



PRC-007

## Plan Review Checklist Grading and Retaining Wall

<b>INFORMATION</b>	PROJECT NO.:		EXPIRATION DATE:		STATUS: <b>1<sup>st</sup> Review</b>		
	PROJECT ADDRESS:			CUBIC YARDS:			
	WORK DESCRIPTION:						
	APPLICANT'S NAME:				TEL. NO.:		
	USE	OCCUPANCY GROUP	FLOOR AREA	OCCUPANT LOAD	TYPE OF CONSTR.	NO. OF STORIES	FIRE SPRINKLER
<b>INSTRUCTIONS</b>	<p>Your application for a permit, together with plans and specifications, has been examined and you are advised that the issuance of a permit is withheld for the reasons herein after set forth. The approval of plans and specifications does not permit the violation of any sections of the Building Code or other local ordinances or state laws.</p> <p>In an effort to streamline the plan review process, please follow the steps outlined below to ensure that there is no delay in processing your application and reviewing your responses to these plan check comments.</p> <ul style="list-style-type: none"> <li>All items on this checklist with circled item numbers apply to this plan review. This is not a complete list of the building comments and corrections, please see the marked plans, calculations, reports, etc. for all remaining comment items.</li> <li>The revised plans, reports, and calculations shall incorporate or address all comments marked on the original checked set of plans, calculations, and this plan review checklist.</li> <li>Provide a written response to each comment, stating where and how it has been addressed on the plans. Identify the sheet number, detail number or reference note on the revised plans where the corrections are made. When all comments on the plans, calculations, and this checklist have been addressed, resubmit the updated plans, calculations and reports via email directly to the plan reviewer listed below.</li> </ul>						
	PLAN REVIEWER: _____					TEL. NO.: <b>562-570-</b> _____	
	ADDRESS: <b>411 W. OCEAN BLVD., 2nd FLOOR, LONG BEACH, CA 90802</b>						
	EMAIL: _____			@longbeach.gov		WEBSITE: <b>www.longbeach.gov/lbcd</b>	
<b>NOTE</b>	<p>Numbers within the parenthesis ( ) refer to the section of the applicable code 2022 California Building Code (CBC). Table (T). Long Beach Municipal Code (LBMC).</p>						



**A. PERMIT APPLICATION**

1. Provide a fully dimensioned plot plan (similar to the site plan on the construction document) to scale, in ink and copy it to the plot plan sheet provided by the department. Include the following information as applicable: permit application number, project address, lot size and dimensions, street names, street center line, alley, property boundary, existing and proposed contours, slope angles and drainage terraces, and location of retaining walls (if any).
2. Valuation provided or determined during the initial submittal process was not accurate. Valuation is revised to \$\_\_\_\_\_. Pay additional required plan check fee of \$\_\_\_\_\_.
3. The value to be used in computing the permit and plan examination fees shall be the total value of all construction work, including materials and labor, for which the permit is issued as well as all finish work, painting, roofing, electrical, plumbing, heating, air conditioning, elevators, fire protection systems and any other permanent equipment. (LPMC 18.06.025)
4. Cubic yard of grading work provided or determined during the initial submittal process was not accurate. Cubic yard is revised to \_\_\_\_\_. Pay additional required plan check fee of \$\_\_\_\_\_.
5. Provide complete and correct legal description (i.e., Tract, Lot, Block, APN, metes and bounds, etc.) onto the first sheet or title sheet of the construction documents.
6. Provide complete information for (applicant) (owner) (engineer) (architect) (contractor) (\_\_\_\_\_).
7. Separate permit application is required for the following items:
  - a. Retaining walls or block fence walls
  - b. Grading work
  - c. Swimming pools
  - d. Separate structures
  - e. Shoring.
  - f. Demolition of \_\_\_\_\_
  - g. Construction Trailers
  - h. Others \_\_\_\_\_
8. When all required approvals are obtained, the permit application must be signed by the property owner, licensed contractor, or authorized agent at the time the permit is to be issued:
  - a. For owner-builder permits: Owner’s signature can be verified with owner’s driver license. Owner’s representatives must present owner’s approval with a notarized letter from the owner.
  - b. For contractor building permits: Prior to the issuance of a building permit, the contractor shall have the following:
    - i. Certificate of workers Compensation Insurance made out to the Contractors State License Board.
    - ii. Copy of Contractors State License or pocket ID.
    - iii. Copy of city business tax registration certificate or a newly paid receipt for one.
    - iv. Notarized letter of authorization for agents.

