**Pre-Construction Meeting Discussion Items**

Project: _____

Meeting Date: _____

1. **Project Overview**

2. **Work Hours**

   The Work hours for any work requiring an Engineers inspection shall be 7:00 A.M. to 6:00 P.M.- Monday through Friday. More restrictive hours of operation (9:00 A.M. to 3:00 P.M.) may be in place for off site road improvements depending on the location and nature of the off site improvements being constructed. Work requiring an Engineers inspection will not be permitted on weekends or holidays, unless requested in writing by the contractor and approved by the County in writing.

3. **Restrictions within Larimer County Public Right of Way (ROW)**

   No construction is permitted within the ROW of Larimer County roads that are external to and or adjacent to the development construction project unless the improvements are shown on the approved construction drawings.

   Signage, such as site entrance signs, will not be allowed within the ROW of Larimer County roads.

   Landscaping within the ROW of Larimer County roads that are external to and or adjacent to the subdivision or development construction project shall be limited to placement of approved ground cover, such as native seed mixes.

4. **Access and Right of Way Construction Permits**

   Access Permits will be required for all access points (driveways, roads) that will tie to an existing County road. If a development is paying a DCP fee, a separate fee will not be assessed for the access permit.

   Right of Way Construction Permits and Fees will be required for all utility installations, excavations, or street cuts in existing Larimer County Right of Way. These permits shall be issued at the time of construction.

   A Traffic Control Plan is required for off site improvements. To obtain Access or Right of Way Construction Permits or to submit a Traffic Control Plan, please contact Marc Lyons (Larimer County Access and Utility Coordinator) at 970-498-5709.

5. **State Stormwater Managment Permit**

   This permit is for the regulation of stormwater runoff from construction activities that disturb one acre of land or more. The term "construction activity" includes clearing, grading and excavation operations.

The permits are administered by the Colorado Department of Health and Environment, Water Quality Control Division. The permits require holders to control or eliminate the sources of pollutants in stormwater through the implementation of a Stormwater Management Plan, developed as part of the application process.

The permit application and guidance documents can be obtained from the Water Quality Control Division's website found at: www.cdphe.state.co.us/wq/PermitsUnit/index.html. Scott Cornell, Larimer County Environmental and Access Specialist, can also be contacted for information at 970-498-5723.

The person(s) the developer/owner has designated as being responsible to ensure compliance with this permit is:

_____

## 6. Colorado Department of Health and Environment Permits

The applicant shall be aware of two additional permits that may be required by the Colorado Department of Public Health and Environment (http://www.cdphe.state.co.us).

### A. Construction Dewatering Permit (Colorado Department of Health & Environment -Water Quality Control Division)

This application is for use by all dischargers engaged in the dewatering of groundwater from a construction site. To obtain additional information on this Permit, please contact Scott Cornell (Larimer County Environmental and Access Specialist) at 970-498-5723.

### B. Fugitive Dust Permit

Colorado's air quality regulations contain requirements for controlling fugitive dust emissions during construction activities. The steps necessary to comply depend on the amount of land disturbed, and the duration of the disturbance.

- Development that involves clearing more than five acres of land must incorporate all available and practical methods which are technologically feasible and economically reasonable in order to minimize dust emissions. As a practical matter, these control strategies are normally identified as part of the overall drainage and erosion control plan.
- If land development creates more than a 25 acre contiguous disturbance, or exceeds 6 months in duration, the responsible party is required to prepare a fugitive dust control plan, submit an air pollution emissions notice (APEN), and obtain an emissions permit from the Colorado Department of Public Health and Environment. The APEN and specialty permit application form for land developments can be obtained from the Air Pollution Control Division website at: www.cdphe.state.co.us/ap/downloadforms.html.

## 7. Project Manager

The developer/owner, their managers, engineers, and contractors are entirely responsible for providing the management, monitoring, inspection or supervision of this project to insure compliance with the approved construction drawings, and all applicable standards and specifications.

