



MANUAL TRANSMITTAL

Department of the Treasury
Internal Revenue Service

4.48.1

SEPTEMBER 23, 2020

EFFECTIVE DATE

(09-23-2020)

PURPOSE

- (1) This transmits revised IRM 4.48.1, Engineering Specialty, Overview of Engineering Program.

MATERIAL CHANGES

- (1) Rewrote IRM 4.48.1.1 to conform to new requirement to include internal control information at the beginning of the IRM.
- a. Changed title to Program Scope and Objectives
 - b. Added new paragraphs (3) through (6) to describe audience, policy owner, program owner and primary stakeholders.
 - c. Rearranged and added material previously under “Areas of Expertise” to IRM 4.48.1.1.1, Background.
 - d. Added new sub-sections IRM 4.48.1.1.2 through IRM 4.48.1.1.6 to include “Authority,” “Roles and Responsibilities,” “Program Objectives and Review,” “Acronyms,” and “Related Resources.”
- (2) Significant changes are summarized in the following table:

IRM Cite	Title	Description
4.48.1.1.3	Roles and Responsibilities	Updated material on the Engineering Program organization.
4.48.1.1.3.4	Role of the Engineering Team Manager	Updated roles and responsibilities
4.48.1.1.3.4	Role of the Engineering Team Manager	Added new material on LB&I Examination Process.
4.48.1.1.3.5	Role of the Engineering Specialist	Updated roles and responsibilities
4.48.1.1.6	Related Resources	Added link to Engineering website here and throughout.
4.48.1.2	Referrals - Requests for Engineering and Valuation Services	Updated criteria for requesting engineer assistance and requesting MITRE and National Office Art Appraisal Services.
4.48.1.2	Referrals - Requests for Engineering and Valuation Services	Revised engineering consultation process to allow up to 5 days to be charged directly to an issue in IMS.
4.48.1.4	Workpapers	Updated material
4.48.1.7	Training	Updated material and removed Exhibits 4.48.1-4 through 4.48.1-7. Removed material on manager training.

- (3) Editorial corrections made throughout.

EFFECT ON OTHER DOCUMENTS

IRM 4.48.1 dated May 1, 2006 is superseded.

AUDIENCE

All IRS employees who request engineering services.

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4.48.1

Overview of Engineering Program

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4.48.1.1
(09-23-2020)
Program Scope and Objectives

- (1) This IRM provides an overview of the responsibilities that Engineering Program employees should understand and apply in the performance of their duties. The primary objective of the IRS Engineering Program is to support the mission of the IRS and LB&I.
- (2) IRS engineers provide professional and accurate development of issues as well as efficient and effective resolutions to more complex engineering and valuation issues. Engineers provide expertise to issues encountered in all types of tax returns. The Engineering Program is committed to providing trained, knowledgeable and effective members to the examination team. The Engineering Program also has a key role in the Outside Expert Program.
- (3) **Audience:** All IRS employees who request engineering services. Engineers support all IRS organizations that examine tax returns and provide direct support to non-examination organizations, such as Appeals, Counsel, Criminal Investigation, Collection and the Department of Justice.
- (4) **Policy Owner:** Director, Eastern Compliance Practice Area
- (5) **Program Owner:** Director of Field Operations (DFO), Engineering

4.48.1.1.1
(09-23-2020)
Background

- (1) Engineering services are available in several areas of expertise, including staff with advanced degrees, professional designations, and state certifications/licenses. The following is a list of engineering specialists working in the Engineering Program:

- General Engineer (GS-0801)
- Mining Engineer (GS-0880)
- Petroleum Engineer (GS-0881)
- Industrial Engineer (GS-0896)
- Internal Revenue Agent Valuation Specialist (GS-0512)
- Financial Analyst/Intangible Property Appraiser (GS-1160)
- Real Property Appraiser (GS-1171)
- Personal Property Appraiser (GS-1171)

All of the above specialists are hereafter referred to as “engineers” or “engineering specialists”.

- (2) The Engineering Program typically provides expertise to local geographic compliance practice areas; however, engineers with specialized issue training may assist other geographic practice areas. Engineering issues include:
 - Depletion
 - Depreciation (cost segregation, bonus depreciation)
 - Amortization
 - Research expenditures
 - Casualty loss
 - Capital v. expense
 - Capital v. repairs
 - Capital gains/losses
 - Energy efficient commercial building deduction
 - Valuation issues (real property, intangibles and business)
 - Tax credits (such as research, orphan drug, energy, qualifying advanced energy project, enhanced oil recovery, railroad, etc.)
 - Functional analysis related to transfer pricing
 - Other technical issues

4.48.1.1.2
(09-23-2020)
Authority

- (1) By law, the Service has the authority to conduct examinations under Title 26, Internal Revenue Code, Subtitle F – Procedure and Administration, Chapter 78, Discovery of Liability and Enforcement of Title, Subchapter A, Examination and Inspection, which includes, but is not limited to, the following IRC sections:

- IRC 7602, Examination of books and witnesses
- IRC 7605, Time and place of examination

For additional information see IRM 4.10, Examination of Returns, and IRM 4.46, LB&I Examination Process

4.48.1.1.3
(09-23-2020)
Roles and Responsibilities

- (1) The Engineering Program consists of a director of field operations (DFO), Engineering, territory managers, program analysts, team managers and teams. The DFO, Engineering reports to the Eastern Compliance Practice Area director. The engineering teams are located across the United States. See the LB&I organization chart: https://irssource.web.irs.gov/LBI/Documents/LBI_Org_Chart.pdf.