**B. ADMINISTRATION**

1. Obtain all approvals/clearances from the following department/bureau/agency noted below. It is necessary to apply immediately for the signoff or approval as it can take weeks or months for some departments/bureaus/agencies to review and approve the project. All required approvals or clearances must be secured prior to permit issuance.
 

a. Planning Bureau	(562) 570-6194	g. Marine Bureau	(562) 570-3215
b. Fire Prevention Bureau	(562) 570-7086	h. Oil Well Special Inspection	(562) 570- 6278
c. Public Works	(562) 570-6383	i. Water Department	(562) 570-2300
d. Health Department	(562) 570-4000	j. Gas Department	(562) 570-2000
e. Historic Preservation	(562) 570-6194	k. LACDPW	(626) 458-3129
f. Harbor Department	(562) 570-0041	l. Others _____	



2. Obtain Los Angeles County Flood Channel approval for storm drain connection. Provide proof of approval.
3. Provide a copy of permit from the California Division of Industrial Safety for excavations or trenches over 5 feet vertical cuts.
4. The final set of construction documents must be stamped by the following department/bureau/agency:
  - a. Planning Bureau
  - b. Public Works
  - c. Fire Department
  - d. Others\_\_\_\_\_
5. Each sheet of the construction documents must bear the signatures, registration number and expiration date of the registered design professional in responsible charge licensed in the State of California.
6. Provide the following type of information on each set of construction documents:
  - a. Address of the project
  - b. Name and address of property owner.
  - c. Name and address of Civil Engineer responsible for grading plan if any.
  - d. Name and address of Soil/Geologist responsible for soil/geologic report if any.
  - e. Earthwork quantities in cubic yard for cut, fill, import, export, and removal or re-compaction.
  - f. Complete legal descriptions for all adjacent lots involved.
7. Final plans and construction documents will be required during permit issuance. Construction documents must be:
  - a. Quality blue or black line drawings with uniform and light background color.
  - b. Max. 36" x 48" size with min. 1/8" lettering size.
8. This project is subject to NPDES and SUSMP regulations per LBMC 18.61. Provide the following:
  - a. The project architect or engineer of record, or authorized qualified designee, shall sign a statement on the plans to the effect:
 

“As the architect/engineer of record, I have selected appropriate BMPs to effectively minimize the negative impacts of this project’s construction activities on storm water quality. The project owner and contractor are aware that the selected BMPs must be installed, monitored, and maintained to ensure their effectiveness. The BMPs not selected for implementation are redundant or deemed not applicable to the proposed construction activities.”

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Name	Position	Date
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- b. One or more acres. In addition to the above requirements, developments located adjacent to or directly discharging into environmentally sensitive areas, in a hillside area, or those that will result in the disturbance of one acre or more in size, shall have their construction plans include features meeting the applicable construction activities BMPs (CA-1 through CA-40) and erosion and sediment control BMPs (ESC-1 through ESC-56) published in the “California Storm Water Best Management Practice Handbooks (Construction Activity) (1993)” to ensure that every construction site meets the requirement of these regulations during the time of construction. Furthermore, these projects shall be required to prepare and submit to the city a storm water pollution prevention plan (SWPPP). The SWPPP shall include appropriate construction site BMPs listed in this subsection.
      - c. Five or more acres. Projects with disturbed areas of five (5) acres or greater shall prepare and submit to both the RWQCB and the city a SWPPP. The SWPPP shall include appropriate construction site BMPs listed in subsection 18.61.050.C. In addition, a notice of intent (NOI) to comply with the state construction activity storm water permit shall be filed with the RWQCB, and evidence of such filing shall be submitted to the city.
9. The construction plans shall include features meeting construction activities BMPs (CA-10 through CA-12, CA-20, CA-21 and CA-23, and CA-30 through CA-32) and the applicable provisions of the erosion and sediment control BMPs (ESC-1 through ESC-56) published in the “California Storm Water Best Management Practice Handbooks (Construction Activity)” and BMP (CD-4(2)) of the “Caltrans Storm Water Quality Handbooks, Construction Guide and Specifications”. See information Bulletin IB-038, IB-039 and IB-042. Provide on the construction documents.



