

DALLAS CENTRAL APPRAISAL DISTRICT



**2027 - 2028
Reappraisal Plan**

DALLAS CENTRAL APPRAISAL DISTRICT 2027 - 2028 REAPPRAISAL PLANS

Introduction

General Overview of Tax Code Requirement

Passage of Senate Bill 1652 in 2005 amended the Texas Property Tax Code to require each Appraisal District to prepare a biennial reappraisal plan. The following details are the Tax Code requirements:

The Written Plan

Section 6.05, Property Tax Code, is amended by adding Subsection (i) to read as follows:

- (i) To ensure adherence with generally accepted appraisal practices, the board of directors of an appraisal district shall develop biennially a written plan for the periodic reappraisal of all property within the boundaries of the district according to the requirements of Section 25.18 and shall hold a public hearing to consider the proposed plan. Not later than the 10th day before the date of the hearing, the secretary of the board shall deliver to the presiding officer of the governing body of each taxing unit participating in the district a written notice of the date, time, and place of the hearing. Not later than September 15 of each even-numbered year, the board shall complete its hearing, make amendments, and by resolution finally approve the plan. Copies of the approved plan shall be distributed to the presiding officer of the governing body of each taxing unit participating in the district and to the comptroller within 60 days of the approval date.

Plan for Periodic Reappraisal

Subsections (a) and (b), Section 25.18, Texas Property Tax Code, are amended to read as follows:

- (a) Each appraisal office shall implement the plan for periodic reappraisal of property approved by the board of directors under Section 6.05(i).
- (b) The plan shall provide for the following reappraisal activities for all real and personal property in the district at least once every three years:
 - (1) Identifying properties to be appraised through physical inspection or by other reliable means of identification, including deeds or other legal documentation, aerial photographs, land-based photographs, surveys, maps, and property sketches;
 - (2) Identifying and updating relevant characteristics of each property in the appraisal records;
 - (3) Defining market areas in the district;

- (4) Identifying property characteristics that affect property value in each market area, including:
 - (a) The location and market area of the property;
 - (b) Physical attributes of the property, such as size, age, and condition;
 - (c) Legal and economic attributes; and
 - (d) Easements, covenants, leases, reservations, contracts, declarations, special assessments, ordinances, or legal restrictions;
- (5) Developing an appraisal model that reflects the relationship among the property characteristics affecting value in each market area, and determines the contribution of individual property characteristics;
- (6) Applying the conclusions reflected in the model to the characteristics of the properties being appraised; and
- (7) Reviewing the appraisal results to determine value.

Scope of Responsibilities

Dallas Central Appraisal District (DCAD) has prepared and published this reappraisal plan to provide its Board of Directors, taxing units, citizens, and taxpayers with a better understanding of the District's responsibilities and reappraisal activities. This report has several parts: a general introduction and then several sections describing the proposed 2027-2028 reappraisal effort by the appraisal departments within the DCAD.

Dallas Central Appraisal District (DCAD) is a political subdivision of the State of Texas created effective January 1, 1980. The provisions of the Texas Property Tax Code govern the legal, statutory, and administrative requirements of the appraisal district. A member of the Board of Directors, appointed by the taxing units or voted on by the public within the boundaries of Dallas County, constitutes the district's governing body. Effective July 1, 2024, the Dallas Central Appraisal District Board of Directors will be comprised of nine board members. Three board members will be elected at large. Five board members will be appointed by the taxing jurisdictions via a levy vote. With the Dallas County Assessor Collector being the ninth board member. The Chief Appraiser, appointed by the Board of Directors, is the Chief Appraiser and Executive Director of the appraisal district.

Dallas Central Appraisal District is responsible for local property tax appraisal and exemption administration for sixty-three jurisdictions and/or taxing units in the county. Each taxing unit, such as the county, a city, school district, municipal utility district, etc., sets its own tax rate to generate revenue to pay for such things as police and fire protection, public schools, road and street maintenance, courts, water and sewer systems, and other public services. Property appraisals are estimated values by the appraisal district and used by the taxing units to distribute the annual tax burden. They are generally based on each property's worth or market value. DCAD also determines eligibility for various types of property tax exemptions, such as those for homeowners, business owners, the elderly, disabled persons, disabled

veterans, and charitable or religious organizations.

The Property Tax Code, except as otherwise provided, states that all taxable property is appraised annually at its “market value” as of January 1st. Under the tax code, “market value” means the price at which a property would transfer for cash or its equivalent under prevailing market conditions if:

- exposed for sale in the open market with a reasonable time for the seller to find a purchaser;
- both the seller and the buyer know of all the uses and purposes to which the property is adapted and for which it is capable of being used and of the enforceable restrictions on its use, and;
- both the seller and buyer seek to maximize their gains and neither is in a position to take advantage of the exigencies of the other.

The Code defines special appraisal provisions for the valuation of residential homestead property (Sec. 23.01 & 23.23), real property circuit breaker for non-homestead exemption accounts five million or less (Sec. 23.231), productivity (Sec. 23.41 & 23.51), real property inventory (Sec. 23.12), dealer inventory (Sec. 23.121, 23.124, 23.1241 and 23.127), nominal (Sec. 23.18) or restricted use properties (Sec. 23.83) and allocation of interstate property (Sec. 21.03, 21.04, 21.05 and 21.055).

The Texas Property Tax Code, under Sec. 25.18 requires each appraisal office to implement a plan to update appraised values for real property at least once every three years. The district’s current policy is to conduct a general reappraisal of real and business personal property value every year, meaning that a property’s appraised value is established and reviewed for equality and uniformity on an annual basis.

The appraised value of real and business personal property is calculated using specific information and data about each property. Using various computer-assisted mass appraisal (CAMA) programs, and generally recognized appraisal methods and techniques, registered and trained appraisers compare the subject property information with the data for similar properties and with recent market data. The district adheres to the standards of the International Association of Assessing Officers (IAAO) regarding its appraisal practices and procedures and subscribes to the standards promulgated by the Appraisal Foundation, known as the Uniform Standards of Professional Appraisal Practice (USPAP), to the extent they are applicable. Chapter 23 of the Texas Property Tax Code contains statutes dealing with appraisal methods and procedures. Section 23.01 of this Chapter was amended in 1997 to specify that appraisal districts be required to comply with the mass appraisal standards of USPAP (Standard 6 – now Standards 5 and 6) when the appraised value of a property is established using mass appraisal techniques. In cases where the appraisal district contracts for professional valuation services, the contract that is entered into by each appraisal firm requires adherence to similar professional standards.

Reappraisal Plan Assumptions and Limiting Conditions

The 2027 - 2028 Reappraisal Plan adopted by the Dallas Central Appraisal District Board of Directors will occur no later than September 15, 2026. The assessment dates for the 2027 and 2028 Reappraisal Plan is January 1, 2027 and January 1, 2028 respectively.

DCAD's goal is to appraise all properties at fair market value as of January 1 of every year by reflecting the marketplace. The Reappraisal Plan itself regarding 2027 and 2028 building permit and reappraisal account projections is based on historical data and best estimates as to the number of properties that will be targeted for reappraisal in these years. At the time of approval for the 2027-2028 Reappraisal Plan, a complete listing of the actual properties to be targeted for reappraisal cannot be specifically identified, as DCAD does not undertake a geographical reappraisal effort. DCAD's position has always been to reflect the marketplace as of January 1 of every year. Therefore, DCAD undertakes an as needed reappraisal approach as opposed to a geographical reappraisal approach in order to better achieve the goal of appraising all property at fair market value as of January 1 of every year.

With this said, DCAD's Reappraisal Plan will always target the properties who meet the following building permit and reappraisal criteria during the course of the appraisal year cycle (August 1 – April 1):

- 1) Any Residential or Commercial account that has a Code Z (re-inspect code) or Code 9 (partial complete code), as of January 1 of the prior appraisal year.
- 2) Any Residential or Commercial account that had a significant building permit issued from one of the thirty-one cities in Dallas County from January 1 to December 31, and construction begun prior to January 1.
- 3) Any Residential or Commercial account where data or inquiry has been provided to DCAD that indicates the property has had a conditional change that is not currently reflected on the record as of January 1.
- 4) Any Residential account that falls within a Residential Neighborhood that has been targeted for reappraisal based on a neighborhood sales ratio analysis for the current appraisal year. Neighborhood sales ratio analysis occurs in October, January, and March of every appraisal year. Residential neighborhood sales ratio analysis is a process whereby the Residential supervisory staff analyzes and compares actual neighborhood sales prices to DCAD's current appraised value. Typically, neighborhoods whose overall sales ratio is less than 95% or greater than 105% will be targeted for reappraisal. In neighborhoods where there is an absence of sales, competing neighborhood sales and appraised information will be analyzed and targeted as needed.
- 5) All residential mobile home accounts that have an account number beginning with 75.
- 6) Any Commercial account that falls within a Commercial Improved Market Area (IMA) or Commercial Land Market Area (LMA) that has been targeted for reappraisal based on current market analysis. Annual market analysis typically takes place between January and March of every year. Market analysis consists of a sales analysis, cost analysis, and income and expense analysis for the major Commercial property types (Apartments, Offices, Industrial, Retail) and market areas. It should be noted, due to the dynamic nature of commercial property with regard to changing of income and expense data on an annual basis, all significant commercial improved property and high-profile improved market areas will likely be reappraised on an annual basis either through the reappraisal effort or appeals process.
- 7) All mineral accounts.

- 8) All business personal property account that have a taxable value.
- 9) Any real property account in 2027 and 2028 that has a last reappraisal of 2024 and 2025 respectively.
- 10) Any account in the reappraisal year in which a rendition has been filed.

DCAD can query its database at any given time to identify the specific accounts that have been targeted for reappraisal as of that date. Identifying the actual accounts and proposed market value that were targeted for reappraisal based on the criteria for a given appraisal year can be made available to the public after April 15th of any given appraisal year.

As stated, the 2027 and 2028 Residential and Commercial Reappraisal analysis will be conducted typically in January of 2027 and January 2028. Please see the Appraisal Divisions 2027 and 2028 Reappraisal Plans below for more specific details concerning the 2027 and 2028 reappraisal effort.

Parcel counts and other statistical data are based on the District’s current operation as of the date of this report. Personnel numbers are based on DCAD’s 2026/2027 Approved Budget. Those key DCAD personnel involved in the annual Reappraisal Plan are identified in Appendix A. A detailed organizational chart can always be located within DCAD’s annual Budget and annual Management Plan.

Appraisal Division manuals document all DCAD’s appraisal processes and the Mass Appraisal Records System (MARS) functionality. DCAD also has copies of Hugh Landrum and Associates' mineral appraisal manual and reappraisal plan associated with mineral valuations.

A listing of all Residential Neighborhoods, Commercial Improved Market Areas (IMA), Land Market Areas (LMA), and Business Personal Property (BPP) Routes is located in the Appendix. Area maps for Residential, Commercial, and BPP are also located in the Appendix. These maps can be tied back to specific residential neighborhood codes, commercial market areas, and BPP routes targeted for reappraisal. More detailed maps can be made available when requested.

Appraisal Notification

The Dallas Central Appraisal District (DCAD) provides an appraisal notice for all taxable property on the DCAD website annually.

DCAD’s notification criteria are to mail an appraisal notice annually to all new owners, any property that had an increase in market value from the prior tax year, all new accounts, any account that had a capped homestead or circuit breaker limitation value in the prior tax year, all rendered accounts, all mineral accounts, and all business personal property accounts.

Reappraisal Plan Appendix & Overview of District’s Operation

Key Personnel on Reappraisal Plan Implementation.....Appendix A

Residential Neighborhoods.....Appendix B

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The 2026/2027 & 2027/2028 Financial Budgets are adopted annually.

The 2026/2027 & 2027/2028 Management Plans are developed annually. The 2026/2027 Management Plan adopted in August 2026 will reflect any changes to the 2027 Reappraisal Plan account projections.

Personnel Resources

The Office of the Chief Appraiser is primarily responsible for overall planning, organizing, staffing, coordinating, and controlling of district operations, which includes the Quality Control Division. The Administration Division's function is to plan, organize, direct, and control the business support functions related to human resources, budget, finance, records management, purchasing, fixed assets, facilities, and postal services. The Administration Division also oversees the Appeals, Finance, Human Resources, and Building Services Divisions. The Appraisal Division is responsible for the valuation of all real property and business personal property accounts. The property types appraised include commercial, residential, mineral, and business personal property. The Property Records Exemption Customer Service Division and GIS Division are now operating divisions within Community Relations Services. The Property Records Exemption Customer Service Division processes deed documents filed at the county clerk's office, any total or partial exemptions filed with the appraisal district, as well as other documents such as tax deferrals, historic exemptions, agricultural applications, abatements, tax increment finance districts, and all mapping records.

- 2 – Executive
- 25 - Administrative Services (Executive-level administration)
- 130 - Appraisal Services (Residential, Commercial, Business Personal Property)
- 65- Community Relations Services (Property Records Exemption Customer Service and GIS)
- 6 - Technical Services (Litigation functions)
- 14 – Information Technology (Technology-related functions)
- 3 – Quality Control

Staff Education and Training

All appraisal district employees who perform appraisal work are subject to the provisions of the Property Taxation Professional Certification Act and must be registered with the Texas Department of Licensing and Regulation (TDLR). TDLR is responsible for ensuring appraisers are professional, knowledgeable, competent, and ethical. This is accomplished through a statewide program of registration, licensing, education, experience, testing, and certification for all property tax professionals.

Upon registration, appraisers registered with the TDLR have up to five years to take a series of appraisal courses and exams in order to achieve certification as a Registered Professional Appraiser (RPA). During each subsequent twenty-four-month period after certification, appraisers must complete an additional 30 hours of continuing education. Continuing education is in the form of IAAO, Texas Association of Assessing Officers (TAAO), Texas Association of Appraisal Districts (TAAD), in-house program offerings, and other approved Property Tax Assistance Division (PTAD) courses and seminars.

Failure to meet these minimum standards will result in a registrant losing their TDLR license and will also result in the removal of the employee from an appraiser position.

Additionally, all appraisal personnel receive extensive training in the data gathering and valuation processes. Standardized manuals are provided to ensure uniform and accurate data collection.

Supervisors and senior appraisal personnel provide on-the-job data collection training in the office and the reappraisal field area. Managers meet regularly with staff to introduce new procedures and regularly monitor appraisal activity to ensure that all personnel follow standardized appraisal methods and techniques.

Data

The district is responsible for establishing and maintaining approximately 860,943 real property and business personal property accounts covering 908.7 square miles within the DCAD's territorial boundaries. This data includes property characteristics, ownership, and exemption information. Property characteristic data on new construction is updated through an annual field effort; existing property data is maintained through a field and office review. Sales are routinely validated during an office review and a separate field effort when applicable; however, numerous sales are validated as part of the building permit process and annual reappraisal effort. General trends in employment, interest rates, new construction trends, and cost and market data are acquired through various sources, including internally generated questionnaires to buyers and sellers, university research centers, and market data centers and vendors.

The district has a Geographic Information System (GIS) that maintains maps and various layers of data, including aerial photography. The district's website makes a broad range of information available for public access, including detailed information on the appraisal process, property characteristics data, certified values, protests and appeal procedures, frequently asked questions, links to other government agencies, property maps, and a tax calendar. Downloadable files of related tax information and district forms, including exemption applications, business personal property renditions, and protest forms, are also available. An Online BPP Rendition System, Online Homestead Exemption Filing System, Online Tax Consultant Protest System, and Online Residential, Commercial, Business Personal Property Protest and Settlement System (uFile) have also been developed by DCAD.

Information Systems

The Information Technology Division maintains the district's data processing facility, software applications, and Internet website. The GIS Division will be responsible for maintaining the Geographical Information Systems within DCAD. The district operates under a Microsoft SQL Server relational database. The hardware is Intel Servers, NT Servers host the LAN, Internet, and document imaging; and

the user base is served by general-purpose Desktop and Server PC's, along with iPads for field appraisal data collection and valuation. The Geographic Information System software is ESRI products – ArcGIS Pro (version 3.4) and ArcGIS Enterprise (version 11.3). The District's Mass Appraisal Records System (MARS) is the District's software application that has incorporated its Computer Assisted Mass Appraisal system with iPad Technology, Digital Photography, GIS, and Image Workflow/Scanning.

Independent Performance Test

According to Chapter 5 of the TPTC and Section 403.302 of the Texas Government Code, the State Comptroller's Property Tax Assistance Division (PTAD) conducts a biennial property value study (PVS) of each Texas school district and each appraisal district unless the study reveals invalid findings, in which case the study is conducted every year until the school district receives valid findings.

The methodology used in the property value study includes stratified samples to improve sample representativeness and techniques or procedures for measuring uniformity. This study utilizes statistical analysis of sold properties (sale ratio studies) and appraisals of unsold properties (appraisal ratio studies) as a basis for assessment ratio reporting. For appraisal districts, the reported measures include median level of appraisal, coefficient of dispersion (COD), the percentage of properties within 10% of the median, the percentage of properties within 25% of the median, and price-related differential (PRD) for properties overall and by State category (i.e., categories A, B, C1, D and F1 are directly applicable to real property). There are 16 Independent School Districts (ISD) in Dallas CAD for which appraisal rolls are annually developed. The preliminary results of this study are released in January in the following appraisal year. The final results of this study are certified to the Education Commissioner of the Texas Education Agency (TEA) in the following July of each year. This outside (third-party) ratio study provides additional assistance to the CAD in determining areas of market activity or changing market conditions. DCAD also contracts with the University of Texas at Dallas to conduct an annual ratio study for Residential neighborhoods.

The Comptroller's Property Tax Assistance Division is also required to review each CAD's governance, taxpayer assistance, operating standards, appraisal standards, appraisal procedures, and appraisal methodology at least every two years. This review, referred to as the Methods and Assistance Program (MAP), will be conducted during the year in which a Property Value Study is not undertaken. The Comptroller is required to deliver a written report to the chief appraiser, the CAD board of directors, each superintendent, and board of trustees in school districts in the CAD concerning the MAP findings. DCAD had its first MAP review in 2011 and has had MAP reviews in 2013, 2015, 2017, 2019, 2021, 2023, and 2025. PTAD's Property Value Study (PVS) occurred in 2026 and will occur again in 2028, with another MAP review in 2027.

Management and appraisal staff members are also responsible for conducting ratio studies and comparative analysis to ensure accurate and equitable appraised values. The Quality Control Division also undertakes performance testing annually to ensure accuracy and uniformity.

Appraisal Activities

Appraisal Responsibilities

The appraisal staff is responsible for collecting and maintaining property characteristic data for classification and valuation. Accurate valuation of real and personal property by any method requires a physical description of personal property, land, and building characteristics. This appraisal activity is responsible for administering, planning, and coordinating all activities involving data collection and maintenance of all commercial, residential, and personal property types that are located within Dallas County. The data collection effort involves the field inspection of real and business personal property accounts, as well as data entry of all data collected into the existing information system. The goal is to periodically field inspect residential and commercial properties in Dallas County every six years. In homogeneous areas and areas where there is a high degree of confidence with our existing data, a six-year inspection cycle may not occur. The use of aerial photography and a periodic digital photography project may also be used in meeting this goal. Ultimately, meeting this goal is dependent on budgetary constraints.

Appraisal Resources

- **Personnel** - The appraisal activities consist of 94 appraisers and 10 appraisal support staff.
- **Data** - The data used by field appraisers includes the existing property characteristic information contained in MARS (Mass Appraisal Records System). The data is collected and input using iPads. Other data used includes maps, sales data, building permits, photos, actual cost, income, and expense information from properties.

Data

Data Collection/Validation

Data collection of real property involves maintaining data characteristics of the property in MARS (Mass Appraisal Records System). The information contained in MARS includes site characteristics, such as land size and topography, and improvement data, such as square feet of living area, year built, quality of construction, and condition. Commercial and Residential appraisers use Commercial and Residential appraisal manuals that establish uniform procedures for the correct listing of real property. All properties are coded according to these manuals, and the approaches to value are structured and calibrated based on this coding system. Appraisers use these manuals during their initial training and as a guide in the field inspection and valuation of properties. Data collection for business personal property also involves maintaining information in MARS. The type of business personal property information contained in MARS includes items such as business inventory, furniture and fixtures, machinery and equipment, cost, and location.

The appraisal manuals that are utilized by the appraisal staff are available in the district offices. Appraisal manuals can be located in the Customer Service Division for public inspection. If a property owner/agent wants a copy of the divisional appraisal manual or DCAD's Mass Appraisal Report, Customer Service will handle this request. Management staff updates the divisional manuals and Mass Appraisal Report annually.

Sources of Data

The sources of data collection are through the new construction field efforts, reappraisal, hearings, sales processing, newspapers and publications, property owner correspondence, and inquiries received via the Internet and customer service. A principal source of data comes from building permits received from the cities that require property owners to take out a building permit. Where available, permits are received electronically and loaded into MARS. Otherwise, paper permits are received and matched manually with the property's tax account number by the appraisal support staff and then updated and scanned into MARS.

Data review of entire neighborhoods is generally a good source for data collection. Appraisers typically review entire neighborhoods to ensure the accuracy of the data and identify properties that need to be updated during the permit and reappraisal effort. During Sales Processing, property characteristics are verified as well. In Residential and Commercial, the sales validation effort involves office review and verification, and when needed, on-site inspection by appraisers to verify the accuracy of the property characteristics. Sale surveys are also mailed out to the grantee and grantor on all undisclosed Commercial sales and for certain undisclosed Residential sales.

Property owners are one of the best sources for identifying incorrect data that generates a field check. Frequently, the property owner provides sufficient enough data to allow correction of records without having to send an appraiser on-site. As the district has increased the amount of information available on the Internet, property owners' requests to correct data inconsistencies have also increased. For the property owner without access to the Internet, letters are often submitted notifying the district of inaccurate data. Properties identified in this manner are added to a work file and inspected at the earliest opportunity.

Data Collection Procedures

Field data collection requires organization, planning, and supervision of the field effort. Data collection procedures have been established for Residential, Commercial, and Business Personal Property (BPP). Appraisers have territorial assignments throughout Dallas County to conduct field inspections. Appraisers conduct field inspections and record information in MARS via their iPads.

The quality of the data used is extremely important in establishing accurate values of taxable property. While production standards are established and upheld for the various field activities, the quality of data is emphasized as the goal and responsibility of each appraiser. New appraisers are trained in the specifics of data collection outlined in their divisional manual. Appraisers are routinely retrained in listing procedures prior to major field projects such as new construction and reappraisal. A quality control process exists through supervisory review of the work being performed by the appraisers. Supervisors are charged with the responsibility of ensuring that appraisers follow listing procedures, identify training issues, and provide uniform training throughout the year. When applicable, Senior and Territorial Appraisers will also assist with the quality control of the appraisal product.

Data Maintenance

The field appraiser is responsible for the data entry of his/her fieldwork directly into MARS via his/her iPad. This responsibility includes not only data entry, but also quality assurance. The date of last inspection, the extent of that inspection, and the appraiser responsible are listed on the account record.

Most on-site inspections of properties are due primarily to the issuance of a current city building permit or the annual reappraisal effort.

