
Place 4” stone base as required by the plans. Tailgate placement from truck, feather out with grader, and roll with 4+ ton smooth drum roller for required compaction. Ensure that moisture content and compaction of base is acceptable with GC and Geotech.		
Layout and verify all construction joints, edge forms, turn-downs, depressions, pits, and penetrations within proposed slab limits.		
GC reviewed layout for general conformance.		
Excavate turn-downs, depressions, and pits as needed. Verify weather for extents of daily excavation.		
Termite treatment applied after stone placement and excavations, but prior to placement of vapor retarder.		
Install, plumb, and level all edge, column, and leave-out forms as required. Ensure that edge forms maintain a mitered edge to assist in edge troweling and densification.		

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Drill and slot cut forms as necessary to accommodate for reinforcement continuation as needed.		
Install vapor retarder as required per plans. Ensure correct overlap and appropriate taping is applied at all seams. Run vapor retarder under all forms.		
Install mesh reinforcing and reinforcing bars as required per plans. Continue mesh and bars thru all construction and contraction joints or as required.		
Verify reinforcement has correct lap splices.		
Verify reinforcement has appropriate clearances within excavation		
Inspections with Geotech and appropriate governing municipality have been scheduled.		
pour based on positive inspection results		
Verify ready mix is per approved mix design and for specific use.		
Discuss with GC that pour will only take place when precipitation potential is 0-20%		
Verify with GC appropriate time for mobilization of all equipment, crews, and start of pour. Follow up with all suppliers, operators, drivers, office, and safety directors.		
1-hour prior to pour, setup and exercise pumps or telebelts. Setup and exercise laser screed sending/receiving units – verify with calibrated instruments.		
Verify mix design with supplier before initial dispatch. Confirm anticipated placement rate and approximate total quantity.		
Verify that weather is acceptable for duration of pour.		
Start pour when crew and finishing equipment are on site.		
If additional mix water is needed, only supplier's QC representative is authorized to add water.		
Geotech took samples, if necessary. Verify slump and mix design.		
Concrete placed via truck chute, chute is kept as close to needed placement point as possible, concrete never to fall from chute more than 4' unless precautions are taken.		
Concrete placed via telebelts, boom pump, or line pump shall be within 4' of final placement point unless proper precautions are taken.		
Placement shall occur laterally across pour, left to right, right to left, or sides to center. Laser screed shall follow placement in same lateral pattern.		
Operate laser screed to ensure appropriate contact and consolidation is being made with mold board, vibrator and concrete surface. Ensure all actions are taken to ensure required floor FF/FL numbers.		
Pull up and chair mesh/reinforcing mat after screed has moved so that mat is in center of slab profile.		
Consolidate concrete around reinforcing, embeds, forms and excavation sides with appropriate vibrator, have working backup vibrator at edge of pour location.		
Apply surface evaporation retarder to prevent crazing and shrinkage cracking from sun and wind exposure, if necessary.		
Bull float, pan, and then hard trowel surface as required obtaining required floor finish. Ensure all actions are taken to ensure required floor FF/FL numbers.		

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Apply curing compound immediately after burnishing, ensure that product is applied at right angles and appropriate coverage takes place.		
Once surface has set enough to perform early entry sawing, layout contraction joints with blue chalk to prevent permanent slab staining. Operate two saws simultaneously with at least one working backup saw. Insert joint savers at contraction intersections to minimize chattering, raveling, and spalling. Replace saw blades often during cutting as gravel erodes diamond teeth twice as fast as limestone or granite. Sweep up and blow off saw dust to prevent reactivation on slab surface and within joints.		
Walk slab to ensure that small pock marks and voids, other than at joints, are filled and troweled to avoid epoxy filling later on.		
Document work in Project Daily Report, advise GC on issues, progress/delays.		

Task Description: Tilt Wall		
Confirm with GC the most recent plan revisions and specification pertaining to tilt wall aesthetics and structural requirements. Also review the need for any MEP penetrations or specific coordination issues.		
Discuss with GC specifics of other scopes affecting tilt operations and working in the area of tilt operations, specifically for safety and quality control.		
Review the panel book in entirety with GC and crew to ensure a safe and successful execution of tilt layout, forming, pouring, erection, and bracing.		
Review each panel that is integral color on front and side elevations with GC and crew. Remind all parties that these panels are not painted.		
Appropriate building corners, benchmarks, and points to perform layout provided		
Stoned lay-down area and stoned access roads to all areas of work. Adequate access is provided for 60-120CY/hour delivery rate in addition to all pumps and finishing equipment		
concrete truck wash-out location with good stoned access provided		
Discuss with GC the size, duration of pour, placement of pumps, trucks and finishing equipment during pour.		
Inspect slab for any obvious issues prior to start of forming or bond breaker application		
Verify with Geotech and GC that slab is acceptable for tilt scope commencement		
Place (2) coats of approved bond breaker on forming area, applying at right angles to each other. Ensure that 2-3’ past all forming surfaces are covered to protect against placement splash.		
Layout and verify all common boards, header boards, toe boards, opening, leave-outs, depressions/recesses, and thickness steps. Use blue chalk with spray sealer to ensure placement of lines without permanent staining.		
Layout and verify all architectural details including reveal, chamfers, radii, and depressions. Use blue chalk with spray sealer to ensure placement of lines without permanent staining.		
Layout and verify all exterior embeds/connections for tilt, masonry, EIFS and steel. Use blue chalk with spray sealer to ensure placement of lines without permanent staining.		
GC to review for general conformance		
Layout and install panel reinforcing as required. Ensure that appropriate bar sizes		