10. Provide the following checked items related to grading:

- SWPPP
- SUSMP
- NOI
- Hydrology/Hydraulic Report
- LID Report
- Erosion Control Plan
- Soils Report
- Bond for \$ \_\_\_\_\_

11. Refer to the attached supplemental checklist sheets listed below for additional plan review comments:

- a. Low Impact Development (LID) Plan Review Checklist
- b. Storm Water Pollution Prevention Plan (SWPPP) Plan Review Checklist
- c. Commercial Accessibility Plan Review Checklist
- d. CAL Green Non-Residential Checklist

12. The Long Beach City Council adopted the Low Impact Development (LID) Ordinance on November 16, 2010, with an effective date of February 19, 2013. Any development or redevelopment requiring a building permit, which creates, adds, or replaces 500 sq. ft. or more of impervious area, must comply with LID standards.
13. File a Notice of Intent (NOI) to comply with the State construction activity storm water permit with the RWQCB. Evidence of such filing shall be submitted to the City.
14. A property line agreement or survey shall be provided to identify the location of the proposed fence(s).
15. When grading occurs during the wet season (October 1 through April 15), the contractor shall conduct and document self-on-site inspections during rain events exceeding 0.1 inch over 24 hour period. In addition, susceptible slopes shall be covered.
16. A grading bond is required. Provide Civil Engineering Cost Estimate for the project stamped and signed by the licensed Engineer. Please note that the bonds must be submitted for review by the City Attorney and will require several days to obtain approval. See information Bulletin IB-BU-020. Contact Samuel Norden at 562-570-6544 for additional information.
17. The Civil Engineering cost estimate should include the following minimum items: Cut and Fill, Subsidence, underground wet utilities (water, sewer, storm drain system), erosion control, etc.). The quantities should be reflected on the construction documents.

18. Provide the following information:

- Total lot/ land area - \_\_\_\_\_ (Square feet/ Acre)
- Existing Impervious surface - \_\_\_\_\_ (Square Feet/ Acre)
- Existing pervious surface - \_\_\_\_\_ (Square Feet/ Acre)
- Disturbed area - \_\_\_\_\_ (Square Feet/ Acre)
- New Impervious surface - \_\_\_\_\_ (Square Feet/ Acre)
- New pervious surface - \_\_\_\_\_ (Square Feet/ Acre)

19. Provide Soils Engineer’s stamp and signature on the grading/ foundation plans for conformance to soils report.
20. Submit separate electronic copies (PDF) of the soils report, SUSMP, SWPPP, hydrology and hydraulics report.

21. A covenant and agreement regarding maintenance for SUSMP should be filed with the County Recorder's Office. See bulletin (BU-07 for additional information) and form. Include as an exhibit with the forms, the following: Site plan indicating location of permanent BMP's, Permanent BMP Details, specifications, maintenance agreement, etc. The forms are required to be signed and approved by the Plan Check Engineer prior to filling.