Office reviews are also completed on properties where information has been received from the property owner, taxing jurisdictions, or other sources, and a physical on-site inspection is deemed not to be imperative to correct the property data or characteristics. In many instances, aerial photographs and digital photographs are used to verify property characteristics. When the property data is verified in this manner, field inspections are not required.

Quality Control

Quality control of the appraisal product occurs throughout the year by supervisory and management staff in the form of monitoring valuation reports, ratio studies, audit trail (value change) reports, file maintenance reports, and other customized reports and queries development in the Mass Appraisal Records System (MARS). Field checks by supervisory staff and senior appraisal staff members are conducted throughout the appraisal field cycle on an annual basis to ensure accurate appraisal records and compliance with standard operating procedures as detailed in the Division's Appraisal Manual.

Performance Test

Management and appraisal staff members are also responsible for conducting ratio studies and comparative analysis to ensure accurate and equitable appraised values. The Quality Control Division also undertakes Performance Testing annually to ensure accuracy and uniformity. The Quality Control Division, independent of the Appraisal Divisions (Residential, Commercial, Business Personal Property), annually undertakes a final performance analysis for all Divisions to ensure value accuracy, equality, and uniformity.

RESIDENTIAL VALUATION PROCESS

Scope of Responsibility

The Residential Division is responsible for establishing the fair market value of all residential accounts as of January 1 of every year. There are approximately 682,960 residential properties within Dallas County.

Appraisal Resources

- **Personnel** - The Residential appraisal staff consists of 48 appraisers and 2 appraisal support staff.
- **Data** - A common set of data characteristics for each residential property in Dallas County is collected and updated by Residential appraisers and maintained in the various MARS (Mass Appraisal Records System) modules. The property characteristic data drives the computer-assisted mass appraisal (CAMA) approach to valuation. Property data attribute information is verified and corrected based on on-site inspections as well as office review using digital photographs and aerial photography. The following data attribute information is captured on each appraisal record: Land Value, Zoning, Property Classification Use Code, Building Class, Desirability rating, Quality Design factor, Actual Year Built, Effective Year Built, Living Area, Additional Improvements, Total Living Area, Foundation, Basement, Heating, Roof Type, Roofing, Garage, Frame, Exterior Walls, Fireplace, Bedrooms, Wet bars, Kitchens, Full Baths, Half Baths, Remodel Year, Air Conditioning, Level Of Finish-out, Deck, Security, Porch, Spa, Fence, Sprinklers, Landscaping, Wooded Lot, Quiet Street, Special Features, and Percent Complete.

Area and Highest and Best Use Analysis

Regional Analysis

Data on regional economic forces such as demographic patterns, regional location factors, employment and income patterns, general trends in real property prices and rents, interest rate trends, availability of vacant land, and construction trends and costs are collected from private vendors and public sources and provide the field appraiser with a current economic outlook on the real estate market. Information is gleaned from real estate publications and other third party publications and resources, including seminars attended by staff members.

Neighborhood and Market Analysis

Neighborhood analysis involves the examination of how physical, economic, governmental, and social forces and other influences affect property values. The effects of these forces are also used to identify, classify, and stratify comparable properties into smaller, manageable subsets of the universe of properties known as neighborhoods. Residential model development and analysis are typically conducted at the neighborhood level. A residential neighborhood boundary is typically within the same independent school district, as a motivating factor for many residential home buyers is the school district itself.

The first step in neighborhood analysis is the identification of a group of properties that share certain

common traits. A "neighborhood" for analysis purposes is defined as the largest geographic grouping of properties where the property's physical, economic, governmental, and social forces are generally similar and uniform. Geographic stratification accommodates the local supply and demand factors that vary across a jurisdiction. Once a neighborhood has been identified, the next step is to define its boundaries. This process is known as "delineation". Some factors used in neighborhood delineation include location, sales price range, lot size, age of dwelling, quality of construction and condition of dwellings, square footage of living area, and story height. Delineation involves the physical drawing of neighborhood boundary lines on a map. Part of neighborhood analysis is the consideration of discernible patterns of growth that influence a neighborhood's individual market. Few neighborhoods are fixed in character. Each neighborhood may be characterized as being in a stage of growth, stability, or decline. The growth period is a time of development and construction. As new neighborhoods in a community are developed, they compete with existing neighborhoods. An added supply of new homes tends to induce population shifts from older homes to newer homes. In the period of stability, or equilibrium, the forces of supply and demand are about equal. Generally, in the stage of equilibrium, older neighborhoods can be more desirable due to their stability of residential character and proximity to the workplace and other community facilities. The period of decline reflects diminishing demand or desirability. During decline, general property use may change from residential to a mix of residential and commercial uses. Declining neighborhoods may also experience renewal, reorganization, rebuilding, or restoration, which promotes increased demand and economic desirability.

Neighborhood identification and delineation are the cornerstone of the residential valuation system at the district. When delineating neighborhood boundaries, a major factor is to determine a defined area in which homes compete for each other for resale purposes. All the residential analysis work done in association with the residential valuation process is neighborhood specific. Neighborhoods are driven and delineated based on observable aspects of homogeneity. Neighborhood delineation is periodically reviewed to determine if further neighborhood delineation is warranted. Whereas neighborhoods involve similar properties in the same location, a neighborhood group is simply defined as similar properties in similar locations. Each residential neighborhood is assigned to a neighborhood group based on observable aspects of homogeneity between neighborhoods. Neighborhood grouping is highly beneficial in cost-derived areas of limited or no sales, or for use in direct sales comparison analysis. Neighborhood groups, or clustered neighborhoods, increase the available market data by linking comparable properties outside a given neighborhood. Sales ratio analysis, discussed below, is performed on a neighborhood basis, and in soft sale areas on a neighborhood group basis. For estate and unique properties, the neighborhood concept may not always be applicable if better comparables reside outside the subject's immediate neighborhood. For truly unique properties, a larger sub-market may be appropriate.

Highest and Best Use Analysis

The highest and best use of property is the reasonable and probable use that supports the highest present value as of the date of the appraisal. The highest and best use must be physically possible, legal, financially feasible, and productive to its maximum. The highest and best use of residential property is normally its current use. This is due in part to the fact that residential development, in many areas, through the use of deed restrictions and zoning, precludes other land uses. Residential valuation undertakes reassessment of the highest and best use in transition areas and areas of mixed residential and commercial use. In transition areas with ongoing gentrification, the appraiser reviews the existing residential property use and makes a determination regarding the highest and best use. Once the conclusion is made that the

highest and best use remains residential, further highest and best use analysis is done to decide the type of residential use on a neighborhood basis. As an example, it may be determined in a transition area that older, non-remodeled homes are economic mis-improvements, and the highest and best use of such property is the construction of new dwellings. In areas of mixed residential and commercial use, the appraiser reviews properties in these areas on a periodic basis to determine if changes in the real estate market require reassessment of the highest and best use of a select population of properties.

Effective January 1, 2010, the market value of a residential homestead is to be solely determined by its value as a residential homestead, regardless of its highest and best use. DCAD will value residential homestead properties based on their current use, using residential comparables to support a total market value.

Valuation and Model Development

Cost Schedules

Residential parcels in the district are valued from building class cost schedules using a comparative unit method. DCAD's residential base building class cost schedules have been customized to fit Dallas County's local residential building and labor market. DCAD calibrates each building class cost table at the neighborhood level during the reappraisal effort to ensure equitable and accurate appraised values. Review and revision of the residential base building class cost schedules occur annually and are adjusted as needed. These building class costs are compared against Marshall and Swift, a nationally recognized cost estimator, and local market cost data typically obtained during the building permit and appraisal review board processes. Mobile Homes cost schedules are derived annually from Marshall and Swift's Cost Handbook.

Sales Information

A sales file for sales data is maintained in MARS as well as in other data files, such as Access and Excel, when customized queries are needed. Residential improved and vacant sales are collected from a variety of sources, including surveys sent to buyers and sellers, renditions, protest hearings, Title companies, builders, fee appraisers, and realtors. Sale price, sale date, sale type, and source are recorded. Sales are used for ratio analysis, neighborhood building class model development, and will be provided to the property owner if the sale was used in the valuation of the property owner's property, but the source of the sale always remains confidential.

Land Analysis

Residential land analysis is conducted by each of the residential appraisers. The appraisers develop a base lot value and can price land on a flat-price, square foot, acreage, or front foot basis. Land market adjustments may be established for factors such as view, shape, size, topography, utility easements, greenbelts, major thoroughfares, among others. In lieu of land sale information, appraisers may use abstraction and allocation methods to ensure that the land values created best reflect the contributory market value of the land to the overall property value.

Statistical Analysis

The residential appraisal staff performs statistical analysis annually to evaluate whether values are equitable and consistent with the market. Ratio studies are conducted on each of the approximately 5,301 residential neighborhoods to determine the level of assessment and whether the neighborhood and associated building classes are in need of reappraisal. The level of appraised values is determined by the weighted mean for individual properties within a neighborhood and also by building class within a neighborhood. Every neighborhood is reviewed annually by the supervisory staff undertaking the sales ratio analysis process. The first phase involves neighborhood ratio studies that compare the recent sales prices of neighborhood properties to the appraised values of these sold properties. This set of ratio studies affords the staff an excellent means of judging the present level of appraised value within a given neighborhood, independent school district, and city.

The University of Texas at Dallas (UTD) also conducts an annual regression and census ratio analysis by neighborhood and Independent School District (ISD) to determine the level of assessment within these market areas. The UTD Study, in conjunction with in-house ratio analysis, is used to target neighborhoods in need of reappraisal for a given appraisal year. Ratio analysis targeting neighborhoods for reappraisal typically occurs in October, January and March of each tax year.

Market Adjustment or Trending Factors

Neighborhood, or market adjustment, factors are developed from appraisal statistics provided from ratio studies and are used to ensure that estimated values are consistent with the market. The district's primary approach to the valuation of residential properties uses a hybrid cost-sales comparison approach. This type of approach accounts for neighborhood market influences not specified in the base building class cost tables.

The following equation denotes the hybrid model used:

$$MV = LV + ((RCN \times BCLF) - D)$$

Whereas the market value (MV) equals land value (LV) plus the replacement cost new (RCN) times the neighborhood building class location factor (BCLF) less depreciation (D). As the cost approach separately estimates both land and building values and uses depreciated replacement costs, which reflect only the supply side of the market, it is expected that adjustments to the cost values are needed to bring the level of appraisal to an acceptable standard. Therefore, market, or building class location factors are applied uniformly by building class by neighborhood to ensure equitable and accurate market values within these market areas. The MARS Neighborhood Analysis module is where the appraiser undertakes these calculations and documents the neighborhood trends and findings for the given reappraisal effort.

If a neighborhood is to be updated, the appraiser uses a sale ratio that compares recent sales prices of properties within a delineated neighborhood by building class with the property's actual cost value. The calculated ratio derived from the sum of the sold properties' cost value divided by the sum of the sales prices by building class indicates each neighborhood's building class level of value based on the unadjusted cost value for the sold properties within that building class range. A common building class location factor is then calculated to appraise the sold properties within that building class range at 100%

of market value. The calculated building class location factor is then applied to both the sold and unsold properties within that neighborhood to ensure equitable and accurate market values. This market adjustment factor or building class location factor is needed to trend the values obtained through the cost approach closer to the actual market, evidenced by recent sales prices within a given neighborhood. The sales used to determine the building class location factor will reflect the market influences for a given building class within a neighborhood, producing a more representative and supportable indication of value. The building class location factor is applied uniformly to all similar class properties within the neighborhood. Once the building class location factor(s) are applied for a given neighborhood, the appraiser reviews the final neighborhood's building class ratio and value reviews the neighborhood accounts proposed market values to ensure accurate and equitable market values. This value review process may occur in the office or field if needed. GIS, aerial photography, digital photography, and other MARS functionality are used during the neighborhood value review process.

Treatment of Residence Homesteads

Beginning in 1998, per Texas Property Tax Code Section 23.23, the State of Texas implemented a constitutional classification scheme concerning the appraisal of residential property that receives a residence homestead exemption. Under the new law, beginning in the second year a property receives a homestead exemption, increases in the value of that property are "capped." The value for tax purposes (appraised value) of a qualified residence homestead will be the LESSER of:

- The market value; or
- The preceding year's appraised value;
PLUS 10 percent;
PLUS the value of any improvements added since the last re-appraisal.

Values of capped properties must be recomputed annually. If a capped property sells, the cap automatically expires as of January 1st of the following year. The MARS Capped Homestead module is where these calculations take place programmatically.

Treatment of Real Property Non Homestead Exemption Property

Effective January 1, 2024, per Texas Property Code Section 23.231, all real property accounts without a homestead exemption and an ownership change within the preceding 12 months, and whose market value is \$5,000,000 or less, will now be subject to a twenty percent (20%) appraisal cap valuation (circuit breaker).

- The market value; or
- The preceding year's appraised value;
PLUS 20 percent;
PLUS the value of any improvements added since the last re-appraisal.

Note: The Texas Property Tax Code, Section 23.231, was enacted as a three-year pilot program that is due to sunset at the end of the 2026 tax year.

Value Review Procedures

Building Permit Review

Building permits are received monthly from each city and are then updated to the applicable account so a physical inspection and/or an office review can take place for the current appraisal year. All significant value related building permits issued from January 1, 2026 through December 31, 2026 associated with an account will be inspected and reappraised for the 2027 Appraisal Year. All significant value related building permits issued from January 1, 2027 through December 31, 2027 associated with an account will be inspected and reappraised for the 2028 Appraisal Year. Also, those accounts that were partially complete as of January 1, 2026 and January 1, 2027 will be re-inspected for 2027 and 2028 respectively. Any property that has new construction activity as of January 1 and was not 100% complete will be targeted for reappraisal the next appraisal year. This also includes those properties whereby a building permit was issued prior to January 1, but no new construction activity had taken place as of January 1 of the current appraisal year. Property data attribute information is verified and corrected based on on-site inspections as well as office review using digital photographs and aerial photography.

Field Review

Management and appraisal staff members also identify individual properties in need of field or office review through sales ratio analysis. Sold properties with a high variance in sales ratios are field reviewed to check for the accuracy of data characteristics. Additionally, the appraiser frequently field reviews subjective data items such as quality of construction, condition, and physical, functional, and economic obsolescence, factors contributing significantly to the market value of the property. After preliminary estimates of value have been determined in targeted areas, the appraiser value reviews the results. During this review, the appraiser is able to physically inspect both sold properties and unsold properties for comparability and consistency of values. GIS, aerial photography, digital photography, and other MARS functionality are also used during the value review process.

Neighborhoods targeted for reappraisal are identified through the University of Texas at Dallas (UTD) Ratio Study in conjunction with annual in-house Neighborhood Ratio Studies conducted during October, January, and March of every appraisal year. Also included in the annual reappraisal effort are all mobile homes, any new subdivisions, and where an inspection and/or office review was undertaken to correct data on an account that wasn't a result of a building permit being issued or wasn't a part of the annual neighborhood reappraisal effort. Account Reviews are typically identified from third party inquiries, the sales qualification process, re-inspections initiated during the Appraisal Review Board process, and/or a general review of accounts in non-reappraisal neighborhoods.

Office Review

Given the ample resources and time required to conduct a routine field review of all properties, homogeneous properties consisting of tract housing with a low variance in sales ratios and other properties having a recent field inspection date are value reviewed in the office. Valuation reports comparing previous values against proposed and final values are generated for all residential improved and vacant properties. GIS, aerial photography, digital photography, and other MARS functionality are also used during the value review process.

Neighborhood Reappraisal Value Review

A Residential Neighborhood Value Report is reviewed by appraisal staff members for all neighborhoods targeted during the annual reappraisal effort. The Residential Neighborhood Value Review report provides the dollar amount and percentage of value difference are noted for each property within a delineated neighborhood, allowing the appraiser to identify, research, and resolve value anomalies before final appraised values are released. Previous values resulting from a hearing protest are individually reviewed to determine if the value remains appropriate for the current year. Once the appraiser is satisfied with the level and uniformity of value for each neighborhood within his/her area of responsibility, the estimates of values will be reviewed and approved by a supervisor for appraisal notification purposes.

Residential Neighborhoods

A listing of all Residential Neighborhoods has been provided in Appendix A and the Residential Neighborhood Map in Appendix C. Based on the Residential Division's pending in-house ratio studies to be conducted in October and January 2026/2027 and 2027/2028 respectively, any neighborhood whose ratio is typically less than 95% or greater than 105% will be targeted for reappraisal, assuming sufficient and adequate sales data. A complete listing of those neighborhoods reappraised in 2027 and 2028 will be available for review on April 15, 2027, and April 15, 2028, respectively.

Three Approaches to Value

The Mass Appraisal Records System (MARS) utilized by the Residential Division of the Dallas Central Appraisal District gives the ability to appraise property by all three approaches to value: Cost Approach, Sales Approach, and Income Approach.

Cost Approach

The Cost Approach is the first approach to value used by DCAD. For residential properties, there will always be a Cost Approach to value established on an account. The Cost Approach involves calculating the replacement cost new for each home and then deducting the appropriate amount for depreciation (effective age and condition, desirability, and utility). The result of this process is the sum of the depreciated value of the house and any other buildings or amenities on the property. The land value is then added back to the total depreciated value of all improvements established on account to arrive at the estimated market value of the account via the Cost Approach. The Cost Approach is the primary valuation approach used when undertaking the reappraisal of a neighborhood. During the reappraisal effort, the Cost Approach is modified based on recent sales information by building class by neighborhood to arrive at the estimated market value. Equity is achieved by applying the same location factor for all properties with the same building classification within a given neighborhood. The Cost Approach may be the preferred method used during the informal meetings with a property owner or authorized agent and at the formal Appraisal Review Board hearing if the residential property is truly unique and does not have comparable sales information.

Sales Approach

The Sales Approach compares the property being appraised with similar properties that have recently sold.

The characteristics of the sold properties are analyzed for their similarity to those of the subject property. Because no two properties are exactly alike, the prices of the sold properties must be adjusted to the subject property to account for any differences between the properties and the subject property. For instance, if the sold property had a pool and the subject property does not, an adjustment would be warranted. The newly adjusted sale prices give a direct reflection of the indicated market value of the unsold subject property. The sales approach can be used to value any property, whether improved or vacant. The Sales Approach is typically utilized during informal meetings with property owners or authorized agents and at the formal Appraisal Review Board hearing when analyzing a residential property's estimated market value.

Income Approach

The Income Approach is used in very limited instances for residential properties. It is typically the preferred method for income producing Commercial properties.

When reviewing a residential property's estimated market value during the informal and formal Appraisal Review Board process, the Sales Approach is typically the preferred method.

Equal and Uniform Analysis

An equal and uniform analysis can be undertaken on any given property. For Residential property, a sample size of approximately seven properties is typically used, whereby each appraisal comparable is appropriately adjusted when compared to the subject property based on land valuation differences, additional improvement differences, and/or physical attribute differences.

Performance Tests

Sales Ratio Studies

The primary analytical tool used by the appraisers to measure and improve performance is the ratio study. The district ensures that the appraised values that it produces meet the standards of accuracy in several ways. Overall sales ratios can be generated by building class, by neighborhood, by city, and by ISD to allow the appraiser to review general market trends within their area of responsibility and provide an indication of market appreciation over a specified period of time. These sales ratio statistics are available under the MARS Reappraisal Analysis module and typically cover a 12 month time frame.

The Quality Control Division also undertakes performance testing annually to ensure accuracy and uniformity as required by USPAP and State Law.

Residential Reappraisal Plan Overview

The Residential Division's 2027 and 2028 Reappraisal Plan consist of two primary tasks – Fixed Tasks and Variable Tasks. Fixed tasks are those tasks required to be done on an annual basis and are associated with building permits received on a monthly basis from the thirty-one cities within Dallas County. Variable tasks are those tasks associated with our annual reappraisal effort. The Reappraisal Plan account projections for 2027 and 2028 below are based on past historical permit and reappraisal activity.

**RESIDENTIAL DIVISION
2027 REAPPRAISAL PLAN**

FIXED TASKS:

NEW CONSTRUCTION:	ACCOUNTS
Permit Inspection	45,000
Permit Remeasure	6,250
Permit Remeasure Complex	150
Permit Office Review	2,000

VARIABLE TASKS:

REAPPRAISAL:	
Reappraisal Office Review	300,000
Reappraisal Inspection	20,000
Reappraisal Remeasure	150
Mobile Home Reappraisal	13,700
Neighborhood Analysis	2,800

ACCOUNT REVIEW:

Account Office Review	40,000
Account Inspection	1,000
Account Remeasure	100

**RESIDENTIAL DIVISION
2028 REAPPRAISAL PLAN**

FIXED TASKS:

NEW CONSTRUCTION:	ACCOUNTS
Permit Inspection	50,000
Permit Remeasure	7,000
Permit Remeasure Complex	175
Permit Office Review	2,500

VARIABLE TASKS:

REAPPRAISAL:	
Reappraisal Office Review	400,000
Reappraisal Inspection	20,000
Reappraisal Remeasure	200
Mobile Home Reappraisal	14,500
Neighborhood Analysis	3,200

ACCOUNT REVIEW:

Account Office Review	42,500
Account Inspection	2,000
Account Remeasure	150

Residential Division Fixed Tasks Definitions

Permit Office Review: Reappraising an account that has a building permit issued, and the appraiser is working the permit/account in the office, and/or is not physically at the site.

Permit Inspect: Reappraising an account that has a building permit issued, and the appraiser is physically at the site location, and a measurement of the structure(s) is not required or done.

Permit Remeasure: Reappraising an account that has a building permit issued, and the appraiser is physically at the site, and a measurement of the structure(s) is required and done. The total square footage of the structure is less than 8,000 square feet.

Permit Remeasure Complex: Reappraising an account that has a building permit issued, and the appraiser is physically at the site, and a measurement of the structure(s) is required and done. The total square footage of the structure is greater than 8,000 square feet.

Residential Divisions Variable Tasks Definitions

Reappraisal Office Review: Reappraising an account during the annual neighborhood reappraisal effort while in the office and/or not physically at the site.

Reappraisal Inspect: Reappraising an account during the annual neighborhood reappraisal effort, while physically at the site, and a measurement is not required nor done.

Reappraisal Remeasure: Reappraising an account during the neighborhood reappraisal, while physically at the site, and a measurement is required and done.

Mobile Home Reappraisal: Reappraising a mobile home account.

Reappraisal Neighborhood Analysis: Updating the Neighborhood Overview and undertaking Location Factor Analysis on a neighborhood targeted for the annual neighborhood reappraisal effort.

Account Review Office Review: Reappraising an account in the office and/or not physically at the site, which does not involve a building permit or is not associated with the annual neighborhood reappraisal effort.

Account Review Inspect: Reappraising an account while physically at the site, which does not involve a building permit or is not associated with the annual neighborhood reappraisal effort, and a measurement is not required nor done.

Account Review Remeasure: Reappraising an account while physically at the site, which does not involve a building permit or is not associated with the annual neighborhood reappraisal effort, and a measurement is required and done.

COMMERCIAL VALUATION PROCESS

Scope of Responsibility

The Commercial Division is responsible for establishing the fair market value of all commercial accounts as of January 1 of every year. There are approximately 76,236 commercial properties within Dallas County.

Appraisal Resources

- **Personnel** - The Commercial appraisal staff consists of 24 appraisers and 2 appraisal support staff.
- **Data** - A common set of data characteristics for each commercial property in Dallas County is collected and updated by commercial appraisers and maintained in the various MARS (Mass Appraisal Records System) modules. The property characteristic data drives the computer-assisted mass appraisal (CAMA) approach to valuation. Property data attribute information is verified and corrected based on on-site inspections and during office review. During office review, tools such as digital photographs, aerial photography, and third-party data sources are used. The following data attribute information is captured on each appraisal record where applicable: Land Value, Property Classification Code, Building Class, Construction Type/Quality/Condition Codes, Gross Building Area, Net Leasable Area, Actual Year Built, Effective Age, Remodel Year, Number of Stories, Story Height, Number of Buildings, Foundation Type, Basement, Overhead Doors, Finish-out Quality, Percent Finish-out, Framework, Exterior Walls, Roof Type, Roof Structure, Roofing, Heating, A/C, Interior Walls, Floors, Restrooms, Rail Access, Average Unit Size, and Dock High Construction.

In addition to the physical characteristics noted above, data captured for income producing properties includes Net Leasable Area, Gross Rent, Rent Adjustments, Adjusted Rent, Plus Electric Charges, Parking Income, Percent Vacancy, Other Income, Expenses, Cap Rates, Loaded Cap Rates, Lease-up Expenses, Deferred Maintenance Costs, and Excess Land Value Contribution.

The data used by the commercial appraiser also includes verified sales of vacant land and improved properties, and the pertinent data obtained from each (sales price levels, capitalization rates, income multipliers, equity dividend rates, marketing period, etc.). Other data used by the appraiser includes actual income and expense data (typically obtained through the hearings process), actual contract rental data, leasing information (commissions, tenant finish, length of terms, etc.), and actual construction cost data. In addition to the actual data obtained from specific properties, market data publications and informational databases are also reviewed to provide additional support for market trends.

Market Area and Highest and Best Use Analysis

Regional Analysis

Data on regional economic forces such as demographic patterns, regional location factors, employment and income patterns, general trends in real property prices and rents, interest rate trends, availability of

vacant land, and construction trends and costs are collected from private vendors and public sources and provide the field appraiser with a current economic outlook on the real estate market. Information is gleaned from real estate publications and other third-party publications and resources, including seminars attended by staff members.

Neighborhood Analysis (Land Market Area & Improved Market Area)

Neighborhood analysis involves the examination of how physical, economic, governmental, and social forces and other influences affect property values. The effects of these forces are also used to identify, classify, and organize comparable properties into smaller, manageable subsets of the universe of properties known as Land Market Areas and Improved Market Areas. In the mass appraisal of commercial properties, these subsets of a universe of properties are generally referred to as land market areas (LMA's) and improved market areas (IMA's).

Economic areas and/or Improved Market Areas (IMA's) are defined by each of the improved property use types (apartment, office, retail, warehouse, industrial, and special use) based upon an analysis of similar economic or market forces. These include, but are not limited to, similarities in rental rates, classification of projects (known as building class by area commercial market experts), date of construction, overall market activity, or other pertinent influences. Improved market area identification and delineation by each major property use type is the benchmark of the commercial valuation system. All income model valuations (income approach to value estimates) are improved market area (IMA) specific. Improved market areas are periodically reviewed to determine if re-delineation is required. The geographic boundaries, as well as income, occupancy, and expense levels, and capitalization rates by age within each economic area for all commercial use types and their corresponding income model may be found in the Commercial Mass Appraisal Records System (MARS).

Highest and Best Use Analysis

The highest and best use is the most reasonable and probable use that generates the highest present value of the real estate as of the date of valuation. The highest and best use of any given property must be physically possible, legally permissible, financially feasible, and maximally productive. For improved properties, the highest and best use is evaluated as improved and as if the site were still vacant. This assists in determining if the existing improvements have a transitional use, interim use, nonconforming use, multiple uses, speculative use, excess land, or a different optimum use if the site were vacant. For vacant tracts of land within this jurisdiction, the highest and best use is considered speculative based on the surrounding land uses. Improved properties reflect a wide variety of highest and best uses, which include, but are not limited to: office, retail, apartment, warehouse, light industrial, special purpose, or interim uses. In many instances, the property's current use is the same as its highest and best use. This analysis ensures that an accurate estimate of market value (sometimes referred to as value in exchange) is derived.

Data

Data Collection Procedures

The primary manual pertinent to data collection and documentation is the Commercial Appraisal Manual.

This manual is continually updated, providing a uniform system of itemizing the multitude of components and/or characteristics associated with a given property. All commercial property located in Dallas County is coded according to this manual, with the data being maintained in the various MARS modules (Ownership, Land, Physical, etc.).

Sales data is captured in DCAD's sales file database after the sale has been researched, verified, and quality controlled by a Commercial appraisal staff member. The sales database is used by the Dallas CAD appraisers during the appraisal and appraisal review board processes and is maintained in the MARS Sales Processing module.

Income and expense data are also collected from data received during the appraisal review process and from outside sources, and are used primarily for Income Model Development for the various property types. Income and expense data are maintained in the MARS Income and Expense Processing module.

Sources of Data

In terms of commercial sales data, Dallas CAD receives a copy of the deeds recorded in Dallas County that convey commercially classed properties. Other sources of sale data include the hearings process and local, regional and national real estate and financial publications, Real Capital Analytics database, LoopNet sales database, TREPP database, and the CoStar Comps sales database.

For those properties involved in a transfer of commercial ownership, a sale file is produced which begins the research and verification process. If DCAD does not have a high degree of confidence that the sales information being provided is accurate, then a sales file will not be created until confirmation is established from the parties involved in the transaction. The initial step in sales verification involves a computer-generated questionnaire, which is mailed to both parties in the transaction (Grantor and Grantee). If a questionnaire is answered and returned, the documented responses are recorded into the computerized sales database system. If no information is provided, verification may be attempted via phone calls to both parties. If the sales information is still not obtained, other sources may be contacted, such as the brokers involved in the sale, property managers, or commercial vendors. In other instances, sales verification is obtained from local appraisers or others who may have the desired information. Finally, closing statements are often provided during the hearing process. The actual closing statement is the most reliable and preferred method of sales verification. Sales data will be given to a property owner if the sale was used in the valuation of the property owner's property, but the source of the sale always remains confidential.

Actual property income and expense data remain confidential; however, the model pro forma income and expense components used in income models for a given property type and comparability code are not considered confidential.

Valuation and Model Development

Model development and calibration involves the process of periodically adjusting the mass appraisal formulas, tables and schedules to reflect current local market conditions. Once the models have undergone the specification process, adjustments can be made to reflect new construction procedures, materials and/or costs, which can vary from year to year. The basic structure of a mass appraisal model can be valid

over an extended period of time, with trending factors utilized for updating the data to the current market conditions. However, if at some point, the adjustment process becomes too involved, the model calibration technique can mandate new model specifications or a revised model structure. Due to the dynamic commercial marketplace in Dallas County, Income and Cost models are typically updated annually.

Cost Schedules

The cost approach to value is applied to all improved real property utilizing the comparative unit method. This methodology involves the utilization of national cost data reporting services as well as actual cost information on comparable properties whenever possible. Cost models are typically developed based on the Marshall Swift Valuation Service and review of local area trends. Cost models include the derivation of the replacement cost new (RCN) of all improvements. These include comparative base rates, per unit adjustments, and lump sum adjustments. This approach also employs the sales comparison approach in the valuation of the underlying land value. Time and location modifiers are necessary to adjust cost data to reflect conditions in a specific market and changes in costs over a period of time. Because a national cost service is used as a starting point for the cost models, location modifiers are necessary to adjust these base costs specifically for Dallas County. The Commercial Cost tables are reviewed annually and updated as needed.

Depreciation schedules are developed based on what is typical for each property type at that specific age. Depreciation schedules have been implemented for what is typical of each major class of commercial property by economic life categories. Schedules have been developed for improvements with 15, 20, 30, 40, 50, and 60 years of expected life. The actual and effective ages of improvements are noted in MARS. Effective age estimates are based on the utility of the improvements relative to where the improvement lies on the scale of its total economic life and its competitive position in the marketplace.

Market adjustment factors, such as external and/or functional obsolescence, can be applied if warranted. A depreciation calculation override can be used if the condition or effective age of a property varies from the norm by appropriately noting the physical condition and functional utility ratings on the property data characteristics. These adjustments are typically applied to a specific property type or location and can be developed via ratio studies or other market analyses. In certain instances, Commercial properties being valued using the Income Approach may not have an appropriate functional and/or economic obsolescence factor calculated in the Cost Approach, as the Income Approach value in itself will reflect these cost depreciation factors.

Land Analysis

Commercial land analysis is conducted by each of the commercial land appraisers. The appraisers develop a base lot value and can price land on a flat price, square foot, acreage, or front foot basis. Land market adjustments may be established for factors such as view, shape, size, topography, utility easements, greenbelts, and major thoroughfares, among others. In lieu of land sales information, appraisers may use abstraction and allocation methods to ensure that the land values created best reflect the contributory market value of the land to the overall property value. Undisclosed land sales are also targeted for analysis and reappraisal.

Income Models

The income approach to value is applied to those real properties that are typically viewed by market participants as “income producing”, and for which the income methodology is considered a leading value indicator. The first step in the income approach pertains to the estimation of market rent on a per-unit basis. This is derived primarily from actual rent data furnished by property owners and from local market study publications. This per-unit rental rate multiplied by the number of units results in the estimate of potential gross rent.

A vacancy and collection loss allowance is the next item to consider in the income approach. The projected vacancy and collection loss allowance is established from actual data furnished by property owners and from local market publications. This allowance accounts for periodic fluctuations in occupancy, both above and below an estimated stabilized level. The market derived stabilized vacancy and collection loss allowance is subtracted from the potential gross rent estimate to yield an effective gross rent.

Next, secondary income, plus electric income, is calculated as a percentage of stabilized effective gross rent. Secondary income represents parking income, escalations, reimbursements, and other miscellaneous income generated by the operations of real property. The secondary income estimate is derived from actual data collected and available market information. The secondary income estimate is then added to the effective gross rent to arrive at an effective gross income.

Allowable expenses and expense ratio estimates are based on a study of the local market, with the assumption of prudent management. An allowance for non-recoverable expenses, such as leasing costs and tenant improvements are included in the expenses. A non-recoverable expense represents costs that the owner pays to lease rental space. Different expense ratios are developed for different types of commercial property based on use. For instance, retail properties are most frequently leased on a triple-net basis, whereby the tenant is responsible for their pro-rata share of taxes, insurance, and common area maintenance. In comparison, a general office building is most often leased on a base-year expense stop. This lease type stipulates that the owner is responsible for all expenses incurred during the first year of the lease. However, in subsequent years, any amount in excess of the total per unit expenditure that occurred in the first year is the responsibility of the tenant. Under this scenario, if the total operating expense in year one (1) equates to \$8.00 per square foot, any increase in expense over \$8.00 per square foot throughout the remainder of the lease term would be the responsibility of the tenant. As a result, expense ratios are implemented based on the type of commercial property.

Another form of allowable expense is the replacement of short-lived items (such as roof or floor coverings, air conditioning, major mechanical equipment, or appliances) requiring expenditures of large lump sums. When these capital expenditures are analyzed for consistency and adjusted, they may be applied on an annualized basis as stabilized expenses. When performed according to local market practices by commercial property type, these expenses, when annualized, are known as replacement reserves.

Subtracting the allowable expenses (inclusive of non-recoverable expenses and replacement reserves) from the effective gross income yields an estimate of net operating income.

Rates and multipliers are used to convert income into an estimate of market value. These include income

multipliers, overall capitalization rates, and discount rates. Each of these is used in specific applications. Rates and multipliers also vary between property types, as well as by location, quality, condition, design, age, and other factors. Therefore, the application of the various rates and multipliers must be based on a thorough analysis of the market.

Capitalization analysis is used in the income approach models. This methodology involves the capitalization of net operating income as an indication of market value for a specific property. Capitalization rates, both overall (going-in) cap rates for the direct capitalization method and terminal cap rates for discounted cash flow analyses, can be derived from the market. Sales of improved properties from which actual income and expense data are obtained provide a very good indication of what a specific market participant requires from an investment at a specific point in time. In addition, overall capitalization rates can be derived from the built-up method (band-of-investment). This method relates to satisfying the market return requirements of both the debt and equity positions of a real estate investment. This information is obtained from real estate and financial publications.

Rent loss concessions are made on specific properties with vacancy problems. A rent loss concession accounts for the impact of lost rental income while the building is moving toward stabilized occupancy. The rent loss is calculated by multiplying the rental rate by the percentage difference between the property's stabilized occupancy and its actual occupancy. Build out allowances (for first-generation space or retrofit/second-generation space as appropriate) and leasing expenses are added to the rent loss estimate. The total adjusted loss from these real property operations is discounted using an acceptable risk rate. The discounted value (inclusive of rent loss due to extraordinary vacancy, build-out allowances, and leasing commissions) becomes the rent loss concession and is deducted from the value indication of the property at stabilized occupancy. A variation of this technique allows that for every year that the property's actual occupancy is less than stabilized occupancy, a rent loss deduction may be estimated.

Sales Comparison (Market) Approach

Although all three of the approaches to value are based on market data, the Sales Comparison Approach is most frequently referred to as the Market Approach. This approach is utilized not only for estimating land value but also in comparing sales of similarly improved properties to each parcel on the appraisal roll. As previously discussed in the Data section of this report, pertinent data from actual sales of properties, both vacant and improved, is pursued throughout the year in order to obtain relevant information that can be used in all aspects of valuation. Sales of similarly improved properties can provide a basis for the depreciation schedules in the Cost Approach, rates and multipliers used in the Income Approach, and as a direct comparison in the Sales Comparison Approach. Improved sales are also used in ratio studies, which afford the appraiser an excellent means of judging the present level and uniformity of the appraised values.

Statistical and Capitalization Analysis

Statistical analysis of final values is an essential component of the quality control and validation process. This methodology represents a comparison of the final value against the standard and provides a concise measurement of the appraisal performance. Statistical comparisons of many different standards are used, including sales of similar properties, the previous year's appraised value, audit trails, value change analysis, and sales ratio analysis.

The appraisers review every commercial property type annually through the sales ratio analysis process. The first phase involves ratio studies that compare the recent sales prices of properties to the appraised values of the sold properties. This set of ratio studies affords the appraiser an excellent means of judging the present level of appraised value and uniformity of the appraised values. The appraiser, based on the sales ratio statistics and designated parameters for valuation update, makes a preliminary decision as to whether the value level of a particular property type needs to be updated in an upcoming reappraisal, or whether the level of market value is at an acceptable level.

Potential gross rent estimates, occupancy levels, secondary income, allowable expenses (inclusive of non-recoverables and replacement reserves), net operating income, capitalization rate, and multipliers are continuously reviewed utilizing statistical procedures or measures. Income model conclusions are compared to actual information obtained on individual commercial properties during the hearings process, as well as information from published sources and area vendors such as CoStar Properties and TREPP.

Individual Review Procedures

Building Permit Review

Building permits are received monthly from each city and are then updated to the applicable account so a physical inspection and/or an office review can take place for the current appraisal year. All significant value related building permits issued from January 1, 2026, through December 31, 2026, associated with an account will be inspected and reappraised for the 2027 Appraisal Year. All significant value related building permits issued from January 1, 2027, through December 31, 2027, associated with an account will be inspected and reappraised for the 2028 Appraisal Year. Also, those accounts that were partially complete as of January 1, 2026, and January 1, 2027, will be re-inspected for 2027 and 2028 respectively. Any property that has new construction activity as of January 1 and was not 100% complete will be targeted for reappraisal the next appraisal year. This also includes those properties whereby a building permit was issued prior to January 1, but no new construction activity had taken place as of January 1 of the current appraisal year. Property data attribute information is verified and corrected based on on-site inspections as well as office review using digital photographs and aerial photography.

Field Review

The Commercial Division will typically reappraise at least 33% of all improved commercial accounts. In addition, 33% of all land accounts, whether vacant or improved, will be reappraised. Vacant land sales and improved property sales data will be reviewed and updated. In addition to the one-third reappraisal area, individual properties will be reviewed for equality. Markets showing significant activity will also be reviewed as time allows. Property types whose income and expense components and capitalization rates change will typically be reviewed and reappraised annually.

Improved Market Areas (IMA) and Land Market Areas (LMA) are targeted annually for reappraisal based on the market activity and changes between appraisal years within each of these markets. Accounts within these market areas are reviewed and are valued based on current market standards for the given appraisal year. Field inspections will typically occur on most properties identified in the IMA and LMA annual reappraisal effort. However, an office review in lieu of a field inspection may occur. When commercial appraisers conduct an office review, aerial photography, digital photographs, and access to third-party

market data for particular properties will be utilized. Accounts may also be reviewed based on property owner inquiries, third-party inquiries, the sales qualification process, and re-inspections initiated during the Appraisal Review Board process. The date of the last property review, the extent of that review, and the Dallas CAD appraiser responsible are listed in the MARS system.

Major income producing properties such as offices, retail, apartments, warehouses, and industrial are coded with an Improved Market Area (IMA) Code, defining the properties located within the same competing market area. There are approximately 70 office IMA's, 30 retail IMA's, 25 apartment IMA's, and 66 industrial IMA's identified within the appraisal district. Other IMA's also exist for other improved property types such as Fast Food/Restaurants, Tech/Data Centers, Auto Displays, etc. Each area is defined physically on a map for each respective market area and each respective property type. Income models are then developed for each class of comparability codes A, B, C, and occasionally D for the respective property types. Multiple competing Improved Market Areas are identified for each property type, and appropriate adjustments are made to the income models to reflect market influences observed affecting the market values both within and between said Improved Market Areas.

Office Review

Office reviews are typically limited by the data presented in final value reports. These reports summarize the pertinent data of each property, as well as comparing the previous values to the proposed value conclusions of the various approaches to value. These reports show proposed percentage value changes, income model attributes or overrides, economic factors (cost overrides), and special factors affecting the property valuation, such as new construction status, prior year litigation, and sales history.

Each appraiser's review is typically limited to properties in their area of responsibility by property type (improved) or geographic area (commercial vacant land). With preliminary estimates of value in these targeted areas, the appraisers test computer assisted values against their own appraisal judgment. Once the appraiser is satisfied with the level and uniformity of value for each commercial property within their area of responsibility, the estimates of value go to notice. Each parcel is subjected to the value parameters appropriate for its use type. Therefore, although the value estimates are determined in a computerized mass appraisal environment, value edits enable an individual parcel review of value anomalies before the estimate of value is released for appraisal notification.

Commercial Market Areas

A listing of all Commercial Improved Market Areas (IMA) and Land Market Areas (LMA) has been provided in Appendix D. Maps for the four major property types (Apartment, Industrial, Office, and Retail), as well as the LMA map, have been provided in Appendix E. A complete listing of those IMA's and LMA's reappraised in 2027 and 2028 will be available for review on April 15, 2027, and April 15, 2028, respectively.

Three Approaches to Value

The Mass Appraisal Records System (MARS) utilized by the Commercial Division of DCAD gives the ability to appraise property by all three approaches to value: Cost Approach, Sales Approach and Income Approach.

Cost Approach

The Cost Approach involves calculating the replacement cost new for each improvement and then deducting the appropriate amount of depreciation using age/life tables. The cost tables utilized by DCAD are initially derived from a recognized national cost publication service that develops data from actual case studies of sales and market value appraisals. DCAD further augments this data with its own cost information received during the appeals process through property cost of construction documentation and other cost sources. Based on the physical characteristics of a subject property, the DCAD cost tables generate a price per square foot that is applied to the subject improvement. The land value is then added to the depreciated value of the improvements to establish the estimated market value of the property via the Cost Approach. The DCAD building class cost tables are reviewed on an annual basis. The Cost Approach may be the preferred method used during informal meetings with property owners or authorized agents and at the formal Appraisal Review Board hearing if the Commercial property is a special use property, a new property recently constructed, lacks comparable sale information, and/or the property doesn't lend itself to the Income Approach to value.

Sales Approach

The Sales Approach involves determining the market value of a subject property by analyzing sales of comparable properties. DCAD collects sales from several sources, including sales surveys, market research companies, third-party appraisals, and local media. The bulk of sales information is received through the Appraisal Review Board process in the form of closing statements. The sales are processed and entered into the Commercial sales database. The Commercial MARS system then allows the appraiser to select the most comparable sale properties based on the subject's physical characteristics and market area. The sale prices can be further adjusted based on sale conditions, land size, improvement size, age, condition, and location. Finally, the appraiser may weigh the sales to arrive at an overall adjusted value per square foot or unit via the Sales Approach.

Income Approach

The Income Approach involves the capitalization of income into an estimation of market value. DCAD emphasizes the Direct Capitalization Approach, where a single year's net operating income is capitalized. Capitalization is the process of dividing the subject property's estimated net operating income by a market capitalization rate to arrive at an indicated estimate of market value via the Income Approach. Market income data is compared to the subject's property income data to ensure the subject's income data is reflective of market standards. If not, then market standards will be used for income calculations. DCAD collects income/expense statements and rent rolls from property owners throughout the year, but primarily during the appeals process. Rents, occupancies, expenses, secondary income, and net operating income for these properties are entered into the Commercial income database. Capitalization rates are then estimated based on the sale prices of properties and their respective net operating incomes. Outside sources, such as market research companies and real estate publications, are also referenced for data pertaining to income, expense, occupancy, and capitalization rates. DCAD analyzes this data to determine market income models for properties based on their physical characteristics and improved market areas. Actual income components for a property are then compared to market indicators, and an estimated market value is established via the Income Approach. The Income Approach is typically the preferred method when analyzing typical income producing Commercial properties (Retail, Office, Apartments, and

Industrial), not only during the reappraisal effort but also during the informal meetings with property owners or authorized agents and at the formal Appraisal Review Board hearing.

Equal and Uniform Analysis

An Equal and Uniform Module (Equity Module) has been developed to augment the three approaches to value. In this module, comparable properties are determined for a subject property. These comparables are then appropriately adjusted to the subject based on physical attributes. The median adjusted value per square foot, or per unit, of the comparables is selected and applied to the subject net leasable area, or number of units, to arrive at an equal and uniform value based on the selected comparables.

Performance Tests

The primary tool used to measure mass appraisal performance is the ratio study. A ratio study compares appraised values to market values. In a ratio study, market values are typically represented by sales prices (i.e., a sales ratio study). Independent, expert appraisals may also be used to represent market values in a ratio study (i.e., an appraisal ratio study). If there are not enough sales to provide necessary representativeness, independent appraisals can be used as indicators for market value. In addition, appraisal ratio studies can be used for properties statutorily not appraised at market value, but that reflect the use-value requirement. Examples of these are multi-family housing projects subject to subsidized rent provisions or other governmental guarantees as provided by legislative statutes (affordable housing) and agricultural lands to be appraised on the basis of productivity value. The Quality Control Division also undertakes performance testing annually to ensure accuracy and uniformity.

Sales Ratio Studies

Sales ratio studies are an integral part of establishing equitable and accurate market value estimates, and ultimately assessments for this taxing jurisdiction. The primary uses of sale ratio studies include the determination of a need for general reappraisal; prioritizing selected groups of property types for reappraisal; identification of potential problems with appraisal procedures; assist in market analyses; and calibrating models used to derive appraised values during valuation or reappraisal cycles. When undertaking sale ratio analysis for a given sale, the appraiser must consider the fee simple interest of the property as opposed to the lease fee interest of the property. When such a difference occurs during sales analysis, an adjusted sale amount will be made to the actual sale amount.

Overall sales ratios are generated by use type annually (or more often in specific areas) to allow appraisers to review general market trends in their area of responsibility. The appraisers utilize reports developed in MARS (Mass Appraisal Records System), our in-house CAMA appraisal system, to evaluate subsets of data by economic area or a specific and unique data item. In MARS, this may be customized and performed by building class, by age, or by several other economic or physical attributes. In many cases, field checks may be conducted to ensure the ratios produced are accurate, and the appraised values utilized are based on accurate property data characteristics. These ratio studies aid the appraisers by providing an indication of market activity by land market area and improved market area, and provide insight into changing market conditions (appreciation or depreciation).

Comparative Appraisal Analysis

The commercial appraiser performs an average unit value comparison in addition to a traditional ratio study. These studies are performed on commercially classed properties by property use type (such as apartment, office, retail, and warehouse usage or special use). The objective of this evaluation is to determine the appraisal performance of sold and unsold properties. Appraisers use their judgment and experience to analyze average unit prices of sales and average unit appraised values of the same parcels, and the comparison of average value changes of sold and unsold properties. These studies are conducted on substrata such as building class and on properties located within various improved market areas. In this way, overall appraisal performance is evaluated geographically, by specific property type, to discern whether sold parcels have been selectively appraised. When sold parcels and unsold parcels are appraised equally, the average unit values should be within a reasonable range, assuming they are similar in terms of physical characteristics and performance.

Mineral Valuations

Mineral valuations within Dallas County are conducted annually by the firm of Hugh L. Landrum Associates, Inc. The mineral valuation process is documented in the mineral appraisal manual provided by Hugh L. Landrum Associates, Inc.

Treatment of Real Property Non-Homestead Exemption Property

Effective January 1, 2024, per Texas Property Code Section 23.231, all real property accounts without a homestead exemption and an ownership change within the preceding 12 months, and whose market value is \$5,000,000 or less, will now be subject to a twenty percent (20%) appraisal cap valuation (circuit breaker).

- The market value; or
- The preceding year's appraised value;
PLUS 20 percent;
PLUS the value of any improvements added since the last re-appraisal.

Note: The Texas Property Tax Code, Section 23.231, was enacted as a three-year pilot program that is due to sunset at the end of the 2026 tax year.

Commercial Division Reappraisal Plan Overview

The following pages describe the Commercial Division's Reappraisal Plan. The Commercial Division's 2027 and 2028 Reappraisal Plan consists of two primary tasks – Fixed Tasks and Variable Tasks. Fixed tasks are those tasks required to be done on an annual basis and are associated with building permits received on a monthly basis from the thirty-one cities within Dallas County. Variable tasks are those tasks associated with our annual reappraisal effort. The Reappraisal Plan account projections for 2027 and 2028 below are based on past historical permit and reappraisal activity.

**COMMERCIAL DIVISION
2027 REAPPRAISAL PLAN**

FIXED TASKS:	ACCOUNTS
NEW CONSTRUCTION:	
Average	400
Major	90
Complex	155
Miscellaneous Permits	4,250
VARIABLE TASKS:	
LAND REAPPRAISAL:	
Land Pricing – Commercial	8,000
Land Inspections	1,400
IMPROVED REAPPRAISAL:	ACCOUNTS
Improved Inspections	3,000
Improved Value Review	26,000
Re-measure	125
Security	300
Mineral Accounts	4,500
Shared CAD Accounts	50
Sales Processing	1,200
Deed Research	5,500

**2028 REAPPRAISAL PLAN
COMMERCIAL DIVISION**

FIXED TASKS:	ACCOUNTS
NEW CONSTRUCTION:	
Average	400
Major	95
Complex	155
Miscellaneous Permits	4,300
VARIABLE TASKS:	
LAND REAPPRAISAL:	
Land Pricing – Commercial	8,000
Land Inspections	1,400
IMPROVED REAPPRAISAL:	ACCOUNTS
Improved Inspections	3,000
Improved Value Review	26,500
Re-measure	125
Security	300
Mineral Accounts	4,500
Shared CAD Accounts	50
Sale Processing	1,225
Deed Research	5,500

Commercial Division Fixed Tasks Definitions

New Construction

Average: The actual field inspection and on-site measuring, classification, and collection of physical characteristics of improvements with a value range of \$0 to \$2,499,999. Also, includes needed preparation and final value review.

Major: The actual field inspection and on-site measuring, classification, and collection of physical characteristics of improvements with a value range of \$2,500,000 to \$6,999,999. Also, includes needed preparation and final value review.

Complex: The actual field inspection and on-site measuring, classification, and collection of physical characteristics of improvements with a value range of \$7,000,000 and greater. Also, includes needed preparation and final value review.

Miscellaneous Permits: The actual field inspection of properties that do not require a measurement but do involve partial completions, no starts, remodels, finish-out, repairs, and demolition permits. Also, includes needed preparation and final value review.

Commercial Division Variable Tasks Definitions

Land Reappraisal

Land Pricing – (Commercial & Residential): The determination of land values for vacant and improved properties within a designated reappraisal area. This task also includes the determination of land values within selected active market areas that are not in reappraisal areas. Also, includes the development of land pricing schedules and Mass updating.

Land Inspections: The actual field inspection of vacant land accounts in a designated reappraisal area or selected active market area.

Improved Reappraisal

Improved Inspections: The actual field inspection of improved accounts in a designated reappraisal area. Classification, physical characteristics, and sketches are verified. This category may also include the review of recent photographs and ortho photography of improved accounts in a reappraisal area where time limitations prevent actual field inspection.

Improved (& Active Market) Value Review: The final determination of value for improved accounts in a designated reappraisal area based on an analysis of cost, comparable sales, and market income/expense data as well as an analysis of equity considerations. This also includes time spent reviewing various value reports as needed to ensure accuracy and uniformity of work. Analyze and rectify cost versus income approach discrepancies. Insure proper comparison code application for respective Improved Market Areas. Additionally, time is spent updating Improved Market Area (IMA) and Land Market Area (LMA) related information, such as boundary adjustments, sales data, pricing schemes, land

market adjustments, competing LMAs, overall market activity, transition trends, and other pertinent influences.

Major property type IMAs and certain LMAs will be reviewed for high market activity and will be designated for reappraisal based on analysis of cost, comparable sales, and market income/expense data, as well as an analysis of equity considerations. These areas may or may not be part of the overall one-third reappraisal effort.

Re-measure: The actual re-measure of improved properties in a designated reappraisal area due to an error in the sketch or net leasable area, or due to additions/demolitions since the last reappraisal.

Security: Fieldwork in high crime areas is conducted by two appraisers for safety purposes.

Miscellaneous

Mineral Accounts: Appraise all mineral accounts.

Shared CAD Accounts: Appraising accounts split by the county line.

Sale Processing: The retrieval and classification of sales documentation received during the year and the preparation of those sales in a manner that may be entered into the Commercial sales file.

Deed Research: Accounts reviewed due to a change in ownership.

BUSINESS PERSONAL PROPERTY VALUATION PROCESS

Scope of Responsibility

The Business Personal Property Division (BPP) is responsible for establishing the fair market value of all business personal property accounts as of January 1 of every year. There are approximately 102,023 business personal property accounts within the Dallas CAD territorial boundaries. There are four different personal property types appraised by the district's personal property section: Business Personal Property accounts, Leased Assets, Multi-Location Assets, and Vehicles.

Appraisal Resources

- **Personnel** - The personal property staff consists of 28 appraisers and 7 appraisal support staff.
- **Data** - A common set of data characteristics for each business personal property (BPP) account in Dallas County is collected and updated by BPP appraisers and maintained in the various MARS (Mass Appraisal Records System) modules. The property characteristic data drives the computer-assisted mass appraisal (CAMA) approach to valuation. Property data information is verified and corrected based on on-site inspections, during office and rendition review. Data typically collected is the type of business and the various business personal property assets used in the course of business, such as furniture and fixtures, machinery and equipment, computer equipment, vehicles, inventory, and other tangible business personal property assets.

Business Personal Property Routes and Reappraisal Accounts

The BPP file consists of approximately 102,023 accounts that fall into two general categories. The first category is for all accounts that have a single physical location, and the second category is for multiple-location accounts and specialty properties.

The single physical location accounts are divided into 36 geographic routes, and one appraiser is typically assigned to each one. There are also six geographic sub routes with security concerns that are assigned to two-person appraisal teams.

The second category of accounts is made up of multiple location accounts and specialty accounts. The multiple location accounts include leased equipment, telecommunications, utilities, pipelines, and billboards. The specialty accounts in this group include tenant accounts and special inventory accounts for auto, boat, heavy equipment, and manufactured housing dealers.

The BPP Division reviews all BPP accounts each year. However, accounts that were not rendered in the previous year, or that were rendered, but the rendition was not used to arrive at the appraised value, are flagged for reappraisal. The flagged accounts are reappraised using Business Type Code models.

When valuing Business Personal Property, all three approaches to value are considered; however, the cost approach is typically considered to be the most appropriate. The BPP Division has developed cost models based on information gleaned from taxpayer renditions and financial records. The models are built for the Business Type Codes. The typical model uses a price per square foot that is comprised of original cost

and an average depreciation. The list of comparables provides a value range that includes overall depreciation for the subset of assets unique to that business ID type. The model is applied to the subject property by multiplying the square footage of the subject against the selected comparable price per foot to arrive at an estimate. There is a separate price per foot for comparables for inventory. The model equation is Comparable Price per Foot (CPPF) x Estimated Subject Square Footage (SF).

The third area of reappraisal is based on the information provided on the taxpayer's rendition form. The rendered data often includes cost and year acquired information for fixed assets and inventory. This information is used in conjunction with the field appraisal or field confirmation process to reappraise the property. Renditions are filed by taxpayers on approximately 36,000 BPP accounts, or 35% of the total BPP file.

Valuation Approach (Model Specification)

Business Type Code Analysis

The Dallas Appraisal District used the Standard Industrial Classification (SIC) codes to develop the BPP Business Type Codes. These codes are used by the Dallas CAD to classify similar types of business personal property.

Business Type Code identification and delineation is the cornerstone of the personal property valuation system at the Dallas CAD. All of the personal property analysis work done in association with the personal property valuation process is Business Type Code specific. There are 400 Dallas CAD personal property Business Type Codes. These codes are delineated based on observable aspects of homogeneity. Business Type Code delineation is periodically reviewed to determine if further Business Type Code delineation is warranted. A comprehensive review of all Business Type Codes was completed in 2025. In 2026 the Business Type Codes were verified and matched to their equivalent North American Industrial Classification System (NAICS) code.

Highest and Best Use Analysis

The highest and best use of property is the reasonable and probable use that supports the highest present value as of the date of the appraisal. The highest and best use must be physically possible, legal, financially feasible, and productive to its maximum. The highest and best use of personal property is normally its current use.

Data Collection/Validation

Data Collection Procedures

Personal property data collection procedures are published and distributed to all appraisers involved in the appraisal and valuation of personal property. The appraisal procedures are reviewed and revised to meet the changing requirements of field data collection. The personal property data collection procedures are reviewed annually and updated as needed.

Sources of Data

Business Personal Property

The district's property characteristic data was originally received from Dallas County and various school district records in 1980, and where absent, collected through a massive field data collection effort coordinated by the district over a period of time. Since the initial data collection, the District appraisers have maintained the appraisal roll through annual field drive-outs. This project results in the discovery of new businesses not revealed through other sources. Various published sources, such as the Dallas Business Journal, trade journals, and other publications, are also used to discover personal property. Tax assessors, municipalities, local newspapers, the public, and internet research provide the District with information regarding new personal property and useful facts related to property valuation.

Vehicles

An outside vendor provides the Dallas CAD with a listing of vehicles within the Dallas CAD's jurisdiction. The vendor develops this listing from the Texas Department of Motor Vehicles' Title and Registration Division records. Other sources of data include property owner renditions and field inspections.

Leased and Multi-Location Assets

The primary source of leased and multi-location assets is property owner renditions of property. Other sources of data include field inspections.

Valuation and Model Development

Cost Schedules

Cost schedules are developed by Business Type Code by district personal property valuation appraisers. The cost schedules are developed by analyzing cost data from property owner renditions, hearings, state schedules, and published cost guides. The cost schedules are reviewed as necessary to conform to changing market conditions. The schedules are typically in a price per square foot format, but some exception Codes are in an alternate price per unit format.

Statistical Analysis

Summary statistics, including but not limited to the median, weighted mean, and standard deviation, provide the appraisers with an analytical tool by which to determine both the level and uniformity of appraised value by Business Type Code. Review of the standard deviation can discern appraisal uniformity within the business type codes.

Depreciation Schedule and Trending Factors

Business Personal Property

The Dallas CAD's primary approach to the valuation of business personal property is the cost approach. The replacement cost new (RCN) is either developed from property owner reported historical cost or from the Dallas CAD developed valuation models. The trending factors used by the Dallas CAD to develop RCN are based on published valuation guides. The percentage good depreciation factors used by Dallas CAD are also based on published valuation guides. The index factors and percentage good depreciation factors are used to develop present value factors (PVF), by year of acquisition, as follows:

$$\text{PVF} = \text{INDEX FACTOR} \times \text{PERCENT GOOD FACTOR}$$

The PVF is used as an "express" calculation in the cost approach. The PVF is applied to reported historical cost as follows:

$$\text{MARKET VALUE ESTIMATE} = \text{PVF} \times \text{HISTORICAL COST}$$

This mass appraisal PVF schedule is used to ensure that estimated values are uniform and consistent within the market.

Mass Appraisal Records System (MARS)

The MARS program includes a CAPPA module that has two main objectives: 1) Analyze and adjust existing Business Type models. 2) Develop new models for business types not previously integrated into MARS. The delineated sample is reviewed for accuracy of Business Type code, square footage, field data, and original cost information. Models are created and refined using actual original cost data to derive a typical replacement cost new (RCN) per square foot for a specific category of assets. The RCN per square foot is depreciated by the estimated age using the depreciation table adopted for the tax year.

The data sampling process is conducted in the following order: 1) Prioritizing Business Type Codes for model analysis. 2) Compiling the data and developing the reports. 3) Field checking the selected samples. The models are built and adjusted using internally developed software. The models are then tested against the previous year's data. The typical RCN per square foot (or applicable unit) is determined by a statistical analysis of the available data.

MARS model values are used in the general business personal property valuation program to estimate the value of new accounts for which no property owner's rendition is filed. Model values are also used to establish tolerance parameters for testing the valuation of property for which prior data years' data exist or for which current year rendered information is available. The calculated current year value or the prior year's value is compared to the indicated model value by the valuation program. If the value being tested is within an established acceptable percentage tolerance range of the model value, the account passes that range check and moves to the next valuation step. If the account fails the tolerance range check, it is flagged for individual review. Allowable tolerance ranges may be adjusted from year to year depending on the analysis of the results of the prior year.

Vehicles

Value estimates for vehicles are provided by an outside vendor and are based on published values. Vehicles that are not valued by the vendor are valued by an appraiser using PVF schedules or published value guides.

Leased and Multi-Location Assets

Leased and multi-location assets are valued using the PVF schedules or published value guides.

Individual Value Review Procedures

Field Review

The Business Personal Property file has defined routes and/or areas of assignments. Each of these routes is driven annually by BPP appraisal staff members to discover and list any new businesses, delete any businesses no longer operating as of January 1, and to make any necessary changes to existing businesses. Thus, effectively, every BPP account is reappraised annually.

Due to the dynamic nature of Business Personal Property, all businesses are reviewed each year for either reappraisal or field confirmation. DCAD's jurisdiction is broken down into geographic routes that are worked by individual appraisers. Sub-routes that cover geographic areas with security concerns are worked by two appraiser teams. Within the routes and sub-routes, accounts are slated for reappraisal or field confirmation based on the following criteria:

New business accounts are set up during the August through February field inspection portion of the appraisal year. The appraisers drive or walk all streets that are within their assigned geographic routes during this time period. Various sources, such as Certificates of Occupancy, articles in local papers and business journals, as well as online research, supplement the physical inspection process used to identify and set up the new Business Personal Property accounts.

Business Type Code / Rendition Filing Review: Specific groups of businesses may be slated for reappraisal based on timing or analysis that indicates a market value adjustment is needed. Businesses that have not filed a rendition or filed a rendition that was not used to arrive at the appraised value for the BPP account in the previous year are flagged for reappraisal.

The remaining accounts are worked under the field confirmation task, which verifies that these businesses are still in operation. If the appraiser determines that there has been some type of change, an inspection and reappraisal of the property may be performed at that time. Please note, effective January 1, 2026, the BPP exemption amount is now \$125,000; thus, BPP's primary reappraisal focus going forward will be to reappraise and/or focus primarily on those BPP properties that have an actual taxable value status.

Office Review

Business Personal Property

A district valuation computer program (MARS) exists in a client-server environment that identifies accounts in need of review based on a variety of conditions. Property owner renditions, accounts with

field or other data changes, accounts with prior hearings, new accounts, and Business Type code changes are all considered. The accounts are processed by MARS and pass or fail preset tolerance parameters by comparing appraised values to prior year and model values. Accounts that fail the tolerance parameters are reviewed by the appraisers.

Vehicles

A list of commercial vehicles registered in Dallas County is received in an electronic format from an outside vendor. These vehicles are matched to existing BPP accounts, and the accounts are updated. New accounts may be created as needed. Vehicles that are not valued by the vendor are valued by an appraiser using PVF schedules or published guides.

Leased and Multi-Location Assets

Leasing and multi-location accounts that have a high volume of vehicles or other assets are loaded programmatically into MARS if reported by the property owner electronically. Electronic renditions, usually in an Excel spreadsheet or CD, often require reformatting before they can be loaded to the account. Accounts that render in a hard copy format are manually entered in a database by BPP staff.

After matching and data entry, reports are generated and reviewed by an appraiser. Corrections are made, and the accounts are notified after supervisor approval.

Rendition Review

The most significant office review task is the rendition processing period. The BPP division expects to receive in excess of 36,000 renditions each year. Between March and when notices are mailed in late May, Business Personal Property will receive, and data enter the information provided on the renditions. The Appraisal Staff will review the rendered data and incorporate the inventory and depreciated cost information into the appraisals. Renditions for Leased Equipment, Telecommunications, and Utilities will be worked on as the renditions are received. These business types are typically reappraised each year, and processing the accounts is part of the variable task process.

Rendition Process

BPP Renditions contain information provided by the property owner and are legally required to be filed annually by the property owner per the Texas Property Tax Code, not later than April 15, or upon written request by the property owner, the chief appraiser shall extend the deadline for filing a rendition statement to May 15. Not filing a business personal property rendition by the annual April 15th deadline date will result in a 10% penalty being applied to the business personal property tax bill. DCAD encourages all business owners to file an Online Business Personal Property rendition.

The BPP Rendition requests basic information about a business, including cost and year acquired of assets, inventory values, consigned goods, leased equipment, and the property owner's opinion of value.

The DCAD mails BPP Rendition forms each January to all existing BPP accounts in Dallas County with a value greater than \$125,000, as well as to all new accounts regardless of value. DCAD also provides on its website (www.dallascad.org) an Online BPP Rendition filing system that is simple and easy to use. The Online BPP Rendition filing system can be accessed by using a PIN located at the top of the BPP Rendition that is mailed in January. DCAD would like to encourage all business owners to use the Online BPP Rendition filing system as opposed to filing a rendition using the paper form. Utilizing The Online BPP filing system is beneficial for both DCAD and the property owner.

A properly filed BPP rendition form allows the BPP appraiser to:

- Verify the Legal Owner, DBA, and Physical Location of the property on January 1 of the appraisal year.
- Use contact information on the rendition form if the appraiser has questions about the business being appraised.
- Compare the cost or opinion of value information against the estimate of value made by the appraiser in the field.

With the appraiser's information gathered in the field and a properly filed BPP rendition form from the property owner or authorized agent, the BPP appraiser has sufficient information to make an accurate and equitable business personal property market value estimate used to determine the business's property taxes.

Three Approaches to Value

The Mass Appraisal Records System (MARS) utilized by the Business Personal Property Division of the Dallas Central Appraisal District gives the ability to appraise property by all three approaches to value: Cost Approach, Sales Approach, and Income Approach.

Cost Approach

The Cost Approach is typically the approach used to value business personal property; although all approaches (Income Approach and Sales Approach) are considered, the Cost Approach offers the most equitable and consistent method for mass appraisal of business personal property. The BPP appraiser will estimate the market value by comparing the subject business being appraised against similar types of businesses. The appraiser considers the size of the business, the quality and condition of the assets, and estimates the overall age of the assets. In addition to the business assets, the appraiser will also estimate the market value of the inventory based on the quantity and make any known condition adjustments.

Sales Approach

The Sales Approach may be used for certain types of business personal property that have substantial secondary markets, such as cars and trucks. However, the Sales Approach is often less useful with many

types of business assets that don't have an active used market.

Income Approach

The Income Approach is rarely used, since it is often impossible to differentiate the income from the business personal property being valued and the income associated with the components of a business.

Equal and Uniform Analysis

BPP's preferred method when dealing with equal and uniform analysis is to request the business to provide an asset listing with the cost and year of acquisition per asset, so DCAD can uniformly apply the applicable depreciation schedule to determine a fair and equitable value.

Performance Tests

Ratio Studies

The Property Tax Assistance Division of the State Comptroller's office conducts a Property Value Study (PVS). The PVS is a ratio study used to gauge appraisal district performance. Results from the PVS play a part in school funding. Rather than a sales ratio study, the personal property PVS is a ratio study using state cost and depreciation schedules to develop comparative personal property values. These values are then compared to Dallas CAD's personal property values, and ratios are formed.

Internal Testing

The Dallas CAD can test new or revised cost and depreciation schedules by running the valuation program in a test mode prior to the valuation cycle. This can give appraisers a chance to make additional refinements to the schedules if necessary. The Quality Control Division also undertakes performance testing annually to ensure accuracy and uniformity.

BUSINESS PERSONAL PROPERTY REAPPRAISAL PLAN OVERVIEW

The Business Personal Property Division 2027 and 2028 Reappraisal Plan is made up of both fixed and variable tasks. The fixed tasks include setting up new business accounts and the annual field reappraisal of Business Personal Property, as well as deleting inactive accounts. Variable tasks are associated with aircraft, special inventory accounts, leased equipment processing, and rendition processing.

**BUSINESS PERSONAL PROPERTY DIVISION
2027 REAPPRAISAL PLAN**

FIXED TASKS:	ACCOUNTS
Add / New Accounts	8000
Business ID Type Reappraisal	5,000
Tenant Account Reappraisal	7,000
Complex Account Reappraisal	400

VARIABLE TASKS:	
Aircraft Accounts Reappraisal	625
Rendition Processing / Reappraisal	36,000

**BUSINESS PERSONAL PROPERTY DIVISION
2028 REAPPRAISAL PLAN**

FIXED TASKS:	ACCOUNTS
Add / New Accounts	8,100
Business ID Type Reappraisal	5,500
Tenant Account Reappraisal	7,200
Complex Account Reappraisal	400

VARIABLE TASKS:	
Aircraft Account Reappraisal	625
Rendition Processing / Reappraisal	33,000

BUSINESS PERSONAL PROPERTY FIXED TASKS DEFINITIONS

Add/New Accounts: This category captures the time required to tour a new business and set up the add/new account in MARS.

Business ID Type Reappraisal: Selection of accounts for reappraisal based on specific business types and previous year's rendition status.

Tenant Account Reappraisal: The Tenant accounts are furnished by public warehouses, craft malls, storage garages, consignment stores, executive office suites, etc.

Complex Account Reappraisal: Accounts with a value of \$5,000,000 or greater.

BUSINESS PERSONAL PROPERTY VARIABLE TASK DEFINITIONS

Aircraft Account Reappraisal: Valuing and confirming ownership of aircraft.

Rendition Process / Reappraisal: Property owners' statements calculated and data entered by appraisers.

LIMITING CONDITIONS

The appraised value estimates provided by the district are subject to the following conditions:

1. The appraisals are prepared exclusively for ad valorem tax purposes with a January 1 assessment date.
2. The property characteristic data upon which the appraisals are based is assumed to be correct. Exterior inspections of the property appraised are performed as staff resources and time allow. Some interior inspections of property appraisals are performed at the request of the property owner and required by the district for clarification purposes and to correct property descriptions.
3. Sales data provided by third-party sources that have historically provided extremely reliable and accurate sales information is considered verified and confirmed by DCAD, assuming deed transfer dates correlate with sale dates. If discrepancies arise, then DCAD will attempt to re-verify and confirm the sales data information from the appropriate parties.
4. Appraisals prepared by third-party appraisal firms will discuss Assumptions and Limiting Conditions in their appraisal manuals provided to DCAD. Currently, only mineral interest appraisals are prepared by Hugh L. Landrum & Associates.
5. Appendix A has a list of staff providing significant assistance to the person signing this certification.

Certification Statement:

"I, Shane Docherty, Chief Appraiser/Executive Director for Dallas Central Appraisal District, solemnly swear that I have made or caused to be made a reappraisal plan for Dallas Central Appraisal District for the 2027 and 2028 tax years as required by law."

Shane Docherty

Chief Appraiser / Executive Director

Appendix A

Key Personnel on Reappraisal Plan Implementation

<u>Department</u>	<u>Employee</u>	<u>Position</u>
Administration	Shane Docherty	Chief Appraiser/Executive Director
	Cheryl Jordan	Deputy Chief Appraiser
	Jimmy Cox	Director of Appraisal
Residential	Brad Ward	Manager
	Maxim Angelich	Assistant Manager
	Jered Kimmel	Appraisal/GIS Coordinator
	Hung Nguyen	Supervisor
	Robert Newman	Supervisor
	Jackie McKamy	Supervisor
	Amsy Villatoro	Supervisor
	Vacant	Supervisor
Commercial	Greyson Johnson	Manager
	Mason Massei	Assistant Manager
	Richard Davis	Supervisor
	Molly Vaughan	Supervisor
	Joe Flores	Supervisor
	Johnny Blount	Supervisor
	Jeff Richardson	Supervisor
	Dong Nguyen	Supervisor
BPP	Raul Reyes	Manager
	Schantell Dearing	Assistant Manager
	Mel Sims	Supervisor
	Kathy Nora	Supervisor
	Tonya Gee	Supervisor
	Arthur Salinas	Supervisor
Quality Control	William Welles	Manager
	Darryl Green	Development Analyst
	Chadd Johnson	Development Analyst

Appendix B

Residential Neighborhoods

1DS02N	1DS135	1DS175	1DS313	1DS354	1DS393
1DS03N	1DS136	1DS176	1DS314	1DS355	1DS394
1DS04N	1DS137	1DS177	1DS315	1DS356	1DS395
1DS05N	1DS138	1DS178	1DS316	1DS357	1DS396
1DS09N	1DS139	1DS179	1DS317	1DS358	1DS397
1DS100	1DS140	1DS180	1DS318	1DS359	1DS398
1DS101	1DS141	1DS181	1DS319	1DS360	1DS399
1DS102	1DS142	1DS182	1DS320	1DS361	1DS400
1DS103	1DS143	1DS183	1DS321	1DS362	1DS401
1DS104	1DS144	1DS184	1DS322	1DS363	1DS402
1DS105	1DS145	1DS185	1DS323	1DS364	1DS403
1DS106	1DS146	1DS186	1DS324	1DS365	1DS404
1DS107	1DS147	1DS187	1DS325	1DS366	1DS405
1DS108	1DS148	1DS188	1DS326	1DS367	1DS406
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1DS110	1DS150	1DS190	1DS328	1DS369	1DS408
1DS111	1DS151	1DS191	1DS329	1DS36N	1DS409
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1DS113	1DS153	1DS193	1DS331	1DS371	1DS411
1DS114	1DS154	1DS194	1DS332	1DS372	1DS412
1DS115	1DS155	1DS195	1DS333	1DS374	1DS413
1DS116	1DS156	1DS196	1DS334	1DS375	1DS414
1DS117	1DS157	1DS197	1DS335	1DS376	1DS416
1DS118	1DS158	1DS198	1DS336	1DS377	1DS417
1DS119	1DS159	1DS199	1DS337	1DS378	1DS418
1DS11N	1DS160	1DS201	1DS338	1DS379	1DS419
1DS120	1DS161	1DS204	1DS339	1DS380	1DS420
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1DS124	1DS164	1DS302	1DS342	1DS383	1DS423
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1DS129	1DS169	1DS307	1DS347	1DS388	1DS428
1DS130	1DS170	1DS308	1DS348	1DS389	1DS429
1DS131	1DS171	1DS309	1DS349	1DS38N	1DS42N
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1DS133	1DS173	1DS311	1DS352	1DS391	1DS431
1DS134	1DS174	1DS312	1DS353	1DS392	1DS432

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1DS434	1DS483	1DS526	1DS569	1DS613	1DS656
1DS435	1DS484	1DS527	1DS570	1DS614	1DS657
1DS436	1DS485	1DS528	1DS571	1DS615	1DS658
1DS437	1DS486	1DS529	1DS572	1DS616	1DS659
1DS438	1DS487	1DS530	1DS573	1DS617	1DS660
1DS439	1DS488	1DS531	1DS574	1DS618	1DS661
1DS440	1DS489	1DS532	1DS575	1DS619	1DS662
1DS441	1DS490	1DS533	1DS576	1DS620	1DS663
1DS442	1DS491	1DS534	1DS577	1DS621	1DS664
1DS443	1DS492	1DS535	1DS578	1DS622	1DS665
1DS444	1DS493	1DS536	1DS579	1DS623	1DS666
1DS445	1DS494	1DS537	1DS580	1DS624	1DS667
1DS447	1DS495	1DS538	1DS581	1DS625	1DS668
1DS448	1DS496	1DS539	1DS582	1DS626	1DS669
1DS449	1DS497	1DS540	1DS583	1DS627	1DS670
1DS450	1DS498	1DS541	1DS584	1DS628	1DS671
1DS451	1DS499	1DS542	1DS585	1DS629	1DS672
1DS452	1DS500	1DS543	1DS586	1DS630	1DS673
1DS453	1DS501	1DS544	1DS587	1DS631	1DS674
1DS454	1DS502	1DS545	1DS588	1DS632	1DS675
1DS455	1DS503	1DS546	1DS589	1DS633	1DS676
1DS456	1DS504	1DS547	1DS590	1DS634	1DS677
1DS457	1DS505	1DS548	1DS591	1DS635	1DS678
1DS458	1DS506	1DS549	1DS592	1DS636	1DS679
1DS459	1DS507	1DS550	1DS593	1DS637	1DS680
1DS462	1DS508	1DS551	1DS595	1DS638	1DS681
1DS463	1DS509	1DS552	1DS596	1DS639	1DS682
1DS464	1DS510	1DS553	1DS597	1DS640	1DS683
1DS465	1DS511	1DS554	1DS598	1DS641	1DS684
1DS466	1DS512	1DS555	1DS599	1DS642	1DS685
1DS467	1DS513	1DS556	1DS600	1DS643	1DS686
1DS468	1DS514	1DS557	1DS601	1DS644	1DS687
1DS469	1DS515	1DS558	1DS602	1DS645	1DS688
1DS470	1DS516	1DS559	1DS603	1DS646	1DS689
1DS471	1DS517	1DS560	1DS604	1DS647	1DS690
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1DS474	1DS519	1DS562	1DS606	1DS649	1DS692
1DS475	1DS520	1DS563	1DS607	1DS650	1DS693
1DS476	1DS521	1DS564	1DS608	1DS651	1DS694
1DS477	1DS522	1DS565	1DS609	1DS652	1DS695
1DS478	1DS523	1DS566	1DS610	1DS653	1DS696
1DS479	1DS524	1DS567	1DS611	1DS654	1DS697

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1DS699	1DS744	1DS787	1DS830	1DS875	1DS918
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1DS702	1DS747	1DS790	1DS833	1DS878	1DS921
1DS703	1DS748	1DS791	1DS834	1DS879	1DS922
1DS704	1DS749	1DS792	1DS835	1DS880	1DS923
1DS705	1DS750	1DS793	1DS836	1DS881	1DS924
1DS706	1DS751	1DS794	1DS838	1DS882	1DS925
1DS707	1DS752	1DS795	1DS839	1DS883	1DS926
1DS708	1DS753	1DS796	1DS841	1DS884	1DS927
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1DS710	1DS755	1DS798	1DS843	1DS886	1DS929
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1DS714	1DS759	1DS802	1DS847	1DS890	1DS933
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1DS726	1DS771	1DS814	1DS859	1DS902	1DSA05
1DS727	1DS772	1DS815	1DS860	1DS903	1DSA06
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1DS732	1DS776	1DS819	1DS864	1DS907	1DSA10
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1DS735	1DS779	1DS822	1DS867	1DS910	1DSD01
1DS736	1DS780	1DS823	1DS868	1DS911	1DSD02
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1DS738	1DS782	1DS825	1DS870	1DS913	1DSD04
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1DS742	1DS785	1DS828	1DS873	1DS916	1DSD09

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1DSD11	1DSM03	1DSS09	1HS305	1HS349	1HS393
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1DSD16	1DSM10	1DSS1H	1HS310	1HS353	1HS397
1DSD17	1DSM11	1DSS2H	1HS311	1HS354	1HS398
1DSF01	1DSM12	1DST01	1HS312	1HS355	1HS399
1DSF02	1DSM13	1DST02	1HS313	1HS356	1HS400
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1DSG01	1DSM15	1DST06	1HS315	1HS358	1HS900
1DSG03	1DSM16	1DST07	1HS316	1HS359	1HS901
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1DSG07	1DSM18	1DSV02	1HS318	1HS361	1HS912
1DSG09	1DSM1H	1DSV03	1HS319	1HS362	1HSL01
1DSG10	1DSM20	1DSV04	1HS320	1HS363	1HSM01
1DSG11	1DSM21	1DSV06	1HS321	1HS364	1HSM02
1DSG13	1DSM23	1DSW1H	1HS322	1HS365	1HSM03
1DSG16	1DSM24	1DSX02	1HS323	1HS366	1HSP03
1DSH02	1DSM26	1DSY01	1HS324	1HS367	1HSP04
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1DSJ13	1DSP13	1HS103	1HS332	1HS376	1HSP13
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1DSJ21	1DSR01	1HS203	1HS339	1HS383	1HSS01
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1DSJ23	1DSR03	1HS205	1HS341	1HS385	1HSS03
1DSJ25	1DSR04	1HS206	1HS342	1HS386	1HSS04
1DSJ26	1DSR06	1HS222	1HS343	1HS387	1HSS05
1DSJ27	1DSR07	1HS300	1HS344	1HS388	1HSS06
1DSJ2H	1DSS02	1HS301	1HS345	1HS389	1HSS07
1DSJ30	1DSS04	1HS302	1HS346	1HS390	1HSS09
1DSJ3H	1DSS05	1HS303	1HS347	1HS391	1HSS10

1HSS11	2DS106	2DS314	2DS371	2DS415	2DSO04
1HSS13	2DS107	2DS315	2DS372	2DS416	2DSO05
1HST06	2DS108	2DS316	2DS373	2DS417	2DSP01
1HSV01	2DS109	2DS317	2DS374	2DS418	2DSP02
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1HSV06	2DS112	2DS320	2DS377	2DS422	2DSP05
1HSV07	2DS113	2DS321	2DS378	2DS423	2DSP06
1HSV08	2DS114	2DS322	2DS379	2DS424	2DSP07
1HSV09	2DS115	2DS323	2DS380	2DS425	2DSP08
1HSV13	2DS116	2DS324	2DS381	2DS426	2DSP09
1HSV14	2DS117	2DS325	2DS382	2DS427	2DSP10
1HSV15	2DS120	2DS326	2DS383	2DS428	2DSP11
1HSV16	2DS122	2DS327	2DS384	2DS430	2DSP12
1HSV17	2DS201	2DS328	2DS385	2DS431	2DSP13
1HSV18	2DS202	2DS329	2DS386	2DS432	2DSP14
1HSV19	2DS203	2DS331	2DS387	2DS433	2DSP15
1HSV20	2DS204	2DS333	2DS388	2DS434	2DSP16
1HSV21	2DS205	2DS334	2DS389	2DS900	2DSP17
1HSV22	2DS206	2DS335	2DS390	2DS901	2DSP18
1HSY01	2DS207	2DS337	2DS391	2DS902	2DSP19
1HSY02	2DS208	2DS340	2DS392	2DSM01	2DSP20
1HSY03	2DS209	2DS346	2DS393	2DSM02	2DSR02
1HSY04	2DS210	2DS349	2DS394	2DSM03	2DSR03
1HSY05	2DS211	2DS350	2DS395	2DSM04	2DSR04
1HSY09	2DS212	2DS351	2DS396	2DSM05	2DSS01
1HSY10	2DS213	2DS353	2DS398	2DSM06	2DSS02
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1HSY12	2DS300	2DS355	2DS400	2DSM08	2DSS04
1HSY13	2DS301	2DS356	2DS401	2DSM10	2DSS05
1HSY14	2DS302	2DS357	2DS402	2DSM11	2DSS07
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1HSZ03	2DS304	2DS359	2DS404	2DSM14	2DSS09
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2DS02N	2DS306	2DS361	2DS406	2DSM17	2DSS11
2DS03N	2DS307	2DS362	2DS407	2DSM18	2DSS12
2DS04N	2DS308	2DS363	2DS408	2DSM19	2DSS13
2DS05N	2DS309	2DS364	2DS409	2DSM31	2DSS14
2DS100	2DS30N	2DS365	2DS410	2DSM32	2DSS15
2DS102	2DS310	2DS366	2DS411	2DSN01	2DST01
2DS103	2DS311	2DS367	2DS412	2DSN02	2DST02
2DS104	2DS312	2DS369	2DS413	2DSN03	2DST03
2DS105	2DS313	2DS370	2DS414	2DSO02	2DST04

2DST05	2DSX05	2RS103	2RS218	2RS340	2RSJ20
2DST08	2DSX06	2RS104	2RS219	2RS341	2RSJ21
2DST09	2DSX07	2RS105	2RS220	2RS342	2RSJ22
2DST10	2DSX08	2RS106	2RS221	2RS343	2RSJ23
2DST11	2DSX09	2RS107	2RS300	2RS344	2RSJ24
2DST12	2DSX10	2RS108	2RS301	2RS345	2RSJ25
2DST13	2DSX11	2RS109	2RS302	2RS346	2RSJ26
2DST14	2DSX13	2RS10N	2RS303	2RS347	2RSJ27
2DST15	2DSX14	2RS110	2RS304	2RS348	2RSJ29
2DST16	2DSX16	2RS111	2RS305	2RS349	2RSJ30
2DSU01	2DSX17	2RS112	2RS306	2RS350	2RSJ31
2DSU03	2DSX19	2RS113	2RS307	2RS351	2RSK01
2DSU06	2DSX20	2RS114	2RS308	2RS352	2RSK03
2DSU07	2DSX21	2RS115	2RS309	2RS353	2RSK04
2DSU08	2DSX22	2RS116	2RS310	2RS354	2RSK05
2DSV01	2DSX24	2RS117	2RS311	2RS355	2RSK06
2DSV02	2DSX25	2RS118	2RS312	2RS356	2RSK07
2DSV03	2DSX26	2RS119	2RS313	2RS357	2RSK08
2DSV04	2DSX27	2RS120	2RS314	2RS420	2RSK09
2DSV06	2DSX28	2RS121	2RS315	2RSF01	2RSK10
2DSV07	2DSX29	2RS122	2RS316	2RSG01	2RSK11
2DSV08	2DSY01	2RS123	2RS317	2RSH01	2RSK12
2DSV09	2DSY02	2RS124	2RS318	2RSH02	2RSK13
2DSV5N	2DSY03	2RS125	2RS319	2RSI01	2RSK16
2DSV5S	2DSY04	2RS126	2RS320	2RSJ01	2RSK17
2DSW01	2DSY05	2RS127	2RS321	2RSJ02	2RSK18
2DSW02	2DSY06	2RS128	2RS322	2RSJ03	2RSK19
2DSW03	2DSY07	2RS200	2RS323	2RSJ04	2RSK20
2DSW04	2DSY08	2RS201	2RS324	2RSJ05	2RSK21
2DSW05	2DSY09	2RS202	2RS325	2RSJ06	2RSL01
2DSW06	2DSY10	2RS203	2RS326	2RSJ07	2RSL02
2DSW08	2DSZ99	2RS204	2RS327	2RSJ08	2RSL04
2DSW09	2RS01N	2RS205	2RS328	2RSJ09	2RSL08
2DSW10	2RS02N	2RS206	2RS329	2RSJ10	2RSL09
2DSW11	2RS03N	2RS207	2RS330	2RSJ11	2RSM01
2DSW12	2RS04N	2RS209	2RS331	2RSJ12	2RSM02
2DSW13	2RS05N	2RS210	2RS332	2RSJ13	2RSM03
2DSW14	2RS06N	2RS211	2RS333	2RSJ14	2RSM04
2DSW15	2RS08N	2RS212	2RS334	2RSJ15	2RSM05
2DSX01	2RS09N	2RS213	2RS335	2RSJ16	2RSM06
2DSX02	2RS100	2RS215	2RS337	2RSJ17	2RSM09
2DSX03	2RS101	2RS216	2RS338	2RSJ18	2RSM11
2DSX04	2RS102	2RS217	2RS339	2RSJ19	2RSM12

2RSM13	2RSP09	2RSR12	2RSV03	3DS209	3DSK01
2RSM14	2RSP10	2RSR13	2RSV04	3DS302	3DSK02
2RSM15	2RSP11	2RSR14	2RSV05	3DS304	3DSK05
2RSM16	2RSP12	2RSR15	2RSV06	3DS305	3DSK06
2RSM17	2RSP13	2RSR16	2RSV07	3DSA04	3DSK07
2RSM19	2RSP14	2RSS01	2RSW01	3DSAB3	3DSK08
2RSM20	2RSP15	2RSS02	2RSW02	3DSG01	3DSK09
2RSM21	2RSP16	2RSS03	2RSW04	3DSG02	3DSL02
2RSM22	2RSP17	2RSS04	2RSW05	3DSG03	3DSL04
2RSM23	2RSP18	2RSS05	2RSW06	3DSG04	3DSL07
2RSM24	2RSP19	2RSS06	2RSX01	3DSG05	3DSL24
2RSM25	2RSP21	2RSS07	2RSX02	3DSG06	3DSM01
2RSM26	2RSP22	2RSS08	2RSX03	3DSG07	3DSM02
2RSM28	2RSP23	2RSS09	2RSX04	3DSG08	3DSM03
2RSM31	2RSP24	2RSS10	2RSX05	3DSG10	3DSM04
2RSM33	2RSP25	2RSS11	2RSX06	3DSG12	3DSM05
2RSM34	2RSP26	2RSS12	2RSX07	3DSG13	3DSM06
2RSM40	2RSP27	2RSS13	2RSX08	3DSG14	3DSM07
2RSM41	2RSP28	2RSS14	2RSX09	3DSG15	3DSM08
2RSM42	2RSP29	2RSS15	2RSX10	3DSG16	3DSM09
2RSM43	2RSP30	2RSS16	2RSX11	3DSG19	3DSM10
2RSM44	2RSP31	2RSS17	2RSX99	3DSG20	3DSM11
2RSM45	2RSP36	2RSS18	2RSY01	3DSG24	3DSM14
2RSN01	2RSQ01	2RSS19	2RSY02	3DSH01	3DSM15
2RSN02	2RSQ02	2RSS20	2RSY03	3DSH02	3DSM18
2RSN03	2RSQ03	2RSS21	2RSY06	3DSJ01	3DSM19
2RSN05	2RSQ04	2RSS22	2RSY07	3DSJ02	3DSM59
2RSN06	2RSQ05	2RSS23	2RSY08	3DSJ03	3DSO07
2RSO01	2RSQ07	2RST01	3DS01N	3DSJ06	3DSP04
2RSO02	2RSQ08	2RST02	3DS02N	3DSJ07	3DSP06
2RSO04	2RSQ09	2RST03	3DS100	3DSJ08	3DSR01
2RSO05	2RSQ10	2RST04	3DS101	3DSJ09	3DSS01
2RSO06	2RSR01	2RST05	3DS102	3DSJ11	3DSS02
2RSO07	2RSR02	2RST06	3DS103	3DSJ12	3DSS03
2RSO08	2RSR03	2RST07	3DS104	3DSJ13	3DSS04
2RSP01	2RSR04	2RST08	3DS105	3DSJ14	3DSS06
2RSP02	2RSR05	2RST09	3DS201	3DSJ15	3GS01M
2RSP03	2RSR06	2RSU01	3DS202	3DSJ16	3GS01N
2RSP04	2RSR07	2RSU03	3DS203	3DSJ18	3GS02M
2RSP05	2RSR08	2RSU05	3DS204	3DSJ19	3GS02N
2RSP06	2RSR09	2RSU06	3DS205	3DSJ20	3GS03M
2RSP07	2RSR10	2RSV01	3DS207	3DSJ25	3GS03N
2RSP08	2RSR11	2RSV02	3DS208	3DSJ50	3GS04M