Larimer County's responsibility is to periodically performing quality assurance checks on this project. Larimer County will also require extensive documentation from the developer's professional engineers to demonstrate that this project is in compliance with the approved construction drawings, and all applicable standards and specifications.

The designated as project manager for this project is:_____

**8. Erosion Control**

Discuss erosion control measures that will be used during construction and refer to the project erosion control plan/SWMP. (Vehicle tracking pads, straw bales, silt fence, seed disturbed areas, etc).

The site SWMP is required to be on site at all times. On site location of SWMP is:
_____

Inspections forms are to be filled out every 14 days and after every significant precipitation event. They shall be kept in the site SWMP. Who will be doing the inspection reports:
_____

Erosion Control Supervisor or person accountable for compliance with the SWMP is:
_____

**9. Soils Report**

The soils report and investigation for this project was provided by: _____

If the firm that provides materials testing for this project is different than the firm that provided the soils report and investigation for this project, the materials testing firm shall be bound by the recommendations made in the soils report unless the materials testing firm provides a second soils report which supercedes the initial soils report.

**10. Pavement Section Design**

Projects Inside the GMA:
The Larimer County Urban Area Street Standards apply for projects within the Fort Collins or Loveland Growth Management Area (GMA). According to these standards, the pavement design shall be undertaken after utility work is complete (water and sewer) and project is to final sub-grade elevation. The following table on binder grade requirements is an excerpt from the LCUASS:

**Table 22-11 - Binder Grade Requirement**

| **New Construction or Reconstruction** | **Overlay** |
|---|---|
| Local/Residential PG 58-28 | Local/Residential PG 58-28 |
| Minor Collector PG 58-28 | Minor Collector PG 58-28 |
| Major Collector PG 64-28 | Major Collector PG 64-28 |
| Industrial/Commercial PG 64-28 | Industrial/Commercial PG 64-22 |
| Arterial PG 64-28 | Arterial PG 64-22 |

Projects Outside of Growth Management Areas (GMA):
Typically the pavement design is approved by Larimer County at the time of final plat and information is included on the construction plans accordingly. In no event shall base and pavement improvements commence until the pavement design has been approved by the County. The following is an excerpt from the Appendix D of the LCRARS and includes binder grade requirements for projects outside of the GMA:

**Table 403-3 - Binder Grade Requirement**

| New Construction or Reconstruction | Overlay |
|---|---|
| Local/Residential PG 58-28 | Local/Residential PG 58-28 |
| Minor Collector PG 64-28 | Minor Collector PG 64-22 |
| Major Collector PG 64-28 | Major Collector PG 64-22 |
| Industrial/Commercial PG 64-28 | Industrial/Commercial PG 64-22 |
| Arterial PG 64-28 | Arterial PG 64-22 |

Please note that Larimer County requires soil sterilization to be applied on the Aggregate Base Course before placement of asphalt.

The pavement section is_____" AC, _____" ABC, asphalt binder is PG _____ Grade: SX S SG

