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ODOT ORGANIZATION

With the recent re-organization of the Ohio Department of Transportation (ODOT) the roles of the Central Office and District have changed significantly. Many of the responsibilities formerly held by the Central Office have now been passed to the Districts. The following will outline the new roles played by the Central Office and Districts:

I. CENTRAL OFFICE

The changes within ODOT begin with the Table of Organization. As part of the restructuring ODOT drastically revised the Table of Organization. The Central Office Senior Management table is shown on the facing page.

Although District Construction needs to communicate with the Central Office on many issues, its primary contacts are within Transportation Policy. The Table of Organization for this area is also shown on the facing page. As you can see Transportation Policy contains the offices most frequently contacted by the District concerning contract administration. The District's primary contact is the Office of Highway Management. Highway Management's responsibilities lie in the area of policy development, support services and quality assurance. More specifically, its roles are:

- Work with other offices within Transportation Policy to develop specifications and policies that apply to the day-to-day operations at the project level.
- Acts as a liaison with other offices within Transportation Policy, the various trade organizations and FHWA on matters concerning ODOT's

specifications, policies and procedures.

- Acts as a consultant to the Districts in matters concerning contract administration.
- Provides training to the Districts in contract administration.
- Reviews and reports the effectiveness of various construction methods and materials and provides advice on their use.
- Conducts Quality Assurance Reviews (QAR) to assure that ODOT's policies, procedures and specifications are being followed uniformly.
- Develops the performance measures by which the Districts are judged.
- Conducts the administrative closing of Contracts.

The responsibilities described above are of a general nature. Highway Management also has some specific approval functions that relate directly to the District. They are as follows:

- Processing and obtaining approval from the Controlling Board for all extra work change orders that exceed the contract limitations.
- Answering all pre-bid questions. This is done to assure consistency throughout the State.
- Testifying before the Controlling Board.

- Summarizing and reporting all extra work to the Controlling Board.
- Acts as a lead-office and representative when non-specification matters are referred to the Central Office Review Committee. (Appendix A, SOP-PHC-305).
- Schedules all Claim Review Board meetings and then summarizes and reports the results to the Districts.

As mentioned above, the Office of Highway Management has the responsibility of the policy development and the processing of extra work change orders. The Office contains specialists in areas such as concrete and asphalt who provide specialized advice to the Districts. If the District needs advice in other areas, the District through the Office of Highway Management can contact other offices within Transportation Policy such as Traffic, Bridges, Material Management and Contracts. These offices possess expertise that can aid the District in its decision making.

II. DISTRICT

As noted in the Central Office portion, the District has also undergone reorganization which required a new Table of Organization as shown on the facing page.

All District responsibilities begin with the District Deputy Director (DDD). The DDD through the Highway Management Administrator (HMA) and the District Construction Engineer is responsible for the administration of all contracts sold for the construction, reconstruction and maintenance of the highway system within the District.

While Central Office's responsibilities are primarily general in nature, the District's responsibilities are very specific. The recent reorganization has given the District more approval authority thus more accountability. Although the Districts have always been responsible for the administration of all contracts within the District, they now have additional authority to help in the administration of these contracts. The following is a summary of the various District responsibilities as they relate to contract administration:

- Assure that all work done on each project is performed in accordance with the project's requirements (plans, proposal, specifications, supplemental specifications, special provisions, etc.)
- Approval of all change orders including extra work change orders not requiring Controlling Board approval.
- Approval of all time extensions and waivers.
- Review the contractor/subcontractor certified payrolls for compliance with the contract requirements.
- Review the contractor's performance and compliance with the contracts Equal Employment Opportunity requirements.
- Approve all estimates for work completed on the projects.
- Perform the final inspection and approve the final inspection report.
- Review the project records to assure that all requirements have been

met.

- Prepare and approve the final report on the project.
- Issue the final acceptance letter and submit the finalized project to the Auditor.

The general responsibilities and requirements assigned to each District rest in the hands of the District Construction Office and specifically the District Construction Engineer (DCE). This person with the approval of the District Deputy Director and Highway Management Administrator is responsible for the administration of the contracts involving the construction, re-construction and maintenance of the District's highway system as well as local projects involving State and Federal aid on the State's system. The DCE is responsible for assigning personnel to the project for this purpose. In addition, the DCE will resolve all issues not answerable at a lower level.

As part of this reorganization, each county is now under the supervision of a County Manager. This person will be involved with all work within the county. The County Manager will ultimately be the owner of the construction end product. Therefore, they must be involved in the construction process. As part of their duties, they will provide the inspection force used in the contract administration. Their involvement will depend on their authority level which may vary from district to district.

III. PROJECT LEVEL MANAGEMENT

The Project Engineer/Supervisor (PE/PS) is in charge of all details on the assigned project. This includes the following:

- Assignment of the inspection duties at the project level.
- Review of materials to be incorporated in the work. This may involve rejection of materials.
- Responsible for instruction of the inspection force in the requirements of the project or the item being constructed.
- Responsible for the project's record keeping.
- Responsible for payment for work completed. This must be done in a timely manner.
- Determine the need for change orders within the scope of the contract.
- The Project Engineer must also recognize when an issue is not resolvable at the project level and refer it to the DCE.

The front-line ODOT representative at the project level is the Project Inspector. This person's duties involve the following:

- Inspects all work performed. This inspection will be done in accordance with ODOT's present policies.

- Inspects the materials incorporated into the work.
- Can reject unsuitable materials.
- Reports quantities of work satisfactorily completed in the units established by the contract.
- The inspector can suspend operations until an issue is resolved by the PE/PS or DCE.
- The inspector can neither alter the contract or issue orders contrary to the contract.

DISCUSSION NOTES
SECTION 1 - ODOT ORGANIZATION

I. Purpose of Training:

A. Reinforce Goal 1.

1. All attendees are managers. They are charged with managing time, cost and quality.
 - a) Attendees will be managing from an administrative standpoint such as change orders, approvals, answers to contractors' questions, etc.
 - b) Attendees will be managing from a project standpoint such as scheduling, types of contracts, time extensions, etc.
2. All attendees are committed to raise the "bar of quality". Quality is the adherence to ODOT standards.

ATTENDEE NOTES:

B. Better understand the ODOT reorganization.

1. Central Office has become a policy group/consultant group. They

function more in a consulting role with less day to day contact with the contract work.

2. The power has been placed with the individual Districts.
3. A good example of this change is seen in the change order process. Formerly the process required 22 steps. Now there are only four steps in the process.
4. Refer to “bullets” on pages 1 to 4 of the text.

ATTENDEE NOTES:

**ELEMENTS/TERMS AND CONDITIONS OF
CONTRACT**

The purpose of this section is to show the relationship of the bidding documents and the documents which comprise the contract. We will briefly describe the following documents and information:

- Selecting a project for sale;
- Bid letting pamphlet;
- Initiating the bidding documents and composition of the bid package;
- Addenda;
- Reasons for the rejection of bids;
- Contract Award;
- Alternative contract types.

I. SELECTING A PROJECT FOR SALE

The District and/or local entity continually reviews the physical condition of their roadway and bridges. Based on their review, they determine whether the infrastructure needs to be rebuilt or enhanced. If a decision is made to replace the roadway or bridge, the project is then prioritized. Next a decision must be made if there is funding for the project. If funding is available, the project gets programmed. This in turn means that the project gets a PID number and is entered into PDMS. At this time, the District must decide whether it will be preparing the plans or request that the Office of Contracts, Consultant Services Section hire

a consultant to prepare the plans. Once the plans are completed, they are submitted to the Office of Project Coordination for scheduling and then to the Office of Estimating. The Office of Estimating prepares an estimate and the bid package is then transferred to the Office of Contracts in order to be sold.

II. BID LETTING PAMPHLET

The bid letting pamphlet is assembled by the Office of Contracts using the estimated quantities. The pamphlet advertises the projects to be sold on a given date. Lettings are held every two weeks. The pamphlet lists all the jobs to be sold by the project number, county, route, section and type of job. A detailed description of the work along with the cost of the plans and the completion dates are also listed.

Once the pamphlet is prepared, it is mailed to all prequalified contractors. This document is used by the contractors to order plans. Once a contractor orders a set of plans, the contractor becomes a planholder for purposes of receiving bid proposals and addenda.

III. INITIATING THE BIDDING DOCUMENTS AND COMPOSITION OF THE BID PACKAGE

There are many important items that are contained in the bidding documents. It will be important for you to understand the relationship among these different documents. The following is a list of items that are contained in the bid package and who prepares the package:

- Plans - Either prepared by District or Consultant
- Bid Proposal - Prepared by Office of Contracts
- Special Provisions - Drafted by District and Approved by Central Office
- Supplemental Specifications -Developed by ODOT Specifications

Committee

- Addenda -
 - 1) Prepared by the Office of Highway Management often with District support.
 - 2) Distributed by the Office of Contracts
- 4A Notes - Prepared by the Office of Real Estate

The contractors will call the Office of Contracts and order their plans. Once they become planholders they automatically receive the bid proposal approximately two weeks prior to the letting.

IV. ADDENDA

Addenda are necessary when there is an error or omission in the bidding documents or when a clarification is needed. The addenda provides the contractor with the correct estimated quantity or clarified proposal note. Each planholder is sent a copy of the addenda. Failure to attach addenda may be cause for rejection of the bid. It is very important for ODOT personnel to be aware of the addenda issued on a project because the addenda may cause a substantial change to the contract.

All questions regarding addenda are to be addressed only by the Office of Highway Management, Central Office. It is very important that each call is documented. If ODOT feels that a clarification of the addenda is needed, ODOT will issue an additional addenda. This process is to ensure that all bidders are given the same information. This process maintains the integrity of the competitive bidding process.

V. REASONS FOR REJECTION OF BIDS

There are approximately three to five bids rejected every letting. Some of the reasons for rejection are as follows:

- Failure to sign bid proposal, or signature is not by authorized personnel.
- Failure to sign the bid bond.
- Failure to include the bid guaranty.
- Failure to enter unit prices, extensions and/or lump sums.
- Failure to submit a Supplemental Questionnaire.
- Failure to include an addendum.
- A contractor is not prequalified for type of work and/or for dollar amount.

VI. CONTRACT AWARD

Once the awards committee has awarded a contract the Office of Contracts supplies the appropriate District personnel with the following information which are all part of the contract documents:

- Notice of Commencement for Public Improvements
- Agreement
- Copies of the Bid Proposal
- Copies of the Insurance Certificates or Policies

ODOT construction projects contain the following documents:

- Plans (as per plan notes)
- Specifications

- Supplemental specifications
- Prevailing wages
- DBE/MBE goals

DBE/MBE Goals

It is important to note whether there is a DBE or MBE goal on a project. A number of federal projects are given a goal in each letting. These goals usually range from 5% to 20% of the total contract amount. All subcontracting agreements (C-92's) that are required to meet the goal are due to the Office of Contracts prior to the execution of the contract. For example, if there is a 10% DBE goal on a project and the contractor is going to use two contractors to meet that goal, then both C-92's have to be submitted to the Office of Contracts prior to execution of that contract. Those two C-92's will be stamped by the Office of Contracts as a "SUPPORT BID". It is the District's responsibility to ensure that the contractor performing those items on the C-92 are in fact the DBE contractors.

All state projects with the exception of mowing and herbicidal spray jobs have a 7% MBE goal. This is required by law. As stated above, the prime contractor must submit its C-92's prior to execution of the contract.

VII. ALTERNATIVE CONTRACT TYPES

There are several different types of contracts that ODOT sells. The usage of a particular type or method depends on the work, timing and location of the project. These methods have

been used by ODOT in the past and have proven valuable in administering our contracts. They have enabled the Department to get a better project in a faster time frame.

Incentive/Disincentive

This method is used when the project has a major impact on the traveling public. ODOT establishes a completion date for the project. If the contractor completes the project prior to the completion date, the contractor receives an incentive for an early finish. The incentive is predetermined based on a dollar amount per day. If the contractor finishes after the completion date, it is assessed damages (a disincentive) for a late finish. Again, this method is best used when there is a major impact or lost access to a facility.

A + B Bidding

A + B Bidding means to bid the cost of the job plus the contract time. Using this method, each bid submitted consists of two parts. The “A” component is the traditional bid for the contract items and is the dollar amount for all work to be performed under the contract. The “B” component is a bid for the total number of calendar days required to complete the project. The lowest bid is determined by the formula $A + (B \times \text{road user cost/day})$. When time is a major concern for the project, this method may be best to use.

Design Build

The design/build method gives the contractor maximum flexibility for innovation in the selection of design, materials, and construction methods. ODOT specifies the end result and establishes the minimum design criteria. An extensive liability insurance clause is used to insure the finished product. The potential time savings is the biggest benefit to ODOT. The construction can begin before all design details are completed.

Lane Rental

This method is used to encourage contractors to decrease or minimize the effects on road users during construction. This is done by assessing a rental fee amount based on the estimated cost of delay or inconvenience to the road users during the rental period. Neither the contractor nor the agency gives an indication of the anticipated amount of time for which the assessment will apply. This encourages contractors to schedule their work so that traffic impacts are kept to a minimum. This method is best used when projects significantly affect the traveling public.

