



PROFESSIONAL SERVICES AGREEMENT

for

NW Irvinedale Drive and NW 5th Street Intersection Improvements

Preliminary and Final Design Services

HR Green Project # 40150051

W. David Cubit, MPA, Project Manager
HR Green, Inc.
5525 Merle Hay Rd., Suite 200
Johnston, IA 50131

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THIS **AGREEMENT** is between the City of Ankeny (hereafter "CLIENT") and HR GREEN, INC. (hereafter "COMPANY").

1.0 PROJECT UNDERSTANDING

1.1 General Understanding

The project entails improvements to the NW Irvinedale Drive corridor in the vicinity of NW 5th Street, described generally as follows:

- Reconstruction of the intersection of NW Irvinedale Drive and NW 5th Street, in order to provide dedicated left-turn lanes on all four legs of the intersection;
- Reconstruction of adjacent mainline (NW Irvinedale Drive) and side road (NW 5th Street) only to the extents necessary to complete transitions between the improvements and existing roadways in compliance with project design criteria;
- Provide alternate for design and construction on south leg to connect to existing full section north of West 1st Street and NW Irvinedale Drive;
- Grading and construction of an earth retaining wall along the west side of NW Irvinedale Drive between NW 5th Street and NW 9th Street, in order to reduce safety risks currently posed by a steep embankment in this vicinity;
- Construction of 24" dia. water main along the east side of NW Irvinedale Drive for the length of the project and construction of 12" dia. water main along the north side of NW 5th Street from the 24" dia. water main west to the northwest quadrant of the intersection to provide for future connection;
- Construction of 8" sanitary sewer main along the south side of NW 5th Street from existing manhole 15G105 east to serve properties in the southwest quadrant of the intersection;
- Removal of the existing traffic signal system and the installation of a new traffic signal system and associated street lighting at the intersection of NW Irvinedale Drive and NW 5th Street;
- Construction of sidewalks and ADA / PROWAG-compliant pedestrian ramps at the intersection;
- Related utility adjustments, surface restoration, pavement marking and signage, and other minor appurtenances associated with aforementioned improvements and necessary to produce a finished project;
- Storm sewer improvements on both NW Irvinedale Drive and NW 5th Street corridors.

1.2 Project Criteria

- The project will be let by means of a local letting, and the latest edition of Statewide Urban Design and Specifications (SUDAS) and City of Ankeny Supplemental Specifications will be applicable to the design.
- The Public Rights-of-Way Accessibility Guidelines (PROWAG) will govern pedestrian facilities design. City preference is for minimum sidewalk width of 5 feet and maximum sidewalk width of 8 feet. However, these criteria will be evaluated in light of PROWAG requirements during design.
- City of Ankeny Guidelines for Street Lighting Design (Rev. 1/11/16) will govern street lighting design.

- The Scope of Services below assumes a mechanically stabilized earth (MSE) retaining wall will be suitable for the earth retaining structure described above; suitability of an MSE wall will be evaluated by a geotechnical engineer.
- CAD production will be performed using Microstation SS4/OpenRoads software.
- The project limits will remain closed to through traffic during construction and access to properties must be maintained at all times.

2.0 SCOPE OF SERVICES

CLIENT agrees to employ COMPANY to perform the following major phases of work:

- Project Management and Administration
- Surveying and Mapping
- Geotechnical Engineering
- Preliminary Design
- Project Information Meeting
- Utility Coordination
- Final Design
- Right-of-Way and Easement Services
- Bidding Assistance
- Hydrologic and Hydraulic Investigation

Each of these phases is described below.

2.1 Phase 1000 – Project Management and Administration

COMPANY will develop and maintain a Critical Path Method (CPM) Schedule, develop and execute a project work plan, manage sub-consultants, perform quality control reviews, and conduct internal meetings. As part of the project work plan, progress reports will be provided to CLIENT with each monthly invoice.

2.2 Phase 2000 – Surveying and Mapping

COMPANY will employ Nilles Associates, Inc. as a sub-consultant for survey and mapping services for the project. COMPANY shall provide survey in the areas identified below.

Survey Standards will adhere to IADOT Office of Design Preliminary Survey Specifications, using Open Roads SS4.

Geographic Extents

Provide survey at the following locations:

- Along NW Irvinedale Drive from 2825 NW 2nd Court south property line north to NW 9th Street South ROW line (approximately 1725 feet).
- Along NW 5th Street from the City Lift Station west property line / include the RCB culvert to the east property line of 2909 NW 5th Street (approximately 900 feet).
- The extent of the survey laterally will be (on average) to the right-of-way line, to building face on 2921 and 2917 NW Park Lane, or as necessary to establish side slopes, break lines, and drainage patterns.
- Stream channel survey from the outlet of the 36" dia. culvert under NW Irvinedale Drive down stream to the channel's confluence with North Creek.

- Provide topo survey for 2917 and 2921 NW Park Lane from the west building line west to the right-of-way. Include lowest floor elevation.

Property Ownership and Research

- a) Research City of Ankeny and Polk County records including right-of-way strip maps, subdivision plats, section corner ties, and surveys to be used in the locating of property pins along the roadway corridor and establishment of the right-of-way lines, property lines, section lines, easements and to determine ownership of the properties affected by the project.
- b) Prepare a Microstation CAD drawing (file name: **40150051.dis**) with property lines, roadway right-of-way lines, section lines, and easements within the project area as shown on existing plats and other documents of record along with the land corner monuments and property pins located in the field.
- c) Check property ownership information from public records and add property owner names to the CAD drawing for public display and plan preparation purposes.

Right-of-Entry

Right-of-entry will be acquired by CLIENT for properties adjacent to the project (9 properties).

Ground Control

State-Plane Coordinates (**NAD83 / Iowa South**) and Sea-Level Elevations (**NAVD88**) will be used. Narrative explaining how horizontal control points and vertical datum were determined will be provided. This narrative will be included in the final plans. Sub-consultant will provide Reference Ties to COMPANY in Microstation CAD format.

Horizontal Control – Locate existing survey control points (if any) established along both roadways within the project area. Obtain section corner information from Polk County. Establish additional control points (minimum of 4) along the project extents as necessary. The additional control points will be referenced to physical features.

Vertical Control – Locate existing benchmarks (if any) established along both roadways within the project area. Existing benchmark and datum information will be provided by CLIENT. Establish additional benchmarks (minimum of 4) and elevations of control points.

Topographic Survey

Iowa DOT feature codes will be used for survey on the project.

- a) Locate topographic features within the project limits. These items include buildings, trees, shrubs, landscaping, fences, parking lots, retaining walls, signs, mail boxes, etc.
- b) Locate streets, parking lots, driveways, sidewalks, curb and gutter, and ground break lines. The type of material that each of these items consists of shall be noted (e.g. concrete, asphalt, seal coat, gravel, etc.). Existing transverse joints will be located near proposed pavement tie-in locations.
- c) Locate property corners to establish roadway rights-of-way and easements.

Utility Survey

Using the Iowa One Call system, CLIENT will request location flagging for all utilities. COMPANY will notify CLIENT one (1) week before survey operations commence in order to coordinate field utility location activity. COMPANY will contact public and private utility owners of record to request current maps of facilities within the project area. The private utilities could include telephone, fiber-optics, electric, gas, cable television, etc. The public utility systems could include water mains and services, storm sewer systems, sanitary sewer systems, and fiber optic lines. Review maps provided by facility owners for consistency with field locates.