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and lap splices are used.		
Verify reinforcement has appropriate clearances within forms and around openings		
Install face, back, and side of panel embeds inserts and connections as required. Ensure that all lifting and bracing inserts have the required additional reinforcing and are inspected for integrity.		
Review and inspect each panel in comparison to the panel book prior to pouring.		
Pour will be based on positive results from inspection		
Verify ready mix is per approved mix design and for specific use.		
Only pour when precipitation potential is 0-20%		
Verify with GC appropriate time for mobilization of all equipment, crews, and start of pour. Follow up with all suppliers, operators, drivers, office, and safety directors.		
1-hour prior to pour, setup and exercise pumps or telebelts.		
Verify mix design with supplier before initial dispatch. Confirm anticipated placement rate and approximate total quantity.		
Verify that weather is acceptable for duration of pour.		
Verify bond breaker thickness and coverage, apply more if in doubt.		
Start pour when crew and finishing equipment are on site.		
If additional mix water is needed, only supplier's QC representative is authorized to add water.		
Geotech took samples, if necessary. Verify slump and mix design.		
Concrete placed via truck chute, chute is kept as close to needed placement point as possible, concrete never to fall from chute more than 4' unless precautions are taken.		
Concrete placed via telebelts, boom pump, or line pump shall be within 4' of final placement point unless precautions are taken.		
Placement shall occur laterally across each panel, left to right, right to left, or sides to center.		
Consolidate concrete around reinforcing, embeds, forms with appropriate vibrator, have working backup vibrator at edge of pour location.		
Apply surface evaporation retarder to prevent crazing and shrinkage cracking from sun and wind exposure, if necessary.		
Bull float, pan, and then hard trowel surface as required obtaining required panel finish. Ensure all precautions are taken to avoid cutting or covering up insert wicks during finishing operations. Hand tool all form edges to prevent spalling upon form removal.		
If curing compound is required, apply immediately after hard troweling, ensure that product is applied at right angles and appropriate coverage takes place.		
Document work in Project Daily Report, advise GC on issues, progress/delays.		

Task Description: Tilt Wall Erection		
Discuss with GC specifics of other scopes affecting tilt erection operations, specifically for safety and quality control.		
Discuss with GC the starting location and sequence of tilt erection.		
Discuss with GC the equipment utilized during erection operations.		

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Review the panel book in entirety with GC and crew to ensure a safe and successful erection sequence.		
Review each panel that is integral color on front and side elevations with GC and crew. Remind all parties that these panels are not painted and must be handled carefully.		
GC provided stoned lay-down area and stoned access roads to all areas of work. Adequate access is provided for 250T crawler crane and support vehicles throughout erection sequence.		
Discuss with GC and crane operator, the size, weight, and pick motion of each panel. Specifically address which panels will need to be carried/walked or blind set.		
Remove all lifting, bracing, and slant anchor insert covers. Verify correct locations with panel book.		
Attach braces to panels. Verify brace size and length with panel book. Review brace integrity and consult tilt engineer immediately with issues.		
Remove header boards, toe boards, and opening forms. Remove debris from lifting area.		
Inspect panels for any obvious issues at least two days prior to erection day.		
Inspect crane, rigging and clutches the day before erection commencement. Keep spare clutch on job site.		
Layout and mark footings for panel joints, install drift pins if not already installed. Mark footings with orange paint to improve visibility during setting. Pre-wrap shim packs and place on footings at panel ends.		
Verify with Geotech and GC that concrete break reports meet or exceed minimum PSI requirement designated in panel book. Immediately consult tilt engineer with issues.		
Hold safety meeting prior to start of erection, EVERY DAY. Discuss dangers and assign erection roles and rules.		
Study the initial uplift on each panel. Listen for cracking and popping, watch for cracks, pull outs, insert failures, and boom whip.		
Do not drag panels on bare slab, place plywood or lumber underneath panels before moving, if necessary.		
Once panel is in air, remove common board and any remaining form material hanging on panel.		
Set panel on shim packs and align with foundation marks. Slide brace feet into bracing area, drill bolt holes, and slide foot around bolt and tighten with impact. Do not take weight off crane until braces are securely fastened to floor slab. Once fastened, ease weight off crane; shoot in panel for plumbness, adjusted braces as needed. Once braces are adjusted and panel is in final location, clutches may be removed and fastened to the next panel in the sequence.		
Once clutches are released, the area of the previously-picked panel is to be cleaned of all forming debris and pushed outside of the panel fall line.		
Truck grouting of panels is to take place within 24-36 hours of panel placement. Slant anchors and weld connections are to be 24-48 hours after panel placement or as required by the tilt engineer.		
Pressure wash integral colored panels immediately after erection is complete. Gray panels can be washed just prior to painting.		

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Rubbing and patching operations are to commence one day behind panel placement for gray panels. Patching of colored panels will occur 20-30 days after panel placement so moisture may evaporate from panel surface and sun bleaching may occur. Patcher will use the back side of the integral colored panels to match the final patch color. Tilt wall subcontractor will verify require acceptance by GC and Architect of color match prior to proceeding on patching the colored panels.		
Once building diaphragm has been established, panel braces are to be removed carefully so as not to crack or scratch the floor slab or panels.		
Floor patching is to commence on all form and brace holes. Old2Neu Epoxy is to be used per the manufacturer's recommendations. Grind smooth all epoxy to finish floor. Coordinate with GC and other trades as areas will be required to be taped off to prevent the tracking of wet epoxy on the surrounding areas.		
Document work in Project Daily Report, advise GC on issues, progress/delays.		
Clean up work areas as needed.		

_____ _____

Site Quality Representative

Hoar Project Superintendent
(Reviewed for general conformance only)