



2017 District Accountability Protocol

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Chapter 1: Document Intent

The aim of the present document is to enumerate the processes and methods for preparing the accountability data files and calculating district¹ accountability determinations for the Tennessee Department of Education (the department). The ultimate goal is to provide a transparent and replicable framework for making district determinations, such that districts will find themselves empowered to utilize their data files to draw meaningful conclusions about next steps and targeted improvement for their students.

1.1 Changes Pending Legislation

With the passage of the Every Student Succeeds Act (ESSA) and the release of final regulations by the U.S. Department of Education, there may be additional changes to accountability calculations for the 2017-18 school year, as required by federal law.

¹ Throughout this document, the words “district,” “school district,” “LEA,” and “system” will be used interchangeably.

Chapter 2: Accountability Background

2.1 District Accountability Subject Areas

The following content areas are included in district accountability calculations:

1. Grades 3–5 math
2. Grades 3–5 English language arts (ELA)
3. Grades 6–8 math
4. Grades 6–8 ELA
5. High school math, which includes:
 - a. Algebra I, Geometry, Algebra II, Integrated Math I, Integrated Math II, and Integrated Math III
6. High school ELA, which includes:
 - a. English I, English II, and English III
7. Graduation rate
8. ACT composite

2.2 District Accountability Subgroups

Students are divided into applicable subgroups for accountability determinations in order to ensure that all Tennessee students are achieving high levels of success.

1. All students are combined to create the All Students group
2. If applicable, student records are assigned to the following subgroups
 - a. Super Subgroup²
 - b. Black, Hispanic, and Native American students (BHN)
 - c. Economically Disadvantaged students (ED)
 - d. English Learners (EL)
 - e. Students with Disabilities (SWD)

2.3 Subgroup Minimum Qualifications

Each subgroup must have a minimum number of 30 students to be included in accountability calculations. The subgroup cutoff is determined by the number of *valid tests*, which means the number of tests for which a performance level can be assigned. The subgroup cutoff applies to the school, system, and state levels.

² The Super Subgroup is composed of all records that identify at least one of the subgroups in b through e. For more information, please consult [section 5.1.2](#).

Chapter 3: Types of Tests

Records from the current year's fall *and* spring administrations of the following tests are included in accountability calculations for all applicable tests.

3.1 Tennessee Comprehensive Assessment Program

The Tennessee Comprehensive Assessment Program (TCAP) is the umbrella program of state assessments required for students in grades 3–11. TCAP tests for high school subjects are considered End of Course (EOC) exams; whereas, TCAP tests for elementary and middle school subjects are considered Achievement exams. The TCAP Alternative Assessment is designed for students in grades 3–11 with significant cognitive disabilities.

Please note: TNReady *is a part of TCAP* and *is not* an additional test. For accountability purposes, TNReady tests are considered Achievement exams for elementary and middle school math and ELA courses, and TNReady tests are considered EOC exams for high school math and ELA courses.

3.1.1 TCAP Achievement Exams

Students in grades 3–8 take the TCAP each spring.

- 3–8 TCAP records in grades 3–8 with subjects of math and ELA are included in district accountability calculations.
- If a student takes both 3–8 TCAP and EOC for the same subject, the 3–8 TCAP record is dropped from accountability calculations and replaced with the EOC record. Please consult [section 5](#) for more detailed information on data preparation.³

3.1.2 TCAP End of Course (EOC) Exams EOC testing records consist of students who take Algebra I, Algebra II, Geometry, Integrated Math I, Integrated Math II, Integrated Math III, Biology I, Chemistry, English I, English II, English III, or U.S. History in grades 6–12.^{4 5}

For the purposes of district accountability calculations, middle school students who take an EOC subject are included in the middle school counts corresponding to that subject.

- Middle school Algebra I, Algebra II, Geometry, Integrated Math I, Integrated Math II, and Integrated Math III records are included in the grades 6–8 math counts.
- Middle school English I, English II, or English III records are included in the grades 6–8 ELA counts.

3.1.3 TCAP-Alternative Assessment

³ If a student has records both for a grades 6–8 subject and for a grades 9–12 subject in the same content area, the grades 6–8 record will be dropped and the grades 9–12 record will replace it. As an example, if a student has records both for grades 6–8 math and for Algebra I, the grades 6–8 math record will be dropped. Only the student's Algebra I record will count toward accountability calculations. Please consult [section 5](#) for more detailed information on data preparations for base and numeric files.

⁴ Though records exist for Biology and Chemistry, these subjects are not considered in district accountability calculations.

⁵ The Chemistry EOC was added starting in the 2014–15 school year.

The TCAP-Alternative Assessment is designed for students with significant cognitive disabilities and is based on alternative content standards.

- TCAP-Alternative Assessment students in grades 3–12 with math and/or English language arts subjects are included in accountability calculations.
- All TCAP-Alternative Assessment students are considered Students with Disabilities (SWD).
- TCAP-Alternative Assessment math records in grades 9 or above are included as Algebra I or Integrated Math I, depending on the district's curriculum sequence.
- TCAP-Alternative Assessment English language arts records in grades 9 or above are included as English II.

3.2 The ACT

The department's five-year strategic plan, *Tennessee Succeeds*,⁶ lays out the state's goal to have an average ACT composite score of 21 by 2020. The motivation to raise Tennessee's ACT composite average is rooted in improving postsecondary and career readiness for all Tennessee students. This goal reflects the reality that Tennessee students will enter a workforce that requires some type of postsecondary training. With a score of 21, students are predicted to be more successful in both college and career. Allowing our students an opportunity to take the ACT within the school day removes a college entrance barrier for many of our students.

For the first time during the 2016-17 school year, ACT testing data will factor into district accountability calculations. The ACT assesses students' cumulative knowledge from grades K–12, and by taking an assessment of career and college readiness, students gain valuable information on their preparation for postsecondary opportunities and the workforce.

For the ACT Composite content area, a student's highest ACT score from a single administration will be used.⁷

Please note: ACT data lag by one year, such that 2017 district accountability determinations for the ACT composite content area rely on ACT data for the graduating class of 2016.⁸

⁶ You may find more information about the department's strategic plan [here](#).

⁷ For calculating a student's highest score, the highest ACT composite score from the three years including and up to June of the student's cohort graduation year will be considered.

⁸ Please note that for the subject replacement, as detailed in sections [5.5.2](#) and [5.5.3](#) for students taking advanced coursework in lieu of Algebra II, Integrated Math III, or English III, current year ACT testing data will be used from the state testing day.

Chapter 4: Student Testing Records

4.1 Student Testing Records

In order to perform accountability calculations at the district level, the department integrates the following files containing student achievement and demographic data.

1. TCAP Achievement data (grades 3–8) will come in one file.
2. EOC data (grades 9–12) for both fall and spring administrations will be delivered in two files at the end of the academic year.
3. There will be a separate file for students taking TCAP-Alternative Assessments.
4. ACT testing data will come in two files: the department will receive 1) the graduating cohort file, which is used for the ACT composite content area, and 2) the state testing day file, which is used for grade 11 subject substitutions.

These files represent the student testing records for all district accountability tests. Although the testing records may contain other subjects, only the following subjects, tested in the fall and spring of the current school year, are used in accountability determinations at the district level:⁹

- Grades 3–5 math
- Grades 3–5 ELA
- Grades 6–8 math
- Grades 6–8 ELA
- High school math¹⁰
- High school ELA¹¹
- ACT composite

4.1.1 File Layouts and Code Definitions

The testing vendors will provide a comprehensive layout document as outlined in this section that allows the department's office of accountability to aggregate the testing records into a single file. The department uses the following file layouts and coding definitions so that variables used for accountability can be properly identified and assigned.

4.1.2 Data Pre-Checks

The department checks to determine if any testing records are attributed to the following schools and removes the records for district accountability purposes:

- Adult high schools
- CTE schools
- Alternative schools

⁹ Other subjects are used in the accountability process but not at the district level. For more information regarding the subjects used for school accountability calculations, please consult the School Accountability Protocol document.

¹⁰ See [section 2.1](#) for a complete list of courses that are aggregated to create a score for the subject of high school math.