Field survey the locations of private utilities and public utility systems that are visible, have been marked on the ground by the utility owner, or have been potholed by others, in order to establish coordinates and elevations (if possible). Generate a coordinate listing of the points surveyed and a plot showing the field surveyed utilities, including utility names and descriptions. This phase includes locating private utility appurtenances (e.g. telephone pedestals, power poles, guy wires, electric transformer boxes, cable television pedestals, light poles and luminaries, valves, utility accesses and vaults, etc.) and public utility appurtenances (e.g. fire hydrants, water valves, water service stop boxes, utility accesses, intakes, sanitary sewer cleanouts, fiber-optic junction boxes, etc.). Storm sewer and sanitary sewer utility accesses and storm sewer intakes shall be opened to measure the structure's dimensions (length, width, and depth); direction of flow and sizes of each pipe; the flow line elevations of each pipe; and to determine the types of structure and pipe materials.

Sub-consultant will provide COMPANY with utility legend, including applicable CAD utility linestyles, names, contact information, etc.

Field survey potholed utilities as applicable. Excavating and potholing to expose buried utilities are not included in this Scope of Services.

Soil Borings and Pavement Cores Locations

Survey / mark the locations of soil borings and pavement cores. Refer to Phase 3000.

Base Mapping and Digital Terrain Modeling

A Base Map and Digital Terrain Model will be used for the design of the proposed improvements.

- a) *Base Map* – Prepare a Microstation CAD drawing (file name: **SUR_40150051.dgn**) that contains line work, symbols and drawings of physical features and utilities that were located, as part of the topographic and utility surveys. Public and private utility locations will be based on locations marked in the field in coordination with maps obtained from utility companies. The CAD drawing file will comply with Iowa DOT Design Manual protocols.
- b) *Digital Terrain Model* – Create a digital terrain model (file name: **TRN_EX_40150051_E.dgn**) and display ground contours at one-foot (major) and 0.2 foot (minor) intervals in the Base Map Contours Model. The digital terrain model and base map will be used for the design of the proposed improvements.

Field Books

In addition to information and data typically included with survey field books, Sanitary and Storm Structures will include:

- a) Sketch showing:
 - a. entering and exiting pipes with flow directions
 - b. approximate angle of connections and distances from adjacent walls or corners
 - c. inside dimensions and shape of structure
 - d. location of casting(s) in relation to center of structure or walls (i.e. is the casting centered or not – if not, where is it?). Exact location and orientation of structure in relation to topo shot location is critical.
 - e. North arrow
- b) Accurate identification of pipe sizes, shapes, and materials
- c) “Assessment of Condition” (“Good” / “Fair” / “Poor”) for the structure and visible portions of connecting pipes, including identification of structure materials (e.g. concrete block, cast-in-place concrete, brick, etc.)
- d) Structure type identification (e.g. specific SW series (DOT/SUDAS)), if possible

2.3 Phase 3000 – Geotechnical Engineering

COMPANY will employ Terracon Consultants, Inc. as a sub-consultant for geotechnical engineering services. COMPANY shall provide subsurface exploration consisting of nine (9) soil borings. Four (4) borings approximately 20-feet deep will be conducted at suitable locations within the public right-of-way, including one (1) at the intersection (which could be located for the sake of signal footing design, if applicable). The remaining five (5) borings will be completed to a depth of approximately 30 feet. Three (3) of these borings will be along the alignment of the proposed retaining wall, and two (2) will be outside the toe of the existing embankment slope.

The purpose for the borings is to evaluate the suitability of an MSE structure, to evaluate global stability of embankment slopes, and to evaluate the applicability of standard signal foundation design tables in SUDAS Chapter 13. Soil borings will be obtained at locations determined by the geotechnical sub-consultant with input from COMPANY.

CLIENT will determine locations of and obtain four (4) pavement core samples separately, and provide results to COMPANY. CLIENT will provide location of pavement core samples to COMPANY.

Laboratory tests will be conducted in general accordance with the referenced ASTM standards, and certified and calibrated equipment per ASTM and AASHTO standards will be used. The geotechnical sub-consultant will prepare a bound geotechnical report describing subsurface conditions (via drilling log attached) that addresses the suitability of an MSE retaining wall, the global stability of embankment slopes, and the applicability of standard signal foundation design tables in SUDAS Chapter 13. The geotechnical sub-consultant will provide recommendations to COMPANY regarding the use of a MSE retaining wall or other wall types, as applicable based on analysis. A qualified Engineer, licensed in the State of Iowa, will review test results, conclusions, recommendations, and the final geotechnical report.

Upon completion of soil borings, the site will be cleaned and the holes filled so as to adhere to known safety regulations. The soil boring locations will be marked in the field by the survey sub-consultant. Refer to Phase 2000.

2.4 Phase 4000 – Preliminary Design

COMPANY will perform preliminary design services including the preparation of preliminary design plans depicting the proposed improvements. The deliverables for the preliminary design phase are listed later in this section. The work tasks to be performed by COMPANY as part of this phase are described below.

(a) Design Criteria and Constraints

Develop the project design criteria based on SUDAS, PROWAG, the 2015 Traffic Study (by COMPANY) and other applicable sources with input from CLIENT. The design criteria to be addressed include:

- Functional classification and design type
- Design speed
- Design vehicle for intersection design will be S-BUS40
- Design year drainage requirements
- Provisions for pedestrians with regards to pedestrian push button accessibility, sidewalk and curb ramp vertical elevations as required by PROWAG.
- Maintenance of pedestrian traffic during construction, including detour requirements
- Project area to be closed to traffic, develop detour alternative
- Clear zone for MSE wall and potential guardrail locations

The project design criteria will be used in the following evaluations:

- Establishing and evaluating geometric elements of the proposed improvements
- Determining extents of pavement widening throughout the project
- Establishing and evaluating alternative section dimension requirements including parking area width and slope, location of sidewalk, etc.
- Identifying constraints such as utilities, trees, private infrastructure, drainage-related elements, clear zone, etc. that will influence the design.

No pavement design will be performed. CLIENT will provide prescription for pavement, subbase, and subgrade materials and thicknesses to COMPANY. The assumed pavement, subbase and subgrade materials and thicknesses will be validated based on the traffic information, with further input from CLIENT.

(b) Preliminary Typical Sections

Alternate typical sections for the project will be evaluated. The typical section elements that will be reviewed include lane widths, curb and gutter sections, parking area width and slope, sidewalk width and location, utility locations, right-of-way width(s), and clear zone. CLIENT will inform COMPANY where 8-ft. and 5-ft. sidewalk sections are desired. It is assumed no more than three (3) typical section alternatives will be evaluated. Develop preliminary typical cross sections for both roadways based on the design criteria, pavement section(s), and typical section review.

(c) Preliminary Horizontal Alignments and Vertical Profiles

Establish preliminary existing horizontal alignments and vertical profiles for both roadways based on the topographic survey and available as-built information. The existing alignments and profiles will be used to design alignments and profiles in areas of proposed reconstruction.

(d) Preliminary Cross Sections

Integrate preliminary horizontal and vertical designs, typical cross sections, and existing sections to prepare preliminary cross sections and determine slope intercepts as needed for guidance during design, review, and quantity estimating. Cross sections will be created at 25-foot intervals and at geometric break points, transition points (e.g. begin/end lane taper), and driveway centerlines using Microstation SS4/OpenRoads software. Revise cross sections to accommodate grading/side drainage design, erosion control features, and potential guardrail location.

(e) Preliminary Sanitary Sewer and Water Main

CLIENT will review existing facilities and provide information on any locations in need of repairs. COMPANY will design 24" dia. water main parallel to NW Irvinedale Drive horizontally located approximately in the existing east ditch. Design will include water main from the north driveway line at 306 NW Irvinedale Drive to approximately the south property line of 2917 NW Park Lane (approximately 1250 LF).

This task includes designing one (1) 6" hydrant assembly at each end of the 24" water main to accommodate SUDAS required testing, one (1) 24"x12" tee at the intersection of NW Irvinedale Drive and NW 5th Street to accommodate a new 12" water main stubbed west to a point outside the new pavement for future extension, one (1) 6" hydrant assembly at the end of the 12" water main for SUDAS testing requirements, and two (2) 24" mainline isolation valves and two (2) 6" hydrant assemblies for the 24" water main and one (1) 12" main line isolation valve for the 12" stub west at the intersection of NW Irvinedale Drive and NW 5th Street.

