ENGINEERING PLAN REVIEW CHECKLIST

Project Name:

1ST REVIEW ---- RECEIVED _____, REVIEWED _____, STATUS _____, COMPLETED BY _____

2ND REVIEW ----- RECEIVED _____, REVIEWED _____, STATUS _____, COMPLETED BY _____

3RD REVIEW -----RECEIVED _____, REVIEWED _____, STATUS _____, COMPLETED BY _____

GENERAL INFORMATION:

1. _____ Signed & dated Professional Engineer's stamp (registered in the state of Georgia), also include address and telephone number.

2. _____ Owner/Developer's name, address and telephone number.

3. _____ Development Name, including phase if part of a larger development.

4. _____ Provide copies:

    1. GDOT approvals and permits where applicable. These permits will be required prior to issuance of a land disturbance permit from the City of Newnan.

    2. Army Corps Permits, notices, conditions and correspondences

    3. Tim Cox, Fire Marshal, has to review the site plans and utility plans and I will need proof of coordination with him before I can issue the permit. Email him the site plan and utility plans at tcox@cityofnewnan.org

5. _____ Vicinity map showing the location of the project and surroundings within a 5 mile radius

6. _____ Index of all sheets shown on the cover sheet.

7. _____ 24 Hour contact on cover sheet (must be a local number)

8. _____ 24 Hour contact for E&SC on cover sheet (if different from #6)

9. _____ Title blocks to include: development name, sheet titles, sheet numbers & Dates (rev), land lot, districts, sections, etc.

10. _____ Scale – Graphic and written on each sheet including Profiles, X-Sections – Sheets must be printed at the correct scale

11. _____ North arrows on each plan view (GRID NORTH)

12. _____ Development plans shall include the following minimum plans and details:

- Cover sheet.
- Existing conditions and demolition plan.
- Site plan.
- Traffic control and signing and marking plan
- Grading plan.
- Street plan and profiles with details.
- Storm drainage plan and profiles with details
- ADA accessibility plan
- Three (3) phase erosion and sediment control and pollution prevention plan and details.
- Landscape plan and details.
- Tree protection plan and details.
- Water plan with Newnan utility details.
- Sewer plan and profiles with Newnan utility details.
- Street lighting plan with Newnan utility details.
- General details (civil site design details not included in other details)

EXISTING CONDITIONS and/or DEMOLITON PLAN:

13. _____show all existing streets, roads, drives, bridges, railroads and rights of way to include existing sidewalks and multi use easements.

14. _____ Boundary data – provide bearings and distances, curve and line tables, Georgia State Plane Coordinate System, West Zone, NAD 83

15. _____ Show all existing buildings and structures on the site.

16. _____ Existing storm drainage systems with all elevations and easements

17. _____ Existing Water Main/ Sewer Mains and easements.

18. _____ All other Utility Easements to include phone, cable, power, gas etc.

19. _____ Show all streams, perennial and intermittent, water Courses, drainage ditches and existing topography within 200' of the site. Include a statement about state waters whether or not within 200 feet of the site, if w/I 200' they must be shown on the plan with appropriate buffers and setbacks.

20. _____ Stream Buffers – EPD & Water supply watershed (50' buffer & 25' of non pervious for all streams if within a watershed these can be up to 100' and 150')

21. _____ Show wetlands on site or within 200 feet of site otherwise must include a statement that no wetlands are on or within 200' of site.

22. _____ If state waters or waters of the US are to be impacted must provide–the Corps of Engineers jurisdiction (404 Permit) and state stream buffer variance info.

23. _____ Underground Utilities Disclaimer – Call B 4 U Dig 1 (800) 282-7411 with logo now new 811 number

24. _____ Flood Insurance Rate Map (FIRM) Panel number and flood plain boundary w/ Base Flood Elevation (if applicable)

25. _____ Demolition Plan (if applicable)

ROAD, SIDEWALK AND CURB AND GUTTER:

25. _____ Show existing and proposed R/W, indicate whether city, county, or state, show on plans and label (width).