¹¹ See [section 2.1](#) for a complete list of courses that are aggregated to create a score for the subject of high school ELA.

Furthermore, the department will use the following data files for accountability purposes, the records from which will be included in accountability calculations:

- List of new schools
- Graduation file for determining graduation rates
- School- and system-level TVAAS data

It is also worth noting that records that have a blank or unknown race/ethnicity will be assigned to the All Students group, even if the student is Black, Hispanic, or Native American and would otherwise be assigned to the BHN subgroup. The same is true of testing records that do not accurately report data that reflect students' status as Economically Disadvantaged (ED) students, English Learners (EL), and Students with Disabilities (SWD). **This underscores the importance of ensuring accurate student records at the school and system levels.**

4.2 Files Delivered to Districts

The files described in this section are provided to districts once accountability determinations are complete:

- Base accountability files (system, and school level)
- Numeric accountability files (system, and school level)
- Final determination heat map file (system level only) that includes:
 - Participation rate determination heat map
 - Minimum performance goal determination heat map
 - Achievement determination heat map
 - Subgroup determination heat map
 - Final determination heat map
- Student level files
- TCAP-Alternative Assessment files

Appendices C and D provide a list of all the accountability files, the structure description for each file, and a list and description of all the variables in each file. Appendix B provides an example of the final determination heat map files.

4.2.1 Base Accountability Files

The base accountability files display the counts and percentages for each grade included in the testing data for math in grades 3–8, ELA in grades in 3–8, Algebra I, Algebra II, Geometry, Integrated Math I, Integrated Math II, Integrated Math III, English I, English II, English III, Biology I, Chemistry, social studies, U.S. History, ACT composite, and graduation rate. **Please note that the counts and percentages listed in the base accountability file detail the results *before* subject reassignment or ACT substitution rules are applied.**

Base files are created at the school, system, and state levels and contain information for the three most recent years.

Base files are broken down by subgroup and contain aggregate testing information for all grades, individual grades of 3–12, and missing grades. Counts and percentages in the “All Grades” group consist of each individual grade level, including a grade level of “missing” for that subject.

4.2.2 Numeric Accountability Files

The numeric accountability files display only the counts and percentages on which the accountability decisions are based: i.e., aggregated counts and percentages for grades 3–5 math, grades 3–5 ELA, grades 6–8 math, grades 6–8 ELA, high school math,¹² high school ELA,¹³ ACT composite,¹⁴ and graduation rate.

Numeric files are created at the school, system, and state levels and contain information for the two most recent years. The file contains data for All Students, the four subgroups evaluated in district accountability,¹⁵ and for the Super Subgroup.

4.2.3 Final Determination Heat Map Files

The final determination heat map files outline how the district determination was calculated and consist of six individual worksheets: 1) the Participation Rate heat map, 2) the Minimum Performance Goal heat map, 3) the Achievement Determination heat map, 4) the Subgroup Determination heat map, 5) the Final Determination heat map, and 6) the Individual Subgroup heat map.

All of the files detailed below display data for a system in the eight content areas listed in [section 2.1](#).

1. The Participation Rate heat map displays the breakdown of the system's participation rates for all applicable subgroups/grades/subjects.
2. The Minimum Performance Goal heat map displays the breakdown of whether the system met or missed each component of the Minimum Performance Goal.
3. The Achievement Determination heat map displays the breakdown of how the All Students group performed relative to the achievement criteria.
4. The Subgroup Determination heat map displays the breakdown of how individual subgroups performed relative to the subgroup pathway criteria.
5. The Final Determination heat map provides districts with their final determination status and summarizes each component of the accountability model.
6. The Individual Subgroup heat map displays the performance of each subgroup for each pathway before the data are aggregated in the Subgroup Determination heat map.

4.2.4 Student-Level Files

The student-level files contain the scores for all students used in accountability determinations. The student-level files also outline which records changed due to accountability procedures, such as students' whose scores were reassigned using the ACT subscore substitution rules.¹⁶

¹² See [section 2.1](#).

¹³ See [section 2.1](#).

¹⁴ ACT testing data are taken from the lagged-year graduating students file. For more information regarding ACT data files, please refer to sections [3.2](#) and [4.1](#). For more information regarding ACT proficiency reassignment, please refer to sections [5.5.2](#) and [5.5.3](#).

¹⁵ See [section 2.2](#).

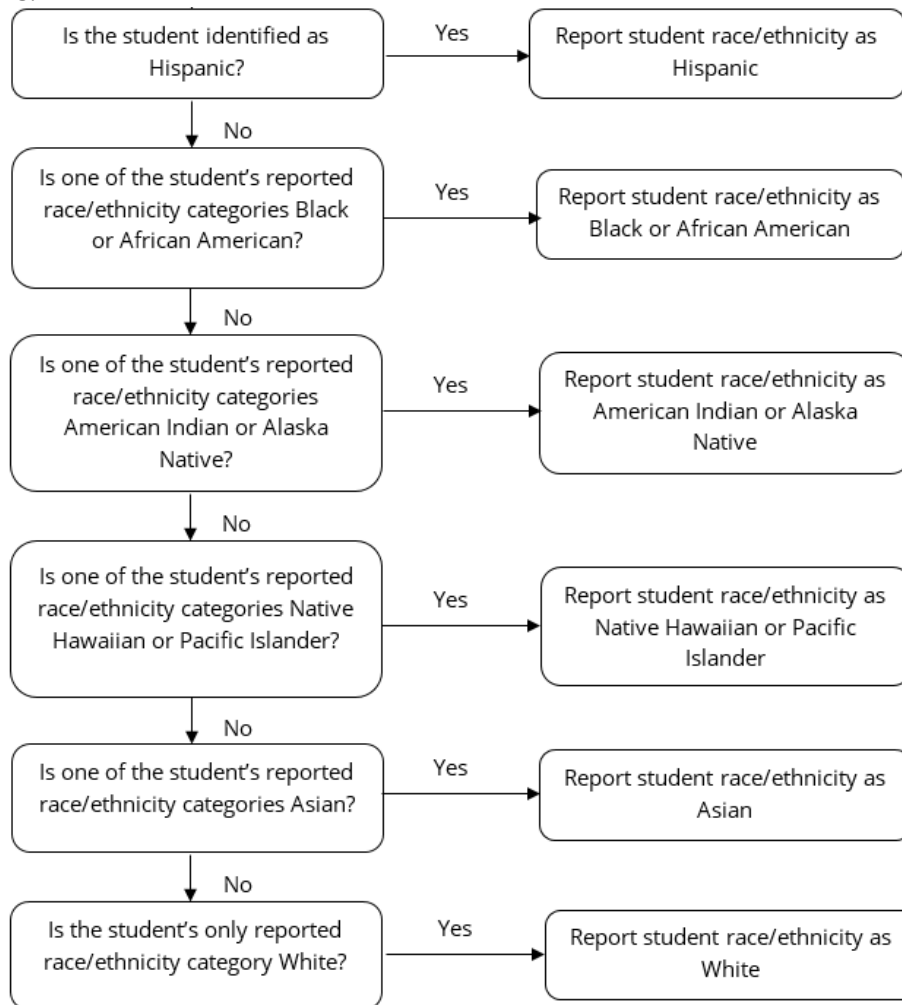
¹⁶ See [section 5.5.3](#) for more details.

Chapter 5: Data Preparations for Base and Numeric Files

5.1 Subgroups and Definitions

5.1.1 Subgroups

1. All students are combined to create the All Students group.
2. Students are assigned to the following subgroups, as applicable:
 - a. English Learners (EL)¹⁷
 - b. Economically Disadvantaged (ED)
 - c. Students with Disabilities (SWD)
 - d. Black, Hispanic, and Native American (BHN)
3. If the student has multiple marks for race/ethnicity, the following progression is applied for race/ethnicity determinations:



¹⁷ In the base file, there are separate categories for EL and EL with T1 and T2. In the numeric file, student records marked as T1 and T2 are included in the EL subgroup only if there are greater than or equal to 30 valid EL tests without T1 and T2 for the particular subject.

5.1.2 Super Subgroup

The Super Subgroup consists of all students identified with one or more of the subgroups mentioned in [section 2.2](#), counting each individual student only once, regardless of how many subgroups they identify with. For example, a student who is classified both as EL and as SWD counts once in the Super Subgroup. The same would be true if a student identified with only one of the subgroups, as in the case of student whose ethnicity is listed as Black, Hispanic, or Native American (BHN). Please note that the Super Subgroup is only used in the Minimum Performance Goal¹⁸ for district accountability calculations.

5.1.3 Enrolled, Tested, and Valid Tests Definitions

To reiterate, enrolled and tested counts are primarily used for calculating eligibility counts and participation rates.¹⁹

1. **enrolled** is defined as the number of tested and non-tested records.
2. **tested** is defined as the number of tested records.
3. **valid tests** is defined as the number of tested records with a performance level.

Please note that all counts are calculated after excluded and multiple testing records have been removed from accountability data.

Records that are marked as **enrolled** but **not tested** will be reflected in the data as follows:

1. For calculating the percent of students tested,
 - a. the record will be included in the numerator count (number tested) as a **0**, and
 - b. the record will be included in the denominator count (number of enrolled students) as a **1**.
2. The record will **not** be included in calculating performance level percentages and does not change this calculation.

Records that are marked as **enrolled** and **tested** but do not have a performance level will be reflected in the data as follows:

1. For calculating the percent of students tested,
 - a. the record will be included in the numerator count (number tested) as a **1**, and
 - b. the record will be included in the denominator count (number of enrolled students) as a **1**.
2. The record will be included in calculating performance level percentages.

5.1.4 Enrollment and Testing Scenarios

The following scenarios detail how student records will factor into district accountability determinations depending on different testing and enrollment scenarios.

Any student who is not enrolled in a school district for at least 60 percent of the academic year will count toward participation rates but will not count in district-level accountability calculations.²⁰

¹⁸ Please see [section 7.2](#).

¹⁹ For more information regarding participation rates, please see [section 6.2](#).

²⁰ Students who are enrolled for less than 60 percent of the academic year will count toward state-level accountability calculations. Students who are enrolled in a given district for 60 percent of the academic year will count in the school-level calculations in the school in which they tested.

The following table details how testing records are included in calculations for district-level participation rates, district-level accountability determinations, and state-level accountability.

Enrollment/Testing Scenario	Count Participation Rate ²¹	Count District Level	Count State Level
Student was not enrolled for at least 60 percent of the school year	Yes	No	Yes
Student was enrolled for at least 60 percent of the school year and student was present and tested for test	Yes	Yes	Yes

5.2 Testing Flags

The testing flags listed below are used to exclude data appropriately from accountability calculations. Please see [section 5.6](#) for other general exclusions.

5.2.1 Testing Flag Hierarchy

If the student has multiple testing flags, the following hierarchy is applied to determine the performance level and tested value of the record. For example, if the student record has a testing flag of “did not attempt” and is also flagged as “absent,” the student would receive a performance level of *null* and a tested value of 0.

RI Status	Flag	Performance Level	Tested Value
0	No RI Status	As reported	1
1	Residential Facility	Null	1
2	Nullified	Null	1
3	Medically Exempt	Null	1
4	Did Not Attempt (Refusal)	Null	1
5	Absent	Null	0
6	Teacher Effect Ineligible		1
7	Test Ineligible	Null	1
8	Nullify Field Test	Null	1
9	Void	Null	1
10	EL_Exclude ELA or social studies record with a <i>null</i> original performance level or EL_Exclude math or science records that	Null	1

²¹ A student who was present and tested will count **for** a district’s participation rate (that is, as a 1 in both the numerator and denominator) whereas a student who was absent will count **against** a district’s participation rate (that is, as a 0 in the numerator and a 1 in the denominator).

	do not have a null original performance level.		
11	<i>EL_Exclude</i> math or science records with a null original performance level	<i>Null</i>	0
12	<i>Invalid Score</i>	<i>Approaching</i> ²²	1

5.2.2 Teacher Effect Ineligible and Nullify Field Test Flags

Records with a flag of *Teacher Effect Ineligible* and/or *Nullify Field Test* are included in accountability calculations. There are no special rules surrounding these flags.

5.3 Missing Data

Below are the department's guidelines for handling missing data.

1. If the test date is missing, then it considered taken in the spring semester.²³
2. If race/ethnicity is missing, then the student is counted in the All Students group.
3. If the school number is missing and the district number is present, then the student is included in the district and state levels.²⁴
4. If the district number is missing, then the student is included in the state level.²⁵
5. If the grade is missing, then the student is included in "All Grades" for accountability purposes at the state level.
6. If grade is missing and the subject is a subject for which there is a corresponding EOC,²⁶ then the student record is counted in either high school math or high school ELA, depending on the subject.
7. If EL status is missing, then the student is not considered EL.
8. If special education status is missing, then the student is not identified as SWD.
9. If economically disadvantaged status is missing, then the student is not considered to be ED.

5.4 Duplicate Data

Below are the department's guidelines for handling duplicate testing records.

1. If a student has testing records for two different test types, then the type of test determines which record is included. For example, if a student has a valid TCAP Achievement math test and a TCAP-Alternative Assessment math test, then the TCAP-Alternative Assessment trumps the TCAP Achievement/EOC assessment. Priority is as follows:
 - a. TCAP-Alternative
 - b. TCAP EOC

²² Records with a performance level of Below will remain Below.

²³ All alternative assessment records are spring semester. For EOC, if test date is missing, it is assigned to a test date from the semester of the testing file. (A testing file is received for each semester.)

²⁴ If the school number is missing in the file (but the district number is present, the department checks to see if the school name is populated before setting it to "missing."

²⁵ If the district number is missing, the department checks to see if the district name is populated before setting it to missing.

²⁶ High school math (Algebra I, Algebra II, Geometry, Integrated Math I, Integrated Math II, or Integrated Math III) or high school English (English I, English II, or English III).

c. TCAP Achievement²⁷

2. Of the remaining records (after the first step is complete), if a student has two valid tests of the same type, meaning same grade, content area, and test type (e.g., two valid grade 7 TCAP-Alternative Assessments in math), then the record with the highest of the multiple performance levels is chosen. The other record is dropped.
3. Of the remaining records (after the second step is complete), if a student has two valid tests of the same type, meaning same grade, content area, and test type with the same performance level within different test cycles (e.g., two valid Algebra I tests with a performance level of On Track), then the record from the most recent administration is chosen. The other record is dropped.
4. Of the remaining records (after the third step is complete), if a student has multiple test records within the same test cycle with the same test type, meaning same grade, content area, and test type, and receives the same performance level, all remaining records are kept.

All information from the chosen record (e.g., school, race/ethnicity, grade, etc.) is the information that will be used in the accountability calculation.

5.5 Modifications to Student Information and Testing Data

Below are the department's guidelines for making modifications to student information and testing data. This occurs only in the cases enumerated below.

5.5.1 Modifying Student Subgroup Information

1. If the student took the TCAP-Alternative Assessment (*test_category = alternative*), the student will be assigned to the Students with Disabilities (SWD) subgroup.
2. If the student is marked as "EL Exclude" for their math assessment, science assessment, or the corresponding EOC, and the performance level is missing, then the student is not considered tested. If the performance level is present, then the performance level is modified to *null*, but the student is considered tested.
3. If the student is marked as "EL Exclude" for their English language arts and social studies assessments, then the student is considered tested, but performance levels are modified to *null*.

5.5.2 Modifying Testing Subjects and Grades

These are the department's guidelines for modifying testing subjects and grades in situations where the grade is either missing or is less than grade 9.

Original Subject	Original Grade	Modified Subject	Modified Grade
Algebra I	Missing	Do not modify	9–12
	< grade 9	Math	Do not modify
	Missing	Do not modify	9–12

²⁷ If a student has two achievement records in the same content area but in two different grades and one of the records has an absent flag, the record with the absent flag is dropped and the non-absent record is retained.