4.48.1.1.3.1
(09-23-2020)
Role of the Director of Field Operations, Engineering

- (1) The DFO, Engineering provides management oversight on all aspects of the Engineering Program, including budget and staffing.

- (2) The DFO, Engineering ensures that the program addresses:

- Policy and legislative changes
- Uniform and consistent treatment of issues
- Timely and professional technical assistance
- Trends and developing issues

- (3) Management of the Engineering Program includes:

- Determining budget, staffing, and training
- Developing measures to gauge and monitor program effectiveness
- Monitoring management information systems
- Conducting program visits to territories
- Coordinating national projects
- Developing and recommending referral criteria
- Developing position descriptions
- Maintaining a directory of Engineering personnel and related expertise

- (4) The DFO, Engineering oversees design and delivery of engineering training. Training in the Engineering Program includes Continuing Professional Education (CPE), Recruit Training and Out-service Training.

- (5) The DFO, Engineering provides oversight by:

- Issuing guidelines and procedures
- Assisting territories in achieving uniform program direction
- Providing technical and administrative assistance when necessary
- Resolving differences between territories
- Resolving differences between Engineering and other divisions
- Providing liaison between field and national functions

- (6) The DFO, Engineering communicates directly with Engineering territory managers and Engineer team managers when necessary.

- (7) The DFO, Engineering represents the Engineering Program to the Eastern Compliance Practice Area director by:
 - Presenting support for staffing needs
 - Providing data to support budgetary requests and needs
 - Participating in strategic planning
 - Describing new tax issues that may impact the Engineering Program
 - Advocating training needs of all types
- (8) The DFO, Engineering represents the Engineering Program to external stakeholders such as appraisal and valuation societies, associations of tax personnel, and other professional societies.

4.48.1.1.3.2
(09-23-2020)

Role of the Engineering Territory Manager

- (1) Territory managers directly supervise engineer team managers. The territory managers perform operational reviews of engineer team managers.
- (2) Territory managers ensure that appropriate resources are assigned to issues including resources in other Engineering territories.
- (3) Territory managers recommend policy changes and procedures to the DFO, Engineering.
- (4) Territory managers, engineering program analysts, and the DFO, Engineering work as a team to ensure that the Engineering Program functions efficiently and effectively. This team considers and recommends changes in policy or procedure to improve the overall effectiveness of the Engineering Program.
- (5) Territory managers perform periodic workload reviews to provide current staffing needs to the DFO, Engineering.
- (6) Territory managers oversee travel, supplies, training, Outside Expert Program (IRM 4.46.10, Outside Expert Program) and other budgetary issues for their respective territories.
- (7) Territory managers work with practice area territory managers to resolve differences as necessary.
- (8) Territory managers participate in Engineering Program work groups and program initiatives.
- (9) Territory managers serve as acting DFO, Engineering when necessary.

4.48.1.1.3.3
(09-23-2020)

Role of an Engineering Program Analyst

- (1) The engineering program analyst supports the DFO, Engineering and territory managers to facilitate the implementation and completion of program objectives and initiatives.
- (2) The engineering program analyst works with analysts from other practice areas.

4.48.1.1.3.4
(09-23-2020)

Role of the Engineering Team Manager

- (1) The engineering team manager is responsible for the overall management, operations, and quality of the work product of the Engineering Program at the examination team level. The engineering team manager's responsibilities include:
 - Receiving, prioritizing, and timely processing all requests for Engineering services.

- Ensuring accurate and timely input of data on program monitoring systems.
 - Providing local support to the Outside Expert Program (see IRM 4.46.10 and <https://irssource.web.irs.gov/LBI/SitePages/OEP.aspx>).
 - Monitoring receipt of engineering referrals (e.g., periodic review of team workload databases).
 - Working with each engineer (degree of involvement based on manager's discretion) on issue planning, issue development and issue resolution.
 - Reviewing and approving Forms 886-A and 5701, if assigned as the issue manager.
 - Reviewing and approving all engineering and valuation/appraisal reports as to form, content and quality.
 - Coordinating with the case manager to ensure LB&I examination processes are followed (see IRM 4.46, LB&I Examination Process and paragraph (4) of this subsection).
 - Assisting in issue development as necessary.
 - Reviewing the rebuttal to the taxpayer protest letter.
 - Assisting in resolution of issues and suggesting appropriate alternative issue resolution methods such as Fast Track, Rapid Appeals, etc.
 - Recommending training and CPE needs.
 - Addressing employee satisfaction issues.
 - Conducting performance reviews and annual appraisals.
 - Acting as territory manager as requested.
- (2) With respect to Large Corporate Compliance (LCC) examinations, the engineering team manager's involvement includes:
- Review and approve the engineer's risk analysis and audit plan.
 - Attend opening conferences of LB&I team examinations, when appropriate.
 - Assist the practice area team manager in creating a team environment.
 - Coordinate work scheduling and monitor progress of audit with engineer, team coordinator and case manager.
 - Assist in issue development as necessary.
 - Attend status meetings as requested by the taxpayer, engineer, or case manager.
 - Participate in issue discussions with the engineer, team coordinator or case manager.
 - Attempt to resolve issues at the earliest point possible in the examination.
 - Participate in issue resolution discussions with the case manager.
 - Provide feedback on audit and LB&I team process.
 - Participate in resolution of differences.
 - Assist the examination team if the team believes that an outside expert would be useful to the examination.
 - For additional roles and responsibilities see IRM 4.46.1.1.3.2, Issue Manager Roles and Responsibilities, and IRM 4.46.1.1.3.3, Managers of Team Members Who Are Not Designated as the Case Manager or Issue Manager.
- (3) The engineering team manager will ensure that all engineers assigned to any LCC examination are familiar with the roles and responsibilities of the various team members as specified in IRM 4.46.1.1.3, Roles and Responsibilities.