Warranty Contracts

Warranty Contracts are being used by the Department for projects where the contractor not only performs the work, but also warrants that it will maintain a standard of performance for a specified period of time such as five years.

DISCUSSION NOTES

SECTION 2 - ELEMENTS/TERMS & CONDITIONS OF CONTRACT

- I. Contracts are comprised of several elements:
 - A. Plans - Prepared by District or Consultant.
 - B. Bid Proposal - Prepared by Office of Contracts.
 - C. Special Provisions - Drafted by District and approved by Central Office.
 - D. Supplemental Specifications - Developed by ODOT Specifications Committee.
 - E. Addenda -
 - 1. Prepared by Office of Highway Management with District support.
 - 2. Distributed by the Office of Contracts.
 - F. 4 A Notes - Prepared by Office of Real Estate.
 - II. Contractors order plans from the Office of Contracts. Once contractors are planholders, they automatically receive the proposal for the project.
-

ATTENDEE NOTES:

- III. Bids may be rejected for several reasons. Refer to bullets on page 4 of the text for this section. The Office of Contracts is most often involved in the process of rejection of bids.

- IV. Innovative contracting methods are used by ODOT to enhance quality objectives. The text discusses these as Alternative Contract Types.
- A. Incentive/Disincentive clauses are used to encourage early or on time completion of work for projects where there are significant inconvenience to the traveling public.
 - B. A + B bidding is used for projects where time of completion is a significant concern. In these type of contracts, the contractor is bidding both the cost of the work and the time in which it can complete subject to limitations on the overall time included in the contract.

ATTENDEE NOTES:

- C. Design Build contracts require the contractor to perform both the project design and construction work. ODOT specifications are expressed in a “performance” format. This approach allows construction to begin before design is complete.

- D. Lane Rental clauses require the contractor to “pay for” or “rent” the use of lanes during construction. This approach encourages the contractor to minimize the time lanes are not available to the traveling public.
- E. Warranty Contracts are being used by the Department for projects where the contractor not only performs the work, but also warrants that it will maintain a standard of performance for a specified period of time such as five years.

(CLASS EXERCISE NO. 1)

ATTENDEE NOTES:

DEFINING PROJECT RELATIONSHIPS

In order to implement both the letter and spirit of any contract, it is necessary to have clearly

defined lines of authority and communication between ODOT and the contractor. This section will present a framework to establish these lines.

I. ODOT RESPONSIBILITIES

Although the previous section described the basic contract involving ODOT and the contractor, there are many responsibilities inherent in these contracts. These include but are not limited to the following:

- Provide a description of the work through the plans, proposal, specifications, supplemental specifications and special provisions.
- Provide a method to pay for completed work.
- Provide a project site with full access for the contractor to begin work. This includes right-of-way purchases and utility relocations.
- Furnish an adequate and trained inspection/engineering force at the project level.
- Secure good workmanship by the contractor. This involves the monitoring by the project staff of all operations for compliance with the documents described above.
- Arrive at decisions in a thoughtful manner with due consideration of all facts involved.

- Make decisions in a timely manner to avoid undue delay.
- Promptly pay the contractor for completed work.
- Monitor the contractor's compliance with the legal aspects of the contract such as prevailing wage and equal employment opportunity requirements.
- Review the contractor's work zone traffic control to ensure the public can pass through the work zone with the least interference.
- Respond to any complaints or questions in a timely manner.

II. CONTRACTOR RESPONSIBILITIES

- In order to submit a bid that adequately reflects the conditions of the contract, the contractor must research all aspects of the contract such as visiting the project site, understanding the plan notes, reviewing all plan requirements.
- The contractor must notify ODOT of the project's starting date and keep ODOT informed of the proposed schedule of operations. This allows ODOT to anticipate engineering and inspection needs and therefore, efficiently manage staff.
- The contractor must provide a list of material suppliers. ODOT then can review the proposed list and obtain required samples. It should be submitted early to avoid delays associated with sampling and testing.

- The contractor must carry out the work on the projects in a diligent manner utilizing adequate labor.
- In order to manage the project efficiently and to avoid project related problems, the contractor must be aware of all federal, state and local laws that apply. Many of the legal requirements of the contract are addressed in the proposal but the contractor must also be aware of other regulations such as safety, which is not thoroughly detailed in ODOT's specifications but is extremely important. ODOT requires the contractor to protect and indemnify ODOT from all claims and liability resulting from negligence or willful violations.
- When open to traffic, the contractor must maintain the project in order to permit the public to move safely through. This includes using clean, readable signs, and traffic control devices, and maintaining the project free of debris.
- Once notified of problems the contractor must respond quickly to correct it. This is extremely important when the situation involves public safety.

Almost everything done at the project level effects another party. Because of this, the project personnel are constantly subject to pressures from outside sources. We should always be mindful of the needs of these parties, the effects of the project on them, their relationship to the project and their affect on the project. Many of these outside forces are shown on the facing page.

III. OTHER AGENCIES

Although the primary parties to any contract administered by ODOT are the contractor and ODOT, other political subdivisions may also be involved either directly or indirectly. During the administration of each project, these relationships should be recognized and addressed.

The Federal Highway Administration (FHWA) is involved in many projects administered by ODOT. Federal funds are available for many programs and are utilized by both ODOT and local political subdivisions for improvement to their roadway systems. Their involvement varies with the type of project and its location on the National Highway System. FHWA's philosophy for review of federal aid projects has evolved over the years and now is as follows:

- Major projects on the National Highway System (NHS) will continue to receive the most attention from FHWA. FHWA will be involved from preliminary design to finalization. This will include periodic reviews to monitor the project's progress and participation in the final inspection.
- FHWA, with the advent of ISTEA, has taken a step back in the tight oversight that had existed on all federal-aid projects. On most federal aid projects, both with ODOT or local participation, FHWA has minor on-site participation. It does not get involved with the project specifically but expects ODOT to administer these projects in accordance with the plans and specifications and then certify that this has been done.
- FHWA will still participate in reviews of our policies, procedures and specifications. At the project level, this may involve a review of an

individual process (paving, traffic control, etc.) which is being studied statewide.

Many contracts involve direct local participation. The Local Participating Agency (LPA) will provide funds for their portion of the contract and the remainder may be provided by either FHWA or ODOT or both. Although ODOT administers the project, the LPA will have to live with the project after we are done. Therefore, with this in mind, ODOT should:

- Invite the LPA to the pre-construction meeting and all progress meetings.
- Keep the LPA informed to all changes to the contract.
- The above is especially true when dealing with changes requiring large increases in the local participation.
- The LPA must be involved in the final inspection.
- The LPA must give their final approval and acceptance to the project.

Many ODOT projects impact other political sub-divisions. Because of this it is important to maintain good communication with these parties. Two examples of direct impact on other political entities are haul roads and designated local detours. The procedures for dealing with these issues are as follows:

HAUL ROADS

- The contractor requests, through ODOT, that certain local roadways be used for hauling material and equipment to and from the project.
- ODOT reviews the request and contacts the LPA.
- If there is no objection by ODOT or the LPA the roadway is designated as a haul road.
- The roadway's condition is reviewed prior to hauling.
- If, during the course of the project, the roadway becomes dangerous, ODOT will have the contractor repair it.
- Once the project is completed, the condition is again reviewed.
- The roadway will be restored to its original condition either through the contract or by other means.

DESIGNATED LOCAL DETOURS

- During the design stage, the LPA selects the route it believes traffic will take to bypass a road closure.
- Prior to construction, this route's condition is reviewed.
- If necessary, repairs are made to this route during construction. This is done through the contract.
- Once the project is completed, the condition is again reviewed.
- The pavement is restored to its original condition.

It is important to understand that contracts administered by ODOT have an impact on people other than ODOT. Establishing and maintaining good working relationships with the LPA will greatly help in the administration of these contracts.

IV. OUR MOST IMPORTANT CONSIDERATION

Every contract we are involved with impacts the public. They are our largest and at times most vocal customers. We work for them and they will tell us that sometimes. Our obligation to them is the same as it is to ODOT. We should provide, through our active involvement, the best possible finished product. We should also keep the public informed as to what the project is about and its current status. Communication is extremely important. If we are open and honest in our communication the public is generally appreciative.

DISCUSSION NOTES

SECTION 3 - DEFINING PROJECT RELATIONSHIPS

- I. All projects have certain relationships either express or implied among ODOT, the contractor and the public.
 - A. ODOT has certain responsibilities. Refer to bullets on pages 1 and 2 of the text.
 - B. The contractor also has certain responsibilities. Refer to bullets on pages 2 and 3 of the text.
 - C. Other agencies may also have involvement in ODOT construction projects.

1. Federal Highway Administration (FHWA). Refer to bullets on page 4 of the text.
 2. Local Participating Agency (LPA). Refer to bullets on pages 4 and 5 of the text.
- II. ODOT's primary and most important customer is the traveling public. ODOT is obligated to provide to the public the best finished product, the least inconvenience and continuous communications during construction.

(CLASS EXERCISE No. 2)

ATTENDEE NOTES:

PROSECUTION AND PROGRESS

The purpose of this section is to discuss tools available to the Department for use in tracking the Contractor's progress and timely completion of the project.

Following the signing of a contract for a construction project, the District will contact the contractor and schedule a preconstruction meeting (Appendix B). On or about that time, a Project Engineer/Supervisor will be chosen by the Department for that project.

Once the Project Engineer/Supervisor is chosen, it is the responsibility of that individual or team to review all of the project documents and terms of the contract prior to the preconstruction meeting. Special attention must be paid to the following items:

- Plan Notes
- Completion Date
- Interim completion dates
- Special uses of “As Per Plan” reference items
- Proposal notes
- Phasing requirements
- Special provisions
- Addenda
- A check of the status of utility relocation (must be performed immediately as to avoid delays to the start of the project)

I. PRECONSTRUCTION MEETING

The purpose of the preconstruction meeting is to review the various items of work as set forth in the detailed construction plans, bid proposal, specifications and the contractor’s

work schedule. Those items to be discussed are the necessary utility adjustments, availability of right-of-way, maintenance of traffic and the Department's responsibility for the inter-related activities so that all concerned might have a better understanding of the problems involved and thus be able to coordinate the project.

The District Construction Engineer shall invite the following parties to the preconstruction meeting:

- Contractor
- State Personnel, including the Project Engineer/Supervisor and staff, utilities coordinator, EEO Coordinator, design engineer, traffic engineer, test engineer, public information office, county manager and all parties involved with the preparation of the plans.
- Utility companies with facilities located within the right-of-way, including all railroads and local park boards.
- Maintaining Agency
- Regional Transit Authority
- Parties funding project including FHWA/County/Local

At the preconstruction meeting, the project engineer must obtain a list of contacts for all parties involved with the project. This list will be useful in the future for timely resolution of problems which surface during the project construction. These contacts should also be invited to attend the progress meetings held on site once the project begins (Appendix C).

Items which the contractor needs for the preconstruction meetings are as follows and are listed in Section 108.02 of the C&MS:

- Progress Schedule
- List of Material Sources
- List of Subcontractors
- List of Haul Roads

II. PROGRESS SCHEDULE

The Contractor must submit a progress schedule, pursuant to Section 108.02 of the C&MS. This schedule must show the contractor's plan to carry out the work, the dates which the contractor and subcontractor will start the critical work, including the procurement of materials and equipment, ordering special manufactured articles, working drawings and the planned dates of critical project milestones.

On many projects, the plan notes or proposal notes may dictate the type of schedule required. Some plan notes may require the contractor to use the critical path method of scheduling, as shown in Appendix D.

The progress schedule must be reviewed and accepted by the District Construction Engineer. The Project Engineer/Supervisor and/or Field Engineer will review the schedule and forward his comments to the District Construction Engineer. The following items are to be used in determining an acceptable schedule:

- All major items of work must be included in the schedule.
- Completion of the entire project must follow contract requirements.
- Duration of activities must be reasonable.

- Sequence of operations must be logical.
- Schedule must be arranged per plan phases if required.
- Schedule must include special provisions in the contract, including interim completion dates.
- Special material requirements of the plans must be included.

The progress schedule is the responsibility of the contractor. If the schedule does not make sense or is illogical, the District must ask for clarification. A revision of the details in question is required prior to acceptance.

Reviewing and Accepting the Contractor's Schedule

- Is the project identified ?
- Does the schedule graphically depict the work ?
- Is there sufficient detail to truly describe the work ?
- Are the sequences and activity durations reasonable ?
- Are critical deliveries shown ?
- Is there consideration for winter months ?
- Are special ODOT requirements from plan notes or special provisions accounted for ?
- Does the schedule fit within the duration allowed by contract ?
- Are there clear relationships shown between activities ?

The progress schedule is the main tool with which the owner can monitor the progress of the contract and determine at an instant the status of work. It is therefore very important that the Project Engineer accurately review the schedule before acceptance. Monitoring the progress schedule is very important in determining “fault” or responsibility for project delays. Section 108.06 of the C&MS, Date for Completion, allows the director to grant requests for an extension of time if the work was delayed. Guidelines for the review and acceptance of the relationship bar chart schedule are included in Appendix E.