Algebra II	< grade 9	Math	Do not modify
Geometry	Missing	Do not modify	9–12
	< grade 9	Math	Do not modify
Integrated Math I	Missing	Do not modify	9–12
	< grade 9	Math	Do not modify
Integrated Math II	Missing	Do not modify	9–12
	< grade 9	Math	Do not modify
Integrated Math III	Missing	Do not modify	9–12
	< grade 9	Math	Do not modify
English I	Missing	Do not modify	9–12
	< grade 9	ELA	Do not modify
English II	Missing	Do not modify	9–12
	< grade 9	ELA	Do not modify
English III	Missing	Do not modify	9–12
	< grade 9	ELA	Do not modify

For students who have opted to take more advanced classes in lieu of English III, Algebra II, or Integrated Math III, their ACT subject score for the corresponding subject will be compared to the corresponding benchmark in order to assign a performance level for a given subject.²⁸ Students who score at or above the ACT College Readiness Benchmarks²⁹ for the corresponding subjects will be relabeled as On Track for either high school ELA or high school math, depending on the subject. Conversely, students who score below the ACT College Readiness Benchmarks for the corresponding subjects will be relabeled as Approaching for the respective subject.

5.5.3 Modifying Performance Levels

Below are the department's guidelines for modifying performance levels to *null*.

1. Modify to Null or Approaching
 - a. If the test has a flag of *Nullified* or *Did Not Attempt (Refusal)*, then the performance level will be modified to *null*.
 - b. If the student is marked as "*absent*," then the performance level will be modified to *null* and the student will be counted as not tested.
 - c. If the test has a flag of "*did not test*," then the performance level will be modified to Approaching.

Below are the department's guidelines for modifying performance levels to On Track or Approaching as it relates to ACT substitution.

Student Subjects with Missing Test Score	Student Grade	ACT Subject-Area Test	ACT College Readiness Benchmark	Student Subject Score	Modified Performance Level	Modified Grade-Content Area
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²⁸ Please refer to the table in [section 5.5.3](#) for more information.

²⁹ For more information regarding the ACT College Readiness Benchmarks more generally, please visit the [ACT website](#).

Algebra I, Geometry, and Algebra II OR Integrated Math I, II, and III	11	Math	22	≥ 22	On Track	High School Math
				< 22	Approaching	
				Missing	Do not modify	
English I, English II, and English III	11	Reading	22	≥ 22	On Track	High School ELA
				< 22	Approaching	
				Missing	Do not modify	

5.5.4 TCAP-Alternative Assessment Modifications to Student Information, Subject, and Testing Data

For the TCAP-Alternative Assessment for students in grades 9 and above, a math record is considered Algebra I or Integrated Math I, depending on the district's curriculum. An English language arts TCAP-Alternative Assessment record is considered English II for grades 9 and above. For the base file only, a science TCAP-Alternative Assessment record for grades 9 and above is considered Biology I. All testing records will be relabeled and modified accordingly in the numeric files.

In grades 3–8, all tests are used together within each individual subject area. Subjects used in TCAP-Alternative Assessment reassignment are based on the modification of testing subjects as outlined in the preceding paragraph.

Base file calculations will use the original subject before TCAP-Alternative Assessment reassignments. That is, alternative reassignments are made, but only the original subjects are used in the base file calculations.

5.6 Excluded Data

Below are the department's guidelines for excluding data from district accountability calculations.

1. If a student is classified as both homeschooled and homebound, reclassify the student to only *homebound*.
2. Exclude the student from school level file if she or he is homebound (*homebound* = 1). Keep the student at state and district levels.
3. Exclude if the student is homeschooled (*homeschool* = 1, or *school number* = 981).
4. Exclude if the student is medically exempt (*medically_exempt* = 1)
5. Exclude if the district number is greater than 1000 (private or parochial testing records).
6. Exclude if the student is from an adult high school.
7. Exclude if the student is from a CTE school.
8. Exclude if the student is from an alternative school.
9. Exclude if *residential_facility* = 'Y' and maintain the record at the state level only.

10. Exclude if the grade is 13.
11. Exclude if the test is flagged as void (*test_flag = void*).
12. Exclude if the test is flagged as ineligible (*test_flag = ineligible*).
13. Exclude if the test category is TCAP-Alternative Assessment and has a testing flag of *not required to test*.
14. Exclude if the subject = math and the student also has an Algebra I, Geometry, Algebra II, or Integrated Math testing record.
15. Exclude if the subject = ELA and the student also has an English I, English II, or English III testing record.
16. Exclude if the subject = science and the student also has a Biology I testing record.
17. Exclude if the subject = science and the student also has a Chemistry testing record.

Chapter 6: Data Calculations for Base and Numeric Files

6.1 Performance Level Percentages

A student is included in a district's accountability performance level percentages only if that student was enrolled in the district for at least 60 percent of the academic year.³⁰ The percentage of students at a given performance level is equal to the number of valid tests at that performance level divided by the number of valid tests at all performance levels.³¹

1. Percent Mastered = $\frac{\# \text{ Mastered}}{\# \text{ Valid Tests}} * 100$
2. Percent On-Track = $\frac{\# \text{ On Track}}{\# \text{ Valid Tests}} * 100$
3. Percent Approaching = $\frac{\# \text{ Approaching}}{\# \text{ Valid Tests}} * 100$

Percent On Track or Mastered is calculated by dividing the number of On Track and Mastered records by the total number of valid tests.

1. Percent On Track or Mastered = $\frac{\# \text{ On Track} + \# \text{ Mastered}}{\# \text{ Valid Tests}} * 100$

Percent Below and Percent Approaching or Below are calculated during the rounding process to ensure that all percentages sum to 100. Please note that values will be rounded to the tenths place only after all calculations and comparisons have been performed.

1. Percent Below = $100 - (\text{Percent Mastered} + \text{Percent On Track} + \text{Percent Approaching})$
2. Percent Approaching or Below = $100 - (\text{Percent On Track or Mastered})$

6.2 Participation Rate

Participation rates are calculated for any subgroup/grade/subject with an enrolled count that equals or exceeds 30. The participation rate is equal to the number of students **tested** divided by the number of students **enrolled**.³² The following equation illustrates how test participation rates are calculated:

$$\text{Participation Rate} = \frac{\text{Number of students tested}}{\text{Number of students enrolled}}$$

Participation rates are calculated for each subject at the school, district, and state levels both for the All Students group and for each of the four accountability subgroups. This calculation is then rounded to the nearest whole

³⁰ If the student switched schools within the district and the total enrollment in the district was at least 60 percent of the academic year, the student counts toward district accountability calculations. Please refer to [section 5.1.3](#) for more information regarding testing scenarios.

³¹ Records with blank or null performance levels are not included in these counts.

³² ACT participation rates, which are calculated by dividing the number of students with valid ACT tests by the number of graduates in the district, represent the only exception to this formula.

percentage point. This is done to calculate a 1-year rate, a 2-year rate,³³ and a 3-year rate.³⁴

Please note that participation rates are calculated **after** all data transformations have been completed. That is, after all testing records have been modified, amended, and excluded in accordance with [section 5](#), numbers of tested and enrolled students are used to calculate participation rates.

Please also note that a district must achieve a participation rate of 95 percent or higher in order to meet the Minimum Performance Goal, as described in [section 7](#). Any district that does not achieve a 95 percent participation rate for any subgroup/grade/subject³⁵ automatically misses the Minimum Performance Goal and receives a determination of In Need of Improvement.³⁶

6.3 Graduation Rate³⁷

The graduation rate is equal to the number of graduates divided by the graduation cohort, rounded to one decimal place. This is calculated at the school, district, and state levels using the graduation files from the graduation cohort application. Some districts and certain schools may not have a graduation rate; for example, they may not meet the minimum required count of 30 students in the graduation cohort.

6.4 Calculating Confidence Intervals (CIs)

The department calculates a 95 percent confidence interval (CI) for the percent of students with a performance level of On Track or Mastered for each subgroup and subject. The percentage of students scoring On Track or Mastered in one test administration may not be equal to the true proportion of students who are on track. Thus, a confidence interval is a range of values that is calculated to capture the true performance level percentage with greater confidence. The procedure for calculating a 95 percent confidence interval is such that, over many iterations, the interval will contain the true performance level percentage in 95 percent of cases. For more details on the formula used to calculate upper and lower confidence bounds, please see [Appendix E](#).

A 95 percent CI means that:

- If the process were repeated on multiple samples, the CI would include the value of percent On Track or Mastered 95 percent of the time.

A 95 percent CI does **not** mean that:

- 95 percent of the data fall within the calculated interval.
- There is a 95 percent probability that the true performance level percentage falls within the calculated interval.

³³ 2-year rate = (Year 1 tested + Year 2 tested) / (Year 1 enrolled + Year 2 enrolled)

³⁴ 3-year rate = (Year 1 tested + Year 2 tested + Year 3 tested) / (Year 1 enrolled + Year 2 enrolled + Year 3 enrolled)

³⁵ With the exception of ACT composite, for which the participation rate threshold will be set at 85 percent for accountability year 2016-17, which uses data from 2015-16 graduates. Each year thereafter, the participation rate threshold will be 95 percent.

³⁶ With the exception of ACT. For 2016-17 accountability, districts with ACT participation rates below 85 percent will miss the ACT Composite content area goals for the Minimum Performance Goal and will receive 0 points for both All Students and Subgroup statuses.

³⁷ Graduation rates for the current accountability year are based on the previous year's results.

Chapter 7: Accountability Determinations

7.1 Grade-Content Areas, Eligibility, and Participation Rates

As was stated previously in section 2.1, the following content areas are used in district accountability calculations:

- Grades 3–5 math
- Grades 3–5 ELA
- Grades 6–8 math³⁸
- Grades 6–8 ELA³⁹
- High school math⁴⁰
- High school ELA⁴¹
- ACT composite
- Graduation rate

A district will be considered eligible for participation rate in a given content area and subgroup if it has at least 30 students enrolled in the current year for the following subgroups:

- All Students
- Super Subgroup
- Black, Hispanic, Native American (BHN)
- Economically Disadvantaged (ED)
- English Learner (EL)
- Students with Disabilities (SWD)

For each eligible content area, a district's participation rate is calculated by dividing the number of students tested by the number of students enrolled, after all exclusions and modifications have been applied according to the business rules detailed in [section 5](#). All districts must have a participation rate that equals or exceeds 95 percent in order to meet the Minimum Performance Goal.⁴² A district that has a participation rate below 95 percent for all students or any subgroup misses the Minimum Performance Goal and receives a final determination of In Need of Improvement.

7.2 Minimum Performance Goal Procedures

Please note that a district must meet all three goals (described in detail below) and the participation rate for each subgroup in order to meet the Minimum Performance Goal.⁴³ Districts that do not meet the Minimum Performance Goal will be labeled In Need of Improvement and will not progress to the Achievement or Subgroup statuses.

³⁸ Grades 6-8 math may include Algebra I or Algebra II records. Please see [section 5](#) for further details.

³⁹ Grades 6-8 ELA may include English I, II, or III records. Please see [section 5](#) for further details.

⁴⁰ High school math includes either Algebra I, Algebra II, Geometry, Integrated Math I, Integrated Math II, and Integrated Math III, except for those students who took those classes while in the 6-8 grade band.

⁴¹ High school English includes English I, II, and III, except for those students who took those classes while in the 6-8 grade band.

⁴² Districts must meet the 95 percent participation rate threshold through a 1-year or 2-year rate. The department does not check participation rates separately for the Super Subgroup.

⁴³ For ACT composite, there is no subgroup participation rate check.

7.2.1 Achievement Goal

First, the department will determine whether there are at least 30 students with valid tests in the current year and previous year for the All Students group for the same accountability content areas. For each eligible content area for **grades 3–8** listed in [section 7.1](#),⁴⁴ the department will compare the current year On Track or Mastered percentile rank⁴⁵ to the prior year On Track or Mastered percentile rank. If the current year percentile rank equals or exceeds the prior year percentile rank⁴⁶ then the district will pass that content area.

For each eligible content area for **high schools**,⁴⁷ the department will compare the current year percent On Track or Mastered to the prior year percent On Track or Mastered for the same content area. If the current year percent On Track or Mastered equals or exceeds the corresponding prior year percent On Track or Mastered, the district will pass that content area.

If the district passes at least 25 percent of the content areas for which it is eligible, regardless of the distribution of content areas between grades 3–8 and 9–12, then the district will pass the Achievement Key of the Minimum Performance Goal.

7.2.2 TVAAS Goal

Next, the department will determine whether there are at least 30 students with valid tests in the current year and the previous year for the All Students group for each accountability content area (listed on the previous page and in [section 2.1](#)).

If the district achieves an overall TVAAS level of 3 or greater in at least 25 percent of eligible content areas for the current year, then the district passes the TVAAS Key of the Minimum Performance Goal.

7.2.3 Subgroup (Below Reduction) Goal⁴⁸

Lastly, the department will determine whether there are at least 30 students with valid tests in the current year and the previous year for the Super Subgroup for each accountability content area. For each eligible content area for **grades 3–8**, the department will compare the current year Below percentile rank to the prior year Below percentile rank. If the current year percentile rank is less than or equal to the prior year percentile rank,⁴⁹ then the district will pass that content area.

⁴⁴ These content areas are 3–5 Math, 3–5 ELA, 6–8 Math, and 6–8 ELA.

⁴⁵ Districts' current year percentile rank will reflect the better of their percentile ranks before and after reconciling assessment scoring errors.

⁴⁶ There is a two-point buffer when comparing current year and prior year percentile ranks. That is, if the current year percentile rank is at most two points lower than the prior year percentile rank, then the district would meet the achievement key goal of the Minimum Performance Goal.

⁴⁷ These content areas are HS Math, HS ELA, Graduation Rate, and ACT Composite.

⁴⁸ The dropout rate will be used for the graduation rate grade-content area for the purposes the Below reduction calculations. For the ACT composite grade-content area, the percent of students scoring 18 or below for the ACT composite will be used to calculate the Below reduction.

⁴⁹ Two notes here: 1) The Below percentile rank is reverse ordered, so higher percentiles translate to lower achievement. 2) There is a two-point buffer when comparing current year and percentile ranks, as listed in the footnote above. Again, if the current year Below percentile rank is at most two points higher than the prior year Below percentile rank for the Super Subgroup, then the district would meet the subgroup goal.

For each eligible content area for **high schools**, the department will compare the current year percent Below⁵⁰ to the prior year percent Below for the same content area. If the current year percent Below is less than or equal to the corresponding prior year percent Below, the district will pass that content area.

Additionally, the department will determine whether the district earned a Super Subgroup TVAAS level of 3 or better for each eligible content area. A district will be considered to have passed a content area **either** if the district reduces its percent or percentile ranking of students scoring at the lowest level of achievement **or** if the district has a Super Subgroup TVAAS level of 3 or higher.

If the district passes at least 25 percent of the content areas for which it is eligible, regardless of the distribution of content areas between grades 3–8 and 9–12, then the district will pass the Subgroup goal of the Minimum Performance Goal.

Please note that a district must pass all three keys (i.e., Achievement, TVAAS, and Subgroup) in order to pass the Minimum Performance Goal.

Content Area	Achievement Goal	TVAAS Goal	Subgroup Goal
3–5 Math	>= 2015 Percentile Rank	>= Level 3 TVAAS	<= 2015 Percentile Rank
3–5 ELA	>= 2015 Percentile Rank	>= Level 3 TVAAS	<= 2015 Percentile Rank
6–8 Math	>= 2015 Percentile Rank	>= Level 3 TVAAS	<= 2015 Percentile Rank
6–8 ELA	>= 2015 Percentile Rank	>= Level 3 TVAAS	<= 2015 Percentile Rank
HS Math	>= 2016 Achievement	>= Level 3 TVAAS	<= 2016 Achievement
HS ELA	>= 2016 Achievement	>= Level 3 TVAAS	<= 2016 Achievement
Graduation Rate	>= 2016 Achievement		<= 2016 Achievement
ACT Composite	>= 2016 Achievement	>= Level 3 TVAAS	<= 2016 Achievement
Overall Goal:	At least 25 percent met	At least 25 percent met	At least 25 percent met

7.3 Achievement Determination Procedures

7.3.1 Overview and Grade-Content Eligibility

During the 2016–17 transition year, the achievement component of district accountability determinations will be composed of the best score between the following three pathways: the **annual measurable objectives (AMO) goal**,⁵¹ the **relative achievement goal**, and the **TVAAS goal** (all described below in detail).

For each content area, the department will determine whether there are at least 30 students with valid tests in the

⁵⁰ For the content areas of Graduation Rate and ACT Composite, the dropout rate and the percent of students scoring 18 or below on the ACT will serve as the Below equivalent.

⁵¹ For high school content areas only.

current year and the previous year for the All Students group.

In the achievement determination heat map,⁵² districts will receive a score from 0 to 4 for each eligible content area that reflects their relative achievement and their TVAAS level.

7.3.2 AMO Goal

For the AMO goal, districts will receive points for their performance compared to their AMO targets⁵³ for the high school content areas **only** based on the following scale:

- Districts will receive **4** points if their percent On Track or Mastered for a given content area meets or exceeds the Double AMO Target.
- Districts will receive **3** points if their percent On Track or Mastered for a given content area exceeds the AMO target but is less than the Double AMO Target.
 - **Please note:** Districts in which both the current year and prior year percent On Track or Mastered for a given content area equal or exceed 95 percent, regardless of their performance compared to the AMO target, will receive **3** points.⁵⁴
- Districts will receive **2** points if their percent On Track or Mastered for a given content area meets the AMO target or if the upper bound of the confidence interval of the percent On Track or Mastered meets or exceeds the AMO target.
- Districts will receive **1** point if their upper bound of the confidence interval of the percent On Track or Mastered for a given content area increases compared to the previous year but fails to meet the AMO target.
- Districts will receive **0** points if their upper bound of the confidence interval of the percent On Track or Mastered for a given content area is the same or less than the prior year.

7.3.3 Relative Achievement Goal

For the relative achievement goal, districts will receive points for their comparative achievement, in terms of the percentage of students scoring On Track or Mastered, based on the following scale:

- Districts will receive **4** points if their percentile rank for a given content area increases by 10 or more points compared to the previous year.
- Districts will receive **3** points if their percentile rank for a given content area increases by between 0 and 10 points compared to the previous year.
 - **Please note:** Districts in which the current year percentile rank for a given content area and the prior year percentile rank are both greater than or equal to 95, regardless of the change in their percentile rank, will receive **3** points.⁵⁵
- Districts will receive **2** points if their percentile rank for a given content area stays the same or decreases by no more than 2 points compared to the previous year.
- Districts will receive **1** point if their percentile rank for a given content area decreases by more than two

⁵² This file is a worksheet within the final determination heat map file.

⁵³ AMO targets are set for each content area based on an expectation of 6.25 percent reduction in the percent of students not scoring on track or mastered.

⁵⁴ These 3 points are not additional. That is, they aim to ensure that districts that cannot numerically achieve 10-point improvement from a numerical standpoint are rewarded for their consistently high relative achievement.

⁵⁵ These 3 points are not additional. That is, they aim to ensure that districts showing consistently high achievement are appropriately rewarded.

points and no more than 10 points compared to the previous year.

- Districts will receive **0** points if their percentile rank for a given content area decreases by more than 10 points compared to the previous year.

7.3.4 TVAAS Goal

For the TVAAS goal, districts will receive points for the TVAAS levels in all eligible content areas for the All Students group based on the following scale:⁵⁶

- Districts will receive **4** points if their TVAAS level for a given content area is Level 5.
- Districts will receive **3** points if their TVAAS level for a given content area is Level 4.
- Districts will receive **2** points if their TVAAS level for a given content area is Level 3.
- Districts will receive **1** point if their TVAAS level for a given content area is Level 2.
- Districts will receive **0** points if their TVAAS level for a given content area is Level 1.

7.3.5 Final Achievement Determination

Districts' final Achievement status will take the best score among the AMO goal, for applicable high school content areas, the relative achievement goal, and the TVAAS goal (calculated above) for each eligible content area and determine the average value of those best scores. The district will then receive a final Achievement status that compares that average to the values in the following scale:

- Districts that have an average score of less than 2 will be labeled **Progressing**.
- Districts that have an average score of less than 3 and greater than or equal to 2 will be labeled **Achieving**.
- Districts that have an average score of greater than or equal to 3 will be labeled **Exemplary**.

7.4 Subgroup Determination Procedures

7.4.1 Overview and Grade-Content Eligibility

During the 2016–17 transition year, the subgroup component of district accountability determinations will be comprised of the best score between the following three pathways: the **AMO goal**, the **relative achievement goal** and the **TVAAS goal** (all described below in detail).

The department will determine whether there are at least 30 students with valid tests in the current year and the previous year for each of the following subgroups:

- Black, Hispanic, Native American (BHN)
- Economically Disadvantaged (ED)
- English Learners (EL)
- Students with Disabilities (SWD)

7.4.2 Subgroup AMO Goal

- Districts will receive **4** points if their percent On Track or Mastered for a given content area meets or exceeds the Double AMO Target.
- Districts will receive **3** points if their percent On Track or Mastered for a given content area exceeds the

⁵⁶ For districts that administer the second grade assessment, TVAAS levels for this exam will only be included if they improve the district's TVAAS score for the grades 3–5 grade-content areas.

AMO target but is less than the Double AMO Target.

- **Please note:** Districts in which both the current year and prior year percent On Track or Mastered for a given content area equal or exceed 95 percent, regardless of their performance compared to the AMO target, will receive **3** points.⁵⁷
- Districts will receive **2** points if their percent On Track or Mastered for a given content area meets the AMO target or if the upper bound of the confidence interval of the percent On Track or Mastered meets or exceeds the AMO target.
- Districts will receive **1** point if their upper bound of the confidence interval of the percent On Track or Mastered for a given content area increases compared to the previous year but fails to meet the AMO target.
- Districts will receive **0** points if their upper bound of the confidence interval of the percent On Track or Mastered for a given content area is the same or less than the prior year.

7.4.3 Relative Achievement Subgroup Goal

For the relative achievement goal, districts will receive points for each eligible content area and subgroup for their relative achievement, in terms of the percentage of students scoring On Track or Mastered, based on the following scale:

- Districts will receive **4** points if their percentile rank for a given content area and subgroup increases by 10 or more points compared to the previous year.
- Districts will receive **3** points if their percentile rank for a given content area and subgroup increases by more than 0 but less than 10 points compared to the previous year.
 - Note: Districts in which the current year percentile rank for a given content area and subgroup and the prior year percentile rank are both greater than or equal to 95, regardless of the change in their percentile rank, will receive **3** points compared to the previous year.⁵⁸
- Districts will receive **2** points if their percentile rank for a given content area and subgroup stays the same or decreases by no more than 2 points compared to the previous year.
- Districts will receive **1** point if their percentile rank for a given content area and subgroup decreases by more than two points and no more than 10 points compared to the previous year.
- Districts will receive **0** points if their percentile rank for a given content area and subgroup decreases by more than 10 points compared to the previous year.

7.4.4 Subgroup TVAAS Goal

For the TVAAS goal, districts will receive points for the TVAAS levels in all eligible content areas for the four subgroups mentioned previously based on the following scale:

- Districts will receive **4** points if their TVAAS level for a given content area and subgroup is Level 5.
- Districts will receive **3** points if their TVAAS level for a given content area and subgroup is Level 4.
- Districts will receive **2** points if their TVAAS level for a given content area and subgroup is Level 3.
- Districts will receive **1** point if their TVAAS level for a given content area and subgroup is Level 2.
- Districts will receive **0** points if their TVAAS level for a given content area and subgroup is Level 1.

⁵⁷ These 3 points are not additional. That is, they aim to ensure that districts that cannot numerically achieve 10-point improvement from a numerical standpoint are rewarded for their consistently high relative achievement.

⁵⁸ As was previously stated, these 3 points are not additional. That is, they aim to ensure that districts showing consistently high achievement are appropriately rewarded.

7.4.5 Final Subgroup Determination

Districts' final Subgroup statuses will, for each of the four subgroups, take the best score among the AMO subgroup goal for applicable high school content areas, the relative achievement subgroup goal, and the subgroup TVAAS goal (calculated above) for each eligible content area. These best scores from each content area are then averaged again to create an overall subgroup average. These four subgroup averages are then averaged together to create an overall average,⁵⁹ which is used to compute districts' final subgroup determination using the following scale, which is congruent to the scale used for final achievement determinations.

- Districts that have an average score of less than 2 will be labeled **Progressing**.
- Districts that have an average score of less than 3 and greater than or equal to 2 will be labeled **Achieving**.
- Districts that have an average score of greater than or equal to 3 will be labeled **Exemplary**.

Points for Achievement or Subgroup Status	AMO Goal	Relative Achievement Goal	TVAAS Goal
4	Percent On Track or Mastered is greater than or equal to Double AMO Target	Percentile rank increases by prior year more than 10 points	Level 5 TVAAS
3	Percent On Track or Mastered is greater than AMO target but less than Double AMO Target	Percentile rank increases, but by fewer than 10 points OR districts has percentile rank of 95 or better in both current and prior year	Level 4 TVAAS
2	Percent On Track or Mastered meets AMO target or upper bound of confidence interval meets or exceeds AMO target	Percentile rank stays the same or decreases by no more than 2 points	Level 3 TVAAS
1	Upper bound of confidence interval of percent On Track or Mastered does not meet AMO target, but is greater than prior year	Percentile rank decreases, but by no more than 10 points	Level 2 TVAAS
0	Upper bound of confidence interval of percent On Track or Mastered is lower than prior year	Percentile rank decreases by more than 10 points	Level 1 TVAAS

⁵⁹ In other words, the process of averaging these best scores (from the three potential pathways) is calculated for each subgroup, such that each subgroup has a subgroup average that has been calculated from the average of the scores of each eligible content area.

7.5 Final Determination Procedures

Districts' final district accountability determinations will be calculated by taking the mean of districts' achievement and subgroup determinations (calculated above). This average is then compared to the following scale to compute districts' final district accountability determinations:

- Districts that have an average score of less than 2 will be labeled **Progressing**.
- Districts that have an average score of less than 3 and greater than or equal to 2 will be labeled **Achieving**.
- Districts that have an average score of greater than or equal to 3 will be labeled **Exemplary**.

Appendix A: List of Acronyms

Term	Definition
AMOs	Annual Measurable Objectives
CTE	Career Technical Education Schools
BHN	Black, Hispanic, Native American Subgroup
ED	Economically Disadvantaged Subgroup
EL	English Learner Subgroup
ELA	English language arts
EOC	End of Course
ESSA	Every Student Succeeds Act (Elementary and Secondary Education Act Reauthorization)
FD	Functionally Delayed
FTTT	First Time Test Taker
LEP	Limited English Proficiency
SWD	Students with Disabilities Subgroup
TCAP	Tennessee Comprehensive Assessment Program
TDOE	Tennessee Department of Education

Within the Minimum Performance Goal worksheet, a district receives data for how it performed for each content area, listed in column A, for each of the three pathways, listed in columns B through D. For the 2016-17 school year, a district must improve its percentile rank⁶⁰ in terms of the percentage of student scoring On Track or Mastered in at least 25 percent of eligible content categories in all pathways to meet the Minimum Performance Goal.

Content Area	Achievement Goal	TVAAS Goal	Subgroup Goal	
			Below Reduction	Super Subgroup TVAAS
3-5 Math	Yes	No	No	No
3-5 ELA	Yes	Yes	Yes	Yes
6-8 Math	Yes	Yes	No	Yes
6-8 ELA	Yes	Yes	Yes	Yes
High School Math	Yes	Yes	No	No
High School ELA	Yes	Yes	Yes	Yes
ACT Composite	Yes	Yes	Yes	No
Graduation Rate	No		Yes	
Measures Met	7	6	6	
Eligible Measures	8	7	8	
Percent of Measures Met	✔ 87.5%	✔ 85.7%	✔	75.0%
Minimum Performance Goals	For 3–8 content areas: Did the district maintain or improve its relative percentile rank in terms of % P/A in at least 25% of eligible content areas? For HS content areas: Did the district improve its %P/A compared to the previous year	Did the district demonstrate growth through TVAAS in at least 25% of eligible content areas?	Did the district either 1) decrease its relative percentile rank for its Super Subgroup (BHN/ED/EL/SWD) in terms of % BB in at least 25% of eligible content areas or 2) demonstrate growth through a TVAAS level 3 or higher for its Super Subgroup?	
A district must meet all three goals to progress to the Achievement and Gap Closure Determinations.				

Participation Rates	Minimum Performance Goal	Achievement Pathway	Subgroup Pathway	Final Determination
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⁶⁰ There is a two-point buffer such that districts must improve their percentile rank or decrease by no more than 2 points. See [section 7](#) for more details.

The second worksheet lists a district's Achievement status, which details the performance of the All Students group.

Content Area	AMOs	Relative Achievement	TVAAS	Best Score
3-5 Math		2	2	2
3-5 ELA		0	1	1
6-8 Math		3	3	3
6-8 ELA		1	0	1
High School Math	3	3	4	4
High School ELA	3	2	2	3
ACT Composite	1	0	1	1
Graduation Rate	0	2		2
Achievement Determination	2.13			
	Achieving			
Achievement Determination Key	Progressing		Achieving	Exemplary
	Below 2.0		2.0 to < 3.0	3.0 and above
	District is improving on average but missing growth expectation		District is meeting growth expectation on average	District is exceeding growth expectation on average
Points	AMO Pathway	Relative Achievement Pathway	TVAAS Pathway	Definition
0	Percent On-Track/ Mastered decreased compared to previous year	Rank decreased by more than 10 points compared to previous year	Level 1	Regressing or no improvement
1	Percent On-Track/ Mastered increased but did not meet AMO target	Rank decreased by more than 2 points and fewer than 10 points compared to previous year	Level 2	Improvement, but not meeting growth expectation or performance goal
2	Percent On-Track/ Mastered met AMO target	Rank stayed the same or decreased by no more than 2 points compared to	Level 3	Meeting growth expectation or performance goal

Participation Rates	Minimum Performance Goal	Achievement Pathway	Subgroup Pathway	Final Determination
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A district receives between 0 and 4 points⁶¹ for each eligible content area based on the scale at the bottom of the worksheet. A district's Achievement status is computed by taking the average of the best scores between the two pathways (column D) and comparing that average to the scale in the middle of the worksheet.

⁶¹ The heat map labels higher scores with blue fill and lower scores with red fill to promote quick understanding.

The third worksheet lists a district's Subgroup status, which details the performance of the four priority subgroups.

Content Area	Black/Hispanic/ Native American	Economically Disadvantaged	English Learners	Students with Disabilities
3-5 Math	3	3		3
3-5 ELA	1	2		2
6-8 Math	2	2		1
6-8 ELA	3	2		2
High School Math	2	3		2
High School ELA	4	4		1
ACT Composite	2	2		1
Graduation Rate	3	2		2
Subgroup Average	2.50	2.50		1.75
District Gap Closure Determination	2.25			
	Achieving			
Gap Closure Determination Key	Progressing		Achieving	Exemplary
	Below 2.0		2.0 to < 3.0	3.0 and above
	District is improving on average but missing growth expectation		District is meeting growth expectation on average	District is exceeding growth expectation on average
Points	AMO Pathway	Relative Achievement Pathway	TVAAS Pathway	Definition
0	Percent On-Track/ Mastered decreased compared to previous year	Rank decreased by more than 10 points compared to previous year	Level 1	Regressing or no improvement
1	Percent On-Track/ Mastered increased but did not meet AMO target	Rank decreased by more than 2 points and fewer than 10 points compared to previous year	Level 2	Improvement, but not meeting growth expectation or performance goal
2	Percent On-Track/ Mastered met AMO	Rank stayed the same or decreased by no more than 2	Level 3	Meeting growth expectation or

Participation Rates	Minimum Performance Goal	Achievement Pathway	Subgroup Pathway	Final Determination
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As with its Achievement status, a district receives between 0 and 4 points for each eligible content area based on the scale at the bottom of the worksheet for all subgroup pathways. The scores in columns B through E above show the best scores taken between the two pathways, which can be viewed in detail in the Individual Subgroup Heat Maps worksheet (see below). These best scores are used to calculate a subgroup average, and these subgroup averages are averaged again to create an overall subgroup pathway average. This overall average is compared to the scale in the middle of the worksheet to determine the district's Subgroup status.

Next we'll provide more information on the Individual Subgroup Heat Maps to provide additional context around

the subgroup pathway determination calculations.

As stated previously, the individual performance of each subgroup is contained in the Individual Subgroup Heat Maps worksheet—which is the fifth worksheet in the final determination heat map file—and allows districts to analyze subgroup performance for each eligible content area.

Content Area	Subgroup	Subgroup AMO Goal	Subgroup Relative Achievement Goal	Subgroup TVAAS Goal	Best Score
3-5 Math	Black/Hispanic/Native American		2	3	3
3-5 ELA	Black/Hispanic/Native American		1	1	1
6-8 Math	Black/Hispanic/Native American		2	2	2
6-8 ELA	Black/Hispanic/Native American		3	1	3
High School English	Black/Hispanic/Native American	2	0	0	2
High School Math	Black/Hispanic/Native American	1	4	1	4
ACT Composite	Black/Hispanic/Native American	2	2	2	2
Graduation Rate	Black/Hispanic/Native American	3	1		3
BHN Overall Average		2.50			
3-5 Math	Economically Disadvantaged		3	2	3
3-5 ELA	Economically Disadvantaged		2	2	2
6-8 Math	Economically Disadvantaged		2	1	2
6-8 ELA	Economically Disadvantaged		1	2	2
High School English	Economically Disadvantaged	3	0	0	3
High School Math	Economically Disadvantaged	2	3	4	4
ACT Composite	Economically Disadvantaged	1	2	2	2
Graduation Rate	Economically Disadvantaged	2	1		2
ED Overall Average		2.50			
3-5 Math	English Language Learners				
3-5 ELA	English Language Learners				
6-8 Math	English Language Learners				
6-8 ELA	English Language Learners				
High School English	English Language Learners				
High School Math	English Language Learners				
ACT Composite	English Language Learners				
Graduation Rate	English Language Learners				
EL Overall Average					
3-5 Math	Students with Disabilities		2	3	3
3-5 ELA	Students with Disabilities		0	2	2
6-8 Math	Students with Disabilities		1	1	1
6-8 ELA	Students with Disabilities		2	0	2
High School English	Students with Disabilities	1	0	2	2
High School Math	Students with Disabilities	0	1	0	1

Click to add

... Minimum Performance Goal Achievement Pathway Subgroup Pathway Final Determination

Individual Subgroup Heat Maps

As you can see above, each subgroup receives a score from 0 through 4, using the scales listed in previous sections, for both pathways of the Subgroup status. The best scores, listed in column E, are used to calculate a subgroup average, and all subgroup averages are averaged again to calculate the district's Subgroup status (see above for more details).

Appendix C: Accountability Files Purpose and Structure

This appendix outlines the purpose and structure of all accountability files. Please note that files 3 through 6 are all stored in separate worksheets of the final determination files.

Accountability Files

1. **Base accountability files:** Display school, district, or state level testing data at the subject/grade/subgroup level for all tested grades and subjects for the past three years; these files are produced after all rules in [section 5](#) have been applied.
 - a. **Versions:** State, district, and school level
2. **Numeric accountability files:** Display data with all accountability rules (e.g., Algebra I scores included in math counts, where applicable) applied and all data points used to make accountability determinations.
 - a. **Versions:** State, district, and school level
3. **Participation rates heat maps:** Outlines whether districts met or missed participation rate thresholds for all applicable content areas and subgroups
 - a. **Versions:** District level only
4. **Minimum performance goal heat maps:** Outline why districts either met or did not meet the Minimum Performance Goal for district accountability
 - a. **Versions:** District level only
5. **Achievement determination heat maps:** Outline why districts arrive at a given accountability determination for achievement targets.
 - a. **Versions:** District level only
6. **Subgroup determination heat maps:** Outline why districts arrive at a given accountability determination for subgroup targets.
 - a. **Versions:** District level only
7. **Final determination heat map files:** Provide districts with their final determination status and summarizes each component of the accountability framework
 - a. **Versions:** District level only

Other Files Produced by the Department

1. **Student level files:** Include the scores used for all students in accountability determinations.
 - a. **Versions:** Student level only
2. **TCAP-Alternative Assessment student files:** Include all records that are reassigned based on the TCAP-Alternative Assessment reassignment business rules.
 - a. **Versions:** Student level only
3. **TCAP-Alternative Assessment systems/schools over cap files:** Include all systems and schools that exceeded the 1 percent cap of On Track or Mastered portfolio students.
 - a. **Versions:** District level only

Appendix E: Confidence Interval Calculations

The equation below is used to calculate confidence intervals (CIs) for each subgroup and subject.

$$ci_{95} = round \left(100 \left(\frac{n}{n + Z_{95}^2} \left(p + \left(\frac{Z_{95}^2}{2n} \right) \pm Z_{95} \sqrt{\frac{p(1-p)}{n} + \frac{Z_{95}^2}{4n^2}} \right) \right) \right),$$

In the equation above, n represents the number of students with a valid test, $Z_{95} = 1.96$ from a standard normal distribution to have a 95 percent confidence interval, and p is the percentage of On Track or Mastered (or Below) students.

Appendix F: Percentile Rank Calculations

A percentile rank is defined as the percentage of districts with an equal or lower proficiency rate—or percent Below—in the same subject in the same year for the same subgroup and grade band. The department has calculated percentile ranks for the percent of students scoring Below and On Track or Mastered in each content area listed in [section 2.1](#) and for each subgroup listed in [section 2.2](#). For each year/subgroup/content area combination, only districts with 30 valid tests in both the current and prior year are assigned a percentile rank.

Listed below are the steps used to calculate a district's percentile rank.

1. Determine the number of districts with at least 30 valid tests at the subgroup/content area level in both the current and prior year.
2. Reverse rank districts according to the percentage of students scoring On Track/Mastered so that districts with a higher percentage of students scoring On Track/Mastered have a higher rank value.
3. Divide each district's rank by the number of districts meeting the valid test count in each subject. A district's percentile rank is calculated using the following formula:

$$\text{Percentile Rank} = \frac{\text{District rank}}{\text{Districts meeting test count}} * 100$$

In order to calculate a district's percentile rank in terms of the percentage of students scoring Below, the same process would be repeated, substituting the percent of students scoring Below in place of the percent of students scoring On Track/Mastered.

Document Information

Document Control

Title	2017 District Accountability Protocol
Version	2.7
Date	Oct. 13, 2017

Revision History

Date	Version	Description of Changes
10/9/2017	2.7	<ul style="list-style-type: none"> Corrected and moved file layouts to separate document
10/6/2017	2.6	<ul style="list-style-type: none"> Amended file layouts
8/11/2017	2.5	<ul style="list-style-type: none"> Adjusted variable names and descriptions to reflect most current file delivery
6/23/2017	2.4	<ul style="list-style-type: none"> Adjusted table of RI flags in 5.2.1 to clarify EL_Exclude records in math or science with non-null performance levels
6/15/2017	2.3	<ul style="list-style-type: none"> Clarified how the 60 percent enrollment rule affects school-level calculations
2/7/2017	2.2	<ul style="list-style-type: none"> Noted variable names and layouts for files released to districts may be subject to change Updated participation rates to reflect only a one-year rate to be used in accountability
2/2/2017	2.1	<ul style="list-style-type: none"> Updated heat maps to reflect pathway changes and changes to color scheme Amended participation rate calculations and rules to reflect administration of tests in a single part Removed sections regarding students taking alternate assessment over the 1 percent cap, as it is no longer pertinent Reflected shift to "subgroup pathway" terminology in favor of "gap closure pathway"