COMPANY will design an 8" sanitary sewer main from the approximate location of MH 15G105 east to a point enabling service connections of properties located at 3110 and 3003 NW 5th Street (approximately 350 LF). Design will include connection to the existing system at either the existing manhole or by constructing a new standard manhole. Design will include two (2) service connections to the new 8" sanitary sewer. Testing will comply with SUDAS requirements.

(f) Preliminary Intersection

Develop the geometric layout for the intersection. Intersection geometric (horizontal and vertical) roadway and pedestrian facility designs will consider right-of-way restrictions/impacts, drainage design, left turn lane capacity needs, pedestrian facilities, existing and proposed utility locations, and other constraints (e.g. private property infrastructure). Intersection returns will be designed to accommodate the selected S-BUS40 design vehicle turning paths and analyzed against the turning paths for the WB-50 vehicle to determine if adjustments shall be made to accommodate for the larger vehicle.

(g) Preliminary Storm Sewer and Drainage

Inventory existing hydrologic and hydraulic conditions and evaluate the effects the proposed improvements will have on the drainage patterns of areas surrounding the project. A preliminary storm sewer and drainage design will be developed, in accordance with SUDAS storm water design standards and the CLIENT'S applicable codes and ordinances, to support the proposed improvements. This task includes the preliminary consideration of erosion control measures to be provided on the project. Detailed, area-wide drainage studies; analyses of upstream trunk lines and downstream outfalls; and water quality management studies are not included in this Scope of Services. Refer to Phase 9000 regarding a hydrologic and hydraulic analysis to evaluate the adequacy of the existing 36" dia. culvert under NW Irvinedale Drive, just south of NW 9th Street.

(h) Preliminary Traffic Signals

The modification design will involve the replacement of the existing traffic signal system including cabinet, poles, handholes and associated conduit/wiring. New pedestrian related equipment including push buttons and pedestrian signal heads is anticipated. It is anticipated that the existing vehicle detection system at the intersection will be abandoned and a new vehicle detection system will be installed.

The traffic signal system design will be based on the following assumptions:

- Existing traffic signal cabinet / controller to be removed and salvaged from current location and a new traffic signal cabinet / controller and foundation to be installed in the same southwest quadrant of the intersection, pending Right-of-Way review;
- Existing power service connection to remain in current southwest quadrant of the intersection;
- Existing traffic signal pole uprights (vertical members) and traffic signal mast arms (horizontal members) along with associated equipment (signal heads, pedestrian heads, etc.) to be salvaged and replaced with new equipment;
- Existing stand-alone pedestal signal/pedestrian poles (if applicable) and associated equipment (signal heads, pedestrian heads, push buttons, etc.) to be salvaged and replaced with new equipment;

- Pedestrian push buttons and pedestrian signal heads will be included on the new traffic signal poles in each of the quadrants. The use of stand-alone pedestrian push button and/or pedestrian signal poles is anticipated;
- Existing traffic signal related cabling/wiring, conduits, handholes will be removed/abandoned as necessary;
- New traffic signal related cabling/wiring, conduits, handholes will be installed as part of this project as necessary;
- Existing overhead power lines/poles will remain as currently constructed; no utility relocation coordination or plan production (other than traffic signal power service) is included within the traffic signal design Scope of Services;
- New stock equipment will be used for proposed equipment;
 - Design/or modification of fiber optic cable or other means of traffic signal system interconnect is anticipated due to interconnection (2" conduit containing 12SM/12MM fiber optic cable) existing along the east side of NW Irvinedale Drive between NW 1st Street and NW 5th Street; The interconnect design will consist of design of conduit/handhole routing to/from the proposed traffic signal cabinet. The design will include the installation of fiber optic cable, tracer wire, and pull rope within dedicated 2" conduit pathway as necessary to tie-into the existing fiber optic cable.
 - The interconnect design will be at the outside plant fiber optic cable level
 - Splicing and fiber optic terminations will be needed.
 - If sufficient slack length of fiber optic cable does not exist, a handhole containing outside plant splice enclosure may be necessary.
- The form of vehicle detection has not been established, however for the purposes of scoping is assumed to be accommodated via a newly installed video detection system;
- The installation of Opticom emergency vehicle preemption (EVP) equipment will be included;
- Combination traffic signal/light poles will be used – including both traffic signal head mast arm and luminaire mast arm – Pole style/finish consistent with proposed aesthetics of corridor. Photometric analysis of the two intersecting corridors in the vicinity of the intersection will be necessary and this work is covered in the Final Street Lighting task of this Scope of Services;
- The signal design will also include supplemental traffic signs to be installed as part of the traffic signal system. This includes but is not limited to street name signs, turn arrow plaques, and pedestrian signs. It is assumed for purposes of scoping that all proposed traffic signal related signing will be provided by the CLIENT and installed by the contractor.
- Traffic counts from COMPANY will not be required;
- Due to the anticipated roadway closure for construction, design of temporary traffic signal plans is not anticipated and not included within this Scope of Services.

The preliminary permanent traffic signal plans will include: general notes/legend sheet (1 sheet overall), summary of quantities sheet (1 sheet overall), traffic signal component removal sheet (1 sheet), traffic signal layout sheet (1 sheet), conduit/wiring layout sheet (1 sheet), quantities sheet (1 sheet) and typical details sheet (1 sheet). The approximate total number of traffic signal modification sheets is seven (7). Development of special details is not included within this Scope of Services.

The traffic signal layout will include location of proposed traffic signal and pedestrian poles, vehicle and pedestrian signal heads, pedestrian push buttons, controller cabinet, conduit, and handholes. The traffic signal wiring diagram, traffic signal quantities, and recommended traffic signal timings will not be completed as part of the preliminary submittal.

COMPANY assumes one (1) in-person meeting with CLIENT at CLIENT's location to discuss the project. COMPANY will conduct a field review to verify existing traffic signal infrastructure at spot locations.

The traffic signal design will be completed in accordance with available/applicable City of Ankeny details and specifications. The City of Ankeny Supplement to the Statewide Urban Design and Specifications (SUDAS) documents including specifications (Standard Specification 8010) and details will be used as necessary. This task includes the development of a technical specification / supplemental special provision for the necessary traffic signal equipment not covered by the SUDAS Standard Specification 8010 or City of Ankeny specifications. It is understood that the project does not involve the use of State or Federal funding, and thus the preparation of a Public Interest Finding (PIF) memorandum will not be required.

(i) Preliminary Access/Traffic Control

Vehicular and pedestrian detour alternatives will be developed and analyzed.

The analysis will consider special needs (if any) of the adjacent properties within the project area as well as special needs for emergency response vehicles.

Develop a preliminary access plan to indicate how local access will be maintained during construction. This task includes developing preliminary traffic control notes and determining the best method to maintain driveway access to directly affected residents. Staged project design is not included in this Scope of Services.

(j) Preliminary Retaining Wall

Develop a preliminary retaining wall layout per recommendations provided by the geotechnical sub-consultant.

(k) Preliminary Right-of-Way

Determine the right-of-way layout (i.e. permanent easement and temporary construction easement limits) needed to construct the project. Determine location of proposed right-of-way and easement lines. The final right-of-way layout will be reviewed with CLIENT for concurrence, and submitted.

(l) Preliminary Plans

- Title, Location Map (A-sheets)
- Typical Cross Sections and Details (B-sheets)
- Preliminary Quantities (C-sheets)
- Mainline Plan and Profile for NW Irvinedale Drive (D-sheets; 1"=40' half-size)
- Side Road Plan and Profile for NW 5th Street (E-sheets; 1"=40' half-size)
Note: Storm sewer will be shown on D & E sheets unless COMPANY determines it's more efficient to use M sheets.
- Survey Information (G-sheets)
- Right-of-Way (H/HE-sheets)
- Traffic Control and Detours (J-sheets)
- Geometrics (L-sheet; 1"=20' half-size)
- Traffic Signals (N-Sheets)
- Sanitary Sewer/Water Main (O-Sheets)
- Retaining Wall (U-sheets)
- Cross Sections for NW Irvinedale Drive (W-sheets)
- Cross Sections for NW 5th Street (X-sheets)

(m) Preliminary Opinion of Probable Construction Cost

Prepare a preliminary Opinion of Probable Construction Cost (OPCC) for the project. The OPCC will be based on preliminary estimated quantities for major construction items (e.g. removals, pavement, sub-base, earthwork, signals, drainage, utilities, etc.). Detailed quantity takeoffs will not be developed for the preliminary OPCC.

(n) Preliminary Field Review

A field review will be held with CLIENT to discuss key issues and design elements, including geometric and utility improvements, drainage, traffic signal system, pedestrian accommodation, traffic control, and right-of-way. The review will determine the completion of the preliminary design and identify needed adjustments to minimize potential impacts. It is assumed two (2) representatives of COMPANY will participate in the field review.

(o) Preliminary Client Coordination Meetings

This task includes four (4) meetings during the Preliminary Design phase, involving two (2) representatives of COMPANY, to be held at COMPANY's location. COMPANY will prepare an agenda and distribute minutes for each meeting.

2.45 Phase 4500 – Project Information Meeting

This phase includes one (1) meeting involving two (2) representatives of COMPANY. COMPANY will provide two (2) plotted exhibits for the project information meeting. Refinement of the exhibits following the meeting is not included in this Scope of Services.

2.5 Phase 5000 – Utility Coordination

COMPANY will identify potential utility conflicts and relocations based on the preliminary design and existing survey information. COMPANY will provide copies of preliminary design plans to utility companies for advance coordination, maintain a utility correspondence log, and facilitate a joint utility meeting during the preliminary design phase with CLIENT and representatives from each utility company. The purpose of the meeting will be to advise the utility companies of the nature and extent of the proposed improvements and potential conflicts with existing or proposed utility systems. CLIENT will be responsible for establishing the time and location for the meeting and COMPANY will be responsible for notifying the applicable attendees. Two (2) representatives of COMPANY will participate in the joint utility coordination meeting. COMPANY assumes the following entities will be involved:

- Ankeny Community School District (Fiber)
- City of Ankeny Utilities (Storm/San/Water/Fiber)
- Iowa Network Services (Fiber)
- Mediacom (Cable/Fiber)
- Windstream (Fiber)
- MidAmerican Energy (Electric/Gas)
- Century Link (Telephone/Fiber)
- Unite Private Network (Fiber)
- Others as identified by One Call

In addition to the joint utility coordination meeting held during the initial Preliminary Design, a second joint utility meeting (with the same assumed entities listed above) will be held in advance of Final Plan submittal. Two (2) representatives of COMPANY will attend this second meeting. CLIENT will be responsible for establishing the time and location for the meeting and COMPANY will be responsible for notifying the applicable attendees. COMPANY will coordinate franchise utility relocation plan review. CLIENT will coordinate franchise utility relocation permitting.

2.6 Phase 6000 – Final Design

Upon CLIENT's acceptance of the preliminary design and provision of preliminary plans comments, COMPANY shall subsequently proceed with final design. The deliverables for the final design phase are listed later in this section. The work tasks to be performed by COMPANY as part of this phase are described below:

(a) Final Roadway

Refine the roadway design developed during the preliminary design phase. Complete the design for the typical cross sections, horizontal alignments, vertical profiles, roadway cross sections, and construction details for mainline and side roads. This task includes final modeling and developing the final proposed surface.

(b) Final Intersections and Driveways

Refine the design for the intersections and driveways developed during the preliminary design phase. Determine final geometrics, cross slopes, pavement elevations and jointing details and verify drainage for driveways.

(c) Final Sidewalks and Pedestrian Curb Ramps

Refine the design for the sidewalk and pedestrian curb ramps developed during the preliminary design phase. Verify compliance with the current "Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way" (PROWAG) and SUDAS design standards. Determine the final geometrics, running slopes, cross slopes, landing areas, and elevations for sidewalk and pedestrian curb ramps along with coordinating the locations and elevations of pedestrian push buttons.

(d) Final Storm Sewer and Drainage

Refine the storm sewer and drainage design developed during the preliminary design phase. Finalize type, size, and location of storm sewers. Also, verify critical form grade and flowline elevations of existing and proposed storm sewer structures and pipes. This task includes detailed structural design (i.e. major deviation from standards) of a maximum of two (2) non-standard storm sewer structures (assume the structures could be used in multiple locations) or modifications of existing storm sewer structures.

(e) Final Sanitary Sewer and Water Main

Refine the sanitary sewer and water main design for potential horizontal and vertical adjustments of existing structures, appurtenances, and pipes within the project area. Provide testing per SUDAS specifications.

(f) Final Erosion Control, Seeding and Sodding

Finalize locations and types of temporary and permanent erosion control measures to be used on the project and coordinate the design with the final storm sewer, drainage, grading, and paving designs. Prepare a Storm Water Pollution Prevention Plan (SWPPP). Indicate areas to be seeded and/or sodded.

(g) Final Traffic Signals

Refine the traffic signal design developed during the preliminary design phase. Determine final traffic signal locations, signal phasing, signal timings, wiring, pedestrian accommodations and include coordinating plans with the existing traffic signal at W First Street and NW/SW Irvinedale Drive.

The project special provisions as prepared as part of the preliminary design will be revised as

necessary. In addition, COMPANY will coordinate with the local utility company on power supply to the proposed traffic signal system. Power service coordination will remain at a high level with the intent that the contractor will be responsible for final power service coordination details.

Conducting turning movement counts at the previously listed intersection(s) is not included in the Scope of Services. Opening day signal timings/phasing plans will be provided by COMPANY and will be based on either existing traffic counts conducted as part of the 2015 Irvinedale Drive Corridor Study and/or available opening day traffic projections for the intersection made available by CLIENT.

Clearance interval yellow and red time information will be provided for each of the traffic signal timing plans (AM, PM, and Off-peak) and will be based upon methodology available within Chapter 10 of the ITE Traffic Control Devices Handbook (2nd Edition, 2013). Pedestrian timings will be included within this Scope of Services.

COMPANY will develop an engineer's opinion of probable construction cost for the intersection traffic signal improvements and will prepare the supplemental unit cost form.

(h) Final Street Lighting

Develop a street lighting layout based on the utility's standard street lighting equipment to accommodate the reconstruction of the project area. The lighting layout will also include luminaires located on top of the traffic signal structures at each corner. Perform a photometric analysis, per City of Ankeny lighting policy, to calculate and illustrate the resulting illumination of the layout. Plans will include a station/offset table for street light locations.

Finalize the wattage, mounting height, and location of lighting poles based on the standard street lighting equipment and structures typically supplied by MidAmerican Energy Company (MEC) and the City of Ankeny's roadway illumination policy. Coordinate the proposed street lighting pole locations with the proposed roadway and utility improvements. COMPANY's final street lighting layout will be used as the basis for MEC to perform final design of the street lighting system and develop a cost proposal to construct the street lighting system within the project area. CLIENT will review and approve the photometric analysis and final lighting layout. COMPANY will assist CLIENT in obtaining the utility's lighting design and cost proposal.

(i) Final Access/Traffic Control Plan

Refine the access and traffic control plan developed during the preliminary design phase. The final plan will include provisions for managing access to affected properties during construction. This task also includes designing the permanent pavement markings, permanent and temporary traffic signing, and temporary traffic control devices in accordance with standards of the City of Ankeny and MUTCD. COMPANY assumes permanent signing will be shown "for information only" on the plans and CLIENT will furnish and install said signing.

(j) Final Retaining Wall

Refine the retaining wall layout per recommendations provided by the geotechnical sub-consultant. This assumes a MSE retaining wall is suitable for the project.

(k) Final Earthwork

Determine final earthwork quantities from the cross sections and complete template adjustments. This task also includes determining final earthwork quantities for the side-road connections. Determining earthwork quantities for staged construction is not included in this Scope of Services, except earthwork required to maintain individual property owner access during construction.

(l) Final Bid Items and Quantities

Determine final bid items using the standard bid items provided by SUDAS. Prepare and verify quantity calculations for bid items. Prepare estimate reference information based on SUDAS

specifications and City of Ankeny Supplemental Specifications. COMPANY assumes permanent signing quantities and costs will be excluded because CLIENT will furnish and install said signing.

(m) Final Plans

- Title, Location Map (A-sheets)
- Typical Cross Sections and Details (B-sheets)
- Quantities, Estimate Reference Information, and General Information (C-sheets)
- Mainline Plan and Profile for NW Irvinedale Drive (D-sheets; 1"=40' half-size)
- Side Road Plan and Profile for NW 5th Street (E-sheets; 1"=40' half-size)
Note: lighting and soils (boring locations) will be shown on D & E sheets with light pole locations tabulated (for information only)
- Survey Information (G-sheets)
- Right-of-Way (H/HE-sheets)
- Traffic Control and Detours (J-sheets)
- Geometrics, Staking, and Jointing (L-sheets; 1"=20' half-size)
- Storm Sewer and Drainage Plans (M-sheets)
- Traffic Signals (N-Sheets)
- Sanitary Sewer/Water Main (O-Sheets)
- Pedestrian Plan (S-sheets)
- Earthwork (T sheet)
- Removals, Special Details, Erosion Control, Seeding, and Sodding (U-sheets)
- Retaining Wall (U-sheets)
- Franchise Utility Relocations (for information only) (U-sheets)
- Cross Sections for NW Irvinedale Drive (W-sheets)
- Cross Sections for NW 5th Street (X-sheets)

(n) Project Manual

CLIENT will provide templates for all front-end contract documents. COMPANY will prepare a Project Manual to include Notice to Bidders and Notice of Public Hearing; Proposal Form; Bid Bond Form; Contract Form; Performance, Payment, and Maintenance Bond Form; Notice to Proceed; City of Ankeny Supplemental Specifications; City of Ankeny SWPPP templates; and Special Provisions for additions and/or revisions to the SUDAS standard specifications.

(o) Final Opinion of Probable Construction Cost

Prepare one (1) final Opinion of Probable Project Cost (OPPC) for the project. The final OPPC will be based on final estimated quantities for construction bid items. COMPANY assumes permanent signing quantities and costs will be excluded because CLIENT will furnish and install said signing. The final OPPC will be submitted with the Final Design Plans.

(p) Permits

Participate in consultations with authorities having jurisdiction to approve the design of the project and prepare the required permit applications. Due to the proposed roadway and public utility improvements, it is assumed one (1) Storm Water (NPDES) Permit, one (1) Sanitary Sewer Construction Permit and one (1) Water Main Construction Permit will be required from the Iowa Department of Natural Resources (DNR). COMPANY will provide technical criteria, written descriptions, design data and prepare the Iowa DNR Storm Water Construction Permit application, on behalf of CLIENT. Any fees for the permits, licenses or other costs associated with the permits and approvals will be invoiced to CLIENT as reimbursable expenses.

(r) Final Client Coordination Meetings

This task includes four (4) meetings during the Final Design phase, involving two (2) representatives of COMPANY, to be held at COMPANY's location. COMPANY will prepare an agenda and distribute minutes for each meeting.

2.7 Phase 7000 – Right-of-Way and Easement Services

COMPANY and its sub-consultants identified below will provide the services necessary for permanent right-of way, permanent easement, and temporary construction easement acquisitions. CLIENT will coordinate and manage the permanent right-of-way or easement and temporary easement acquisition process as an integral part of the management and scheduling of the project.

Reports of Record Ownership and Liens

COMPANY will employ Iowa Title Company as a sub-consultant for the purpose of obtaining reports of record ownership and liens (i.e. title searches) for parcels affected by the project to determine property ownership / interest(s) and instruments affecting title of land. The title report shall identify mortgages; the last deed and easements of record; real estate tax assessment and payment information; and liens and claims pending in probate or other proceedings. Reports of record ownership and liens will only be obtained for the project parcels where permanent acquisition is required. It is assumed reports of record ownership and liens will be obtained for a maximum of four (4) parcels.

Acquisition Plats and Legal Descriptions for Permanent R.O.W. or Easements

COMPANY will employ Nilles & Associates, Inc. as a sub-consultant for the preparation of acquisition plats and legal descriptions for the permanent right-of-way or easements to be acquired for the project. The acquisition plats and legal descriptions shall comply with the requirements of the Iowa Code and will be certified by the Professional Land Surveyor preparing the documents. The acquisition plats and legal descriptions will be filed with the Polk County Recorder by CLIENT. It is assumed acquisition plats and legal descriptions will be prepared for a maximum of four (4) permanent right-of-way acquisitions.

Preparation of Legal Descriptions for Temporary Easements

COMPANY will employ Nilles & Associates, Inc. as a sub-consultant for the preparation of exhibits and legal descriptions for the temporary construction easements to be acquired for the project. It is assumed no plats will be required for the temporary easements and the legal descriptions will not need to be certified by the Professional Land Surveyor nor filed with the Polk County Recorder. It is assumed exhibits and legal descriptions will be prepared for a maximum of seven (7) temporary construction easements.

Easement Negotiations and Acquisitions

CLIENT will complete all easement and right-of-way acquisition negotiations and transactions, including compensation estimates. No such services are included in this Scope of Services.

2.8 Phase 8000 – Bidding Assistance

COMPANY will perform the following tasks related to the project's bid letting phase:

- Prepare and distribute *Notice of Project* to Contractors.
- Prepare and distribute final plans and project manual to requesting contractors online through QuestCDN. CLIENT will provide free account information to COMPANY. Fees incurred for QuestCDN usage will be invoiced to CLIENT monthly as reimbursable expenses.
- Respond to contract document-related questions and, if necessary, issue applicable addenda to interpret, clarify, or expand the bidding documents.
- Attend project bid letting, which will be held by CLIENT. Prepare and distribute a tabulation of letting results.
- Following award of the project, assist CLIENT with preparing the necessary construction contract documents.

2.9 Phase 9000 – Hydrologic and Hydraulic Investigation

This phase will be performed on the drainage channel along the north lot line of 3016 NW 5th Street outletting into North Creek. Hydrologic and hydraulic conditions will be investigated regarding the possibility of needing increased conveyance capacity from the surface intake on the east side of NW Irvinedale Drive to its release to the drainage channel. The need for increased conveyance capacity of the pipe and/or for the surface intake will be based on the 10% and 1% annual chance storm events. COMPANY will then develop a computer model utilizing field survey, Iowa Statewide LiDAR data, aerial photography, and on-site investigation. It appears the drainage area is fully developed, therefore, the hydrologic investigation will be to determine hydrographs and peak discharges reaching the surface intake for only existing conditions for the water quality storm, 50%, 25%, 10%, 2%, and 1% annual chance 6-hour and 24-hour storms.

The hydraulic investigation will determine:

- existing capacity of drainage infrastructure,
- existing and proposed high water elevations and determine how it affects the project location and adjacent properties,
- existing and proposed velocities within the receiving stream,
- possible conveyance improvements to reach specified high water and/or conveyance targets, and
- possible improvements to stabilize receiving stream for existing and proposed conditions, if needed based on study results.

The hydraulic investigation will specifically be limited to:

- from the confluence with North Creek, to approximately 170 feet upstream to the surface intake on the east side of NW Irvinedale Drive.

COMPANY will summarize the findings of the study and recommendations in a technical memo. This memo will include tables, maps, and other pertinent information outlining the results of the study.

3.0 SCHEDULE AND DELIVERABLES INCLUDED IN THIS AGREEMENT

Project Schedule:

- | | |
|---|----------------|
| • Notice to Proceed | March 21, 2017 |
| • Submit Preliminary Plans (50%) and Acquisition Plats/Exhibits | July 31, 2017 |

- | | |
|---|------------------|
| • Project Information Meeting | September 2017 |
| • Submit Check Plans (95%) and Streetlight Photometric Analysis | December 4, 2017 |
| • Submit Final Plans (100%) | January 2, 2018 |
| • Bid Letting | January 30, 2018 |
| • Contract Award | February 5, 2018 |

The above schedule assumes a CLIENT review period of fifteen (15) working days for each of the following deliverables: preliminary plans and check plans. Schedule changes due to factors outside of COMPANY's control could result in changes to the above schedule.

Deliverables:

1. Geotechnical Report
2. Preliminary Plans in SUDAS and 11" X 17" formats
3. Preliminary Opinion of Probable Construction Cost (OPCC)
4. Project Information Meeting Exhibits (2 sets of 2 plots)
5. Check Plans in SUDAS and 11"X17" Format
6. Final Plans in SUDAS and 11" X 17" formats
7. Final Opinion of Probable Construction Cost (OPCC)
8. Project Manual (including City of Ankeny Supplemental Specifications, City of Ankeny SWPPP, and Special Provisions)
9. Streetlight Photometric Analysis
10. Applications for one (1) Iowa DNR Storm Water (NPDES) Permit, one (1) Sanitary Sewer Construction Permit and one (1) Water Main Construction Permit.
11. A maximum of four (4) certified acquisition plats and four (4) legal descriptions for permanent right-of-way or easements
12. Reports of Record Ownership and Liens (for a maximum of four (4) parcels)
13. A maximum of seven (7) exhibits and legal descriptions for temporary construction easements
14. Electronic files for the Final Construction Plans in Adobe Acrobat PDF format and MicroStation SS4 format. The intelligent CAD files will include:
 - Topographic Survey
 - Right-of-Way
 - Proposed Planimetrics
 - Geopak
15. Notice of Project to Contractors
16. Five (5) copies of the Contract Documents
17. Bid Tabulation
18. Culvert Analysis Technical Memorandum

4.0 ITEMS NOT INCLUDED IN AGREEMENT / SUPPLEMENTAL SERVICES

Supplemental services not included in the agreement can be provided by COMPANY under separate agreement, if desired, for the following items:

1. Environmental assessments
2. Structural design of non-MSE retaining walls
3. Traffic counts, traffic and crash data analysis, traffic operations and safety study, traffic impact and/or travel demand study, traffic microsimulation modeling, forecasting, traffic signal warrant analysis
4. Development of machine-control grading model and associated files
5. The street lighting photometrics and light pole layout will be performed by HR Green. The electrical design and construction of the street lighting will be by MidAmerican Energy Company. Also, the street lighting will be owned, operated and maintained by

MidAmerican Energy Company. The exception to this is the lighting mounted on traffic signal poles.

6. Water quality/quantity management studies
7. Condemnation activities
8. Construction Phase Services (CPS)
9. Design of culvert modifications
10. Staking of proposed improvements to assist franchise utility companies with their relocations within City ROW

5.0 PROFESSIONAL SERVICES FEE

5.1 Fees

The fee for services will be based on COMPANY standard hourly rates current at the time the agreement is signed. These standard hourly rates are subject to change upon 30 days' written notice. Non salary expenses directly attributable to the project such as: (1) living and traveling expenses of employees when away from the home office on business connected with the project; (2) identifiable communication expenses; (3) identifiable reproduction costs applicable to the work; and (4) outside services will be charged in accordance with the rates current at the time the work is done.

5.2 Invoices

Invoices for COMPANY's services shall be submitted, on a monthly basis. Invoices shall be due and payable upon receipt. If any invoice is not paid within 15 days, COMPANY may, without waiving any claim or right against CLIENT, and without liability whatsoever to CLIENT, suspend or terminate the performance of services. Accounts unpaid 30 days after the invoice date may be subject to a monthly service charge of 1.5% (or the maximum legal rate) on the unpaid balance. In the event any portion of an account remains unpaid 60 days after the billing, COMPANY may institute collection action and CLIENT shall pay all costs of collection, including reasonable attorney's fees.

5.3 Extra Work

Any work required but not included as part of this contract shall be considered extra work. Extra work will be billed on a Time and Material basis with prior approval of CLIENT.

5.4 Exclusion

This fee does not include attendance at any meetings or public hearings other than those specifically listed in the Scope of Services. These work items are considered extra and are billed separately on an hourly basis only if authorized by CLIENT.

5.5 Payment

CLIENT AGREES to pay COMPANY on the following basis: Time and material basis with a Maximum, Not to Exceed fee of \$274,000 summed as follows:

- Phase 1000 – Project Management and Administration \$38,419
- Phase 2000 – Surveying and Mapping \$24,000 (sub, Nilles)
- Phase 3000 – Geotechnical Engineering \$17,780 (sub, Terracon)
- Phase 4000 – Preliminary Design \$66,262
- Phase 4500 – Project Information Meeting \$2,426
- Phase 5000 – Utility Coordination \$10,483
- Phase 6000 – Final Design \$89,745
- Phase 7000 – Right-of-Way and Easement Services \$10,560 (subs, ITC/Nilles)
 - Title Searches \$1,800
 - Plats and Descriptions \$6,750

- Phase 8000 – Bidding Assistance \$5,650
- Phase 9000 – Hydrologic and Hydraulic Investigation \$8,675

The summary above is provided for informational purposes. Fees for each phase may be reallocated to other phases based on project workflow.

6.0 TERMS AND CONDITIONS

The following Terms and Conditions are incorporated into this AGREEMENT and made a part of it.

6.1 Standard of Care

Services provided by COMPANY under this AGREEMENT will be performed in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing at the same time and in the same or similar locality.

6.2 Entire Agreement

This Agreement, and its attachments, constitutes the entire understanding between CLIENT and COMPANY relating to professional engineering services. Any prior or contemporaneous agreements, promises, negotiations, or representations not expressly set forth herein are of no effect. Subsequent modifications or amendments to this Agreement shall be in writing and signed by the parties to this Agreement. If CLIENT, its officers, agents, or employees request COMPANY to perform extra work or services pursuant to this Agreement, CLIENT will pay for the additional services even though an additional written Agreement is not issued or signed.

6.3 Time Limit and Commencement of Work

This AGREEMENT must be executed within ninety (90) days to be accepted under the terms set forth herein. The work will be commenced immediately upon receipt of this signed Agreement.

6.4 Suspension of Services

If the project or COMPANY'S services are suspended by CLIENT for more than thirty (30) calendar days, consecutive or in the aggregate, over the term of this Agreement, COMPANY shall be compensated for all services performed and reimbursable expenses incurred prior to the receipt of notice of suspension. In addition, upon resumption of services, CLIENT shall compensate COMPANY for expenses incurred as a result of the suspension and resumption of its services, and COMPANY'S schedule and fees for the remainder of the project shall be equitably adjusted.

If COMPANY'S services are suspended for more than ninety (90) days, consecutive or in the aggregate, COMPANY may terminate this Agreement upon giving not less than five (5) calendar days' written notice to CLIENT.

If CLIENT is in breach of this Agreement, COMPANY may suspend performance of services upon five (5) calendar days' notice to CLIENT. COMPANY shall have no liability to CLIENT, and CLIENT agrees to make no claim for any delay or damage as a result of such suspension caused by any breach of this Agreement by CLIENT. Upon receipt of payment in full of all outstanding sums due from CLIENT, or curing of such other breach which caused COMPANY to suspend services, COMPANY shall resume services and there shall be an equitable adjustment to the remaining project schedule and fees as a result of the suspension.

6.5 Book of Account

COMPANY will maintain books and accounts of payroll costs, travel, subsistence, field, and incidental expenses for a period of five (5) years. Said books and accounts will be available at all reasonable times for examination by CLIENT at the corporate office of COMPANY during that time.

6.6 Insurance

COMPANY will maintain insurance for claims under the Worker's Compensation Laws, and from General Liability and Automobile claims for bodily injury, death, or property damage arising from the negligent performance by COMPANY's employees of the functions and services required under this Agreement.

6.7 Termination or Abandonment

Either party has the option to terminate this Agreement. In the event of failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party, then the obligation to provide further services under this Agreement may be terminated upon seven days written notice. If any portion of the work is terminated or abandoned by CLIENT, the provisions of this Schedule of Fees and Conditions in regard to compensation and payment shall apply insofar as possible to that portion of the work not terminated or abandoned. If said termination occurs prior to completion of any phase of the project, the fee for services performed during such phase shall be based on COMPANY's reasonable estimate of the portion of such phase completed prior to said termination, plus a reasonable amount to reimburse COMPANY for termination costs.

6.8 Waiver

COMPANY's waiver of any term, condition, or covenant or breach of any term, condition, or covenant, shall not constitute a waiver of any other term, condition, or covenant, or the breach thereof.

6.9 Severability

If any provision of this Agreement is declared invalid, illegal, or incapable of being enforced by any Court of competent jurisdiction, all of the remaining provisions of this Agreement shall nevertheless continue in full force and effect, and no provision shall be deemed dependent upon any other provision unless so expressed herein.

6.10 Successors and Assigns

All of the terms, conditions, and provisions hereof shall inure to the benefit of and be binding upon the parties hereto, and their respective successors and assigns, provided, however, that no assignment of this Agreement shall be made without written consent of the parties to this Agreement.

6.11 Third-Party Beneficiaries

Nothing contained in this Agreement shall create a contractual relationship with or a cause of action in favor of a third party against either CLIENT or COMPANY. COMPANY's services under this Agreement are being performed solely for CLIENT's benefit, and no other party or entity shall have any claim against COMPANY because of this Agreement or the performance or nonperformance of services hereunder. CLIENT and COMPANY agree to require a similar provision in all contracts with contractors, subcontractors, subconsultants, vendors and other entities involved in this project to carry out the intent of this provision.

6.12 Governing Law and Jurisdiction

CLIENT and COMPANY agree that this Agreement and any legal actions concerning its validity, interpretation and performance shall be governed by the laws of the State of Iowa without regard to any conflict of laws provisions, which may apply the laws of other jurisdictions.

It is further agreed that any legal action between CLIENT and COMPANY arising out of this Agreement or the performance of the services shall be brought in a court of competent jurisdiction in the State of Iowa.

6.13 Dispute Resolution

Mediation. In an effort to resolve any conflicts that arise during the design or construction of the project or following the completion of the project, CLIENT and COMPANY agree that all disputes between them arising out of or relating to this Agreement shall be submitted to non-binding mediation prior to either party exercising their rights under law unless the parties mutually agree otherwise. CLIENT and COMPANY further agree to include a similar mediation provision in all agreements with independent contractors and consultants retained for the project and to require all independent contractors and consultants also to include a similar mediation provision in all agreements with subcontractors, sub-consultants, suppliers or fabricators so retained, thereby providing for mediation as the primary method for dispute resolution between the parties to those agreements.

6.14 Attorney's Fees

If litigation arises for purposes of collecting fees or expenses due under this Agreement, the Court in such litigation shall award reasonable costs and expenses, including attorney fees, to the party justly entitled thereto. In awarding attorney fees, the Court shall not be bound by any Court fee schedule, but may, in the interest of justice, award the full amount of costs, expenses, and attorney fees paid or incurred in good faith.

6.15 Ownership of Instruments of Service

All reports, plans, specifications, field data, field notes, laboratory test data, calculations, estimates and other documents including all documents on electronic media prepared by COMPANY as instruments of service shall remain the property of COMPANY. COMPANY shall retain these records for a period of five (5) years following completion/submission of the records, during which period they will be made available to CLIENT at all reasonable times.

6.16 Reuse of Documents

All project documents including, but not limited to, plans and specifications furnished by COMPANY under this project are intended for use on this project only. Any reuse, without specific written verification or adoption by COMPANY, shall be at CLIENT's sole risk, and CLIENT shall defend, indemnify and hold harmless COMPANY from all claims, damages and expenses including attorney's fees arising out of or resulting therefrom.

Under no circumstances shall delivery of electronic files for use by CLIENT be deemed a sale by COMPANY, and COMPANY makes no warranties, either express or implied, of merchantability and fitness for any particular purpose. In no event shall COMPANY be liable for indirect or consequential damages as a result of CLIENT's use or reuse of the electronic files.

6.17 Failure to Abide by Design Documents or To Obtain Guidance

CLIENT agrees that it would be unfair to hold COMPANY liable for problems that might occur should COMPANY'S plans, specifications or design intents not be followed, or for problems resulting from others' failure to obtain and/or follow COMPANY'S guidance with respect to any errors, omissions, inconsistencies, ambiguities or conflicts which are detected or alleged to exist in or as a consequence of implementing COMPANY'S plans, specifications or other instruments of service. Accordingly, CLIENT waives any claim against COMPANY, and agrees to defend, indemnify and hold COMPANY harmless from any claim for injury or losses that results from failure to follow COMPANY'S plans, specifications or design intent, or for failure to obtain and/or follow COMPANY'S guidance with respect to any alleged errors, omissions, inconsistencies, ambiguities or conflicts contained within or arising as a result of implementing COMPANY'S plans, specifications or other instruments of services. CLIENT also agrees to compensate COMPANY for any time spent and expenses incurred remedying CLIENT's failures according to COMPANY'S prevailing fee schedule and expense reimbursement policy.

6.18 Opinion of Probable Construction Cost

COMPANY shall submit to CLIENT an opinion of probable cost required to construct work recommended, designed, or specified by COMPANY, if required by CLIENT. COMPANY is not a construction cost estimator or construction contractor, nor should COMPANY'S rendering an opinion of probable construction costs be considered equivalent to the nature and extent of service a construction cost estimator or construction contractor would provide. This requires COMPANY to make a number of assumptions as to actual conditions that will be encountered on site; the specific decisions of other design professionals engaged; the means and methods of construction the contractor will employ; the cost and extent of labor, equipment and materials the contractor will employ; contractor's techniques in determining prices and market conditions at the time, and other factors over which COMPANY has no control. Given the assumptions which must be made, COMPANY cannot guarantee the accuracy of his or her opinions of cost, and in recognition of that fact, CLIENT waives any claim against COMPANY relative to the accuracy of COMPANY'S opinion of probable construction cost.

6.19 Design Information in Electronic Form

Because electronic file information can be easily altered, corrupted, or modified by other parties, either intentionally or inadvertently, without notice or indication, COMPANY reserves the right to remove itself from its ownership and/or involvement in the material from each electronic medium not held in its possession. CLIENT shall retain copies of the work performed by COMPANY in electronic form only for information and use by CLIENT for the specific purpose for which COMPANY was engaged. Said material shall not be used by CLIENT or transferred to any other party, for use in other projects, additions to this project, or any other purpose for which the material was not strictly intended by COMPANY without COMPANY's expressed written permission. Any unauthorized use or reuse or modifications of this material shall be at CLIENT'S sole risk. Furthermore, CLIENT agrees to defend, indemnify, and hold COMPANY harmless from all claims, injuries, damages, losses, expenses, and attorney's fees arising out of the modification or reuse of these materials.