**11. Asphalt Mix Design for Road Improvements**

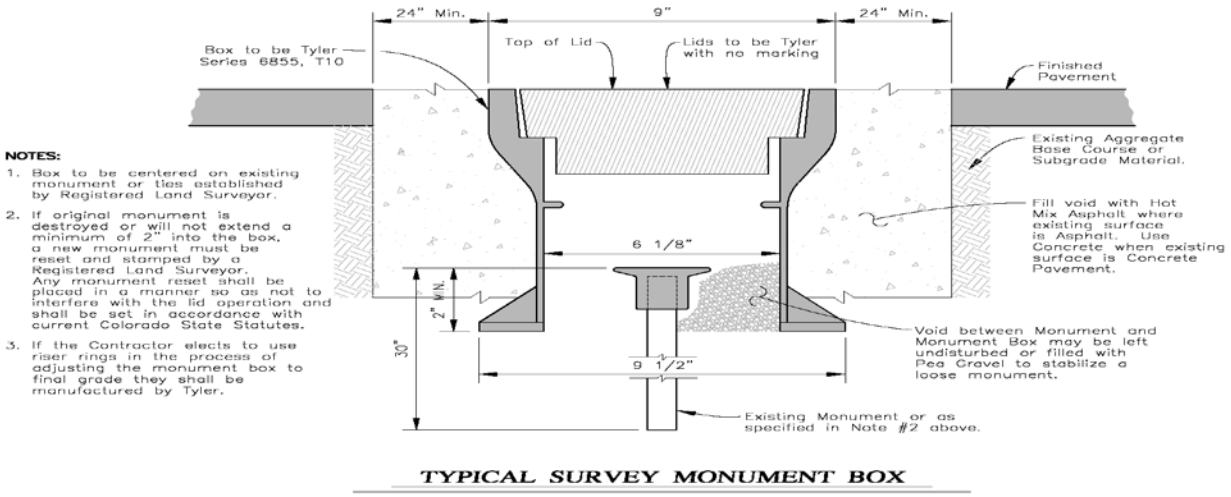
The inspecting engineer shall review and approve all mix designs for compliance with project standards and specifications prior to paving. Please submit a copy of the reviewed and approved mix design to your Development Services Engineer. The pavement contractor on this project is:
_____

**12. Asphalt Coring for Road Improvements (For Density Correction, Lift Thickness, and Aggregate Base Thickness)**

The project materials testing engineer shall take asphalt cores to verify asphalt layer thickness, density gauge correction, and thickness of the aggregate base course. Asphalt cores shall be 4 inches in diameter. Coring locations shall not be within the wheel paths or the travel lanes and shall be backfilled with asphalt permapatch, or approved equal. Asphalt coring shall be performed on each completed lift of asphalt. Asphalt coring frequency shall be 1 core per 1000 lane feet and at least one core for an auxiliary turn bay.

**13. Survey Monument Boxes in County ROW**

When Larimer County gravel roads are paved, all survey monuments (section corners, quarter corners, and the like) must be improved and upgraded per Appendix D of the Larimer County Rural Area Road Standards and the State of Colorado standards. This may include, but is not limited to, boxing, raising and upgrading each monument. If boxing a monument is required, it shall be a Tyler Series 6855 T10 water valve top, with Tyler with no markings. See detail.




*TYPICAL SURVEY MONUMENT BOX*

## 14. Design Changes

All design changes and deviations from the approved plans must be approved by the Larimer County Engineering Department. It shall be the responsibility of the developer/owner, his engineers, and or contractors to consult with the Larimer County Engineering Department to determine the magnitude of the change and to determine what type of review and approval is needed to incorporate this change into the approved construction documents.

The Civil Engineer that will be processing any design changes is:

_____

## 15. Materials Testing

Please see the Larimer County Rural Area Road Standards (or the Urban Area Street Standards if applicable) for a more complete description of testing frequencies and requirements.

Material testing shall include, but not be limited to:

- Density tests for earthwork, trench work, road subgrade, base course, and asphalt.
- Asphalt gradations, Lottman, Volumetrics, rice values and oil content.
- Concrete tests taken for curb and gutter, sidewalks, cross pans, aprons, pavement, inlets and other concrete structures: slump, air content, yield and compressive strength.
- Proofroll tests for road subgrade and aggregate road base:

  Proofrolls should be performed on subgrade prior to placement of aggregate base course, and on road base prior to placement of asphalt. All failed areas should be re-proof rolled to demonstrate that stability deficiencies have been corrected. Following precipitation, all areas should be re-proofrolled as needed based upon the evaluation of the Larimer County Engineering Department. Chemically treated subgrade will require proofrolling to demonstrate the adequacy of the chemical stabilization. Non paved roads will require a proofroll on subgrade and Aggregate Base Course

Larimer County shall be copied on an ongoing basis on all material testing reports. The Engineer that will be providing Materials Testing for this project is: _____

## 16. Review of Documents Prior to Placement of Aggregate Road Base & Asphalt for Road Improvements

Review of the documents listed below shall be done as part of the ongoing inspection work of the certifying and inspecting engineer. The inspecting engineer shall, first review, and then submit to Larimer County the following documents to ensure compliance with the specifications and standards.