III. TOOLS FOR MONITORING PROGRESS

Schedule

There are several tools for monitoring the status of a project. The main tool as stated above is the monitoring of the progress schedule. The progress schedule must be reviewed at regular intervals with the contractor at the project level by the PE/PS and at the following times:

- The start of the project to detect if the contractor began as scheduled.
- Every two weeks on larger more complex projects, monthly on smaller less complex projects.
- Following the completion of a major item of work.
- Following the completion of a phase or sub phase of work.
- Before, during and after any type of delay to determine whether or not the delay was owner caused, contractor caused or concurrent.

Results of this review must be included in the daily diary. The diary entry must list the reasons the contractor cannot proceed with certain portions of the work. Accuracy and details in the daily diary concerning delays will protect the Department against the successful prosecution of many claims.

Progress Meetings

Effective progress meetings are very productive tools for enhancing communication, discussing issues, solving problems and thus furthering progress on the project. The PE/PS must invite the appropriate personnel to attend the progress meetings. The status of the project must be discussed with the contractor. This time would be ideal to determine if the schedule must be updated. Suggested items for discussion are included in Appendix F.

Before the progress meetings, the PE/PS should be prepared to discuss every item included on the agenda.

IV. BEHIND SCHEDULE

When the progress differs appreciably from the original schedule (more than fifteen calendar days), a revised schedule must be requested by the Department. A letter from the District Construction Engineer to the contractor must be written to request a revised schedule and reasons for the delays. Once a new schedule is submitted and the reasons for delay are given by the contractor, the PE/PS must review the daily diary to determine the accuracy of these delays. If delays are due to poor or inexperienced workmen, Section 108.05 allows for

removal of unskilled workmen from the project. If the delays claimed are caused by the contractor, the revised schedule must show finishing by the original completion date and the method for recovery must be included.

The methods of monitoring a progress schedule are as follows:

- Percentage of completion by dollars paid to the contractor
- Examination of actual start and finish dates of line items

Judgment must be used when reviewing the progress schedule. It may be possible that the dollars paid to the contractor do not truly reflect the progress on the project. These issues must be discussed with the contractor. A good time to do this is usually during the progress meetings when all parties involved with the project are present.

V. TERMINATION

The two types of project termination are as follows:

Termination for convenience

Termination by convenience is explained in Section 108.031 of the C&MS and allows the Department to terminate a contract at anytime. Several projects involving huge plan errors have been terminated. This is done to give the Department time to revise the plans and to allow the project to be bid competitively, rather than perform all work on change orders on the existing project.

Termination by Default

Termination by default is explained in Section 108.08 of the C&MS. The Director has the right to terminate the project for the following reasons:

- Contractor abandons, fails or refuses to complete work.
- Improperly performing the work.
- Has not commenced work in a reasonable time or does not make reasonable progress.
- Contractor goes out of business or files bankruptcy.

Termination by default or cause is not an immediate event. This type of default requires a series of events to occur over a period of time, all of which must be documented by the Department. Progressive documentation must occur and extensive records must be kept to avoid any legal action against the Department. Presently, Directive DHC-135 is the Department's policy on this topic.

VI. TIME EXTENSION AND WAIVER OF LIQUIDATED DAMAGES

If the contractor fails to complete the work by the contract completion date (original or revised), he must request permission of the Engineer to remain in control of the work. The contractor must make this request in writing and may be required to provide a written plan for completion of the work. This requirement is described in Section 108.07 of the C&MS which includes a table of liquidated damages.

Certain plan notes may require interim dates for phase completion and include special liquidated damages. Different methods of bidding may include special liquidated damages.

The Department may grant a time extension or waiver of liquidated damages for excusable delays. The contractor must make a written request giving details which will justify the granting of the request for this extra time. Methods to analyze requests for time extensions are explained in detail in Policy #512-001(P), Appendix G.

Since the advent of the Construction Management System (CMS), the computer now deducts liquidated damages automatically from the estimates until dates for completion are entered into the “KETRK” screen or the time extension/waiver is processed and entered into the system. It is more important than ever that the contractor submit the request for a time extension in the following time frame:

- Requests for an extension of time due to weather or seasonal conditions shall be submitted in writing to the engineer at the end of each month.
- Requests for extensions other than for weather and seasonal conditions shall be submitted in writing to the engineer within 30 days following the termination of the delay and prior to the expiration of the extended contract date.

Extensions of time are approved by the District Construction Engineer.

DISCUSSION NOTES

SECTION 4 - PROSECUTION AND PROGRESS

- I. In order to enhance the effective management of the project, ODOT staff must be thoroughly familiar with the complete package of contract documents. Several areas should receive particular attention. Refer to bullets on page 1 of the text.
- II. The initiation of the contract work is normally marked by the preconstruction meeting. At that meeting, you will review many items.
 - A. Various items of work required by the contract.

- B. Bid proposal.
- C. Specifications.
- D. Contractor's work schedule.
- E. Items specific to the project that are significant to the successful prosecution of the work such as utility adjustments, right-of-way, maintenance of traffic, contractor's responsibilities, ODOT's responsibilities, etc.

ATTENDEE NOTES:

- III. Progress schedules must be submitted by the contractor prior to the execution of the work. The contractor's schedule is extremely important to ODOT since it will be used as a basis for measuring the progress of the work, may be used in any assessment of liquidated damages or incentives/disincentives, and may even be a consideration with respect to any termination action.
 - A. The schedule must show the contractor's plan for the execution of the work.
 - B. At a minimum the schedule should reflect:
 - 1. Start and finish dates for the specific activities of work required by the contract.

2. An identification of the critical or controlling work activities.
3. Activities reflecting procurement of materials and equipment.
4. Project milestone dates.
5. Project phasing and maintenance of traffic requirements.
6. Refer to bullets on pages 3 and 4 of the text.

ATTENDEE NOTES:

- IV. ODOT is required to review the contractor's schedule and either accept or not accept it. The ODOT manager reviewing the schedule is responsible to insure that the schedule will provide a reasonable management tool for use by both the contractor and ODOT in managing time on the project. Therefore, the review process is very important and should receive special attention.
 - A. Some considerations for review of the schedule are noted on page 4. Refer to bullets on page 4 of the text.
 - B. ODOT has historically used "schedules" based on dollar value of work versus time. While they have often been referred to as "bar charts", they really are not the best method for tracking progress, nor are they true bar charts.
 1. Bar charts are most correctly graphical representations of specific

activities of work shown on a time scale. An example of a typical bar chart will be distributed in class.

2. ODOT requires the use of Critical Path Method (CPM) schedules on some of its projects. On projects not requiring a CPM, ODOT has and will often require a bar chart with relationships among activities shown on the chart.
3. An example of a bar chart with relationships shown will be handed out during the class

(CLASS EXERCISE NO. 4 - Reviewing and accepting a schedule)

ATTENDEE NOTES:

- V. Contracts may submit schedules which reflect completion of the project earlier than required by the contract documents. This is an acceptable practice. It is noted, however, that the ODOT manager should pay particular attention to the review and acceptance of early completion schedules.
 - A. When an early completion schedule is submitted, the contractor may be required to escrow bid documents. Refer to specifications.
 - B. A contractor has the right to finish early but may also assert a delay claim for being delayed from early completion.
 - C. When an early completion schedule has been accepted, the ODOT manager must pay particular attention to monitoring the progress of the work throughout the project to avoid unsubstantiated early completion delay claims.

- D. Liquidated damages and disincentives would still be assessed from the contract completion date despite the early completion schedule.

ATTENDEE NOTES:

- VI. Regardless of the quality of the contractor's initial schedule, the schedule is an effective management tool only if it is used throughout the course of the project.
 - A. The schedule must be monitors/updated periodically to ensure an accurate measure of the progress of the work and the status of the project with respect to time.
 - B. Updating a bar chart schedule is not a difficult task. Even if the contractor does not provide updates or if ODOT does not require updates, the ODOT manager can perform an update of the schedule to measure the performance of the contractor.

(CLASS EXERCISE NO. 5 - Updating the schedule)

ATTENDEE NOTES:

- VII. If it appears that the contractor is behind schedule, the ODOT manager can request an update from the contractor. ODOT should verify that the contractor is behind schedule and also determine the reasons why the delay occurred.
- A. If it is determined that the delay was caused by ODOT, a time extension should be granted as quickly as possible. This avoids the incidence of constructive acceleration. Constructive acceleration occurs when six things are present:
1. The contractor has experienced an excusable delay.
 2. The contractor has requested an extension of time.
 3. The time extension request is denied.
 4. The contractor is told to finish the project in accordance with the existing contract completion date.
 5. The contractor accelerates the work.

6. The contractor incurs additional costs because of the acceleration.

ATTENDEE NOTES:

- B. If the delay is caused by the contractor, the ODOT manager must consider the application of liquidated damages or disincentives.
 - 1. Liquidated damages must be applied in accordance with the exact requirements of the contract.
 - 2. Liquidated damages should not be applied more than once for the same cost elements that may be experienced by ODOT.

(CLASS EXERCISE NO. 6)

ATTENDEE NOTES:

Office of Contracts

Mark Kelsey

Administrator
(800)459-3778

**Three Key Contract
Administration
Requirements**

Three Key Elements

- I. Sub-Contract Agreements (C-92's)
- II. EEO/DBE/MBE Requirements
- III. Prevailing Wage Requirements

Reasons these are key:

- All extremely important.
- All are based in the law.
- Two of these are public policy.
- Maintain the integrity of the contracting process.
- Doing the right thing.

I. Sub-Contract Agreements (C-92's)

C-92's

Primes are legally responsible -
that hasn't changed

Increased accountability of Primes

I. Sub-Contract Agreements (C-92's)

**Contractor Evaluation (C-95) Questions
(Example 1)**

Question #21 To what degree did the contractor coordinate work with

subcontractors work?

- 10 The contractor always coordinated work operations with its subcontractors.
- 08 The contractor routinely coordinated all work operations with its sub contractors. (Sub-subcontractors.)
- 05 The contractor coordinated work operations with its subcontractors (Sub-subcontractors) only upon notification from the project engineer.
- 01 The contractor did not coordinate work operations with its subcontractors.

I. Sub-Contract Agreements (C-92's)

Contractor Evaluation (C-95) Questions (Example 2)

Question #22 **To what degree did the contractor exercise authority over sub contractors and provide notice of subcontractor work schedule?**

-
- 10 Contractor always exercised authority over subcontractors and provided notice of subcontractor schedule at all times.
 - 08 Contractor routinely exercised authority over subcontractors and provided notice of subcontractor schedule most of the time.
 - 05 Contractor exercised authority over subcontractors and provided notice of subcontractor schedule only upon notification from the project engineer.
 - 01 Contractor did not exercise any authority over subcontractors and/or did not provide notice of subcontractors' work schedule.

I. Sub-Contract Agreements (C-92's)

Common Ways the Prime Tries to Shift Responsibility of Subcontractor

Prime blames sub for faulty work.

Prime blames sub for not showing up as scheduled.

Prime tells Project Engineer to deal with sub.

Prime says sub really can't do the work - so

Prime does the work.

Prime says, "Don't hold me accountable for sub - it's not my fault".

I. Sub-Contract Agreements (C-92's)

Things you Need to Know

Never deal with sub directly without prime's representative present.

Never send sub direct correspondence.

Always send correspondence to prime.

I. Sub-Contract Agreements (C-92's)

Why Deal With the Sub in These Ways?

Enforcing terms of the contract.

Maintaining integrity of contracting process.

Protecting Public Policy.

Doing the right thing.

I. Sub-Contract Agreements (C-92's)

How?

By completing the C-95 correctly.

By holding Prime accountable.

II. EEO/DBE/MBE Requirements

DBE/MBE Goals

DBE's 5-10% usually.

MBE's 7% of contract.

C-92's must be executed prior to execution of contract.

Reference items and dollar amounts identified.

Prequalified / Not Prequalified.

Process is in place to enforce this contract requirement.

II. EEO/DBE/MBE Requirements

Reasons For Not Enforcing Goals

Lack of ownership of process after execution.

Lack of contract compliance oversight.

Lack of will.

Therefore, all of the above result in opportunity to violate the contract and law.

II. EEO/DBE/MBE Requirements

Examples

Brokering in excess of 49%.

Prime paying the sub not to work.

Prime doing work of sub against the sub's will.

Putting prime's employees on subs payroll.

II. EEO/DBE/MBE Requirements

Consequences of Inaction By Owner

Violation of law.

Fraud by prime and subcontractors.

Erroneous payroll records.

Criminal Investigations (very expensive and time consuming):

- Reviewing records,
- Depositions,
- Testifying.

II. EEO/DBE/MBE Requirements

Benefits of Proper Contract Administration

Reduction in contract and legal violations.

Less costly (costly to go to court and very time consuming).

Keeps ODOT out of news media for doing the wrong thing.

Maintain good relationship with contracting industry by being fair.