- (4) IRM 4.46, LB&I Examination Process (LEP), provides specific procedures for preparation of the plan, development of issues, and issue resolution. Some of the responsibilities of the engineering team manager with respect to the LEP include:
- a. Planning the examination (IRM 4.46.3) -- The engineering team manager will coordinate with the case manager on the Issue Selection and Collaboration Process and the Specialist Initial Risk Assessment. They will also participate with the case manager in the initial survey establishing the breadth and depth of the scope, as well as potential issues pertaining to the specialty area. If time does not permit personal involvement with the case manager, the engineering team manager should nevertheless participate and approve, in writing, the planned recommendations of the assigned engineer.
 - b. Executing the examination (IRM 4.46.4) -- The engineering team manager will monitor the progress of the examination by periodically having discussions with the engineer. Because engineers usually have several assignments, the engineering team manager will establish the priority of work based on the status of case, significance of potential issues, etc., and advise the case manager. The engineering team manager will be available to discuss with the case manager any technical matters or questions regarding the effectiveness of the examination procedures, including the information document request (IDR) process and the acknowledgment of facts (AOF) IDR for potentially unagreed issues. The engineering team manager will also make job-site visits to monitor the performance of the engineer in selected cases. This activity should be coordinated with the case manager.
 - c. Resolution of the examination (IRM 4.46.5) -- The engineering team manager will participate with the case manager and the engineer in meetings with the taxpayer to discuss and attempt to resolve issues, which are complex or have substantial tax or compliance impact. The engineering team manager will review and approve the engineer's report prior to submitting it to the case manager.

4.48.1.1.3.5
(09-23-2020)

Role of the Engineering Specialist

- (1) Engineers receive referrals from LB&I and other organizations:
- LB&I LCC cases
 - Other LB&I cases (non-LCC)
 - SB/SE
 - W&I
 - TE/GE
 - Appeals
 - Chief Counsel
 - Criminal Investigation
 - U. S. Department of Justice
- (2) The engineer is a member of the issue team. The roles and responsibilities of the engineer as an LB&I team member are defined in IRM 4.46.1.1.3.5, Team Member Roles and Responsibilities. The engineer also works with referring agents or estate and gift tax attorneys to develop and present issues to the taxpayer.
- (3) Roles and responsibilities of the engineering specialist include:

- Coordinate with team coordinator.
 - Review relevant information such as tax returns, public information, tax studies, etc.
 - Collaborate with the revenue agent to complete a Collaboration Assessment Matrix (CAM). A CAM is required for non-LCC cases and recommended for all other cases.
 - Perform a risk/trend analysis.
 - Hold issue discussions with the taxpayer.
 - Draft an audit plan.
 - Get engineering manager approval of risk analysis and audit plan.
 - Conduct the examination of issue (i.e., prepare IDRs, conduct interviews, perform site visits, etc.) to determine the proper tax treatment.
 - Continuously risk assess and amend the scope of the issue as new facts are developed.
 - Draft a work product if adjustments are warranted and discuss with issue team and issue manager. (See IRM 4.48.1.6 for a discussion of engineer work products.)
 - Present findings to the taxpayer.
 - Resolve issue if possible or support alternative issue resolution.
 - Maintain workpapers contemporaneously either in paper copy or electronically in the Issue Management System (IMS).
- (4) When providing assistance to Appeals, Counsel, Criminal Investigation, the U. S. Department of Justice, or other non-examination referrals, the engineer will provide expert advice, an expert report and expert testimony as required to assist the referring party. This expertise could involve:
- Assistance with determining the correct treatment of items on a tax return.
 - Valuation assistance, including an appraisal of tangible property or valuation of a business interest or intangible property.
 - Other assistance, including technical engineering or scientific knowledge or expertise as may benefit the specific case.
- (5) Before written products prepared by the engineer are submitted to the requestor, the engineering team manager will review both issue narratives and expert reports.