26. _____ Road names existing and proposed label

27. _____ Road Widths (back of curb preferred method of measurement, where applicable)

Residential:

28' b/c – b/c with 12' min lane width for 2 way traffic –

City Engineer may allow 11' wide lane for traffic calming, to pursue this please contact in writing and receive permission to reduce lanes before plans submittal.

22' b/c – b/c with 10' min lane width for 1 way traffic – must include 8' min width parking or passing lane.

For Commercial or Industrial see the Sub Regs.

28. _____ Roads - typical Cross sections with paving detail (must be designed to carry the anticipated traffic loads using GDOT pavement design tool), curb, sidewalks, and utilities. We require GAB underneath the curb and gutter.

29. _____ Street plan with C/L Stationing & horizontal curve data (min horizontal curve is 100) to include PC, PT and the centerline of intersections (give consideration to reducing speed by having more curves on road segments no tangent section greater than 500 feet unless necessary).

30. _____ Street Profile sheets with adequate labeling on profiles to include the % grade, change in grade (A), PVC, PVT, PVI & low point elevations and "K" values, show design speed on plans, generally VC are 3 times the design speed minimum, exact location of drainage structures.

31. _____ Delineate the length and width of all Accel/Decel/left turn lanes w/ curb/striping, if applicable.

> Turning lanes shall provide not less than one hundred fifty (150) feet of storage length for arterial roadways and not less than one hundred (100) feet of storage length for collector roadways.
>
> The taper length for turning lanes, expressed as a ratio, shall be not less than 8:1 for design speeds up to 30 mph and 15:1 for design speeds up to 50 mph. Taper length based on the peak period speed may be appropriate as determined from a traffic study.

32. _____ Cul-De-Sac – Max Length = 500'; provide detail for temporary cul-de-sac if necessary

33. _____ Median break and intersection separation – maintain adequate separation and distance. Min width of medians is 20' measured from edge of travel lanes. Medians with pedestrian crossing shall be convex or raised and shall incorporate standard curb and gutter.

34. _____ Provide sight distance profiles at all new drives and intersections.

PARKING LOTS AND DRIVES:

36. _____ Parking lots – paving detail, striping, (spaces 9 x 18 min), dimension drive aisles, indicate whether one way or two way with arrows, stop bars, cross walks.

90 degrees – 24 feet aisle for two way

60 degrees – 18 feet one way

45 degrees – 13 feet one way

37. _____ Provide sight distance profiles at all new drives and intersections also check landscape plans for triangle of sight clearance at entrances/exits

- On a local street, no driveway shall be permitted within fifty (50) feet of an intersection with another street. On a collector street, no driveway shall be permitted within ninety (90) feet of an intersection with another street. On an arterial street, no driveway shall be permitted within 120 feet downstream or ninety (90) feet upstream of an intersection with another street. At signalized intersections on collector or arterial streets, respective distances shall be increased by 100 feet.

38. _____ Driveways – widths, curb, striping, signage, min drive separation from other drives and intersections, (site plan show SSD for driveway entrance, crest and sag drainage placement)

MAX DRIVE WIDTHS:

- Residential use, one or two dwelling units: Eighteen (18) feet.

- Other residential uses: Sixteen (16) feet for a one-way drive and thirty (30) feet for a two-way drive.

- Non-residential uses: Sixteen (16) feet for a one-way drive, thirty (30) feet for a two-way drive (except thirty-five feet for a service station), and forty (40) feet for a joint driveway.

39. _____ Curb on all drives, circulation areas and parking – indicate type on plan, indicate spill-out where necessary; provide details

40. _____ Dimension all entrance radii back of curb, typically use 15' min for minor drives and 20-25' min for major drives or aisles, may need larger radii for trucks, indicate truck routes. No radius may exceed thirty (50) feet except in conjunction with an approved traffic channeling structure.