3GS04N	3GS15M	3GS322	3GSG16	3GSJ08	3GSJ53
3GS05M	3GS15N	3GS323	3GSG17	3GSJ09	3GSJ54
3GS06M	3GS16M	3GS324	3GSG18	3GSJ10	3GSJ55
3GS06N	3GS16N	3GS326	3GSG19	3GSJ11	3GSJ58
3GS07M	3GS17M	3GS327	3GSG20	3GSJ12	3GSJ59
3GS07N	3GS17N	3GS330	3GSG21	3GSJ13	3GSJ61
3GS08M	3GS200	3GS331	3GSG23	3GSJ14	3GSJ62
3GS08N	3GS201	3GS332	3GSG24	3GSJ15	3GSJ63
3GS09M	3GS202	3GS335	3GSG26	3GSJ16	3GSJ64
3GS100	3GS203	3GS336	3GSG27	3GSJ17	3GSJ65
3GS101	3GS204	3GS337	3GSG28	3GSJ18	3GSJ66
3GS102	3GS205	3GS36N	3GSG31	3GSJ19	3GSJ67
3GS103	3GS206	3GS41N	3GSG32	3GSJ20	3GSJ68
3GS104	3GS207	3GS51N	3GSG33	3GSJ21	3GSJ69
3GS105	3GS208	3GS55N	3GSG34	3GSJ22	3GSJ70
3GS106	3GS209	3GSAB1	3GSH01	3GSJ23	3GSJ71
3GS107	3GS20N	3GSAB3	3GSH02	3GSJ24	3GSJ72
3GS108	3GS210	3GSAB4	3GSH03	3GSJ25	3GSJ74
3GS109	3GS211	3GSAB5	3GSH04	3GSJ26	3GSJ75
3GS10M	3GS212	3GSAB6	3GSH05	3GSJ27	3GSJ76
3GS110	3GS21N	3GSAB7	3GSH06	3GSJ28	3GSJ79
3GS111	3GS23N	3GSD01	3GSH07	3GSJ29	3GSK01
3GS112	3GS24N	3GSD02	3GSH08	3GSJ30	3GSK02
3GS113	3GS25N	3GSD03	3GSH10	3GSJ31	3GSK03
3GS114	3GS26N	3GSD04	3GSH11	3GSJ32	3GSK04
3GS115	3GS301	3GSD05	3GSH12	3GSJ33	3GSK05
3GS116	3GS302	3GSD06	3GSH13	3GSJ34	3GSK06
3GS117	3GS303	3GSE01	3GSH14	3GSJ35	3GSK07
3GS118	3GS306	3GSE02	3GSH16	3GSJ36	3GSK08
3GS119	3GS307	3GSG01	3GSH18	3GSJ37	3GSK09
3GS11M	3GS308	3GSG02	3GSH20	3GSJ38	3GSK10
3GS120	3GS309	3GSG03	3GSH21	3GSJ39	3GSK11
3GS121	3GS30N	3GSG04	3GSH22	3GSJ40	3GSK12
3GS122	3GS310	3GSG05	3GSI01	3GSJ41	3GSK13
3GS123	3GS311	3GSG06	3GSI02	3GSJ42	3GSK14
3GS124	3GS312	3GSG08	3GSI03	3GSJ43	3GSK15
3GS125	3GS313	3GSG09	3GSJ01	3GSJ44	3GSK16
3GS12M	3GS314	3GSG10	3GSJ02	3GSJ45	3GSK17
3GS12N	3GS315	3GSG11	3GSJ03	3GSJ46	3GSK18
3GS13M	3GS316	3GSG12	3GSJ04	3GSJ48	3GSK19
3GS13N	3GS317	3GSG13	3GSJ05	3GSJ49	3GSK20
3GS14M	3GS320	3GSG14	3GSJ06	3GSJ51	3GSK21
3GS14N	3GS321	3GSG15	3GSJ07	3GSJ52	3GSK22

3GSK23	3GSM02	3GSM57	3GSO12	3GSP40	3GSR16
3GSK27	3GSM03	3GSM64	3GSO13	3GSP41	3GSR17
3GSK28	3GSM04	3GSM65	3GSO15	3GSP42	3GSR18
3GSK29	3GSM05	3GSM67	3GSO18	3GSP43	3GSR19
3GSK30	3GSM06	3GSM68	3GSO19	3GSP44	3GSR20
3GSK31	3GSM07	3GSMHP	3GSO20	3GSP45	3GSR21
3GSK33	3GSM08	3GSN01	3GSO21	3GSP46	3GSR22
3GSK34	3GSM09	3GSN02	3GSO22	3GSP47	3GSR23
3GSK35	3GSM10	3GSN03	3GSO24	3GSQ01	3GSR24
3GSL01	3GSM11	3GSN04	3GSO25	3GSQ02	3GSR25
3GSL02	3GSM12	3GSN05	3GSP01	3GSQ03	3GSR26
3GSL03	3GSM13	3GSN06	3GSP02	3GSQ04	3GSR27
3GSL04	3GSM14	3GSN07	3GSP03	3GSQ05	3GSR28
3GSL05	3GSM16	3GSN08	3GSP04	3GSQ06	3GSR29
3GSL06	3GSM18	3GSN09	3GSP05	3GSQ07	3GSR30
3GSL07	3GSM19	3GSN11	3GSP06	3GSQ08	3GSR31
3GSL08	3GSM20	3GSN12	3GSP07	3GSQ09	3GSR32
3GSL09	3GSM21	3GSN13	3GSP08	3GSQ10	3GSR33
3GSL10	3GSM22	3GSN14	3GSP09	3GSQ12	3GSR34
3GSL11	3GSM23	3GSN15	3GSP10	3GSQ13	3GSS01
3GSL12	3GSM24	3GSN16	3GSP11	3GSQ14	3GSS02
3GSL13	3GSM25	3GSN17	3GSP12	3GSQ15	3GSS03
3GSL15	3GSM26	3GSN18	3GSP13	3GSQ16	3GSS04
3GSL17	3GSM28	3GSN19	3GSP14	3GSQ17	3GSS05
3GSL18	3GSM29	3GSN20	3GSP15	3GSQ18	3GSS06
3GSL19	3GSM30	3GSN23	3GSP16	3GSQ19	3GSS07
3GSL20	3GSM31	3GSN24	3GSP17	3GSQ20	3GSS08
3GSL21	3GSM32	3GSN25	3GSP18	3GSQ21	3GSS09
3GSL22	3GSM33	3GSN26	3GSP19	3GSR01	3GSS10
3GSL23	3GSM34	3GSN27	3GSP20	3GSR02	3GSS11
3GSL24	3GSM35	3GSN28	3GSP22	3GSR03	3GSS12
3GSL25	3GSM36	3GSN29	3GSP23	3GSR04	3GSS13
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3GSL27	3GSM40	3GSO01	3GSP25	3GSR06	3GSS15
3GSL28	3GSM41	3GSO02	3GSP27	3GSR07	3GSS16
3GSL29	3GSM42	3GSO03	3GSP28	3GSR08	3GSS17
3GSL30	3GSM43	3GSO04	3GSP29	3GSR09	3GSS18
3GSL31	3GSM44	3GSO05	3GSP30	3GSR10	3GSS20
3GSL32	3GSM45	3GSO07	3GSP32	3GSR11	3GSS21
3GSL33	3GSM47	3GSO08	3GSP33	3GSR12	3GSS22
3GSL34	3GSM49	3GSO09	3GSP34	3GSR13	3GSS23
3GSL35	3GSM53	3GSO10	3GSP36	3GSR14	3GSS24
3GSM01	3GSM56	3GSO11	3GSP39	3GSR15	3GSS25

3GSS26	3MS11N	3MSAB3	3MSG21	3MSJ32	3MSK31
3GSS27	3MS12M	3MSAB4	3MSG22	3MSJ33	3MSK36
3GSS28	3MS12N	3MSD01	3MSG23	3MSJ34	3MSK37
3GSS29	3MS13M	3MSD02	3MSG24	3MSJ35	3MSL01
3GSS30	3MS14M	3MSD03	3MSG25	3MSJ36	3MSL02
3GSS31	3MS14N	3MSD04	3MSG67	3MSJ38	3MSL03
3GSS32	3MS15M	3MSD05	3MSH01	3MSJ39	3MSL04
3GSS33	3MS15N	3MSD07	3MSH02	3MSJ40	3MSL05
3GST01	3MS16M	3MSD10	3MSH29	3MSJ41	3MSL06
3GST02	3MS16N	3MSD11	3MSI02	3MSJ42	3MSL07
3GST03	3MS17M	3MSD12	3MSI04	3MSJ43	3MSL08
3GST04	3MS17N	3MSD13	3MSI06	3MSJ44	3MSL09
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3GST06	3MS18N	3MSD15	3MSJ02	3MSJ46	3MSL11
3GSU01	3MS19M	3MSD16	3MSJ03	3MSK01	3MSL12
3GSU02	3MS19N	3MSD18	3MSJ04	3MSK02	3MSL13
3GSU03	3MS201	3MSE02	3MSJ05	3MSK03	3MSL15
3GSU04	3MS202	3MSE03	3MSJ06	3MSK04	3MSL16
3GSU05	3MS203	3MSE04	3MSJ07	3MSK05	3MSL17
3MS01M	3MS204	3MSE05	3MSJ08	3MSK06	3MSL18
3MS01N	3MS205	3MSE06	3MSJ09	3MSK07	3MSL20
3MS02M	3MS206	3MSE07	3MSJ10	3MSK08	3MSM01
3MS02N	3MS207	3MSE08	3MSJ11	3MSK09	3MSM02
3MS03M	3MS208	3MSE09	3MSJ12	3MSK10	3MSM03
3MS03N	3MS209	3MSG01	3MSJ13	3MSK11	3MSM04
3MS04M	3MS20M	3MSG02	3MSJ14	3MSK12	3MSM05
3MS05M	3MS20N	3MSG03	3MSJ15	3MSK13	3MSM06
3MS06M	3MS210	3MSG04	3MSJ16	3MSK14	3MSM07
3MS07M	3MS21M	3MSG05	3MSJ17	3MSK15	3MSM08
3MS08M	3MS22M	3MSG06	3MSJ18	3MSK16	3MSM09
3MS08N	3MS23M	3MSG07	3MSJ19	3MSK17	3MSM10
3MS09M	3MS24M	3MSG08	3MSJ20	3MSK18	3MSM11
3MS100	3MS25M	3MSG09	3MSJ21	3MSK19	3MSM12
3MS101	3MS26M	3MSG10	3MSJ22	3MSK20	3MSM13
3MS102	3MS27M	3MSG12	3MSJ23	3MSK21	3MSM14
3MS103	3MS28M	3MSG13	3MSJ24	3MSK22	3MSM15
3MS104	3MS300	3MSG14	3MSJ25	3MSK24	3MSM18
3MS105	3MS301	3MSG15	3MSJ26	3MSK25	3MSM19
3MS106	3MS302	3MSG16	3MSJ27	3MSK26	3MSM20
3MS107	3MSA01	3MSG17	3MSJ28	3MSK27	3MSM21
3MS10M	3MSA04	3MSG18	3MSJ29	3MSK28	3MSM22
3MS10N	3MSAB1	3MSG19	3MSJ30	3MSK29	3MSM23
3MS11M	3MSAB2	3MSG20	3MSJ31	3MSK30	3MSM25

3MSM26	3YS41N	4DS03N	4DS17M	4DS312	4DS48M
3MSM27	3YS42N	4DS04M	4DS17N	4DS313	4DS49M
3MSM28	3YSM01	4DS04N	4DS18N	4DS314	4DS50M
3MSM29	3YSM02	4DS06M	4DS19N	4DS315	4DS50N
3MSM30	3YSM03	4DS07M	4DS201	4DS316	4DS51M
3MSM91	3YSM04	4DS07N	4DS207	4DS317	4DS52M
3MSO01	3YSM05	4DS09M	4DS208	4DS318	4DS53M
3MSO03	3YSM06	4DS09N	4DS209	4DS319	4DS54M
3MSO04	3YSM07	4DS100	4DS20N	4DS31M	4DS55M
3MSO05	3YSM08	4DS101	4DS211	4DS320	4DS56M
3MSO06	3YSP01	4DS102	4DS212	4DS321	4DS57M
3MSO07	3YSR01	4DS103	4DS214	4DS322	4DS58M
3MSO08	3YSR02	4DS104	4DS215	4DS323	4DS900
3MSO09	3YSR03	4DS105	4DS216	4DS324	4DSA02
3MSP01	3YSS01	4DS106	4DS21N	4DS325	4DSA03
3MSP02	3YSS02	4DS107	4DS220	4DS326	4DSA04
3MSP03	3YSS03	4DS108	4DS223	4DS327	4DSA05
3MSP04	3YSS04	4DS109	4DS22N	4DS328	4DSA07
3MSP05	3YSS05	4DS10M	4DS23M	4DS329	4DSA11
3MSP06	3YSS06	4DS10N	4DS23N	4DS32M	4DSA12
3MSP07	3YSS07	4DS110	4DS24N	4DS330	4DSA14
3MSP08	3YSS08	4DS111	4DS25N	4DS331	4DSA17
3MSP09	3YSS09	4DS112	4DS26M	4DS332	4DSA5C
3MSP10	3YSS10	4DS113	4DS26N	4DS333	4DSA6C
3MSP11	3YSS11	4DS114	4DS27M	4DS335	4DSA7C
3MSP12	3YSS13	4DS115	4DS28M	4DS336	4DSA8C
3MSP13	3YSS14	4DS116	4DS28N	4DS337	4DSA9C
3MSP14	3YSS16	4DS117	4DS29M	4DS338	4DSAB2
3MSQ01	3YSS17	4DS118	4DS29N	4DS339	4DSAB3
3MSQ02	3YSS18	4DS119	4DS300	4DS33M	4DSAB5
3MSS01	3YSS19	4DS11M	4DS301	4DS340	4DSAB6
3MSS02	3YSS21	4DS11N	4DS302	4DS34M	4DSAB7
3MSS03	3YSS22	4DS120	4DS303	4DS36M	4DSAB8
3MSS04	3YSS23	4DS121	4DS304	4DS38M	4DSAB9
3MSS05	3YSS25	4DS122	4DS305	4DS39M	4DSB02
3MSS06	3YSS26	4DS12M	4DS306	4DS40M	4DSB03
3MSS07	3YSS27	4DS12N	4DS307	4DS40N	4DSB04
3MSS08	3YSS28	4DS13N	4DS308	4DS41N	4DSB06
3MSS21	4DS01M	4DS14M	4DS309	4DS43M	4DSB07
3MSS22	4DS01N	4DS14N	4DS30M	4DS44M	4DSB08
3MSS30	4DS02M	4DS15N	4DS30N	4DS45M	4DSB09
3YS03N	4DS02N	4DS16M	4DS310	4DS46M	4DSC01
3YS10N	4DS03M	4DS16N	4DS311	4DS47M	4DSC03

4DSC04	4DSD44	4DSD90	4DSE35	4DSG27	4DSG77
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4DSD02	4DSD47	4DSD92	4DSE37	4DSG29	4DSG80
4DSD03	4DSD48	4DSD93	4DSE38	4DSG30	4DSG82
4DSD04	4DSD50	4DSD94	4DSE39	4DSG31	4DSG83
4DSD05	4DSD51	4DSD95	4DSE40	4DSG32	4DSG84
4DSD06	4DSD52	4DSD96	4DSE54	4DSG33	4DSG85
4DSD07	4DSD53	4DSD97	4DSF01	4DSG34	4DSG86
4DSD08	4DSD54	4DSD98	4DSF02	4DSG35	4DSH01
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4DSD10	4DSD56	4DSE01	4DSF04	4DSG38	4DSH03
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4DSD12	4DSD58	4DSE03	4DSF06	4DSG42	4DSH05
4DSD13	4DSD59	4DSE04	4DSF07	4DSG43	4DSH06
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4DSD18	4DSD65	4DSE09	4DSG01	4DSG49	4DSH11
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4DSD20	4DSD67	4DSE12	4DSG03	4DSG51	4DSH13
4DSD21	4DSD68	4DSE13	4DSG04	4DSG52	4DSH14
4DSD22	4DSD69	4DSE14	4DSG05	4DSG53	4DSH16
4DSD23	4DSD70	4DSE15	4DSG06	4DSG54	4DSH17
4DSD24	4DSD71	4DSE16	4DSG07	4DSG55	4DSH18
4DSD25	4DSD72	4DSE17	4DSG08	4DSG56	4DSH19
4DSD26	4DSD73	4DSE18	4DSG09	4DSG57	4DSH20
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4DSD28	4DSD75	4DSE20	4DSG11	4DSG59	4DSH22
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4DSD30	4DSD77	4DSE22	4DSG13	4DSG61	4DSH24
4DSD31	4DSD78	4DSE23	4DSG14	4DSG62	4DSH25
4DSD32	4DSD79	4DSE24	4DSG15	4DSG63	4DSH26
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4DSD34	4DSD81	4DSE26	4DSG17	4DSG65	4DSH28
4DSD35	4DSD82	4DSE27	4DSG19	4DSG66	4DSH29
4DSD36	4DSD83	4DSE28	4DSG20	4DSG67	4DSH30
4DSD37	4DSD84	4DSE29	4DSG21	4DSG68	4DSH31
4DSD38	4DSD85	4DSE30	4DSG22	4DSG70	4DSH32
4DSD39	4DSD86	4DSE31	4DSG23	4DSG71	4DSH33
4DSD40	4DSD87	4DSE32	4DSG24	4DSG72	4DSH34
4DSD41	4DSD88	4DSE33	4DSG25	4DSG73	4DSH35
4DSD43	4DSD89	4DSE34	4DSG26	4DSG74	4DSH37

4DSH38	4DSI39	4DSJ46	4DSK05	4DSL15	4DSM30
4DSH40	4DSI40	4DSJ47	4DSK07	4DSL16	4DSM73
4DSH42	4DSJ02	4DSJ48	4DSK08	4DSL17	4DSO01
4DSH43	4DSJ03	4DSJ49	4DSK09	4DSL18	4DSO02
4DSH44	4DSJ04	4DSJ50	4DSK10	4DSL19	4DSO03
4DSH45	4DSJ05	4DSJ51	4DSK11	4DSL1H	4DSP01
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4DSI02	4DSJ08	4DSJ54	4DSK14	4DSL24	4DSP04
4DSI03	4DSJ09	4DSJ55	4DSK15	4DSL25	4DSP05
4DSI04	4DSJ11	4DSJ56	4DSK16	4DSL27	4DSP06
4DSI05	4DSJ12	4DSJ57	4DSK17	4DSL29	4DSP08
4DSI06	4DSJ13	4DSJ58	4DSK19	4DSL30	4DSPRN
4DSI07	4DSJ14	4DSJ59	4DSK20	4DSL31	4DSQ01
4DSI08	4DSJ15	4DSJ60	4DSK21	4DSL32	4DSQ02
4DSI09	4DSJ16	4DSJ61	4DSK22	4DSL33	4DSS01
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4DSI12	4DSJ20	4DSJ64	4DSK25	4DSM03	4DSS04
4DSI13	4DSJ21	4DSJ65	4DSK26	4DSM04	4DSS05
4DSI14	4DSJ22	4DSJ66	4DSK27	4DSM05	4DSS06
4DSI15	4DSJ23	4DSJ67	4DSK28	4DSM07	4DST01
4DSI16	4DSJ24	4DSJ68	4DSK29	4DSM08	4DST1H
4DSI17	4DSJ25	4DSJ69	4DSK30	4DSM09	4DSV01
4DSI18	4DSJ26	4DSJ70	4DSK32	4DSM11	4DSV02
4DSI19	4DSJ27	4DSJ71	4DSK33	4DSM12	4DSW1H
4DSI20	4DSJ28	4DSJ72	4DSK34	4DSM13	4DSX92
4DSI21	4DSJ29	4DSJ73	4DSK35	4DSM14	4ES01N
4DSI22	4DSJ30	4DSJ74	4DSK36	4DSM15	4ES02M
4DSI24	4DSJ31	4DSJ75	4DSL01	4DSM16	4ES02N
4DSI26	4DSJ32	4DSJ76	4DSL02	4DSM17	4ES04N
4DSI27	4DSJ33	4DSJ77	4DSL03	4DSM18	4ES07N
4DSI28	4DSJ34	4DSJ78	4DSL04	4DSM19	4ES08N
4DSI29	4DSJ35	4DSJ79	4DSL05	4DSM20	4ES09N
4DSI30	4DSJ36	4DSJ80	4DSL06	4DSM21	4ES100
4DSI31	4DSJ37	4DSJ81	4DSL07	4DSM22	4ES101
4DSI32	4DSJ38	4DSJ82	4DSL08	4DSM23	4ES102
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4DSI34	4DSJ40	4DSJ84	4DSL10	4DSM25	4ES104
4DSI35	4DSJ41	4DSK01	4DSL11	4DSM26	4ES10N
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4ES47N	4ESM01	4ESU02	4LSG07	4LSK18	4PS103
4ES56N	4ESM02	4ESV01	4LSG46	4LSK19	4PS104
4ES59N	4ESM03	4ESV02	4LSH01	4LSK20	4PS106
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4ESJ10	4ESR02	4LSAB1	4LSJ20	4LSS01	4PS214
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4PSD03	4PSJ16	4PSM03	4PSQ01	4SSH02	4SSL02
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4PSD07	4PSJ20	4PSM07	4SS01M	4SSJ03	4SSL06
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4SSO01	4US04N	4USJ09	4USM06	4USR04	4WSI28
4SSO02	4US05M	4USJ10	4USM07	4USS03	4WSL01
4SSO03	4US100	4USJ11	4USM08	4USS04	4WSMHP
4SSO04	4US102	4USJ13	4USM09	4USS05	5AS01N
4SSO05	4US103	4USJ14	4USM10	4USV01	5AS02M
4SSO06	4US104	4USJ15	4USM11	4USV02	5AS02N
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4SSO08	4US107	4USJ17	4USM14	4USX01	5AS05N
4SSO09	4US108	4USJ18	4USM15	4WS01M	5AS06N
4SSO10	4US109	4USJ19	4USM16	4WS01N	5AS08N
4SSO11	4US110	4USJ20	4USM18	4WS02M	5AS100
4SSO12	4US16N	4USJ21	4USM19	4WS03M	5AS101
4SSP01	4US200	4USJ22	4USM21	4WS04M	5AS102
4SSP02	4US201	4USJ23	4USM22	4WS05M	5AS103
4SSP04	4US202	4USJ24	4USM23	4WS06M	5AS104
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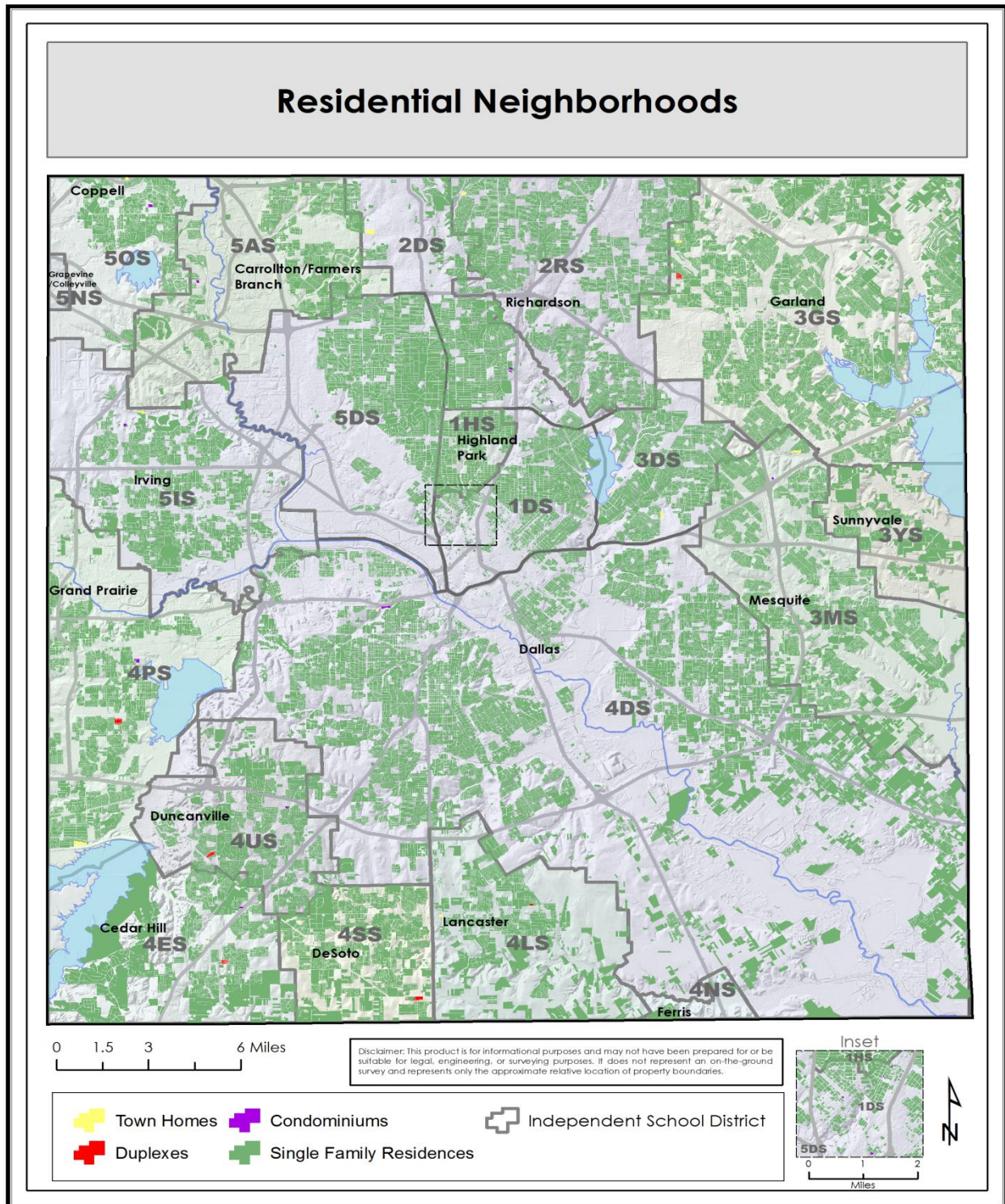
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5ISM02	5ISP04	5ISW03	5OSM04	5OSR04	5OST08
5ISM03	5ISP05	5ISW05	5OSM05	5OSR05	5OST09
5ISM04	5ISP06	5ISY01	5OSM06	5OSR06	5OST10
5ISM05	5ISP07	5ISY02	5OSM08	5OSR07	5OST11
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5ISM12	5ISP14	5OS03N	5OSM14	5OSR13	5OST19
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5ISM18	5ISP19	5OS103	5OSN03	5OSS05	5OSU04
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6DS021	6DS049	6DS076	6DS105	6DS132	
6DS022	6DS050	6DS077	6DS106	6DS133	

Appendix C

Residential Neighborhood Map



Appendix D
Commercial Improved Market Areas (IMA) and Land Market Areas (LMA)

Apartment IMA's

540100	540600	541100	541600	542100
540200	540700	541200	541700	542200
540300	540800	541300	541800	543000
540400	540900	541400	541900	543100
540500	541000	541500	542000	543200

Industrial IMA's

100100	101500	110700	111900	131300
100200	101600	110800	112000	131400
100300	101700	110900	114400	131500
100400	10171V	111000	130100	131600
100500	101800	111100	130300	131700
100600	101900	111200	130400	131800
100700	102000	111300	130500	131900
100800	104400	111400	130600	132000
100900	110100	111500	130700	150000
101000	110200	111600	130800	152000
101100	110300	111700	130900	140000
101200	110400	11171V	131000	
101300	110500	11172V	131100	
101400	110600	111800	131200	

Office IMA's

210100	2105PC	211100	211600	2122BK
2101BK	2105SN	2111BK	2116BK	212300
2101LF	210600	211200	211700	2123BK
210200	2106BK	2112BK	2117BK	212400
2102BK	210700	211300	2117MO	2124BK
210300	2107BK	2113BK	211800	2124MO
2103BK	2107MO	2113MO	2118BK	212500
210400	210800	211400	211900	212800
2104BK	2108BK	2114BK	2119BK	2102MO
2104MO	210900	2114MO	212000	2103MO
210500	2109BK	211500	2120BK	2108MO
2105BK	211000	2115BK	2120MO	2109MO
2105MO	2110BK	2115MO	212200	2111MO
2112MO	2118MO	2119MO	2122MO	2123MO

Retail IMA's

360100	360500	361000	361600	362200
360200	360600	361100	361700	362300
36020L	360700	361200	361800	362400
3602PC	360800	361300	361900	362500
3602SP	360900	361400	362000	362600
360400	3609DE	361500	362100	370000

Fast Food/Restaurant IMA's

720100	720700	721200	721700	722200
720200	720800	721300	721800	722300
720400	720900	721400	721900	722400
720500	721000	721500	722000	722500
720600	721100	721600	722100	722600

Tech/Data Center IMA's

610000	610500	610900	611400	611800
610100	610600	611000	611500	611900
610200	610700	611200	611600	612000
610300	610800	611300	611700	611100
610400				

Auto Display IMA's

640000	640700	642600	641900	642500
640200	640800	641400	642000	
640400	640900	641500	642200	
640500	641000	641700	642300	
640600	641200	641800	642400	

Car Wash IMA's

660100	660700	661200	661700	662200
660200	660800	661300	661800	662300
660400	660900	661400	661900	662400
660500	661000	661500	662000	662500
660600	661100	661600	662100	662600

Convenience/Mini-Mart/Service Station IMA's

690200	690800	691300	691800	692300
690400	690900	691400	691900	692400
690500	691000	691500	692000	692500
690600	691100	691600	692100	692600
690700	691200	691700	692200	

Country Club IMA's

4800MU
4800PR

Love Field Airport

DO1LFA

Commercial LMA's

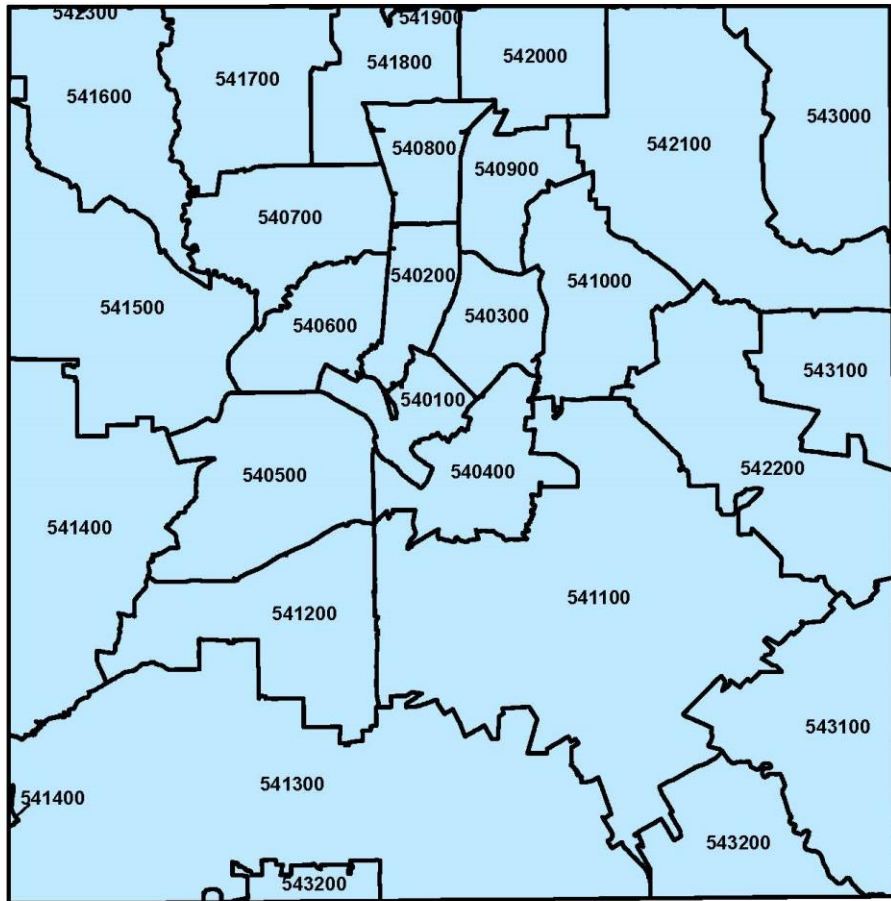
LMA's				
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1AS004	1DSE07	1DSH18	1DSJ7G	1OS001
1AS005	1DSE08	1DSH19	1DSK04	1OS002
1AS006	1DSE09	1DSH20	1DSK05	1OS003
1AS007	1DSE10	1DSH21	1DSK06	1OS004
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1AS009	1DSF04	1DSH5B	1DSK6A	2DSC11
1ASVR1	1DSF05	1DSH6A	1DSK7A	2DSK08
1CA001	1DSF06	1DSH6B	1DSOL1	2DSK09
1CA002	1DSF07	1DSH9A	1DSOL2	2DSK10
1CA003	1DSF08	1DSH9B	1DSOL3	2DSK11
1DSA08	1DSF09	1DSH9C	1DSOL4	2DSK12
1DSB01	1DSF4A	1DSI05	1DSOL5	2DSK13
1DSB02	1DSG04	1DSI06	1DSOL6	2DSK14
1DSB03	1DSG05	1DSI07	1DSOL7	2DSK15
1DSB04	1DSG06	1DSI09	1DSOL8	2DSK16
1DSB05	1DSG07	1DSI10	1HS001	2DSK17
1DSC01	1DSG08	1DSI11	1HS002	2DSK18
1DSC02	1DSG10	1DSI12	1ISA03	2DSK19
1DSC03	1DSG11	1DSI13	1ISA04	2DSK20
1DSC04	1DSG12	1DSI14	1ISA05	2DSK21
1DSCE1	1DSG13	1DSI5A	1ISA06	2DSK22
1DSCE2	1DSG14	1DSI7A	1ISA07	2DSK23
1DSCE3	1DSG15	1DSJ04	1ISA08	2DSK24
1DSCE4	1DSG16	1DSJ05	1ISB03	2DSK4A
1DSCE5	1DSG17	1DSJ06	1ISB04	2DSK5A
1DSCE6	1DSG18	1DSJ09	1ISB05	2DSK9A
1DSCE7	1DSG6A	1DSJ10	1ISB06	2DSL03
1DSCE8	1DSH04	1DSJ11	1ISB07	2DSL04
1DSCE9	1DSH05	1DSJ12	1ISB08	2DSL05
1DSCEX	1DSH06	1DSJ13	1ISB09	2DSL06
1DSD01	1DSH07	1DSJ14	1ISB10	2DSL07
1DSD02	1DSH08	1DSJ15	1ISC04	2DSL08
1DSD03	1DSH09	1DSJ16	1ISC05	2DSL09
1DSD04	1DSH10	1DSJ5A	1ISC06	2DSL10
1DSD05	1DSH11	1DSJ6A	1ISC07	2DSL11
1DSD06	1DSH12	1DSJ7A	1ISC08	2DSL12
1DSD07	1DSH13	1DSJ7B	1ISC09	2DSL13
1DSDE1	1DSH14	1DSJ7C	1ISC10	2DSL14

LMA's					
2DSL15	2DSP08	2ES004	2US003	3GSD06	3MSH02
2DSL16	2DSP09	2ES005	2US004	3GSE01	3MSH03
2DSL17	2DSP10	2ES006	2US005	3GSE02	3MSH04
2DSL18	2DSP11	2ES007	2US006	3GSE03	3MSI03
2DSL19	2DSP12	2ES008	2US007	3GSE04	3MSJ03
2DSL20	2DSP13	2ES009	2US008	3GSE05	3MSK04
2DSL21	2DSP14	2ES010	2WS001	3GSE06	3RSA01
2DSL22	2DSP15	2ES011	2WS002	3GSF01	3RSA02
2DSL4A	2DSP4A	2ES01A	2WS003	3GSF02	3RSA03
2DSL6A	2DSP4B	2LS001	2WS004	3GSF03	3RSA04
2DSL6B	2DSP4C	2LS002	2WS005	3GSF04	3RSC01
2DSL7A	2DSP4D	2LS003	2WS006	3GSF05	3RSC02
2DSM05	2DSP5A	2LS004	2WS007	3GSF06	3RSC03
2DSM06	2DSP6A	2LS005	3DSI01	3GSG01	3RSC04
2DSM07	2DSQ01	2LS006	3DSI02	3GSG02	3RSC05
2DSM08	2DSQ02	2LS007	3DSI03	3GSG03	3RSC06
2DSM09	2DSQ03	2LS008	3DSJ01	3GSG04	3RSC07
2DSM10	2DSQ04	2LS009	3DSJ02	3MSA01	3RSD01
2DSM11	2DSQ05	2LS010	3DSJ03	3MSA02	3RSD02
2DSM12	2DSQ06	2LS011	3DSK01	3MSA03	3RSE03
2DSM13	2DSQ07	2LS01A	3DSK02	3MSB01	3RSE04
2DSM14	2DSR01	2OV001	3DSK03	3MSB02	3RSF03
2DSM5A	2DSR02	2PS001	3DSK04	3MSB03	3RSF04
2DSM6A	2DSR04	2PS002	3DSL01	3MSC01	3YSB04
2DSN05	2DSR05	2PS003	3DSL02	3MSC02	3YSB05
2DSN06	2DSR06	2PS004	3DSM01	3MSC03	3YSC05
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2DSN09	2DSR09	2PS008	3GSB03	3MSD02	
2DSN10	2DSR10	2PS009	3GSB04	3MSD03	
2DSN11	2DSR11	2PS010	3GSB05	3MSD04	
2DSN12	2DSR12	2PS03A	3GSC01	3MSD05	
2DSN13	2DSR13	2PS04A	3GSC02	3MSE01	
2DSN14	2DSR14	2PS05A	3GSC03	3MSE02	
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2DSN6B	2DSRB3	2SS004	3GSD02	3MSG01	
2DSN6C	2ES001	2SS005	3GSD03	3MSG02	
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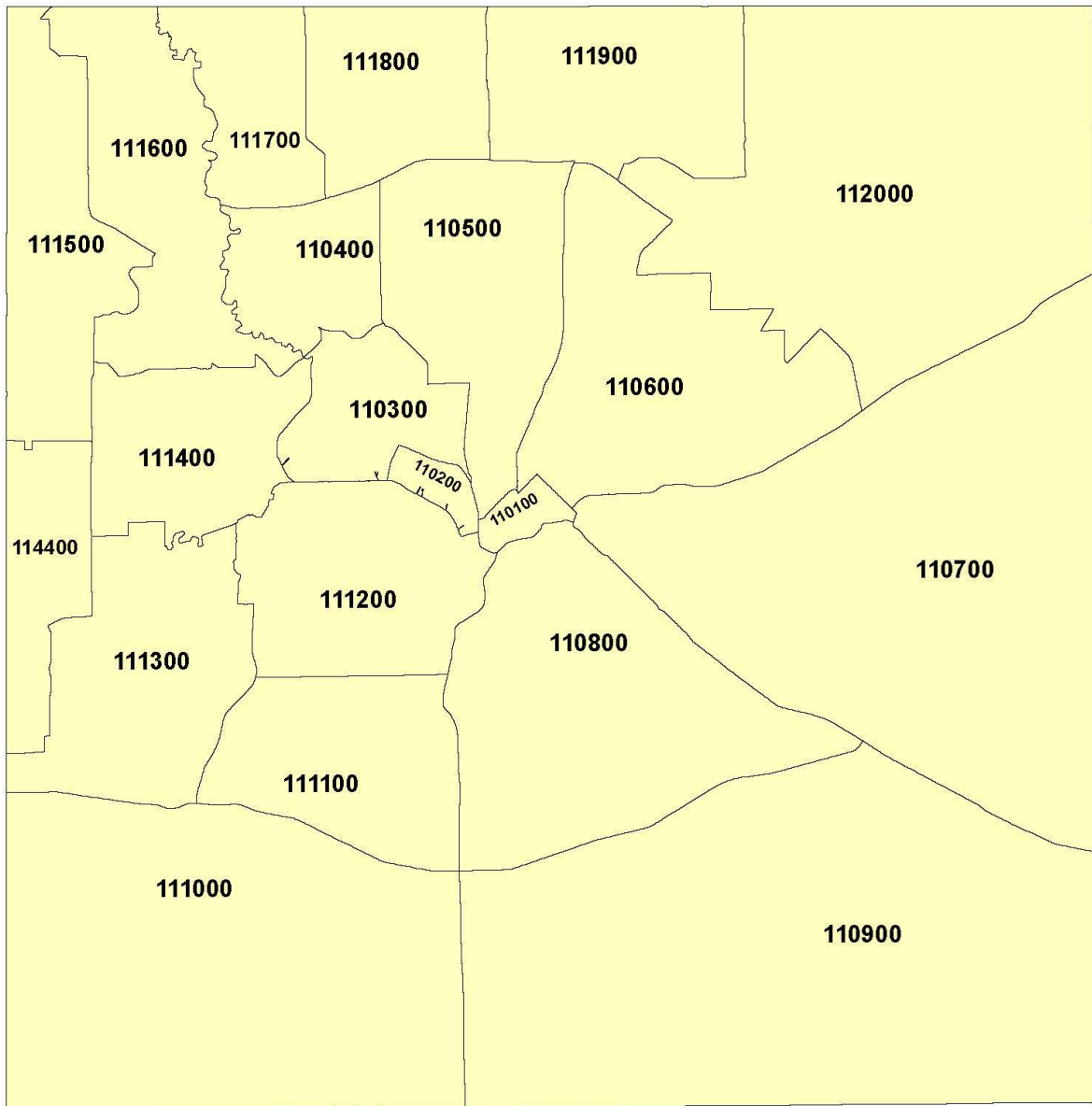
Appendix E

Commercial IMA and LMA Maps

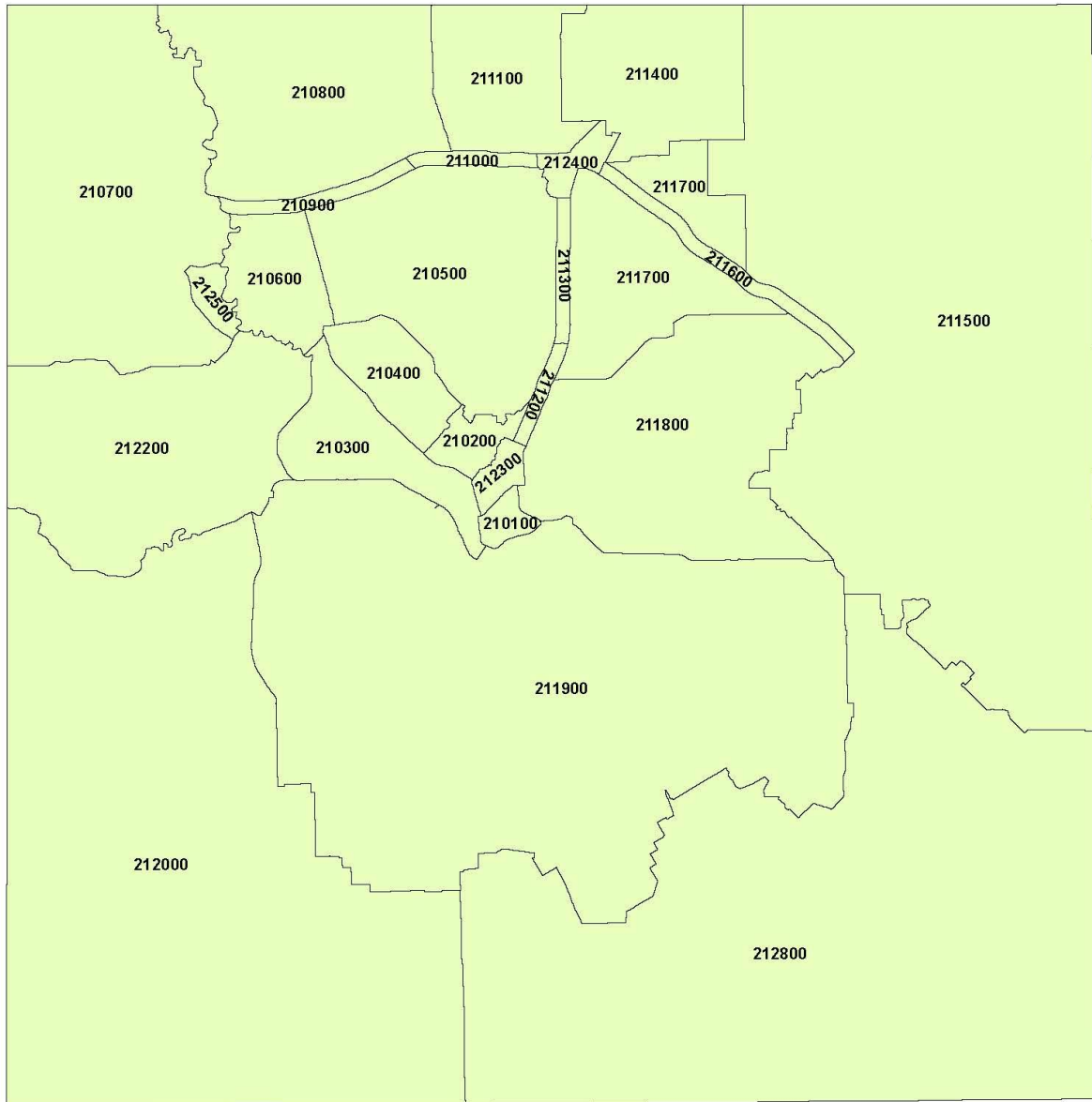
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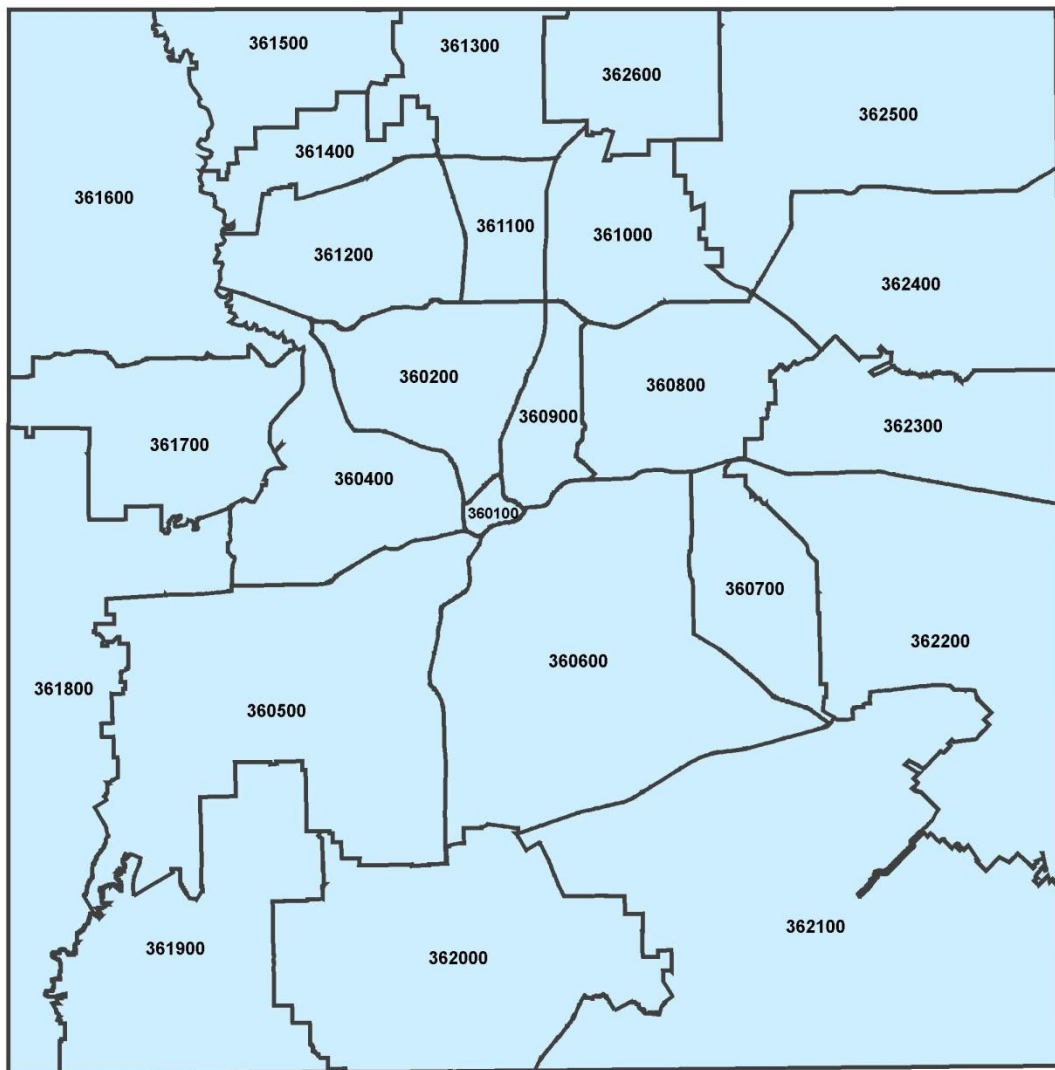
INDUSTRIAL IMPROVEMENT SUBMARKETS



OFFICE IMPROVEMENT SUBMARKETS

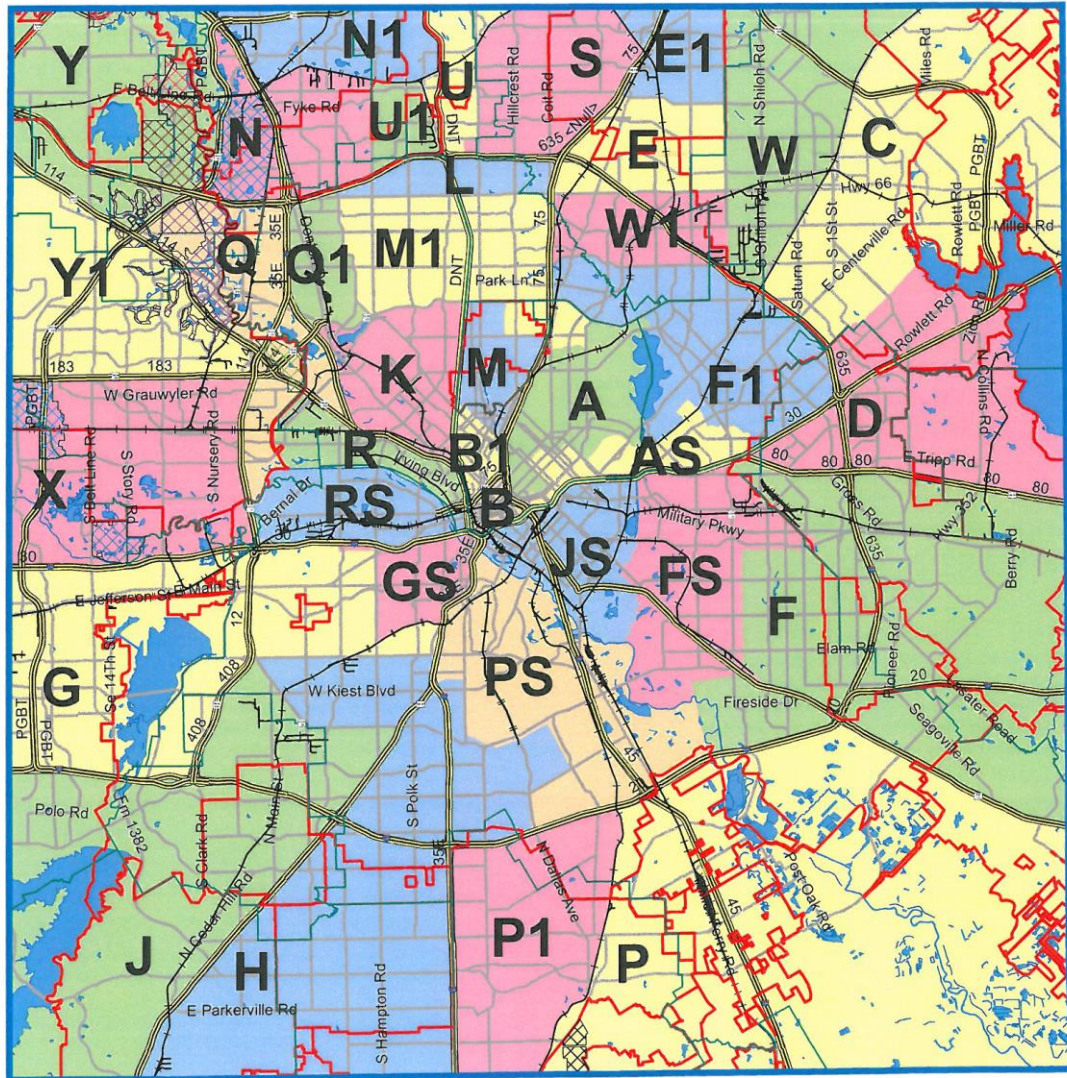


RETAIL IMPROVEMENT SUBMARKETS



Appendix F Business Personal Property (BPP) Routes

Dallas Central Appraisal District Business Personal Property Routes



Legend

Special Districts

NAME

- DALLAS COUNTY FCD #1
- DALLAS COUNTY URD
- LANCASTER MUD #1
- DENTON COUNTY LEVEE IMPROVEMENT DISTRICT
- DENTON COUNTY LID - RUD
- DENTON COUNTY ROAD UTILITY DISTRICT
- GRAND PRAIRIE METRO URD
- IRVING FCD SECTION 1
- IRVING FCD, SECTION III
- N W DALLAS COUNTY FCD
- VALWOOD IMPROVEMENT AUTHORITY

- County
- School Districts
- Cities
- Railroads
- Freeway
- Major Roads
- Lakes

2016 Routes

- | ROUTE | ROUTE | ROUTE | ROUTE | ROUTE | ROUTE |
|-------|-------|-------|-------|-------|-------|
| A | E1 | JS | P1 | U1 | |
| AS | F1 | K | PS | W | |
| B | FS | L | Q | W1 | |
| B1 | G | M | Q1 | X | |
| C | GS | N | RS | Y | |
| D | H | N1 | S | | |
| E | J | P | U | | |



April 27, 2016

Appendix G

DCAD 2027 and 2028 Reappraisal Timeline and Calendar of Events

Reappraisal Plan Timeline

August 1 – July 25

- Building Permit Processing
- Sales Processing
- Statistical Testing

August 1 – January 30

- Residential and Commercial Building Permit Inspections
- BPP Route Inspections
- Account Field and Office Review

August 15 – October 1

- Commercial Income and Expense Processing

October 15 – March 15

- Residential Reappraisal Analysis (Neighborhood Ratio Review)
- Commercial Income Model Development

January 15 – February 15

- Mobile Home Inspections
- BPP Phone Verification Project

February 1 – March 15

- Residential Neighborhood Reappraisal
- Commercial IMA and LMA Reappraisal

February 1 – May 15

- BPP Rendition Processing
- BPP Valuation
- Leased Equipment Project

March 1 – March 15

- Final Performance Analysis

April 15 – May 26

- Real Property Appraisal Notification
- BPP Appraisal Notification

April 16 – July 20

- Appraisal Review Board Process

DALLAS CENTRAL APPRAISAL DISTRICT
KEY APPRAISAL DATES
2026 - 2027 APPRAISAL YEAR

Mon, 07/27/2026	Management Plan Begins
Wed, 08/05/2026	Data entry cutoff date 08-2027
Wed, 08/05/2026	Board of Directors meeting. In even-numbered years, approve biennial Reappraisal Plan for 2027-2028. Report on 2027 Appraisal Review Board Process Budget & Audit Committee meeting.
Thu, 08/13/2026	ARB full board meeting approval for 08-2027
Mon, 08/31/2026	Fiscal Year Ends
Tue, 09/01/2026	Fiscal Year Begins
Tue, 09/01/2026	Statutory appraisal date for certain BPP inventory properties (Sec. 23.12).
Thu, 09/03/2026	Data entry cutoff date 09-2027
Mon, 09/07/2026	Labor Day
Thu, 09/10/2026	ARB full board meeting approval for 09-2027
Wed, 09/30/2026	2026 Property Tax Bills are mailed to taxpayers (approximate date).
Wed, 10/07/2026	Data entry cutoff date 10-2027
Mon, 10/12/2026	Columbus Day holiday (not observed): No mail delivery.
Thu, 10/15/2026	ARB full board meeting approval for 10-2027
Sun, 11/01/2026	Daylight Savings Ends
Wed, 11/04/2026	Data entry cutoff date 11-2027
Thu, 11/05/2026	Fall Tax Entity Meeting
Wed, 11/11/2026	Veterans Day holiday (not observed): No mail delivery.
Wed, 11/11/2026	Board of Directors meeting
Thu, 11/12/2026	ARB full board meeting approval for 11-2027
Thu, 11/26/2026	Thanksgiving holiday.
Fri, 11/27/2026	Friday after Thanksgiving holiday.
Thu, 12/03/2026	Data entry cutoff date 12-2027
Wed, 12/09/2026	Board of Directors meeting
Thu, 12/10/2026	ARB full board meeting approval for 12-2027
Thu, 12/24/2026	Christmas Eve Holiday
Fri, 12/25/2026	Christmas Day Holiday
Fri, 01/01/2027	New Years Day
Sat, 01/02/2027	BPP Renditions and Freeport Exemption Applications are mailed.
Wed, 01/13/2027	Board of Directors meeting
Wed, 01/13/2027	Data entry cutoff date 01-2028
Mon, 01/18/2027	Martin Luther King, Jr. Birthday Holiday. (DCAD and Post Office Closed)
Thu, 01/21/2027	ARB full board meeting approval for 01-2028
Mon, 02/01/2027	Homestead Exemption Applications are mailed.
Mon, 02/01/2027	Unpaid 2026 Property Tax Bills become delinquent and subject to penalties and interest (approximate date).
Wed, 02/03/2027	Data entry cutoff date 02-2028

DALLAS CENTRAL APPRAISAL DISTRICT
KEY APPRAISAL DATES
2026 - 2027 APPRAISAL YEAR

Wed, 02/10/2027	Board of Directors meeting Presentation of 2027/2028 Proposed Budget to Board of Directors.
Thu, 02/11/2027	ARB full board meeting approval for 02-2028
Mon, 02/15/2027	Presidents Day Holiday (not observed DCAD). No mail delivery
Wed, 03/03/2027	Data entry cutoff date 03-2028
Thu, 03/11/2027	ARB full board meeting approval for 03-2028
Sun, 03/14/2027	Daylight Savings Begins
Thu, 03/25/2027	Mail 1 Data Entry Cutoff
Fri, 03/26/2027	Good Friday Holiday. DCAD Closed.
Wed, 04/07/2027	Data entry cutoff date 04-2028
Thu, 04/08/2027	Spring Tax Entity Meeting
Wed, 04/14/2027	Board of Directors meeting. Budget & Audit Committee Meeting.
Thu, 04/15/2027	Preliminary Certification Estimates are released to taxing entities (April 30th letter)
Thu, 04/15/2027	Mail 1 Postmark and VeriVerge delivers mail to post office at 5:00pm. Online notices available on DCAD Website
Thu, 04/15/2027	ARB Period begins (4-1/2 day work week).
Thu, 04/15/2027	ARB full board meeting approval for 04-2028
Thu, 04/15/2027	Deadline for filing renditions and requests for BPP rendition extensions
Wed, 05/05/2027	Prelim 1 Certification Data Entry Cutoff
Wed, 05/05/2027	Data entry cutoff date 05-2028
Wed, 05/05/2027	Mail 2 Data Entry Cutoff
Sat, 05/08/2027	Extended hours for Residential only (8:00 AM to Noon).
Mon, 05/10/2027	Prelim 1 Available on staff website
Wed, 05/12/2027	Mail 2 Postmark and proposed values for 2nd mailing are available on DCAD website
Thu, 05/13/2027	ARB full board meeting approval for 05-2028
Sat, 05/15/2027	Extended hours for Residential only (8:00 AM to Noon).
Mon, 05/17/2027	ARB Hearings begin for Real Property (tentative date).
Mon, 05/17/2027	Mail 1 Protest Deadline
Mon, 05/17/2027	Deadline for filing BPP renditions with timely extensions.
Tue, 05/25/2027	Prelim 2 Certification Data Entry Cutoff
Tue, 05/25/2027	Prelim 2 Certification output is available to taxing entities on DCAD staff website.
Tue, 05/25/2027	Mail 3 Data Entry Cutoff
Fri, 05/28/2027	ARB Full Board Meeting. Consent Agenda to Administration Administrative Assistant by 11:30 A.M. ARB receives MAIL 3 appraisal records (Real Property and Business Personal Property) from Chief Appraiser.
Mon, 05/31/2027	Memorial Day Holiday DCAD closed.
Tue, 06/01/2027	Mail 3 Postmark. Proposed values for 3rd mailing are available on DCAD website.
Thu, 06/03/2027	Data entry cutoff date 06-2028
Fri, 06/11/2027	ARB full board meeting approval for 06-2028
Fri, 06/11/2027	Mail 2 Protest Deadline
Sat, 06/12/2027	Saturday ARB Hearings for Residential accounts (tentative date).

**DALLAS CENTRAL APPRAISAL DISTRICT
KEY APPRAISAL DATES
2026 - 2027 APPRAISAL YEAR**

Fri, 06/18/2027	Observed Juneteenth Holiday. DCAD Closed.
Fri, 06/25/2027	ARB Full Board Meeting. Consent Agenda to Administration Administrative Assistant by 11:30 A.M.
Thu, 07/01/2027	Mail 3 Protest Deadline
Mon, 07/05/2027	Observed Independence Day Holiday. DCAD Closed.
Wed, 07/07/2027	Data entry cutoff date 07-2028
Fri, 07/16/2027	ARB full board meeting approval for 07-2028
Wed, 07/21/2027	Last day of ARB Hearings (tentative date).
Sun, 07/25/2027	Chief Appraiser certifies the Appraisal Rolls. Certified EVRs, Certified Appraisal Rolls and other Certification reports are available to the taxing entities on the DCAD Staff Website.
Sun, 08/01/2027	Management Plan Ends
Mon, 08/02/2027	Management Plan Begins
Wed, 08/04/2027	Board of Directors meeting. In even-numbered years, approve biennial Reappraisal Plan for 2028-2029. Report on 2028 Appraisal Review Board Process Budget & Audit Committee meeting.

Note: Most dates are subject to change if circumstances warrant.

DALLAS CENTRAL APPRAISAL DISTRICT
KEY APPRAISAL DATES
2027 - 2028 APPRAISAL YEAR

Mon, 08/02/2027	Management Plan Begins
Wed, 08/04/2027	Data entry cutoff date 08-2027
Wed, 08/04/2027	Board of Directors meeting. In even-numbered years, approve biennial Reappraisal Plan for 2028-2029. Report on 2028 Appraisal Review Board Process Budget & Audit Committee meeting.
Thu, 08/12/2027	ARB full board meeting approval for 08-2027
Tue, 08/31/2027	Fiscal Year Ends
Wed, 09/01/2027	Statutory appraisal date for certain BPP inventory properties (Sec. 23.12).
Wed, 09/01/2027	Fiscal Year Begins
Thu, 09/02/2027	Data entry cutoff date 09-2027
Mon, 09/06/2027	Labor Day
Thu, 09/09/2027	ARB full board meeting approval for 09-2027
Thu, 09/30/2027	2027 Property Tax Bills are mailed to taxpayers (approximate date).
Wed, 10/06/2027	Data entry cutoff date 10-2027
Mon, 10/11/2027	Columbus Day holiday (not observed): No mail delivery.
Thu, 10/14/2027	ARB full board meeting approval for 10-2027
Wed, 11/03/2027	Data entry cutoff date 11-2027
Thu, 11/04/2027	Fall Tax Entity Meeting
Sun, 11/07/2027	Daylight Savings Ends
Wed, 11/10/2027	Board of Directors meeting
Thu, 11/11/2027	ARB full board meeting approval for 11-2027
Thu, 11/11/2027	Veterans Day holiday (not observed): No mail delivery.
Thu, 11/25/2027	Thanksgiving holiday.
Fri, 11/26/2027	Friday after Thanksgiving holiday.
Thu, 12/02/2027	Data entry cutoff date 12-2027
Wed, 12/08/2027	Board of Directors meeting
Thu, 12/09/2027	ARB full board meeting approval for 12-2027
Fri, 12/24/2027	Christmas Eve Holiday
Mon, 12/27/2027	Observed Christmas Day Holiday
Fri, 12/31/2027	Observed New Years Day
Sun, 01/02/2028	BPP Renditions and Freeport Exemption Applications are mailed.
Wed, 01/12/2028	Data entry cutoff date 01-2028
Wed, 01/12/2028	Board of Directors meeting
Mon, 01/17/2028	Martin Luther King, Jr. Birthday Holiday. (DCAD and Post Office Closed)
Thu, 01/20/2028	ARB full board meeting approval for 01-2028
Tue, 02/01/2028	Homestead Exemption Applications are mailed.
Tue, 02/01/2028	Unpaid 2027 Property Tax Bills become delinquent and subject to penalties and interest (approximate date).
Wed, 02/02/2028	Data entry cutoff date 02-2028

DALLAS CENTRAL APPRAISAL DISTRICT
KEY APPRAISAL DATES
2027 - 2028 APPRAISAL YEAR

Wed, 02/09/2028	Board of Directors meeting Presentation of 2028/2029 Proposed Budget to Board of Directors.
Thu, 02/10/2028	ARB full board meeting approval for 02-2028
Mon, 02/21/2028	Presidents Day Holiday (not observed DCAD). No mail delivery
Wed, 03/01/2028	Data entry cutoff date 03-2028
Thu, 03/09/2028	ARB full board meeting approval for 03-2028
Sun, 03/12/2028	Daylight Savings Begins
Thu, 03/30/2028	Mail 1 Data Entry Cutoff
Wed, 04/05/2028	Data entry cutoff date 04-2028
Thu, 04/06/2028	Spring Tax Entity Meeting
Wed, 04/12/2028	Board of Directors meeting. Budget & Audit Committee Meeting.
Thu, 04/13/2028	ARB Full Board receives 1st Mailing appraisal records (real property) and approves Supplemental 04-2028
Thu, 04/13/2028	Mail 1 Postmark and VeriVerge delivers mail to post office at 5:00pm. Online notices available on DCAD Website
Fri, 04/14/2028	Good Friday Holiday. DCAD Closed.
Sat, 04/15/2028	Preliminary Certification Estimates are released to taxing entities (April 30th letter)
Sat, 04/15/2028	Deadline for filing renditions and requests for BPP rendition extensions
Mon, 04/17/2028	ARB Period begins (4-1/2 day work week).
Wed, 05/03/2028	Mail 2 Data Entry Cutoff
Wed, 05/03/2028	Data entry cutoff date 05-2028
Wed, 05/03/2028	Prelim 1 Certification Data Entry Cutoff
Sat, 05/06/2028	Extended hours for Residential only (8:00 AM to Noon).
Mon, 05/08/2028	Prelim 1 Available on staff website
Wed, 05/10/2028	Mail 2 Postmark and proposed values for 2nd mailing are available on DCAD website
Thu, 05/11/2028	ARB Full Board accepts 2nd Mailing (BPP) appraisal records, Consent Agenda to Administration Administrative Assistant by 10:00 A.M. and approves Supplemental 05-2028
Sat, 05/13/2028	Extended hours for Residential only (8:00 AM to Noon).
Mon, 05/15/2028	Mail 1 Protest Deadline
Mon, 05/15/2028	Deadline for filing BPP renditions with timely extensions.
Mon, 05/22/2028	ARB Hearings begin for Real Property (tentative date).
Tue, 05/23/2028	Mail 3 Data Entry Cutoff
Tue, 05/23/2028	Prelim 2 Certification output is available to taxing entities on DCAD staff website.
Tue, 05/23/2028	Prelim 2 Certification Data Entry Cutoff
Fri, 05/26/2028	ARB Full Board Meeting. Consent Agenda to Administration Administrative Assistant by 11:30 A.M. ARB receives MAIL 3 appraisal records (Real Property and Business Personal Property) from Chief Appraiser.
Mon, 05/29/2028	Memorial Day Holiday DCAD closed.
Tue, 05/30/2028	Mail 3 Postmark. Proposed values for 3rd mailing are available on DCAD website.
Thu, 06/01/2028	Data entry cutoff date 06-2028

**DALLAS CENTRAL APPRAISAL DISTRICT
KEY APPRAISAL DATES
2027 - 2028 APPRAISAL YEAR**

Fri, 06/09/2028	ARB full board meeting approval for 06-2028
Fri, 06/09/2028	Mail 2 Protest Deadline
Sat, 06/10/2028	Saturday ARB Hearings for Residential accounts (tentative date).
Mon, 06/19/2028	Juneteenth Holiday. DCAD Closed.
Thu, 06/29/2028	Mail 3 Protest Deadline
Fri, 06/30/2028	ARB Full Board Meeting. Consent Agenda to Administration Administrative Assistant by 11:30 A.M.
Tue, 07/04/2028	Independence Day Holiday. DCAD Closed.
Wed, 07/05/2028	Data entry cutoff date 07-2028
Fri, 07/14/2028	ARB full board meeting approval for 07-2028
Wed, 07/19/2028	Last day of ARB Hearings (tentative date).
Tue, 07/25/2028	Chief Appraiser certifies the Appraisal Rolls. Certified EVRs, Certified Appraisal Rolls and other Certification reports are available to the taxing entities on the DCAD Staff Website.
Sun, 07/30/2028	Management Plan Ends
Mon, 07/31/2028	Management Plan Begins
Wed, 08/02/2028	Board of Directors meeting. In even-numbered years, approve biennial Reappraisal Plan for 2029-2030. Report on 2029 Appraisal Review Board Process Budget & Audit Committee meeting.

Note: Most dates are subject to change if circumstances warrant.