4.48.1.1.4
(09-23-2020)

Program Objectives and Review

- (1) **Program Goals:** The goal of the Engineering Program is to deliver timely, effectively planned, and properly managed support of examinations of tax issues providing for quality results and minimization of burden to the IRS and to taxpayers.
- (2) **Program Reports:** The Engineering Program collects issue examination and time utilization data documentation and monitors the progress and results of assigned issues through various information management systems.
- (3) **Program Effectiveness:** The effectiveness of the Engineering Program is monitored by issue examination and time utilization information system documentation and reporting, time entry system reporting, and other sources of information. Effectiveness is determined by the Program whereby mission and program objectives are accomplished efficiently, and reliable information is obtained and used for decision making. Statutes and regulations are followed to ensure the Program's resources are protected from mismanagement and misappropriation of funds.

- (4) **Annual Review:** Annual quality assurance and internal control reviews are conducted through the Federal Managers' Financial Integrity Act Managers' Assessment (FMFIA) certification process. The FMFIA Managers' Assessment is part of management and internal controls assessment certification required for the Annual Assurance Statement. All managers are required to review the adequacy of controls for their respective program area to identify risks. Management involvement is necessary at every level in certifying the control environment for their program area of responsibility is working as designed. (See IRM 1.4.2, Monitoring and Improving Internal Control)

4.48.1.1.5
(09-23-2020)

Acronyms

- (1) The following is a list of frequently used acronyms in this program:

Acronym	Term
AOF	Acknowledgment of Facts
CAM	Collaboration Assessment Matrix
DFO	Director of Field Operations
IDR	Information Document Request
IMS	Issue Management System
LCC	Large Corporate Compliance
LUQ	Large, Unusual and Questionable
MIRA	Manager Initial Risk Assessment
MITRE	(contractor)
OEP	Outside Expert Program
QRE	Qualified Research Expense
SIRA	Specialist Initial Risk Assessment
SME	Subject Matter Expert
SRS	Specialist Referral System

4.48.1.1.6
(09-23-2020)

Related Resources

- (1) The Engineering website is <https://irssource.web.irs.gov/LBI/SitePages/ENG.aspx>.
- (2) Other IRMs in this chapter include:

IRM No.	Title
IRM 4.48.2	Valuation Assistance for Cases Involving Works of Art
IRM 4.48.3	Tangible Personal Property Valuation Guidelines
IRM 4.48.4	Business Valuation Guidelines
IRM 4.48.5	Intangible Property Valuation Guidelines

IRM No.	Title
IRM 4.48.6	Real Property Valuation Guidelines

4.48.1.2
(09-23-2020)

**Referrals - Requests for
Engineering and
Valuation Services**

- (1) The Engineering Program encourages referrals. Tax returns may be referred if engineering assistance is appropriate. Examiners should make referrals as early as possible upon identification of an issue involving a specialist. A limited issue review and assessment by Engineering is available to determine if a referral is warranted. Such cases will use Miscellaneous Examination Activity Codes as defined by IRM 4.9.1 and applied by engineering specialists in accordance with the Engineering Issue Management System (IMS) and Timekeeping Desk Guide.
- (2) A referral to MITRE could be considered if research credit contains internal use software (IUS) qualified research expenses (QREs). Referral and/or consultation requests to MITRE can also be made if QREs are below the threshold at the discretion of the issue team. The MITRE referral form is available here: <https://portal.ds.irsnet.gov/sites/vl020/Credits/MITRERefForm%202020.pdf>.
- (3) For art appraisals greater than \$50,000, referral is mandatory and must be sent directly to the National Office Art Appraisal Services. See IRM 4.25.12.3, Referrals of Artwork to Art Appraisal Services and the Art Advisory Panel.
- (4) For appraisals of art and collectibles less than \$50,000 see IRM 4.48.2, Valuation Assistance for Cases Involving Works of Art, for referral procedures to request art valuation assistance. The engineering team manager will determine which engineering specialist to assign.
- (5) The Specialist Referral System (SRS) is the preferred method for making referrals for engineering services from SB/SE, TE/GE and for LCC inventory in LB&I. LB&I should use the MIRA/SIRA process for other inventory. The recipient of the referral is usually the local engineer team manager. If a post of duty has more than one engineer team manager, the Engineering territory manager may determine the recipient.
- (6) Generally, all LCC referrals will be assigned to one or more engineers who will perform risk analyses and, if appropriate, prepare audit plans for submission to the LCC team. The engineer team manager will evaluate non-LCC referrals and requests for assistance from other divisions or organizations (e.g., SB/SE, W&I, E&G, etc.) before the requests are assigned to an engineer.
- (7) Engineering may request additional information to determine whether engineering assistance is needed. Further, some or all the following information may be necessary before the engineer team manager can determine the level of engineering assistance.
 - a. Copy of the face of the tax return
 - b. Copies of the balance sheet, Schedule M-1, Schedule M-2, and Schedule M-3
 - c. Schedules of depreciation, depletion, contributions, gains/losses, "other deductions", or credits
 - d. Copies of other relevant forms such as Form 8594 or 8283
 - e. A brief narrative explaining the need for which assistance is requested
 - f. Nature of business

- g. Location of property
- h. Location of books and records
- i. Source of referral if not from LB&I
- j. Copies of appraisals, sales documents, leases, etc.
- k. Studies prepared by the taxpayer or their representative