41. _____ Delineate the length and width of all Accel/Decel lanes w/ curb/striping

- Each such lane shall be 150 feet in length, with an additional tapered transition section 50 feet in length. Lane pavement width shall be 12

feet. Where the taper of a new deceleration lane will merge with the taper of an existing driveway or is within twenty (20) feet of merging, the deceleration lane shall be extended to that driveway.

42. _____ Interconnectivity with properties within the same boundary and with future developments

43._____ Show truck route, heavy duty pavement, truck turning radius, minimize conflicts with truck movements and landscape strips, curb, etc.

44. _____ Dumpster pad (show location of concrete pad 6" thick, 3000 psi, 10' x 20')

45. _____ Bollards, please show on plans were bollards are needed and include details.

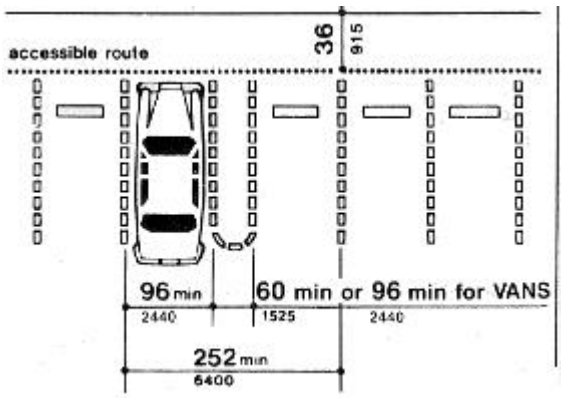
ADA REQUIREMENTS:

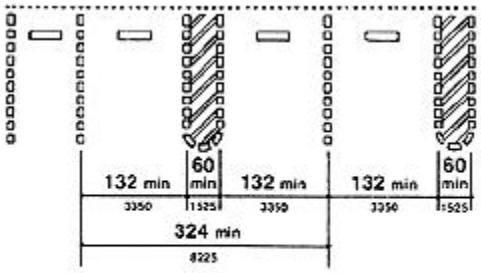
46. _____ ADA safe route from public transportation (show on plans the 5 foot route – ensure ramps, landing and pedestrian crosswalks are noted, ensure running slope and cross slope is noted)

47. Required ADA PARKING spaces:

Total Parking in Lot	Required Minimum Number of Accessible Spaces
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1000	2 percent of total
1001 and over	20 plus 1 for each 100 over 1000

48. _____ Parking Dimensions/Grades/ADA (at least one van accessible parking space per six handicap spaces.) Labeled H/C ramp types and provide details.





(b)
Universal Parking Space Design

Fig. A5
Parking Space Alternatives

49. _____ Wheel stops required where parked vehicles could hang over sidewalks or property lines (or extend sidewalk to 5.5')

50. _____ Include ramp locations type and details (GDOT details).

51. _____ Include crosswalk locations and striping no mid block crosswalks or crosswalks at uncontrolled intersections allowed without pedestrian signals or approval of the City Engineer. (GDOT detail).

52. _____ Signage and striping per ADA and MUTCD. All Striping on right of way shall be thermoplastic, and all new signs shall be HIP

TRAFFIC CONTROL:

53. _____ Add note that states that all striping and signage items must meet latest MUTCD, GDOT and GA Code.

54. _____ Signs shall be mounted at 7'0" above finished grade.

a. _____ Stop signs must be break-a-way mounted on a square tube all other signs may be mounted on a U-Channel

b._____ street name sign detail must be included if new public roads are proposed

55. _____ Provide a plan of all traffic control devices to include traffic signals were warranted and supported by an engineering traffic study, and all striping and signage.

GRADING PLANS:

56. _____ Label Contour elevations – existing and proposed (2' min contour interval)

57. _____ Grading – prevent unnecessary ponding; swales min 1% max 5% without riprap max 10% without paving (Provide flow lines for drainage purposes)

58. _____ Show flow arrows and percent grade throughout.