**C. GENERAL REQUIREMENTS**

1. Provide the following notes onto the construction documents:
  - a. All grading slopes shall be planted and sprinklered.
  - b. No fill to be placed until city inspectors has inspected and approved the bottom excavation.
  - c. All fill shall be compacted to a min. relative compaction of 90%.
  - d. Temporary erosion control to be installed during construction.
  - e. Temporary erosion control to be installed during construction.
2. The following BMPs shall be used as applicable: CA-10, 11, 12, 20, 21, 23, 30, 31, 32, CD-4(2) and ESC-1 through 56.
3. Building to be clear of ascending slopes exceeding 3:1 [H:V] a min. of H/2 but need not exceed 15 feet. (CBC 1808.7.1)
4. Special inspections are required for the following items: (CBC 1704 & LBMC 18.07.080)
  - a. Grading (Soil Compaction)
  - b. Special Case: \_\_\_\_\_
  - c. SUSMP
  - d. SWPPP
  - e. Driven/Cast-in-place deep foundations.
5. Provide cross-sections showing existing grades, proposed slopes, areas of cut or fill, retaining walls, structures and property boundaries.
6. The slope of cut surfaces shall be no steeper than 2:1 [H:V] vertical (50%) unless the applicant furnishes a soils report justifying a steeper slope. (CBC 1704)
7. The slope of fill surfaces shall be no steeper than 2:1 [H:V] (50%) unless the applicant furnishes a soils report justifying a steeper slope. (CBC 1704)
8. Cut and fill slopes shall be set back from the property lines in accordance with CBC Figure J108.1 unless substantiating data is submitted.
9. Remove all plans, details or notes that do not pertain to the project from the final set of construction documents.
10. The plans shall show the following minimum items: vicinity map, property limits, accurate contours, detailed plans of all surface and subsurface drainage devices, original and finish contours, erosion control plans and details.
11. Provide a Standard Urban Storm Water Mitigation Plan (SUSMP) report with at least the following minimum information:
  - a. Introduction
  - b. Project Description
  - c. Site Description
  - d. SUSMP Requirements and Provisions (Peak Storm Water Runoff Discharge Rates, Conserve Natural Areas, Minimize Stormwater Pollutants of Concerns, Protect Slopes and Channels, Provide Storm Drain System Stenciling and Signage, Properly Design Trash Storage Areas, Provide Proof of Ongoing BMP Maintenance and Operations, Design Standards For Structural or Treatment Control BMPs, Provisions Applicable to Individual Priority Project Categories, Catch Basin Inspection, Street Sweeping, Water Conservation, Runoff Treatment BMPs, Limitation of Use of BMPs, Etc.)
  - e. Volume and Flow Rate Calculations

- f. Best Management Practice's
  - g. Operation and Maintenance Guidelines
  - h. Figures (Vicinity Map, Site plan, Isohyet, Pre and Post Development HydroCalc for 10 and 25 year, Pre and Post Hydrology Map, 0.75" Precipitation HydroCalc, LID/ SUSMP Plan, Etc.)
  - i. Attachments
  - j. Appendix (BMP Sizing Calculations, BMP Details, Infiltration System Details, Soils Report, Maintenance Covenant, Etc.)
12. Provide cross sections showing existing grades, proposed slopes, areas of cut and fill (cut and fill lines should be shaded for clarity), retaining walls, structures, existing contour lines, proposed contour lines, plan and section views showing cut and fill, zero cut/ fill lines, property boundaries, elevations, benchmarks, details (sidewalk, gutters, asphalt or concrete pavements, BMP's, etc.), precise grading plans and Notes, storm drain plan, storm drain profiles, horizontal control plan, stripping plan, SPPWC standard plans, condition of approval from Planning Department, Construction Notes, Utility Plan, General Grading Notes, Demolition plan and General Demolition Notes, Storm drain stencil Details, LID plans, etc.
13. Provide erosion control plan. Provide Erosion and sediment control plan general notes, sandbagging details, entrance/ outlet tire wash, catch basin/ area drain sandbagging detail, BMP's, temporary fencing/ gate, wash area, materials storage/ delivery area, vehicle cleaning/fuel/ maintenance area, existing utilities (gas, electrical, drains, sewers, water), etc.
14. Standard Plans for Public Works Construction should be included with the plans. Provide details.

