

**Exhibit D:
HR&A Housing Dashboard
Product Options Form for Apex, NC**

Check Box Below to Select Option:	Options	Digital Housing Needs Assessment	Dashboard	Data Customization	Engagement/Feedback/Support	Price
	Premium – customization and proprietary data and analysis.	<ul style="list-style-type: none"> • Premium housing needs assessment report, auto-updated • 5 comparison geographies 	<ul style="list-style-type: none"> • Select 8 basic and premium indicators for each category (demographics, housing supply, etc.) with ability to customize indicator categories. • Premium map layers 	<ul style="list-style-type: none"> • Up to 5 custom map layers • Up to 3 additional local data sources • 2 custom charts per local data source 	<ul style="list-style-type: none"> • 2 scoping meetings (select and iterate on indicators and map layers) • 1 facilitated stakeholder feedback work session • 2 rounds of client feedback • 10 annual support hours 	<ul style="list-style-type: none"> • \$30k launch • \$8k annual maintenance • Additional setup fee based on custom features (see below).
	Additional Custom Features *See Feature Descriptions	<ul style="list-style-type: none"> • Policy calculators, including Inclusionary Zoning, local Gap Funding and others (TBD – Custom – not included) <p><i>Custom modules, features and analytical tools are priced based on specific scope.</i></p>				

Each option includes:

- 3-year platform hosting by HR&A
- Basic annual maintenance – maintaining data connections with most recently available data, functioning maps and charts

Feature Descriptions

Feature	Description	Versions
Basic Digital Housing Needs Assessment Report	<i>Standardized housing needs assessment exploring population, economic, housing supply and housing affordability trends using publicly-available data. Includes 3 comparison geographies for some charts.</i>	Basic
Premium Digital Housing Needs Assessment Report	<i>Premium housing needs assessment exploring population, economic, housing supply and housing affordability trends using publicly-available and third-party data and proprietary data analysis. Includes 5 comparison geographies for some charts.</i>	Premium, Custom
Basic Map Layers	<i>Standardized map layers for population, economic, housing supply and housing affordability indicators.</i>	Basic
Premium Map Layers	<i>Custom map layers using local data sources such as zoning data, custom geographic boundaries (e.g., council districts), or environmental data.</i>	Premium, Custom
Comparisons	<i>Geographic comparisons for specified charts at the place, county, city or state level.</i>	Basic, Premium, Custom
Data Uploads	<i>Data upload feature that allows users to upload local data using a standardized format created by HR&A.</i>	Premium, Custom
Development Pipeline Tracking Module	<i>Dashboard and report module of charts and maps to display development pipeline data, including a standardized format for gathering and uploading data, and a breakdown of development pipeline by type and affordability level.</i>	Premium, Custom
Local Tool/Program Library	<i>Digital library of housing programs and policies at the local, county, state and or federal level, organized by type (land use, subsidy and tenants' rights) and by local housing priority (e.g. increasing housing supply, preventing displacement, increasing homeownership access).</i>	Custom
Data-Informed Priorities Module	<i>Dashboard module including charts and supporting narrative to display and explain indicators to help communities track progress against specific local priorities.</i>	Custom
Resources Library	<i>Digital library of external resources (websites, PDFs), customized by geography.</i>	Custom

Data and Indicator Options

Explanation of Terms

Comparison	What	Definition	Visualization Options
Temporal	How the indicator has changed over time is important	Indicator is shown at multiple points in time, or the percent change is calculated between points in time.	Line Chart; Bar Chart (additional bars for each year or period)
Geographic	How the indicator compares across different places is important	Indicator is shown for multiple geographies of the same or different level.	Choropleth Map; Line or Bar Chart (additional lines or bars for each geography)
Cross-Sectional	How the indicator compares across different categories is important	Categories of the indicator are compared to one another or to their share of the total.	Bar Chart; Stacked Bar Chart; Pie Chart; Stacked Line Chart (additional lines for each category)
Benchmark	How the indicator compares to an external benchmark is important	Indicator is compared to an agreed-upon benchmark metric.	Line or Bar Chart with Benchmark Line

Indicators

Population					
Indicator	Format	Data Source(s)	Time Period	Comparison	Version Available
Population Over Time	Line Chart	ACS 5-Year	10 years	Temporal	Basic
Comparative Population Change	Line Chart	ACS 5-Year	10 years of change relative to Y0	Temporal/Geographic	Basic
Population by Age	Bar Chart	ACS 5-Year	Y0, Y5, Y10	Temporal/Cross-Sectional	Basic
Households Over Time	Line Chart	ACS 5-Year	10 years	Temporal	Basic
Share of Households That Have Children by Number of Adults	Pie Chart	ACS 5-Year	1 year	Cross-Sectional	Basic
Households by Size	Bar Chart	ACS 5-Year	10 years	Temporal/Geographic	Basic
Share of Family Households by Age of Children	Stacked Bar Chart	ACS 5-Year/PUMS	Y0, Y5, Y10	Temporal/Cross-Sectional	Premium
Households by Tenure	Stacked Bar Chart	ACS 5-Year	Y0, Y5, Y10	Temporal/Cross-Sectional	Basic

Tenure of Households with Children	Stacked Bar Chart	ACS 5-Year	Y0, Y5, Y10	Temporal/Cross-Sectional	Basic
Homelessness Over Time	Line Chart	HUD Point In Time	10 years	Temporal/Geographic	Premium
Youth Homelessness Over Time	Line Chart	HUD Point In Time	10 years	Temporal/Geographic	Premium
Household Racial Composition	Pie Chart	ACS 5-Year	1 year	Cross-Sectional	Basic
Change in Households by Race/Ethnicity	Bar Chart	ACS 5-Year	5-year and 10-year change	Temporal/Cross-Sectional	Basic
Household Income Distribution	Pie Chart	ACS 5-Year	1 year	Cross-Sectional	Basic
Household Income Distribution for Children	Pie Chart	ACS 5-Year	1 year	Cross-Section	Basic
Change in Households by Income Group	Bar Chart	ACS 5-Year	5-year and 10-year change	Temporal/Cross-Sectional	Basic
Comparative Median Income	Line Chart	ACS 5-Year	10 years	Geographic	Basic
Median Earnings by Educational Attainment	Bar Chart	ACS 5-Year	1 year	Cross-Sectional	Basic
Median Income by Race/Ethnicity	Line Chart	ACS 5-Year	10 years	Temporal/Cross-Sectional	Basic
Median Household Income by Tenure	Line Chart	ACS 5-Year	10 years	Temporal	Basic
Child Poverty Rate Over Time	Line Chart	ACS 5-Year	10 years	Temporal	Basic
Family Poverty Rate	Choropleth Map	ACS 5-Year	1 year	Geographic	Basic
Child Poverty Rate	Choropleth Map	ACS 5-Year	1 year	Geographic	Basic
10-Year Change in Child Poverty Rate	Choropleth Map	ACS 5-Year	10-year change		Basic
Median Income	Choropleth Map	ACS 5-Year	1 year	Geographic	Basic
10-Year Population Change	Choropleth Map	ACS 5-Year	10-year change	Temporal/Geographic	Basic

Population Density	Choropleth Map	ACS 5-Year	1 year	Geographic	Basic
Predominant Racial/Ethnic Group	Choropleth Map	ACS 5-Year	1 year	Cross-Sectional/Geographic	Basic

Jobs/Economics					
Indicator	Format	Data Source(s)	Time Period	Comparison	Version Available
Total Jobs	Line Chart	BLS	10 years	Temporal	Basic
Comparative Unemployment Rate	Line Chart	BLS	10 years	Temporal/Geographic	Basic
Comparative Labor Force Participation Rate	Line Chart	BLS	10 years	Temporal/Geographic	Basic
Top 5 Occupations	Bar Chart	BLS	1 year	Cross-Sectional	Basic
Median Wage for Top 5 Occupations	Bar Chart	BLS	1 year	Cross-Sectional	Premium
5 Fastest Growing Occupations	Bar Chart	BLS	5-year change	Temporal/Cross-Sectional	Premium
Median Wage for 5 Fastest Growing Occupations	Bar Chart	BLS	1 year	Cross-Sectional	Premium
Median Income	Choropleth Map	ACS 5-Year	1 year	Geographic	Basic

Housing Supply					
Indicator	Format	Data Source(s)	Time Period	Comparison	Version Available
Housing Starts by Year (Buildings and Units)	Line Chart	Building Permit Survey	10 years	Temporal	Premium
Units Permitted Per 1,000 Jobs Created Over Time	Line Chart	BLS; Building Permit Survey	10 years	Temporal/Geographic	Premium
Cumulative Change in Units by Building Typology	Line Chart	ACS 5-Year	10 years of change relative to Y0	Temporal/Cross-Sectional	Basic
Units by Decade Built	Bar Chart	ACS 5-Year	1 year	Cross-Sectional	Basic
Vacancy Status	Pie Chart	ACS 5-Year	1 year	Cross-Sectional	Basic
Share of Units Vacant and Available	Line Chart	ACS 5-Year	10 years	Temporal	Premium
Renter-Occupied Units by Typology	Pie Chart	ACS 5-Year	1 year	Cross-Sectional	Basic
Owner-Occupied Units by Typology	Pie Chart	ACS 5-Year	1 year	Cross-Sectional	Basic
Median Rent Over Time	Line Chart	Zillow	10 years	Temporal	Premium

Zillow Home Value Index	Line Chart	Zillow	10 years	Temporal	Premium
Deed Restricted Affordable Units Per 1,000 Households Over Time	Line Chart	NHPD	10 years	Temporal/Geographic	Premium
Deed Restricted Share of Units Affordable Under 60% AMI	Pie Chart	PUMS, NHPD	1 year	Cross-Sectional	Premium
Share of Units Vacant and Available	Choropleth Map	ACS 5-Year	1 year	Geographic	Premium
Share Multifamily	Choropleth Map	ACS 5-Year	1 year	Geographic	Basic
10-Year Change in Median Rent	Choropleth Map	Zillow	10-year change	Temporal/Geographic	Premium
10-Year Change in Median Home Value	Choropleth Map	ACS 5-Year	10-year change	Temporal/Geographic	Basic

Housing Affordability					
Indicator	Format	Data Source(s)	Time Period	Comparison	Version Available
Income Required to Afford Median Rent vs. Median Income by Educational Attainment	Line Chart + Bar Chart	Zillow; PUMS	10 years	Temporal	Premium
Income Required to Afford Median Rent vs. Median Income by Top 5 Occupations	Bar Chart	BLS; PUMS	1 year	Cross-Sectional	Premium
Income Required to Afford Median Rent vs. Median Income by 5 Fastest Growing Occupations	Bar Chart	BLS; PUMS	5 years	Temporal/Cross-Sectional	Premium
Renter Cost Burden Rates	Bar Chart	PUMS	10 years	Temporal	Basic
Renter Cost Burden Rates by Presence of Children	Bar Chart	PUMS	10 years	Temporal/Cross-Sectional	Basic
Renter Cost Burden Rates by Income	Bar Chart	PUMS	10 years	Temporal/Cross-Sectional	Basic
Renter Cost Burden by Race/Ethnicity	Bar Chart	PUMS	1 year	Cross-Sectional	Basic
Renter Cost Burden for Older Adults	Bar Chart	PUMS	1 year	Cross-Sectional	Basic
Home Supportable at Median Income	Line Chart + Bar Chart	Zillow; PUMS	10 years	Temporal/Cross-Sectional	Premium

vs. Typical Home Price					
Owner Cost Burden Rates by Presence of Children	Bar Chart	PUMS	10 years	Temporal/Cross-Sectional	Basic
Owner Cost Burden Rates by Income	Bar Chart	PUMS	10 years	Temporal/Cross-Sectional	Basic
Owner Cost Burden by Race/Ethnicity	Bar Chart	PUMS	1 year	Cross-Sectional	Basic
Owner Cost Burden for Older Adults	Bar Chart	PUMS	1 year	Cross-Sectional	Basic
Comparative Homeownership Rate	Line Chart	ACS 5-Year	10 years	Temporal/Geographic	Basic
Homeownership Rate by Race/Ethnicity	Bar Chart	ACS 5-Year	1 year	Cross-Sectional	Basic
Homeownership Rate	Choropleth Map	ACS 5-Year	1 year	Geographic	Basic

Health and Wellbeing					
Indicator	Format	Data Source(s)	Time Period	Comparison	Version Available
Disability Status by Age	Bar Chart	ACS 5-Year	1 year	Cross-Sectional	Basic
Health Outcomes	Bar Chart	ACS 5-Year	1 year	Cross-Sectional	Basic
Share of All Households without Internet Access Over Time	Line Chart	ACS 5-Year	10 years	Temporal	Basic
Share of Population Experiencing Asthma	Choropleth Map	ACS 5-Year	1 year	Geographic	Basic
Share of Population that is Physically Inactive	Choropleth Map	ACS 5-Year	1 year	Geographic	Basic
Share of Population in Poor or Fair Health	Choropleth Map	ACS 5-Year	1 year	Geographic	Basic