58. _____ CUT OR FILL Slopes CAN NOT BE STEEPER THAN 2:1, Landscape strips 4:1

60. _____ Provide shoulders – drives, parking, buildings (especially on one way streets) usually 8' wide minimum.

61. _____ Show Finished Floor Elevation for proposed buildings. Ensure FFE is at a minimum of 3' above 100 YR Flood Elevation or 1' above Future-Conditions Flood Elevation, whichever is higher.

62. _____Is land development including the placement of utilities or roads proposed within a special flood hazard, flood way or flood plain area? If yes, then a floodplain management / flood damage prevention plan will be required.

Reference: **Floodplain Management Review Checklist on the City of Newnan website www.cityofnewnan.org**

63. _____ Show Spot Elevations throughout– Proposed, EOP, curbs, TOP OF WALL/ BOTTOM OF WALL, ETC.

DETAILS AND OTHER:

64. _____ Erosion Plans & Specs (phases I, II, and III**)** **MUST INCLUDE E&S CHECKLIST LATEST EDITION**

A. _____ Consistent total acreage: _____

B. _____ Consistent disturbed acreage: _____

65. _____ Retaining Walls that are 4 feet and over must be designed by a qualified engineer. These will require separate submittals with factor of safety calculations and all dimensions, details, plan and profile drawings, picture, material type with guardrail at top where necessary, etc. A separate permit will be required for each wall that is 4 feet or higher. Third party inspections

will be required to include but not limited to the footing, rebar, grid, soil, concrete, drains, and final inspection. An engineer's certification that the wall was installed according to the design is also required and must be submitted to the Engineering Department prior to final approval of the project or certificate of occupancy. If the wall is in an overlay district it must be faced or finished to be more decorative and in compliance with the overlay district standards which are approved by the Planning Department.

66. _____ Concrete wash out show the location on the plans and include the detail with guidance must Leak proof, water proof, commercially serviced containment system that is 100 % recycled.

67. _____ Hotspots note that addresses paint or other chemicals on site; petroleum products, etc. (usually on NPDES or E&SC plans)

68. _____ Sewer main and service plan – show all easements

69 _____ Water main and service plan – show all easements, valve locations, hydrant locations, proposed tap locations and details.

70. _____ Lighting plan (street lights and parking lot lights) – This will be from the power supplier Newnan Utilities, Georgia Power or Coweta Fayette EMC, must be included with civil plans also must show location of any transformer or boxes.

71. _____ Fire Hydrants at proper spacing for hose length/ located in proximity of site (500 feet min)

REQUIRED INSPECTIONS AND NOTES THAT MUST BE ON THE COVER SHEET OF ALL CONSTRUCTION PLANS (if applicable):

The approval of these plans and the issuance of this land disturbance permit does not in any way suggest that all other requirements for the legal or appropriate operations for this activity, which may require additional permitting have been met. The onus is on the Owner/Developer/Builder to discover what additional permitting or approvals may be necessary to operate from this point in an appropriate and legal manner. Plan approval or permit issuance does not absolve the applicant from complying with all applicable laws, standards, or other permits which may be required for this project.

COMPACTION TEST: Compaction test will be required in existing or proposed streets, sidewalks, drives, and other existing or proposed paved areas at varying depths and at intervals as determined by the City Engineer. Unless otherwise noted all backfill in the right of way shall be compacted to 95% standard proctor per ASTM D 698. Contact Ray Norton for proof rolls at 404-606-9140 and send all compaction test results to djohnson@cityofnewnan.org and rnorton@cityofnewnan.org

a. Subgrade (at least one test per 1,500 linear feet alternating lanes and one in each cul-de-sac), if less than 1,500 linear feet then one per day/per section constructed, must also pass proof roll.

b. Base (at least one per 1,500 linear feet alternating lanes and one in each cul-de-sac), if less than 1,500 linear feet then one per day/per section constructed, must also pass a proof roll.

c. Curb and Gutter (rock beneath C&G), must pass a proof roll before curb and gutter is poured.

d. Pipes – One test per lift on alternating sides of pipe for each 300 linear feet of pipe or portion thereof. Test pattern is to begin after first compactive layer above structures bedding and continue to 1 foot above top of pipe.

e. Manholes –In the top 5 feet, minimum of one test every other lift around the perimeter of structure and continue to top of structure.

SITE PREP & TREE PROTECTION INSPECTION: Prior to clearing, or clearing and grubbing of the property or any portion included under the development permit, the developer must call for an INITIAL inspection of erosion and sedimentation control measures and protective devices to include tree protection fence. Inspection of these measures will then be conducted on a continuing basis.

PERMENANT PONDS: Upon completion of permanent detention ponds that are not otherwise used for sediment storage. If ponds are concrete the developer must call for footing inspections and wall inspections prior to pouring concrete.

STORM PIPES: Upon installation of storm drainage pipe or other storm water facilities underneath public roads prior to backfilling and during compaction. Inspections will include storm pipe and structure connections, bedding, grout outside and inside, poured inverts, proper compaction of backfill, detention pond – contact Rob Hill for these inspections his direct line is 678-673-5477 or email at rhill@cityofnewnan.org

CURB AND GUTTER: Street curbing and gutter (if provided). Inspection shall be requested before the forms or string lines have been set to verify GAB depth and compaction beneath Curb and Gutter and after forms or string lines have been set to verify alignment and layout. Street width and vertical and horizontal alignment will also be spot-checked.

SUB-GRADE STREETS: Sub-grade of streets shall be inspected after compaction and receipt of test reports by the City Engineer or his/her designee. The sub-grade must be roll tested with an eighteen (18) ton load on a tandem dump truck and shall pass to the satisfaction of the City Engineer or his/her designee.

BASE STREETS: Street base shall be inspected after receipt of test reports by the City Engineer or his/her designee; the base must be string-lined for depth and crown. The street base must be roll-tested with an 18-ton load on a tandem dump truck and shall pass to the satisfaction of the City Engineer or his/her designee.

PAVING STREETS: An inspector may be on site during the paving process to check consistency, depth, and workmanship, as applicable. For asphalt paving, the temperature of the material will be monitored and the street will be cored after completion to check thickness and density. Satisfactory test results of the cores shall be delivered to the City Engineer or his/her designee prior to approval of a final subdivision plat or certificate of occupancy.

SIDEWALKS – pre-pour forms inspection will include: compacted subgrade, optimum moisture, free of organics and debris, cross slope not to exceed 2%, 5-6 feet wide (reference plans) with 2-4 foot grass strip unless noted otherwise, expansion joints at all cold joints, around structures and every 60 feet, contraction joints spaced 5 to 6 feet apart depending on sidewalk width and pattern (picture frame/streetscape), ramps per GDOT with truncated domes set in concrete yellow is the preferred color.

SILT FENCE: Newnan only allows the use of Type "S" silt fence or approved Type "S" Alternatives. Silt fence has a useful life of 6 (six) months generally.

STRIPING AND SIGNAGE – submit artwork for street name signs to Michael Klahr at mklahr@cityofnewnan.org for approval before signs are ordered. Road acceptance will not occur until all regulatory signs, street name signs, and thermoplastic striping are in place.

STREET CUT NOTE: For utility crossings under existing roads, use directional bore or jack and bore unless approved by the City Engineer. If pavement cuts are proposed provide a detail for approval by the City Engineer

NOI: A copy of the N.O.I and proof of fees paid to the GA EPD shall be delivered to the Engineering Department, Attn: City Engineer, prior to approval of these development plans or a land disturbance permit being issued.

AS-BUILTS: "As-Built" drawings shall be submitted to the City Engineer prior to street acceptance. These shall include all information contained on the approved construction drawings in the "As-Built" state. All "as-built" drawings shall be submitted in both hard copy and digital format and be on the state plane coordinate system, USA, GA, NAD 83, West. The digital copy shall be in AutoCAD file format and pdf format.