Prior to placement of aggregate base course:

- **a.** Soil density tests for all utility back fill and embankment material placed in roadway.
- **b.** Soil density tests for scarified and recompacted road subgrade.
- **c.** Proofroll reports for road subgrade.
- **d.** R-value, LA Abrasion and sieve analysis results for proposed base course material.

Prior to placement of asphalt:

- **a.** Proofroll reports for aggregate road base.
- **b.** Density tests for aggregate road base.
- **c.** Asphalt mix design(s)

## 17. Utility Conflicts with County Road Improvements

We strongly recommend that the contractor pothole all existing utilities prior to starting construction within the County ROW. Any conflicts with existing utilities, that will alter the design as originally approved, will require relocation of the utilities or redesign of the area in question. The developer/owner shall be responsible for coordination, and potential payment, for the utility relocation. Utility relocation is not limited to underground utilities. Overhead lines may need to be relocated and or raised if adequate clearance (16 feet) is not maintained.

## 18. Radii

All radii shall be constructed as per the approved construction plans. If radii are not show on the approved construction drawings the Developer/Owner's Civil Engineer will need to clarify radii per **Item 14** of this agenda.

## 19. Building Permit Release Schedule

Refer to the project approved development agreement. All requirements stated in the Building Permit Section of the project development agreement must be completed before footing and foundation permits and full building permits are issued.

In general, footing and foundation permits will only be accepted when the over lot grading and storm water drainage systems are complete, construction of the roadway sub-grade, aggregate base course are complete with acceptable density tests, and street signs have been installed. Full building permits are generally only accepted when final roadway surface is complete and approved, acceptable material tests have been submitted, water and sewer systems are complete, and there is acceptance by the appropriate water, sewer and fire protection providers.

Developer shall notify all property owners when the above mentioned items have been completed.

## 20. Certification of Improvements

The inspecting and certifying engineers shall be responsible for providing an **on-going** review of all material testing and be able to certify that all site improvements have been constructed in conformance with the approved drawings and Larimer County standards and specifications. Any deviations from Larimer County and or project specifications shall be duly noted and described in the engineer's certification letter. The following certification letters (see attached examples) are required and must be signed and stamped by a professional engineer:

**Inspection and Certification of Site and Storm Drainage Improvements**
When applicable, the certification shall include as-built calculations confirming actual pond volumes and capacity calculations for critical drainage conveyances. The Engineer that will be providing the inspection and certification of the site and storm drainage improvements is:
_____

**Inspection and Material Testing Certification of Road Improvements**
The Engineer that will be providing the inspection and certification of the material testing information is: _____

## 21. Warranty Period

Refer to the project approved development agreement. To enter the warranty period, a final walk through with the development review engineer and the Larimer County inspector shall be performed. Any noted deficiencies must be corrected.

The developer/owner's inspecting and certifying engineer must also submit the following before entering the warranty period:

**Certification of Improvements** (See Item 20 above)- Letters that certify that all site improvements are 100% complete, and that the work is in compliance with the approved plans, and the standards and specifications of Larimer County. The engineers' certification letters should be a part of a bound packet that includes all relevant materials testing reports, all of the inspecting engineer's field inspection reports, pictures, and any other appropriate documentation for the construction phase of the project.

**As-Built Drawings/Record Drawings –** These drawings shall be a complete set of the original approved plans with all changes bubbled and documented accordingly. Each sheet shall be clearly labeled "as-built" or "record drawing" and shall be signed and stamped by a Colorado Licensed Engineer.

The as-built drawings should contain, at a minimum, the following information:

- Road horizontal and vertical alignment.
- Storm drainage invert elevations for all culverts and other drainage structures.
- Detention/Retention Pond certification, including spot elevations used in pond volume calculations.
- Spot elevations throughout project to illustrate that all drainage features function as designed.
- Spot elevations throughout project to illustrate that all improvements were constructed as designed.

The Engineer that will be providing the as-built drawings for this project is: _____

**22. Completion Date**

The completion date specified in the project Development Agreement.
This project must be complete by: _____

**23. Expiration Date of Development Construction Permit**

i) The DCP will expire 60 days after issuance if work has not commenced or on the project completion date. By the project completion date the following should have occurred:
   - Project is 100% complete.
   - County Engineering has inspected the completed improvements
   - As-built Plans, site and drainage certification letter, materials testing certification letter, inspection reports, and engineer's certifications).

ii) In the event that the above criteria are not met, the following two items must be addressed:
   - The project completion date must be extended by the developer/owner. This will require an amended Development Agreement and an extension of the construction collateral. The developer must work with the Michelle Yeager in the Planning Department on these issues. Her number is (970) 498-7696.
   - In the future, we may impose fees for reinstating the DCP if it is allowed to expire. If a fee structure is in place for expired DCP's all fees will need to be paid before work may resume on site.

**24. Other Issues**

_____
_____
_____
_____
_____

June 12, 2006

*Mr. or Ms. Development Services Engineer*
Larimer County Engineering Department
P.O. Box 1190
Fort Collins, CO 80522-1190

**Re: Engineer's Material Testing Certification of *"Generic Larimer County Subdivision Project"***

Dear *Mr. or Ms. Development Services Engineer*:

I hereby certify that the material testing of the road and appurtenances shown in the approved construction drawings have been constructed in conformance with those drawings, and the standards and specifications of Larimer County.

I have conducted adequate inspections in order to assure compliance to County Standards. Our inspection services included observation and testing of backfill placed during utility installation, subgrade preparation, the placement of the aggregate base course and asphalt for the roadways. The final field density test results met the project compaction requirements and the final laboratory test results met the asphalt mix design requirement for this project.

We also performed coring and hand auger borings to determine the approximate asphalt and aggregate base course thickness within the roadways at the referenced project. These thickness measurements were completed by wet coring through the existing pavement and manually advancing a hand auger to expose subgrade materials. The locations of the ### random bores are shown on the attached exhibit. The measured asphalt and aggregate base course thickness are indicated on the attached summary sheet and thicknesses shown meet project specifications.

The results of all of the observations and testing are provided in the attached report.

Sincerely,

*Joe Professional Engineer*
Note: This letter must be signed and stamped by a Colorado Registered Professional Engineer

June 12, 2006

*Mr. or Ms. Development Services Engineer*
Larimer County Engineering Department
P.O. Box 1190
Fort Collins, CO 80522-1190

**Re: Engineer's Site and Storm Drainage Certification of *"Generic Larimer County Subdivision Project"***

Dear *Mr. or Ms. Development Services Engineer*:

I hereby certify that the roads, appurtenances, and drainage facilities shown in the approved construction drawings have been constructed in conformance with those drawings, and the standards and specifications of Larimer County.

I hereby certify that I have conducted adequate inspections in order to assure compliance to County Standards. All of the improvements that are shown on the approved construction plans for *"Generic Larimer County Subdivision Project"* have been installed or constructed. *Also verify that the as-built pond volume meets or exceeds the designed pond volume given in the approved "Generic Larimer County Site Plan Project" drainage report.*

The construction plans for *"Generic Larimer County Subdivision Project"* were prepared by me under my direct supervision in accordance with the requirements of the Road Standards Manual and Stormwater Design Standards for Larimer County (or Urban Area Standards if applicable).

Sincerely,

*Joe Professional Engineer*
Note: This letter must be signed and stamped by a Colorado Registered Professional Engineer