- (8) Within 15 calendar days of receipt of the referral, the engineer team manager will inform the requestor that the referral was received. The engineer team manager will assign or reject the referral as soon as practical with the goal of 15 calendar days or less. For non-LCC referrals, additional material may be necessary for the engineer team manager to make an informed decision about the referral. If the additional information is not received timely, the engineer team manager may assign an engineer to the referral to meet the SRS 30-day disposition requirement.
- (9) Engineer team managers are responsible for locating the most appropriate resources for each referral. This resource could be a local engineer, an engineer at another location, an outside expert, or a combination of these options. An SRS referral may be transferred to another engineering team.
- (10) The referring examiner should assist the assigned engineer in obtaining necessary data or records from the taxpayer and other sources. See IRM 4.46.3., Planning the Examination, for information on the specific procedures for participating in LB&I examinations as members of the issue team.

4.48.1.3
(09-23-2020)
Examination of Issues

- (1) To determine the scope of the examination, the engineer must participate in a planning process with the referring agent/attorney or with the audit team. The factors considered must meet the requirements of applicable law, regulations, and IRS policy. See IRM 4.10 Examination of Returns and IRM 4.46, LB&I Examination Process.
- (2) Communication, teamwork, and documentation are essential. The engineer will communicate on a regular basis with other team members and with the taxpayer. The engineer will contact the requestor at least once every 30 days and document activity or include any reasons for inactivity. The engineer workpapers will contain the necessary documentation of the examination work performed. The engineer will follow all relevant procedures for third party contacts. The engineer will seek agreement with the issue team on total planned examination time and starting and completion dates. The engineering manager must approve all days allotted and the issue completion date.

4.48.1.3.1
(09-23-2020)
Pre-Examination Analysis

- (1) After receiving the case assignment, the engineer will perform a risk analysis with the referring agent/attorney or issue team (IRM 4.46.3). The engineer will conduct and document the risk analysis regardless of the type of examination or source of referral. The engineer team manager will review and approve the risk analysis. For more information concerning risk analysis, see IRM 4.10.2.7.1.1, Risk Analysis, and IRM 4.46.3.3, Risk Analysis Process.
- (2) Any large, unusual, and questionable (LUQ) items identified will depend on the engineer's judgment of the return and the separate items that comprise the return. Some factors to be considered when identifying these items are:
 - Taxpayer's history on the issue
 - Trend analysis of current and prior tax years
 - Comparative size of the item

- Absolute size of the item
 - Inherent character of the item
 - Potential impact to current tax (e.g. carryforward research credit)
 - Timing or permanent tax issue
 - Application of new tax law or regulations
 - Relationship to other items
 - Whipsaw issues
 - Automatic adjustments
 - Missing items
- (3) Regardless of the type or class of return, the engineer should first review the return in its entirety. This review should include the line items and credits claimed. Balance sheets, elections, schedules, or any other documents attached to the return are included in the review. The review also should include any relevant items from other sources.
- (4) As part of the risk analysis, the engineer should compare the potential benefits from examining a return to the resources required to perform the examination. After the potential benefits and resources are considered, the engineer will rank the issues in priority order. Generally, the engineer will examine the issues with higher audit potential before those with lower potential. The engineer team manager may request the engineer to reprioritize based on other factors.
- (5) The engineer should review all LUQ items. However, the engineer cannot examine every possible issue. For instance, it is not proper for the engineer to make a detailed analysis, unless the potential adjustments will materially affect the tax liability or will be important from a compliance viewpoint. The engineer is expected to adequately explain both examined items and the large, unusual, or questionable items that are accepted without examination. The case file and workpapers must clearly indicate the scope of the examination for each issue, the depth of the examination, and the reasons for the tax determination reached.
- (6) The audit plan should contain a description of the issue(s), anticipated audit steps needed, additional resources needed (such as outside experts, statistical sampling coordinator, overnight travel, etc.), estimated issue completion date, and estimated days needed to complete the examination. The engineer team manager must approve the audit plan prior to submission to the referring agent/attorney or issue team.
- (7) The scope of the examination may be expanded or reduced during the examination as facts develop on the issue. If additional time is requested by the engineer, approval by the engineer manager is needed. If the estimated completion date or the statute needs an extension, issue manager and case manager approval is needed. Extending the statute may also require territory manager concurrence.
- (8) If a new engineering issue is identified during the examination, a new risk analysis must be completed by the engineer and approved by the engineering team manager. The engineering team manager will coordinate with the case manager to get the issue added in IMS.

4.48.1.3.2
(09-23-2020)

**Engineer Initial
Contact/Meeting with the
Taxpayer**

- (1) The following should be considered during the initial contact/meeting with the taxpayer:
 - a. Coordinate with the team coordinator to set up an initial engineering meeting with the taxpayer or representative.
 - b. Discuss potential issues, potential adjustments, and audit steps with the taxpayer.
 - c. Explain the roles of the engineer team manager and engineering territory manager.
 - d. Exchange expectations.
 - e. Discuss timelines.
 - f. Arrange tours of business operations, interviews or presentations, if needed.
 - g. Issue initial Information Document Requests (IDRs) and discuss the process and expectations.
 - h. Communicate openly with the taxpayer throughout the examination with a focus on resolving the issues. Resolution should occur at the earliest point possible in the examination.

4.48.1.3.3
(09-23-2020)

**Requesting Information
from the Taxpayer**

- (1) Written requests should be in the form of an IDR. The engineer should follow the requirements of the team coordinator or referring agent for preparing and tracking IDRs. The engineer will offer to meet with the taxpayer or taxpayer's representative to discuss the draft IDR before it is formally presented to the taxpayer.
- (2) When requesting information, the engineer will follow the LB&I IDR procedures contained in IRM 4.46.4.6, Information Document Request Process:
 - a. Consider the relevance and reasonableness of the information requested.
 - b. Establish mutually agreeable response dates for individual items if not established in an examination plan with the taxpayer.
 - c. Establish priorities.
 - d. Determine taxpayer's terminology prior to the written request.
 - e. State the purpose of the request.
 - f. Limit the number of items on each IDR.
 - g. Timely follow-up on overdue or incomplete IDR responses and involve the issue manager if IDR enforcement is required.
 - h. Timely review and notification of taxpayer regarding adequacy of IDR responses.
 - i. Follow guidelines set forth in the audit plan
 - j. All IDRs should be entered in IMS and properly tracked as to draft date, issue date, response date, received date and closed date.
 - k. All late or incomplete IDR responses must follow the LB&I enforcement process.

4.48.1.3.4
(09-23-2020)

**Quality Factual
Development**

- (1) The extent of factual development depends on the complexity and compliance risk of the issue. Factual development may include analysis and performance of the following:
 - IDR responses and follow-up IDRs
 - Taxpayer records
 - Tax returns and supporting tax workpapers
 - Related returns and entities
 - Public documents (such as Form 10K)

- Financial statements
 - Books and records (i.e., fixed asset ledger, chart of account, etc.)
 - Schedules (i.e., depreciation, depletion, etc.)
 - Funding requests for capital projects and major repairs
 - Source documents (i.e., leases, rent rolls, contracts, etc.)
 - Studies prepared by the taxpayer or their representative
 - Interviews of subject matter experts (SMEs)
 - Third party contacts
 - Site visits/tours
- (2) The engineer may tour the taxpayer's plant, property, laboratory, or other facilities. When conducting site visits, engineers may hold meetings with taxpayer personnel. Engineers are required to document site visits and interviews with taxpayer personnel in their workpapers.
- (3) During the examination, engineers may consult with:
- Other team members
 - SMEs
 - Counsel
 - Outside consultants
- (4) The engineer should conduct research, using the following sources:
- a. Internal Revenue Code and regulations
 - b. Revenue rulings and revenue procedures
 - c. Letter rulings, including field service advice, technical advice memoranda, Chief Counsel advice, private letter rulings, etc.
 - d. Court cases
 - e. Public records
 - f. Federal and state filings
 - g. Internet information
 - h. Professional papers and industry groups
 - i. Industry periodicals and articles
 - j. Bulletin boards
 - k. Commercial databases
- Note:** For a list of subscribed databases see *Engineering Reference Material Toolkit* on the *Engineering website*.
- (5) Additional actions may include:
- a. Involvement of Counsel, if appropriate.
 - b. Consultation with practice network SMEs.
 - c. Discussions of concerns and potential adjustments with issue manager.
 - d. Confirmation of facts and discussions of findings with taxpayer, including issuing an AOF IDR for potentially unagreed issues.
- (6) The engineer should analyze the information gathered in an objective manner and accurately apply tax laws to provide tax determinations that are well-supported and documented.
- (7) As new facts are developed during the examination, the engineer should re-evaluate the scope and depth of examining the issue and adjust as the facts and circumstances dictate.

4.48.1.4
(09-23-2020)
Workpapers

- (8) Share findings with the taxpayer with the objective of resolving the issue at the earliest point possible.
- (1) Workpapers are the written or electronic records kept by the engineer that provide the principal support for the engineer's report, document the procedures applied, tests performed, information obtained, and explain the conclusions reached in the examination. They should include all the information necessary to conduct the examination and support the audit results (See IRM 4.10.9, Workpapers, and IRM 4.46.6, Workpapers and Reports Resources).
- (2) The issue folder should be a quality product. A quality product includes:
- Indexing all supporting notes to the lead sheet.
 - Ensuring that handwritten notes are legible.
 - Dating the workpapers for the day the work was completed.
 - Cross-referencing workpapers to the activity record.
 - Including all relevant information gathered during the examination as workpapers.
- (3) Supporting workpapers will document the audit trail. These documents may include photographs, documents provided by the taxpayer, documents from third party sources, and correspondence from the taxpayer.
- (4) The engineer will maintain an activity record in IMS (Form 9984, Examining Officer's Activity Record) on the assigned case. The activity record will document actions taken on the case (IRM 4.10.9.5, Activity Records). Documentation should include:
- Daily summary of work performed
 - Research activities
 - Date of tour of taxpayer facilities
 - Date, time, and brief summary of telephone conversations
 - References to notes of meetings with taxpayer, representatives, and third parties
 - Causes for any delays in the examination
 - Discussions with the engineering team manager to document involvement in the examination (required for Appeals/Fast Track, penalties, informal claim exceptions, etc.)
 - Involvement of Engineering management of any level
- (5) Where applicable, the entry in the activity record should reference the respective meeting notes, notes of telephone conversations, workpapers, or other items contained in the indexed workpapers.
- (6) If an issue is reassigned to another engineering team, transmit the workpaper file or relevant portions to the new engineer, using Form 3210, Document Transmittal or other established procedures.
- (7) After review of the engineer workpaper file, the engineer team manager will transmit the file to the referring agent, attorney, or team manager using Form 3210 or other established procedures.

4.48.1.5
(09-23-2020)
Issue Resolution

- (1) If possible, each issue should be resolved as early as possible in the examination. Thorough factual development by the engineer may facilitate issue resolution. Determine who has authority to resolve issues within the taxpayer's organization. The issue manager and case manager should collaborate on issues before discussing possible resolution with the taxpayer. Engineer team managers will ensure that all necessary steps are taken to resolve the issues where possible. The engineer team manager will elevate the issue to the engineer territory manager when appropriate.
- (2) Resolution of valuation issues includes:
 - a. Communicating a clear understanding of the taxpayer's methodologies and legal and factual arguments.
 - b. Explaining to the taxpayer why their value is incorrect or unsupported.
 - c. Considering the acceptable range of values for resolution purposes.
 - d. Proposing the value to the taxpayer that is the most probable and supportable.
- (3) Resolution of non-valuation issues should be addressed by:
 - a. Communicating a clear understanding of the taxpayer's legal and factual arguments
 - b. Attempting to reach agreement on the facts
 - c. Attempting to reach agreement on the applicable law
- (4) If issues are not resolved:
 - a. Issue an Acknowledgment of Facts (AOF) IDR with draft Form 886-A for all potentially unagreed issues and consider any new and/or disputed facts before issuing the Notice of Proposed Adjustment (Form 5701) to the taxpayer.
 - b. Draft a rebuttal to taxpayer's protest response.
 - c. Support or present the examination position in Appeals Pre-Conference or Fast Track.

4.48.1.6
(09-23-2020)
Types of Reports

- (1) Upon the completion of an assignment, the engineer will promptly prepare and submit a report of findings and recommendations to the engineer team manager for review. The issue manager will review and approve the report before forwarding the report to the requesting examiner. When writing the report, the engineer should clearly indicate the basis for the recommended adjustment. Place emphasis on:
 - a. Defining the issue.
 - b. Developing the facts accurately.
 - c. Avoiding lengthy discussions of case law and legal arguments.
 - d. Rebutting the taxpayer's position.
 - e. Writing in a business style using the first person.
 - f. Using plain language and eliminating technical language or jargon wherever possible.
- (2) The engineer report is the final work product of the engineer's involvement on an issue. In most cases, the engineer's findings and recommendations will be an issue narrative. All reports must be reviewed and approved (or signed) by the engineer/issue team manager before they are provided to the requestor. Engineering reports will be one of the following:

- a. Reports for non-valuation issues: Form 886-A, issue narrative submit through a Form 5701, Notice of Proposed Adjustment. Reports for LB&I requestors will be prepared using this method. Non-valuation issues worked for non-LB&I requestors may also be presented on a Form 886-A or other format as appropriate.
- b. Reports for valuation issues: The valuation report may be in memo format or other format as agreed to with the requestor. If the narrative is contained in a memo format, all of the headings described in IRM 4.48.1.6.1(2) must be included in the memo.
- c. Expert Report: An expert report is a report of findings that would be suitable for submission to a court. Expert reports should not contain discussions of case law, or the court will disqualify the report. The most common type of expert report is an appraisal or valuation. Expert reports may be prepared for non-valuation issues when appropriate. For LB&I referrals, attach the expert report to Form 5701 for transmittal to the referring agent.
- d. Other: The engagement letter between Engineering and Estate and Gift may specify another format. Similarly, Counsel or Appeals may request written statements in another format.

4.48.1.6.1
(09-23-2020)
Issue Narratives

- (1) The issue narrative will be developed according to the guidelines found in IRM 4.46.6. Each proposed issue will be developed and presented to the taxpayer on a Form 5701, Notice of Proposed Adjustment. Every engineering report must be reviewed by the engineer team manager. Every Form 5701 must be approved (or signed) by the issue manager before it is presented to the team coordinator, case manager, or revenue agent. A table of contents and executive summary should be included if appropriate or at the judgment of the engineer team manager. As a rule of thumb, if report is more than ten pages, a table of contents is recommended and if the report is unagreed, an executive summary is recommended. If the report has exhibits, a list of exhibits or attachments will follow the conclusion.
- (2) The content will follow this format provided in IRM 4.46.6.9, Explanation of Items:
 - a. Issue
 - b. Facts
 - c. Applicable Law
 - d. Taxpayer's Position
 - e. Argument or Analysis
 - f. Conclusion
- (3) The first section, "Issue", will frame the issue with a brief conclusion of the results of the examination. The issue statement will identify the dollars, the year(s) at issue, the code section and the specific issue being addressed. The context of everything that follows in the narrative on this issue should focus on this commentary. The Issue should clearly and briefly state a question followed by an answer.

Example: Is Taxpayer, Inc., entitled to deduct \$80X in 2001 and \$75X in 2002 for depreciation deduction under IRC 168 (MACRS)? No, the correct amounts are \$65X in 2001 and \$60X in 2002 because Taxpayer, Inc., incorrectly included costs attributable to land and buildings as personal property.

- (4) The “Facts” section discusses the facts of the issue developed during the examination. State the relevant facts of the issue that establish the proper tax treatment of the issue. In addition, a brief description of the taxpayer’s business may help a reader understand the context of the issue. The purpose of an examination is to correctly apply the law to the facts. Do not include adjustments or analysis (including legal analysis) of the issue in the Facts section. The use of sub-headers and tables or charts is helpful for organizing the facts.
- (5) The discussion of “Applicable Law” will contain the commissioner’s position as established by the Internal Revenue Code, treasury regulations, revenue rulings, revenue procedures and relevant court cases. Technical advice memorandums, field service advice, private letter rulings, and other similar publications may not be cited unless the document is specific to the taxpayer and the issue under examination. Specific case citations may be used if the examiner uses the citations to apply the Code or regulations. Lengthy quotations of the Code, regulations, or cited court cases are not helpful.
- (6) The purpose of the “Taxpayer’s Position” section is to explain what legal interpretation the taxpayer relied upon to support their position on the issue. If the taxpayer does not provide a clear explanation of their position, this section will include a discussion of the steps taken to obtain the information from the taxpayer. If possible, consider including a direct quote from either a taxpayer’s response to an IDR or from a study prepared for the issue.
- (7) The “Argument” or “Analysis” section supports the Commissioner’s position and refutes the taxpayer’s position. The narrative should be persuasive in nature and tie together the facts and law and summarize the applicable law. There should be enough information to tell a story. The narrative will be well organized. The purpose is to explain the disagreement with the taxpayer and provide the specific reasons for the proposed adjustment. One of the purposes of this section is to provide the engineer’s response to the taxpayer’s position. The narrative should be objective and professional. If technical information is necessary, use a plain English explanation of the item in the narrative. Use footnotes to describe or define technical terms. Do not introduce facts that were not previously discussed in the “Facts” section.
- (8) The “Conclusion” section briefly summarizes the results of the examination and the reasons for the proposed adjustment.
- (9) Write the issue narrative using prescribed standards for grammar, wording, references, quotations, and other style elements. The *IRS Style Guide* helps IRS writers maintain consistent and uniform standards in communications.

4.48.1.6.2
(09-23-2020)
Expert Reports

- (1) Report the results of appraisals of properties or valuations of interests using professional appraisal or valuation report standards. If the appraiser signs a report using a designated certification (CVA, ASA, MAI, etc.), the report will comply with the requirements of the certifying organization. Otherwise, the report will comply with the appropriate valuation guidelines contained in IRM 4.48.3 through IRM 4.48.6.
- (2) Expert reports may be prepared for non-valuation issues as necessary or as requested.
- (3) Appeals or Counsel may request that an engineer prepare an expert report in preparation for litigation. As with any other written work product, the engineer

team manager will review and approve the expert report prior to submission to the requestor. This step is necessary to ensure the expert report is technically accurate and is consistent with policy and procedures. This report may be presented to the court as an expert witness report. Generally, the expert report must present the facts. It must be free of subjectivity and unfounded opinion. The expert report must not advocate any interpretation of the facts as they may apply to the law or any application of the law. If the engineer is certified, the report should conform to the specifications or requirements of the certifying organization. It is the responsibility of the engineer to provide the best service to the requesting client by ensuring that the expert report complies with the Federal Rules of Evidence, Article VII.

4.48.1.7
(09-23-2020)
Training

- (1) The Engineering Training Program is a comprehensive program designed to provide training for the newly hired engineer through the senior level engineer. Mandatory recruit training (Phases 1 through 5) includes both in-house training and out-service training. This program consists of:
 - a. Orientation (which is offered as Flexible Blended Learning provided by the New Hire Community of Practice)
 - b. Classroom instruction
 - c. Self-instruction material
 - d. Out-service-training
- (2) Engineering Phase Training Program is as follows:
 - Phase 1 – Financial Accounting for Engineers
 - Phase 2 – General Administration
 - Phase 3 – Technical Topics
 - Phase 4 – Appraisal and Business Valuation for Engineers
 - Phase 5 – NACVA Case Study and CVA Certification
- (3) External training courses are available from several sources. An approved SF 182, Request, Authorization, Agreement, and Certificate of Training, is needed before external training may begin. Some training sources include:
 - a. American Institute of Mining Engineering
 - b. American Petroleum Institute
 - c. American Society of Appraisers
 - d. Appraisal Institute
 - e. Colorado School of Mines
 - f. National Association of Certified Valuators and Analysts (NACVA)
 - g. Society of Petroleum Engineers (SPE)
- (4) Internal education courses are available from a variety of sources, including the Integrated Talent Management system. Approval from the engineering team manager is needed before the courses are to begin.