III. Prevailing Wage Requirements

Law and Public Policy require
primes and subs to submit
certified payroll/affidavits.
(Sec. 4115.071)

III. Prevailing Wage Requirements

Public Authority Must Appoint Wage Coordinator (1 of 2):

Duties:

- Maintains payroll reports and affidavits.
- Dates of payments to employees.
- Obtains from prime and subs copy of payroll:
 - Name
 - Address
 - Social security number
 - Hourly rate of pay
 - Number of hours worked
 - Job classifications, fringe benefits and deductions

III. Prevailing Wage Requirements

Public Authority Must Appoint Wage Coordinator (2 of 2):

Duties (continued):

- Establish a monitoring process.
 - Receipt of affidavit from prime and subs.
 - Reporting delinquencies in filing of payrolls or affidavit.
-

**Bureau of Employment Services
Division of Wage of Hours**

Will sue ODOT if ODOT fails to perform the above duties

III. Prevailing Wage Requirements

Public Policy Embodied in Law:

- To protect workers.
- To ensure all contractors are paying same wage rates (no unfair advantages).
- Responsibility is placed on public owner to enforce.

III. Prevailing Wage Requirements

Each Prime, each sub and each sub-sub must pay its own employees and must submit its own payrolls and affidavits.

III. Prevailing Wage Requirements

Each sub and sub-sub must have a C-92 prior to commencement of work.

CONTROL OF THE WORK AND MATERIAL

The purpose of this section is to give guidance to the project on how to administer the physical work of the contract. We will briefly describe the authority levels of the project personnel and explain the different items they have to work with on the job site. We will discuss items that need submitted to different departments and end this section with case studies on controlling the work and material.

I. PROJECT PERSONNEL AUTHORITY/RESPONSIBILITIES

THE PROJECT ENGINEER/PROJECT SUPERVISOR

The Project Engineer/Project Supervisor is the direct representative of the Department and has immediate charge of engineering details of each construction project. He/She is responsible for the administration and satisfactory completion of the project. He/She has the authority to reject defective work, suspend work being improperly performed and order the replacement of defective material.

Job Responsibilities:

- Measure and document quantities.
- Monitors the project and discusses progress schedule with Contractor's Superintendent.
- Maintains job records.
 - Construction daily diary, CMS 1 and CMS 2 Work performed, Contractor's equipment, materials, significant events of the day, PH-C-201 requirements.

- Job correspondence.
Letters from Contractors, Utility companies and from other public agencies, any correspondence from District or internal agencies.
- Minutes from project progress meetings.
Who attended, items discussed, resolutions to problems.
- Other pertinent documents.
Shop drawings, working drawings, erection procedures.
- Assign inspectors specific areas of responsibility.
- Address and resolve job site problems in a timely manner
- Timely payment for work performed by performing the following activities:
 - Input daily diaries on CMS, review estimates, verify payrolls, obtain approval of testings materials.
- Verify need and prepare change orders.
- Provide support and needed information to inspectors.
 - Addenda, proposal and supplemental specifications equipment, ie concrete testing kit.
- Provide the Contractor with specific information.

- Contingency quantities, “As directed” items.
- Reports to District office as required.
 - Major change in conditions, traffic accidents, status of project.
- Project closeout.
 - Determines final quantities, assures the Contractor completes the punch list items, must complete project files.

THE PROJECT INSPECTOR

The Project Inspector has authority to inspect all work performed and materials used. Authority to reject non-conforming materials, suspend operations until problem is resolved by PE/PS. The project inspector does not have authority to alter the contract.

Job Responsibilities:

- Inspects Contractor’s work.
- Daily record keeping.
 - Quantities of work installed, CMS-1, Inspector’s daily diary, AP1, drawings of work performed.
- Inspects the material incorporated into the project.
- Familiar with manuals and specifications of items of work being inspected.
- Communication with Project Engineer/Project supervisor.
- Communicates with Contractor to assure proper installation of work.

CONTRACTOR SUPERINTENDENT (only one)

The Contractor's Superintendent is responsible for the work. He/she must be capable of reading and thoroughly understanding the plans and specifications and be experienced in the work. There will be only one superintendent who shall have full authority to execute instructions of the project engineer and shall be in charge of all construction operations regardless of who performs the work.

The Project Engineer/Project Supervisor must determine the level of the Superintendent's authority to perform the work. You should know if he/she can agree to extra work, get the equipment needed to get the job done and know if they can follow through with final quantities agreed on.

II. CONTRACT ADMINISTRATION TOOLS

Plans

The plans show details of structures, the line, grades, typical cross sections of the roadway and the location and design of structures. The contractor shall keep one set of project plans available at the project site. No changes shall be made to the plans except as approved by the engineer.

Working Drawings

The plans shall be supplemented by working drawings when required to control the work adequately. Working drawings shall be furnished by the contractor. Working drawings shall

not be prepared until the applicable field and plan elevations, dimensions and geometrics have been verified by the contractor. Specific items of work shall require working drawings. These requirements are stated in the specification section that is applicable to the item of work. See table below for typical examples of number of copies and where to submit the different types of working drawings.

ITEM	DRAWING	COPIES	DESTINATION
501.05	Structural steel and other metal items, pre stressed concrete members, precast concrete structural elements joint sealing devices and other similar items requiring either shop or field fabrication	3	Central Office
630	Overhead sign support	2*	District
630	Roadside sign support	2*	District
632	Signal poles	2*	District
632	Traffic signal heads	2*	District

* Certified working Drawings Section 625.04.

Quantities

The bid quantities are part of the plans. The quantities are estimates and the actual quantities are measured by ODOT personnel and reported on the CMS-1 and CMS-2. Quantities are also verified by measurements when the project is completed.

Quantities may also be referenced by delivery of tickets and invoices.

Construction and Material Specifications

Sections 200 thru 600 of the Construction and Material Specifications are used to obtain the workmanship compliance required for each item. These specifications are typically arranged in the following manner:

- Description
- Materials
- Construction Requirements
- Method of measurement
- Basis of Payment

III. COORDINATION OF CONTRACT DOCUMENTS

Contract documents are prepared to promote agreement between the various parts of the plans and specifications that control the work. In case of disagreement between the plans and specifications, the following will govern in descending order:

- Special provisions / proposal
- Plans
- Calculated Dimensions
- Scaled Dimensions
- Standard Specifications

The Contractor shall take no advantage of any apparent error or emission in the plans or specifications. In the event the contractor discovers such an error or emission, he shall immediately notify the engineer.

IV. CONTROL OF MATERIALS

Control of materials is a necessary and important part of every construction project. The intent is to assure that only quality (specification) materials are incorporated into the work. The Contractor must order materials sufficiently in advance of related work to allow enough time for sampling and testing. The Contractor must identify the project and the specification item number on all material orders which are defined in the construction and material specifications. The specification gives you the item which in turn references the appropriate material specification (700 series) used in conjunction with the material sampling and testing program manual gives you the proper procedure for material acceptance. Additional information may be found on the material code screen, (MATL) on CMS/TAS.

The following identifies the different methods of accepting materials on the project and methods of testing acceptance .

- Project - physical sample from the project which would require no additional information.
Cable , Curing Compound
- Electronic TE-24 - material comes from pretested stock.
Concrete pipe, Guardrail, Fence bolts
- Pre-qualified or pre-approved list for pre-qualified materials:
Concrete sealers, Epoxy, Silane, Functional alternates RPMS and adhesives
- Material from brand name sources:

Loop detector sealant, Impact attenuator type 1, Trowelable mortar,
Caulk for OZEU, Loop detector slot sealant SS-1048, Cable splicing kit

- Materials from manufactureres certified test data:
Section 712.09, Filter fabric Type D.
- Material accepted on letter of certified test data:
Water line AWWA cert., Proposal 516, 517 Proposal Note, 518
- Physical sample and certified test data:
Reinforcing Steel.
- Visual inspection:
Dumped Rock, Mulch
- Acceptance of proprietary items:
Impact attenuator G.R.E.A.T.
- Catalog cuts and shop drawings:
Electrical, Traffic control items

V. RESPONSIBILITIES FOR MATERIAL COMPLIANCE UNDER POLICY 515-001 MATERIAL DOCUMENTATION PROCESS

The District Highway Management Administrator will determine the extent of application of this policy based on project staffing level/and or expertise. It may be applied on either

a wholesale or project-by-project basis.

Under this policy Project Engineer/ Project Supervisor may approve certain materials as listed below and may modify the project bill of materials. Materials that may be approved include:

- Any materials that are on approved or pre-qualified lists.
- Materials for which there are approved catalog cuts.
- Proprietary materials.
- Temporary applications.
- Materials that require visual inspection only.
- Materials under the control of the Office of Structural Engineering.
- Any materials accepted as “small quantities” per Section 106.031.

The District Testing Engineer/Test Lab will perform the following functions:

- Sample, test, review and authorize samples for which the Project Engineer/Project Supervisor does not have the authority to approve.
- Provide staff advice to Project Engineer/Project Supervisor concerning material requirements.
- Perform independent reviews of material certifications by Project Engineer/Project Supervisor, using current guidelines for documentation of final quantities.
- Perform quality assurance reviews on active construction projects to insure compliance with material approval requirements.

The material certification for the projects will be approved by the District Highway Management Administrator.

PROCEDURES

- CMS will be used to document material requirements.
- Materials approved by Project Engineer/Project Supervisor
 - Project personnel will complete appropriate documentation (TE 30, etc.) create sample ID's and assign materials to the proper reference numbers.
 - The Project Engineer/Project Supervisor must review and authorize/approve all samples.
- Materials approved by District Testing Engineer or the Office of Materials Management
 - Project Personnel will complete appropriate documentation (TE31 physical sample), create sample ID's and assign material to appropriate reference numbers.
 - The Project Engineer/Project Supervisor must review all documentation for completeness, sign forms, and forward paperwork or physical samples to the District Lab.
 - The District Testing Engineer or the Office Materials Management, as appropriate, will review the documentation or conduct testing of samples and authorize materials.
- **Certification of Project Materials:**
 - As final quantities are determined, the Project Engineer/Project Supervisor, using the C&MS, will insure that the contract and material requirements are met.

- After all final quantities and material issues are resolved, the Project Engineer/Project Supervisor will complete and sign the Material Certification Letter and forward it along with the final quantities list to the District Documentation Review Team.
- The District Testing Engineer in conjunction with the Documentation Team will perform a review of the material requirements using the same guidelines as required for final quantities.
- A final certification letter will be prepared and signed by the District Highway Administrator. This letter will be directed to the Division Administrator of the Federal Highway Administrator for Non-Certification Acceptance Projects (CAP) or to the project file for all other projects.

Quality Assurance Reviews

Personnel from the District Test Lab will conduct quality assurance reviews during the actual construction phase of projects. These reviews will assure that Project Engineers are following the policies and procedures for material approvals, and identify material deficiencies while corrective action is still possible. The Division of Engineering Policy will establish guidelines for performance of the quality assurance reviews.

Unapproved Material

In the event that unapproved materials are incorporated into the work, these materials must be monitored to determine if they will function properly in the judgment of the Engineer. If so then the Engineer must follow the process to modify the contract to allow these materials to remain in place. See SOP-PH-C-305 (Appendix A).

VI. DELIVERED MATERIAL

All materials must be approved prior to invoice payments and all material must be inspected

at the stock piled location. All materials being used are subject to inspection or tests at any time during preparation or use. Any material which has been tested and accepted at the source of supply may be subjected to a check test after delivery or a minimum visual inspection.

SOURCES OF ADDITIONAL INFORMATION AND GUIDELINES FOR THE CONTROL AND CONDUCT OF THE WORK:

- **Standard Operating Procedures**

Standard Operating Procedures (SOP's) are technically focused unit-specific procedures affecting the management and operation of specific divisions and offices of the Department, with references to technical manuals and other procedural documentation used by the various operating units.

- **Supplemental Specifications**

These are detailed specifications which supplement or supersede the specification sections in the C&MS. (Appendix H)

- **Manual of Procedures and Other Technical Bulletins**

Manual of Procedures (MOP) are to provide construction personnel with information necessary to control the work to be performed in accordance with the requirements of the contract, the measurement of quantities for payment and the documentation of compliance and measurements.

- **Standard Drawings**

The Department furnishes Standard Drawings which provide specific

details on various aspects of construction on ODOT Projects.

DISCUSSION NOTES
SECTION 5 - CONTROL OF WORK AND MATERIAL

- I. Various authority/responsibility levels exist on the project.
 - A. Project Engineer/Project Supervisor - Refer to bullets on pages 1 and 2 of the text.

- B. Project Inspector - Refer to bullets on page 3 of the text.
- II. Conflicts among the various elements of the contract are governed by a specified order of precedence. Refer to page 6 of the text.
- III. To insure the quality of materials incorporated into the project, various methods of identifying and accepting materials are used. Refer to bullets on pages 7 and 8 of the text.
 - A. The procedures for acceptance of materials are spelled out in the text of the notes - Refer to page 10.
 - B. Certification of project materials follows specific guidelines. Refer to bullets on page 11 of the text.
 - C. For additional information concerning control and conduct of the work refer to the ODOT Standard Operation Procedures, Supplemental Specifications, Manual of Procedures, Technical Bulletins and Standard Drawings.

(CLASS EXERCISE NO. 7)

(CLASS EXERCISE NO. 8)

ATTENDEE NOTES:

METHOD OF MEASUREMENT AND PAYMENT

This section is presented to provide information and guidelines for the proper method of measurement of completed items of work and the proper payment to the contractor. This section is divided into the following parts:

- General Information
- Documentation
- Daily Diary
- Estimates
- Project Approval of Estimates
- District Office Approval of Estimates
- Method of Measurement
- Basis of Payment

I. GENERAL

In the administration of construction projects, it is the policy of the Department of Transportation to provide the contractor with prompt payment for all completed and accepted items of work. After an item of work is completed, but before payment is made, a determination must be made on the quantities of the various items of work performed. This will be the basis for final settlement between the contractor and the Department. It is the responsibility of the Project Engineer/Project Supervisor to assure this determination of quantities is performed. As the Engineer's authorized representative, the project inspector is likewise responsible for making the detailed inspections necessary to measure, document, and turn in for payment the determined quantities.

As promptly as everyone expects their paycheck, the contractor is entitled to prompt and accurate payment for all completed and accepted items of work. As outlined in the Standard Operating Procedure SOP-512-003(P), (Appendix I) "Payment for Contract Work" and Ohio Revised Code Sections 126.30 and 5525.19 the Department has the obligation to pay for

completed items of work promptly. This payment must be made to the contractor within thirty (30) days of the first estimate date after the completion of the work, except for additional quantities found during the finalization process. Failure to meet the progressive payment time will result in interest being paid to the contractor from monies deducted from the District's budget. To assure prompt payment, the measurement of quantities and the recording for payment must be performed on a daily basis as the items of work are completed.

Project personnel are responsible for preparing documentation to support payment for work performed by the contractor by measurement of completed and accepted quantities of work. This documentation serves two important purposes.

- It provides validation that the quantity for payment has been determined in accordance with contract requirements (contract proposal, plans, specifications) with the necessary measurements, calculations, weight tickets, etc. This is further detailed under the next section entitled "Method of Measurement".
- It also verifies that the work was done in close conformity (as defined in Section 101.351 of the C&MS) to the plans and specifications.

Details on documentation can be found in the following Manuals of Procedures:

- Manual of Procedures for Concrete.
- Manual of Procedures for Structures.

- Manual of Procedures for Earthwork Construction Volume I.
- Manual of Procedures for Earthwork Construction Volume II.
- Manual of Procedures for Flexible Pavement Construction.
- Manual of Procedures for Rigid Pavement Practices.
- Manual of Procedures for Pipe Construction.

Although these Manuals of Procedures are not intended to alter or replace the specifications, their purpose is to supplement the specifications and provide assistance to the project personnel in the interpretation of the specifications. As such, these manuals are not part of the contract documents by which the contractor bids the project. These manuals do provide the recommended minimum documentation requirements and guidelines with respect to measurement of quantities and basis of payment.

II. DOCUMENTATION

Documentation is created by the project personnel for every contract reference number listed in the plans and proposal for the project. Individual measurements of contract pay items shall be made with sufficient accuracy to avoid accumulations. For this reason, these individual measurements are generally made to the next decimal place above that of the pay item quantity (example - proposal quantity of 23.2 tons would be measured in individual measurements to the hundredth with the total calculated to the nearest tenths). The summary of all individual measurements for a contract reference number is then totaled and rounded back to the unit of the pay item. For purposes of documentation, all project records shall be identified as to the date, project number, item number, contract reference number and subject. These records shall also show location data, computations, be validated by

signature or initials of the individual performing the inspection, and be filed in the project field office (or as required by the Project Engineer/Project Supervisor if no field office exists) in individual contract reference number files. Tickets and other bulky substantiating records may be placed in supplementary files provided they are referenced properly to their associated contract reference number. Upon completion of the project, entire files shall be promptly submitted to the District Construction Office for completion of the finalization process.

This project documentation prepared by the project personnel is the necessary supporting data for progressive payment to the contractor. On a daily basis, all Project Engineers /Project Supervisors and Inspectors assigned to a project are required to complete a daily report. Although some specific projects may use specialized forms, the form normally used is the “Inspector’s Daily Report” ,form CMS-1, and the “P.E./P.S. Daily Report”, form CMS-2, (Appendix J).

As items of work are completed by the contractor, project inspectors are required to document the work as previously discussed. Accepted quantities will be turned in for payment on the CMS-1 form under the area entitled “Pay Items”, listing the reference number, extra work number if applicable, participation code, description of work, location, and quantity or lump sum amount. Likewise the Project Engineer/Project Supervisor may also turn in pay items on the CMS-2 form under the area entitled “Additional Pay Items” listing the same type information as required on the CMS-1. A copy of a completed CMS-1 and CMS-2 is also provided in Appendix J for information. It must be emphasized that all items turned in for payment must be supported by documentation kept in the project files under the appropriate contract reference number.

III. DAILY DIARY

The daily accumulation of the information entered on the project is found in CMS-1 and/or CMS-2. These forms will become, when entered into the Construction Management System (CMS), the Construction Daily Diary. This Construction Daily Diary in the Construction Management System consists of five (5) individual screens altogether.

- Contractor Work (DDCON)
- Contractor Equipment Usage (DDCEQ)
- State Employees Hours Worked (DDHRS)
- Weather and Pay (DDWAP)
- Daily Remarks and PE/PS Approval (DDRMK)

All information contained on the CMS-1/CMS-2 forms are transferred by the project personnel to one of these screens. For purposes of payment of completed items of work, pay items listed on the CMS-1 and CMS-2 forms are entered on the “Weather and Pay” (DDWAP) screen. (Appendix K)

Once all information is entered on the various screens of the Construction Daily Diary and the diary is completed, the Project Engineer/Project Supervisor, or alternate who has update authority, reviews the diary and if found acceptable, approves the diary. This approval is performed by changing the “N” on the “Project Engineer/Supervisor Approval” line on the “Daily Remarks and PE/PS Approval” (DDRMK) screen to a “Y” (Appendix L).

Once approval of the Daily Diary takes place, the CMS system automatically transfers any

quantities turned in for payment on the DDWAP Screen to the “Paybook” Screens (PBOOK). This CMS screen lists details about individual reference number quantities completed for payment (Appendix M). Any amount shown on this screen as being completed, but not previously paid will now be picked up for payment when the next estimate is generated.

IV. ESTIMATES

It is the District Construction Engineer’s responsibility to establish the first estimate date for a project. This first estimate date, in general, should be (2) weeks after the first day of work or as otherwise agreed to by the contractor at the preconstruction meeting. Once the first estimate date is established, a second estimate will automatically be generated fifteen (15) days later. Estimates will continue to be automatically generated on the same two (2) dates per month as long as the project is under construction and the automatic generation of estimates remains actuated in the system.

Appendix N provides examples of the two (2) screens created automatically by the CMS from information contained on the various “Paybook” reference screens for a project.

- Estimate Information (EST) screen. It displays overview information and adjustments for generated estimates. This screen allows both the project personnel and the District Construction Personnel to delete or approve the estimate.
- Estimate References (ESTR) Screen. It displays the list of references

having quantities for payment. This screen allows all individuals with update authority the ability to review individual reference quantities, adjust/delete quantities when necessary, and/or add other reference quantities that may have previously been omitted. Any quantity added to the ESTR Screen requires comments to be added on screen and will automatically be posted back to the “PBOOK” Screen.

V. PROJECT APPROVAL OF ESTIMATES

The Project Engineer/Project Supervisor is responsible for the electronic approval of their project’s estimate on each estimate day. Before this approval takes place at the project level, the PE/PS must be assured that:

- The pay quantities and delivered material quantities entered into CMS are correct.
- That any liquidated damages due to failure to meet an interim completion date are entered into CMS.
- That any pay item deficient in material approval and not eligible for override be deleted from the estimate.

With respect to delivered materials, payment is allowed in accordance with Section 109.07 of the C&MS and ORC Section 5525.19. Payment is limited to approved, durable items that have a significant value in comparison to the total price of the contract and shall not be in

excess of what is required to do the contract work. The unit costs allowed are the invoiced material costs and any reasonable delivery charges less any contractor's discounts. The allowed unit cost shall not exceed the applicable contract unit price. Delivered material invoices shall be kept in the project file. Costs for stockpile materials may be established by documents other than invoices.

Payment for approved materials outside the vicinity of the project may be made if it is determined that it is not practicable to deliver the material to the project site. This should apply to only bulky material that represents approximately \$5000 or more for related items of work. For small projects, payment for materials less than \$5000 may be made at the discretion of the District Construction Engineer. These materials are intended to include but not be limited to, guardrail, fence, aggregates, structural steel, precast concrete, light/strain poles, etc. Materials that have established shelf life or are temperature susceptible shall be protected in accordance with the manufacturer's recommendations. Small warehouse items shall not be included. Certain additional requirements also must be met before payment of delivered material off the project takes place.

- The storage site of the material must be approved and documented in writing. This can be performed by the project personnel or other ODOT individuals (in cases where it is more practical for other Districts or Central Office Plant Inspectors to perform the inspection and provide the documentation).
- The material must meet the same level of approval at the storage site as that required of material at the project.

- The existence of the stored material must be verified and documented provided that it is designated or reserved for the particular project. This can also be performed by personnel from another District or Central Office when warranted by the location of the material.
- Payment for off site storage of material must also be supported by invoices kept on file in the project records.

Liquidated damages due to the failure of the contractor to meet the project completion date are automatically accounted for by CMS. The Project Engineer/Project Supervisor must however, enter into CMS any liquidated damages as a result of failure to meet an interim completion date such as a road closure limitation required by the plan notes. This is performed by entering the dates subject to liquidated damage, and the amount per day into the “Liquidated Damages” (LIQID) Screen in CMS. Both automatic and manual Liquidated Damages are then automatically posted to the “EST” Screen for inclusion into the estimate total. CMS automatically checks to see if enough materials have been reported, approved, and entered into CMS to cover the amount paid at the time the estimate was generated. If a deficiency occurs, the estimate is “flagged” by means of a “Y” indicator under the Matl/Tst column on the “ESTR” Screen for the affected reference number (Appendix O). It is the responsibility of the Project Engineer/Supervisor to delete the affected quantity from the estimate if it is determined that the material lacks approval. If the PE/PS establishes that the material in question is approved and the “flag” is caused by the approval not being processed in time for the estimate, then the “unjustified flag” can be overridden. Overriding of “unjustified flags” is performed at the District Approval Level by the District Construction Engineer or back up person. The PE/PS should provide on-screen remarks to the DCE or

backup person to indicate why the flag is not warranted so that the “unjustified flag” can be overridden.

Once the PE/PS has determined all the above has been accomplished, electronic approval of the estimate at the project level can take place. This is accomplished by changing the “N” indicator by “PE/PS Approval” on the EST Screen to a “Y” indicator. The estimate is now ready for the District Level Approval.

VI. DISTRICT OFFICE APPROVAL OF ESTIMATES

District Level Approval is the responsibility of the DCE or back up person. Before this level of approval takes place, all “unjustified flags” must be overridden. This includes the previously discussed “flags” related to deficient material approvals. This also includes “flags” associated with deficient payrolls.

CMS automatically checks to see if payrolls submitted by the prime and any subcontractors for a project are up-to-date. Payrolls are entered for both prime and subcontractors into CMS on the “Payroll” (PAYRL) screen (Appendix P). This is done after the payrolls are reviewed and approved for prevailing wage compliance by either the Project Engineer/Project Supervisor, District Wage Rate Coordinator, or other assigned by the DCE. Once an estimate is generated, CMS automatically checks to see that payrolls have been entered into the system to cover the prime contractor and any subcontractor that would have worked on the project between the time span of the previous two (2) estimate dates. If a deficiency exists, the estimate will be “flagged” by a “Y” indicator beside “Deficient Payrolls” on the “EST” screen (Appendix Q). If this occurs, the estimate is held at the

District until the deficiency is resolved. The DCE or back up person can override the “flag” once it is determined that all required payrolls have been submitted, reviewed, and found acceptable. This is accomplished by changing the “Y” indicator to a “N”.

Once all “unjustified flags” have been overridden, the DCE or back up person can now approve the estimate. This is accomplished by changing the “N” indicator by “District Approval” on the “EST” Screen to a “Y” indicator. The estimate is now automatically forwarded to the Office of Accounting in Central Office for further processing and payment to the prime contractor.

VII. METHOD OF MEASUREMENT

In determining the proper method of measurement for a particular item of work encountered on a project, several sources of information exist. Section 109.01 of the C&MS provides general information for the determination of various units of measurement. These include items measured by weight, those measured by cubic meter (cubic yard) and those measured by the liter (gallon). In addition, specific information can be found for every listed pay item, with few exceptions. Every item number in the C&MS contains a unique section entitled “Method of Measurement” which provides this specific information. For example :

- Section 603.13 Methods of Measurement

The length of conduit to be paid for will be the actual number of meters (linear feet) measured from center to center of appurtenant small structures or between open ends inclusive of lengths of pipe bend and branches. Where the location of an appurtenance or

an open end is changed with the approval of the Engineer to accommodate full conduit sections, the length will be measured to the plan location or to the changed location, whichever results in less cost to the state. Conduits with beveled or skewed ends will be measured along the invert. No deduction will be made for catch basins, inlets, or manholes that are 2 m (6 linear feet) or less across, measured in the direction of flow.

The few exceptions includes: items 402,403,404,412,446, and 448. These are all asphalt concrete items with the “Method of Measurement” for all these items described under Section 401.17. Likewise Section 641.12 provides the “Method of Measurement” for all the pavement stripping items, 642,643,644, and 645. No specific section exists for the Items 441, 499, 501, 502, 505, 506, 508, 509, 510, 619, and 623. These are all general specifications, items involving lump sum payment, or items not paid separately, but included in other items for payment.

For items of work not covered in the C&MS, other sources can be utilized to determine the proper “Method of Measurement”. Supplemental Specifications are individual documents which describe the construction and material specifications for items whose requirements are changing from year to year, are still in the development or experimental stage, or are used only occasionally. These can be identified by their 800 series number. Just like the C&MS, these Supplemental Specifications contain a unique section entitled “Method of Measurement” which provides the specific information for measurement purposes. The following example from a Supplemental Specification is provided:

- Supplemental Specification 839 - Seeding and Erosion Control With Revegetation Mat

Measurement of the seeding and erosion control with revegetation mat shall be the number of square meters (square yards) of area, completed and accepted.

Items listed as “Special”, having no item number, also have specific information with respect to proper measurement. This is likewise included in a section entitled “Method of Measurement” and is incorporated in either the plan notes or listed in the specific proposal for the project.

Another possible source of information with respect to “Method of Measurement” are items listed “as per plan”. Reference items with an “as per plan” designation have been modified in some way from what would normally be required by the Specifications, Proposal, Standard Drawings, etc. This modification will be found in a plan note within the contract plans. The project personnel must investigate these “as per plan” modifications to determine what has been changed with the item.

For those projects designed in metric units, specific information with respect to measurement can be found. Section 109.11 of the C&MS provides information with respect to “Metrification” along with a list of conversion factor for converting English to metric. Proposal note 544, “Metric Substitution Required for Structural & Reinforcing Steel.” provides guidelines for the contractor and project personnel in the substitution of inch pound units for reinforcing steel and structural steel plates for metric units.

VIII. BASIS OF PAYMENT

As per Section 109.02 “Scope of Payment” in the C&MS, payment to the contractor for an item of work performed by the contract shall be full payment for furnishing all materials and performing all work under the contract in a complete and acceptable manner. The “Basis of Payment” for any item of work details that the unit bid price is full compensation for certain work and/or materials essential to that item. As such, this work and/or material will not also be measured or paid for under any other pay item which may appear elsewhere in the plans or Specifications. Like “Method of Measurement”, with few exceptions, every item number in the C&MS contains a unique section entitled “Basis of Payment” which provides specific information as to what is covered by the pay item. The following example is provided:

- Section 604.10 Basis of Payment

The work included in this item, including excavation and backfill, shall be paid for at the contract price, complete in place.

The few exceptions include Items 441, 499, and 501. These are all general specifications dealing with asphalt concrete, concrete and structures.

Likewise, for items of work not covered in the C&MS, the same type sources exist. As with “Method of Measurement”, item numbers in the 800 series are covered under Supplemental Specification. The following example from a Supplemental Specifications is provided:

- Supplemental Specification 839 - Seeding and Erosion Control
With Revegetation Mat

Payment will be made at the contract unit price for:

Item 839	square meter (square yard)	Seeding and erosion control with revegetation mat, Type
----------	----------------------------	--

The liming and fertilizing required on the area covered by seeding and erosion control with revegetation mat will be paid for under 659.

Items listed as “Special” also have a unique section entitled “Basis of Payment”. These are found either in plan notes or the contract proposal.

Likewise “as per plan” modifications need to also be investigated by the project Personnel. These modifications could change the “Basis of Payment” of the particular item of work.

DISCUSSION NOTES

SECTION 6 - METHOD OF MEASUREMENT AND PAYMENT

- I. General - Like most DOTs in the country, ODOT employs a unit price contract. The measurement and payment system set up to administer this type of contract has two primary objectives.

- A. Prompt payment to the contractors for work performed.
 - B. Assurance that ODOT pays for only actual quantities installed to the specified level of quality.
- II. Documentation - The successful administration of a unit price contract, coupled with ODOT's responsibility to the public, necessitates thorough and accurate documentation. At the heart of the measurement and payment system are two forms, CMS-1 and CMS-2. This information, when entered into CMS becomes part of the construction diary.

ATTENDEE NOTES:

- III. Approvals - In order to maintain the integrity of the measurement and payment system, the Project Engineer/Project Supervisor reviews and approves the project estimate each estimate day. Approvals must also be obtained from the District.
- IV. Method of Measurement and Basis of Payment - The actual method to be used to measure actual quantities and the basis for payment is set forth in the CMS.

(CLASS EXERCISE NO. 9)

ATTENDEE NOTES:

CHANGES AND EXTRA WORK

The purpose of this section is show how modifications are made to ODOT construction contracts by change order. We will discuss reasons for change orders, pricing, preparation and processing and record keeping.

ODOT contracts are unit price contracts using estimated quantities of work. Simply by the nature of this type of contract, change orders will occur if for no other reason than to adjust estimated quantities to the quantities of work actually performed. Change orders amend the contract by adding or deleting work, making reimbursement for additional costs incurred, making material substitutions, changing specifications, etc.

The director of transportation is empowered by Section 5525.14 of the Ohio Revised Code (Appendix R) to amend contracts for highway improvements by change order. This authority has the following statutory limitations:

- Any original bid item can be increased to the lesser of 5% of the total original contract amount or \$100,000.00.
- A new item of work can be added to a contract to a value of the lesser of 5% of the original contract value or \$100,000.00.

Additions beyond these limitations must be approved by the State Controlling Board. However, the director can exceed these limits if there are circumstances that warrant the declaration of an emergency. These circumstances could include a threat to public safety, idled equipment costs, delay costs, etc.

Guidelines for preparation of change orders are given in:

- C&MS Section 104.02, 109.03, 109.04
- ODOT Policy No. 512- ___(P)-Draft (Appendix S)

I. REASONS FOR CHANGE

The necessity for a change orders to an ODOT construction contract may arise for many reasons. The most common causes for change orders are discussed below.

Changes in Quantities of Work

The quantities of work actually performed differ from the quantities originally estimated and established in the contract.

- Final measurements/calculations
- Quantity changes to meet field conditions
- Plan errors

Differing Site Conditions

Existing field conditions differ from the plan to the extent that performance of additional or non bid work is required.

- Differing subsurface conditions
- Presence of any conditions not shown in the plan

Changes in the Scope of Work

Changes to the project that are so far reaching that they can be considered outside the original intent of the work.

- Significant changes in the quantities of work
- Significant alteration of the work
 - sequence of construction
 - method of construction
 - materials

Changes for the convenience of the owner

Changes in the work ordered by the owner to meet the needs of the owner. These changes are typically not required for the proper construction of the project.

- Addition of new work or deletion of work
- Acceleration
- Change in Materials
- Suspension of Work

Actions by others

Restriction, regulation or delay imposed on the contractor beyond the terms of the contract by an entity who is not a party to the contract.

- Utility Companies
- Railroads
- Regulatory agencies
- Local governments

II. GENERATING AND PROCESSING A CHANGE ORDER

The actual process for generating and processing a change order will vary from district to district depending on the level to which authority or responsibility has been delegated within the district. The process usually begins with the recognition of a need for a change order at the project level. This need is usually communicated to the District Construction Office which will either grant or obtain concurrence or authorization. A decision is then made as to the type of change order that is needed, a District Change Order or an Extra Work Change Order, and the change order is entered into CMS via the “CO” screen by the Project Engineer or the District Construction Office. CMS then generates both an electronic and a paper change order. The paper change order is signed by the District Construction Engineer and/or the District Deputy Director and submitted to the contractor for signature. Once the contractor signs and returns the change order the required approvals are then entered into CMS via the “CO” screen and the change order is electronically approved and is ready for payment.

III. CHANGE ORDER TYPES

ODOT construction contracts are modified using two types of change orders, a District Change Order and an Extra Work Change Order. Guidelines for use, authorization limits and requirements and approval authority for each type are given in ODOT Policy Number 512-___(P) Draft (Appendix S).

IV. COMMON CHANGE ORDER ELEMENTS

Practically every change order will contain the following elements (Appendix T).

Face

- Project Identification: Project Number, County, Route, Section, Federal Number, Federal Acceptance Type.
- Change Order Identification: Change Order Number, Type of change order.
- Work Item information: Reference Number, Participation Code, Item Code, Item Description, Units of Measure.
- Cost Information: Unit Price/Lump Sum Amount, Reference Total, Addition/Non-performance, Change Order Total Addition /Non-performance.

Body

- Reference Number Identification: Reference Number, Extra Work Number Participation Code.
- Reason Code: Mandatory field in CMS “EXPL” screen for each reference. CMS contains a list of 22 reason codes to choose from.
- Explanation of Necessity.

Signatures

- For request and approval by the Department.
- For agreement by the contractor.

Attachments (when applicable)

- Emergency Declaration: District’s request and Declaration issued by Office of Highway Management.
- Support Documentation: Additional information describing need for the change order.

- Cost Documentation: Cost analyses, Comparative pricing information, etc.

V. CHANGE ORDER PRICING

Once the need to perform extra work on a project has been identified a basis of payment for this work must be established. Pricing for extra work is usually established using one of the following methods.

Agreed Unit Price

This method of pricing is used when the extra work can be broken down into measurable units. The number of units necessary to perform the work is estimated and a unit price is determined and agreed upon as described below. Final payment is based upon the final measurement of the number of units of work actually performed.

- Unit prices already established in contract.
- Comparative pricing. Contract unit prices for similar work on other projects (CMS database), (Appendix U).
- Use force account type analysis (Appendix V).

Force Account (Section 109.04 of the CM&S)

A force account method is used when the work cannot be broken into measurable units or when a unit price cannot be agreed upon. This method reimburses the contractor the actual costs of labor, equipment and materials incurred in the performance of the work including

allowable overhead and markup. This method requires a significant amount of record keeping and is described in Section 109.04 of the CM&S.

This method usually requires the preparation of two change orders both of which use the same format. The first change order is known as an “Estimated Cost Force Account” and is established so that money can be encumbered and payments can be made to the contractor as the work is performed. The second change order is known as an “Actual Cost Force Account” and represents the final accounting of the cost of the performance of the work and is used to reconcile the “Estimated Cost Force Account” change order.

Agreed Lump Sum

This method of pricing is a negotiated amount and can be used when the extra work can be identified as something that is usually paid as a “lump sum”. The “Agreed Lump Sum” can also be used as an alternate to the force account method.

- Prepare lump sum using force accounts style analysis
- Maintain force account record of the work for a period of time and use to develop lump sum
- 3rd party billing (Appendix W)
- Lump Sum Adjustment

VI. ADDITIONAL CONTRACT TIME FOR EXTRA WORK

The performance of extra work or additional quantities of work may warrant an extension of contract time. Extensions of contract time may involve additional direct project overhead costs.

Record Keeping

Record keeping is an integral part of contract administration and is especially important when considering change orders. Adequate records must be maintained to document the need for changes and to establish pricing for extra work.

VII. QUANTITY MEASUREMENTS

Measurements of the quantities of work in the units prescribed by the plan actually performed by the contractor must be recorded by the project personnel. Change orders must be prepared to make adjustments for any differences between contract quantities and the quantities actually performed.

Issues of efficiency or other similar factors may arise that may impact unit costs when the quantities actually performed differ significantly from those shown in the plan. For these occasions the quantity records must be thorough enough to determine actual production rates and other such items.

VIII. FORCE ACCOUNT WORK AND EXTRA WORK USING FORCE ACCOUNT STYLE ANALYSIS (C163)

The records required for force account pricing of extra work must **accurately** depict all

labor, equipment and materials used by the contractor to perform the work. The items that are necessary to record are as shown below.

- Description of Work
- Contractor's work force
 1. Employee Name
 2. Classification
 3. Hours worked - regular and overtime
- Contractor equipment
 1. Type
 2. Model
 3. Age
 4. Capacity
 5. Hours Worked
 6. Hours Idle
- Materials
 1. Description
 2. Quantity
 3. Invoices

DISCUSSION NOTES

SECTION 7 - CHANGES AND EXTRA WORK

I. A change to a construction contract is the requirement to perform work which is

different than that specified in the contract documents.

A. Changes can occur for many reasons.

1. Changes in the quantities of unit price items.
2. Differing site conditions.
3. Changes in the work which was originally delineated in the contract such as revised design considerations.
4. Changes for the convenience of the owner.
5. Changes caused by outside agencies such as utilities, railroads, etc.

ATTENDEE NOTES:

B. Changes can be both directed and constructive.

1. Directed changes generally are not major points of contention.
2. Constructive changes are caused by the action or lack of action of the

owner. Constructive changes can include such things as:

- a) Late inspection.
- b) Over inspection.
- c) Requiring a higher standard of performance.
- d) Superior knowledge.

3. Constructive changes are treated the same as any other change.

ATTENDEE NOTES:

II. To successfully resolve a change, some basic steps must be followed and some basic questions answered.

A. The following questions must be addressed:

1. Is it a change?

2. Who caused or is liable for the change?
3. What is the result or impact of the change?
4. What are the costs associated with the change?

(CLASS EXERCISE NO. 10)

B. The pricing of a change normally follows three standard approaches:

1. Unit prices.
2. Lump sum.

ATTENDEE NOTES:

3. Force account.

III. All changes must address both time and money. If a change does not require a time extension, it should be so stated in the change order document that resolves the change.

A. Do not leave the question of time extension until the end of the job.

1. It is more difficult to resolve later on.
 2. It invites claims for constructive acceleration.
- B. If a contractor is due a time extension but ODOT and the contractor cannot agree on the duration, ODOT should grant at least those days which it believes are merited.
- C. If ODOT and the contractor cannot agree on the dollar amount of the change, ODOT should grant a change order at least in the amount for which it believes merited.
- IV. Changes should be resolved for all elements such as inefficiency, delay, etc. Try not to leave any portion of a change for resolution at a later time.
-

ATTENDEE NOTES:

PROJECT CLOSEOUT

The purpose of this section is to explain the process by which ODOT construction contracts are closed out. We will discuss final inspections, the completion of contract requirements, the determination of the final contract value and the issuance of the final payment and release

to the contractor.

Following the completion of the physical work of a project a process to “closeout” the contract begins. This process ultimately leads to the final payment and release of the contractor from further responsibility for the project. This process includes gaining acceptance of the project from all participating agencies, determining the final value of the contract, the completion of all remaining contract requirements and the issuance of a final change order. It is the Department’s goal that this process be completed within six months of the completion of the physical work for at least 90 percent of our projects.

I. FINAL INSPECTION

When work on a project has been completed to the satisfaction of the Project Engineer/ Project Supervisor, a final inspection is conducted. The final inspection is typically conducted by a team that is headed by the District Deputy Director’s Appointee for Final Inspection. This Team shall include representatives of all local participating agencies and FHWA, when applicable, ODOT maintenance personnel, the Project Engineer/ Project Supervisor and the contractor. The Team will determine the need for any corrective or additional work and prepare a “punch list” for the project. In the case of any disagreements among the Team, the District Deputy Director’s Appointee is empowered with final authority. The “punch list” is provided to the contractor in writing along with a specified time frame or a specified date for completion of the prescribed work.

- **Resolution of Punch List**

It is the responsibility of the Project Engineer/ Project Supervisor to perform any follow up necessary to assure that the contractor completes the punch list

work in a timely manner.

- **Obtain acceptance of project by all local agencies**

Upon completion of all physical work, including punch list work, the District Construction Office must obtain a letter of acceptance of the project from all local participating agencies.

- **Issuance of Report on Final Inspection**

Following the completion of punch list work, if any, the District Deputy Director's Appointee for Final Inspection issues the Report on Final Inspection, form C-85 (Appendix X). This report represents an informal acceptance of the project.

II. COMPLETION OF CONTRACT REQUIREMENTS

Once the physical work is completed for a project there are a number of administrative contract requirements that must be completed before final payment can be issued. These requirements may differ from contract to contract and typically include the processing of various documents or the Contractor supplying certain information.

- Material & Labor Report -PR 47 (Federal Projects Only)
- Payroll requirements completed
- Affidavit of Compliance - Final Wage Affidavit (State Projects Only)
- Profilometer Report
- Concrete Core Report

The dates on which each of these contract requirements has been satisfied are entered and recorded in CMS on the “FINAL” screen. (Appendix X)

III. DETERMINATION OF FINAL CONTRACT VALUE

A key element of the project closeout process is the determination of the final dollar value of the construction project. This is accomplished by determining the final number of units to be paid for each item of the contract and by processing all necessary change orders including a final change order.

In order to ensure timely closeout, it is strongly recommended that some of the activities that will be discussed be performed as work is completed on the project.

- **Prepare and audit final contract quantities**

The Project Engineer/Project Supervisor is responsible for determining and preparing support documentation for the final quantity (final number of units) to be paid for every item of work contained in the construction contract. Ideally this is accomplished progressively as the items are completed during the course of construction of the project. Once the physical work has been completed for the project, the Project Engineer/Project Supervisor submits all project records to the District Office for an audit. This audit is performed by the District Level Reviewer for the purpose of verifying the final quantities and assuring that adequate documentation exists to support payment of those quantities. It is currently the Department’s policy to audit a minimum of 25% of all projects awarded each calendar year. The District can

audit additional projects at its discretion. Again, it is preferred for larger projects that the audit be performed progressively as items of work are completed and documented. Upon completion of the audit, or periodically during the audit for larger projects, a list of “approved” final quantities is prepared and is forwarded to the contractor for concurrence. Once agreement with final quantities has been obtained a change order is prepared to make any necessary adjustments between the final and original contract quantities. Any necessary pay estimates resulting from these change orders are initiated by the District Construction Office.

- **Material Certification**

As discussed in earlier sections, all materials incorporated into construction projects must be approved for use. Once the work is completed for the project an audit must be performed to ensure that sufficient quantities of material have been approved for each reported final quantity. As the final quantity audit is being performed and final quantities are approved, the quantities are reported to the District Engineer of Tests for the material audit. The District Engineer of Tests and staff review the project testing and acceptance records to ensure that sufficient materials are approved for the final quantity for every contract item. Material deficiencies are reported to the Project Engineer/Project Supervisor who is responsible for resolution of the deficiency. Once all material deficiencies are resolved, the District Engineer of Test generates the Letter of Certification of Materials for the project. This letter is signed by the District Engineer of Tests and the District Highway Management Administrator and included in the final estimate

package.

The project closeout process is modified as follows for projects constructed under the material acceptance process described in Policy 515-001.

Under this policy the Project Engineer/Project Supervisor prepares a material certification for the project and submits it along with the final contract quantities to the District for an audit. The final quantity documentation is audited by the District Level Review Team as described earlier. The District Engineer of Tests now only audits the Project Engineer's/Project Supervisor's material certification using project audit guidelines similar to those used by the District Level Review Team. Deficiencies identified by the District Engineer of Test's audit are reported to the Project Engineer/Project Supervisor who is responsible for their timely resolution.

The Highway Management Administrator approves the material certification and it is included in the final estimate package.

- **Issuance of Final Change Order**

A final change order is required for every construction project. Change orders for all quantity adjustments, extra work, additional costs, price adjustment or contract amendments must be processed prior to the issuance of the final change order. Approval of the final change order signifies that all necessary changes have been made to adjust the

contract from the original bid condition to the final “as built” condition.
(Appendix X)

IV. FINAL PAYMENT AND RELEASE

Following the approval of the final change order, the final estimate is prepared and processed and the contractor is released from any further responsibility for the project in accordance with C&MS Section 109.09.

- **Preparation of Final Estimate Package**

A final estimate package is prepared for the project and includes the following items (Appendix X):

- Final estimate (reconciles payment to final quantities)
- Letter of Certification of Materials
- Certification of Payroll Affidavit (100% State projects only)
- Letter of Acceptance from Participating Agency
- Affidavit as to Non-Specified Materials (when applicable)
- Receiving ticket for Salvaged Materials (when applicable)

The final report is certified by the District Construction Engineer and the District Deputy Director. The final estimate is approved by the District Deputy Director.

- **Issue final payment and release contractor from further responsibility**

Once submitted the final estimate package is audited and approved

for payment. Following this approval the District Construction Office generates a letter to the contractor advising of the final value of the contract and of their release. This letter also serves as the Department's formal acceptance of the project.

DISCUSSION NOTES

SECTION 8 - PROJECT CLOSEOUT

- I. Certain steps must be followed in closing out a construction project.
 - A. A final inspection is conducted when it appears that the work has been

completed to the satisfaction of the Project Engineer/Project Supervisor.

1. The final inspection normally results in the generation of a punch list. This punch list must be resolved prior to finalizing the contract.
 2. The project must be accepted by local agencies.
 3. A report on final inspection will be issued.
- B. The final contract value must be determined.
1. The final contract quantities must be prepared and audited.
 2. All materials incorporated into the project must be approved.
 3. A final change order is issued.
- C. After the final change order, the final estimate package is prepared. (Refer to Appendix X). Based on the final estimate, final payment is made and the contractor is released from further contract responsibility.
-

ATTENDEE NOTES:

CLAIMS

Like every Owner on a construction project, ODOT, by the very nature of the volume and complexity of the work which it does, is subject to claims by the Contractors who perform

the work. The underlying “rules of the game” between ODOT and a contractor exist in the Contract, the Specifications and the Plans. There are certain terms which are not stated in the contract documents. These are known as implied terms. For instance there is an implied warranty that the plans and specifications are free from defects and, unless stated otherwise, that there will be safe and continuous access to all areas within the project’s boundaries. Claims arise from both stated and implied terms.

I. WHO CAN MAKE A CLAIM ?

The only entity that can assert against ODOT is the legal contractor of record. If the project is being performed by a joint venture then only the joint venture can assert a claim. A single party to the venture cannot assert a claim. Likewise, a subcontractor cannot assert a claim against ODOT but can make a claim against the Prime Contractor who, in turn, can assert a claim against ODOT for damages incurred by the subcontractor.

II. ELEMENTS A CLAIM

Every claim has two distinct elements: **Entitlement and Damages**.

Entitlement means essentially the theory under which the Contractor asserts the claim. Examples of this would be: work not shown on plans, conflict between plans and specifications, Owner caused or third party delays, and unforeseen conditions.

Damages are the cost impacts incurred by the Contractor which are over and above normal costs and which are occasioned by the claim event.

Each claim must have both of these elements. While a contractor may encounter a situation where there would be an entitlement but incurs no monetary impact, there is no claim. Likewise, a contractor may state that he has incurred additional costs but cannot establish an entitlement then there is no claim.

Duty to Mitigate

The contractor must make a reasonable effort to mitigate his damages. Mitigation might include: re-sequencing, reducing or changing manpower, re-mobilizing etc. The contractor is entitled to recover the costs of mitigation.

III. TYPES OF CLAIMS

Certain types of disputes by their nature are those which are most likely to result in a claim.

- Plan discrepancies or omissions
- Allowable costs in calculating Change Orders
- Unforeseen site conditions
- Constructive acceleration
- Quantity variations
- Interferences
- Delays

Delays may be associated with some of the claims listed above, and may require careful analysis to determine who is responsible for the delay. It is important to keep the following

principles in mind when evaluating a Delay Claim:

- **The Contractor must demonstrate that the delay was critical.** It must be shown that the delay in question affected the overall project schedule and was a controlling operation with respect to project completion.
- **Excusable Delays.** Are those delays which are unforeseeable and beyond the control of the contractor. Excusable Delays may be either compensable or non-compensable.
- **Excusable/Compensable.** These are delays caused by the Owner. Examples include: lack of site access, late shop drawing approval, redesign etc.
- **Excusable/Non-Compensable.** These are delays caused by third parties outside the contractors' control. Examples include: area-wide labor disputes, floods, transportation industry delays, fire, vandalism etc.
- **Non-Excusable.** Non-Excusable delays are always non-compensable. These delays are caused by the contractor or under his control. Examples are: subcontractor delay, late mobilization, production takes longer than scheduled, equipment breakdowns etc.

Very often delays can occur from various sources at the same time. These are called concurrent delays. An ODOT caused compensable delay occurring at the same time as an

excusable delay which is non-compensable should result in a time extension but no recovery of costs. An ODOT caused delay occurring at the same time as a Contractor caused delay should result in a time extension but no recovery of costs. Both cases relieve the Contractor from liquidated damages for the time in question.

The Contractor is entitled to plan and pursue the work in order to finish ahead of the contract completion date. If ODOT delays the Contractor, the Contractor may be entitled to impact costs.

IV. PROOF OF CLAIM

Proof of entitlement and proof that additional costs were incurred rests solely with the Contractor. ODOT specifications require the Contractor to put ODOT on notice of each instance where the Contractor intends to file a claim. This notice requirement allows ODOT the opportunity to mitigate the claim situation and to begin to keep careful and specific records of the Contractor's activities, manpower, equipment and materials which are related to the claim.

V. CLAIM COST APPROACHES

The damages attendant to a claim are presented by Contractors utilizing various approaches.

- **Total Cost.** Total Cost = Contractor's Total Cost - Amount received for the work. This method presupposes that there are no Contractor

inefficiencies or unanticipated contractor costs. Further, it may be prepared using Blue Book or other backup.

- **Modified Total Cost.** Total Cost = Contractor's Total Cost - Amount received for the work - Contractor Inefficiencies. A little better than the Total Cost method but still not ODOT friendly.
- **Agreed Upon Unit Prices.** Uses Unit Prices agreed upon by the Contractor/ODOT. Has the limitation of not always being applicable to the situation. Good for ODOT since ODOT has fantastic data concerning unit prices.
- **Force Account.** Based on actual records and actual Contractor costs. Cumbersome to assemble and check but has a certain essential fairness built-in. Mark-ups and determination of costs defined in the Specifications.

VI. ANALYZING A CLAIM

The following step-by-step process should be used to analyze a claim.

- **Entitlement**
 - Is the claim filed timely and was ODOT given the required

notice?

- Identify the Contractor's position.
- What does the contract, plans and specifications say about it?
- What do the contract documents say?
- Determine the actual conditions giving rise to the claim.
- Identify each specific claim issue. What is the position of both sides on each issue?
- Identify responsibility. If delay related, is it excusable vs. non-excusable, compensable, or is there an issue of concurrent delay?
- Was there actually an impact?

If the analysis, to this point, does not support an entitlement, go no further.

- Damages
 - Review the Contractor's Costs
 - Compare with ODOT records
 - Analyze the Damages
 - Conclusion: Reject or recommend an appropriate settlement.

VII. ODOT APPROACH TO CLAIMS

ODOT has as a general policy a proactive approach which seeks to avoid claims in the first instance and, when claims do arise, an orderly procedure to manage the claims process and

various methods of resolution.

Claim Avoidance: Claim avoidance, at its most basic level, is accomplished by removing or lessening the factors which contribute to claims. Discussed below are some of the methods used by the Department:

- **Prequalification & Post Project Assessment of Contractors:** Qualified, capable Contractors with the resources to undertake a project can lessen the factors which lead to claims (i.e. qualified superintendents, capacity to maintain schedule, quality work). Some very good Contractors are also very astute at recognizing claim opportunities. So, qualifications alone are not a guarantee of claim avoidance.

- **Constructability Review:** The Department has instituted Constructability Reviews which occur at the District level. The review team is generally designated by the DCE. The review team will:
 - 1) Review General Notes and Special Provisions.

 - 2) Personnel should walk the project paying particular attention to:
 - Right of way encroachment or obstructions

 - Utilities

- Drainage
- Pavement or bridge condition (i.e. heaving, cracking, deterioration)
- Sediment and erosion problems and other geological features
- Stream & Stream diversions
- Railings & Signs
- Joint conditions
- Impact on signals
- Quantities

The focus of the review should be very practical.

LISTEN to the operations personnel. They know the problems.

LOOK for the obvious discrepancies in location, missing information, obstructions, conditions or quantities.

Preconstruction Conferences

The rationale of employing a thorough Pre-Construction Conference is pervasive as regards claim avoidance in that it seeks to uncover problems at a time when there is the greatest flexibility available for their solution and with the least disruption to the project. It is designed to create, for all parties, an overview of the conduct of the work and flush out any misconceptions or erroneous assumptions.

Understandings reached at meetings of this nature have resulted in improved relations and coordination of the inter-related activities by all concerned.

The pre-con meeting really is the place to establish communication, voice and discuss intentions, discuss concerns and layout the road map and rules for the conduct of the project.

A preliminary study of the project shall be made in advance of the meeting in order that the pertinent problems involved are known.

An Agenda should be used at every pre-construction conference.

CLAIM MANAGEMENT

I. THE CLAIM PROCESS

The Claim Process is a step-by-step outline of the sequence of events which occur after a condition is encountered which the contractor believes is “outside” the scope or intent of the contract. The narrative which follows describes the steps which are essential to the process:

- 1) A condition or circumstance is encountered and the Contractor ~~notifies~~ notifies the Engineer at the first responsible level of the problem. The Engineer investigates the condition or circumstance.

- 2) The Engineer analyzes the condition or circumstance and:
- The Engineer concurs with the Contractor that the problem is a change to the contract and proceeds to implement the required administrative actions.
- OR**
- The Engineer believes that, by contract, the Contractor is responsible for the solution of the problem.
- 3) In the event that the Contractor disagrees with the Engineer's decision the Contractor may notify the Engineer of his intent to file a claim (Notice) per revised Section 105.17 proposal note (Appendix Y). The Contractor must submit a projection of estimated costs and/or time either with the Notice or within 10 calendar days of the Notice.
- 4) The Engineer, upon receipt of the claim, prepares and mails within 10 days a letter acknowledging the receipt of the Contractor's claim. The acknowledgment letter should include:
- The acknowledgment.
 - Reminds the Contractor of the obligation per specification to keep specific records concerning the perceived claim.
 - The Engineer may propose to the Contractor, if he deems it appropriate, the implementation of an ADR technique

appropriate to the circumstance.

It is envisioned that during this period the Engineer will avail himself of Departmental resources including consultation and advice from the Engineer of Construction, to determine the most appropriate course of action.

- 5) In the event that ADR is suggested by the Engineer:
 - Contractor agrees to ADR and that is implemented.
 - Contractor disagrees with ADR and submits claim documentation within 60 days after all costs have been incurred.
- 6) In the event that ADR is not suggested the Contractor submits claim documentation within 60 days after all costs have been incurred.
- 1) The Engineer analyzes the Contractor's submission and responds to the claim within 60 calendar days. The response to a claim, regardless of how that decision was formulated, is always by the Engineer.
 - A rejection of the claim by the Engineer requires no specific consultation with Central Office.
 - An acceptance of all or a portion of the claim by the Engineer

should have the concurrence of the Central Office and, when applicable, FHWA shall be kept advised on those claims where they are expected to participate.

IN NO EVENT SHALL THE ENGINEER NOTIFY OR RESPOND TO A CONTRACTOR ACCEPTING A CLAIM UNTIL THIS PROCESS HAS BEEN COMPLETED.

- 8) Either an entitlement and/or dollar amount is established for the claim, in whole or in part, and the Engineer's Decision is accepted by the Contractor.

OR

The claim is rejected and the Engineer's decision is accepted by the Contractor.

OR

The Contractor rejects the Engineer's Decision and requests a review of the claim by the Director's Claim Board within 20 calendar days of the receipt of the Engineer's Decision.

- 9) If the claim review is to include a hearing then the Director's Claim Board shall notify the Contractor of the date, place and time of the hearing. The review or hearing must be held within 60 days of the time that the Board receives the Contractor's request.

10) The Director's Claim Board convenes and, when fact finding is concluded, renders a written decision to the contractor within 15 days. Either the:

- Decision is accepted and, if required, administrative actions are undertaken to implement the Decision.

OR

- The Decision is not accepted. The Contractor may bring an action in the Ohio Court of Claims.

Unless expressly agreed otherwise by the Contractor and the Board, the time from the date of the initial review or hearing by the board until a written decision is rendered shall not exceed ninety (90) calendar days.

The Board shall render a decision based on the written submission of the Contractor and the Department. However, either the Contractor may request a hearing or the Board, on its own motion, may decide to conduct one.

II. THE DIRECTOR'S CLAIM BOARD

The Claim Board has been functioning successfully for about two years. The board consists of three members:

- **Chairman**

The Chairman is a Senior ODOT manager and the sole permanent member of the Board. His duties include:

- Setting the date, time and place for the review discussion or hearing.
- Conducting the review discussion or hearing proceeding.
- Ensuring that Board decisions are written and rendered on a timely basis.
- Acting as liaison to ODOT to secure and manage such resources as the Board may require to assist in the fact finding process.
- Acting as liaison with FHWA to secure their input and participation when required.
- Acting as liaison with the contracting community and securing their participation when, at his sole discretion, such participation may be useful or desirable or both.
- Preparing a roster of District Construction Engineers to serve on the Board and designating which DCE is to participate at a particular hearing.
- Providing feedback and recommendations to the Director concerning the functioning of the Board or any other aspect of

the Administrative Claim Process.

- **Member #2**

This member shall be appointed by the Chairman from another department within ODOT. His duties shall include:

- Review of claim documentation
- Participating in hearings
- Carrying out such duties as may be assigned by the Chairman

- **Member #3.**

This member shall always be a District Construction Engineer, or his designee, from a District other than that in which the claim has originated. His duties include:

- Review of claim documentation
- Participating at hearings
- Carrying out such duties as may be assigned by the Chairman

Powers and Decisions

Each of the three Board members shall have one vote and each vote shall have an equivalent weight. A two vote majority shall constitute sufficient basis for decision. The Board, as structured, is meant to operate within the statutory limits and with powers already granted to the Director.

The action of the Board will not foreclose the Contractor's rights to bring an action in The Ohio Court of Claims.

III. ALTERNATE DISPUTE RESOLUTION

The Department has experienced an increasing use of ADR as a means of claims resolution.

The three most common ADR techniques being used are: NEGOTIATION, MEDIATION, and ARBITRATION.

- **Negotiation:** A face to face meeting or many meetings between the parties where each “makes a case” and listens to the other viewpoint. The goal of a negotiation is that each party will move towards a position that both can ultimately agree upon.
- **Mediation:** An informal, structured process in which a neutral third party, called a mediator, helps disputing parties generate and evaluate options for reaching a mutually acceptable agreement. The mediator does not have the power to impose a decision on the parties. Factors to consider:
 - Voluntary
 - Parties may select an outside facilitator
 - Wide latitude in presentation of evidence, arguments and concerns

- Private proceedings
 - Gets parties to the table fast
 - Preserves business relationships
 - Avoid litigation costs
 - Both parties must engage in good faith effort to mediate in order to be successful.
 - Disputants pay mediator
-
- **Arbitration:** Disputing parties present evidence and legal arguments to a mutually acceptable neutral third party, the arbitrator, who renders a decision, usually referred to as an award. The parties are bound by prior agreement to accept the award. For a full description of a typical procedure, refer to the AAA Construction Industry Arbitration rules. Factors to consider:
 - Less complex than traditional litigation
 - Disputants may agree to procedural and evidentiary rules, may select arbitrator and may present their positions
 - Provides for speedy decision
 - Disputants given “day in Court”

- Hearings may be private
- Confidentiality may be agreed upon
- Award is not legal precedent
- Disputants pay arbitrator

IV. IMPLEMENTING ADR

To get ADR “into action”, use the steps which follow as a guideline.

- Review the elements of the claim to identify the basic areas of disagreement. If the areas of disagreement are based on opinion and/or interpretation, then an ADR Technique may be beneficial in resolving the difference. If the areas of disagreement are focused on issues where the circumstances or documents are clear with regards to the reasons for denial of the claim, then do not delay the inevitable by introducing ADR.
- Review the claims issues with others. They may have had previous experience with similar claims.
- Select the ADR techniques most appropriate to the circumstances. Those which would seem to fit in best with the Administrative Claim Procedure are:
 - Negotiation
 - Mediation
 - Arbitration

- Suggest the use of ADR to the contractor. Since the use of an ADR technique is voluntary, the contractor must agree with both its use and the specific ADR technique used.
- An ADR technique is as binding or non-binding as the parties agree that it is.
- Memorialize the results of all ADR sessions or series of sessions.
- Salvage the agreements and keep the process “alive” as long as it’s producing results. Flexibility can be critical to a satisfactory outcome.
- The costs of ADR are normally borne equally by the parties.

DISCUSSION NOTES

SECTION 9 - CLAIMS

- I. Change on a construction project have become a common occurrence. Therefore, the ODOT manager should be prepared to manage claims like any other aspect of the project.
 - A. A claim is simply an unresolved change order.
 1. Claims are managed in the same manner as a change.
 - a) It is a change?
 - b) Who caused the change?
 - c) What are the impacts associated with the change?
 - d) What are the costs of the change?

ATTENDEE NOTES:

- B. Claims are often more difficult to settle because the parties have become entrenched in their positions.
1. Contractors often assert claims because they have either lost money on the project or not made their anticipate profit.
 2. Often contractors will asset total cost claims. They should not be accepted unless there is no other means to quantify an impact.
 - a) Nature of loss makes it impossible or highly impractical to determine with a reasonable degree of accuracy.
 - b) Assumes contractor's estimate is perfect.
 - c) Actual costs were reasonable.
 - d) Assumes the contractor has no liability for the extra cost.

ATTENDEE NOTES:

- II. The most expensive and most difficult claims usually involve delays and inefficiency.
 - A. Delay claims must be resolved by a meticulous analysis of the project schedules.
 - 1. Determine project delays based on the contemporaneous schedules.
 - 2. Assess liability for the delays.
 - 3. Delays must be categorized as excusable/non-excusable and compensable/non-compensable.
 - B. Costs associated with delays must be time related. They can include such things as:
 - 1. Extended field overhead.
 - 2. Unabsorbed home office overhead.
 - 3. Escalation of labor, materials and equipment.

ATTENDEE NOTES:

- III. Claims related to delays, changes of sequence, differing site conditions, etc. often lead to claims for reduced productivity or inefficiency.
 - A. Inefficiency claims are extremely difficult to quantify.
 - 1. A measured mile should be used where possible. This necessitates that adequate project records be maintained.
 - 2. “Industry published standards” should not be accepted at face value for the support of inefficiency claims.
 - B. Any analysis of claims for inefficiency must address actual costs related to measurable impacts.

(CLASS EXERCISE NO. 11)

ATTENDEE NOTES

IV. Claims avoidance practices are the most effective tool to reduce the incidence of claims.

A. The avoidance of claims is best effected by proper contract management practices. These include such things as:

1. Constructability reviews.
2. Prequalification of contractors.
3. Proper scheduling.
4. Prompt resolution of changes.
5. Pre-bid and pre-construction meetings.
6. Partnering.

ATTENDEE NOTES:

- V. ODOT has established a specific detailed process for the administration of claims.
 - A. The attendees are referred to the text for a detailed discussion of the ODOT claim process.
 - B. It is important to note that ODOT follows a process designed to expeditiously and fairly resolve all claims, including the use of alternative dispute resolution techniques such as:
 - 1. Negotiation.
 - 2. Mediation.
 - 3. Arbitration.

ATTENDEE NOTES:

