these industries is key and dependent on communities' ability to provide a "high quality of life and place defined by vibrant desirable communities and environments." 10 Workers with the skills to support these industries are highly mobile and seek out environments with lifestyle amenities including entertainment and recreation all located within proximity to housing options before employment. Further, infrastructure including highspeed and low-cost broadband is key in supporting the communications needs of businesses in these sectors. Despite multiple internet providers to residences, there is still improvement to be made to speed and reliability.¹¹ Considering the opportunities to leverage growth in this emerging sector, the City of Beaverton should consider strategies to improve placemaking amenities and supportive infrastructure for these sectors and should seek to follow its 2018 Parks and Recreation Master Plan and Gladwin County's 2016 Technology Action Plan.

CITY OF BEAVERTON WORKERS

COMMUTING

In many parts of Michigan, small cities such as Beaverton are employment centers for residents living in surrounding rural areas. The U.S. Census Bureau's online application called "On the Map" uses payroll data to estimate commuting patterns. The tool indicates that the City of Beaverton, despite its concentration of manufacturing jobs, does not have a net inflow of workers in line. The analysis indicates that the vast majority (94%) of the 329 workers employed within the City boundary commute in from outside the City daily. At the same time, most (95%) of the 366 employed Beaverton residents travel outside the community to get to work, while only 20 employed workers live and work within the City boundary. Taken together, this means that there is a net loss of 57 people from the community daily from work-related travel.

FIGURE XX: COMMUTING PATTERNS IN BEAVERTON

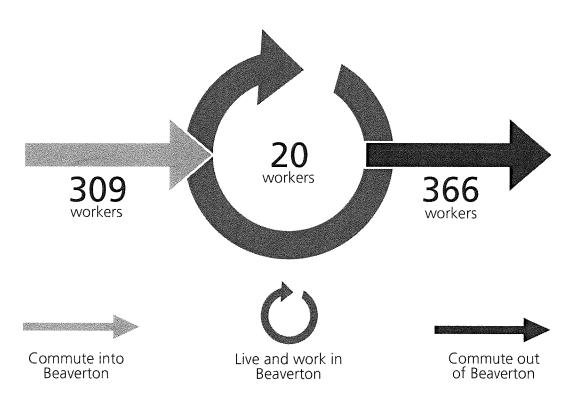


TABLE XX: CITY AND STATE PARKS & RECREATION GOALS

	CITY OF BEAVERTON
RESIDENT LABOR FORCE	
Percent of residents in the labor force	47.9%
Number of residents in the labor force	451
Labor force unemployment rate	9.8%
Number of employed residents	407
PERCENT OF EMPLOYED RESIDENTS BY INDUSTRY	
Agriculture, forestry, fishing and hunting, and mining	0.5%
Construction	2.7%
Manufacturing	34.6%
Wholesale trade	5.9%
Retail trade	9.1%
Transportation and warehousing, and utilities	2.0%
Information	3.2%
Finance and insurance, and real estate and rental and leasing	3.7%
Professional, scientific, and management, and administrative and waste management services	2.7%
Educational services, and health care and social assistance	17.2%
Arts, entertainment, and recreation, and accommodation and food services	17.0%
Other services, except public administration	1.5%
Public administration and industries not classified	0.0%

Source: American Fact Finder - American Community Survey 2017

Further, the time spent commuting between home and work is a major expense for working households, both in terms of time costs and money. The "On the Map" analysis shows that nearly one third (32%) of Beaverton workers commute 50 miles or greater to get to work. Relatedly, the mean commute time for Beaverton workers was 22.8 minutes in 2016, which resembled the statewide average of 24.3 minutes. For a complete discussion of households' transportation costs, refer to the transportation chapter.

INDUSTRIES

This section inventories the jobs that residents of Beaverton hold, which are likely to be outside of the City. In places

where commuting between communities is heavy, there can be a major difference between the employment and jobs located within the City and the jobs that its residents hold. Data from the American Community Survey suggest, however, that employment among Beaverton residents generally follows the profile of the community's establishments and employees, with a few key differences.

Although the margin of error in these measurements leads to some uncertainty, community survey data suggest that City residents take advantage of the region's large share of manufacturing employment; over one-third (34.6%) of Beaverton workers were employed in this sector as of 2019. This large

share is particularly striking compared with neighboring Gladwin, where manufacturing employment makes up only about 15% of residents' jobs. The employment sectors educational services, healthcare, and social assistance and arts, entertainment, and recreation comprise employ similar proportions of Beaverton workers around 17.0%. Few Beaverton workers are employed in the professional sectors of information, finance, insurance, and real estate, and professional and scientific occupations (6.9%).

BEAVERTON'S COMMERCIAL DISTRICTS

DOWNTOWN BEAVERTON

Beaverton's downtown district extends east and west for approximately two blocks. Between Pearson Street and M-18, this key downtown block features a mix of retail, dining, and services, all of which are housed within single-floor and two-floor structures. The buildings on this block of downtown, some of which feature historic brick construction, are attached on narrower lot widths. although a couple of properties with long single-floor structures break up this pattern. Critically, the high-visibility lot on the southeast corner of M-18 and Brown Street intersections is public parking, a less than inviting gateway into the downtown. Other features, including window displays, street trees, and street lighting enhance the downtown character.

Although Beaverton's downtown houses a prosperous mix of businesses, vacant spaces, and aging buildings are also characteristic of these two blocks. The City could consider small changes to its municipal zoning policies to promote the revitalization of these spaces. All properties in downtown fall under the City's C-2 zoning designation, which is intended to provide space for retail and businesses that require ample window space. Several second floors along Brown Street appear vacant. Considering that younger millennial demographics with skills and training needed to support "knowledge-based" industries prefer high-density housing options and proximity to entertainment, the City

Over one-third of participants in the community visioning process selected "housing" as a priority

should consider investing in converting those units to apartments or condos. Beaverton officials could then work with property owners to market spaces to current and new residents. This could, in turn, provide additional patronage for the district's businesses and incentivize for new establishments by placing residents and commercial spaces in proximity.

Other small adjustments to Beaverton's zoning code, including parking regulations could help make better use of downtown space. As of 2019, all commercial uses within the City's C-2 zone are subject to inflexible parking requirements, which mandate that developers provide a specified minimum number of parking spaces based on the square footage of commercial space or size of the commercial facility.¹² For instance, the code requires six parking spaces per alley for a bowling facility constructed within the zone. The City could instead allow developers to choose the "correct" amount of parking based on the needs of their prospective tenants (within a flexible threshold). Doing this could provide dual benefits; it could spur redevelopment by allowing developers to maximize floor area and could make downtown more pedestrian-friendly by minimizing unnecessary off-street parking that breaks up a denser walkable environment. Since the City has engaged in the state's Redevelopment Ready Communities, parking maximum should be considered to align with the program's best practices.

Other ways to liven up the downtown are to provide outdoor seating. This is complicated in Beaverton because the sidewalks are not wide enough for restaurants to offer outdoor dining, but some alternatives are possible. The property behind City Hall could be

converted to public space that offers outdoor seating related to events like food truck rallies, recreation, communitybased activities. The downtown would also be enhanced if building design followed a consistent architectural theme. The downtown's structure is ideal as buildings have zero build-to lines, rear parking, and the streetscape has many positive features such as historic light poles, trees, banners, planter boxes, and benches. However, the facades vary greatly by style. The two-story brick buildings have historic charm but they are often adjacent to shorter buildings with wood or vinyl siding with varying roof and awning styles that span mid 20th-century architectural characteristics. It is recommended that design standards are updated, consistently enforced, and that façade improvements are focused on bringing stylistic cohesion to the downtown.

ROSS STREET/M-18 CORRIDOR

A second major commercial thoroughfare extends north and south along M-18 for approximately 1.4 miles through the center of the City. This corridor's low-density character contrasts with the two-story buildings and narrow lot widths in Beaverton's downtown. Most of the corridor is oriented towards vehicular traffic, for example, the City's only grocery store. South of the Ross Street Bridge, the Corridor encompasses a variety of retail and dining establishments. including the Gem Theater, the Beaverton Activity Center, as well as banks, offices, and institutional uses. It is important not to have the two commercial areas compete with one another, in that sense, Beaverton has done a good job separating commercial uses. The downtown permits uses and design standards that provide an experience whereas state trunk lines, like M-18, that the City has less control



Welcome to Beaverton banners

TABLE XX: SURPLUS MARKETS

INDUSTRY	SURPLUS (DOLLARS)	NUMBER OF ESTABLISHMENTS IN BEAVERTON
Gasoline stations	2,956,915	2
Health and personal care stores	1,857,183	3
Food and beverage stores	1,305,938	3
Beer, wine, and liquor stores	1,059,211	2
Used merchandise stores	756,752	2
Grocery stores	480,630	1
Miscellaneous store retailers	313,836	7
Florists	72,003	1

Source: ESRI ~ Retail Market Profile

TABLE XX: TOP 10 LEAKAGE MARKETS

INDUSTRY	LEAKAGE (DOLLARS)	NUMBER OF ESTABLISHMENTS IN BEAVERTON
Motor vehicle and parts dealers	5,627,739	1
Automobile dealers	5,024,041	0
General merchandise stores	2,918,602	2
Department stores	2,624,115	0
Building materials, garden equipment, and supply stores	1,886,532	1
Buildings materials and supplies dealers	1,704,688	1
Clothing and clothes accessories stores	866,313	1
Electronics and appliance stores	768,831	0
Sporting goods, hobby, book, and music stores	656,303	0
Auto parts, accessories, and tire stores	649,710	1

Source: ESRI – Retail Market Profile

of, are host to commercial uses that are based on convenience. The difference between the two types of commercial zones is evident in the setbacks, parking, circulation, design, and building footprint.

INDUSTRIAL PARK

A third major district contains a variety of Beaverton's industrial businesses in the southeastern extent of the City. Facilities including Saint-Gobain and Advance Engineering are located along

Terry Diane Street within the district. Properties in this portion of the City fall under the City's "Industrial" zoning category, which limits permissible uses to those related to industrial manufacturing and warehousing, and mandates large yards and maximum permissible building coverage areas. ¹³

RETAIL MARKET ANALYSIS

One major concern for the economic health and vitality of downtown business

districts is how well local demand for products and services are matched with businesses' supply of those goods and services. The "Retail Market Place Profile" created by ESRIs Business Analyst software aggregates demographic, payroll, and other public consumer data to estimate this. A "surplus" industry means that visitors from outside Beaverton come to the community for the good or service, while conversely, "leakage" markets indicate where community residents travel outside of the City limits to access the good or service. The Retail Market Place Profile also quantifies in dollar terms the value of surplus and leakage within a community and therefore enables comparison of supply and demand within a community's submarkets.

The retail markets wherein Beaverton businesses attract customers from outside the community are few, but one major automotive-related industry, gasoline stations, rakes in more money than the rest. Customers buying everyday types of products of this type are less willing to travel long distances to procure them, and it follows that the community's two gas stations likely attract patronage from surrounding rural townships. Similarly, Beaverton forms a hub for other types of everyday products, especially foodrelated ones including food and beverage stores, alcoholic beverage stores, and grocery stores, which attract sales from consumers outside the community, therefore exceeding Beaverton residents' demand. As the marketplace profile suggests, however, the value of lost sales that "leaks" outpaces the community's surplus by about a three to one ratio across all retail markets analyzed.

Retail markets in which local retailers' provision of goods and services do not meet the community's demand are many and range from essential, everyday goods and services to more specialized market segments. Interestingly, the top two leakage markets in the community in monetary value are automobile dealers and motor vehicle parts and dealers. The market report also shows that Beaverton residents also travel afield for building

materials and garden equipment, clothing and clothes accessories, sporting goods, book, music and hobby stores, and electronic appliance stores. According to ESRI, the lost value from markets related to these four types of goods totals over \$11,000,000 annually.

The City of Beaverton should consider these market findings and work cooperatively with business owners and related organizations to determine how to bring these retail sectors to the downtown. Distributing the market report's findings to local businesses through networking organizations such as the Gladwin County Chamber of Commerce is a good first step to help local business owners better match their supply of goods with local demand, coordinate with one another, and revitalize their businesses.

PROGRAMS AND ORGANIZATIONS SERVING BEAVERTON'S ECONOMY

A variety of local economic development programs exist at multiple geographic levels to spur private investment and business development in Beaverton.

GLADWIN COUNTY ECONOMIC DEVELOPMENT CORPORATION

The Gladwin Economic Development Corporation provides a variety of measures to support local businesses throughout Gladwin County and to attract and encourage new ones. The organization maintains an online catalog of commercial and residential properties available for rent or purchase. The organization also operates a small business revolving loan fund, which makes more favorable credit available to County businesses seeking to start or expand operations than is typically available through private lenders. The County Economic Development Corporation is authorized by the State to administer a variety of tax incentives for the redevelopment of industrial and commercial properties. Businesses seeking to locate in Beaverton's industrial park qualify for tax incentives administered by the County Economic



Source: Gladwin County Economic Development Corporation

Development Corporation and high levels of service provision including sewer, water, roadways, and underground infrastructure.¹⁴

GLADWIN COUNTY CHAMBER OF COMMERCE

The Gladwin County Chamber of Commerce is a partnership working to promote networking, information sharing, and cooperation among local businesses. Through the chamber, the County's local businesses also promote the area as a place to live and do business. The organization holds community events and promotes others hosted by local clubs and organizations. The chamber also catalogs and disperses information on the County's businesses for use by visitors, residents, and business owners themselves.¹⁵

BEAVERTON DOWNTOWN DEVELOPMENT AUTHORITY

The City of Beaverton Downtown Development Authority (DDA) is a local board with the stated purpose to strengthen the character and economy of the community's downtown. The organizations undertake strategic

improvements to a variety of public facilities in the City including parking, pedestrian linkages and sidewalks, road resurfacing, and streetscaping projects and provide incentives such as façade grants to support business and investment in the community's core. The organization is authorized to collect tax revenue to support these economic development projects in the form of tax increment financing. 16 The DDA collects tax revenue and undertakes improvements in a defined geographic district that includes the entire business frontage along Brown Street and M-18 and extends south to the community's industrial park.

BEAVERTON AREA BUSINESS ASSOCIATION (BABA)

The Beaverton Area Business Association brings a variety of businesses in the community together with community organizations and interests to promote networking, information sharing. Through the group's meetings, member organizations learn more about other local participants, their goals and services, and work to develop mutual solutions to shared problems in the business community. The organization also holds a variety of programmed events including golf outings and fishing derbies to promote greater integration between the business community and residents.¹⁷

MICHIGAN SMALL BUSINESS DEVELOPMENT CENTER

Access to capital and technical knowledge is often an impediment to potential entrepreneurs and to address this issue, the Michigan Small Business Development Center offers consulting services to potential business owners. The organization provides information on financing sources and assists entrepreneurs in accessing grants and loans for business ventures. It also provides training to new entrepreneurs including business plan creation, social media use and marketing, and human resources management. These services make the office a valuable resource for those seeking to expand or establish businesses.18

MTD-MTCHTGAN COMMUNITY COLLEGE

The appropriate workforce training for manufacturing jobs is a major issue facing communities in Michigan and is a factor driving the relocation of manufacturing activities from the state. To this issue, Mid-Michigan Community College, which is located roughly 25 miles northwest of Beaverton, offers an array of industryrelated and skilled-trades job training including welding, advanced integrated manufacturing, facilities, heating, and air conditioning maintenance, and computeraided drafting and design. The College offers professional certifications and credentials and is, therefore, an asset in the development of a skilled workforce. 19

ECONOMIC OPPORTUNITIES

HIGH-SKILL INDUSTRIES

The City of Beaverton should work to foster growth in healthcare and other high-skill industries by partnering with key institutions throughout the community and region. City leadership could actively network with and recruit emerging professionals at CMU and SVSU at events including university business competitions to market the community's available space to retain and attract young workers. Further, the City could work with these same educational institutions to expand experiential learning and educational practicums in disciplines such as business and social work to foster student learning that is also rooted in the surrounding community. Other key organizations such as MidMichigan Health and the CMU Medical School are located in Beaverton or within the surrounding region. The MidMichigan Health's Beaverton medical offices are often part of a broader organizational configuration such as the University of Michigan Health System, which leverages larger budgets to carry out research and development and other functions. The City could work with these institutions to expand life sciences research and other purposes carried out by their larger organizational framework at the local level in Beaverton.20

MARKETING AND TOURTSM

Michigan's tourism and recreationbased industry garner multiple billions of dollars on an annual basis, and the City of Beaverton could seek to partner with organizations including visitors and conventions bureaus, chambers of commerce, and the Michigan Department of Natural Resources to share in this growth. These organizations can collaborate to offer amenities for a "diverse, adaptable, and accessible set of outdoor recreation activities" coupled with lodging and transportation to facilitate their use.²¹ Considering that younger residents with the training to support emerging economic sectors seek out recreation opportunities, leveraging the region's natural resources could also be instrumental in attracting firms and residents. Projects such as the nonmotorized trail connecting Midland, Beaverton, and Gladwin are a strong start.

Vocational training at educational institutions such as MidMichigan Community College could be expanded to include hospitality. Beaverton could also partner with other communities in internal marketing efforts to promote a shared image and welcoming environment. This could include training sessions for service industry workers or engaging organizations such as visitors bureaus, chambers of commerce, and municipalities on shared marketing strategies. Other external marketing could include developing relationships with industry leaders and business executives throughout the state to better coordinate public and private investment and promote the region as a business environment.²²

REDEVELOPMENT READY SITES

Redevelopment Ready Communities (RRC) is a program administered by the Michigan Economic Development Corporation as a voluntary, no-cost certification designed to help cities attract investment and residents. To participate, cities must follow a set of RRC best practices defined by the state agency to achieve certification. These best practices

include improving planning, zoning, and a streamlined development process to signal to developers and investors that the community is ready for reinvestment. One important part of the process is to identify and catalog sites that are vacant, obsolete, or underused and located in areas that have large impacts such as neighborhoods or downtowns. In the RRC process, the community takes this initiative and defines its selected sites and markets it to the private sector.



Downtown Beaverton clock

The municipality first defines its sites. collects information on them, convenes a process to define the community's preferred vision for them, identifies potential resources and incentives that could be used to implement the vision, and then markets the sites to developers. The approach is designed to first establish community support ahead of time and proactively marketing a defined vision to developers with the expertise to implement it. The sites for RRC should be selected by consensus but the State's guidelines can help in establishing promising options. The state recommends that redevelopment sites can be a range of poorly used parcels including:

- » Vacant land
- » Surface parking lots
- » Former industrial sites
- Brownfields and contaminated sites
- » Historic rehab or adaptive reuse

The initial step in the process is cataloging information and characteristics of underused properties that the community would like to see redeveloped. From this starting point, the City can begin a community-driven conversation to determine the desirable types of development in each location, the uses, and businesses that the community would like, the types of development that would be feasible, and the resources available to encourage the development. The City of Beaverton should continue to engage the community on preferred redevelopment locations and can use the information and economic trends depicted in this chapter to plan for the market realities and regional economic trends.

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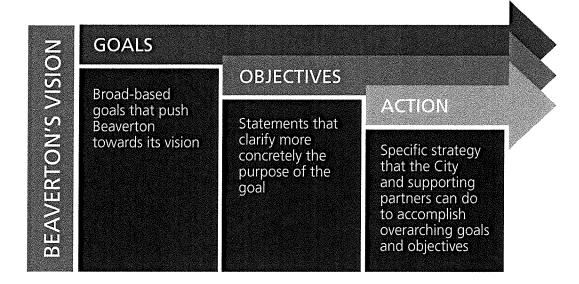
photo credit: Pure Gladwin County

The culmination of the master planning process is when goals, objectives, and strategies are formed and folded into an action plan – a "one-stop-shop" to see the who, what, when, where, and why of achieving goals. The strategies outlined in the master plan are reflective of the inventory, community engagement, and research, and then reconciled with the City's capacity to implement. The action plan is divided by theme, but each action is attached to a rationale, a responsible party, a supporting party, and a timeframe for completion. The action plan starts with the vision statement, a broad communitybacked statement that defines the desired direction for Beaverton to take over the next ten years. It's the cornerstone of the action plan as the goals, objectives, and strategies are based on the aspiration established in the statement.

Vision Statement

Beaverton is a growing family-friendly city that highly values its strong and supportive connection to its school system and enriching youth activities. It is a place that provides quality housing options for residents throughout their life cycle in safe neighborhoods, it has a downtown with a variety of entertainment options that draws people from the region, and protects the natural assets that define its "near north" appeal.

00201 IMPLEMENTATION



COMMUNITY ENGAGEMENT RESULTS

The results of the visioning session are summarized here as a basis for the goals and actions discussed later in this section. The visioning statement is based on a series of exercises that were completed by the public. On June 4th, 2019, a community visioning session was conducted as part of the Community Master Plan process. Approximately 22 residents attended, representing the City and surrounding townships at the Beaverton Activity Center (BAC). These exercises were a crucial part of the process because it allowed residents to imagine what could be and to build consensus and on a collective vision so that Beaverton can confidently update its processes, practices, and policies in the right direction.

The visioning process focused on interactive group exercises designed to be discussion-based to determine actions the City should take to reach that vision. Attendees sat in groups of four to six people and were asked to brainstorm responses to a set of three questions. After each question, each person in the group voted on his/her top choices from the responses they generated. After the visioning session concluded, responses were analyzed and grouped into categories (outliers excluded) to capture

the major themes that emerged; the votes for each response were totaled as were the number of times something was mentioned across the different tables. The purpose of counting both is to determine responses that were commonly written—popular among the residents—and then which ones made it to the top.

PERCEPTION OF BEAVERTON NOW

During the visioning session, attendees were asked to describe how they view Beaverton now using one word or phrase. When summarized using the word cloud, some positive descriptors come to the forefront (the larger the word, the more often it was said). The most common responses were that the community is community-minded, the execution of BAC serving as the prime example. It is felt that the community comes together to provide services and resources widely. Associated are words like "compassionate." "inviting," and "family." On the other side, there is an acknowledgment that the City is economically challenged in that many households have low-incomes and that there are insufficient jobs and workers, and that the downtown has a limited presence.

BEAVERTON'S FUTURE

The question "What does Beaverton look like 10 years in the future?" was



00203

INSERT COMMUNITY ENGAGEMENT PHOTO(S)

TABLE XX: COMPARATIVE COLLECTIVE PRIORITIES

		4TH OF JULY INTERCEPT	VOTES	JUNE 4TH ATTENDEES	VOTES
- 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	1	Top school in [the] region	70	Suitable and sustainable housing market	10
S	2	More restaurant variety (bar)	68	Top school in [the] region	7
TOP PRIORITIES	3	Increased student enrollment	54	Increase youth activities	7
RIO	4	Live and work in Beaverton	50	Optimize available land [in the city]	6
OP P	5	Increase the housing supply	45	Live and work in Beaverton	6
<u> </u>	6	Suitable and sustainable housing market	44	Recreation destination [for] waterway[s]	5
	7	Increase youth activities	43	Affordable childcare	3
	8	Raise housing quality for all income groups	40	More restaurant variety (bar)	2
ES	9	Recreation destination [for] waterway[s]	27	Raise housing quality for all income groups	2
PRIORITIES	10	Affordable childcare	25	Increase the housing supply	0
1	11	Age in Place	22	Age in Place	0
-OWER	12	Optimize available land [in the city]	17	Increased student enrollment	0
0	13	Other	22	N/A	
	14	Fill vacant properties on [the] waterfront	7	Fill vacant properties on [the] waterfront	0

constructed for the community to conceptualize what would make this City a better place to live. After each group brainstormed and voted, they shared their top three answers with the group at large. Each group's top three answers were recorded for everyone to see at the front of the room. Once the list was compiled, each visioning participant voted on their top three priorities, which became the "collective priorities." The top three were transferred back to the original smaller groups to brainstorm projects, barriers, and potential partners for each of the three collective priorities. Specific responses and observations for the visioning session are detailed below.

The collective priorities were then brought to the 4th of July parade to reach a wider group of people to solicit more votes and feedback. In just one day, 175 people were "intercepted" at the event and submitted responses. The table "Comparative Collective Priorities" shows that there is substantial overlap in the priorities in the highest vote earners but also where preferences diverge.

Among the 14 total priorities (including "other"), there is substantial overlap in the top highest votes. The following priorities were shared across both events: top school in the region, live and work in Beaverton, a suitable and sustainable housing market, and increase youth activities. The message behind these votes is that the City is family-oriented and sees education and youth programming as a primary tenant of Beaverton's desirability. It also explains that housing, the lack of supply and diversity of options, is a

00205

major concern. The results from visioning exercises will be discussed in more detail where they fall into goals.

GOALS, OBJECTIVES, AND ACTION PLANS

The following describes the goals by major theme and provides a more detailed explanation of why goals were selected and what actions can be taken, by whom, to accomplish the established goals. The desired timeframe was also selected to ensure that goals are scheduled so that it can be coordinated with the budgeting cycles.

HOUSING

Another way of looking at this table is to count the votes for similar themes among the entire list. In doing that, "housing" rises to utmost importance. Housing is mentioned from several different viewpoints when references to housing supply, format, and quality are combined. Over one-third of the votes (37.5%) from both groups were related to housing, which is more than any other topic. For example, "live and work" and "increase the housing supply" are tightly correlated, for more people to live in Beaverton, there needs to be more housing. The Housing Needs Assessment confirms the public's observation when it found an inadequate supply of moderateincome and upper-income rentals and homeownership options. For example, much of the rental stock is subsidized which leaves a gap for market-rate

rentals that young professionals and entry-level employees may need before they can purchase a home in Beaverton. In terms of homeownership options, the construction of homes in the \$160,000-\$200,000 range is needed for moderate-income households. This is the price range specifically for households earning \$30,000 and \$60,000. Given that new construction of a single-family lot may exceed this price range, options that fall along the Missing Middle spectrum to bring the cost down.

The City's population is expected to grow and now is the time to start preparing for that growth through the provision of housing types that are compatible with the target market's needs. It is predicted that the population will continue to age so that senior citizens become a larger proportion of the population, and the youth a smaller proportion. With few market rate rentals available or smaller homes to downsize to, the youth and seniors have limited options. One way to address this is to permit accessory dwelling units in the rear yard. Smaller units expand the options for two groups that are underserved.

The City and residents were also concerned about residential blight. To collect data on the extent and severity of blighted structures, staff walked the neighborhoods taking photos and recording the condition of homes. Using a GIS Collector App, the data was stored and tied specifically to the residential parcel so that patterns could be analyzed.

GOAL: Expand housing options to include a greater diversity of formats that accommodate all ages, income levels, and disabilities based on the Beaverton Housing Needs Assessment.

- 1. Increase housing variety so that it matches the price points of the City's target markets.
- 2. Optimize the City's available land for infill development and planned neighborhoods.
- 3. Induce population growth through the provision of the housing types compatible with local needs.

ACTION	LEAD PARTY	SUPPORTING PARTY	TIMEFRAME
Permit accessory dwelling units in the rear yard of single-family zones	PC		Melledata kantan pengangan pengangan pengangan pengangan pengangan pengangan pengangan pengangan pengangan pen
Create a new residential zone with small minimum lot sizes	PC		
Reduce minimum living space requirements in R-1	PC		
Update the R-2 zone to include missing middle housing types that comply with RRC requirements	PC		
Identify available land, and share the Housing Needs Assessment results to market to reputable developers for homes that meet the target markets needs			
Build new construction homes on a grid street pattern			

GOAL: Create a system that fairly addresses residential blight and improves the quality of the housing stock.

- 1. Enhance the neighborhood's appearance and improve property values
- 2. Hold property owners accountable
- 3. Assist property owners that struggle to maintain their structure and yard

ACTION	LEAD PARTY	SUPPORTING PARTY	TIMEFRAME
Develop a residential blight ordinance and enforce consistently; other considerations for homeowners who cannot afford blight violations should be included	ong at the second of the second s		en language and a great property of the second of the seco
Develop a rental inspection program			
Create a one-pager handout and distribute to homeowners that detail all of the available programs to help with housing maintenance			
Apply for home repair grants and target neighborhoods with high concentrations of blight		MSHDA, USDA, GCCF	

The Housing Needs Assessment also expects that some lower-quality homes may convert to rentals. One way to slow the conversion to rentals, and to ensure that the rentals remain high-quality is to enact a rental inspection program. There are several ways to implement programs that reward good landlords with lower fees and few inspections and focus attention on landlords that have substandard homes. {ADD RESULTS FROM HOUSING EVALUATION}

YOUTH

Beaverton's dedication to its youth and their education is noteworthy. The visioning session participants selected "top school in the region" as a priority, a testament to the community's true deference for its youth. Because the school district is not operated by the City any municipal-led initiative around this topic is somewhat limited. However, the results are clear enough that a more effective partnership between the two entities is worth pursuing. Relatedly, both visioning groups selected "increase youth

activities" as one of the top priorities, which goes hand in hand with the idea that quality of life for their children is highly regarded.

The City of Beaverton is projected to grow over the next five years but most of that growth is expected from the age cohort 65 and older. One of the largest drops is expected to come from the age group 20 and younger. When Generation Z was surveyed through the local high school, over half of them reported that they plan to stay in Beaverton after graduating and attend a college in the area. Of those that said they will leave, two-third of them said that they did not plan to return after college. Part of their reasoning was based on the perception that they cannot pursue a career in the Beaverton area. While these results are severe as other parts of Michigan, the outcome is still a shrinking youth population. Efforts to change that trajectory should begin now before the age pyramid is too imbalanced to repair.



Youth activies at the Beaverton Branch Library. Source: Pure Gladwin County

GOAL: To meaningfully engage the City's youth and incorporate their feedback into the planning process.

- 1. Actively and regularly engage high school students and young adults to determine younger generation's values and what motivates them to choose where they live as adults.
- 2. Create and market opportunities for youth to work on City projects throughout their childhood, adolescents, and young adulthood.

GOAL: Provide affordable childcare for Beaverton families.

- 1. Make a long-term investment in retaining youth by providing families quality and affordable childcare.
- 2. Work with local providers to expand childcare hours that accommodate "after hours" work schedules.

ACTION	LEAD PARTY	SUPPORTING PARTY	TIMEFRAME
Youth Rete	intion & Engage	ament	
Modernize communication efforts to match Generation Z's preferences for social media			
Meet with high school students annually in person to incorporate their values into planning efforts	City		
Invite youth and/or young adult to serve on a local committee			
Create a Youth Advisory Council that meets regularly with the City Council to discuss issues concerning them			
Identify local projects that the youth can assist, organize, and/or lead that accomplish City goals			
	Childcare		
Inventory the number of childcare spots available to Beaverton residents			
Share results with local employers and childcare providers			
Identify sites where childcare is permitted and market them to local providers			

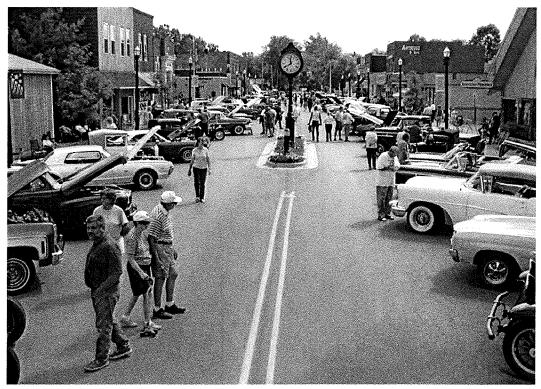
Their dedication to youth begins before children reach high school age. Residents have been vocal about needing affordable childcare options. A childcare survey was administered that shows that more locations with extended hours are needed (before 7 am and after 6 pm). Quality childcare is vital to attracting and retaining families. Often where both parents work, they must rely on outside help. With the potential for differing work schedules, childcare also has to be flexible so that parents can attend shifts outside of conventional working hours.

DOWNTOWN

One of the top priorities from the 4th of July survey-takers was a greater variety of bars and restaurants. According to the ESRI Business Analyst report, there were four "food services and drinking places" in Beaverton in the summer of 2019. The ESRI report also estimates that these establishments are losing money as residents leave the City to dine elsewhere. In addition, retail markets that "leak" money that are suitable for in a downtown environment are department stores, clothing and accessory stores,

sporting goods, hobby, book, and music store, general merchandise stores, electronics, and appliance stores.

The Downtown Development Authority (DDA) is the body that oversees downtown improvements using tax increment financing. However, the downtown suffers from commercial vacancy on the ground and second story floors which affects how much revenue the DDA can capture. Building density in the downtown is one strategy for building a clientele for local businesses and easing cash flow concerns for building owners. The structure and layout of the second stories may not be easily converted to residences, but it worth inventorying the units and determining the potential cost and impact of filling those units with residents. For the ground floor, the City can use the findings from the ESRI reports to focus business recruitment on "leaky" retail sectors. Business recruitment is a full-time job, and in order to see transformational change in a downtown, it is recommended that the DDA hire a full-time Director.



Downtown festival Source: Pure Gladwin County

GOAL: To become the lively social and entertainment hub of the City

- 1. Be a place where businesses want to locate and/or expand to serve the community
- 2. Provide a safe, fun, and convenient place for visitors and residents to spend time

ACTION	LEAD PARTY	SUPPORTING PARTY	TIMEFRAME
Hire a full-time DDA Director	DDA		and the control of th
Assist building owners in converting second story units to residential	DDA		
Invest in public wifi downtown	DDA		
Commission local artists to paint murals downtown	DDA		
Plan and coordinate regularly scheduled events that extend business hours and take place year-round	DDA		
Convert the waterfront on Ross Lake into usable public space	DDA		
Improve signage on M-18 to direct passers-by to downtown destinations	DDA		
Identify underused spaces and temporarily test to news to activate them	DDA	Michigan Municipal League	
Install a pavilion for the farmer's market	DDA		



4th of July festival banner

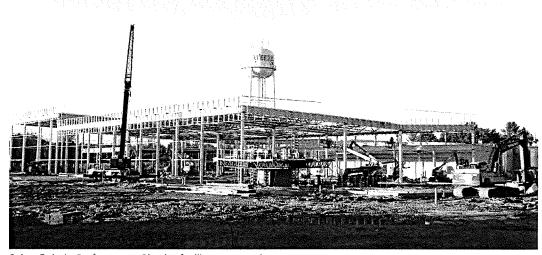
The DDA understands the importance of "placemaking" in creating a destination. Over the last decade, the DDA has made parking and sidewalk improvements, planted trees, started a farmer's market, offered façade improvement grants, update signage, among other things. Some other recommended improvements are to install art in public spaces, fence and landscape parking lots, improve signage along M-18 to direct passer-by to the downtown, expand the public realm, and create coordinated events that draw people downtown.

ECONOMIC DEVELOPMENT

Economic development extends beyond the downtown. For example, the Eastern Michigan Council of Governments' Comprehensive Economic Development Strategies focuses on marketing, entrepreneurship and innovation, talent and workforce development. transportation and infrastructure, placemaking, equitable development, and community resiliency. Given the larger scope of a regional government that aligns more closely with the City's market area, it is recommended that Beaverton works closely with EMCOG, in a supportive role, to help achieve these initiatives. As a small city embedded in a larger region, any major improvements to the 14-county region will likely benefit Beaverton. For example, when it comes to talent development, a partnership with employers, education institutions, and a regional government is essential for training youth for jobs that are located in Beaverton.

It is also worth investigating how to draw "new economy" jobs to the area. **EMCOGs Comprehensive Economic** Development predicts that manufacturing will continue to decline and calls for the attraction of growing and emerging industries. As the population ages, the next generation is poised to take over jobs in new industries as opposed to filling positions in declining markets. The report called out "energy" as an opportunity and industry to target. While it is commonly believed that northern Michigan is not a good candidate for solar capture, some cities up north have already conducted such analysis that shows the opposite. Exposure to the sun is sufficient for helping properties run on renewable energy. In addition, "software and app development" was listed as another target industry. However, highskilled youth require social infrastructure in addition to physical locations to work: co-working space with cafes, gyms, and a network of other young like-minded people, along with recreation and entertainment should be simultaneously pursued to attract young workers.

The connection between economic development and planning centers on how land is used. To comply with



Saint-Gobain Performance Plastics facility construction. Source: Pure Gladwin County

GOAL: To reduce commercial and industrial vacancy with new economy enterprises and amenities.

- 1. Diversify the local economic profile by investing in modern employment sectors and tourism.
- 2. Promote existing sites and opportunities for redevelopment widely.
- 3. Invest in social infrastructure that will help attract high-skill workers.

GOAL: To build a stronger relationship with local and regional education and training institutions

- 1. Market available jobs in Beaverton to colleges, universities, and training centers
- 2. Stay connected with the needs of the education system and support their endeavors to train workers for local jobs.

ACTION	LEAD PARTY	SUPPORTING PARTY	TIMEFRAME
Taler	it Development		
Market and incentivize career tours and co-op experiences to high school students	School district	City, MiWorks	
Align career and technical training with available jobs in Beaverton through education partnerships			
Build relationships with nearby colleges, universities, and technical training centers to market job opportunities available in Beaverton			
Work with local employers to develop a summer youth intern program	City		
Assist businesses with business plans, strategy, and networking	ВАВА		
Redevel	opment Potenti	al	
Gather information about the site and create a vision for that property	City Manager, Assessor		
Create a property information package and market online to reputable investors	City Manager, Assessor		
	Tourism		
Use new branding to boost tourism			
Create a tourism map and distribute through regional institutions			
Expand lodging options for visitors			
Ne	ew Economy		
Conduct a solar suitability analysis to determine if there are areas of the city that can be used as a solar farm			
Induce demand for solar energy by permitting panels on residential, commercial, and industrial structures			
Consider where to locate a co-working space and maker space for the self-employed and entrepreneurs			

Redevelopment Ready Communities ®, the City shall not only compile basic information about properties that are vacant, abandoned, or underutilized but shall proactively market these sites to investors. The difference in this approach is that the process is community-driven, as opposed to waiting for the private market to come to Beaverton. Each site should have a community-backed vision that signals to investors that the City is ready to receive this type of development to expedite the process and ensure it aligns with community expectations.

INFRASTRUCTURE

Beaverton's grid street pattern is ideal for pedestrian and vehicular users. While the layout of the street system is efficient for getting to and from, the quality of the system, like in most cities, could be improved. The Michigan Department

of Transportation uses a system known as PASER to systematically evaluate road conditions. Local governments are responsible for the maintenance of residential roads but often the budget cannot keep up with the level of disrepair. It is recommended that Beaverton train staff on the PASER system and use it to assess local roads and sidewalks annually. The assessment could then be mapped to see where there are gaps in the network and prioritize areas with the poorest conditions first. In addition to keeping up with maintenance, it is recommended that the City starts to rethink how streets are used. Complete Streets is a movement that has gain traction for improving design standards that make cities more walkable and safer for all its users.

Climate scientists predict that storms will intensify and fall with more frequency.



Existing parking lot landscaping Source: Pure Gladwin County

GOAL: To main high-quality roads and sidewalks where all users feel safe.

- 1. Provide public rights-of-way that accommodate vehicles, pedestrians, bicyclist, transit, and disabled persons.
- 2. Reward short trips by making the journey to destinations pleasant and convenient.

ACTION	LEAD PARTY	SUPPORTING PARTY	TIMEFRAME
Train DPW on the PASER system and conduct on an annual basis			
Prioritize and budget for repair of roads and sidewalks in the poorest condition			
Close any gaps in the sidewalk network			
When installing new sidewalks, use AASHTO's guideline for accessibility			
Install protected bicycle lanes on residential streets that connect to the City's assets			
Install bicycle racks at popular destinations			
Work with the school district to apply for Safe Routes to School			
Inventory lighting, benches, landscaping, access points to the street network to determine where to make pedestrian improvements			

GOAL: To reduce the impact of flooding on people, property, and infrastructure.

- 1. Invest in strategies that expand the City's capacity to handle stormwater.
- 2. Educate homeowners on how they can capture rainfall onsite.
- 3. Update zoning ordinances and land use policy to mitigate the impacts of flooding.

ACTION	LEAD PARTY	SUPPORTING PARTY	TIMEFRAME
Remove the last connection where the stormwater and sewer system intersect		મંત્રિકેન્ટ જેવારે મહુલ જ પારાપ્ય હતાનું હતાએક વાગ્યવ્યક્તિનું ની સહિત હતાનું હતી તે વિદેશો હતાને વેટલાનું વાગ ત્રાંત્રિક ત્રાંત્રિક હતાનું વિદેશો હતાન	
Determine how many homes have footing drains and to what extent they are contributing to stormwater system overloads			
Incentivize homeowners to plant rain gardens and/or use rain barrels to capture rain			
Expand tree canopy coverage in highly impervious areas of the City and riparian areas			
Identify flood prone areas and update the ordinance to require that pervious pavement is used in these areas			
Update the zoning ordinance to prevent development in wetlands that are not regulated by the state			

From a planning perspective, cities must be prepared with expanded capacity to handle heavier rainfall. Some of these efforts may include updating grey infrastructure but also strategically using green infrastructure to reduce the amount of water that enters the stormwater system. In many cases, existing natural features are the best safeguard against excessive precipitation. As a City that is surrounded by water, it is Beaverton's best interest to protect its residents, property, and infrastructure from the increased likelihood of flooding.

RECREATION

In 2019, a Parks and Recreation Master Plan was completed that includes an inventory, accessibility rating, community engagement results, and goals for improving the recreation system. With a projected budget that remains largely the same, the plan recommends the focus remains on the maintenance of existing parks over land acquisition or the

construction of new facilities, although in some cases it is recommended to invest in recreation assets that bring tourists to the area. For example, the river is an example of a recreational asset that could be better leveraged to attract visitors. For the visioning attendees, "recreation destination for waterways" made it to the top half of priorities.

While recreation is sometimes thought of as "nonessential" and the first to cut from the budget, recreation has many positive ties to improved mental and physical health, increased property values, and capacity to handle excess stormwater. When considering its role in contributing to a higher quality of life, recreation opportunities should be maintained, and expanded when feasible. The Gladwin Community Heads Needs Assessment found that 61% of county residents have access to exercise opportunities, which is much lower than the state average of 85%, and that almost one-third of



Firecracker 5k Source: Pure Gladwin County

GOAL: Invest in the infrastructure necessary to expand the capacity of Beaverton's popular parks.

- 1. Expand recreation tourism at the City's premier sites.
- 2. Create year-round recreation opportunities and work with partners to market Beaverton's assets.

ACTION	LEAD PARTY	SUPPORTING PARTY	TIMEFRAME
Invest in the infrastructure recommended in the 2019 Parks and Recreation Master Plan to expand Ross Lake's capacity to serve as a regional recreation asset			Assertation and Assertation and Assertation and Assertation (Assertation Assertation)
Invest in the infrastructure recommended in the 2019 Parks and Recreation Master Plan to increase Calhoun Campground occupancy			
Build a database of volunteers and identify projects that they can assist the City			

GOAL: Continue to build the blue and green nonmotorized trails network.

- 1. Expand active recreation options to improve public health outcomes.
- 2. Improve regional nonmotorized connectivity.

ACTION	LEAD PARTY	SUPPORTING PARTY	TIMEFRAME
Rive	r "Blue" Trails		
Complete a water quality study for Ross Lake to determine the source of pollution and how to mitigate it			
Work with the local watershed council to determine sites in Beaverton that could become a part of a regional water trail system			
Stabilized the eroding shoreline of Cedar River and Ross Lake			
Apply for MDNR grants to establish ADA-compliant kayak/canoe launches			
Install a canoe portage to increase safety as users navigate around the existing dam on the Tobacco River.			
Land	"Green" Trails		
Acquire easements along the proposed Coleman Rail Trail according to the specifications in the Bicycle and Pedestrian Trails Master Plan			
Continue installing the River Road Trail to connect with Gladwin's South Park			
Install amenities that facilitate use such as signs, benches, water refill stations, lighting, and trash and recycling receptacles			

residents do not have "leisure time for physical activity." Obesity was selected as one of the top five focus areas by the Gladwin County Human Service Coordinating Board. The City can do its part to offer free and accessible public places for residents to exercise to help improve public health outcomes in the area. Considering the popularity of trails and the City's investment in the Bicycle and Pedestrian Trails Master Plan, the City already has a framework to follow that would greatly improve the nonmotorized network.

another tool that helps the City visualize how it should develop over time. Similar to visioning exercises, this map represents the City's vision for land use and development patterns. Unlike a Zoning Map, that is designed to be parcel-by-parcel map to enforce the legally binding zoning ordinance, the FLUM provides a direction on how future development can align with best planning practices. Many of the FLUM designations correspond to existing zones, although there are some departures concerning housing density and the conservation of institutional uses

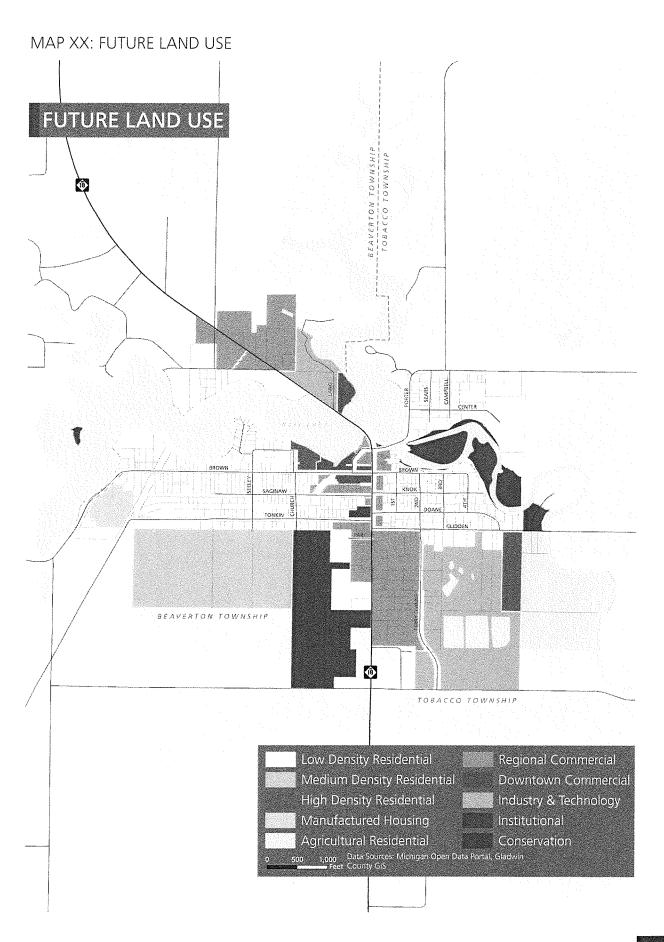
FUTURE LAND USE & ZONING PLAN

The Future Land Use Map (FLUM) is

TABLE XX: FUTURE LAND USE DESIGNATIONS AND PROPOSED CHANGES

FLUM DESIGNATION	CORRESPONDING ZONE	INTENT OF PROPOSED CHANGE
Agriculture Residential	New	The intent of this zone is to protect remaining vacant land that could be used for agriculture by only permitting large residential single-family lots
Low Density	R-1	The intent of this zone is to preserve low-density single-family neighborhoods
Medium Density	New	The intent of this zone is to provide a more compact neighborhood that integrates single-family housing with denser units
High Density	R-2	The intent of this zone is to expand the options available in multi-family neighborhoods
Downtown	C-1	The intent of this zone is to provide a dynamic experience as the hub of retail, services, and entertainment
Commercial Corridor	C-2	The intent of this zone is to permit convenience- based retail and services that do not compete with the downtown and primarily serve highway bound vehicles
Institutional	New	The intent of this zone is to protect community- serving assets from development that could remove this use from the City
Conservation	Floodplain District	The intent of this zone is to protect naturally sensitive areas from development that would harm or be harmed in this zone
Industry & Technology	IND	The intent is to serve an exclusive area for manufacturing, research, and technology that does not negatively affect its surroundings

CITY OF BEAVERTON MASTER PLAN 0 0 2 1 8



and natural sensitive areas.

As a key component of the Master Plan, the Zoning Plan is based on the recommendations of the Master Plan and is intended to identify areas where existing zoning is inconsistent with the objectives and strategies of the Master Plan and to guide the development of the Zoning Ordinance. The Zoning Ordinance is the primary implementation tool for future development. The Zoning Plan is the link between the two documents; its purpose is to align the Zoning Ordinance with the City's vision for its future laid out in the Master Plan.

HOUSING

AGRICULTURE RESIDENTIAL

In the eastern part of the City, there are a few large residential lots just south of an open field. This land was acquired in the last decade and has been used an agricultural field and residential lots that are much larger than in the neighborhoods. As such, this type of development pattern warrants a separate zone that preserves the agricultural fields by permitting little other development, namely, single-family homes.

LOW DENSITY

The low-density single-family housing remains the primary type of housing in Beaverton. The lots are large for a city neighborhood, with a required minimum width of 80 feet. Because there is more land available to build more housing, it is not recommended that this zone change its current dimension. However, if there were a delay in new construction, one possibility is to reduce the minimum width to permit more housing in this neighborhood. It is also recommended that accessory dwelling units are allowed in the rear yard to alleviate some of the stress on the housing market.

MEDIUM DENSITY

As the zoning ordinance stands now, there are few medium density housing

options. In this context, a medium-density zone could remain largely single-family but on smaller lots. A 50-foot width is sufficient to maintain a small yard and would permit several more homes to be constructed. It is also recommended that this zone permit duplexes, and even triplexes with high-quality design standards.

HIGH DENSITY

Currently, higher density housing is permitted in small zones, one near the downtown, and the other sandwiched on the periphery of the City next to industrial uses. The zone does not differentiate between the many types of multifamily units that may require different lot sizes. For example, townhomes, small condominiums, and courtyard apartments have different footprints, and to encourage this type of development more tailored regulations should be incorporated into this zone.

COMMERCIAL

DOWNTOWN

The downtown boundaries were not changed. This zone should continue to remain the mixed-use center of the City and try to densify within its borders by converting upper stories to residential uses. Part of the south side of Brown Street remains C-2 because the buildings have larger footprints and parking lots, and some single-family homes have been converted to businesses but do not follow the compact building footprint of a historic building. It is recommended that the design standards are reviewed and updated to enhance facades and the overall "look" of downtown.

COMMERCIAL CORRIDOR

This zone accommodates businesses that are auto-oriented and meant to be convenient for those traveling on the M-18 corridor. The zoning ordinance does a good job of separating the types of business uses between the

two commercial zones. The highway features drive-through services, lodging, gas station, among other uses that are better serviced by a wider right of way. This zone is expanded along the entire corridor.

INDUSTRIAL

INDUSTRY & TECHNOLOGY

The industrial zone is well located away from neighborhoods. As there is adequate space for industrial uses, the boundaries were not extended. The major update here is to include more than modern forms of industry such as robotics, server farms, solar farms, among others.

CONSERVATION

Where land is covered by wetlands or a floodplain, development should be restricted. The City already protects its floodplain. As floodplains are likely to expand and flood more often, it is a preventative measure that protects the land, people, and property from damage. Because this area is so narrowly defined in

Beaverton, it is not foregoing much future development.

INSTITUTIONAL

The implementation of this zone is intended to protect community assets that serve the educational, health care. and/or social needs of residents. When they fall into residential or commercial zones, as they often do, they could be redeveloped as such if the communitybased enterprise were to vacate. For example, without ample protection, a place like the Beaverton Activity Center, zoned commercial, could be converted to a private business if it were to become vacant and/or sold. Considerations for this zone's development standards should emphasize accessibility, public amenities, and/or an extended transition period post-closure to identify another building to re-locate and preserve this use.² The purpose of this zone is to protect structures that hold high value to the entire community and gives the City time to determine how it could best be rezoned if another community-based service is infeasible.

SOURCES

- 1 MidMichigan Health. 2019 Community Health Needs Assessment. Building Healthy Communities. Page 37.
- 2 Los Angeles Times. "Institutional Zone Vial to City Planning." 1987. https://www.latimes.com/archives/la-xpm-1987-01-04-me-2152-story.html



Large Firm Resources. Personal Attention. sm

October 16, 2019

Mr. Heath Kaplan, City Manager City of Beaverton 124 W. Brown Street Beaverton, MI 48612

RE: City of Beaverton - Saginaw Street Reconstruction

Professional Services Proposal

Revision Number One

Dear Mr. Kaplan:

ROWE Professional Services Company is pleased to submit this modification to our professional services contract for the Saginaw Street Reconstruction project. This modification is to address changes associated with the City's proposed construction funding though the United States Department of Agriculture Rural Development (USDA).

USDA funding requires three separate contracts, one each for category of work; water, sewer and roadway. USDA will fund roadway reconstruction required for installation of the new water and sewer lines. This is limited to work between the back of curbs on both sides of the road. As you are aware, ROWE has prepared and submitted to the city separate contracts for the water and sewer construction work in the form required by USDA.

This proposal is for non-USDA funded roadway work only. This category of work includes sidewalks, storm drainage, signs, driveway approaches and other miscellaneous work required to complete the project. Our understanding is that this work will be funded by the Michigan Department of Transportation (MDOT) Category B grant awarded to the city and by local funds.

The following scope of work is for bidding and construction phase engineering services required for both the USDA and non-USDA funded components. We are including this scope of work of the overall effort required for your reference. The fees shown under the "compensation" section are for those portions of the scope of services not funded by USDA. Two engineering services contracts for USDA funded work submitted for city approval contain the fees for the water and sewer portions of the project.

SCOPE OF WORK

Bidding Phase

- 1. Prepare an advertisement for bids for the project to be published in the local newspaper and provided contract documents to selected plan rooms.
- 2. Assist the city with the bid opening, prepare bid tabulation and make a recommendation of contract award to the city council.
- 3. Obtain, review, and coordinate execution of contracts, including bonds and insurance from the contractor.

Mr. Heath Kaplan, City Manager October 16, 2019 Page 2

Construction Phase

- 1. Schedule and administer a pre-construction meeting.
- 2. Review material shop drawings for conformance with contract documents.
- 3. Provide construction staking for the proposed improvements, including:
 - Stake the proposed underground utilities, curb and sidewalk
 - Related office work for staking plan and checking
- 4. Provide construction observation, including soil density testing. Budget is based on 750 hours of on-site observation (50 hrs. / week for 15 weeks).
- 5. Provide contract administration, including creation of any necessary change orders, and review the Contractor's Application for Payment(s).
- 6. Administer regularly scheduled meetings to review progress of project and to address any concerns by the contractor and / or city
- 7. Schedule and attend a project walk-thru upon completion and create a punchlist, if necessary.
- 8. Obtain, review, and submit all necessary project closeout documentation as required.
- 9. At the completion of the project, we will prepare record drawings for the work completed and provide PDF documents to the city for your files.

SCHEDULE:

We have prepared the following project schedule for your consideration.

Date
December 21, 2019
January 3, 2020
January 29, 2020
February 18, 2020
May 2020
September 2020
May, 2021

The above schedule is contingent on the city receiving approval for the project from USDA in a timely manner.

COMPENSATION:

Compensation for our services will be based on our billable rates for the staff assigned to this project. We propose the following engineering services budgets for this project. Once the actual Progress Schedule is submitted, by the contractor, we will review our budget with the city to determine if any adjustments are required.

Description	Budget
Bidding Phase	\$1,040
Construction Administration	\$9,940
Resident Project Representative	\$22,350
Post Construction	\$1,630
Total Engineering Services Budget	\$34,960

Mr. Heath Kaplan, City Manager October 16, 2019 Page 3

We appreciate the opportunity to provide continued engineering services to the City of Beaverton for your infrastructure improvement projects. If you concur with this proposal, please sign and date on the acceptance line below and return a copy to our office. Our standard terms and conditions are attached and considered part of this proposal. If you have any questions or concerns, please contact me at (989) 772-2138.

Sincerely,					
ROWE Profes	sional Services Company				
Michael P. Fa	eth, P.E.				
Senior Project Manager					
	d this proposal, including the attached statement of terms and conditions which is a part thereof, his proposal is hereby confirmed. ROWE Professional Services Company is authorized to proceed				
Accepted by:					
. ,	Signature				
	Print Name and Title				

R:\WPDOCS\Proposals-Contracts - Rev Forms\2018\City of Beaverton\Saginaw Street Reconstruction\Saginaw Street Reconstruction\S

TERMS AND CONDITIONS

The Owner will designate a representative with the authority to provide direction, receive and review information, and make decisions regarding the project. Decisions and direction shall be provided in a timely manner, so as to not delay the project.

The Engineer will perform services in a timely manner, consistent with sound professional practice. The Engineer will strive to perform the services within the established schedule, if any. Services are considered to be complete when deliverables have been presented to the Owner.

The Owner will provide the Engineer with all available information pertinent to the site of the project and access to the project site.

The Engineer will assist the Owner in preparing applications and documents to secure approvals and permits. The Owner is responsible for payment of permit application fees and charges.

Services provided by the engineer shall be performed with the care and skill normally exercised by other members of the profession practicing under similar conditions.

The Owner shall promptly notify the Engineer of defects or suspected defects in the work.

The Engineer's opinions of construction costs will be based upon experience and historical information.

The Engineer will be responsible for the safety precautions and programs of its employees only.

If the Engineer is reviewing work by contractors or others on behalf of the Owner, the Engineer may only recommend to the Owner that work which does not conform to the project requirements be rejected.

Payment for work completed shall be made within thirty days of invoicing. Unless otherwise provided, invoices will be submitted monthly as the work progresses.

In the event additional work is needed because of a change in scope or unforeseen conditions, the Engineer will submit a proposal defining the modified scope of work and any modifications to the schedule and fee for the Owner's approval.

This agreement may be terminated by either party with fourteen days written notice; however, the Engineer shall be paid for work completed prior to the date of termination.

All documents prepared by the Engineer in completing this work are considered the Engineer's property as instruments of service and are not intended for re-use by the Owner or others.

The Engineer is an independent contractor, responsible to the Owner for the results of this undertaking and is not an employee or agent of the Owner.

The Owner agrees to limit ROWE Professional Services Company's total liability to the Owner and any contractors on the project to \$34,960 or the Engineer's fee, whichever is greater.

The Owner and Engineer each bind themselves and any partners, successors, and assigns of the other party to this agreement. Neither party will assign, sublet, or transfer their interest in this agreement without the consent of the other party.

The terms of this agreement shall be governed by the laws of the State of Michigan. In the event a provision of this agreement is rendered unlawful, the remaining terms and provisions shall remain in effect.

In performance of this work, the Engineer will comply with their policies regarding non-discrimination against employees on the basis of race, color, religion, national origin or ancestry, age or sex.

Terms and Conditions Agreed to.	
Owner	ROWE Professional Services Company

Torms and Conditions Assessed to

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

AGREEMENT BETWEEN OWNER AND ENGINEER FOR PROFESSIONAL SERVICES

Prepared by



Issued and Published Jointly by







This Agreement has been prepared for use with EJCDC® C700, Standard General Conditions of the Construction Contract, 2013 Edition. Their provisions are interrelated, and a change in one may necessitate a change in the other. For guidance on the completion and use of this Agreement, see EJCDC® E-001, Commentary on the EJCDC Engineering Services Agreements, 2013 Edition.

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AGREEMENT BETWEEN OWNER AND ENGINEER FOR PROFESSIONAL SERVICES

THIS IS AN AGREEMENT effective as of	("Effective Date") between
City of Beaverton, Michigan	("Owner") and
ROWE Professional Services Company	("Engineer").
Owner's Project, of which Engineer's services under this Agreement a Saginaw Street Reconstruction - Water Main Replacements ("Project").	re a part, is generally identified as follows:
Other terms used in this Agreement are defined in Article 7.	The state of the s
Engineer's services under this Agreement are generally identified as for design engineering, and construction engineering	ollows:

Owner and Engineer further agree as follows:

ARTICLE 1 - SERVICES OF ENGINEER

1.1 Scope

A. Engineer shall provide, or cause to be provided, the services set forth herein and in Exhibit A.

ARTICLE 2 – OWNER'S RESPONSIBILITIES

2.1 General

- A. Owner shall have the responsibilities set forth herein and in Exhibit B.
- B. Owner shall pay Engineer as set forth in Article 4 and Exhibit C.
- C. Owner shall be responsible for all requirements and instructions that it furnishes to Engineer pursuant to this Agreement, and for the accuracy and completeness of all programs, reports, data, and other information furnished by Owner to Engineer pursuant to this Agreement. Engineer may use and rely upon such requirements, programs, instructions, reports, data, and information in performing or furnishing services under this Agreement, subject to any express limitations or reservations applicable to the furnished items.
- D. Owner shall give prompt written notice to Engineer whenever Owner observes or otherwise becomes aware of:
 - 1. any development that affects the scope or time of performance of Engineer's services;
 - 2. the presence at the Site of any Constituent of Concern; or

3. any relevant, material defect or nonconformance in: (a) Engineer's services, (b) the Work, (c) the performance of any Constructor, or (d) Owner's performance of its responsibilities under this Agreement.

ARTICLE 3 – SCHEDULE FOR RENDERING SERVICES

3.1 Commencement

A. Engineer is authorized to begin rendering services as of the Effective Date.

3.2 Time for Completion

- A. Engineer shall complete its obligations within a reasonable time. Specific periods of time for rendering services, or specific dates by which services are to be completed, are provided in Exhibit A, and are hereby agreed to be reasonable.
- E. If, through no fault of Engineer, such periods of time or dates are changed, or the orderly and continuous progress of Engineer's services is impaired, or Engineer's services are delayed or suspended, then the time for completion of Engineer's services, and the rates and amounts of Engineer's compensation, shall be adjusted equitably.
- F. If Owner authorizes changes in the scope, extent, or character of the Project or Engineer's services, then the time for completion of Engineer's services, and the rates and amounts of Engineer's compensation, shall be adjusted equitably.
- G. Owner shall make decisions and carry out its other responsibilities in a timely manner so as not to delay the Engineer's performance of its services.
- H. If Engineer fails, through its own fault, to complete the performance required in this Agreement within the time set forth, as duly adjusted, then Owner shall be entitled, as its sole remedy, to the recovery of direct damages, if any, resulting from such failure.

ARTICLE 4 - INVOICES AND PAYMENTS

4.1 Invoices

A. Preparation and Submittal of Invoices: Engineer shall prepare invoices in accordance with its standard invoicing practices and the terms of Exhibit C. Invoices must include a breakdown of service provided. Engineer shall submit its invoices to Owner on a monthly basis. Invoices are due and payable within 30 days of receipt.

4.2 Payments

- A. Application to Interest and Principal: Payment will be credited first to any interest owed to Engineer and then to principal.
- I. Failure to Pay: If Owner fails to make any payment due Engineer for services and expenses within 30 days after receipt of Engineer's invoice, then:
 - amounts due Engineer will be increased at the rate of 1.0% per month (or the maximum rate of interest permitted by law, if less) from said thirtieth day; and
 - Engineer may, after giving seven days written notice to Owner, suspend services under this Agreement until Owner has paid in full all amounts due for services, expenses, and other related charges. Owner waives any and all claims against Engineer for any such suspension.

- J. Disputed Invoices: If Owner disputes an invoice, either as to amount or entitlement, then Owner shall promptly advise Engineer in writing of the specific basis for doing so, may withhold only that portion so disputed, and must pay the undisputed portion subject to the terms of Paragraph 4.01.
- K. Sales or Use Taxes: If after the Effective Date any governmental entity takes a legislative action that imposes additional sales or use taxes on Engineer's services or compensation under this Agreement, then Engineer may invoice such additional sales or use taxes for reimbursement by Owner. Owner shall reimburse Engineer for the cost of such invoiced additional sales or use taxes; such reimbursement shall be in addition to the compensation to which Engineer is entitled under the terms of Exhibit C.

ARTICLE 5 - OPINIONS OF COST

5.1 Opinions of Probable Construction Cost

A. Engineer's opinions (if any) of probable Construction Cost are to be made on the basis of Engineer's experience, qualifications, and general familiarity with the construction industry. However, because Engineer has no control over the cost of labor, materials, equipment, or services furnished by others, or over contractors' methods of determining prices, or over competitive bidding or market conditions, Engineer cannot and does not guarantee that proposals, bids, or actual Construction Cost will not vary from opinions of probable Construction Cost prepared by Engineer. If Owner requires greater assurance as to probable Construction Cost, then Owner agrees to obtain an independent cost estimate. Opinions of Probable Cost and any revisions thereof should reflect compliance with American Iron & Steel requirements mandated by Section 746 of Title VII of the Consolidated Appropriations Act of 2017 (Division A – Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2017) and subsequent statutes mandating domestic preference.

5.2 Designing to Construction Cost Limit

A. If a Construction Cost limit is established between Owner and Engineer, such Construction Cost limit and a statement of Engineer's rights and responsibilities with respect thereto will be specifically set forth in Exhibit F to this Agreement.

5.3 Opinions of Total Project Costs

- A. The services, if any, of Engineer with respect to Total Project Costs shall be limited to assisting the Owner in tabulating the various categories that comprise Total Project Costs. Engineer assumes no responsibility for the accuracy of any opinions of Total Project Costs.
- L. Opinions of Total Project Costs and any revisions thereof should reflect compliance with American Iron & Streel requirements mandated by Section 746 of Title VII of the Consolidated Appropriations Act of 2017 (Division A Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2017) and subsequent statutes mandating domestic preference.

ARTICLE 6 - GENERAL CONSIDERATIONS

6.1 Standards of Performance

- A. Standard of Care: The standard of care for all professional engineering and related services performed or furnished by Engineer under this Agreement will be the care and skill ordinarily used by members of the subject profession practicing under similar circumstances at the same time and in the same locality. Engineer makes no warranties, express or implied, under this Agreement or otherwise, in connection with any services performed or furnished by Engineer.
- M. Technical Accuracy: Owner shall not be responsible for discovering deficiencies in the technical accuracy of Engineer's services. Engineer shall correct deficiencies in technical accuracy without additional compensation, unless such corrective action is directly attributable to deficiencies in Owner-furnished information.
- N. Consultants: Engineer may retain such Consultants as Engineer deems necessary to assist in the performance or furnishing of the services, subject to reasonable, timely, and substantive objections by Owner.
- O. Reliance on Others: Subject to the standard of care set forth in Paragraph 6.01.A, Engineer and its Consultants may use or rely upon design elements and information ordinarily or customarily furnished by others, including, but not limited to, specialty contractors, manufacturers, suppliers, and the publishers of technical standards.
- P. Compliance with Laws and Regulations, and Policies and Procedures:
 - 1. Engineer and Owner shall comply with applicable Laws and Regulations.
 - Engineer shall comply with any and all policies, procedures, and instructions of Owner that are applicable to Engineer's performance of services under this Agreement and that Owner provides to Engineer in writing, subject to the standard of care set forth in Paragraph 6.01.A, and to the extent compliance is not inconsistent with professional practice requirements.
 - 3. This Agreement is based on Laws and Regulations and Owner-provided written policies and procedures as of the Effective Date. The following may be the basis for modifications to Owner's responsibilities or to Engineer's scope of services, times of performance, or compensation:
 - a. changes after the Effective Date to Laws and Regulations;
 - b. the receipt by Engineer after the Effective Date of Owner-provided written policies and procedures;
 - c. changes after the Effective Date to Owner-provided written policies or procedures.
- Q. Engineer shall not be required to sign any document, no matter by whom requested, that would result in the Engineer having to certify, guarantee, or warrant the existence of conditions whose existence the Engineer cannot ascertain. Owner agrees not to make resolution of any dispute with the Engineer or payment of any amount due to the Engineer in any way contingent upon the Engineer signing any such document.
- R. The general conditions for any construction contract documents prepared hereunder are to be EJCDC® C-700 "Standard General Conditions of the Construction Contract" (2013 Edition), prepared by the Engineers Joint Contract Documents Committee, unless expressly indicated otherwise in Exhibit J or elsewhere in this Agreement.

- S. Engineer shall not at any time supervise, direct, control, or have authority over any Constructor's work, nor shall Engineer have authority over or be responsible for the means, methods, techniques, sequences, or procedures of construction selected or used by any Constructor, or the safety precautions and programs incident thereto, for security or safety at the Site, nor for any failure of a Constructor to comply with Laws and Regulations applicable to that Constructor's furnishing and performing of its work. Engineer shall not be responsible for the acts or omissions of any Constructor.
- T. Engineer neither guarantees the performance of any Constructor nor assumes responsibility for any Constructor's, failure to furnish and perform the Work in accordance with the Construction Contract Documents.
- U. Engineer shall not be responsible for any decision made regarding the Construction Contract Documents, or any application, interpretation, clarification, or modification of the Construction Contract Documents, other than those made by Engineer or its Consultants.
- V. Engineer is not required to provide and does not have any responsibility for surety bonding or insurance-related advice, recommendations, counseling, or research, or enforcement of construction insurance or surety bonding requirements.
- W. Engineer's services do not include providing legal advice or representation.
- X. Engineer's services do not include (1) serving as a "municipal advisor" for purposes of the registration requirements of Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (2010) or the municipal advisor registration rules issued by the Securities and Exchange Commission, or (2) advising Owner, or any municipal entity or other person or entity, regarding municipal financial products or the issuance of municipal securities, including advice with respect to the structure, timing, terms, or other similar matters concerning such products or issuances.
- Y. While at the Site, Engineer, its Consultants, and their employees and representatives shall comply with the applicable requirements of Contractor's and Owner's safety programs of which Engineer has been informed in writing.

6.2 Design Without Construction Phase Services

A. Engineer shall be responsible only for those Construction Phase services expressly required of Engineer in Exhibit A, Paragraph A1.05. With the exception of such expressly required services, Engineer shall have no design, Shop Drawing review, or other obligations during construction, and Owner assumes all responsibility for the application and interpretation of the Construction Contract Documents, review and response to Contractor claims, Construction Contract administration, processing of Change Orders and submittals, revisions to the Construction Contract Documents during construction, construction observation and review, review of Contractor's payment applications, and all other necessary Construction Phase administrative, engineering, and professional services. Owner waives all claims against the Engineer that may be connected in any way to Construction Phase administrative, engineering, or professional services except for those services that are expressly required of Engineer in Exhibit A.

6.3 Use of Documents

A. All Documents are instruments of service, and Engineer shall retain an ownership and property interest therein (including the copyright and the right of reuse at the discretion of the Engineer) whether or not the Project is completed.

- Z. If Engineer is required to prepare or furnish Drawings or Specifications under this Agreement, Engineer shall deliver to Owner at least one original printed record version of such Drawings and Specifications, signed and sealed according to applicable Laws and Regulations.
- AA. Owner may make and retain copies of Documents for information and reference in connection with the use of the Documents on the Project. Engineer grants Owner a limited license to use the Documents on the Project, extensions of the Project, and for related uses of the Owner, subject to receipt by Engineer of full payment due and owing for all services relating to preparation of the Documents, and subject to the following limitations: (1) Owner acknowledges that such Documents are not intended or represented to be suitable for use on the Project unless completed by Engineer, or for use or reuse by Owner or others on extensions of the Project, on any other project, or for any other use or purpose, without written verification or adaptation by Engineer; (2) any such use or reuse. or any modification of the Documents, without written verification, completion, or adaptation by Engineer, as appropriate for the specific purpose intended, will be at Owner's sole risk and without liability or legal exposure to Engineer or to its officers, directors, members, partners, agents, employees, and Consultants; (3) Owner shall indemnify and hold harmless Engineer and its officers, directors, members, partners, agents, employees, and Consultants from all claims, damages, losses, and expenses, including attorneys' fees, arising out of or resulting from any use, reuse, or modification of the Documents without written verification, completion, or adaptation by Engineer; and (4) such limited license to Owner shall not create any rights in third parties.
- BB. If Engineer at Owner's request verifies the suitability of the Documents, completes them, or adapts them for extensions of the Project or for any other purpose, then Owner shall compensate Engineer at rates or in an amount to be agreed upon by Owner and Engineer.

6.4 Electronic Transmittals

- A. Owner and Engineer may transmit, and shall accept, Project-related correspondence, Documents, text, data, drawings, information, and graphics, in electronic media or digital format, either directly, or through access to a secure Project website, in accordance with a mutually agreeable protocol.
- CC. If this Agreement does not establish protocols for electronic or digital transmittals, then Owner and Engineer shall may jointly develop such protocols.
- DD. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the items, or from those established in applicable transmittal protocols.

6.5 Insurance

- A. Engineer shall procure and maintain insurance as set forth in Exhibit G. Engineer shall cause Owner to be listed as an additional insured on any applicable general liability insurance policy carried by Engineer.
- EE. Owner shall procure and maintain insurance as set forth in Exhibit G. Owner shall cause Engineer and its Consultants to be listed as additional insureds on any general liability policies carried by Owner, which are applicable to the Project.

- FF. Owner shall require Contractor to purchase and maintain policies of insurance covering workers' compensation, general liability, motor vehicle damage and injuries, and other insurance necessary to protect Owner's and Engineer's interests in the Project. Owner shall require Contractor to cause Engineer and its Consultants to be listed as additional insureds with respect to such liability insurance purchased and maintained by Contractor for the Project.
- GG. Owner and Engineer shall each deliver to the other certificates of insurance evidencing the coverages indicated in Exhibit G. Such certificates shall be furnished prior to commencement of Engineer's services and at renewals thereafter during the life of the Agreement.
- HH. All policies of property insurance relating to the Project, including but not limited to any builder's risk policy, shall allow for waiver of subrogation rights and contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any insured thereunder or against Engineer or its Consultants. Owner and Engineer waive all rights against each other, Contractor, the Consultants, and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by any builder's risk policy and any other property insurance relating to the Project. Owner and Engineer shall take appropriate measures in other Project-related contracts to secure waivers of rights consistent with those set forth in this paragraph.
- II. All policies of insurance shall contain a provision or endorsement that the coverage afforded will not be canceled or reduced in limits by endorsement, and that renewal will not be refused, until at least 10 days prior written notice has been given to the primary insured. Upon receipt of such notice, the receiving party shall promptly forward a copy of the notice to the other party to this Agreement.
- JJ. At any time, Owner may request that Engineer or its Consultants, at Owner's sole expense, provide additional insurance coverage, increased limits, or revised deductibles that are more protective than those specified in Exhibit G. If so requested by Owner, and if commercially available, Engineer shall obtain and shall require its Consultants to obtain such additional insurance coverage, different limits, or revised deductibles for such periods of time as requested by Owner, and Exhibit G will be supplemented to incorporate these requirements.

6.6 Suspension and Termination

A. Suspension:

- 1. *By Owner*: Owner may suspend the Project for up to 90 days upon seven days written notice to Engineer.
- 2. By Engineer: Engineer may, after giving seven days written notice to Owner, suspend services under this Agreement if Owner has failed to pay Engineer for invoiced services and expenses, as set forth in Paragraph 4.02.B, or in response to the presence of Constituents of Concern at the Site, as set forth in Paragraph 6.10.D.
- A. *Termination*: The obligation to provide further services under this Agreement may be terminated:
 - 3. For cause,

a. by either party upon 30 days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party.

b. by Engineer:

- upon seven days written notice if Owner demands that Engineer furnish or perform services contrary to Engineer's responsibilities as a licensed professional; or
- 2) upon seven days written notice if the Engineer's services for the Project are delayed or suspended for more than 90 days for reasons beyond Engineer's control, or as the result of the presence at the Site of undisclosed Constituents of Concern, as set forth in Paragraph 6.10.D.
- 3) Engineer shall have no liability to Owner on account of such termination.
- c. Notwithstanding the foregoing, this Agreement will not terminate under Paragraph 6.06.B.1.a if the party receiving such notice begins, within seven days of receipt of such notice, to correct its substantial failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt thereof; provided, however, that if and to the extent such substantial failure cannot be reasonably cured within such 30 day period, and if such party has diligently attempted to cure the same and thereafter continues diligently to cure the same, then the cure period provided for herein shall extend up to, but in no case more than, 60 days after the date of receipt of the notice.
- 4. For convenience, by Owner effective upon Engineer's receipt of notice from Owner.
- KK. Effective Date of Termination: The terminating party under Paragraph 6.06.B may set the effective date of termination at a time up to 30 days later than otherwise provided to allow Engineer to demobilize personnel and equipment from the Site, to complete tasks whose value would otherwise be lost, to prepare notes as to the status of completed and uncompleted tasks, and to assemble Project materials in orderly files.

LL. Payments Upon Termination:

- In the event of any termination under Paragraph 6.06, Engineer will be entitled to
 invoice Owner and to receive full payment for all services performed or furnished in
 accordance with this Agreement and all Reimbursable Expenses incurred through the
 effective date of termination. Upon making such payment, Owner shall have the
 limited right to the use of Documents, at Owner's sole risk, subject to the provisions of
 Paragraph 6.03.
- 2. In the event of termination by Owner for convenience or by Engineer for cause, Engineer shall be entitled, in addition to invoicing for those items identified in Paragraph 6.06.D.1, to invoice Owner and receive payment of a reasonable amount for services and expenses directly attributable to termination, both before and after the effective date of termination, such as reassignment of personnel, costs of terminating contracts with Engineer's Consultants, and other related close-out costs, using methods and rates for Additional Services as set forth in Exhibit C.

6.7 Controlling Law

A. This Agreement is to be governed by the Laws and Regulations of the state in which the Project is located.

6.8 Successors, Assigns, and Beneficiaries

- A. Owner and Engineer are hereby bound and the successors, executors, administrators, and legal representatives of Owner and Engineer (and to the extent permitted by Paragraph 6.08.B the assigns of Owner and Engineer) are hereby bound to the other party to this Agreement and to the successors, executors, administrators and legal representatives (and said assigns) of such other party, in respect of all covenants, agreements, and obligations of this Agreement.
- MM.Neither Owner nor Engineer may assign, sublet, or transfer any rights under or interest (including, but without limitation, money that is due or may become due) in this Agreement without the written consent of the other party, except to the extent that any assignment, subletting, or transfer is mandated by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement.

NN. Unless expressly provided otherwise in this Agreement:

- 1. Nothing in this Agreement shall be construed to create, impose, or give rise to any duty owed by Owner or Engineer to any Constructor, other third-party individual or entity, or to any surety for or employee of any of them.
- All duties and responsibilities undertaken pursuant to this Agreement will be for the sole and exclusive benefit of Owner and Engineer and not for the benefit of any other party.
- 3. Owner agrees that the substance of the provisions of this Paragraph 6.08.C shall appear in the Construction Contract Documents.

6.9 Dispute Resolution

- A. Owner and Engineer agree to negotiate all disputes between them in good faith for a period of 30 days from the date of notice prior to invoking the procedures of Exhibit H or other provisions of this Agreement, or exercising their rights at law.
- OO. If the parties fail to resolve a dispute through negotiation under Paragraph 6.09.A, then either or both may invoke the procedures of Exhibit H. If Exhibit H is not included, or if no dispute resolution method is specified in Exhibit H, then the parties may exercise their rights at law.

6.10 Environmental Condition of Site

- A. Owner represents to Engineer that as of the Effective Date to the best of Owner's knowledge no Constituents of Concern, other than those disclosed in writing to Engineer, exist at or adjacent to the Site.
- PP. If Engineer encounters or learns of an undisclosed Constituent of Concern at the Site, then Engineer shall notify (1) Owner and (2) appropriate governmental officials if Engineer reasonably concludes that doing so is required by applicable Laws or Regulations.
- QQ. It is acknowledged by both parties that Engineer's scope of services does not include any services related to unknown or undisclosed Constituents of Concern. If Engineer or any

- other party encounters, uncovers, or reveals an undisclosed Constituent of Concern, then Owner shall promptly determine whether to retain a qualified expert to evaluate such condition or take any necessary corrective action.
- RR. If investigative or remedial action, or other professional services, are necessary with respect to undisclosed Constituents of Concern, or if investigative or remedial action beyond that reasonably contemplated is needed to address a disclosed or known Constituent of Concern, then Engineer may, at its option and without liability for consequential or any other damages, suspend performance of services on the portion of the Project affected thereby until such portion of the Project is no longer affected.
- SS. If the presence at the Site of undisclosed Constituents of Concern adversely affects the performance of Engineer's services under this Agreement, then the Engineer shall have the option of (1) accepting an equitable adjustment in its compensation or in the time of completion, or both; or (2) terminating this Agreement for cause on seven days notice.
- TT. Owner acknowledges that Engineer is performing professional services for Owner and that Engineer is not and shall not be required to become an "owner," "arranger," "operator," "generator," or "transporter" of hazardous substances, as defined in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, which are or may be encountered at or near the Site in connection with Engineer's activities under this Agreement.

6.11 Indemnification and Mutual Waiver

- A. Indemnification by Engineer: To the fullest extent permitted by Laws and Regulations, Engineer shall indemnify and hold harmless Owner, and Owner's officers, directors, members, partners, agents, consultants, and employees, from losses, damages, and judgments (including reasonable consultants' and attorneys' fees and expenses) arising from third-party claims or actions relating to the Project, provided that any such claim, action, loss, damages, or judgment is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Engineer or Engineer's officers, directors, members, partners, agents, employees, or Consultants. This indemnification provision is subject to and limited by the provisions, if any, agreed to by Owner and Engineer in Exhibit I, "Limitations of Liability."
- UU. Indemnification by Owner: Owner shall indemnify and hold harmless Engineer and its officers, directors, members, partners, agents, employees, and Consultants as required by Laws and Regulations and to the extent (if any) required in Exhibit I, "Limitations of Liability."
- VV. Environmental Indemnification: To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Engineer and its officers, directors, members, partners, agents, employees, and Consultants from all claims, costs, losses, damages, actions, and judgments (including reasonable consultants' and attorneys fees and expenses) caused by, arising out of, relating to, or resulting from a Constituent of Concern at, on, or under the Site, provided that (1) any such claim, cost, loss, damages, action, or judgment is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, and (2) nothing in this paragraph shall obligate Owner to indemnify

- any individual or entity from and against the consequences of that individual's or entity's own negligence or willful misconduct.
- WW. No Defense Obligation: The indemnification commitments in this Agreement do not include a defense obligation by the indemnitor unless such obligation is expressly stated.
- XX. Percentage Share of Negligence: To the fullest extent permitted by Laws and Regulations, a party's total liability to the other party and anyone claiming by, through, or under the other party for any cost, loss, or damages caused in part by the negligence of the party and in part by the negligence of the other party or any other negligent entity or individual, shall not exceed the percentage share that the party's negligence bears to the total negligence of Owner, Engineer, and all other negligent entities and individuals.
- YY. Mutual Waiver: To the fullest extent permitted by Laws and Regulations, Owner and Engineer waive against each other, and the other's employees, officers, directors, members, agents, insurers, partners, and consultants, any and all claims for or entitlement to special, incidental, indirect, or consequential damages arising out of, resulting from, or in any way related to this Agreement or the Project, from any cause or causes.

6.12 Records Retention

A. Engineer shall maintain on file in legible form, for a period of five years following completion or termination of its services, all Documents, records (including cost records), and design calculations related to Engineer's services or pertinent to Engineer's performance under this Agreement. Upon Owner's request, Engineer shall provide a copy of any such item to Owner at cost.

6.13 Miscellaneous Provisions

- A. Notices: Any notice required under this Agreement will be in writing, addressed to the appropriate party at its address on the signature page and given personally, by registered or certified mail postage prepaid, or by a commercial courier service. All notices shall be effective upon the date of receipt.
- ZZ. Survival: All express representations, waivers, indemnifications, and limitations of liability included in this Agreement will survive its completion or termination for any reason.
- AAA. Severability: Any provision or part of the Agreement held to be void or unenforceable under any Laws or Regulations shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Engineer, which agree that the Agreement shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.
- BBB. Waiver: A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Agreement.
- CCC. Accrual of Claims: To the fullest extent permitted by Laws and Regulations, all causes of action arising under this Agreement shall be deemed to have accrued, and all statutory periods of limitation shall commence, no later than the date of Substantial Completion.

ARTICLE 7 - DEFINITIONS

7.1 Defined Terms

- A. Wherever used in this Agreement (including the Exhibits hereto) terms (including the singular and plural forms) printed with initial capital letters have the meanings indicated in the text above, in the exhibits, or in the following definitions:
 - Addenda—Written or graphic instruments issued prior to the opening of bids which clarify, correct, or change the bidding requirements or the proposed Construction Contract Documents.
 - 2. Additional Services—The services to be performed for or furnished to Owner by Engineer in accordance with Part 2 of Exhibit A of this Agreement.
 - Agreement—This written contract for professional services between Owner and Engineer, including all exhibits identified in Paragraph 8.01 and any duly executed amendments.
 - 4. Application for Payment—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Construction Contract.
 - 5. Basic Services—The services to be performed for or furnished to Owner by Engineer in accordance with Part 1 of Exhibit A of this Agreement.
 - 6. Change Order—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Construction Contract Price or the Construction Contract Times, or other revision to the Construction Contract, issued on or after the effective date of the Construction Contract.
 - 7. Change Proposal—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth in the Construction Contract, seeking an adjustment in Construction Contract Price or Construction Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Construction Contract Documents or the acceptability of Work under the Construction Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Construction Contract.
 - 8. Constituent of Concern—Asbestos, petroleum, radioactive material, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. ("CERCLA"); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5501 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. ("RCRA"); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, State, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

- 9. Construction Contract—The entire and integrated written contract between the Owner and Contractor concerning the Work.
- 10. Construction Contract Documents—Those items designated as "Contract Documents" in the Construction Contract, and which together comprise the Construction Contract.
- 11. Construction Contract Price—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Construction Contract Documents.
- 12. Construction Contract Times—The number of days or the dates by which Contractor shall: (a) achieve milestones, if any, in the Construction Contract; (b) achieve Substantial Completion; and (c) complete the Work.
- 13. Construction Cost—The cost to Owner of the construction of those portions of the entire Project designed or specified by or for Engineer under this Agreement, including construction labor, services, materials, equipment, insurance, and bonding costs, and allowances for contingencies. Construction Cost does not include costs of services of Engineer or other design professionals and consultants; cost of land or rights-of-way, or compensation for damages to property; Owner's costs for legal, accounting, insurance counseling, or auditing services; interest or financing charges incurred in connection with the Project; or the cost of other services to be provided by others to Owner. Construction Cost is one of the items comprising Total Project Costs.
- 14. Constructor—Any person or entity (not including the Engineer, its employees, agents, representatives, and Consultants), performing or supporting construction activities relating to the Project, including but not limited to Contractors, Subcontractors, Suppliers, Owner's work forces, utility companies, other contractors, construction managers, testing firms, shippers, and truckers, and the employees, agents, and representatives of any or all of them.
- 15. Consultants—Individuals or entities having a contract with Engineer to furnish services with respect to this Project as Engineer's independent professional associates and consultants; subcontractors; or vendors.
- Contractor—The entity or individual with which Owner enters into a Construction Contract.
- 17. Documents—Data, reports, Drawings, Specifications, Record Drawings, building information models, civil integrated management models, and other deliverables, whether in printed or electronic format, provided or furnished in appropriate phases by Engineer to Owner pursuant to this Agreement.
- 18. *Drawings*—That part of the Construction Contract Documents that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
- 19. Effective Date—The date indicated in this Agreement on which it becomes effective, but if no such date is indicated, the date on which this Agreement is signed and delivered by the last of the parties to sign and deliver.
- 20. Engineer—The individual or entity named as such in this Agreement.
- 21. Field Order—A written order issued by Engineer which requires minor changes in the Work but does not change the Construction Contract Price or the Construction Contract Times.

- 22. Laws and Regulations; Laws or Regulations—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
- 23. Owner—The individual or entity named as such in this Agreement and for which Engineer's services are to be performed. Unless indicated otherwise, this is the same individual or entity that will enter into any Construction Contracts concerning the Project.
- 24. Project—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the services to be performed or furnished by Engineer under this Agreement are a part.
- 25. Record Drawings—Drawings depicting the completed Project, or a specific portion of the completed Project, prepared by Engineer as an Additional Service and based on Contractor's record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications, as delivered to Engineer and annotated by Contractor to show changes made during construction.
- 26. Reimbursable Expenses—The expenses incurred directly by Engineer in connection with the performing or furnishing of Basic Services and Additional Services for the Project.
- 27. Resident Project Representative—The authorized representative of Engineer assigned to assist Engineer at the Site during the Construction Phase. As used herein, the term Resident Project Representative or "RPR" includes any assistants or field staff of Resident Project Representative. The duties and responsibilities of the Resident Project Representative, if any, are as set forth in Exhibit D.
- 28. Samples—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
- 29. Shop Drawings—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Construction Contract Documents.
- 30. Site—Lands or areas to be indicated in the Construction Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands furnished by Owner which are designated for the use of Contractor.
- 31. Specifications—The part of the Construction Contract Documents that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
- 32. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.

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- 33. Substantial Completion—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Construction Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.
- 34. Supplier—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
- 35. Total Project Costs—The total cost of planning, studying, designing, constructing, testing, commissioning, and start-up of the Project, including Construction Cost and all other Project labor, services, materials, equipment, insurance, and bonding costs, allowances for contingencies, and the total costs of services of Engineer or other design professionals and consultants, together with such other Project-related costs that Owner furnishes for inclusion, including but not limited to cost of land, rights-of-way, compensation for damages to properties, Owner's costs for legal, accounting, insurance counseling, and auditing services, interest and financing charges incurred in connection with the Project, and the cost of other services to be provided by others to Owner.
- 36. Work—The entire construction or the various separately identifiable parts thereof required to be provided under the Construction Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Construction Contract Documents.
- 37. Work Change Directive—A written directive to Contractor issued on or after the effective date of the Construction Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.
- 38. *Agency* The Rural Utilities Service or any designated representative of Rural Utilities Service, including USDA, Rural Development.

DDD.

Day:

1. The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

ARTICLE 8 – EXHIBITS AND SPECIAL PROVISIONS

- 8.1 Exhibits Included:
 - A. Exhibit A, Engineer's Services.
 - EEE. Exhibit B, Owner's Responsibilities.
 - FFF. Exhibit C, Payments to Engineer for Services and Reimbursable Expenses.
 - GGG. Exhibit D, Duties, Responsibilities and Limitations of Authority of Resident Project Representative.
 - HHH. Exhibit E, Notice of Acceptability of Work.
 - III. Exhibit F, Construction Cost Limit. Not Included
 - JJJ. Exhibit G, Insurance.
 - KKK. Exhibit H, Dispute Resolution.
 - LLL. Exhibit I, Limitations of Liability. Not Included
 - MMM. Exhibit J, Special Provisions. Not Included
 - NNN. Exhibit K, Amendment to Owner-Engineer Agreement.
- 8.2 Total Agreement
 - A. This Agreement, (together with the exhibits included above) constitutes the entire agreement between Owner and Engineer and supersedes all prior written or oral understandings. This Agreement may only be amended, supplemented, modified, or canceled by a written instrument duly executed by both parties. Amendments should be based whenever possible on the format of Exhibit K to this Agreement.
- 8.3 Designated Representatives
 - A. With the execution of this Agreement, Engineer and Owner shall designate specific individuals to act as Engineer's and Owner's representatives with respect to the services to be performed or furnished by Engineer and responsibilities of Owner under this Agreement. Such an individual shall have authority to transmit instructions, receive information, and render decisions relative to this Agreement on behalf of the respective party whom the individual represents.
- 8.4 Engineer's Certifications
 - A. Engineer certifies that it has not engaged in corrupt, fraudulent, or coercive practices in competing for or in executing the Agreement. For the purposes of this Paragraph 8.04:
 - "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the selection process or in the Agreement execution;

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- 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the selection process or the execution of the Agreement to the detriment of Owner, or (b) to deprive Owner of the benefits of free and open competition;
- "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the selection process or affect the execution of the Agreement.

8.5 Federal Requirements

- A. Agency Concurrence. Signature of a duly authorized representative of the Agency in the space provided on the signature page of EJCDC form E-500 (2014) hereof does not constitute a commitment to provide financial assistance or payments hereunder but does signify that this Agreement conforms to Agency's applicable requirements. This Agreement shall not be effective unless the Funding Agency's designated representative concurs. No amendment to this Agreement shall be effective unless the Funding Agency's designated representative concurs.
- OOO. Audit and Access to Records. Owner, Agency, the Comptroller General of the United States, or any of their duly authorized representatives, shall have access to any books, documents, papers, and records of the Engineer which are pertinent to the Agreement, for the purpose of making audits, examinations, excerpts, and transcriptions. Engineer shall maintain all required records for three years after final payment is made and all other pending matters are closed.
- PPP. Restrictions on Lobbying. Engineer and each Consultant shall comply with "Byrd anti-lobbying amendment (31 U.S.C. 1352)" if they are recipients of engineering services contracts and subcontracts that exceed \$100,000 at any tier. If applicable, Engineer must complete a certification form on lobbying activities related to a specific Federal loan or grant that is a funding source for this Agreement. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or any other applicable award. Each tier shall disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Certifications and disclosures are forwarded from tier to tier up to the Owner. Necessary certification and disclosure forms shall be provided by Owner.
- QQQ. Suspension and Debarment. Engineer certifies, by signing this Agreement, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this transaction by any Federal department or agency. Engineer will not contract with any Consultant for this project if it or its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency. Necessary certification forms shall be provided by the Owner. The Engineer will complete and submit a form AD-1048, "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion lower tier transactions," to the Owner who will forward it the USDA, Rural Development processing office.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, the Effective Date of which is indicated on page 1.

Owner: City of Beaverton, Michigan	Engineer: ROWE Professional Services Company		
Ву:	By:		
Print name: Heath Kaplan	Print name: Rick Freeman, PE.		
Title: City Manager	Title: Principal		
Date Signed:	Date Signed:		
	Engineer License or Firm's Certificate No. (if required):		
	36056		
	State of: Michigan		
Address for Owner's receipt of notices:	Address for Engineer's receipt of notices:		
124 W. Brown Street	127 S. Main Street		
PO Box 477			
Beaverton, MI 48612-0477	Mt. Pleasant, MI 48858		
Designated Representative (Paragraph 8.03.A):	Designated Representative (Paragraph 8.03.A):		
Heath Kaplan	Michael P. Faeth, PE		
Title: City Manager	Title: Senior Project Manger		
Phone Number: 989-435-934.	Phone Number: (989) 772-2138		
E-Mail Address: hkaplan@beavertonmi.org	E-Mail Address: mfaeth@rowepsc.com		

This is **EXHIBIT A**, consisting of 17 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services**

Engineer's Services

Article 1 of the Agreement is supplemented to include the following agreement of the parties.

Engineer shall provide Basic and Additional Services as set forth below.

PART 1 - BASIC SERVICES

A1.1 Study and Report Phase

A. Engineer shall:

- Consult with Owner to define and clarify Owner's requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility, and expandability, and any budgetary limitations, and identify available data, information, reports, facilities plans, and site evaluations.
 - a. If Owner has already identified one or more potential solutions to meet its Project requirements, then proceed with the study and evaluation of such potential solutions:
 - b. If Owner has not identified specific potential solutions for study and evaluation, then assist Owner in determining whether Owner's requirements, and available data, reports, plans, and evaluations, point to a single potential solution for Engineer's study and evaluation, or are such that it will be necessary for Engineer to identify, study, and evaluate multiple potential solutions. In addition, Engineer must identify, study, and evaluate multiple potential alternative solutions potentially available to Owner, unless Owner and Engineer mutually agree with Agency concurrence that only one feasible solution exists. The number of alternative solutions should be appropriate to the specific project as concurred in by the Agency.
 - c. If it is necessary for Engineer to identify, study, and evaluate multiple potential solutions, then identify [] [insert specific number] alternative solutions potentially available to Owner, unless Owner and Engineer mutually agree that some other specific number of alternatives should be identified, studied, and evaluated.
- 2. Identify potential solution(s) to meet Owner's Project requirements, as needed.
- 3. Study and evaluate the potential solution(s) to meet Owner's Project requirements.
- 4. Visit the Site, or potential Project sites, to review existing conditions and facilities, unless such visits are not necessary or applicable to meeting the objectives of the Study and Report Phase.
- Advise Owner of any need for Owner to obtain, furnish, or otherwise make available to Engineer additional Project-related data and information, for Engineer's use in the

- study and evaluation of potential solution(s) to Owner's Project requirements, and preparation of a related report.
- 6. After consultation with Owner, recommend to Owner the solution(s) which in Engineer's judgment meet Owner's requirements for the Project.
- Identify, consult with, and analyze requirements of governmental authorities having
 jurisdiction to approve the portions of the Project to be designed or specified by
 Engineer, including but not limited to mitigating measures identified in an
 environmental assessment for the Project.
- 8. Prepare a report (the "Report") which will, as appropriate, contain schematic layouts, sketches, and conceptual design criteria with appropriate exhibits to indicate the agreed-to requirements, considerations involved, and Engineer's recommended solution(s). For each recommended solution Engineer will provide the following, which will be separately itemized: opinion of probable Construction Cost; proposed allowances for contingencies; the estimated total costs of design, professional, and related services to be provided by Engineer and its Consultants; and, on the basis of information furnished by Owner, a tabulation of other items and services included within the definition of Total Project Costs. The Report mentioned in paragraph 1.01.A.8 of Exhibit A to the Agreement is the Preliminary Engineering Report as defined in RUS Bulletin 1780-2. This document must meet customary professional standards as required by 7 CFR 1780.55. The Report must be concurred in by the Agency.
- 9. Advise Owner of any need for Owner to provide data or services of the types described in Exhibit B, for use in Project design, or in preparation for Contractor selection and construction.
- 10. When mutually agreed and approved by the Agency, assist Owner in evaluating the possible use of building information modeling; civil integrated management; geotechnical baselining of subsurface site conditions; innovative design, contracting, or procurement strategies; or other strategies, technologies, or techniques for assisting in the design, construction, and operation of Owner's facilities. The subject matter of this paragraph shall be referred to in Exhibit A and B as "Project Strategies, Technologies, and Techniques."
- 11. If requested to do so by Owner, assist Owner in identifying opportunities for enhancing the sustainability of the Project, and pursuant to Owner's instructions plan for the inclusion of sustainable features in the design.
- 12. Use ASCE 38, "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data" as a means to advise the Owner on a recommended scope of work and procedure for the identification and mapping of existing utilities.
- 13. Develop a scope of work and survey limits for any topographic and other surveys necessary for design.
- 14. Perform or provide the following other Study and Report Phase tasks or deliverables: Provide an Environmental Report as defined at 7 CFR 1970 or other Agency approved format. The Environmental Report must be concurred in by the Agency.
- 15. Furnish 1 review copies of the Report and any other Study and Report Phase deliverables to Owner within 30 days of the Effective Date and review it with Owner.

- Within 14 days of receipt, Owner shall submit to Engineer any comments regarding the furnished items.
- 16. Revise the Report and any other Study and Report Phase deliverables in response to Owner's comments, as appropriate, and furnish [] copies of the revised Report and any other Study and Report Phase deliverables to the Owner within [] days of receipt of Owner's comments. Revise the Report and any other Study and Report Phase deliverables in response to Owner's and Agency's comments, as appropriate, and furnish three (3) written copies and one (1) electronic copy of the revised Report and any other Study and Report Phase deliverables to the Owner within [14] days of receipt of Owner's and Agency's comments.

RRR. Engineer's services under the Study and Report Phase will be considered complete on the date when Engineer has delivered to Owner the revised Report and any other Study and Report Phase deliverables.

A1.2 Preliminary Design Phase

- A. After acceptance by Owner and concurrence by Agency of the Report and any other Study and Report Phase deliverables; selection by Owner of a recommended solution; issuance by Owner of any instructions of for use of Project Strategies, Technologies, and Techniques, or for inclusion of sustainable features in the design; and indication by Owner of any specific modifications or changes in the scope, extent, character, or design requirements of the Project desired by Owner, (1) Engineer and Owner shall discuss and resolve any necessary revisions to Engineer's compensation (through application of the provisions regarding Additional Services, or otherwise), or the time for completion of Engineer's services, resulting from the selected solution, related Project Strategies, Technologies, or Techniques, sustainable design instructions, or specific modifications to the Project, and (2) upon written authorization from Owner, Engineer shall:
 - 1. Prepare Preliminary Design Phase documents consisting of final design criteria, preliminary drawings, outline specifications, and written descriptions of the Project.
 - In preparing the Preliminary Design Phase documents, use any specific applicable Project Strategies, Technologies, and Techniques authorized by Owner and Agency during or following the Study and Report Phase, and include sustainable features, as appropriate, pursuant to Owner's instructions.
 - 3. Provide necessary field surveys and topographic and utility mapping for Engineer's design purposes. Comply with the scope of work and procedure for the identification and mapping of existing utilities selected and authorized by Owner pursuant to advice from Engineer based on ASCE 38, "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data," as set forth in Paragraph A1.01.A.12 above. If no such scope of work and procedure for utility mapping has been selected and authorized, then at a minimum the utility mapping will include Engineer contacting utility owners and obtaining available information.
 - 4. Visit the Site as needed to prepare the Preliminary Design Phase documents.
 - Advise Owner if additional reports, data, information, or services of the types described in Exhibit B are necessary and assist Owner in obtaining such reports, data, information, or services.

- 6. Continue to assist Owner with Project Strategies, Technologies, and Techniques that Owner has chosen to implement.
- Based on the information contained in the Preliminary Design Phase documents, prepare a revised opinion of probable Construction Cost, and assist Owner in tabulating the various cost categories which comprise Total Project Costs.
- Obtain and review Owner's instructions regarding Owner's procurement of construction services (including instructions regarding advertisements for bids, instructions to bidders, and requests for proposals, as applicable), Owner's construction contract practices and requirements, insurance and bonding requirements, electronic transmittals during construction, and other information necessary for the finalization of Owner's bidding-related documents (or requests for proposals or other construction procurement documents), and Construction Contract Documents. Also obtain and review copies of Owner's design and construction standards, Owner's standard forms, general conditions (if other than EJCDC® C-700, Standard General Conditions of the Construction Contract, 2013 Edition), supplementary conditions, text, and related documents or content for Engineer to include in the draft bidding-related documents (or requests for proposals or other construction procurement documents), and in the draft Construction Contract Documents, when applicable. Engineer must also incorporate all Agency regulations, forms, and design and construction standards applicable to the project in development of the documents indicated in this Article.
- 9. Perform or provide the following other Preliminary Design Phase tasks or deliverables:
- 10. Furnish 2 review copies of the Preliminary Design Phase documents, opinion of probable Construction Cost, and any other Preliminary Design Phase deliverables to Owner within 90 days of authorization to proceed with this phase, and review them with Owner. Within14 days of receipt, Owner shall submit to Engineer any comments regarding the furnished items.
- 11. Revise the Preliminary Design Phase documents, opinion of probable Construction Cost, and any other Preliminary Design Phase deliverables in response to Owner's comments, as appropriate, and furnish to Owner 2 copies of the revised Preliminary Design Phase documents, revised opinion of probable Construction Cost, and any other deliverables within 30 days after receipt of Owner's comments.
- SSS. Engineer's services under the Preliminary Design Phase will be considered complete on the date when Engineer has delivered to Owner the revised Preliminary Design Phase documents, revised opinion of probable Construction Cost, and any other Preliminary Design Phase deliverables.

A1.3 Final Design Phase

- A. After acceptance by Owner of the Preliminary Design Phase documents, revised opinion of probable Construction Cost as determined in the Preliminary Design Phase, and any other Preliminary Design Phase deliverables, subject to any Owner-directed modifications or changes in the scope, extent, character, or design requirements of or for the Project, and upon written authorization from Owner, Engineer shall:
 - 1. Prepare final Drawings and Specifications indicating the scope, extent, and character of the Work to be performed and furnished by Contractor.

- 2. Visit the Site as needed to assist in preparing the final Drawings and Specifications.
- 3. Provide technical criteria, written descriptions, and design data for Owner's use in filing applications for permits from or approvals of governmental authorities having jurisdiction to review or approve the final design; assist Owner in consultations with such authorities; and revise the Drawings and Specifications in response to directives from such authorities, as appropriate.
- Advise Owner of any recommended adjustments to the opinion of probable Construction Cost.
- 5. After consultation with Owner, include in the Construction Contract Documents any specific protocols for the transmittal of Project-related correspondence, documents, text, data, drawings, information, and graphics, in electronic media or digital format, either directly, or through access to a secure Project website. Any such protocols shall be applicable to transmittals between and among Owner, Engineer, and Contractor during the Construction Phase and Post-Construction Phase, and unless agreed otherwise shall supersede any conflicting protocols previously established for transmittals between Owner and Engineer.
- Assist Owner in assembling known reports and drawings of Site conditions, and in identifying the technical data contained in such reports and drawings upon which bidders or other prospective contractors may rely.
- In addition to preparing the final Drawings and Specifications, assemble drafts of other Construction Contract Documents based on specific instructions and contract forms, text, or content received from Owner.
- Prepare or assemble draft bidding-related documents (or requests for proposals or other construction procurement documents), based on the specific bidding or procurement-related instructions and forms, text, or content received from Owner.
- 9. Perform or provide the following other Final Design Phase tasks or deliverables: The Engineer shall identify the building codes and accessibility standards used in the design and indicate them on the drawings and specifications and certify that the final drawings and specifications comply with those standards.
- 10. Furnish for review by Owner, its legal counsel, and Agency and other advisors, 2 copies of the final Drawings and Specifications, assembled drafts of other Construction Contract Documents, the draft bidding-related documents (or requests for proposals or other construction procurement documents), and any other Final Design Phase deliverables, within 30 days of authorization to proceed with the Final Design Phase, and review them with Owner. Within 14 days of receipt, Owner shall submit to Engineer any comments regarding the furnished items, and any instructions for revisions.
- 11. Revise the final Drawings and Specifications, assembled drafts of other Construction Contract Documents, the draft bidding-related documents (or requests for proposals or other construction procurement documents), and any other Final Design Phase deliverables in accordance with comments and instructions from the Owner, as appropriate, and submit 3 final copies of such documents to Owner within 30 days after receipt of Owner's comments and instructions.
- 12. Provide the Owner and Agency with a written certification that the final Drawings and Specifications, other assembled Construction Contract Documents, bidding-

- related documents (or requests for proposals or other construction procurement documents), and any other Final Design Phase deliverables comply with all requirements of Agency. Use the Engineer's Certification of Final Plans and Specifications (Attachment J of the RUS Bulletin 1780-26) for this purpose.
- 13. Services required to determine and certify that to the best of the Engineer's knowledge and belief all iron and steel products referenced in engineering analysis, the Plans, Specifications, Bidding Documents, and associated Bid Addenda requiring design revisions are either produced in the United States or are the subject of an approved waiver; and services required to determine to the best of the engineer's knowledge and belief that approved substitutes, equals, and all iron and steel products proposed is the shop drawings, Change Orders and Partial Payment Estimates are either produced in the United States or are the subject of an approved waiver under Section 746 of Title VII of the Consolidated Appropriations Act of 2017 (Division A - Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2017) and subsequent statutes mandating domestic preference. The term "iron and steel products" means the following products made primarily of iron or steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and construction materials. The deminimis and minor components wavier apply to this contract."
- TTT. Engineer's services under the Final Design Phase will be considered complete on the date when Engineer has delivered to Owner the final Drawings and Specifications, other assembled Construction Contract Documents, bidding-related documents (or requests for proposals or other construction procurement documents), and any other Final Design Phase deliverables and all final design phase deliverables have been accepted by Owner.
- UUU. In the event that the Work designed or specified by Engineer is to be performed or furnished under more than one prime contract, or if Engineer's services are to be separately sequenced with the work of one or more prime Contractors (such as in the case of fast-tracking), Owner and Engineer shall, prior to commencement of the Final Design Phase, develop a schedule for performance of Engineer's services during the Final Design, Bidding or Negotiating, Construction, and Post-Construction Phases in order to sequence and coordinate properly such services as are applicable to the work under such separate prime contracts. This schedule is to be prepared and included in or become an amendment to Exhibit A whether or not the work under such contracts is to proceed concurrently.
- VVV. The number of prime contracts for Work designed or specified by Engineer upon which the Engineer's compensation has been established under this Agreement is one. If more prime contracts are awarded, Engineer shall be entitled to an equitable increase in its compensation under this Agreement.

A1.4 Bidding or Negotiating Phase

- A. After acceptance by Owner of the final Drawings and Specifications, other Construction Contract Documents, bidding-related documents (or requests for proposals or other construction procurement documents), and the most recent opinion of probable Construction Cost as determined in the Final Design Phase, and upon written authorization by Owner to proceed, Engineer shall:
 - Assist Owner in advertising for and obtaining bids or proposals for the Work, assist Owner in issuing assembled design, contract, and bidding-related documents (or

Exhibit A - Engineer's Services

requests for proposals or other construction procurement documents) to prospective contractors, and, where applicable, maintain a record of prospective contractors to which documents have been issued, attend pre-bid conferences, if any, and receive and process contractor deposits or charges for the issued documents.

- 2. Prepare and issue Addenda as appropriate to clarify, correct, or change the issued documents. Obtain Agency concurrence on any addenda that modify the bidding documents. Obtain prior concurrence where possible.
- 3. Provide information or assistance needed by Owner in the course of any review of proposals or negotiations with prospective contractors.
- 4. Consult with Owner as to the qualifications of prospective contractors.
- 5. Consult with Owner as to the qualifications of ubcontractors, suppliers, and other individuals and entities proposed by prospective contractors, for those portions of the Work as to which review of qualifications is required by the issued documents.
- 6. If the issued documents require, the Engineer shall evaluate and determine the acceptability of "or equals" and substitute materials and equipment proposed by prospective contractors, provided that such proposals are allowed by the bidding-related documents (or requests for proposals or other construction procurement documents) prior to award of contracts for the Work. Services under this paragraph are subject to the provisions of Paragraph A2.02.A.2 of this Exhibit A. The Engineer shall evaluate and determine the acceptability of "or equals" and substitute materials and equipment proposed by prospective contractors prior to award of contracts for the Work. Engineer shall issue a bid addendum for any and all approved "or equals" and substitutes. Review of substitutes and "or equals" shall be in accordance with the General Conditions of the Construction Contract and applicable Agency regulations. Services under this paragraph are subject to the provisions of Paragraph A2.02.A.2 of this Exhibit A.
- Attend the bid opening, prepare bid tabulation sheets to meet Owner's schedule, and
 assist Owner in evaluating bids or proposals, assembling final contracts for the Work
 for execution by Owner and Contractor, and in issuing notices of award of such
 contracts.
- 8. If Owner engages in negotiations with bidders or proposers, assist Owner with respect to technical and engineering issues that arise during the negotiations.
- Perform or provide the following other Bidding or Negotiating Phase tasks or deliverables: Upon award of the Construction Contract, the Engineer shall furnish to Owner five executed copies of the Contract Documents and one electronic copy of the signed documents, including Drawings and Specifications.
- 10. Provide copies of Manufacturers' Certification letters to the Bidders on any brand name iron and steel products along with the Plans, Specifications and Bidding Documents. Manufacturers' Certification Letters are to be included in the Bidding Documents and must be kept in the engineer's project file and on site during construction.
- 11. Provide copies of Manufactures' Certification letters to the Contractor on any brand name iron and steel products along with the Plans, Specifications, Bidding Documents including any Bid Addenda and Change Orders. Manufactures'

Certification letters must be kept in the engineer's project file and on site during construction.

WWW. The Bidding or Negotiating Phase will be considered complete upon commencement of the Construction Phase or upon cessation of negotiations with prospective contractors (except as may be required if Exhibit F is a part of this Agreement).

A1.5 Construction Phase

- A. Upon successful completion of the Bidding and Negotiating Phase, and upon written authorization from Owner, Engineer shall:
 - 1. General Administration of Construction Contract: Consult with Owner and act as Owner's representative as provided in the Construction Contract. The extent and limitations of the duties, responsibilities, and authority of Engineer shall be as assigned in EJCDC® C-700, Standard General Conditions of the Construction Contract (2013 Edition), prepared by the Engineers Joint Contract Documents Committee, or other construction general conditions specified in this Agreement. If Owner, or Owner and Contractor, modify the duties, responsibilities, and authority of Engineer in the Construction Contract, or modify other terms of the Construction Contract having a direct bearing on Engineer, then Owner shall compensate Engineer for any related increases in the cost to provide Construction Phase services. Engineer shall not be required to furnish or perform services contrary to Engineer's responsibilities as a licensed professional. All of Owner's instructions to Contractor will be issued through Engineer, which shall have authority to act on behalf of Owner in dealings with Contractor to the extent provided in this Agreement and the Construction Contract except as otherwise provided in writing.
 - Resident Project Representative (RPR): Provide the services of an RPR at the Site to
 assist the Engineer and to provide more extensive observation of Contractor's work.
 Duties, responsibilities, and authority of the RPR are as set forth in Exhibit D. The
 furnishing of such RPR's services will not limit, extend, or modify Engineer's
 responsibilities or authority except as expressly set forth in Exhibit D.
 - 3. Selection of Independent Testing Laboratory: Assist Owner in the selection of an independent testing laboratory to perform the services identified in Exhibit B, Paragraph B2.01.
 - 4. *Pre-Construction Conference:* Participate in **and chair** a pre-construction conference prior to commencement of Work at the Site.
 - 5. Electronic Transmittal Protocols: If the Construction Contract Documents do not specify protocols for the transmittal of Project-related correspondence, documents, text, data, drawings, information, and graphics, in electronic media or digital format, either directly, or through access to a secure Project website, then together with Owner and Contractor jointly develop such protocols for transmittals between and among Owner, Contractor, and Engineer during the Construction Phase and Post-Construction Phase.
 - 6. Original Documents: If requested by Owner to do so, maintain and safeguard during the Construction Phase at least one original printed record version of the Construction Contract Documents, including Drawings and Specifications signed and sealed by Engineer and other design professionals in accordance with applicable Laws and Regulations. Throughout the Construction Phase, make such original printed record

- version of the Construction Contract Documents available to Contractor and Owner for review.
- Schedules: Receive, review, and determine the acceptability of any and all schedules
 that Contractor is required to submit to Engineer, including the Progress Schedule,
 Schedule of Submittals, and Schedule of Values.
- Baselines and Benchmarks: As appropriate, establish baselines and benchmarks for locating the Work which in Engineer's judgment are necessary to enable Contractor to proceed.
- 9. *Visits to Site and Observation of Construction:* In connection with observations of Contractor's Work while it is in progress:
 - a. Make visits to the Site at intervals appropriate to the various stages of construction, as Engineer deems necessary, to observe as an experienced and qualified design professional the progress of Contractor's executed Work. Such visits and observations by Engineer, and the Resident Project Representative, if any, are not intended to be exhaustive or to extend to every aspect of the Work or to involve detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in this Agreement and the Construction Contract Documents, but rather are to be limited to spot checking, selective sampling, and similar methods of general observation of the Work based on Engineer's exercise of professional judgment, as assisted by the Resident Project Representative, if any. Based on information obtained during such visits and observations, Engineer will determine in general if the Work is proceeding in accordance with the Construction Contract Documents, and Engineer shall keep Owner informed of the progress of the Work.
 - The purpose of Engineer's visits to the Site, and representation by the Resident Project Representative, if any, at the Site, will be to enable Engineer to better carry out the duties and responsibilities assigned to and undertaken by Engineer during the Construction Phase, and, in addition, by the exercise of Engineer's efforts as an experienced and qualified design professional, to provide for Owner a greater degree of confidence that the completed Work will conform in general to the Construction Contract Documents and that Contractor has implemented and maintained the integrity of the design concept of the completed Project as a functioning whole as indicated in the Construction Contract Documents. Engineer shall not, during such visits or as a result of such observations of the Work, supervise, direct, or have control over the Work, nor shall Engineer have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected or used by any Constructor, for security or safety at the Site, for safety precautions and programs incident to any Constructor's work in progress, for the coordination of the Constructors' work or schedules, nor for any failure of any Constructor to comply with Laws and Regulations applicable to furnishing and performing of its work. Accordingly, Engineer neither guarantees the performance of any Constructor nor assumes responsibility for any Constructor's failure to furnish or perform the Work, or any portion of the Work, in accordance with the Construction Contract Documents.

- c. The visits described in Article A1.05.A.9.a shall be at least monthly and the Engineer shall document all visits to the project with copies furnished to the Owner and Agency.
- 10. Defective Work: Reject Work if, on the basis of Engineer's observations, Engineer believes that such Work is defective under the terms and standards set forth in the Construction Contract Documents. Provide recommendations to Owner regarding whether Contractor should correct such Work or remove and replace such Work, or whether Owner should consider accepting such Work as provided in the Construction Contract Documents.
- 11. Compatibility with Design Concept: If Engineer has express knowledge that a specific part of the Work that is not defective under the terms and standards set forth in the Construction Contract Documents is nonetheless not compatible with the design concept of the completed Project as a functioning whole, then inform Owner of such incompatibility, and provide recommendations for addressing such Work.
- 12. Clarifications and Interpretations: Accept from Contractor and Owner submittal of all matters in question concerning the requirements of the Construction Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Construction Contract Documents. With reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Construction Contract Documents.
- 13. Non-reviewable Matters: If a submitted matter in question concerns the Engineer's performance of its duties and obligations, or terms and conditions of the Construction Contract Documents that do not involve (1) the performance or acceptability of the Work under the Construction Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly give written notice to Owner and Contractor that Engineer will not provide a decision or interpretation.
- 14. *Field Orders:* Subject to any limitations in the Construction Contract Documents, Engineer may prepare and issue Field Orders requiring minor changes in the Work.
- Change Orders and Work Change Directives: Recommend Change Orders and Work Change Directives to Owner, as appropriate, and prepare Change Orders and Work Change Directives as required.
- 16. Differing Site Conditions: Respond to any notice from Contractor of differing site conditions, including conditions relating to underground facilities such as utilities, and hazardous environmental conditions. Promptly conduct reviews and prepare findings, conclusions, and recommendations for Owner's use.
- 17. Shop Drawings, Samples, and Other Submittals: Review and approve or take other appropriate action with respect to Shop Drawings, Samples, and other required Contractor submittals to ensure compliance with American and iron Steel requirements mandated by Section 746 of Title VII of the Consolidated Appropriations Act of 2017 (Division A Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2017) and subsequent statutes mandating domestic preference. Any iron and steel products included in any submittal by the General Contractor, must include a Manufacturer's Certification letter to verify the products were produced in the United States. Copies

of Manufacturers' Certification letters must be kept in the engineer's project file and on site during construction. Review and approve or take other appropriate action with respect to Shop Drawings, Samples, and other required Contractor submittals, but only for conformance with the information given in the Construction Contract Documents and compatibility with the design concept of the completed Project as a functioning whole as indicated by the Construction Contract Documents. Such reviews and approvals or other action will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions and programs incident thereto. Engineer shall meet any Contractor's submittal schedule that Engineer has accepted.

18. Substitutes and "Or-equal": Evaluate and determine the acceptability of substitute or "or-equal" materials and equipment proposed by Contractor, but subject to the provisions of Paragraph A2.02.A.2 of this Exhibit A. Review of substitutes and "or equals" shall be in accordance with the General Conditions of the Construction Contract and applicable Agency regulations. Prior to approval of any substitute "or equal" obtain Manufacturers' Certification letter to verify the products were produced in the United States. Manufacturers' Certification letters must be kept in the engineer's project file and on site during construction to ensure compliance with American and iron Steel requirements mandated by Section 746 of Title VII of the Consolidated Appropriations Act of 2017 (Division A – Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2017) and subsequent statutes mandating domestic preference, if applicable.

19. Inspections and Tests:

- a. Receive and review all certificates of inspections, tests, and approvals required by Laws and Regulations or the Construction Contract Documents. Engineer's review of such certificates will be for the purpose of determining that the results certified indicate compliance with the Construction Contract Documents and will not constitute an independent evaluation that the content or procedures of such inspections, tests, or approvals comply with the requirements of the Construction Contract Documents. Engineer shall be entitled to rely on the results of such inspections and tests.
- b. As deemed reasonably necessary, request that Contractor uncover Work that is to be inspected, tested, or approved.
- c. Pursuant to the terms of the Construction Contract, require special inspections or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- d. Receive and review all Manufactures' Certification Letters for materials required to comply with American and iron Steel requirements mandated by Section 746 of Title VII of the Consolidated Appropriations Act of 2017 (Division A Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2017) and subsequent statutes mandating domestic preference to verify the products were produced in the United States. Manufacturers' Certification letters must be kept in the engineer's project file and on site during construction.
- 20. Change Proposals and Claims: (a) Review and respond to Change Proposals. Review each duly submitted Change Proposal from Contractor and, within 30 days after

receipt of the Contractor's supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions shall be in writing, with a copy provided to Owner and Contractor. If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties that the Engineer will not resolve the Change Proposal. (b) Provide information or data to Owner regarding engineering or technical matters pertaining to Claims. (c) Review Change Proposals to ensure compliance with American and iron Steel requirements mandated by Section 746 of Title VII of the Consolidated Appropriations Act of 2017 (Division A — Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2017) and subsequent statute mandating domestic preference.

- 21. Applications for Payment: Based on Engineer's observations as an experienced and qualified design professional and on review of Applications for Payment and accompanying supporting documentation:
 - Determine the amounts that Engineer recommends Contractor be paid. Recommend reductions in payment (set-offs) based on the provisions for set-offs stated in the Construction Contract. Such recommendations of payment will be in writing and will constitute Engineer's representation to Owner, based on such observations and review, that, to the best of Engineer's knowledge, information and belief, Contractor's Work has progressed to the point indicated, the Work is generally in accordance with the Construction Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Construction Contract Documents, and to any other qualifications stated in the recommendation), and the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work. In the case of unit price Work, Engineer's recommendations of payment will include final determinations of quantities and classifications of the Work (subject to any subsequent adjustments allowed by the Construction Contract Documents).
 - By recommending payment, Engineer shall not thereby be deemed to have represented that observations made by Engineer to check the quality or quantity of Contractor's Work as it is performed and furnished have been exhaustive, extended to every aspect of Contractor's Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in this Agreement. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment including final payment will impose on Engineer responsibility to supervise, direct, or control the Work, or for the means, methods, techniques, sequences, or procedures of construction or safety precautions or programs incident thereto, or Contractor's compliance with Laws and Regulations applicable to Contractor's furnishing and performing the Work. It will also not impose responsibility on Engineer to make any examination to ascertain how or for what purposes Contractor has used the money paid to Contractor by Owner; to determine that title to any portion of the Work, including materials or equipment, has passed to Owner free and clear of any liens, claims, security

interests, or encumbrances; or that there may not be other matters at issue between Owner and Contractor that might affect the amount that should be paid.

- 22. Contractor's Completion Documents: Receive from Contractor, review, and transmit to Owner maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance required by the Construction Contract Documents, certificates of inspection, tests and approvals, and Shop Drawings, Samples, and other data approved as provided under Paragraph A1.05.A.17. Receive-from Contractor, review, and transmit to Owner the annotated record documents which are to be assembled by Contractor in accordance with the Construction Contract-Documents to obtain final payment. The extent of Engineer's review of record documents shall be to check that Contractor has submitted all pages. Receive from Contractor and review the annotated record documents which are to be assembled by Contractor in accordance with the Construction Contract Documents to obtain final payment. The Engineer shall prepare Record Drawings, and furnish such Record Drawings to Owner.
- 23. Substantial Completion: Promptly after notice from Contractor that Contractor considers the entire Work ready for its intended use, in company with Owner and Contractor, visit the Site to review the Work and determine the status of completion. Follow the procedures in the Construction Contract regarding the preliminary certificate of Substantial Completion, punch list of items to be completed, Owner's objections, notice to Contractor, and issuance of a final certificate of Substantial Completion. Assist Owner regarding any remaining engineering or technical matters affecting Owner's use or occupancy of the Work following Substantial Completion.
- 24. Other Tasks: Perform or provide the following other Construction Phase tasks or deliverables:
 - a. Upon Substantial Completion, the Engineer shall provide a copy of the Certificate of Substantial Completion to the Agency.
- 25. Final Notice of Acceptability of the Work: Conduct a final visit to the Project to determine if the Work is complete and acceptable so that Engineer may recommend, in writing, final payment to Contractor. Accompanying the recommendation for final payment, Engineer shall also provide a notice to Owner and Contractor in the form attached hereto as Exhibit E ("Notice of Acceptability of Work") that the Work is acceptable (subject to the provisions of the Notice and Paragraph A1.05.A.21.b) to the best of Engineer's knowledge, information, and belief, and based on the extent of the services provided by Engineer under this Agreement. (a) Obtain the Contractor's Certification letter and copies of Manufacturers' Certification letters for all American Iron and Steel products used in the project. Upon Substation Completion, provide copies of Engineer's, Contractors', and Manufacturers' Certification letters to the Owner and a copy of Contractor's Certification letter to the Agency. Provide a list of manufacturers of American Iron and Steel products used in the project and include manufacture' name and location, and product(s) to the Agency.
- 26. Standards for Certain Construction-Phase Decisions: Engineer will render decisions regarding the requirements of the Construction Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth in the Construction Contract for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality

to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

XXX. Duration of Construction Phase: The Construction Phase will commence with the execution of the first Construction Contract for the Project or any part thereof and will terminate upon written recommendation by Engineer for final payment to Contractors. If the Project involves more than one prime contract as indicated in Paragraph A1.03.D, then Construction Phase services may be rendered at different times in respect to the separate contracts. Subject to the provisions of Article 3, Engineer shall be entitled to an equitable increase in compensation if Construction Phase services (including Resident Project Representative services, if any) are required after the original date for completion and readiness for final payment of Contractor as set forth in the Construction Contract.

A1.6 Post-Construction Phase

- A. Upon written authorization from Owner during the Post-Construction Phase, Engineer shall:
 - Together with Owner, visit the Project to observe any apparent defects in the Work, make recommendations as to replacement or correction of defective Work, if any, or the need to repair of any damage to the Site or adjacent areas, and assist Owner in consultations and discussions with Contractor concerning correction of any such defective Work and any needed repairs.
 - Together with Owner, visit the Project within one month before the end of the Construction Contract's correction period to ascertain whether any portion of the Work or the repair of any damage to the Site or adjacent areas is defective and therefore subject to correction by Contractor.
 - 3. Perform or provide the following other Post-Construction Phase tasks or deliverables:
 None
- YYY. The Post-Construction Phase services may commence during the Construction Phase and, if not otherwise modified in this Exhibit A, will terminate twelve months after the commencement of the Construction Contract's correction period.

PART 2 – ADDITIONAL SERVICES

- A2.01 Additional Services Requiring Owner's Written Authorization
 - A. If authorized in writing by Owner, Engineer shall provide Additional Services of the types listed below. These services are not included as part of Basic Services and will be paid for by Owner as indicated in Exhibit C.
 - 1. Preparation of applications and supporting documents (in addition to those furnished under Basic Services) for private or governmental grants, loans, or advances in connection with the Project; preparation or review of environmental assessments and impact statements not including preparation of the Environmental Report defined under Basic Services; review and evaluation of the effects on the design requirements for the Project of any such statements and documents prepared by others; and assistance in obtaining approvals of authorities having jurisdiction over the anticipated environmental impact of the Project.

- 2. Services to make measured drawings of existing conditions or facilities, to conduct tests or investigations of existing conditions or facilities, or to verify the accuracy of drawings or other information furnished by Owner or others.
- 3. Services resulting from significant changes in the scope, extent, or character of the portions of the Project designed or specified by Engineer, or the Project's design requirements, including, but not limited to, changes in size, complexity, Owner's schedule, character of construction, or method of financing; and revising previously accepted studies, reports, Drawings, Specifications, or Construction Contract Documents when such revisions are required by changes in Laws and Regulations enacted subsequent to the Effective Date or are due to any other causes beyond Engineer's control.
- 4. Services resulting from Owner's request to evaluate additional Study and Report Phase alternative solutions beyond those agreed to in Paragraph A1.01.A.1 and 2, but only if the Owner's request is made after completion of the Study and Report Phase.
- 5. Services required as a result of Owner's providing incomplete or incorrect Project information to Engineer.
- Providing renderings or models for Owner's use, including services in support of building information modeling or civil integrated management.
- 7. Undertaking investigations and studies including, but not limited to:
 - a. detailed consideration of operations, maintenance, and overhead expenses;
 - the preparation of feasibility studies (such as those that include projections of output capacity, utility project rates, project market demand, or project revenues) and cash flow analyses, provided that such services are based on the engineering and technical aspects of the Project, and do not include rendering advice regarding municipal financial products or the issuance of municipal securities;
 - c. preparation of appraisals;
 - d. evaluating processes available for licensing, and assisting Owner in obtaining process licensing;
 - e. detailed quantity surveys of materials, equipment, and labor; and
 - f. audits or inventories required in connection with construction performed or furnished by Owner.
- 8. Furnishing services of Consultants for other than Basic Services.
- 9. Providing data or services of the types described in Exhibit B, when Owner retains Engineer to provide such data or services instead of Owner furnishing the same.
- 10. Providing the following services:
 - Services attributable to more prime construction contracts than specified in Paragraph A1.03.D.
 - Services to arrange for performance of construction services for Owner by contractors other than the principal prime Contractor, and administering Owner's contract for such services.

- 11. Services during out-of-town travel required of Engineer, other than for visits to the Site or Owner's office as required in Basic Services (Part 1 of Exhibit A).
- 12. Preparing for, coordinating with, participating in and responding to structured independent review processes, including, but not limited to, construction management, cost estimating, project peer review, value engineering, and constructibility review requested by Owner; and performing or furnishing services required to revise studies, reports, Drawings, Specifications, or other documents as a result of such review processes.
- 13. Preparing additional bidding-related documents (or requests for proposals or other construction procurement documents) or Construction Contract Documents for alternate bids or cost estimates requested by Owner for the Work or a portion thereof.
- 14. Assistance in connection with bid protests, rebidding, or renegotiating contracts for construction, materials, equipment, or services, except when such assistance is required to complete services required by Paragraph 5.02.A and Exhibit F.
- 15. Preparing conformed Construction Contract Documents that incorporate and integrate the content of all Addenda and any amendments negotiated by Owner and Contractor.
- 16. Providing Construction Phase services beyond the original date for completion and readiness for final payment of Contractor, but only if such services increase the total quantity of services to be performed in the Construction Phase, rather than merely shifting performance of such services to a later date.
- 17. Preparing Record Drawings, and furnishing such Record Drawings to Owner.
- Supplementing Record Drawings with information regarding the completed Project, Site, and immediately adjacent areas obtained from field observations, Owner, utility companies, and other reliable sources.
- 19. Conducting surveys, investigations, and field measurements to verify the accuracy of Record Drawing content obtained from Contractor, Owner, utility companies, and other sources; revise and supplement Record Drawings as needed.
- 20. Preparation of operation, maintenance, and staffing manuals.
- 21. Protracted or extensive assistance in refining and adjusting of Project equipment and systems (such as initial startup, testing, and balancing).
- 22. Assistance to Owner in training Owner's staff to operate and maintain Project equipment and systems.
- 23. Assistance to Owner in developing systems and procedures for (a) control of the operation and maintenance of Project equipment and systems, and (b) related recordkeeping.
- 24. Preparing to serve or serving as a consultant or witness for Owner in any litigation, arbitration, lien or bond claim, or other legal or administrative proceeding involving the Project.
- 25. Overtime work requiring higher than regular rates.
- 26. Providing construction surveys and staking to enable Contractor to perform its work other than as required under Paragraph A1.05.A.8; any type of property surveys or

- related engineering services needed for the transfer of interests in real property; and providing other special field surveys.
- 27. Providing more extensive services required to enable Engineer to issue notices or certifications requested by Owner.
- 28. Extensive services required during any correction period, or with respect to monitoring Contractor's compliance with warranties and guarantees called for in the Construction Contract (except as agreed to under Basic Services).
- 29. Other additional services performed or furnished by Engineer not otherwise provided for in this Agreement.

A2.02 Additional Services Not Requiring Owner's Written Authorization

- A. Engineer shall advise Owner that Engineer is commencing to perform or furnish the Additional Services of the types listed below. For such Additional Services, Engineer need not request or obtain specific advance written authorization from Owner. Engineer shall cease performing or furnishing such Additional Services upon receipt of written notice to cease from Owner.
 - 30. Services in connection with Work Change Directives and Change Orders to reflect changes requested by Owner.
 - 31. Services in making revisions to Drawings and Specifications occasioned by the acceptance of substitute materials or equipment other than "or equal" items; services after the award of the Construction Contract in evaluating and determining the acceptability of a proposed "or equal" or substitution which is found to be inappropriate for the Project; evaluation and determination of an excessive number of proposed "or equals" or substitutions, whether proposed before or after award of the Construction Contract. Services in making revisions to Drawings and Specifications occasioned by the acceptance of substitute materials or equipment other than "or equal" items; evaluation and determination of an excessive number of proposed "or equals" or substitutions, whether proposed before or after award of the Construction Contract.
 - 32. Services resulting from significant delays, changes, or price increases occurring as a direct or indirect result of materials, equipment, or energy shortages.
 - 33. Additional or extended services arising from (a) the presence at the Site of any Constituent of Concern or items of historical or cultural significance, (b) emergencies or acts of God endangering the Work, (c) damage to the Work by fire or other causes during construction, (d) a significant amount of defective, neglected, or delayed Work, (e) acceleration of the progress schedule involving services beyond normal working hours, or (f) default by Contractor.
 - 34. Services (other than Basic Services during the Post-Construction Phase) in connection with any partial utilization of the Work by Owner prior to Substantial Completion.
 - 35. Evaluating unreasonable or frivolous requests for interpretation or information (RFIs), Change Proposals, or other demands from Contractor or others in connection with the Work, or an excessive number of RFIs, Change Proposals, or demands.
 - 36. Reviewing a Shop Drawing or other Contractor submittal more than three times, as a result of repeated inadequate submissions by Contractor.

37.	While at the Site, compliance by Engineer and its staff with those terms of Owner's or Contractor's safety program provided to Engineer subsequent to the Effective Date that exceed those normally required of engineering personnel by federal, State, or local safety authorities for similar construction sites.

This is **EXHIBIT B**, consisting of 4 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services**dated

Owner's Responsibilities

Article 2 of the Agreement is supplemented to include the following agreement of the parties.

- B2.01 In addition to other responsibilities of Owner as set forth in this Agreement, Owner shall at its expense:
 - A. Provide Engineer with all criteria and full information as to Owner's requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility, and expandability, and any budgetary limitations.
 - ZZZ. Give instructions to Engineer regarding Owner's procurement of construction services (including instructions regarding advertisements for bids, instructions to bidders, and requests for proposals, as applicable), Owner's construction contract practices and requirements, insurance and bonding requirements, electronic transmittals during construction, and other information necessary for the finalization of Owner's biddingrelated documents (or requests for proposals or other construction procurement documents), and Construction Contract Documents. Furnish copies (or give specific directions requesting Engineer to use copies already in Engineer's possession) of all design and construction standards, Owner's standard forms, general conditions (if other than EJCDC® C-700, Standard General Conditions of the Construction Contract, 2013 Edition), supplementary conditions, text, and related documents and content for Engineer to include in the draft bidding-related documents (or requests for proposals or other construction procurement documents), and draft Construction Contract Documents, when applicable. Owner shall have responsibility for the final content of (1) such bidding-related documents (or requests for proposals or other construction procurement documents), and (2) those portions of any Construction Contract other than the design (as set forth in the Drawings, Specifications, or otherwise), and other engineering or technical matters; and Owner shall seek the advice of Owner's legal counsel, risk managers, and insurance advisors with respect to the drafting and content of such documents.
 - AAAA. Furnish to Engineer any other available information pertinent to the Project including reports and data relative to previous designs, construction, or investigation at or adjacent to the Site.
 - BBBB. Following Engineer's assessment of initially-available Project information and data and upon Engineer's request, obtain, furnish, or otherwise make available (if necessary through title searches, or retention of specialists or consultants) such additional Project-related information and data as is reasonably required to enable Engineer to complete its Basic and Additional Services. Such additional information or data would generally include the following:
 - 1. Property descriptions.
 - 2. Zoning, deed, and other land use restrictions.

Exhibit B - Owner's Responsibilities

EJCDC® E-500, Agreement Between Owner and Engineer for Professional Services.

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- 3. Utility and topographic mapping and surveys.
- 4. Property, boundary, easement, right-of-way, and other special surveys or data, including establishing relevant reference points.
- 5. Explorations and tests of subsurface conditions at or adjacent to the Site; geotechnical reports and investigations; drawings of physical conditions relating to existing surface or subsurface structures at the Site; hydrographic surveys, laboratory tests and inspections of samples, materials, and equipment; with appropriate professional interpretation of such information or data.
- Environmental assessments, audits, investigations, and impact statements, and other relevant environmental, historical, or cultural studies relevant to the Project, the Site, and adjacent areas.
- 7. Data or consultations as required for the Project but not otherwise identified in this Agreement.
- CCCC. Arrange for safe access to and make all provisions for Engineer to enter upon public and private property as required for Engineer to perform services under the Agreement.
- DDDD. Recognizing and acknowledging that Engineer's services and expertise do not include the following services, provide, as required for the Project:
 - Accounting, bond and financial advisory (including, if applicable, "municipal advisor" services as described in Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (2010) and the municipal advisor registration rules issued by the Securities and Exchange Commission), independent cost estimating, and insurance counseling services.
 - 2. Legal services with regard to issues pertaining to the Project as Owner requires, Contractor raises, or Engineer reasonably requests.
 - 3. Such auditing services as Owner requires to ascertain how or for what purpose Contractor has used the money paid.
- EEEE. Provide the services of an independent testing laboratory to perform all inspections, tests, and approvals of samples, materials, and equipment required by the Construction Contract Documents (other than those required to be furnished or arranged by Contractor), or to evaluate the performance of materials, equipment, and facilities of Owner, prior to their incorporation into the Work with appropriate professional interpretation thereof. Provide Engineer with the findings and reports generated by testing laboratories, including findings and reports obtained from or through Contractor.
- FFFF. Provide reviews, approvals, and permits from all governmental authorities having jurisdiction to approve all phases of the Project designed or specified by Engineer and such reviews, approvals, and consents from others as may be necessary for completion of each phase of the Project.
- GGGG. Advise Engineer of the identity and scope of services of any independent consultants employed by Owner to perform or furnish services in regard to the Project, including, but not limited to, cost estimating, project peer review, value engineering, and constructibility review.

- HHHH. If Owner designates a construction manager or an individual or entity other than, or in addition to, Engineer to represent Owner at the Site, define and set forth as an attachment to this Exhibit B the duties, responsibilities, and limitations of authority of such other party and the relation thereof to the duties, responsibilities, and authority of Engineer.
- IIII. If more than one prime contract is to be awarded for the Work designed or specified by Engineer, then designate a person or entity to have authority and responsibility for coordinating the activities among the various prime Contractors, and define and set forth the duties, responsibilities, and limitations of authority of such individual or entity and the relation thereof to the duties, responsibilities, and authority of Engineer as an attachment to this Exhibit B that is to be mutually agreed upon and made a part of this Agreement before such services begin.
- JJJJ. Inform Engineer in writing of any specific requirements of safety or security programs that are applicable to Engineer, as a visitor to the Site.
- KKKK. Examine all alternative solutions, studies, reports, sketches, Drawings, Specifications, proposals, and other documents presented by Engineer (including obtaining advice of an attorney, risk manager, insurance counselor, financial/municipal advisor, and other advisors or consultants as Owner deems appropriate with respect to such examination) and render in writing timely decisions pertaining thereto.
- LLLL.Inform Engineer regarding any need for assistance in evaluating the possible use of Project Strategies, Technologies, and Techniques, as defined in Exhibit A.
- MMMM. Advise Engineer as to whether Engineer's assistance is requested in identifying opportunities for enhancing the sustainability of the Project.
- NNNN. Place and pay for advertisement for Bids in appropriate publications.
- OOOO. Furnish to Engineer data as to Owner's anticipated costs for services to be provided by others (including, but not limited to, accounting, bond and financial, independent cost estimating, insurance counseling, and legal advice) for Owner so that Engineer may assist Owner in collating the various cost categories which comprise Total Project Costs.
- PPPP. Attend and participate in the pre-bid conference, bid opening, pre-construction conferences, construction progress and other job related meetings, and Site visits to determine Substantial Completion and readiness of the completed Work for final payment.
- QQQQ. Authorize Engineer to provide Additional Services as set forth in Part 2 of Exhibit A of the Agreement, as required.
- RRRR. Perform or provide the following: None
- B.2.02 Owners are ultimately responsible for compliance with Section 746 of Title VII of the Consolidated Appropriations Act of 2017 (Division A Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2017) and subsequent statutes mandating domestic preference and will be responsible for the following:
 - (a) Signing loan resolutions, grant agreements and letters of intent to meet conditions which include American Iron and Steel language, accepting American Iron and Steel requirements in those documents and in the letter of conditions.
 - (b) Signing change orders (i.e. C-941 of EJCDC) and partial payment estimates (i.e. C-620 of EJCDC) and thereby acknowledging responsibility for compliance with American Iron and Steel requirements.

- (c) Obtaining the certification letters from the consulting engineer upon substantial completion of the project and maintaining this documentation for the life of the loan.
- (d) Where the owner provides their own engineering and/or construction manufacturers' certification letters (as applicable) to the Agency. All certification letters must be kept in the engineer's project file and on site during construction. For Owner Construction (Force Account), all clauses from Section 17 of RUS Bulletin 1780-35 must be include in the Agreement for Engineering Services.
- (e) Where the owner directly procures American Iron and Steel products, including American Iron and Steel clauses in the procurement contracts and obtaining manufacturers' certification letters and providing copies to consulting engineers and contactors.

This is **EXHIBIT C**, consisting of 3 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services**dated

Payments to Engineer for Services and Reimbursable Expenses
COMPENSATION PACKET BC-2: Basic Services – Standard Hourly Rates

Article 2 of the Agreement is supplemented to include the following agreement of the parties:

ARTICLE 2 – OWNER'S RESPONSIBILITIES

- C2.01 Compensation For Basic Services (other than Resident Project Representative) Standard Hourly Rates Method of Payment
 - A. Owner shall pay Engineer for Basic Services set forth in Exhibit A, except for services of Engineer's Resident Project Representative, if any, as follows:
 - An amount equal to the cumulative hours charged to the Project by each class of Engineer's personnel times Standard Hourly Rates for each applicable billing class for all services performed on the Project, plus Reimbursable Expenses and Engineer's Consultants' charges, if any.
 - The Standard Hourly Rates charged by Engineer constitute full and complete compensation for Engineer's services, including labor costs, overhead, and profit; the Standard Hourly Rates do not include Reimbursable Expenses or Engineer's Consultants' charges.
 - 3. Engineer's Reimbursable Expenses Schedule and Standard Hourly Rates are attached to this Exhibit C as Appendices 1 and 2.
 - 4. The total compensation for services under Paragraph C2.01 is estimated to be \$20,900 based on the following estimated distribution of compensation:
 - a. Study and Report Phase n/a
 - b. Preliminary Design Phase n/a
 - c. Final Design Phase

\$6,300

d. Bidding or Negotiating Phase

\$1,200

e. Construction Phase

\$11,510

- f. Post-Construction Phase \$1,890
- Engineer may alter the distribution of compensation between individual phases of the work noted herein to be consistent with services actually rendered, but shall not exceed the total estimated compensation amount unless approved in writing by Owner and Agency. See also C2.03.C.2 below.

- 6. The total estimated compensation for Engineer's services included in the breakdown by phases as noted in Paragraph C2.01.A.3 incorporates all labor, overhead, profit, Reimbursable Expenses, and Engineer's Consultants' charges.
- 7. The amounts billed for Engineer's services under Paragraph C2.01 will be based on the cumulative hours charged to the Project during the billing period by each class of Engineer's employees times Standard Hourly Rates for each applicable billing class, plus Reimbursable Expenses and Engineer's Consultants' charges.
- 8. The Standard Hourly Rates and Reimbursable Expenses Schedule will be adjusted annually (as of May) to reflect equitable changes in the compensation payable to Engineer. Changes will not be effective unless and until concurred in by the Owner and Agency.

C2.02 Compensation For Reimbursable Expenses

- A. Owner shall pay Engineer for all Reimbursable Expenses at the rates set forth in Appendix 1to this Exhibit C.
- A. Reimbursable Expenses include the expenses identified in Appendix 1 and the following: transportation (including mileage), lodging, and subsistence incidental thereto; providing and maintaining field office facilities including furnishings and utilities; toll telephone calls, mobile phone charges, and courier charges; reproduction of reports, Drawings, Specifications, bidding-related or other procurement documents, Construction Contract Documents, and similar Project-related items; and Consultants' charges. In addition, if authorized in advance by Owner, Reimbursable Expenses will also include expenses incurred for the use of highly specialized equipment.
- B. The amounts payable to Engineer for Reimbursable Expenses will be the Project-related internal expenses actually incurred or allocated by Engineer, plus all invoiced external Reimbursable Expenses allocable to the Project, the latter multiplied by a factor of [1].

C2.03 Other Provisions Concerning Payment

- A. Whenever Engineer is entitled to compensation for the charges of Engineer's Consultants, those charges shall be the amounts billed by Engineer's Consultants to Engineer times a factor of one.
- SSSS. Factors: The external Reimbursable Expenses and Engineer's Consultants' factors include Engineer's overhead and profit associated with Engineer's responsibility for the administration of such services and costs.

TTTT. Estimated Compensation Amounts:

- Engineer's estimate of the amounts that will become payable for specified services are only estimates for planning purposes, are not binding on the parties, and are not the minimum or maximum amounts payable to Engineer under the Agreement.
- When estimated compensation amounts have been stated herein and it subsequently becomes apparent to Engineer that the total compensation amount thus estimated will be exceeded, Engineer shall give Owner and Agency written notice thereof, allowing Owner to consider its options, including suspension or termination of

Engineer's services for Owner's convenience. Upon notice, Owner and Engineer promptly shall review the matter of services remaining to be performed and compensation for such services. Owner shall either exercise its right to suspend or terminate Engineer's services for Owner's convenience, agree to such compensation exceeding said estimated amount, or agree to a reduction in the remaining services to be rendered by Engineer, so that total compensation for such services will not exceed said estimated amount when such services are completed. If Owner decides not to suspend the Engineer's services during the negotiations and Engineer exceeds the estimated amount before Owner and Engineer have agreed to an increase in the compensation due Engineer or a reduction in the remaining services, then Engineer shall be paid for all services rendered hereunder.

UUUU. To the extent necessary to verify Engineer's charges and upon Owner's timely request, Engineer shall make copies of such records available to Owner at cost.

COMPENSATION PACKET RPR-2:

Resident Project Representative - Standard Hourly Rates

Article 2 of the Agreement is supplemented to include the following agreement of the parties:

- C2.04 Compensation for Resident Project Representative Basic Services Standard Hourly Rates Method of Payment
 - A. Owner shall pay Engineer for Resident Project Representative Basic Services as follows:
 - 1. Resident Project Representative Services: For services of Engineer's Resident Project Representative under Paragraph A1.05.A of Exhibit A, an amount equal to the cumulative hours charged to the Project by each class of Engineer's personnel times Standard Hourly Rates for each applicable billing class for all Resident Project Representative services performed on the Project, plus related Reimbursable Expenses and Engineer's Consultant's charges, if any. The total compensation under this paragraph is estimated to be \$25,880 based upon full-time RPR services on an eight-hour 3.45 hour workday, Monday through Friday, over a 15 day week construction schedule.
 - 2. If rate(s) for RPR services is not indicated in Appendix Two to Exhibit C, "Standard Hourly Rates Schedule," the Standard Hourly Rate for RPR services is \$_______ per hour.
 - C. Compensation for Reimbursable Expenses:
 - For those Reimbursable Expenses that are not accounted for in the compensation for Basic Services under Paragraph C2.01, and are directly related to the provision of Resident Project Representative or Post-Construction Basic Services, Owner shall pay Engineer at the rates set forth in Appendix 1 to this Exhibit C.
 - 2. Reimbursable Expenses include the expenses identified in Appendix 1 and the following: transportation (including mileage), lodging, and subsistence incidental thereto; providing and maintaining field office facilities including furnishings and utilities; subsistence and transportation of Resident Project Representative and assistants; toll telephone calls, mobile phone charges, and courier charges; reproduction of reports, Drawings, Specifications, bidding-related or other procurement documents, Construction Contract Documents, and similar Project-related items. In addition, if authorized in advance by Owner, Reimbursable Expenses will also include expenses incurred for the use of highly specialized equipment.
 - The amounts payable to Engineer for Reimbursable Expenses, if any, will be those
 internal expenses related to the Resident Project Representative Basic Services that are
 actually incurred or allocated by Engineer, plus all invoiced external Reimbursable
 Expenses allocable to such services, the latter multiplied by a factor of [].
 - 4. The Reimbursable Expenses Schedule will be adjusted annually (as of []) to reflect equitable changes in the compensation payable to Engineer. Changes will not be effective unless and until concurred in by the Owner and Agency.

Exhibit C – Compensation Packet RPR-2: Resident Project Representative Services— Standard Hourly Rates Method of Payment.

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- D. Other Provisions Concerning Payment Under this Paragraph C2.04:
 - Whenever Engineer is entitled to compensation for the charges of Engineer's Consultants, those charges shall be the amounts billed by Engineer's Consultants to Engineer times a factor of one.
 - 2. Factors: The external Reimbursable Expenses and Engineer's Consultant's factors include Engineer's overhead and profit associated with Engineer's responsibility for the administration of such services and costs.
 - 3. Estimated Compensation Amounts:
 - a. Engineer's estimate of the amounts that will become payable for specified services are only estimates for planning purposes, are not binding on the parties, and are not the minimum or maximum amounts payable to Engineer under the Agreement.
 - When estimated compensation amounts have been stated herein and it subsequently becomes apparent to Engineer that the total compensation amount thus estimated will be exceeded, Engineer shall give Owner and Agency written notice thereof, allowing Owner to consider its options, including suspension or termination of Engineer's services for Owner's convenience. Upon notice Owner and Engineer promptly shall review the matter of services remaining to be performed and compensation for such services. Owner shall either exercise its right to suspend or terminate Engineer's services for Owner's convenience, agree to such compensation exceeding said estimated amount, or agree to a reduction in the remaining services to be rendered by Engineer, so that total compensation for such services will not exceed said estimated amount when such services are If Owner decides not to suspend Engineer's services during negotiations and Engineer exceeds the estimated amount before Owner and Engineer have agreed to an increase in the compensation due Engineer or a reduction in the remaining services, then Engineer shall be paid for all services rendered hereunder.
 - 4. To the extent necessary to verify Engineer's charges and upon Owner's timely request, Engineer shall make copies of such records available to Owner at cost at no cost.

Article 2 of the Agreement is supplemented to include the following agreement of the parties:

C2.05 Compensation for Additional Services – Standard Hourly Rates Method of Payment

- A. Owner shall pay Engineer for Additional Services, if any, as follows:
 - 5. General: For services of Engineer's personnel engaged directly on the Project pursuant to Paragraph A2.01 or A2.02 of Exhibit A, except for services as a consultant or witness under Paragraph A2.01.A.20, (which if needed shall be separately negotiated based on the nature of the required consultation or testimony) an amount equal to the cumulative hours charged to the Project by each class of Engineer's personnel times Standard Hourly Rates for each applicable billing class for all Additional Services performed on the Project, plus related Reimbursable Expenses and Engineer's Consultant's charges, if any.

E. Compensation For Reimbursable Expenses:

- For those Reimbursable Expenses that are not accounted for in the compensation for Basic Services under Paragraph C2.01 and are directly related to the provision of Additional Services, Owner shall pay Engineer at the rates set forth in Appendix 1 to this Exhibit C.
- 2. Reimbursable Expenses include the expenses identified in Appendix 1 and the following categories: transportation (including mileage), lodging, and subsistence incidental thereto; providing and maintaining field office facilities including furnishings and utilities; toll telephone calls, mobile phone charges, and courier charges; reproduction of reports, Drawings, Specifications, bidding-related or other procurement documents, Construction Contract Documents, and similar Project-related items; and Consultants' charges. In addition, if authorized in advance by Owner, Reimbursable Expenses will also include expenses incurred for the use of highly specialized equipment.
- 3. The amounts payable to Engineer for Reimbursable Expenses, if any, will be the Additional Services-related internal expenses actually incurred or allocated by Engineer, plus all invoiced external Reimbursable Expenses allocable to such Additional Services, the latter multiplied by a factor of [-].
- 4. The Reimbursable Expenses Schedule will be adjusted annually (as of []) to reflect equitable changes in the compensation payable to Engineer. Changes will not be effective unless and until concurred in by the Owner and Agency.
- F. Other Provisions Concerning Payment for Additional Services:
 - 1. Whenever Engineer is entitled to compensation for the charges of Engineer's Consultants, those charges shall be the amounts billed by Engineer's Consultants to Engineer times a factor of one.

Exhibit C – Compensation Packet AS-1: Additional Services –
Standard Hourly Rates Method of Payment.

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2.	Factors:	The	external	Reimbursable	Expenses	and	Engineer's	Consultant's	Factors
		_		ead and profit		l with	n Engineer's	responsibility	for the
	administr	ation	of such se	ervices and cost	S.				

3.	To the extent necessary to verify Engineer's charges and upon Owner's timely request
	Engineer shall make copies of such records available to Owner at cost at no cost.

This is Appendix	1 to EXHIBIT C,	, consisting of []	-
pages, referred	to in and part	of the Agreement	
between Owner :	and Engineer for I	Professional Services	
dated [].			

Reimbursable Expenses Schedule

Reimbursable Expenses are subject to review and adjustment per Exhibit C. Rates and charges for Reimbursable Expenses as of the date of the Agreement are:

8"x11" Copies/Impressions	 \$ [
Copies of Drawings	\$ [}/sq. ft.
Mileage (auto)	- \$ [/mile
Air Transportation	at-cost
CAD Charge	\$-[]/hour
Laboratory Testing	at cost-
Health and Safety Level D	\$ []/day
Health and Safety Level C	\$-[]/day
Meals and Lodging	at cost

This is Append	ix 2 to EXHIBIT C, consisting of 2
pages, referred	to in and part of the Agreement
between Own	er and Engineer for Professional
Services dated	

Standard Hourly Rates Schedule

A. Standard Hourly Rates:

- 4. Standard Hourly Rates are set forth in this Appendix 2 to this Exhibit C and include salaries and wages paid to personnel in each billing class plus the cost of customary and statutory benefits, general and administrative overhead, non-project operating costs, and operating margin or profit.
- 5. The Standard Hourly Rates apply only as specified in Article C2.

G. Schedule:

Hourly rates for services performed on or after the date of the Agreement are:

Engineering Department

Director of Engineering	\$165/hour
Deputy Director of Engineering	\$145/hour
Engineering Division Manager	\$145/hour
Senior Project Manager	\$140/hour
Project Manager	\$135/hour
Senior Engineer	\$135/hour
Senior Project Engineer	\$135/hour
Project Engineer	\$120/hour
Assistant Project Engineer	\$110/hour
Graduate Engineer	\$105/hour
Senior Manager	\$106/hour
Senior Project Administrator	\$106/hour
Project Administrator	\$115/hour
Senior Engineering Technician	\$100/hour
Engineering Technician III	\$95/hour
Engineering Technician II	\$85/hour
Engineering Technician I	\$80/hour
Engineering Co-Op/Intern	\$65/hour

Survey Department

Director of Surveying	\$150/hour
Senior Project Manager	\$140/hour
<u> </u>	•
Project Manager	\$130/hour
Project Surveyor - Office	\$110/hour
Project Surveyor – Field	\$110/hour
Survey Project Coordinator	\$110/hour
Assistant Project Surveyor	\$95/hour
Graduate Surveyor	\$90/hour

Exhibit C – Appendix 2: Standard Hourly Rates Schedule.

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Survey Crew Chief	\$93/hour
Survey Field Technician III	\$83/hour
Survey Field Technician II	\$72/hour
Survey Field Technician I	\$65/hour
Survey Office Technician II	\$92/hour
Survey Office Technician I	\$80/hour
Survey Co-Op/Intern	\$65/hour

Administration and Support

Accounting \$55/hour Clerical/Administration \$55/hour

This is **EXHIBIT D**, consisting of 5 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services**dated

Duties, Responsibilities, and Limitations of Authority of Resident Project Representative

Article 1 of the Agreement is supplemented to include the following agreement of the parties:

ARTICLE 1 - SERVICES OF ENGINEER

D1.01 Resident Project Representative

- A. Engineer shall furnish a Resident Project Representative ("RPR") to assist Engineer in observing progress and quality of the Work. The RPR may provide full time representation or may provide representation to a lesser degree. RPR is Engineer's representative at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions. Full time Resident Project Representation is required unless requested in writing by the Owner and waived in writing by the Agency.
- H. Through RPR's observations of the Work, including field checks of materials and installed equipment, Engineer shall endeavor to provide further protection for Owner against defects and deficiencies in the Work. However, Engineer shall not, as a result of such RPR observations of the Work, supervise, direct, or have control over the Work, nor shall Engineer (including the RPR) have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected or used by any Constructor, for security or safety at the Site, for safety precautions and programs incident to the Work or any Constructor's work in progress, for the coordination of the Constructors' work or schedules, or for any failure of any Constructor to comply with Laws and Regulations applicable to the performing and furnishing of its work. The Engineer (including RPR) neither guarantees the performances of any Constructor nor assumes responsibility for any Constructor's failure to furnish and perform the Work, or any portion of the Work, in accordance with the Construction Contract Documents. In addition, the specific terms set forth in Exhibit A, Paragraph A1.05, of this Agreement are applicable.
- I. The duties and responsibilities of the RPR are as follows:
 - General: RPR's dealings in matters pertaining to the Work in general shall be with Engineer and Contractor. RPR's dealings with Subcontractors shall only be through or with the full knowledge and approval of Contractor. RPR shall generally communicate with Owner only with the knowledge of and under the direction of Engineer.
 - Schedules: Review the progress schedule, schedule of Shop Drawing and Sample submittals, schedule of values, and other schedules prepared by Contractor and consult with Engineer concerning acceptability of such schedules.

Exhibit D - Resident Project Representative.

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- 3. Conferences and Meetings: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings (but not including Contractor's safety meetings), and as appropriate prepare and circulate copies of minutes thereof.
- 4. Safety Compliance: Comply with Site safety programs, as they apply to RPR, and if required to do so by such safety programs, receive safety training specifically related to RPR's own personal safety while at the Site.

5. Liaison:

- a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Construction Contract Documents.
- Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.
- c. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.
- 6. Clarifications and Interpretations: Receive from Contractor submittal of any matters in question concerning the requirements of the Construction Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Construction Contract Documents. Report to Engineer regarding such RFIs. Report to Engineer when clarifications and interpretations of the Construction Contract Documents are needed, whether as the result of a Contractor RFI or otherwise. Transmit Engineer's clarifications, interpretations, and decisions to Contractor.,

7. Shop Drawings and Samples:

- a. Record date of receipt of Samples and Contractor-approved Shop Drawings.
- b. Receive Samples that are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.
- c. Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal, if RPR believes that the submittal has not been received from Contractor, or has not been approved by Contractor or Engineer.
- Proposed Modifications: Consider and evaluate Contractor's suggestions for modifications to the Drawings or Specifications, and report such suggestions, together with RPR's recommendations, if any, to Engineer. Transmit Engineer's response (if any) to such suggestions to Contractor.
- 9. Review of Work; Defective Work:

- a. Report to Engineer whenever RPR believes that any part of the Work is defective under the terms and standards set forth in the Construction Contract Documents, and provide recommendations as to whether such Work should be corrected, removed and replaced, or accepted as provided in the Construction Contract Documents.
- b. Inform Engineer of any Work that RPR believes is not defective under the terms and standards set forth in the Construction Contract Documents, but is nonetheless not compatible with the design concept of the completed Project as a functioning whole, and provide recommendations to Engineer for addressing such Work.; and
- c. Advise Engineer of that part of the Work that RPR believes should be uncovered for observation, or requires special testing, inspection, or approval.

10. Inspections, Tests, and System Start-ups:

- a. Consult with Engineer in advance of scheduled inspections, tests, and systems startups.
- b. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.
- c. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.
- d. Observe whether Contractor has arranged for inspections required by Laws and Regulations, including but not limited to those to be performed by public or other agencies having jurisdiction over the Work.
- Accompany visiting inspectors representing public or other agencies having jurisdiction over the Work, record the results of these inspections, and report to Engineer.

11. Records:

- a. Maintain at the Site orderly files for correspondence, reports of job conferences, copies of Construction Contract Documents including all Change Orders, Field Orders, Work Change Directives, Addenda, additional Drawings issued subsequent to the execution of the Construction Contract, RFIs, Engineer's clarifications and interpretations of the Construction Contract Documents, progress reports, approved Shop Drawing and Sample submittals, and other Project-related documents.
- b. Prepare a daily report or keep a diary or log book, recording Contractor's hours on the Site, Subcontractors present at the Site, weather conditions, data relative to questions of Change Orders, Field Orders, Work Change Directives, or changed conditions, Site visitors, deliveries of equipment or materials, daily activities,

- decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer.
- c. Upon request from Owner to Engineer, photograph or video Work in progress or Site conditions.
- d. Record and maintain accurate, up-to-date lists of the names, addresses, fax numbers, e-mail addresses, websites, and telephone numbers (including mobile numbers) of all Contractors, Subcontractors, and major Suppliers of materials and equipment.
- e. Maintain records for use in preparing Project documentation.
- f. Upon completion of the Work, furnish original set of all RPR Project documentation to Engineer.
- g. Maintain all Manufacturers' Certification letters in the project file and on site during construction to ensure compliance with American and Iron Steel requirements mandated by Section 746 of Title VII of the Consolidated Appropriations Act of 2017 (Division A Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2017) and subsequent statutes mandating domestic preference, as applicable.

12. Reports:

- Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the progress schedule and schedule of Shop Drawing and Sample submittals.
- b. Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.
- Furnish to Engineer and Owner copies of all inspection, test, and system start-up reports.
- d. Immediately inform Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, possible force majeure or delay events, damage to property by fire or other causes, or the discovery of any potential differing site condition or Constituent of Concern.
- 13. Payment Requests: Review applications for payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the schedule of values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.
- 14. Certificates, Operation and Maintenance Manuals: During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Contract Documents to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the

Exhibit D - Resident Project Representative.

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Contract Documents, and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.

15. Completion:

- a. Participate in Engineer's visits to the Site regarding Substantial Completion, assist in the determination of Substantial Completion, and prior to the issuance of a Certificate of Substantial Completion submit a punch list of observed items requiring completion or correction.
- b. Participate in Engineer's visit to the Site in the company of Owner and Contractor, to determine completion of the Work, and prepare a final punch list of items to be completed or corrected by Contractor.
- c. Observe whether all items on the final punch list have been completed or corrected, and make recommendations to Engineer concerning acceptance and issuance of the Notice of Acceptability of the Work (Exhibit E).

J. Resident Project Representative shall not:

- Authorize any deviation from the Construction Contract Documents or substitution of materials or equipment (including "or-equal" items).
- 2. Exceed limitations of Engineer's authority as set forth in this Agreement.
- 3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers, or any Constructor.
- Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of the Work, by Contractor or any other Constructor.
- 5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
- 6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
- 7. Accept Shop Drawing or Sample submittals from anyone other than Contractor.
- 8. Authorize Owner to occupy the Project in whole or in part.

This is **EXHIBIT E**, consisting of 2 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services**dated

EICDC ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

NOTICE OF ACCEPTABILITY OF WORK

NOTICE OF ACCEPTABILITY OF WORK
PROJECT:
OWNER:
CONTRACTOR:
OWNER'S CONSTRUCTION CONTRACT IDENTIFICATION:
EFFECTIVE DATE OF THE CONSTRUCTION CONTRACT:
ENGINEER:
NOTICE DATE:
To: Owner
And To: Contractor
From: Engineer
The Engineer hereby gives notice to the above Owner and Contractor that Engineer has recommended final payment of Contractor, and that the Work furnished and performed by Contractor under the above Construction Contract is acceptable, expressly subject to the provisions of the related Contract Documents, the Agreement between Owner and Engineer for Professional Services dated, and the following terms and conditions of this Notice:

Exhibit E – Notice of Acceptability of Work.

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