

SECTION 7
RIGHT OF WAY AND UTILITIES

7.01 RIGHT OF WAY INVOLVEMENT

CDOT has the responsibility for the acquisition of right of way on all federal and state projects. At times, outright acquisition (i.e. fee acquisition), permanent and/or temporary easements are necessary to accommodate certain aspects of design and construction (including MS4 requirements and utilities). The identified types of acquisition, either individually or collectively, comprise what is referred to as right of way (ROW) acquisition. Such acquisition of ROW should be fully completed before a ROW clearance can be issued to facilitate advertisement of the project. However, a conditional clearance may be granted in some limited circumstances.

It is important that the right of way acquired be sufficient for construction and needs such as clear vehicle recovery areas (clear zone), widening when future traffic volumes warrant it, and enhancements. The width of the ROW is available for each project prior to construction. The width depends on the cross-section elements of the highway, topography, land use, environmental constraints, structures and ultimate development of the area. All permanent features should be constructed within fee acquisition areas or permanent easements. Temporary easements are acquired where access is needed to an owner's (remaining) property for construction purposes, and the area within a temporary easement should be restored to its original condition after construction. Restoration is typically done by compensating the owner for the damage done to the property. However, there are instances where CDOT may make the repairs directly. Typically, permanent physical changes in the form of grade changes or permanent public improvements are not allowed within temporary easement areas.

7.01.01 Responsibilities

As part of the project development process, the Resident Engineer is responsible for:

1. Coordination with the ROW Manager and other specialty unit managers to mutually determine an acceptable advertisement date or shelf date;
2. Creation and funding of a ROW phase in SAP based upon a ROW estimate submitted by the ROW Manager;
3. Identification of preliminary survey and right of way needs at the scoping meeting;
4. Submitting a survey request to the Region Survey Coordinator;
5. Furnishing comprehensive design information such as embankment toes, structure limits, road approach design, hydraulic needs (e.g. MS4 ponds), needed replacement of utility easements, impacts to signage, etc. at the time of the Field Inspection Review (FIR);

6. Assisting the Right of Way Plans Supervisor in completing the Right of Way Plan Review (ROWPR) checklist and helping make sure that all design impacts, and associated right of way needs, are fully reflected in the ROW plans;
7. Identification of ROW impacts and necessary ROW acquisitions well in advance of the Final Office Review (FOR). If this does not occur, then significant changes to the ROW plans could become necessary at the FOR, which in turn, would necessitate updated or new valuations, new offers, or both. Major changes at, or following, the FOR often require that the project schedule be adjusted to accommodate the unforeseen acquisition of additional right of way. Post-FOR changes are discouraged, since they often adversely affect and delay the right of way clearance.
8. Coordination of all IGAs or Maintenance Agreements. All of these agreements should be finalized and fully executed prior to requesting ROW clearance.

The Right of Way project development process can be divided into various categories or work activities. The following overview is provided to assist in visualizing the process that takes place during a project that involves ROW acquisition of private properties for public purposes.

NOTE: The right of way phase must be budgeted, obligated, and funded in SAP before right of way charges can be incurred. Before a right of way phase can be created, an estimate of ROW costs needs to be entered by the ROW Manager.

7.01.02 Environmental Elements

1. Public involvement.
2. When an Environmental Assessment (EA) or Environmental Impact Statement (EIS) is prepared, ROW is often asked to estimate the cost of ROW acquisition and to identify the number and type of business and residential relocations.
3. Environmental clearance by either: (a) Form 128 clearance for categorical exclusions; (b) FONSI (Finding of No Significant Impact) for Environmental Assessments; or (c) Record of Decision for Environmental Impact Statements.
4. 4(f) and 6(f) resources: These are certain historic and park resources which cannot be impacted unless an appropriate study concludes that there is no reasonable and prudent alternative but to impact the resource. Mitigation is required under 6(f), but not 4(f). Impacts to these types of resources can significantly increase the time required to acquire ROW, as environmental clearance is needed before the ROW acquisition can begin.
5. Hazmat investigation: Phase I in all cases and Phase II as necessary.

7.01.03 Field Survey and ROW Plans

1. Conduct a pre-survey conference.

2. Prepare field survey, establish control, prepare topography studies, and identify structures.
3. Obtain title research to identify existing ownerships and easements.
4. Prepare ownership mapping.
5. Prepare ROW plans that depict intended right of way acquisitions:
 - a. Procure copies of recorded easement documents identified in the title research.
 - b. Determine existence and impact of utility easements and agreements.
 - c. Determine if existing utilities need to be relocated.
 - d. Review easements of record still in existence on property to be acquired.
6. Consider advertising devices:
 - a. All signs on the project will be inventoried and indicated on all plan sheets
 - b. Signs in fee acquisition areas must be acquired as a part of the right of way process.
7. Consider access control:
 - a. Coordinate with Region Access Coordinator.
 - b. Determine if access control is required, and, if so, where.
 - c. Identify existing and new access points on all plans.
8. Determine location of necessary easements.
9. Determine purpose and nature of easement for:
 - a. Toes of slopes;
 - b. Drainage and MS4 requirements;
 - c. Utilities; and
 - d. Driveway construction or reconstruction.
10. Determine possible relocations and uneconomic remnants.
11. Hold a Right of Way Plans Review. On projects requiring acquisition of right of way or easements, the Region Right of Way Manager shall hold a Right of Way Plans Review as deemed necessary to determine that the proposed right of way and easement limits are sufficient to construct and maintain the project. The Review is done immediately preceding authorization to appraise and acquire. The meeting shall be held with the Resident Engineer and the following:
 - a. Design Project Manager,
 - b. Region Utilities Engineer,
 - c. Environmental Project Manager,
 - d. Region Access Manager,
 - e. Region ROW Plans Supervisor,
 - f. ROW Plans Project Manager,
 - g. Region Survey Coordinator,
 - h. ROW Acquisition Supervisor,
 - i. ROW Acquisition Agent,
 - j. Property Appraiser and
 - k. Review Appraiser.

12. The Region Right of Way Manager or Survey Coordinator shall determine whether the right of way plans are sufficiently complete in accordance with the Right of Way Plans Review Guidelines:
 - a. Right of way plans shall not be submitted for authorization until after the Right of Way Plans Review has been conducted and all parties agree as to the right of way to be acquired.
 - b. After a project has been authorized for appraisal and acquisition, design revisions that affect right of way will not be considered for approval by ROW Services until the revision has been justified by the office initiating the revision and concurrence has been received from the Resident Engineer, Region Survey Coordinator or the Region Right of Way Manager, and the Region Program Engineer.
 - c. While sometimes unavoidable, design revisions which necessitate changes to the ROW plans often lead to scheduling impacts and can result in advertisement date revisions or unnecessary requests for conditional right of way clearances.
13. Prepare engineer's estimate for ROW acquisition and relocation
14. Obtain verification of environmental clearance and obtain ROW plan authorization
15. Prepare control diagrams for field construction.
16. File ROW plans with the County.
17. Monument the new ROW boundaries in the field.

7.01.04 Authorization of Right of Way Projects

1. Requirements for project authorization:

The Region Program Engineer is responsible for the obligation of right of way funds and establishing the spending authority under Function 3114. The following steps must be completed before authorization can proceed to the acquisition or relocation stage under Functions 3111 or 3109. Steps include:

 - a. Environmental clearance;
 - b. Field Inspection Review held by Region;
 - c. Preparation of right of way plans and descriptions;
 - d. Right of Way Plan review;
 - e. Hardship parcels (H-Parcels) approved by FHWA;
 - f. Acquisition Stage Relocation Plan prepared (7-b Study); and
 - g. Sufficient funds obligated by the Region.
2. Issuance of Form 462: After the steps in a, have been met, the Right of Way Program in Project Development shall issue a Form 462, Right of Way Plan Approval, authorizing the entire project for Functions 3111, Function 3109, or both as applicable.

7.01.05 Value Findings and Appraisals

1. Value findings (Waiver Valuations) are prepared by a right of way agent for right of way purchases valued up to \$10,000 and in certain limited circumstances, up to \$25,000.
2. Appraisals prepared by a CDOT qualified appraiser are required for acquisitions over \$10,000 and complicated acquisitions under \$10,000. In certain limited circumstances, a value finding may be substituted for an appraisal, for compensations up to \$25,000.
3. Appraisal requirements apply to both CDOT and the owner's appraisals.
4. The Owner is notified of the statutory right to obtain a second appraisal. The first appraisal is CDOT's appraisal and the second appraisal is the owner's appraisal that will be paid for by CDOT.
5. The Owner may accompany CDOT's appraiser on inspection.
6. CDOT reviews and approves of CDOT's appraisal.
7. CDOT review appraiser issues a determination of Fair Market Value (FMV).
8. CDOT reviews the owner's appraisal.
9. CDOT Issues an amended determination of Fair Market Value, if warranted.

7.01.06 Acquisition Process for Parcels and Easements

1. CDOT will make a prompt written offer to the Landowner. The amount of the offer shall not be less than:
 - a. CDOT's review appraiser's determination of Fair Market Value; or
 - b. CDOT's Value Finding determination.
2. Good faith negotiations begin and require a minimum of 30 days to complete.
3. Last written offer made, then the property owner must be afforded a minimum of 10 days to review it.
4. Final offer of settlement is made and requires a minimum of 10 days for the property owner's review.
5. Memorandum of Agreement - Any commitments to the property owners must be established in a written Memorandum of Agreement and be communicated to the Resident Engineer for inclusion in the plans. The ROW agent and the construction project engineer in the Residency should coordinate with each other so that the project engineer is fully aware of any commitments made to property owners, such as fence-type gates, excess dirt, or moving a tree.
6. Permits must be obtained by property owners for all new accesses and changes to existing accesses made by the property owner.
7. Administrative settlement: This is any settlement in excess of CDOT's approved estimate of compensation (FMV), reached prior to filing a parcel for a condemnation proceeding.

8. Owner retention of improvements: CDOT acquires all realty within a required right of way. Upon request by an owner, at CDOT's discretion, it may permit an owner to retain improvements they made that were acquired at CDOT's determined salvage value.
9. Payment: Payment must be received either by the property owner, escrow agent or the Court for legal possession to be obtained (see number 12 below).
10. Summary statement of elements of compensation: This is a written statement of the amount established by CDOT as just compensation, summarizing the basis of the acquisition offer. The statement must set forth adequate information so that an owner can make a reasonable judgment concerning the amount of the offer.
11. Condemnation – filed by the Attorney General's Office – can take a couple weeks up to three months for an Immediate Possession hearing to be scheduled;
12. Hearing for Immediate Possession – this short hearing (1/2 day or less) is the acquiring party's opportunity to provide a valid public transportation purpose for acquisition of the property rights sought. This hearing almost always results in the acquiring entity winning "immediate possession" of the needed property rights. Very often, the property owners have a higher opinion as to the value of their property. The subsequent valuation trial is the place for the value to be argued and decided by the Court or jury. After the immediate possession hearing, the full amount offered for the property that was in escrow with the Court is available to the property owner;
13. Valuation Trial – while almost all filed condemnation cases are resolved in a settlement reached after the Immediate Possession hearing, cases that remain unresolved go to a valuation trial. Scheduled months after the immediate possession hearing, the valuation trial process can go on for months or years; and
14. Legal Settlement: This is any settlement in excess of CDOT's approved estimate of compensation (FMV), reached by the legal representative (attorney) to CDOT after a condemnation action is filed with the court as noted in number 12 above.

7.01.07 Relocation

1. Region Right of Way Unit will complete an Acquisition Stage Relocation Plan. Completion of this plan is required before FMV's can be approved by the Region Transportation Director or his authorized designee (e.g. Region ROW Manager).
2. Region Right of Way Unit will meet with property owners and tenants to explain the relocation program.
3. Notices to vacate are issued: Initial 90-day notice issued at the same time as the offer to acquire the real estate interests and the final 30-day notice to vacate is issued as of closing or upon obtaining possession.
4. Region Right of Way Unit will inspect the area being acquired (property), inventory personal property to be moved, and present relocation benefit eligibility.

Region Right of Way personnel will discuss issues such as estimate of property and replacement costs with affected landowners and tenants.

5. Advisory services assistance: Region Right of Way Unit will assist displaced property owners and tenants in obtaining alternate facilities.
6. Region Right of Way Unit will provide applicable relocation benefits to displacee and arrange for moving all personal property from any land acquisition or easement.

7.01.08 Property Management

1. Environmental inspection and abatement.
2. Demolition, if not performed by CDOT's contractor.

7.01.09 Project Management

1. All federal-aid projects must meet the requirements of Title 23, United States Code, and the FHWA must review and approve selected state actions on federal-aid projects. This includes actions related to: public hearings; relocation assistance; right of way acquisition; and plans, specifications, and estimates. For CDOT to be reimbursed for eligible project costs by the FHWA, certain requirements must be met. Reimbursement for eligible project costs is based on the requirements set forth in the "Uniform Act." Title II and Title III of the Act contain the requirements with which the acquiring agency must comply.

7.01.10 Right of Way Clearance of Projects for Construction

1. Before any federal-aid project can be advertised for construction, the Federal Highway Administration requires a letter certifying that all right of way has been acquired and relocation carried out. All exceptions must be stated along with what action is being carried out to clear the project and a conditional ROW specification must be included in the bid package.
2. On all projects under the jurisdiction of CDOT procedures, all non-conditional clearance letters will be presented in writing by the Region Right of Way Manager to the Resident Engineer with a copy to the Federal Highway Administration and the Right of Way Program in Project Development. Conditional Right of Way clearances shall be written by the Region Right of Way Manager, but require the approval of the CDOT Project Development Branch Manager. For right of way clearance on all local agency projects, the Region must receive a certification clearance letter from the local public agency and forward it to Right of Way Program Manager in Project Development. The Region must monitor the acquisition process in sufficient depth to ensure that all applicable state and federal laws, rules, and regulations were adhered to by the local public agency. After all the necessary documentation has been received,

the Region Right of Way Manager will issue a clearance letter under the certification acceptance procedure.

3. CDOT has overall responsibility for the acquisition, management, and disposal of real property on federal-aid projects. This responsibility includes assuring that acquisitions and disposals by CDOT are made in compliance with state and federal laws and regulations.
4. CDOT has the authority to enter into written agreements with other state, county, municipal, or local public land acquisition organizations or with private consultants to carry out federal regulations. The organizations, firms, or individuals must comply with the policies and practices of CDOT. CDOT is required by federal regulations to monitor real property acquisition activities to assure compliance with state and federal law. CDOT is also responsible for informing these organizations of all such requirements and for imposing sanctions in cases of material non-compliance.

Additional References:

1. CFR 23, Part 710.201 through 713.308, Right of Way issues
2. CDOT Right of Way Operations Manual
3. Federal-aid Policy Guide
4. FHWA Right of Way Project Development Guide
5. Fifth Amendment, U.S. Constitution
6. ASTM E1527 – 05 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process
7. ASTM E1903 – 11 Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process
8. For forms, see CDOT on-line forms library
<http://www.coloradodot.info/library/forms>

7.02 PERMITS REQUIRED TO WORK ON GOVERNMENT LAND

Permits or other agreements are required whenever the Department or a Contractor is required to do work outside the right of way or easement area that has been previously obtained from other government entities. Permit areas include property owned or under the authority of the United States Bureau of Land Management, United States Forest Service, United States Bureau of Indian Affairs, United States Bureau of Reclamation, the National Parks Service, the State of Colorado Board of Land Commissioners, the State Division of Wildlife, and State Division of Parks and Outdoor Recreation. Property owned by other state agencies such as the Department of Corrections, Department of Institutions, Department of Military Affairs, or State Patrol, is usually handled by the Division of State Buildings in the Department of General Support Services.

For highway construction work to be performed on property that is owned by any of the above-referenced agencies, the agreement of that agency by special use permit, easement, or other document is required. The Resident Engineer, through the Region Right of Way Manager and the Right of Way Program in Project Development, will apply for the required document from the pertinent agency after considering that agency's concerns and expectations. The agency may issue the permit or easement, turn down the request, or ask that it be revised.

The above-referenced agencies require their approval, by special use permit, highway easement deed, property grant, or other document before any work related to construction can begin; this includes environmental clearances, utility relocations, surveying, and related work. Requirements, roles, authorities, planning, coordination, etc. for federal lands (Bureau of Land Management and Forest Service) are described in a memorandum of understanding titled "Memorandum of Understanding Related to Activities Affecting the State Transportation System and Public Lands in the State of Colorado." A current copy can be obtained from the Environmental Programs office in the Project Development Branch.

The Resident Engineer is responsible for initiating and coordinating with the Region Right of Way Manager, and either the Region Utility Engineer, the Region Planning/ Environmental Manager, or both, when applicable, to provide the necessary information to obtain the special use permit, highway easement deed, grant, or other document. The Region Right of Way Manager is responsible for securing the right of way clearances and submitting the necessary information to the Right of Way Program in Project Development to make application for access to state and federal lands.

Necessary information includes the plans, appraisals, and right of way acquisition documents.

7.02.01 SPECIAL USE PERMITS

7.02.01.01 State of Colorado Land (Land Board)

Right of Way Program personnel in Project Development make the application directly to the State Board of Land Commissioners, which includes the following material:

1. State Land Board application form
2. Half-sized plan sheet showing the State Land Board parcels
3. The determination of fair market value and value finding (or appraisal)
4. Legal description of the parcels including a copy in electronic format

7.02.02 BUREAU OF LAND MANAGEMENT, FOREST SERVICE, OR OTHER FEDERAL PROPERTY

Right of way plan sheets upon which the parcels and easements to be acquired are highlighted or crosshatched are prepared by the Region Survey Coordinator. The Right of Way Program in Project Development uses these maps to prepare the following:

1. The application to FHWA, which is reviewed and then forwarded to the agency that owns the property.
2. The Highway Easement Deed with stipulations, which is forwarded for the signatures of the Chief Engineer and Chief Clerk before being submitted to FHWA for final execution.

The Region Right of Way Manager clears the right of way for construction following the issuance of the letter of consent by the owner or agency.

Please refer to the most recent Interagency Agreements between CDOT, FHWA, USFS, and BLM which outlines the roles and responsibilities of each agency in the process described above.

Additional References:

1. 23 CFR 660A, Special Programs, Forest Highways
2. CDOT *ROW Manual*, Chapter 2
3. CDOT Survey Manual
4. Memorandum of Understanding, United States Forest Service and Bureau of Land Management, August-September 1995
5. CRS 38-50-101 ff, Survey Plats and Monument Records – General Provisions
6. CRS 38-51-101 ff, Survey Plats and Monument Records - Minimum Standards for Land Surveys and Plats
7. CRS 38-52-101 ff, Survey Plats and Monument Records - Colorado Coordinate System

7.03 UTILITY INVOLVEMENT

CDOT has established procedures for coordinating with utility companies when utilities may be impacted by a project. Numerous conditions result in the need to relocate utilities or coordinate construction around utilities, such as:

1. A utility may conflict with proposed construction.
2. Road construction may provide a convenient opportunity to place new utilities or upgrade existing ones.
3. Existing unsafe or hazardous conditions may easily and economically be mitigated during construction.
4. Certain non-aesthetic visual impacts may be replaced with a more acceptable solution.

A utility is a private or publicly owned line, facility or system for producing, transmitting, or distributing communications, cable television, power, electricity, light, heat, gas, oil, crude products, water, steam, waste, stormwater not connected with highway drainage, or any other similar type of commodity which directly or indirectly serves the public [23 CFR Part 645.105 Utility Relocations, Adjustments, and Reimbursement, Definitions].

CRS 38-5-101, Eminent Domain Act; CRS 43-1-225, Transportation Act; and other state laws and Constitutional provisions give utilities the right to construct their lines within highway right of way, provided they meet CDOT's established criteria (see 2CCR 601-18 *CDOT Utility Accommodation Code*). As a result, many utilities are located adjacent to or within the highway right of way. Relocation or modification of such utilities to facilitate construction is normally accomplished at the utilities' expense unless the utility has a property interest in their current location. Pursuant to 43-1-225(2)(b), C.R.S.: "The cost of relocating utility facilities owned by any governmental subdivision of the state of Colorado or abutting landowner on the federal-aid primary or secondary or secondary systems or on the interstate system, including extensions thereof within urban areas, shall be a cost of highway construction."

Prior to advertisement of any construction project, the Region Utility Engineer must issue a Utility Clearance in accordance with 23 CFR Part 635.309(b), Physical Construction Authorization. This clearance certifies that all conflicts with the utility companies involved with the project have been addressed in the Plans, Specifications and Estimate package or satisfactorily resolved.

The utility clearance letter is directed to the Federal Highway Administration (FHWA) on projects with FHWA oversight. On projects where CDOT has oversight, the clearance letter is directed to the Resident Engineer.

The Region Utility Engineer is the liaison between the Resident Engineer and all utilities affected by the project.

The Region Utility Engineer's duties include, but are not limited to:

1. Identifying, verifying, and locating known utilities within project limits.
2. Identifying and verifying utility conflicts.
3. Coordinating necessary utility relocations.
4. Negotiating necessary utility agreements and permits.
5. Drafting project utility specifications.
6. Issuing project utility clearance.
7. Processing utility billings.

The Resident Engineer is responsible to:

1. Ensure that existing utility lines and any utility relocation requirements are accurately shown and identified in the Plans, Specifications, and Estimate package.
2. In consultation with the Region Utility Engineer, make further investigations as needed to verify utility conflicts.
3. Ensure that any utility involvement, including utility phases of work (see below) is properly scoped, programmed, budgeted, and authorized.

The Headquarters Utility Unit in the Safety and Traffic Engineering Branch does the following:

1. Advises the Resident Engineer or Region Utility Engineer on utility issues.
2. Assists with developing or processing utility agreements.
3. Assists with obtaining utilities authorizations as needed.

Utilities phase authorization (function 3988) is required prior to incurring costs on any utility relocation work for which the utility owner will be directly reimbursed out of federal-aid project funds. The region must initiate the authorization process by indicating a phase start date and estimated phase costs in the budgeting data system. The Office of Financial Management and Budget (OFMB) will compile this data in its Quarterly Obligation Plan, which it then submits to FHWA for phase authorization approval. To obtain timely authorization, the Region must meet the submission deadlines specified by OFMB.

Agreements for utility services to the project site, such as water and sewer to a rest area, or electric power to a lighting system, are treated as construction, rather than utility phase costs, and therefore do not require utility phase authorization.

Utility phase authorization is also not required for utility work that will be performed by the Contractor on the utility owner's behalf, or coordinated through that Contractor by means of a plan force account item. In either case, such expenses are treated as construction phase costs.

Utility relocations at project expense will be documented by:

1. A Form 690, Standard Utility Agreement, if the owner has or will have performed the work and be reimbursed by CDOT; or
2. A Form 691, Contractor Adjusted Utility Agreement, if the work will be incorporated into the highway contract and performed by CDOT's Contractor on the utility owner's behalf.

For non-reimbursable utility relocations, CDOT and the utility owner should execute a letter of understanding for the agreed-upon work, the timeframe for completion, coordination requirements, and the utility's responsibility for costs.

In some instances, CDOT and the utility owner may find it to be more efficient or economical to have utility work that is the owner's responsibility (cost) incorporated into the highway contract and performed by the Contractor. In such cases, CDOT and the owner may enter an agreement for CDOT to perform the work and for the owner to reimburse the project.

A Form 333, Utility Permit, or a Form 1284, Utility Relocation Permit, shall be issued to cover all relocation work. The permit may incorporate any related agreement and shall include all necessary terms and conditions for the utility work to be accomplished at a time convenient to and in coordination with the highway project.

The utility clearance letter should include, at a minimum:

1. A list of involved utilities
2. Whether the work will be performed at project expense
3. If at project expense, type of agreement and estimated cost
4. Contract force account work if any
5. Utility specification attached, when required

Utility clearance activities include:

1. The Region Utilities Engineer attends the scoping meeting to assess the potential for utility involvement.
2. The Region Utilities Engineer investigates and identifies all utility owners that have facilities within the project limits.

3. After the preliminary Form 463, Design Data, has been issued, the Region Utility Engineer contacts the utility owners for base maps or other information on existing utilities.
4. The Resident Engineer plots existing utilities as accurately as possible onto preliminary plans, using base maps, survey utility locates as marked in the field, or other available data. Subsurface utility engineering techniques, such as electromagnetic detection methods, should be used to verify or supplement base map data for buried utility lines.
5. The Region Utilities Engineer furnishes preliminary plans to utility owners and conducts a Utility Field Inspection Review, in coordination with the project Field Inspection Review, to verify existing utility lines and identify potential conflicts.
6. If necessary to verify conflict or to develop relocation requirements, the Region Utilities Engineer and Resident Engineer will arrange further investigations, such as pot holing. At critical locations, subsurface utility engineering techniques such as non-destructive vacuum excavation methods should be used to visually identify and determine the precise horizontal and vertical location of buried utility lines.
7. The Resident Engineer incorporates all necessary relocation details into the final project plans.
8. If the utility must relocate, the Region Utilities Engineer determines the eligibility of reimbursement based on state or federal laws or regulations, in consultation with Statewide Utilities Engineer as needed.
9. The Region Utilities Engineer negotiates the Standard Utility Agreement, Contractor-Adjusted Utility Agreement, or other form of agreement as may be necessary to cover the utility work. The Region Utilities Engineer transmits agreements requiring approval by the Chief Engineer, Attorney General, Controller, or a combination thereof to Headquarters Utilities unit for review and further processing.
10. The CDOT Headquarters Utilities unit verifies utility phase authorization status as necessary, assembles the executed agreement packages, issues the Notice to Proceed and distributes the executed agreement packages after Headquarters Procurement reviews the agreement for compliance, and routes the agreement for approval of the Chief Engineer and CDOT Controller.
11. The Region Utilities Engineer obtains the utility's concurrence on all non-reimbursable utility relocation requirements.
12. The Region Utilities Engineer furnishes the FHWA, the Resident Engineer, or both with utility clearance and specification, and coordinates any necessary utility permits as outlined earlier in this section.

Additional References:

1. AASHTO Policy on Geometric Design of Highways and Streets
2. AASHTO Guide for Accommodating Utilities within Highway Right of Way
3. AASHTO Policy on the Accommodation of Utilities Within Freeway Right-of-Way
4. AASHTO Roadside Design Guide
5. Program Guide, Relocation and Accommodation on Federal-Aid Highway Projects, Sixth Edition, January 2003
6. *Highway/Utility Guide*, Publication No. FHWA-SA-93-049, June 1993
7. USC 23 Section 109(l), Standards; Section 111, *Agreements Relating to Use of and Access to Rights-of-Way - Interstate System*; Section 123, Relocation of Utility Facilities
8. CDOT Policy Directive 390.0, Accommodation of Utilities Within State Highway System ROW
9. CDOT Procedural Directive 512.1, Project Scoping and the Design Scoping Review (DSR)
10. CFR 23 Part 635C, Physical Construction Authorization
11. CDOT Utility Code
12. See <http://www.coloradodot.info/business/permits/utilitiesspecialuse> for current forms

7.04 RAILROAD INVOLVEMENT

This section prescribes procedures for advancing projects involving work on railroad facilities by CDOT contractors or railroad forces.

Work within the railroad right of way, whether by CDOT personnel or by a CDOT contractor involves the following preliminary steps:

1. As early in the process as possible, contact the Railroad Program Manager (RPM) and get his input and guidance on the project requirements. The RPM will coordinate with the Resident Engineer to develop solutions for expected, and unexpected, railroad issues. Both Union Pacific and BNSF have requested that they not be contacted directly by project personnel without prior permission being given. While this may seem like an inconvenience, it generally results in a smoother process since the RPM has additional resources and information to facilitate the project and generally has a good relationship with the railroad.
2. The RPM will advise the railroad of the pending project and provide them with copies of the planned work at the design level plan stage. The railroad will charge for plan review services.

NOTE: Plan review services and/or preliminary engineering services are initiated via a Task Order issued under the terms of the master agreement with the railroad. Once the RPM is advised that such services are needed, he will begin the process of acquiring the necessary paperwork for the Task Order. The Resident Engineer will be required to prepare a Purchase Requisition for the amount of the PE (usually \$20,000.00) and have it ready by the time the Task Order is ready for processing by HQ Purchasing.

3. For soil sampling, maintenance, demolition, or construction the railroad will require the appropriate right of entry documentation along with corresponding fees. Proof of insurance, whether for CDOT or a Contractor will also be required (see note below). It is not uncommon for railroad-specific insurance to be a required purchase even though CDOT is self-insured. Most of the contact information for the two main Class 1 railroads in Colorado will be available on their websites. It is very important that the Resident Engineer do the research necessary to acquire the needed documents. If railroad specific insurance must be purchased, the Resident Engineer will be required to prepare a Purchase Requisition for the required amount to be issued a check to send in with the required documents before the railroad will grant a right of entry.

NOTE: Documentation for CDOT self-insurance can be obtained through HQ Risk Management – they are familiar with the railroad requirements.

When the Contractor is required to perform work on railroad facilities or within the railroad company's right of way, the Contractor must obtain a right of entry from the railroad which includes obtaining railroad-highway insurance protection for the Contractor's operations on behalf of the railroad company, as stipulated in the railroad

agreement. The railroad company shall also be contacted for work on grade-separated crossings of railroad right of way or work that encroaches upon the railroad's right of way.

An agreement between the railroad and the state is usually required on all projects that will alter an existing railroad facility or that will encroach on railroad right of way.

When a highway project involves work on railroad property or a railroad crossing, the following documentation and procedures are usually necessary:

1. The Resident Engineer holds a field diagnostic meeting to describe the proposed work and identify the impacts to the railroad. All appropriate agencies need to attend, e.g. CDOT design, railroad track foreman, signal foreman, etc. The railroad will develop a cost estimate for any required work by the railroad, including estimating the cost of required railroad flagging.
2. The Resident Engineer develops project plans that depict and describe any railroad encroachments, defines construction responsibilities between railroad and highway, and submits plans for acceptance by the railroad through the RPM.
3. If the railroad-highway agency agreement will provide for direct reimbursement of any costs to the railroad from federal-aid highway funds, the Resident Engineer will coordinate with the RPM to obtain federal authorization (function 3987).
NOTE: this process is seldom used.
4. The RPM prepares and negotiates a draft agreement and ultimately submits the final agreement, including a railroad estimate, for approval by the railroad. The executed agreement is signed by all involved parties before being approved by the Controller.
5. The RPM prepares and submits a Public Utilities Commission application when required, such as at-grade railroad crossings and overpasses or underpasses. The application is not necessary for minor railroad encroachments that do not alter the crossing, i.e., bridge overlays. For local agency projects, that entity is responsible for this activity.
6. The plans and specifications need to detail all the requirements of the Contractor related to the railroad work, e.g. coordinate railroad flagging and obtaining a Contractor's Right-of-Entry from the railroad. The Right-of-Entry requires the Contractor to provide proof of Public Liability and Property Damage Insurance for itself and for any subcontractors. The Contractor shall also obtain Railroad's Protective Liability and Property Damage Insurance on behalf of the railroad. Evidence of the coverage shall be furnished to CDOT and to the railroad.

If there are charges during construction for which the project will be billed by the railroad, the appropriate arrangements should be made with the Region business office to do so expeditiously. Late payment of railroad billings will incur additional costs, such as late payment fees and may result in delayed processing of other paperwork by the

railroad. The business office should pay all invoices as quickly as possible to avoid late fees. There have been instances where unpaid invoices in one Region impacted the approval of projects in another Region.

Railroad flagging requirements, for both preconstruction and construction phases, are complex. Please contact the CDOT Railroad Program Coordinator for the current estimated rate, documentation, and scheduling procedures.

NOTES:

1. Early coordination with the railroad company and with the RPM is critical since it may take up to a year or more to obtain clearances and a written agreement.
2. Projects which have undergone railroad plan review and then are later “shelved” should NOT be assumed to be ready for AD just because the plans were reviewed and approved. Typically a second review process by the railroad is required to verify that no changes were made.
3. Very often, especially in rural areas, the railroad will have existing signal lines attached to poles adjacent to the tracks. When these lines follow the tracks under a highway structure the demolition of the structure will require the lines be either moved or buried prior to the commencement of work. This will require scheduling by the railroad and can take as long as 18 months to accomplish. Recognition of this situation is therefore of prime importance.
4. For projects that eliminate an at-grade crossing, the railroad may be required to pay 5% of the theoretical structure. The Resident Engineer should work with the RPM on when this should be pursued with the railroads.

7.04.01 DRAINAGE PROJECT SPECIAL NOTE:

For projects that affect drainage upstream from a railroad, there are special requirements:

1. The railroad should be notified as early as possible (scoping phase);
2. The hydraulics report should include, at a minimum, cross-referenced locations, i.e., both highway and railroad mileposts, etc. The RPM can work with Hydraulics to provide this information.
3. The hydraulics report should also assess and evaluate downstream (i.e., railroad) flow impacts – if no material flow changes are expected it should clearly state this.

Additional References:

1. 23 CFR Part 140I, Reimbursement for Railroad Work; Part 646A Railroad-Highway Insurance Protection, and Part 646B, Railroad-Highway Projects
2. FHWA Railroad - Highway Grade Crossing Handbook
3. Joint BNSF/UP Guidelines for Grade Separation Projects