#### **D. DRAINAGE**

- 1. Show on site plans the natural and finish grade elevations around the perimeter of the building. Survey map signed by a licensed Surveyor or Civil Engineer may be required by the department.
- 2. Drainage across interior lot lines creating cross lot drainage is not permitted nor is change in the drainage pattern that alter or increase quantity of water discharging to adjoining properties (LBMC 18.75.070.D; LBMC 20.20.010.E; LBMC 20.36.020.E).
- 3. All lots shall be adequately drained. No cross-lot drainage shall be permitted. (LBMC 20.36.020.E)
- 4. No cross-lot drainage shall be permitted without the appropriate easements over adjoining lots. Submit a drainage easement. A covenant and Agreement Regarding drainage easement should be recorded.
- 5. Whenever a project involves cross-lot drainage, a licensed survey map shall be provided to show the drainage pattern of the subject and relevant adjoining lots and the presence of any property line walls.
- 6. Existing cross lot drainage problems shall be corrected.
- 7. Drainage across property lines shall not be permitted except for drainage that does not exceed that which existed prior to grading. Excess or concentrated drainage shall be contained on-site or directed to an approved drainage facility. Erosion of the ground in the area of discharge shall be prevented by installation of nonerosive down drains or other devices. (18.75.070.D)
- 8. Detail pad elevations to provide min. of 2% drainage to street.
- 9. Detail on plan methods proposed to intercept and carry off subsurface water drainage to street.
- 10. Concentrated drainage shall be discharged into an approved location.
- 11. Submit hydrology and hydraulic calculations to justify drainage design and to show that all surface and subgrade devices are adequate.
- 12. Show flow lines for lot drainage. Indicate crowned slopes and directions.

#### **E. RETAINING WALLS**

- 1. Provide retaining wall details on plans show surface drains, sub-surface drains, slope of backfill, tie at change in wall thickness, and reinforcement.
- 2. Provide material specifications for masonry, reinforcing steel, grout, mortar, and concrete. Also specify any required special inspections. (CBC 1704)

3. Locate the basement wall / retaining walls a min. of 12" away from the property line to accommodate the placement of the sub-drain device.
4. Provide a min. safety factor of 1.5 against sliding and overturning. (CBC 1807.2.3)
5. Basement walls and slabs shall be waterproofed with a state-approved water proofing material. (CBC 1805.1)
6. Show clearly property line with exact dimensions adjacent to retaining wall.
7. Guards shall be provided along open-sided walking surfaces that are located more than 30" above the grade below. (CBC 1015.2)

**F. SHORING**

1. Calculate the deflection of soldier piles and compare with the max. allowable as specified in the approved soils report.
2. Comply with the requirements for shotcrete prescribed in CBC Section 1908. Add notes accordingly.
3. Comply with the soils report recommendations for permanent or temporary dewatering procedures.
4. Design and detail required lagging. If tie-back anchors extend across the property line, a notarized letter is required from the adjacent property owner allowing the anchors to extend into their property. A separate permit is required for such offsite work. Approval from Public Works is required for encroachment of anchors into the public way.
5. Obtain a separate permit for underpinning of adjacent structures where the lateral support is being removed.
6. Shoring system is not allowed to support surcharge from adjacent structures without the recommendations of an approved report and evidence that the adjoining property owner has been notified in advance.
7. Record a "Maintenance of Building Support" affidavit by the owner of the subject property which will inform future owners of the subject site that the lateral support of a portion of the building foundation on the adjoining property is provided by the subterranean walls of the building on the subject site. Affidavit must be approved prior to recording.
8. Provide temporary shoring for excavation exceeding 5 feet vertical cut. Show engineering calculations and plans.
9. Provide material specifications for:
  - a. Concrete/Gunite: strength and type
  - b. Steel: structural, reinforcing, prestress rods or strands, and Welding Rods
  - c. Wood: species, grade and decay resistance
10. Specify on plans continuous inspections for:
  - a. Concrete over 2500 psi
  - b. Installation of Tie-back anchors
    - a. Field welding
    - b. Excavation [by Soils Engineer]
11. Specify and detail on plans excavation, shoring installation and sequence of construction procedures.
12. The design criteria for shoring/building do not agree with the recommendations contained in the soils/geologic report dated \_\_\_\_\_.
13. Provide temporary shoring for excavation exceeding 5 feet vertical cut. Show engineering calculations and plans.

**G. ROUGH GRADING**

1. Names, addresses, seal and signature of the licensed professional preparing the drawings.
2. Vicinity map provided at a scale not smaller than 1" = 1000 ft.
3. Sheets 24" X 36" numbered, drawn clearly and at a scale not less than 50 ft to the inch with match lines and corresponding sheet numbering system where required.
4. North arrow.
5. Limits of clearing and grading clearly delineated (match construction drawings).