CLIENT recognizes that designs, plans, and data stored on electronic media including, but not limited to computer disk, magnetic tape, or files transferred via email, may be subject to undetectable alteration and/or

uncontrollable deterioration. CLIENT, therefore, agrees that COMPANY shall not be liable for the completeness or accuracy of any materials provided on electronic media after a 30 day inspection period, during which time COMPANY shall correct any errors detected by CLIENT to complete the design in accordance with the intent of the contract and specifications. After 40 days, at the request of CLIENT, COMPANY shall submit a final set of sealed drawings, and any additional services to be performed by COMPANY relative to the submitted electronic materials shall be subject to separate AGREEMENT. CLIENT is aware that differences may exist between the electronic files delivered and the printed hard-copy construction documents. In the event of a conflict between the signed construction documents prepared by COMPANY and electronic files, the signed or sealed hard-copy construction documents shall govern.

6.20 Information Provided by Others

CLIENT shall furnish, at CLIENT's expense, all information, requirements, reports, data, surveys and instructions required by this AGREEMENT. COMPANY may use such information, requirements, reports, data, surveys and instructions in performing its services and is entitled to rely upon the accuracy and completeness thereof. COMPANY shall not be held responsible for any errors or omissions that may arise as a result of erroneous or incomplete information provided by CLIENT and/or CLIENT's consultants and contractors.

COMPANY is not responsible for accuracy of any plans, surveys or information of any type including electronic media prepared by any other consultants, etc. provided to COMPANY for use in preparation of plans. CLIENT agrees, to the fullest extent permitted by law, to indemnify and hold harmless COMPANY from any damages, liabilities, or costs, including reasonable attorneys' fees and defense costs, arising out of or connected in any way with the services performed by other consultants engaged by CLIENT.

COMPANY is not responsible for accuracy of topographic surveys provided by others. A field check of a topographic survey provided by others will not be done under this contract unless indicated in the Scope of Work.

6.21 Force Majeure

CLIENT agrees that COMPANY is not responsible for damages arising directly or indirectly from any delays for causes beyond COMPANY's control.

6.22 Job Site Visits and Safety

Neither the professional activities of COMPANY, nor the presence of COMPANY'S employees and subconsultants at a construction site, shall relieve the General Contractor and any other entity of their obligations, duties and responsibilities including, but not limited to, construction means, methods, sequence, techniques or procedures necessary for performing, superintending or coordinating all portions of the work of construction in accordance with the contract documents and any health or safety precautions required by any regulatory agencies. COMPANY and its personnel have no authority to exercise any control over any construction contractor or other entity or their employees in connection with their work or any health or safety precautions. CLIENT agrees that the General Contractor is solely responsible for job site safety, and warrants that this intent shall be made evident in CLIENT's AGREEMENT with the General Contractor. CLIENT also agrees that CLIENT, COMPANY and COMPANY'S consultants shall be indemnified and shall be made additional insureds on the General Contractor's and all subcontractor's general liability policies on a primary and non-contributory basis.

6.23 Hazardous Materials

CLIENT hereby understands and agrees that COMPANY has not created nor contributed to the creation or existence of any or all types of hazardous or toxic wastes, materials, chemical compounds, or substances, or any other type of environmental hazard or pollution, whether latent or patent, at CLIENT's premises, or in connection with or related to this project with respect to which COMPANY has been retained to provide professional engineering services. The compensation to be paid COMPANY for said professional engineering services is in no way commensurate with, and has not been calculated with reference to, the potential risk of injury or loss which may be caused by the exposure of persons or property to such substances or conditions. Therefore, to the fullest extent permitted by law, CLIENT agrees to defend, indemnify, and hold COMPANY, its officers, directors, employees, and consultants, harmless from and against any and all claims, damages, and expenses, whether direct, indirect, or consequential, including, but not limited to, attorney fees and Court costs, arising out of, or resulting from the discharge, escape, release, or saturation of smoke, vapors, soot, fumes, acid, alkalis, toxic chemicals, liquids gases, or any other materials, irritants, contaminants, or pollutants in or into the atmosphere, or on, onto, upon, in, or into the surface or subsurface of soil, water, or watercourses, objects, or any tangible or intangible matter, whether sudden or not.

It is acknowledged by both parties that COMPANY'S scope of services does not include any services related to asbestos or hazardous or toxic materials. In the event COMPANY or any other party encounters asbestos or hazardous or toxic materials at the job site, or should it become known in any way that such materials may be present at the job site or any adjacent areas that may affect the performance of COMPANY'S services, COMPANY may, at its option and without liability for consequential or any other damages, suspend performance of services on the project until CLIENT retains appropriate specialist consultant(s) or contractor(s) to identify, abate and/or remove the asbestos or hazardous or toxic materials, and warrants that the job site is in full compliance with applicable laws and regulations.

Nothing contained within this Agreement shall be construed or interpreted as requiring COMPANY to assume the status of a generator, storer, transporter, treater, or disposal facility as those terms appear within the Resource Conservation and Recovery Act, 42 U.S.C.A., §6901 et seq., as amended, or within any State statute governing the generation, treatment, storage, and disposal of waste.

6.24 Certificate of Merit

CLIENT shall make no claim for professional negligence, either directly or in a third party claim, against COMPANY unless CLIENT has first provided COMPANY with a written certification executed by an independent design professional currently practicing in the same discipline as COMPANY and licensed in the State in which the claim arises. This certification shall: a) contain the name and license number of the certifier; b) specify each and every act or omission that the certifier contends is a violation of the standard of care expected of a Design Professional performing professional services under similar circumstances; and c) state in complete detail the basis for the certifier's opinion that each such act or omission constitutes such a violation. This certificate shall be provided to COMPANY not less than thirty (30) calendar days prior to the presentation of any claim or the institution of any judicial proceeding.

6.25 Indemnification

COMPANY agrees, to the fullest extent permitted by law, to indemnify and hold harmless CLIENT, its officers, directors and employees (collectively, CLIENT) against all damages, liabilities or costs, including reasonable attorneys' fees and defense costs, to the extent caused by COMPANY's negligent performance of professional services under this Agreement and that of its subconsultants or anyone for whom COMPANY is legally liable.

CLIENT agrees, to the fullest extent permitted by law, to indemnify and hold harmless COMPANY, its officers, directors, employees and subconsultants (collectively, COMPANY) against all damages, liabilities or costs, including reasonable attorneys' fees and defense costs, to the extent caused by CLIENT's negligent acts in connection with the Project and the acts of its contractors, subcontractors or consultants or anyone for whom CLIENT is legally liable.

Neither CLIENT nor COMPANY shall be obligated to indemnify the other party in any manner whatsoever for the other party's own negligence or for the negligence of others.

This AGREEMENT is approved and accepted by CLIENT and COMPANY upon both parties signing and dating the AGREEMENT. Work cannot begin until COMPANY receives a signed agreement. The effective date of the AGREEMENT shall be the last date entered below.

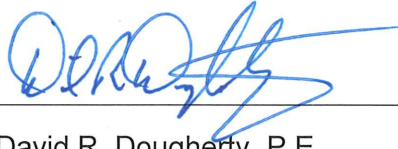
Sincerely,

HR GREEN, INC.

W. David Cubit, MPA, Project Manager

Author Name

Approved by:



Printed/Typed Name: David R. Dougherty, P.E.

Title: Vice President

Date: 03-13-2017

CITY OF ANKENY

Accepted by:

Printed/Typed Name: Gary Lorenz

Title: Mayor

Date: