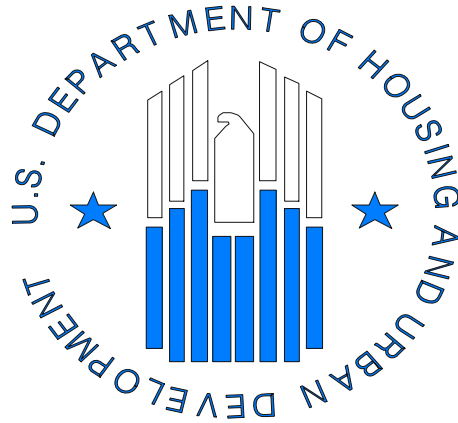


*US Department of Housing and Urban Development  
Single Family Housing*



**Developer's Guide**

**For**

**Total Scorecard**

**Final**

System:	CHUMS
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## Introduction

### *Purpose of TOTAL Scorecard Developer's Guide*

The TOTAL Scorecard Developer's Guide provides the necessary information to establish an interface between the FHA's TOTAL Scorecard and an Automated Underwriting System(AUS). This document is primarily aimed at the software development and maintenance staff supporting an AUS. The document contains the following sections:

- Section 1 - Introduction to TOTAL Scorecard includes an overview of TOTAL Scorecard.
- Section 2 - Getting Started describes communication protocols, tips on building your TOTAL Scorecard interface, and security requirements.
- Section 3 - Interface File Descriptions details XML file formats and error handling.
- Appendices – including the Scorecard Data Elements, Error Codes and the DTD.

### *Overview of TOTAL Scorecard*

TOTAL Scorecard is a transaction-based system. The steps below describe the processing of loan information from the lender's AUS, to the TOTAL Scorecard, and back to the lender. These steps must be performed for each transaction processed through the TOTAL Scorecard.

1. *Loan information is entered into the lender's AUS.*
2. *The lender requests an underwriting decision from the AUS.*
3. *The AUS pulls the borrower's credit and applies eligibility rules.*
4. *The AUS calls the TOTAL Scorecard*
5. *The AUS examines the TOTAL Scorecard results along with other criteria to provide an underwriting decision.*

NOTES:

## Getting Started

This section is designed to assist AUS developers (management and staff) in planning the organization's interface to the TOTAL Scorecard.

The following topics are outlined in this section:

- **Things to Consider** - There are decisions that the AUS developer must take into consideration when developing the TOTAL Scorecard interface.
- **Building the TOTAL Scorecard Interface** - There are steps that the AUS developer must follow with regard to implementation of these requirements, whether it be for initial or subsequent use. Most steps are likely to already be part of your system development process.
- **Security Requirements and Recommendations** - There are general rules and requirements that apply to the AUS developer when interfacing with the TOTAL Scorecard which directly impact system and data-related security.

### *Things to Consider*

This section provides some key points for your consideration in the planning and development of the TOTAL Scorecard interface.

### **Interface Data File Formats**

The TOTAL Scorecard uses Extensible Markup Language (XML). XML uses tags that define the data elements. The TOTAL Scorecard DTD is included in Appendix C in this document. The TOTAL Scorecard uses an SSL secured Hypertext Transfer Protocol (HTTPS) Uniform Resource Locator (URL). For further information regarding interface file descriptions, refer to section 3 of this manual.

### **Communications Protocol**

The communications protocol for TOTAL Scorecard is TCP/IP via the Internet. The call to the TOTAL Scorecard will be via an HTTPS POST.

The HTTPS communications protocol provides two layers of data protection.

- The HTTPS communications protocol requires that a certificate reside on the server. This certificate must be issued by a trusted certificate authority. This ensures that the user is communicating with the TOTAL Scorecard and not some third party trying to spoof the TOTAL Scorecard's IP address.
- The HTTPS protocol encapsulates standard Hyper Text Transfer Protocol (HTTP) within the Secure Socket Layer (SSL). SSL is a universally accepted mechanism for securing data in transit across the Internet. SSL provides a very secure data encryption mechanism.

### **Data Mapping**

The first aspect in developing of the TOTAL Scorecard interface is reviewing the data and formats required by the TOTAL Scorecard. The AUS developer must map each of the TOTAL Scorecard XML data elements to the corresponding data element(s) in the AUS. A field-by-field matrix is the suggested method for accomplishing this data mapping.

Through the data mapping process you are able to identify:

- **Data elements that are currently available within your system** - This set of data elements should not require a significant effort in the process of developing the interface.
- **Data elements that are available but values must be re-mapped or calculated** - These data elements require re-mapping of the values within your system to the values that TOTAL Scorecard requires.

- **Data elements that are unavailable in your system** - The AUS must be modified to capture these additional data elements, utilizing new or existing screens.

***Security Requirements and Recommendations***

TOTAL Scorecard's security requirements and recommendations adhere to the standards that have been established by the Automated Data Processing Security Office at HUD. All TOTAL Scorecard transactions are required to have the following:

- **User ID** – up to ten alphanumeric characters; and
- **Password** – up to ten alphanumeric characters.

User IDs and passwords are sent as part of the transaction. User IDs will be issued to partners as they are ready to begin developing their calls to the TOTAL Scorecard.

## Interface File Descriptions

The AUS interfacing with the TOTAL Scorecard must be able to build TOTAL Scorecard standard XML data for a given Scorecard request. A new TOTAL Scorecard XML Data Stream must be generated for each new request made by the user. This section details the format of both the XML Data Stream and Response File.

### *XML Data Stream Format*

The TOTAL Scorecard XML Data Stream uses an SSL secured Hypertext Transfer Protocol (HTTPS) uniform resource locator (URL).

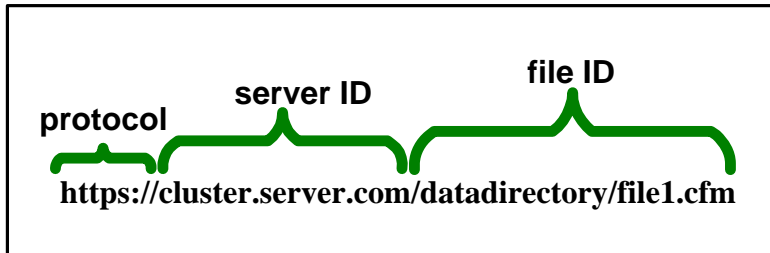


Figure 3.1 - Sections of a URL.

The client sends the XML data stream to the server via a generated post. The XML data stream is comprised of the value of the XML file. The data stream should NOT be urlencoded. In urlencoding, most characters are represented as 3 character strings. The TOTAL Scorecard is expecting that the data be sent as regular ASCII text. Not as urlencoded ASCII text.

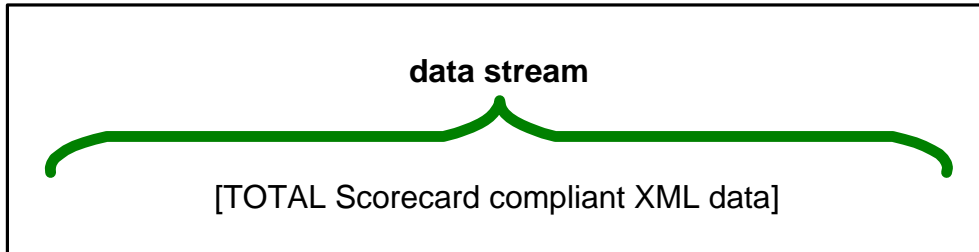


Figure 3.2 - Sample data stream.

## Telecommunications Errors

Since the TOTAL Scorecard is using the HTTPS communications protocol, the exact format of telecommunications errors received follows the standard TCP/IP telecommunications errors.

### *Response File Format*

The TOTAL Scorecard Response File uses Extensible Markup Language (XML) to identify each data element in the file.

NOTES:

## **APPENDIX A – Scorecard Data Elements**



Appendix A – Scorecard Data Elements

	Scorecard Table Elements	Definition	Format	Size	Data Type	Input or Output? *	Required for Scoring/ CHUMS	Source	Scoreable Criteria	DTD Element Name
1	Applicant(s) combined monthly income	The sum, in whole dollars, of the applicant(s) Base Employment Income, Overtime, Bonuses, Commissions, Dividends/Interest, Net Rental Income, and Other from Section 5 in 1003. This includes all applicants (even if 4+).	999999	6	Scorecard	I	Scoring	1003 (Section 5)	Must be > 0	monthly_income
2	Appraised value, if available	"As is" or "As Repaired" from URAR (Uniform Residential Appraisal Report) in whole dollars.	9999999	7	Scorecard	I	Scoring	URAR	If entered, must be > 9000 and must be <= 9,999,999	appraised_value
3	Assets after closing (must allow for negative amounts)	Assets available (post-closing) in whole dollars including gifts.	999999	6	Scorecard	I	Scoring	HUD Form 92900-WS (Line 10p)	Any value is ok	assets_after_clsg
4	FHA case number	FHA case number from FHA Connection	999-9999999	11	Scorecard	I	Scoring	FHA Connection	If entered, must pass check digit routine.	fha_case_number
5	Loan amount including MIP	Sum of loan amount and MIP in whole dollars from Section 7 in 1003.	9999999	7	Scorecard	I	Scoring	1003 (Section 7)	Must be > 0	loan_amount
6	Monthly payment, including Principal, Interest, Taxes, and Insurance	Monthly payment, including Principal, Interest, Taxes, and Insurance in dollars and cents. Interest Rate should be based on Underwriting Interest Rate.	99999.99	8	Scorecard	I	Scoring	1003 (Section 5)	Must be > 0 and < 15000	piti
7	Mortgage Insurance Premium	Loan amount multiplied by the appropriate MIP Factor in whole dollars from Section 7 of 1003.	99999.99	8	Scorecard	I	Scoring	1003 (Section 7)	Any non-negative value is ok	mip
8	Mortgage term in months (e.g., 180 months, 360 months)	Number of Months stated in Section 1 of 1003.	999	3	Scorecard	I	Scoring	1003 (Section 1)	Must be > 47 and must be < 361	term
9	Sales price	Purchase Price stated in Section 7 in whole dollars of 1003.	9999999	7	Scorecard	I	Scoring	1003 (Section 7)	If entered, must be > 9000 and must be <= 9,999,999	sale_price
10	Social Security Number for SSN1	Social Security Number stated in Section 3 of 1003 for SSN1.	999999999	9	Scorecard	I	Scoring	1003 (Section 3)	Must be a valid ssn	ssn
11	Social Security Number for SSN2	Social Security Number stated in Section 3 of 1003 for SSN2.	999999999	9	Scorecard	I	Scoring	1003 (Section 3)	If entered, must be a valid ssn	ssn
12	Social Security Number for SSN3	Social Security Number stated in Section 3 of 1003 for SSN3.	999999999	9	Scorecard	I	Scoring	1003 (Section 3)	If entered, must be a valid ssn	ssn
13	Social Security Number for SSN4	Social Security Number stated in Section 3 of 1003 for SSN4.	999999999	9	Scorecard	I	Scoring	1003 (Section 3)	If entered, must be a valid ssn	ssn
14	Social Security Number for SSN5	Social Security Number stated in Section 3 of 1003 for SSN5.	999999999	9	Scorecard	I	Scoring	1003 (Section 3)	If entered, must be a valid ssn	ssn
15	Total number of applicants	Total number of applicants stated in Section 3 of 1003. Total number of applicants must equal total SSN's/FICO entered.	9	1	Scorecard	I	Scoring	1003 (Section 3)	Must be > 0 and must be < 6	applicants
16	Unique identification for loan application assigned by AUS	Identification number assigned by the AUS scoring the loan.	char(16)	16	Scorecard	I	Scoring	AUS Vendor	Must be a valid identifier	loan_number

	Scorecard Table Elements	Definition	Format	Size	Data Type	Input or Output? *	Required for Scoring/ CHUMS	Source	Scoreable Criteria	DTD Element Name
17	Loan-To-Value Ratio	Loan amount without MIP divided by the lesser of the appraised value or sales price of the property.	999.99	6	Scorecard	I	Scoring	HUD Form 92900-WS (Line 14a)	Must be > 10 and must be < 126	ltv
18	Front-End Ratio	The projected monthly principal, interest, taxes, and insurance payment divided by the gross monthly income of all borrowers.	999.99999	9	Scorecard	I	Scoring	HUD Form 92900-WS (Line 14b)	Must be > 0 and must be < 101	front_end_ratio
19	Back-End Ratio	Housing plus other debt divided by monthly income	999.99999	9	Scorecard	I	Scoring	HUD Form 92900-WS (Line 14c)	Must be > 0 and must be < 101	back_end_ratio
20	Loan Indicator	Defines type of loan. "A" for ARM "B" for Buydown or space for all other loans.	"A", "B" or Space	1	Scorecard	I	Scoring	1003 (Section 1)	Must be "A" for ARM, "B" for Buydown or a Space	amort_type
21	Underwriting P&I	P&I Amount at which loan is underwritten (Adjusted for ARMs whose LTV is 95% or greater and Buydowns; same as Contract P&I for all other loans)  P&I to be used for underwriting purposes. Should be adjusted for ARMs whose LTV is 95% or greater to coincide with Underwriting Interest Rate adjustment. Should be adjusted for Buydowns to coincide with Buydown Interest Rate. Should match Contract P&I for all other loans.	99999.99	8	Scorecard	I	Scoring	See HUD Handbook 4155	Must be > 0 and < 15000	underwriting_pi
22	Contract P&I	Actual P&I payment (CHUMS P&I)	99999.99	8	Additional	I	CHUMS	1003 (Section 5)	Must be > 0 and < 150000	contract_pi
23	Underwriting Interest Rate	Interest rate at which loan is underwritten (Adjusted for ARMs whose LTV is 95% or greater; and for Buydowns same as Contract Interest Rate for all other loans)  Interest rate to be used for underwriting purposes. Should be adjusted upward 1 point for ARMs whose LTV is 95% or greater. Should match the Buydown Interest Rate for Buydowns. Should match Contract Interest Rate for all other loans.	99.999	6	Scorecard	I	Scoring	See HUD Handbook 4155	Must be > 0	underwriting_interest
24	Contract Interest Rate	Stated interest rate on loan application (CHUMS Interest Rate)	99.999	6	Additional	I	CHUMS	1003 (Section 1)	Must be > 0	contract_interest
25	Borrower Age for SSN1	Borrower Age stated in Section 3 of 1003 for SSN1.	99	2	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	borr_age
26	Borrower Age for SSN2	Borrower Age stated in Section 3 of 1003 for SSN2.	99	2	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	borr_age
27	Borrower Age for SSN3	Borrower Age stated in Section 3 of 1003 for SSN3.	99	2	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	borr_age
28	Borrower Age for SSN4	Borrower Age stated in Section 3 of 1003 for SSN4.	99	2	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	borr_age

	Scorecard Table Elements	Definition	Format	Size	Data Type	Input or Output? *	Required for Scoring/ CHUMS	Source	Scoreable Criteria	DTD Element Name
29	Borrower Age for SSN5	Borrower Age stated in Section 3 of 1003 for SSN5.	99	2	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	borr_age
30	Borrower Marital Status	Borrower Marital Status stated in Section 3 of 1003. 1-married, 2-separated, 3-unmarried	9	1	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	borr_marital_status
31	Borrower Name for SSN1	Borrower Name for SSN1 stated in Section 3 of 1003.	Last Name, First Name M.I.	22	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	borr_name
32	Borrower Name for SSN2	Borrower Name for SSN2 stated in Section 3 of 1003.	Last Name, First Name M.I.	22	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	borr_name
33	Borrower Name for SSN3	Borrower Name for SSN3 stated in Section 3 of 1003.	Last Name, First Name M.I.	22	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	borr_name
34	Borrower Name for SSN4	Borrower Name for SSN4 stated in Section 3 of 1003.	Last Name, First Name M.I.	22	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	borr_name
35	Borrower Name for SSN5	Borrower Name for SSN5 stated in Section 3 of 1003.	Last Name, First Name M.I.	22	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	borr_name
36	Borrower Race for SSN1	Borrower Race for SSN1 stated in Section 10 of 1003.  0-Not Applicable, 1-White, 2-Black or African American, 3-American Indian or Alaska Native, 4-Asian, 5-Native Hawaiian or Other Pacific Islander, 9-Not Disclosed.  Note – This field may appear multiple times in a single Borrower Container	char(1)	1	Additional	I	CHUMS	1003 (Section 10)	Any value is ok	borr_race
37	Borrower Race for SSN2	Borrower Race for SSN2 stated in Section 10 of 1003.  0-Not Applicable, 1-White, 2-Black or African American, 3-American Indian or Alaska Native, 4-Asian, 5-Native Hawaiian or Other Pacific Islander, 9-Not Disclosed.  Note – This field may appear multiple times in a single Borrower Container	char(1)	1	Additional	I	CHUMS	1003 (Section 10)	Any value is ok	borr_race

Scorecard Table Elements	Definition	Format	Size	Data Type	Input or Output? *	Required for Scoring/ CHUMS	Source	Scoreable Criteria	DTD Element Name
38	Borrower Race for SSN3	Borrower Race for SSN3 stated in Section 10 of 1003.  0-Not Applicable, 1-White, 2-Black or African American, 3-American Indian or Alaska Native, 4-Asian, 5-Native Hawaiian or Other Pacific Islander, 9-Not Disclosed.  Note – This field may appear multiple times in a single Borrower Container	char(1)	1	Additional	I	CHUMS 1003 (Section 10)	Any value is ok	borr_race
39	Borrower Race for SSN4	Borrower Race for SSN4 stated in Section 10 of 1003.  0-Not Applicable, 1-White, 2-Black or African American, 3-American Indian or Alaska Native, 4-Asian, 5-Native Hawaiian or Other Pacific Islander, 9-Not Disclosed.  Note – This field may appear multiple times in a single Borrower Container	char(1)	1	Additional	I	CHUMS 1003 (Section 10)	Any value is ok	borr_race
40	Borrower Race for SSN5	Borrower Race for SSN5 stated in Section 10 of 1003.  0-Not Applicable, 1-White, 2-Black or African American, 3-American Indian or Alaska Native, 4-Asian, 5-Native Hawaiian or Other Pacific Islander, 9-Not Disclosed.  Note – This field may appear multiple times in a single Borrower Container	char(1)	1	Additional	I	CHUMS 1003 (Section 10)	Any value is ok	borr_race
41	Borrower Sex for SSN1	Borrower Sex for SSN1 stated in Section 3 of 1003. 1-Male, 2-Female	char(1)	1	Additional	I	CHUMS 1003 (Section 3)	Any value is ok	borr_sex
42	Borrower Sex for SSN2	Borrower Sex for SSN2 stated in Section 3 of 1003. 1-Male, 2-Female	char(1)	1	Additional	I	CHUMS 1003 (Section 3)	Any value is ok	borr_sex
43	Borrower Sex for SSN3	Borrower Sex for SSN3 stated in Section 3 of 1003. 1-Male, 2-Female	char(1)	1	Additional	I	CHUMS 1003 (Section 3)	Any value is ok	borr_sex
44	Borrower Sex for SSN4	Borrower Sex for SSN4 stated in Section 3 of 1003. 1-Male, 2-Female	char(1)	1	Additional	I	CHUMS 1003 (Section 3)	Any value is ok	borr_sex
45	Borrower Sex for SSN5	Borrower Sex for SSN5 stated in Section 3 of 1003. 1-Male, 2-Female	char(1)	1	Additional	I	CHUMS 1003 (Section 3)	Any value is ok	borr_sex

Scorecard Table Elements	Definition	Format	Size	Data Type	Input or Output? *	Required for Scoring/ CHUMS	Source	Scoreable Criteria	DTD Element Name
46	Borrower Ethnicity for SSN1	Borrower Ethnicity for SSN1. Is borrower Hispanic or Latino? If borrower is Hispanic or Latino, the answer is "Y."	"Y" or "N"	1	Additional	I	CHUMS CHUMS Insurance Screen	Any value is ok	borr_ethnicity
47	Borrower Ethnicity for SSN2	Borrower Ethnicity for SSN2. Is borrower Hispanic or Latino? If borrower is Hispanic or Latino, the answer is "Y."	"Y" or "N"	1	Additional	I	CHUMS CHUMS Insurance Screen	Any value is ok	borr_ethnicity
48	Borrower Ethnicity for SSN3	Borrower Ethnicity for SSN3. Is borrower Hispanic or Latino? If borrower is Hispanic or Latino, the answer is "Y."	"Y" or "N"	1	Additional	I	CHUMS CHUMS Insurance Screen	Any value is ok	borr_ethnicity
49	Borrower Ethnicity for SSN4	Borrower Ethnicity for SSN4. Is borrower Hispanic or Latino? If borrower is Hispanic or Latino, the answer is "Y."	"Y" or "N"	1	Additional	I	CHUMS CHUMS Insurance Screen	Any value is ok	borr_ethnicity
50	Borrower Ethnicity for SSN5	Borrower Ethnicity for SSN5. Is borrower Hispanic or Latino? If borrower is Hispanic or Latino, the answer is "Y."	"Y" or "N"	1	Additional	I	CHUMS CHUMS Insurance Screen	Any value is ok	borr_ethnicity
51	Borrower Birth Date for SSN1	Borrower Birth Date for SSN1	Yyyyymmdd	8	Additional	I	CHUMS CHUMS Insurance Screen	Any value is ok	borr_birth_date
52	Borrower Birth Date for SSN2	Borrower Birth Date for SSN2	Yyyyymmdd	8	Additional	I	CHUMS CHUMS Insurance Screen	Any value is ok	borr_birth_date
53	Borrower Birth Date for SSN3	Borrower Birth Date for SSN3	Yyyyymmdd	8	Additional	I	CHUMS CHUMS Insurance Screen	Any value is ok	borr_birth_date
54	Borrower Birth Date for SSN4	Borrower Birth Date for SSN4	Yyyyymmdd	8	Additional	I	CHUMS CHUMS Insurance Screen	Any value is ok	borr_birth_date
55	Borrower Birth Date for SSN5	Borrower Birth Date for SSN5	Yyyyymmdd	8	Additional	I	CHUMS CHUMS Insurance Screen	Any value is ok	borr_birth_date
56	First time home buyer (FTHB)	Has borrower had an ownership interest in a property in the last three years? If you have, FTHB = "N". If you have not, FTHB = "Y". If any borrower is a FTHB, the answer is "Y."	char(1)	1	Scorecard	I	Scoring 1003 (Section 8)	"Y" or "N"	first_time_buyer
57	Loan purpose	1-Purchase an existing house, previously occupied 2-Finance improvements to an existing property 3-Refinance 4-Purchase a new condo unit 5-Purchase an existing condo unit 6-Purchase existing home, not previously occupied 7-Construct home – proceeds to be paid out during construction 8-HUD only - finance co-op purchase	char(2)	2	Additional	I	CHUMS 1003 (Section 2)	Any value is ok	loan_purpose
58	Property address	Property street address stated in Section 2 of 1003.	Char(60)	60	Additional	I	CHUMS 1003 (Section 2)	Any value is ok	prop_address

	Scorecard Table Elements	Definition	Format	Size	Data Type	Input or Output? *	Required for Scoring/ CHUMS	Source	Scoreable Criteria	DTD Element Name
59	Property city	Property city name stated in Section 2 of 1003.	Char(17)	17	Additional	I	CHUMS	1002 (Section 2)	Any value is ok	prop_city
60	Property state	Property state abbreviation stated in Section 2 of 1003	Char(2)	2	Additional	I	CHUMS	1002 (Section 2)	Any value is ok	prop_state
61	Property zip code	Property zip code stated in Section 2 of 1003	Char(9)	9	Additional	I	CHUMS	1002 (Section 2)	Any value is ok	prop_zip
62	Property county code	Property fips county code.	Numeric(3)	3	Additional	I	CHUMS	1002 (Section 2)	Any value is ok	prop_county
63	Self employed indicator for borrower	Is borrower self-employed? If one borrower is self-employed, the answer is "Y."	"Y" or "N"	1	Additional	I	CHUMS	1003 (Section 4)	Any value is ok	self_employ
64	Veteran indicator for borrower	Is borrower a Veteran? If one borrower is a Veteran, the answer is "Y."	"Y" or "N"	1	Additional	I	CHUMS	1003 (Section 1)	Any value is ok	veteran
65	Borrower's Closing Costs	Buyers total closing costs subtracted by the amount of buyer's closing costs paid by the seller	999999	6	Additional	I	CHUMS	HUD Form 92900-WS (Line 5c)	Any value is ok	borr_clsg_costs
66	Borrower Type	1-Occupant 2-Landlord 3-Reserved 4-Reserved 5-Escrow Commitment 6-Reserved 7-Corporation (Refinance Only) 8-Government Agency or Non-Profit Organization	1-digit numeric	1	Additional	I	CHUMS	1003 (Section 2)	Any value is ok	borr_type
67	Current Total Monthly Expenses for all borrowers	Current monthly housing expenses in dollars and cents for all borrowers	9999.99	7	Additional	I	CHUMS	1003 (Section 5)	Any value is ok	monthly_expense
68	Energy Efficient Mortgage Indicator	Is there an energy efficient mortgage indicator?	"Y" or "N"	1	Additional	I	CHUMS	See HUD Handbook 4155 Chapter 2-39	Any value is ok	eem
69	First Payment Date	Month and Year of first payment	YYYYMM	8	Additional	I	CHUMS	CHUMS Insurance Screen	Any value is ok	first_pay_date
70	Gift letter amount	Amount of Gift in whole dollars	999999	6	Additional	I	CHUMS	1003 (Section 7)	Any value is ok	gift_amt

Scorecard Table Elements	Definition	Format	Size	Data Type	Input or Output? *	Required for Scoring/ CHUMS	Source	Scoreable Criteria	DTD Element Name
71	Gift letter source	Source of Gift 00 - N/A 01 - Relative 03 - Government Assistance 06 - Employer 15 - Nonprofit/Religious/Community – Non-Seller Funded	99	2	Additional	I	CHUMS 1003 (Section 7)	Any value is ok  Please note: Field will become required in January 2009.	gift_source
72	Number of Dependents for borrowers	Total number of dependents for borrowers	99	2	Additional	I	CHUMS 1003 (Section 3)	Any value is ok	dependents
73	Required Investment	Borrower's share of closing costs and down-payment in whole dollars	999999	6	Additional	I	CHUMS 1003 (Section 7)	Any value is ok	req_invest
74	Solar energy indicator	Is there a solar energy indicator?	"Y" or "N"	1	Additional	I	CHUMS See HUD Handbook 4155 Chapter 1-11	Any value is ok	solar
75	Total cash requirements	Total combined cash available to close loan in whole dollars	999999	6	Additional	I	CHUMS 1003 (Section 7)	Any value is ok	total_req
76	Years at Current Job for SSN1	Years at current job for SSN1	2-digit numeric	2	Additional	I	CHUMS 1003 (Section 4)	Any value is ok	years_at_job
77	Years Renting for borrower	Greatest number of years renting for any borrower	2-digit numeric	2	Additional	I	CHUMS 1003 (Section 3)	Any value is ok	years_renting
78	Total Closing Costs	Total closing costs of the transaction	999999	6	Additional	I	CHUMS HUD Form 92900-WS (Line 5a)	Any value is ok	clsg_costs
79	Unpaid Principle Balance (for refis)	Amount of principal due on first loan	9999999	7	Additional	I	CHUMS CHUMS Insurance Screen	Any value is ok	unpaid_balance
80	Mortgage Basis	Total cost to the buyer, including the buyer's share of any repairs, alterations, and additions to the property and the closing costs, contract price, and existing debt being refinanced, but excluding prepaids.	9999999	7	Additional	I	CHUMS CHUMS Insurance Screen	Any value is ok	mortgage_basis
81	Assets Available	Total assets available for closing, including cash, savings bonds, and securities.	999999	6	Additional	I	CHUMS CHUMS Insurance Screen	Any value is ok	assets_avail
82	Total Fixed Payment	Sum of the total housing expense and other recurring charges, including all monthly payment debts and housing debts.	999999	6	Additional	I	CHUMS CHUMS Insurance Screen	Any value is ok	total_fixed

	Scorecard Table Elements	Definition	Format	Size	Data Type	Input or Output? *	Required for Scoring/ CHUMS	Source	Scoreable Criteria	DTD Element Name
83	Counsel Type	Indicates if First Time Homebuyer (FTHB) completed homebuyer counseling. " " - N/A, "A"- Not Counseled, "D" – HUD Approved Counseling Agency	"A", "D", or " "	1	Scorecard	I	Scoring	CHUMS Insurance Screen	"A", "D", or " "	counsel_type
84	Closing Date	Date loan was settled or closed.	Yymmdd	6	Additional	I	CHUMS	CHUMS Insurance Screen	Any value is ok	closing_date
85	Maturity Date	Date of last mortgage payment.	Yyyymm	6	Additional	I	CHUMS	CHUMS Insurance Screen	Any value is ok	maturity_date
86	Buydown Interest Rate	Interest rate paid by borrower as a result of points paid up front. To be used for underwriting purposes.	99.999	6	Additional	I	CHUMS	1003 (Section 1)	Must be > 0	buydown_interest
87	Secondary Financing Amount	Amount of financing provided from a source other than the originating lender that creates a lien against a property (even if the debt may be forgiven by the provider of the funds).	999999	6	Additional	I	CHUMS	CHUMS Insurance Screen	Any value is ok	secondary_financing_amt
88	Secondary Financing Source	Type of entity providing secondary financing 00 - N/A 01 - Government & Nonprofit Instrumentality of Government 02 - Nonprofit (not Instrumentality of Government) 03 - Private Organizations/Eligible Individuals 04 - Lender	99	2	Additional	I	CHUMS	CHUMS Insurance Screen	Any value is ok	secondary_financing_src
89	EEM Escrow Amount	Amount held in escrow for energy efficient improvements.	999999	6	Additional	I	CHUMS	CHUMS Insurance Screen	Any value is ok	eem_escrow_amt
90	Seller Concessions	Amount of the closing costs and financing concessions paid by the seller on behalf of the borrower.	999999	6	Additional	I	CHUMS	CHUMS Insurance Screen	Any value is ok	seller_concessions
91	Credit Report Type	Designates format of the Credit Report Data	Char(10)	10	Scorecard	I	Scoring	Credit Report	Must be a supported Credit Report Type. Please contact Single Family Housing for a current list of supported Credit Report Types	creditreporttype
92	Credit Report Data	Raw Credit Report	Unlimited Alphanumeric	Unlimited	Scorecard	I	Scoring	Credit Report	Any value is ok	creditreportdata
93	Lender ID	Code to Identify the originator making the underwriting request. Should be the FHA 10 digit lender ID.  Note: When processing a loan for a Sponsored Originator, the AUS should send the Sponsored Originator EIN. If the AUS is unable to send the Sponsored Originator EIN, the AUS is allowed to send 6999609996 in this field. That value will indicate to TOTAL Scorecard the loan is originated by a Sponsored Originator.	Char(10)	20	Scorecard	I	Scoring	FHA	Must be a valid FHA 10 digit lender ID	lender_id



	Scorecard Table Elements	Definition	Format	Size	Data Type	Input or Output? *	Required for Scoring/ CHUMS	Source	Scoreable Criteria	DTD Element Name
94	Sponsor ID	Code to Identify the lender acting as an approved sponsor for the originator making the underwriting request. Should be the FHA 10 digit lender ID. Required if the Lender ID is a Loan Correspondent. Optional if the Lender ID is for a DE Approved originator.	Char(10)	20	Scorecard	I	Scoring	FHA	If entered, must be a valid FHA 10 digit lender ID	sponsor_id
95	Version	The version of the TOTAL Scorecard used during the initial underwriting decision of the loan application. This should match the version output from the TOTAL Scorecard during the initial submission of the loan application to the TOTAL Scorecard. Should be blank for the initial submission of a loan application.	Char(11)	11	Scorecard	I	Scoring	Version output from the initial submission of the loan to the TOTAL Scorecard	Any value is ok	version
96	Down Payment	The difference between the sales price of the property and the mortgage amount excluding any financed closing costs or mortgage insurance premiums.	999999	6	Additional	I	CHUMS		Any value is ok	down_payment
97	Base Mortgage Amount	Mortgage amount prior to adding any financed closing costs or any upfront mortgage insurance premium, or any combination.	9999999	7	Additional	I	CHUMS		Any value is ok	base_mortgage_amount
98	Base LTV	Base mortgage amount divided by the lesser of the appraised value or sales price of the property	999.99	6	Additional	I	CHUMS	Calculated	Any value is ok	base_LTV
99	Manufactured Housing	Indicator for specifying whether the dwelling is a manufactured (mobile) home.	"Y" or "N"	1	Additional	I	CHUMS	URAR	Any value is ok	manufactured_housing
100	Number of Living Units	Number of separate dwellings. For example, a two-family house has 2 living units.	99	2	Additional	I	CHUMS	URLA, II. Property Information and Purpose of Loan section, No. of Units	Any value is ok	living_units
101	ARM Type	Type of ARM 1 – 1 Year Arm H – Hybrid Arm N – Not an ARM	"1", "H", or "N"	1	Additional	I	CHUMS	Note	Any value is ok	ARM_type
102	Refinance Type	" " - Unknown "C" - Conventional "H" - HOPE For Homeowners "N" - Not Refinance "R" - Prior FHA "S" - Streamline Refinance	Char(1)	1	Scorecard	I	Scoring		Any value is OK	refinance_type
103	Sponsored Originator EIN	The Employer Identification Number for the Sponsored Origination Company	999999999	9	Scorecard	I	Scoring	FHA	If entered, must be a valid EIN on the CHUMS Sponsored Originator List.	EmployerIdentificationNumber attribute from the LOAN_ORIGINATOR
<b>Output Variables Follow:</b>										
1	Number of review rules/credit overrides that were triggered	The number of review rules/credit overrides that were triggered (0-5).	99	2	Scorecard	O	Scoring	N/A	N/A	NumReviews

	Scorecard Table Elements	Definition	Format	Size	Data Type	Input or Output? *	Required for Scoring/ CHUMS	Source	Scoreable Criteria	DTD Element Name
2	Error Code	Error codes derived during the validation process; error codes are returned comma delimited (Example: 166, 300, 325)	Char(50)	50	Scorecard	O	Scoring	N/A	N/A	Errcde
3	Array containing the ID of the review rules triggered	Comma delimited field with codes indicating which review rules were triggered. 01-Front-End Ratio 02-Back-End Ratio 04-Foreclosure 05-Bankruptcy 06-Late Mortgage Payments 07 – Ineligible for FHA financing based on values submitted to TOTAL – See Upfront Premiums Chart	99,99	30	Scorecard	O	Scoring	N/A	N/A	ReviewRules
4	Post-review rules Accept or Refer decision	Accept/Refer decision. Takes into account algorithm score, review rules and credit overrides.	"A," "R," or "U"	1	Scorecard	O	Scoring	N/A	N/A	PostReview
5	Pre-review rules Accept or Refer decision	Accept/Refer based only on algorithm score.	"A," "R," or "U"	1	Scorecard	O	Scoring	N/A	N/A	PreReview
6	Borrower1 FICO	FICO score for Borrower1	9999	4	Scorecard	O	Scoring	Credit Report	N/A	LFico
7	Borrower2 FICO	FICO score for Borrower2	9999	4	Scorecard	O	Scoring	credit Report	N/A	LFico
8	Borrower3 FICO	FICO score for Borrower3	9999	4	Scorecard	O	Scoring	Credit Report	N/A	LFico
9	Borrower4 FICO	FICO score for Borrower4	9999	4	Scorecard	O	Scoring	Credit Report	N/A	LFico
10	Borrower5 FICO	FICO score for Borrower5	9999	4	Scorecard	O	Scoring	Credit Report	N/A	LFico
11	Social Security Number for Borrower1	Social Security Number stated in Section 3 of 1003 for Borrower1.	999999999	9	Scorecard	O	Scoring	1003 (Section 3)	N/A	ssn
12	Social Security Number for Borrower2	Social Security Number stated in Section 3 of 1003 for Borrower2.	999999999	9	Scorecard	O	Scoring	1003 (Section 3)	N/A	ssn
13	Social Security Number for Borrower3	Social Security Number stated in Section 3 of 1003 for Borrower3.	999999999	9	Scorecard	O	Scoring	1003 (Section 3)	N/A	ssn
14	Social Security Number for Borrower4	Social Security Number stated in Section 3 of 1003 for Borrower4.	999999999	9	Scorecard	O	Scoring	1003 (Section 3)	N/A	ssn
15	Social Security Number for Borrower5	Social Security Number stated in Section 3 of 1003 for Borrower5.	999999999	9	Scorecard	O	Scoring	1003 (Section 3)	N/A	ssn
16	Repository for selected FICO for Borrower1	The Credit Repository which provided the FICO reported from the scorecard.	Char(20)	20	Scorecard	O	Scoring	Credit Report	N/A	repository
17	Repository for selected FICO for Borrower2	The Credit Repository which provided the FICO reported from the scorecard.	Char(20)	20	Scorecard	O	Scoring	Credit Report	N/A	repository
18	Repository for selected FICO for Borrower3	The Credit Repository which provided the FICO reported from the scorecard.	Char(20)	20	Scorecard	O	Scoring	Credit Report	N/A	repository
19	Repository for selected FICO for Borrower4	The Credit Repository which provided the FICO reported from the scorecard.	Char(20)	20	Scorecard	O	Scoring	Credit Report	N/A	repository
20	Repository for selected FICO for Borrower5	The Credit Repository which provided the FICO reported from the scorecard.	Char(20)	20	Scorecard	O	Scoring	Credit Report	N/A	repository
21	Version	The Version of the TOTAL Scorecard used during this scorecard submission.	Char(11)	11	Scorecard	O	Scoring	N/A	N/A	Version
22	Unique identification for loan application assigned by AUS	Identification number assigned by the AUS scoring the loan.	char(16)	16	Scorecard	O	Scoring	AUS Vendor	N/A	loan_number

	Scorecard Table Elements	Definition	Format	Size	Data Type	Input or Output? *	Required for Scoring/ CHUMS	Source	Scoreable Criteria	DTD Element Name
23	Upfront MIP Factor	Percentage used for calculating the upfront mortgage insurance premium. To calculate the upfront mortgage insurance premium, the factor should be multiplied by the mortgage amount.	99.999	6	Scorecard	O	Scoring	N/A	N/A	upfrontMIPFactor
24	Annual MIP Factor	Percentage used for calculating the annual mortgage insurance premium. To calculate the annual mortgage insurance premium, the factor should be multiplied by the mortgage amount.	99.999	6	Scorecard	O	Scoring	N/A	N/A	annualMIPFactor
25	Higher Mortgage Insurance Premium Indicator  * Only a zero is returned at this time. This is a place holder for future use	Indicates if the upfront mortgage insurance premium was raised above level indicated by the borrower's credit score and LTV combination.  0 – MIP was not raised 1 – MIP was raised due to weakness in the combination of cash reserves, mortgage payment ratio, and/or rate of loan amortization. 2 – MIP was raised due to weakness in credit history; thin credit files. 3 – MIP was raised due to a combination of 1) cash reserves, mortgage payment ratio, and/or rate of loan amortization and 2) weakness in credit history; thin credit files. 4 – MIP was raised due to a combination of weaknesses but no dominant cause	0-4	1	Scorecard	O	Scoring	N/A	N/A	MIPBumplndicator

## **APPENDIX B – Scorecard Error Codes**

## Appendix B - Scorecard Error Codes

ERROR CODES	ERROR MESSAGES
001	Data in AUS system to calculate score is not complete
004	One SSN must be entered
005	SSN1 is not valid
006	SSN2 is not valid
007	SSN3 is not valid
008	SSN4 is not valid
009	SSN5 is not valid
010	SSN2 is required
011	SSN3 is required
012	SSN4 is required
235	A zero FICO Score is only permitted for one applicant
240	One FICO Score is required when only one applicant
290	Invalid FHA Case Number
300	Applicant(s) combined monthly income must be greater than 0
305	Appraised Value must be between \$9,000 and \$9,999,999. Otherwise, it must be 0.
310	Loan amount including MIP must be greater than 0
315	Monthly payment, including Principal, Interest, Taxes and Insurance, must be greater than \$0 and less than \$15,000
320	Mortgage Insurance Premium cannot be less than 0
325	Mortgage term in months must be between 48 and 360
330	Sale price must be between \$9,000 and \$9,999,999.
335	Either Appraised Value or Sale Price is required
340	Total number of applicants must be between 1 and 5
345	Total number of applicants does not match number of SSNs entered
350	Unique identification for AUS must be entered
355	Unique identification for loan application assigned by AUS must be entered
360	Loan-To-Value Ratio must be between 11 and 125
365	Front End Ratio must be greater than 0 and less than 101
370	Back End Ratio must be greater than 0 and less than 101
372	Back End Ratio must be greater than Front End Ratio
375	Underwriting P&I must be greater than \$0 and less than \$15,000
380	Underwriting Interest must be greater than 0
385	Either Lender ID or Sponsored Originator EIN is required
386	Both Lender ID and Sponsored Originator EIN not allowed. Please submit either Lender ID or Sponsored Originator EIN.

ERROR CODES	ERROR MESSAGES
387	Sponsored Originator EIN is invalid. Sponsored Originator EIN must be nine numeric digits.
388	Sponsored Originator EIN is invalid. Sponsored Originator EIN must be in the CHUMS Sponsored Originator list.
390	Lender ID must contain 10 digits
391	Invalid Lender ID Please ensure lender ID is entered correctly. If it is entered correctly, please contact Lender Approval Division at (202)708-3976.
392	Lender ID is not active
393	Sponsor ID is required
394	Sponsor ID must contain 10 digits
395	Invalid Sponsor ID
396	Sponsor ID is not active
397	Both Lender ID and Sponsor ID cannot be mortgagee type 4
398	Lender ID is not certified through FHA Connection Certification Screen
399	Sponsor ID is not certified through FHA Connection Certification Screen
400	Credit Report is required
405	Each Credit Report must include a Credit Report Type and a Credit Report Data
415	First Time Homebuyer must be "Y" or "N"
420	Counsel Type is not valid
999	AUS system unable to score loan with data provided

## **APPENDIX C –Scordcard DTDS**

## Input DTD

```
<?xml version='1.0' standalone='yes'?>
<!DOCTYPE document [
  <!ELEMENT borrower (ssn, borr_age?, borr_name?, borr_race*, borr_sex?, borr_ethnicity?,
    borr_birth_date?)>
  <!ELEMENT creditreport (creditreporttype, creditreportdata)>
  <!ELEMENT ssn (#PCDATA)>
  <!ELEMENT borr_age (#PCDATA)>
  <!ELEMENT borr_name (#PCDATA)>
  <!ELEMENT borr_race (#PCDATA)>
  <!ELEMENT borr_sex (#PCDATA)>
  <!ELEMENT borr_ethnicity (#PCDATA)>
  <!ELEMENT borr_birth_date (#PCDATA)>
  <!ELEMENT monthly_income (#PCDATA)>
  <!ELEMENT appraised_value (#PCDATA)>
  <!ELEMENT assets_after_clsg (#PCDATA)>
  <!ELEMENT fha_case_number (#PCDATA)>
  <!ELEMENT loan_amount (#PCDATA)>
  <!ELEMENT piti (#PCDATA)>
  <!ELEMENT mip (#PCDATA)>
  <!ELEMENT term (#PCDATA)>
  <!ELEMENT sale_price (#PCDATA)>
  <!ELEMENT applicants (#PCDATA)>
  <!ELEMENT loan_number (#PCDATA)>
  <!ELEMENT ltv (#PCDATA)>
  <!ELEMENT front_end_ratio (#PCDATA)>
  <!ELEMENT back_end_ratio (#PCDATA)>
  <!ELEMENT amort_type (#PCDATA)>
  <!ELEMENT underwriting_pi (#PCDATA)>
  <!ELEMENT contract_pi (#PCDATA)>
  <!ELEMENT underwriting_interest (#PCDATA)>
  <!ELEMENT contract_interest (#PCDATA)>
  <!ELEMENT borr_marital_status (#PCDATA)>
  <!ELEMENT first_time_buyer (#PCDATA)>
  <!ELEMENT loan_purpose (#PCDATA)>
  <!ELEMENT prop_address (#PCDATA)>
  <!ELEMENT prop_city (#PCDATA)>
  <!ELEMENT prop_state (#PCDATA)>
  <!ELEMENT prop_zip (#PCDATA)>
  <!ELEMENT prop_county (#PCDATA)>
  <!ELEMENT self_employ (#PCDATA)>
  <!ELEMENT veteran (#PCDATA)>
  <!ELEMENT borr_clsg_costs (#PCDATA)>
  <!ELEMENT borr_type (#PCDATA)>
  <!ELEMENT monthly_expense (#PCDATA)>
  <!ELEMENT eem (#PCDATA)>
  <!ELEMENT first_pay_date (#PCDATA)>
  <!ELEMENT gift_amt (#PCDATA)>
  <!ELEMENT gift_source (#PCDATA)>
  <!ELEMENT dependents (#PCDATA)>
  <!ELEMENT req_invest (#PCDATA)>
  <!ELEMENT solar (#PCDATA)>
  <!ELEMENT total_req (#PCDATA)>
  <!ELEMENT years_at_job (#PCDATA)>
```



```

<!ELEMENT years_renting (#PCDATA)>
<!ELEMENT clsg_costs (#PCDATA)>
<!ELEMENT unpaid_balance (#PCDATA)>
<!ELEMENT mortgage_basis (#PCDATA)>
<!ELEMENT assets_avail (#PCDATA)>
<!ELEMENT total_fixed (#PCDATA)>
<!ELEMENT counsel_type (#PCDATA)>
<!ELEMENT closing_date (#PCDATA)>
<!ELEMENT maturity_date (#PCDATA)>
<!ELEMENT buydown_interest (#PCDATA)>
<!ELEMENT secondary_financing_amt (#PCDATA)>
<!ELEMENT secondary_financing_src (#PCDATA)>
<!ELEMENT eem_escrow_amt (#PCDATA)>
<!ELEMENT seller_concessions (#PCDATA)>
<!ELEMENT creditreporttype (#PCDATA)>
<!ELEMENT creditreportdata (#PCDATA)>
<!ELEMENT version (#PCDATA)>
<!ELEMENT lender_id (#PCDATA)>
<!ELEMENT sponsor_id (#PCDATA)>
<!ELEMENT down_payment (#PCDATA)>
<!ELEMENT base_mortgage_amount (#PCDATA)>
<!ELEMENT base_LTV (#PCDATA)>
<!ELEMENT manufactured_housing (#PCDATA)>
<!ELEMENT living_units (#PCDATA)>
<!ELEMENT ARM_type (#PCDATA)>
<!ELEMENT refinance_type (#PCDATA)>
<!ELEMENT LOAN_ORIGINATOR (#PCDATA)>
<!ATTLIST LOAN_ORIGINATOR
  _EmployerIdentificationNumber>
]>

```

## Output DTD

```

<?xml version='1.0' standalone='yes'?>
<!DOCTYPE document [
  <!ELEMENT Borrowers (Borrower*)>
  <!ELEMENT Borrower (LFico, ssn, repository)>
  <!ELEMENT LFico (#PCDATA)>
  <!ELEMENT ssn (#PCDATA)>
  <!ELEMENT repository (#PCDATA)>
  <!ELEMENT upfrontMIPFactor (#PCDATA)>
  <!ELEMENT annualMIPFactor (#PCDATA)>
  <!ELEMENT MIPBumpIndicator (#PCDATA)>
  <!ELEMENT NumReviews (#PCDATA)>
  <!ELEMENT Errcde (#PCDATA)>
  <!ELEMENT ReviewRules (#PCDATA)>
  <!ELEMENT PostReview (#PCDATA)>
  <!ELEMENT PreReview (#PCDATA)>
  <!ELEMENT Version (#PCDATA)>
  <!ELEMENT loan_number (#PCDATA)>
]

```

## **APPENDIX D –Revisions**

## Revisions

### December 1, 2003

#### Added two new error codes

398: Lender ID is not certified  
 399: Sponsor ID is not certified

### October 22, 2003

#### Changes to be in compliance with HMDA requirements:

##### Added the following fields:

<u>Name</u>	<u>Appendix A - position</u>
Borrower Ethnicity for SSN1	46
Borrower Ethnicity for SSN2	47
Borrower Ethnicity for SSN3	48
Borrower Ethnicity for SSN4	49
Borrower Ethnicity for SSN5	50
Borrower Birth Date for SSN1	51
Borrower Birth Date for SSN2	52
Borrower Birth Date for SSN3	53
Borrower Birth Date for SSN4	54
Borrower Birth Date for SSN5	55
Secondary Financing Amount	87
Secondary Financing Source	88
EEM Escrow Amount	89
Seller Concessions	90

##### Modified the following fields:

Gift Letter Source	70
Borr X Race	36 through 40

##### Modification to DTD Only

Modified Race to allow multiple occurrences

#### Changes to pull FICO scores from the credit report:

##### Removed the following fields:

<u>Name</u>	<u>Appendix A - old position</u>
Beacon Score for SSN1	5
Beacon Score for SSN2	6
Beacon Score for SSN3	7
Beacon Score for SSN4	8
Beacon Score for SSN5	9
FICO Score for SSN1	10
FICO Score for SSN2	11
FICO Score for SSN3	12
FICO Score for SSN4	13
FICO Score for SSN5	14
Empirica Score for SSN1	15
Empirica Score for SSN2	16

Empirica Score for SSN3	17
Empirica Score for SSN4	18
Empirica Score for SSN5	19

**October 6, 2004****Modified the Appraised Value and Sales Price edits:**

<u>Name</u>	<u>Appendix A - position</u>
Appraised Value	2
Sales Price	9

**Modified the definition of Assets After Closing:**

<u>Name</u>	<u>Appendix A – position</u>
Assets After Closing	3

**December 1, 2004****Implemented a new version of TOTAL Scorecard (1.2)**

<u>Name</u>	<u>Appendix A - position</u>
Version	95 (input)

Version 21 (output)

**December 03, 2007 – Implementation Date July 14, 2008.****Implemented a new version of TOTAL Scorecard (2.0)**

Version 2.0 will collect three new required fields: Down Payment, Base Mortgage Amount, and Base LTV. Please see the Input Fields table in Appendix A (page A-9) for field definitions and the input DTD in Appendix C. Three new error codes were added to correspond to these new fields. Please see Appendix B (page B-2) for error codes.

In Version 2.0, two previously optional fields will be required. The two required fields are First Time Home Buyer and Counsel Type. Two new error codes were added to correspond to these newly required fields. Please see Appendix B (page B-2) for error codes.

Version 2.0 will allow for a new value in the Counsel Type field. This new value will be “D” which means the borrower was counseled by a HUD approved counseling agency.

Version 2.0 will collect three new optional fields: Manufactured Housing, Number of Living Units, and ARM Type. Please see the Input Fields table in Appendix A (page A-9) for field definitions and the input DTD in Appendix C.

Version 2.0 returns three new fields: Upfront MIP Factor, Annual MIP Factor, and Higher Mortgage Insurance Premium Indicator. Please see the Output Fields table in Appendix A (page A-10) for field definitions and the output DTD in Appendix C (page C-2). **Please note: Only a zero will be returned for the Higher Mortgage Insurance Premium Indicator at this time. This is a place holder for future use.**

Version 2.0 returns a new review rule (07). Please see the Output Fields table in Appendix A (page A-9) for Review Rule definitions.

Removed 4 Scorecard Error Codes from Appendix B

200: FICO Score numbers for SSN2 must be 0 when SSN2 not entered  
 210: FICO Score numbers for SSN3 must be 0 when SSN3 not entered  
 220: FICO Score numbers for SSN4 must be 0 when SSN4 not entered  
 230: FICO Score numbers for SSN5 must be 0 when SSN5 not entered

Modified the Appraised Value and Sales Price field size and Scoreable Criteria.

Modified the Loan Amount, Unpaid Principle Balance and Mortgage Basis field size.

Name	Appendix A – position
Appraised Value	2
Loan Amount	5
Sales Price	9
Unpaid Principle Balance	79
Mortgage Basis	80

Modified the Error Messages for Appraised Value (305) and Sales Price (330) from Appendix B.

Modified the definition for Loan Purpose

Version 2.0 added two new values for Gift Letter Source (14 and 15) and removed one value (02).

Version 2.0 added a new value for Secondary Financing Source (04).

### **May 13, 2008 – Implementation Date July 14, 2008**

Added new input field `refinance_type`. Please see the Input Fields table in Appendix A (item 102) for field definition and the input DTD in Appendix C.

Modified the Monthly payment, including Principal, Interest, Taxes, and Insurance, Underwriting P&I, and Contract P&I field size and Scorable Criteria.

Name	Appendix A – position
Monthly payment	2
Underwriting P&I	21
Contract P&I	22

Modified the Error Messages for Monthly payment, including Principal, Interest, Taxes, and Insurance (315) and Underwriting P&I (375) from Appendix B.

### **September 2, 2008 – Implementation Date October 1, 2008**

**Implemented a new version of TOTAL Scorecard (2.1)**

Version 2.1 added a new value for Refinance Type. In the Definition for the Input fields table in Appendix A (item 102), this new value will be “H” which means the borrower is applying for a HOPE loan.

In Version 2.1, three previously required fields will be optional. The three optional fields are Down Payment, Base Mortgage Amount and Base LTV.

Removed 3 Scorecard Error Codes from Appendix B

425: DOWN PAYMENT AMOUNT IS NOT VALID  
 430: BASE MORTGAGE AMOUNT IS NOT VALID  
 435: BASE LTV IS NOT VALID

Modified the Down Payment, Base Mortgage Amount, and Base LTV Scoreable Criteria.

Name	Appendix A – position
Down payment	96
Base Mortgage Amount	97
Base LTV	98

**August 3, 2009 – Implementation Date September 1, 2009**

Modified allowable values for the “refinance\_type” field. Added the following allowable values:

“H” - HOPE For Homeowners  
 “S” - Streamline Refinance

Removed “14 - Nonprofit/Religious/Community - Seller Funded” as an allowable value for the “gift\_source” field.

**May 12, 2010 – Modified to reference Version 2.2 which was implemented on April 3, 2010 to support MIP Factor changes described in Mortgagee Letter 2010-02.**

No interface changes were made as part of this modification.

**July 6, 2010 – Implementation Date September 18, 2010.**

Added new input field Sponsored Originator EIN. Please see the Input Fields table in Appendix A (item 103) for field definition and the input DTD in Appendix C.

Modified the definition for Lender ID. Please see Input Fields table in Appendix A (item 93) for new field definition.

Added 4 Scorecard Error Codes in Appendix B

- 385 Either Lender ID or Sponsored Originator EIN is required
- 386 Both Lender ID and Sponsored Originator EIN not allowed. Please submit either Lender ID or Sponsored Originator EIN.
- 387 Sponsored Originator EIN is invalid. Sponsored Originator EIN must be nine numeric digits.
- 388 Sponsored Originator EIN is invalid. Sponsored Originator EIN must be in the CHUMS Sponsored Originator list.