

Contract #227-2014

PART VI

CONTRACT AGREEMENT

INDEX

1.	SCOPE OF WORK.....	CA-2
2.	TIME OF COMPLETION.....	CA-2
3.	ISSUANCE OF WORK ORDERS	CA-2
4.	THE CONTRACT SUM	CA-2
5.	PROGRESS PAYMENTS.....	CA-3
6.	ACCEPTANCE AND FINAL PAYMENT.....	CA-3
7.	THE CONTRACT DOCUMENTS.....	CA-3
8.	EXTRA WORK.....	CA-3
9.	ENUMERATION OF SPECIFICATIONS AND DRAWINGS.....	CA-4

PART VI

CONTRACT AGREEMENT

THIS AGREEMENT, made on the 25th day of Sept., 2014, by and between **Lexington-Fayette Urban County Government**, acting herein called "OWNER" and **Marrillia Design and Construction**, doing business as ~~*(an individual) (a partnership)~~ (a corporation) located in the City of **Lexington**, County of **Fayette**, and State of **Kentucky**, hereinafter called "CONTRACTOR."

WITNESSETH: That the CONTRACTOR and the OWNER in consideration of **Eight million eight hundred eighty-two thousand and nine hundred Dollars and zero Cents (\$8,882,900)** quoted in the proposal by the CONTRACTOR, dated **September 3, 2014**, hereby agree to commence and complete the construction described as follows:

1. SCOPE OF WORK

The CONTRACTOR shall furnish all the materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and other accessories and services necessary to complete the said project in accordance with the conditions and prices stated in the Proposal, the General Conditions, and the Special Conditions of the Contract, the Specifications and Contract Documents therefore as prepared by **EOP Architecture for the Construction of Replacement Senior Citizen Center project**.

2. TIME OF COMPLETION

The time period estimated and authorized by the OWNER for the proper execution of the Work by the Contract is **four hundred and twenty (420) days to Substantial Completion, with an additional thirty (30) days to Final Completion**. The time shall begin ten (10) days after the CONTRACTOR is given the Notice to Proceed with the Work.

3. ISSUANCE OF WORK ORDERS

Notice to begin Work will be given in whole or for part of the Work as determined by the OWNER pending the availability of funds. The order of construction will be as determined by the ARCHITECT after consultation with the CONTRACTOR and the OWNER.

4. THE CONTRACT SUM

The OWNER agrees to pay the CONTRACTOR in current funds for the performance of the Contract, as quoted in the proposal, subject to any additions and deductions, as provided therein.

5. PROGRESS PAYMENTS

The OWNER shall make payments on account of the Contract, as provided in accordance with the General Conditions, as estimated by the ARCHITECT, less the aggregate of previous payments.

6. ACCEPTANCE AND FINAL PAYMENT

Final payment shall be due within ninety (90) days after completion of the Work, provided the Work be then fully completed and the Contract fully accepted.

Before issuance of final certificate, the CONTRACTOR shall submit evidence satisfactory to the ARCHITECT that all payrolls, material bills, and other indebtedness connected with the Work has been paid.

If, after the Work has been substantially completed, full completion thereof is materially delayed through no fault of the CONTRACTOR, and the ARCHITECT so certifies, the OWNER shall upon certificate of the ARCHITECT, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

7. THE CONTRACT DOCUMENTS

The Advertisement for Bids, Information for Bidders, the General Conditions, Performance and Payment Bonds, Contract Agreement, Special Conditions, Technical Specifications, any and all Addenda, and Proposal, and Plan Drawings form the Contract, and they are fully a part of the Contract as if hereto attached or herein repeated.

8. EXTRA WORK

The OWNER, without invalidating the Contract, may order extra work or make changes by altering, adding to or deducting from the Work, the Contract Sum being adjusted accordingly. All such Work shall be executed and paid for in accordance with the General Conditions, which is a part of this Contract.

9. THE FOLLOWING IS AN ENUMERATION OF THE SPECIFICATIONS AND DRAWINGS (CONTRACT DOCUMENTS):

SPECIFICATIONS

SECTION NO.	TITLE	PAGES
I	Advertisement for Bids	AB 1 thru 5
II	Information for Bidders	IB 1 thru 15
III	Form of Proposal	P 1 thru 29
IV	General Conditions	GC 1 thru 50
V	Special Conditions	SC 1 thru 8
VI	Contract Agreement	CA 1 thru 5
VII	Performance and Payment Bonds	PB 1 thru 7
VIII	Addenda	AD 1 thru 1
IX	Technical Specifications	

DIVISION 1 – GENERAL REQUIREMENTS

010800	GENERAL COMMISSIONING REQUIREMENTS
010801	FUNCTIONAL TESTING
010802	TESTING AND BALANCING
012200	UNIT PRICES
012300	ALTERNATES
012500	SUBSTITUTION PROCEDURES
012600	CONTRACT MODIFICATION PROCEDURES
012900	PAYMENT PROCEDURES
013100	PROJECT MANAGEMENT AND COORDINATION
013200	CONSTRUCTION PROGRESS DOCUMENTATION
013233	PHOTOGRAPHIC DOCUMENTATION
013300	SUBMITTAL PROCEDURES
014000	QUALITY REQUIREMENTS
014110	STRUCTURAL SPECIAL INSPECTIONS
015000	TEMPORARY FACILITIES AND CONTROLS
016000	PRODUCT REQUIREMENTS
017300	EXECUTION
017419	CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL
017700	CLOSEOUT PROCEDURES
017823	OPERATION AND MAINTENANCE DATA
017839	PROJECT RECORD DOCUMENTS
017900	DEMONSTRATION AND TRAINING
017901	DEMONSTRATION AND TRAINING OF COMMISSIONED SYSTEMS
018113.13	SUSTAINABLE DESIGN REQUIREMENTS – LEED FOR NEW CONSTRUCTION

DIVISION 3 – CONCRETE

033000	CAST-IN-PLACE CONCRETE
--------	------------------------

DIVISION 4 – MASONRY

042000 CONCRETE UNIT MASONRY
044313.13 ANCHORED STONE MASONRY VENEER
047200 CAST STONE MASONRY

DIVISION 5 – METALS

051200 STRUCTURAL STEEL FRAMING
052100 STEEL JOIST FRAMING
053100 METAL DECKING, FASTENERS AND SHEAR STUDS
054000 COLD-FORMED METAL FRAMING
055000 METAL FABRICATIONS
055100 METAL STAIRS
055214 PIPE AND TUBE RAILINGS
057300 DECORATIVE METAL RAILINGS

DIVISION 6 – WOOD AND PLASTICS

061053 MISCELLANEOUS ROUGH CARPENTRY
061063 EXTERIOR ROUGH CARPENTRY
061600 SHEATHING
062023 INTERIOR FINISH CARPENTRY
064116 PLASTIC-LAMINATE-FACED ARCHITECTURAL CABINETS
064216 COMPOSITE WOOD PANELING

DIVISION 7 – THERMAL AND MOISTURE PROTECTION

071113 BITUMINOUS DAMPROOFING
071353 ELASTOMERIC SHEET WATERPROOFING
071900 WATER REPELLANTS
072100 THERMAL INSULATION
072726 FLUID-APPLIED MEMBRANE AIR BARRIERS
074113.16 STANDING-SEAM METAL ROOF PANELS
074200 EXTERIOR SOLID PHENOLIC CLADDING
074213.13 FORMED METAL WALL PANELS
074213 METAL COMPOSITE WALL PANELS
075323 ETHYLENE-PROPYLENE-DIENE-MONOMER (EPDM) ROOFING
076200 SHEET METAL FLASHING AND TRIM
077100 ROOF SPECIALTIES
077200 ROOF ACCESSORIES
077253 SNOW GUARDS
078413 PENETRATION FIRESTOPPING
079200 JOINT SEALANTS
079500 EXPANSION CONTROL

DIVISION 8 – OPENINGS

081113 HOLLOW METAL DOORS AND FRAMES
081416 FLUSH WOOD DOORS
083113 ACCESS DOORS AND FRAMES
083313 COILING COUNTER DOORS
084113 ALUMINUM-FRAMED ENTRANCES & STOREFRONTS
084413 GLAZED ALUMINUM CURTAIN WALLS

086300 METAL FRAMED SKYLIGHTS
087100 DOOR HARDWARE
088000 GLAZING
088300 MIRRORS
089119 FIXED LOUVERS

DIVISION 9 – FINISHES

092116.23 GYPSUM BOARD SHAFT WALL ASSEMBLIES
092216 NON-STRUCTURAL METAL FRAMING
092900 GYPSUM BOARD
095113 ACOUSTIC PANEL CEILINGS
095426 WOOD PANEL CEILINGS
096229 CORK FLOORING
096400 WOOD FLOORING
096513 RESILIENT BASE AND ACCESSORIES
096516 RESILIENT SHEET FLOORING
096543 LINOLEUM FLOORING
096810 FLOCKED RESILIENT TILE FLOORING
096813 TILE CARPETING
099113 EXTERIOR PAINTING
099123 INTERIOR PAINTING

DIVISION 10 – SPECIALTIES

101100 VISUAL DISPLAY UNITS
101426 POST AND PANEL SIGNAGE
102113 TOILET COMPARTMENTS
102238 OPERABLE PANEL PARTITIONS
102600 WALL PROTECTION
102800 TOILET, BATH, AND LAUNDRY ACCESSORIES
103100 MANUFACTURED GAS FIREPLACES
104413 FIRE PROTECTION CABINETS
104416 FIRE EXTINGUISHERS
105123 PLASTIC LAMINATE CLAD LOCKERS
107000 EXTERIOR SUN CONTROL DEVICES
105613 METAL SHELVING
107500 FLAGPOLES

DIVISION 11 – EQUIPMENT

110000 EQUIPMENT
115213 PROJECTION SCREENS

DIVISION 12– FURNISHINGS

122413 ROLLER WINDOW SHADES
123661 SIMULATED STONE COUNTERTOPS
129300 SITE FURNISHINGS

DIVISION 14–CONVEYING EQUIPMENT

142400 HYDRAULIC ELEVATORS
144200 WHEELCHAIR LIFTS

DIVISION 20 – MECHANICAL SYSTEMS

200100	GENERAL PROVISIONS
200300	REQUIRED SHOP DRAWINGS, DESCRIPTIVE LITERATURE, MAINTENANCE MANUALS, PARTS LISTS, SPECIAL KEYS AND TOOLS
200500	COORDINATION AMONG TRADES, CONNECTION OF EQUIPMENT
200800	COMMISSIONING OF MECHANICAL SYSTEMS
201100	SLEEVING, CUTTING, PATCHING AND REPAIRING
201200	EXCAVATION, TRENCHING, BACKFILLING AND GRADING
201300	PIPE, FITTINGS, AND SUPPORTS
201320	GEOHERMAL (EARTH-COUPLED) LOOP PIPING SYSTEM
201330	HEAT TRANSFER FLUID
202100	VALVES AND COCKS
202110	ACCESS TO VALVES, EQUIPMENT, FILTERS, ETC.
202200	INSULATION
202300	THERMOMETERS AND OTHERS, MONITORING INSTRUMENTS
202400	IDENTIFICATION, TAGS, CHARTS, ETC.
202500	HANGERS, CLAMPS, ATTACHMENTS, ETC.

DIVISION 21 – FIRE PROTECTION

210100	FIRE PROTECTION
--------	-----------------

DIVISION 22 – PLUMBING SYSTEMS

220100	PLUMBING SPECIALTIES
220200	PLUMBING FIXTURES, FITTINGS, AND TRIM
220300	PLUMBING EQUIPMENT
221113	FACILITY WATER DISTRIBUTION PIPING
221313	FACILITY SANITARY SEWERS

DIVISION 23 – HVAC SYSTEMS

230100	PUMPS
230200	HVAC EQUIPMENT
230300	CONDENSATE DRAINAGE
231100	REGISTERS, GRILLES, DIFFUSER, AND LOUVERS
231200	SHEET METAL AND FLEXIBLE DUCT

DIVISION 25 – BUILDING AUTOMATION SYSTEMS

250200	CONTROLS- DIRECT DIGITAL
250300	AIR QUALITY MONITORING SYSTEM

DIVISION 26 – ELECTRICAL SYSTEMS

260501	GENERAL PROVISIONS
260502	SCOPE OF THE ELECTRICAL WORK
260503	SHOP DRAWINGS, LITERATURE, MANUALS, PARTS LISTS, & SPECIAL TOOLS
260504	SLEEVING, CUTTING, PATCHING, AND REPAIRING
260508	COORDINATION AMONG TRADES, SYSTEMS INTERFACING AND CONNECTION OF EQUIPMENT FURNISHED BY OTHERS

260519 CONDUCTORS, IDENTIFICATIONS, SPLICING DEVICES AND CONNECTORS
260526 GROUNDING AND BONDING
260531 CABINETS, OUTLET BOXES AND PULL BOXES
260533 RACEWAYS AND FITTINGS FOR ELECTRICAL SYSTEMS
260544 EXCAVATION, TRENCHING, BACKFILLING AND GRADING
260553 IDENTIFICATION FOR ELECTRICAL SYSTEMS
260800 COMMISSIONING OF ELECTRICAL SYSTEMS
262400 ELECTRICAL DISTRIBUTION EQUIPMENT
262726 WIRING DEVICES AND PLATES
263213 EMERGENCY GENERATOR
263313 SURGE SUPPRESSION SYSTEMS
265113 LIGHTING FIXTURES AND LAMPS

DIVISION 27 – COMMUNICATIONS SYSTEMS

270610 VOICE / DATA / VIDEO COMMUNICATIONS SYSTEM
270640 CATV DISTRIBUTION SYSTEM
275223 NURSE CALL

DIVISION 28 – ELECTRONIC SAFETY AND SECURITY SYSTEMS

281600 SECURITY INTRUSION DETECTION SYSTEM
282300 DIGITAL VIDEO SURVEILLANCE SYSTEM
283100 FIRE ALARM SYSTEM

DIVISION 31 – EARTHWORK

311000 SITE CLEARING
312000 EARTH MOVING

DIVISION 32 – EXTERIOR IMPROVEMENTS

321216 ASPHALT PAVING
321313 CONCRETE PAVING
321373 CONCRETE PAVING JOINT SEALANTS
321400 UNIT PAVERS
321443 POROUS UNIT PAVING
323119 ORNAMENTAL METAL FENCE PANELS
329200 TURF AND GRASSES
329300 PLANTS

DIVISION 33 – UTILITIES

334100 STORM UTILITY DRAINAGE PIPING
334600 SUBDRAINAGE

APPENDIX A Standard Drawings

PLAN DRAWINGS –

COV	COVER SHEET
CODE.1	CODE
CODE.2	CODE
SD1.0	SITE SURVEY (1 OF 3)
SD1.2	SITE SURVEY (1 OF 3)
SD1.3	SITE SURVEY (1 OF 3)
C1.0	SITE UTILITIES PLAN
C2.0	UTILITY DETAILS
C2.1	UTILITY DETAILS
C3.0	UTILITY PROFILES
C3.1	UTILITY PROFILES
C3.2	UTILITY PROFILES
L0.1	BERM WALL
L1.0	STORM WATER POLLUTION PREVENTION PLAN
L2.0	SITE DEMOLITION PLAN
L3.0	SITE GRADING & DRAINAGE PLAN
L3.1	SITE DRAINAGE
L4.0	SITE LAYOUT
L4.1	SITE MATERIALS
L4.2	ENLARGED PLANS
L5.0	SITE LANDSCAPE PLAN
L5.1	LANDSCAPE DETAILS
L6.0	SITE DETAILS
L6.1	SITE DETAILS
L6.2	SITE DETAILS
L6.3	SITE DETAILS
L6.4	SITE DETAILS
S1.0	GENERAL NOTES
S2.1	FOUNDATION/FIRST FLOOR PLAN
S2.2	SECOND FLOOR PLAN
S2.3	ROOF PLAN
S3.1	FOUNDATION DETAILS
S3.2	FOUNDATION DETAILS
S4.1	FRAMING DETAILS
S4.2	FRAMING DETAILS

S4.3	FRAMING DETAILS
S5.1	ROOF FRAMING DETAILS
S5.2	ROOF FRAMING DETAILS
S5.3	ROOF FRAMING DETAILS
S6.1	GABLE ROOF DETAILS
S6.2	GABLE ROOF DETAILS
S6.3	GABLE ROOF DETAILS
S7.1	SUNSCREEN DETAILS
S7.2	SUNSCREEN DETAILS
S8.1	CANOPY
S8.2	MAIN CANOPY DETAILS
S8.3	SUNSCREEN CANOPY
S9.1	SHED PLAN AND DETAILS
A0.01	WALL TYPES
A1.01	FIRST FLOOR PLAN – OVERALL
A1.01A	FIRST FLOOR PLAN – AREA A
A1.01B	FIRST FLOOR PLAN – AREA B
A1.01C	FIRST FLOOR PLAN – AREA C
A1.01D	FIRST FLOOR PLAN – AREA D
A1.02	SECOND FLOOR PLAN – OVERALL
A1.02A	SECOND FLOOR PLAN – AREA A
A1.02B	SECOND FLOOR PLAN – AREA B
A1.02C	SECOND FLOOR PLAN – AREA C
A1.02D	SECOND FLOOR PLAN – AREA D
A1.03	ROOF PLAN – OVERALL
A1.10	RESTROOM PLANS & ELEVATIONS
A1.11	RESTROOM PLANS & ELEVATIONS
A1.20	ENLARGED PLANS & COLUMN WRAPS
A1.30	ENLARGED SHED PLANS & DETAILS
A2.01	FIRST FLOOR - REFLECTED CEILING PLAN
A2.01A	FIRST FLOOR RCP- AREA A
A2.01B	FIRST FLOOR RCP- AREA B
A2.01C	FIRST FLOOR RCP- AREA C
A2.01D	FIRST FLOOR RCP- AREA D
A2.02	SECOND FLOOR - REFLECTED CEILING PLAN
A2.02A	SECOND FLOOR RCP- AREA A
A2.02B	SECOND FLOOR RCP- AREA B
A2.02C	SECOND FLOOR RCP- AREA C
A2.02D	SECOND FLOOR RCP- AREA D
A2.03	REFLECTED CEILING PLAN DETAILS
A2.04	REFLECTED CEILING PLAN DETAILS
A3.01	BUILDING ELEVATIONS
A3.02	BUILDING ELEVATIONS
A3.03	BUILDING SECTIONS
A3.04	BUILDING SECTIONS

A4.01	WALL SECTIONS
A4.02	WALL SECTIONS
A4.03	WALL SECTIONS
A4.04	WALL SECTIONS
A4.05	WALL SECTIONS
A4.06	WALL SECTIONS
A4.10	DETAILS
A4.11	DETAILS
A4.12	DETAILS
A4.13	DETAILS
A4.14	DETAILS
A4.15	DETAILS
A4.16	DETAILS
A4.17	ENLARGED DETAILS
A4.18	ENLARGED DETAILS
A4.19	TYPICAL ROOF DETAILS
A4.20	DETAIL PLANS
A4.21	DETAIL PLANS
A4.22	DETAIL PLANS
A4.23	DETAIL PLANS
A4.30	ENLARGED CANOPY DETAILS
A4.40	SUNSCREEN DETAILS
A4.41	SUNSCREEN DETAILS
A5.01	STAIRS
A5.02	STAIRS
A5.03	STAIR DETAILS
A5.04	STAIR OPENINGS
A5.05	FEATURE STAIR
A5.10	ELEVATOR
A5.11	ELEVATOR DETAILS
A6.01	INTERIOR ELEVATIONS
A6.02	INTERIOR ELEVATIONS
A6.03	INTERIOR ELEVATIONS
A6.04	INTERIOR ELEVATIONS
A6.05	INTERIOR ELEVATIONS
A6.06	INTERIOR ELEVATIONS
A6.07	INTERIOR ELEVATIONS
A6.08	INTERIOR ELEVATIONS
A6.09	INTERIOR ELEVATIONS
A6.10	INTERIOR ELEVATIONS
A6.11	INTERIOR ELEVATIONS
A6.20	INTERIOR DETAILS
A6.21	INTERIOR DETAILS
A7.10	DOOR SCHEDULE
A7.20	CURTAINWALL/STOREFRONT ELEVATIONS
A7.21	CURTAINWALL/STOREFRONT ELEVATIONS

A7.22	INTERIOR STOREFRONT ELEVATIONS
A7.30	CURTAINWALL/STOREFRONT DETAILS
A7.31	CURTAINWALL/STOREFRONT DETAILS
A7.32	CURTAINWALL/STOREFRONT DETAILS
A8.01	CASEWORK DETAILS
A8.02	CASEWORK DETAILS
A8.03	CASEWORK DETAILS
A8.04	CASEWORK DETAILS
A8.05	CASEWORK DETAILS
A8.06	CASEWORK DETAILS
A9.00	FINISH SCHEDULE
A9.01	FIRST FLOOR FINISH PLAN – OVERALL
A9.01A	FIRST FLOOR FINISH PLAN – AREA A
A9.01B	FIRST FLOOR FINISH PLAN – AREA B
A9.01C	FIRST FLOOR FINISH PLAN – AREA C
A9.01D	FIRST FLOOR FINISH PLAN – AREA D
A9.02	SECOND FLOOR FINISH PLAN - OVERALL
A9.02A	SECOND FLOOR FINISH PLAN - AREA A
A9.02B	SECOND FLOOR FINISH PLAN - AREA B
A9.02C	SECOND FLOOR FINISH PLAN - AREA C
A9.02D	SECOND FLOOR FINISH PLAN - AREA D
A10.10A	EQUIPMENT SCHEDULE
A10.10B	EQUIPMENT SCHEDULE
A10.11	FIRST FLOOR EQUIPMENT PLAN - OVERALL
A10.12	SECOND FLOOR EQUIPMENT PLAN - OVERALL
U1.0	SITE UTILITIES
U1.1	SITE UTILITIES FIBER ALTERNATE
U1.2	SITE UTILITIES ALTERNATE
U1.3	SITE DETAILS
FP1.0	FIRE PROTECTION - DETAILS
FP2.1	FIRE PROTECTION - FIRST FLOOR PLAN
FP2.2	FIRE PROTECTION - SECOND FLOOR PLAN
P1.0	PLUMBING LEGEND AND FIXTURE SCHEDULE
P2.0	PLUMBING - FIRST FLOOR PLAN
P2.1	PLUMBING - SECOND FLOOR PLAN
P3.0	PLUMBING SCHEDULES AND DETAILS
P4.0	PLUMBING RISER DIAGRAM
P4.1	PLUMBING RISER DIAGRAM
M1.0	MECHANICAL LEGEND
M2.0	AIR DIST - FIRST FLOOR PLAN
M2.1	AIR DIST - SECOND FLOOR PLAN
M2.2	AIR DIST - ROOF PLAN

M3.0	HYDRONIC - FIRST FLOOR PLAN
M3.1	HYDRONIC - SECOND FLOOR PLAN
M4.0	ENLARGED MECH ROOM 131
M5.0	MECHANICAL SECTIONS
M5.1	MECHANICAL SECTIONS
M5.2	MECHANICAL SECTIONS
M6.0	PIPING SCHEMATICS
M7.0	MECHANICAL DETAILS
M7.1	MECHANICAL DETAILS
M8.0	CONTROLS
M9.0	MECHANICAL SCHEDULES
E1.0	ELECTRICAL LEGEND
E2.0	LIGHTING - FIRST FLOOR PLAN
E2.1	LIGHTING - SECOND FLOOR PLAN
E2.2	LIGHTING - LIGHTING CONTROL DIAGRAMS
E3.0	POWER - FIRST FLOOR PLAN
E3.1	POWER - SECOND FLOOR PLAN
E3.2	POWER - ROOF PLAN
E3.3	ELECTRICAL ONE-LINE DIAGRAM
E3.4	PANEL SCHEDULES
E4.0	SYSTEMS - FIRST FLOOR PLAN
E4.1	SYSTEMS - SECOND FLOOR PLAN
E4.2	SYSTEMS - DETAILS
E4.3	COMMUNICATIONS RISER
E4.4	COMMUNICATIONS RISER

FURNITURE SHEETS ARE FOR REFERENCE ONLY, AND ARE NOT INCLUDED IN THE CONTRACT FOR CONSTRUCTION

F1.01	FIRST FLOOR FURNITURE PLAN - OVERALL
F1.01A	FIRST FLOOR FURNITURE PLAN - AREA A
F1.01B	FIRST FLOOR FURNITURE PLAN - AREA B
F1.01C	FIRST FLOOR FURNITURE PLAN - AREA C
F1.01D	FIRST FLOOR FURNITURE PLAN - AREA D
F1.02	SECOND FLOOR FURNITURE PLAN - OVERALL
F1.02	SECOND FLOOR FURNITURE PLAN - AREA A
F1.02	SECOND FLOOR FURNITURE PLAN - AREA B
F1.02	SECOND FLOOR FURNITURE PLAN - AREA C
F1.02	SECOND FLOOR FURNITURE PLAN - AREA D
F2.00	FURNITURE SCHEDULE

IN WITNESSETH WHEREOF, the parties hereto have executed this Contract as of the date and year above written.

(Seal)

Lexington-Fayette Urban County Government.
Lexington, Kentucky

(Owner)

ATTEST:

Monte Maller, Deputy
Clerk of the Urban County Council

BY:

[Signature]
MAYOR

[Signature]
(Witness)

MAYOR
(Title)

(Seal)

Marrillia Design and Construction
(Contractor)

Rustin W. Morris
(Secretary)* Office Manager

BY:

[Signature]

[Signature]
(Witness)

President
(Title)

259 W. Short St, Suite 325, Lexington, KY
(Address and Zip Code) 40507

IMPORTANT: *Strike out any non-applicable terms.

Secretary of the Owner should attest. If the CONTRACTOR is corporation, Secretary should attest. Give proper title of each person-executing Contract.

 **AIA** Document A312™ – 2010

Performance Bond # 106 158 939

CONTRACTOR:
(Name, legal status and address)
Marrillia Design and Construction
259 West Short Street, Ste 325
Lexington KY 40507

SURETY:
(Name, legal status and principal place of business)
Travelers Casualty and Surety
Company of America
One Tower Square
Hartford CT 06183

OWNER:
(Name, legal status and address)
Lexington-Fayette Urban County Government
200 East Main Street
Lexington KY 40507

CONSTRUCTION CONTRACT
Date: September 25, 2014

Amount: \$8,882,900.00

Description: Lexington Senior Citizens Center
(Name and location) Lexington, Kentucky

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

AIA Document A312-2010 combines two separate bonds, a Performance Bond and a Payment Bond, into one form. This is not a single combined Performance and Payment Bond.

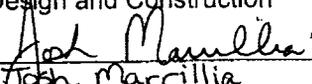
BOND
Date: September 25, 2014
(Not earlier than Construction Contract Date)

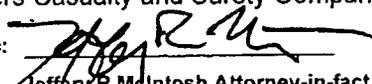
Amount: \$ 8,882,900.00

Modifications to this Bond: None See Section 16

CONTRACTOR AS PRINCIPAL
Company: *(Corporate Seal)*
Marrillia Design and Construction

SURETY
Company: *(Corporate Seal)*
Travelers Casualty and Surety Company of America

Signature: 
Name: Josh Marrillia
and Title: President
(Any additional signatures appear on the last page of this Performance Bond.)

Signature: 
Name: Jeffrey R McIntosh, Attorney-in-fact
and Title:

(FOR INFORMATION ONLY — Name, address and telephone)
AGENT or BROKER:
Energy Insurance Agency
3008 Atkinson Ave
Lexington KY 40509
859-273-1549

OWNER'S REPRESENTATIVE:
(Architect, Engineer or other party:)

§ 1 The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

§ 2 If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Section 3.

§ 3 If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after

- .1 the Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Section 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;
- .2 the Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
- .3 the Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

§ 4 Failure on the part of the Owner to comply with the notice requirement in Section 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

§ 5 When the Owner has satisfied the conditions of Section 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

§ 5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

§ 5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

§ 5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Section 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

§ 5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:

- .1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
- .2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

§ 6 If the Surety does not proceed as provided in Section 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Section 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

§ 7 If the Surety elects to act under Section 5.1, 5.2 or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication, for

- .1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
- .2 additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Section 5; and
- .3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

§ 8 If the Surety elects to act under Section 5.1, 5.3 or 5.4, the Surety's liability is limited to the amount of this Bond.

§ 9 The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors and assigns.

§ 10 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

§ 11 Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 12 Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

§ 13 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

§ 14 Definitions

§ 14.1 Balance of the Contract Price. The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

§ 14.2 Construction Contract. The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

§ 14.3 Contractor Default. Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

§ 14.4 Owner Default. Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

§ 14.5 Contract Documents. All the documents that comprise the agreement between the Owner and Contractor.

§ 15 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

§ 16 Modifications to this bond are as follows:

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL

SURETY

Company:

(Corporate Seal)

Company:

(Corporate Seal)

Signature: _____

Name and Title:

Address

Signature: _____

Name and Title:

Address

CAUTION: You should sign an original AIA Contract Document, on which this text appears in RED. An original assures that changes will not be obscured.

 **Document A312™ – 2010**

Payment Bond # 106 158 939

CONTRACTOR:
(Name, legal status and address)

Marrillia Design and Construction
259 West Short Street, Ste 325
Lexington KY 40507

SURETY:
(Name, legal status and principal place of business)

Travelers Casualty and Surety
Company of America
One Tower Square
Hartford CT 06183

OWNER:
(Name, legal status and address)

Lexington-Fayette Urban County Government
200 East Main Street
Lexington KY 40507

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

AIA Document A312-2010 combines two separate bonds, a Performance Bond and a Payment Bond, into one form. This is not a single combined Performance and Payment Bond.

CONSTRUCTION CONTRACT

Date: September 25, 2014

Amount: \$8,882,900.00

Description: Lexington Senior Citizens Center
(Name and location) Lexington, Kentucky

BOND

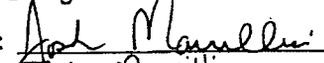
Date: September 25, 2014
(Not earlier than Construction Contract Date)

Amount: \$8,882,900.00

Modifications to this Bond: None See Section 18

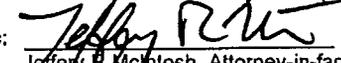
CONTRACTOR AS PRINCIPAL

Company: *(Corporate Seal)*
Marrillia Design and Construction

Signature: 
Name: Josh Marrillia
and Title: President
(Any additional signatures appear on the last page of this Payment Bond.)

SURETY

Company: *(Corporate Seal)*
Travelers Casualty and Surety Company of America

Signature: 
Name: Jeffrey B. McIntosh, Attorney-in-fact
and Title:

(FOR INFORMATION ONLY — Name, address and telephone)

AGENT or BROKER:
Energy Insurance Agency
3008 Atkinson Ave
Lexington KY 40509
859-273-1549

OWNER'S REPRESENTATIVE:
(Architect, Engineer or other party:)

§ 1 The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.

§ 2 If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies and holds harmless the Owner from claims, demands, liens or suits by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

§ 3 If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Section 13) of claims, demands, liens or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety.

§ 4 When the Owner has satisfied the conditions in Section 3, the Surety shall promptly and at the Surety's expense defend, indemnify and hold harmless the Owner against a duly tendered claim, demand, lien or suit.

§ 5 The Surety's obligations to a Claimant under this Bond shall arise after the following:

§ 5.1 Claimants, who do not have a direct contract with the Contractor,

- .1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
- .2 have sent a Claim to the Surety (at the address described in Section 13).

§ 5.2 Claimants, who are employed by or have a direct contract with the Contractor, have sent a Claim to the Surety (at the address described in Section 13).

§ 6 If a notice of non-payment required by Section 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Section 5.1.1.

§ 7 When a Claimant has satisfied the conditions of Sections 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:

§ 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

§ 7.2 Pay or arrange for payment of any undisputed amounts.

§ 7.3 The Surety's failure to discharge its obligations under Section 7.1 or Section 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Section 7.1 or Section 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

§ 8 The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Section 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

§ 9 Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

§ 10 The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to, or give notice on behalf of, Claimants or otherwise have any obligations to Claimants under this Bond.

§ 11 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

§ 12 No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Section 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 13 Notice and Claims to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.

§ 14 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

§ 15 Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

§ 16 Definitions

§ 16.1 Claim. A written statement by the Claimant including at a minimum:

- .1 the name of the Claimant;
- .2 the name of the person for whom the labor was done, or materials or equipment furnished;
- .3 a copy of the agreement or purchase order pursuant to which labor, materials or equipment was furnished for use in the performance of the Construction Contract;
- .4 a brief description of the labor, materials or equipment furnished;
- .5 the date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
- .6 the total amount earned by the Claimant for labor, materials or equipment furnished as of the date of the Claim;
- .7 the total amount of previous payments received by the Claimant; and
- .8 the total amount due and unpaid to the Claimant for labor, materials or equipment furnished as of the date of the Claim.

§ 16.2 Claimant. An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

§ 16.3 Construction Contract. The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

§ 16.4 Owner Default. Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

§ 16.5 Contract Documents. All the documents that comprise the agreement between the Owner and Contractor.

§ 17 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

§ 18 Modifications to this bond are as follows:

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL

SURETY

Company:

(Corporate Seal)

Company:

(Corporate Seal)

Signature: _____

Signature: _____

Name and Title: _____

Name and Title: _____

Address _____

Address _____

CAUTION: You should sign an original AIA Contract Document, on which this text appears in RED. An original assures that changes will not be obscured.



POWER OF ATTORNEY

Farmington Casualty Company
Fidelity and Guaranty Insurance Company
Fidelity and Guaranty Insurance Underwriters, Inc.
St. Paul Fire and Marine Insurance Company
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company
Travelers Casualty and Surety Company
Travelers Casualty and Surety Company of America
United States Fidelity and Guaranty Company

Attorney-In Fact No. 220600

Certificate No. 005969279

KNOW ALL MEN BY THESE PRESENTS: That Farmington Casualty Company, St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company are corporations duly organized under the laws of the State of Connecticut, that Fidelity and Guaranty Insurance Company is a corporation duly organized under the laws of the State of Iowa, and that Fidelity and Guaranty Insurance Underwriters, Inc., is a corporation duly organized under the laws of the State of Wisconsin (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint

R. E. Davis, Mary Elliott, Mark T. Kelder, Steve Simmons, and Jeffery R. McIntosh

of the City of Lexington, State of Kentucky, their true and lawful Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed and their corporate seals to be hereto affixed, this 1st day of July, 2014.

Farmington Casualty Company
Fidelity and Guaranty Insurance Company
Fidelity and Guaranty Insurance Underwriters, Inc.
St. Paul Fire and Marine Insurance Company
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company
Travelers Casualty and Surety Company
Travelers Casualty and Surety Company of America
United States Fidelity and Guaranty Company



State of Connecticut
City of Hartford ss.

By: [Signature]
Robert L. Raney, Senior Vice President

On this the 1st day of July, 2014, before me personally appeared Robert L. Raney, who acknowledged himself to be the Senior Vice President of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

In Witness Whereof, I hereunto set my hand and official seal. My Commission expires the 30th day of June, 2016.



[Signature]
Marie C. Tetreault, Notary Public



Lexington-Fayette Urban County Government
DEPARTMENT OF FINANCE & ADMINISTRATION

Jim Gray
Mayor

William O'Mara
Commissioner

ADDENDUM #1

Bid Number: **#99-2014**

Date: August 11, 2014

Subject: **Construction of Replacement Senior Citizens' Center**

Please address inquiries to:
Theresa Maynard (859) 258-3320

TO ALL PROSPECTIVE BIDDERS:

Please be advised of the following clarifications to the above referenced bid.

See the following attachments:

- **Sign in Sheets from August 11, 2014 Pre-Bid Meeting**
- **Minutes from August 11, 2014 Pre-Bid Meeting**


Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the bid and specifications are unchanged. This letter should be signed, attached to and become a part of your bid.

COMPANY: _____

ADDRESS: _____

SIGNATURE OF PROPOSER: _____

Pre-Bid Meeting Minutes August 11, 2014

- Bid Date is **Tuesday, September 2 at 2:00 P.M.**, Eastern Time, submitted to
 - LFUCG Central Purchasing
 - 200 E Main St, 3rd Floor
 - Lexington, Kentucky 40507
 - *Parking is limited, so please arrive early to ensure on-time delivery*
 - *The Labor Day holiday has been acknowledge by extending the typical 3-week bidding period for LFUCG projects to 4 weeks. Please inform your subs that no further bid period extensions will be considered.*
- Addenda items (contractor questions) need to be submitted by:
 - **Thursday, August 21 at 5:00pm, EST.**
 - All questions shall be submitted to Theresa Maynard at theresam@lexingtonky.gov
 - *Questions may be submitted via direct email or via EconomicEngine*
- Final Addenda if necessary will be issued **Monday, August 25, 2014.**
 - *Addenda will be released to planrooms, but official correspondence on the project will come from EconomicEngine (<https://lfucg.economicengine.com>)*
- Advisement that changes are not binding unless in written form.
- Reminder that conditional or qualified bids are not acceptable.
- The official bid forms must be submitted in a sealed envelope. It is the bidder's responsibility to submit bid on time. Late bids will not be recognized.
- Make sure all blanks on all pages are completed signed and notarized if necessary. Failure to do so invalidates the bid.
- A 5% bid bond is to be included with the proposal. The Bidder may submit a certified check in lieu of the bid bond.
 - *Minority and Women Owned Business Forms are part of the bid documents. The LFUCG goal is for 10% MBENWBE participation. Contact Marilyn Clark (mclark@lexingtonky.gov) with questions about particular trades. Good Faith Efforts and Participation Forms are to be submitted with sealed bids.*
 - *All contractors and subcontractors shall be registered in the EconomicEngine system.*
- This project is a stipulated sum bid with four (4) alternates.
- Prevailing Wage Rates do apply and are included in the Bid Documents.
- The Unit Price List, Manufacturer list and Subcontractor list shall be completed in its entirety and submitted with the bid. If you, the General Contractor, are performing the work, list "Prime" or your company name; do not leave any subcontractor listings blank. If you list yourself for a sub-trade, make sure you have

someone on your payroll etc. that is a licensed electrician/plumber. You cannot change sub contractors during or after a bid opening or review. The owner reserves the right to review, and approve or reject, subcontractors or manufacturers.

- *Unit Price, Manufacturer, and Subcontractor lists are due at the same time as the sealed bid.*

- Overview of project schedule

- Final contractor questions **August 21, 2014; 5:00pm**
- Final Addenda **August 25, 2014.**
- Bid Date **September 2, 2014; 2:00 P.M.**
- Urban County Council Mtgs. **September 25 & October 9, 2014**
- Notice to Proceed **October 10, 2014**
- Pre-Construction Meeting **October 13, 2014**
- On-Site Work **October 20, 2014 - December 14, 2015**
- Substantial Completion **December 14, 2015**
- Final Completion **January 14, 2016**

- Substantial Completion shall be reached after 420 days and Final Completion is 30 days after Substantial Completion. Time will start 10 days after Notice to Proceed
- Liquidated Damages per calendar day after Final Completion is \$500.00.
- The apparent, successful low bidder will receive a Notice of Intent to Award, along with bond forms that are required to be completed.
- The following bonds, forms and insurance shall be required in order to award a contract:
 - 100% payment bond
 - 100% performance bond
 - Insurance certificate
 - *Bid bonds and insurance certificates will be required when the purchase order is issued, which will occur one day after the council approves the bid.*
- Brief review of the scope of work by Architect and Engineer Consultant Team.
 - *Building is located at 195 Life Lane, which connects Richmond Rd and New Circle Rd, running between the Richmond Rd campus of Southland Christian Church and Idle Hour Park. The building site is the southern end of Idle Hour Park, on the site of the current football field.*
 - *The building construction will be 2-stories slab-on-grade (no basement). Concrete substructure and steel frame structure. The envelope will have stud backup, continuous insulation, and exterior skins of metal panel, phenolic panel, stucco, and glazed curtain wall storefront.*
 - *The project will be LEED Certified.*
 - *The approximate area is 33,000 GSF over 2 floors. Building program includes classrooms, art studios, fitness studio, dance studio, offices, kitchen, and a double-height multipurpose room.*
- Site Access.
 - Parking – Idle Hour Park parking lot, until base is laid on site parking lot
 - Building access – Life Lane, with access points from New Circle Road and Richmond Road
 - Elevator Usage – the elevator may be used once installed, per specifications
 - *Special care should be taken to keep Life Lane neat and clean. It is a private road, owned by Southland Christian Church, with perpetual easements granted to LFUCG. The easements are still being finalized, but one requirement of the grant is for periodic street cleaning during construction. Full language is contained in the specifications.*
 - *Site Utility access is, in the case of Domestic Water, provided from adjoining properties. Access to the private water main is part of the perpetual easement agreement between LFUCG and Southland Christian Church, and should not incur additional costs to the contractor.*

- *All temporary facilities and utilities are to be included in the bid.*
- Work under separate contracts
 - Furniture – separate bid package, coordination required
 - *LFUCG Storm Sewer relocation: work is ongoing and may impact the initial stages of construction, primarily with regard to impact on the site entrance, which partially lies in the path of the storm sewer line.*
- Unit Price, Subcontractor and Manufacturer lists are required for this project.
- Review of Additive Alternates
 - **Alternate No. 1:** Fiber Optic Cable Infrastructure Installation
 - **Alternate No. 2:** General Construction Extended Warranty.
 - **Alternate No. 3:** HVAC System Extended Warranty
 - **Alternate No. 4:** Upgrade HVAC Controls Server
- Discussion of Project Submittal Procedures
 - Electronic PDF submittals via Newforma InfoExchange.
 - *Newforma is a suite of Construction Administration tools, managed by EOP Architects and offered free of charge as a web-based interface to consultants and contractors. This will be the required method of correspondence on ASIs, RFIs, PRs, Submittals, COs, and other Construction Administration tasks. EOP will provide a tutorial coinciding with the Notice to Proceed.*
- **Response to Questions**
 - *A budget estimate will not be provided to bidders. This is standard LFUCG practice.*
 - *Pre-Bid Meeting Sign-In Sheet is attached.*



Lexington-Fayette Urban County Government
DEPARTMENT OF FINANCE & ADMINISTRATION

Jim Gray
Mayor

William O'Mara
Commissioner

ADDENDUM #2

Bid Number: **#99-2014**

Date: August 20, 2014

Subject: **Construction of Replacement Senior Citizens' Center**

Please address inquiries to:
Theresa Maynard (859) 258-3320

TO ALL PROSPECTIVE BIDDERS:

Please be advised of the following clarifications to the above referenced bid.

THE OPENING DATE FOR THIS BID HAS BEEN EXTENDED TO
WEDNESDAY, SEPTEMBER 3RD AT 2:00 PM LOCAL TIME.

1.0 PURPOSE OF ADDENDUM:

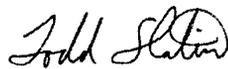
- 1.1 The purpose of this Addendum is to clarify and/or revise the requirements of the construction documents produced by EOP Architects and consultants dated July 29, 2014 for the above noted project.
- 1.2 The Contractor shall be governed by this Addendum insofar as it applies to the work of each Sub-Contractor.
- 1.3 The Contractor shall acknowledge receipt of this Addendum and all other Addenda on the Form of Proposal at the time his price bid is presented.

2.0 GENERAL NOTES

- 2.1 The owner, architect, or consultants will not make determinations on approved equals prior to bid. We encourage all manufacturers/providers who meet the project requirements to submit their bid. Any "or equals" noted by a vendor must include proof of equality in their bid submission.
- 2.2 The Geotechnical Report is considered a supplemental reference document, not part of the contract documents. The contractor shall work with the Special Inspector to ensure that design requirements are met for all subsurface conditions.
- 2.3 The documents have been submitted to all required regulatory bodies. Any changes required in response to comments will be included in Addendum #003.

- 2.4 All sewer and water tap fees have been paid by the owner. Connection to the private domestic water line has been previously negotiated by the owner, and no additional fees shall apply. Coordination for connection to the water line should be handled through LFUCG.

- 2.5 Building Permit Fees will not be waived.

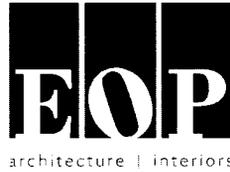

Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the bid and specifications are unchanged. This letter should be signed, attached to and become a part of your bid.

COMPANY: _____

ADDRESS: _____

SIGNATURE OF PROPOSER: _____



August 18, 2014

Bid Number: 99-2014
Architect's Project Number: 201333

LFUCG Replacement Senior Citizen Center
Lexington, Kentucky

ADDENDUM #002

ATTACHMENTS:

Specifications:

329200 TURF AND GRASSES

Drawings:

SKA-1 – PARTIAL 2ND FLOOR PLAN – AREA B
SKL-01 – SHEET C1.0 ADD 002
SKL-02 – SHEET C2.0 DETAIL B
SKL-03 – SHEET C2.0 DETAIL E
SKL-04 – SHEET L2.0 R-1
SKL-05 – SHEET L3.0 R-1
SKL-06 – SHEET L4.0 R-1
SKL-07 – SHEET L4.1 R-1
SKL-08 – SHEET L4.2 R-1
SKL-09 – SHEET L6.4 R-1
SKM-1 – MECHANICAL DETAILS

1.0 PURPOSE OF ADDENDUM:

- 1.1 The purpose of this Addendum is to clarify and/or revise the requirements of the construction documents produced by EOP Architects and consultants dated July 29, 2014 for the above noted project.
- 1.2 The Contractor shall be governed by this Addendum insofar as it applies to the work of each Sub-Contractor.
- 1.3 The Contractor shall acknowledge receipt of this Addendum and all other Addenda on the Form of Proposal at the time his price bid is presented.

2.0 GENERAL NOTES

- 2.1 The owner, architect, or consultants will not make determinations on approved equals prior to bid. We encourage all manufacturers/providers who meet the project requirements to submit their bid. Any "or equals" noted by a vendor must include proof of equality in their bid submission.

- 2.2 All Supporting Documents (Unit Prices, Manufacturers List, Subcontractors List, etc.) are due at the same time as the Form of Proposal.
- 2.3 One copy of the Form of Proposal shall be submitted with all bids.
- 2.4 The Geotechnical Report is considered a supplemental reference document, not part of the contract documents. The contractor shall work with the Special Inspector to ensure that design requirements are met for all subsurface conditions.
- 2.5 The documents have been submitted to all required regulatory bodies. Any changes required in response to comments will be included in Addendum #003.
- 2.6 All sewer and water tap fees have been paid by the owner. Connection to the private domestic water line has been previously negotiated by the owner, and no additional fees shall apply. Coordination for connection to the water line should be handled through LFUCG.
- 2.7 The Owner has engaged Paladin Engineers to perform Fundamental Commissioning for the project.
- 2.8 The Owner shall engage an independent consultant to perform Special Inspections for the project. An RFP for this scope will be released after September 2, 2014.
- 2.9 Building Permit Fees will not be waived.
- 3.0 FRONT END DOCUMENTS
- 3.1 FORM OF PROPOSAL, Section 4 – BID SCHEDULE – SCHEDULE OF VALUES: Revise BID ALTERNATIVE #2: General Construction Extended Warranty to include the following:
- “The base bid includes a 2 year warranty on construction by the General Contractor and his agents and subcontractors as specified in Section 12.6 of the General Conditions.”
- 3.2 FORM OF PROPOSAL, Section 4 – BID SCHEDULE – SCHEDULE OF VALUES: Revise BID ALTERNATIVE #3: HVAC System Extended Warranty and Preventive Maintenance to include the following:
- “The base bid includes 3 years of warranty and preventive maintenance as specified in Section 12.9 of the General Conditions.”
- 3.3 GENERAL CONDITIONS, Section 15.8 – Close Out Procedures: Revise the fourth and final paragraph as follows:
- “The ARCHITECT/CONSULTANT shall provide an electronic version of all construction documents related to the Project at the conclusion of the project.”
- 3.4 GENERAL CONDITIONS: revise Section 12.6 “One Year Correction Period” as follows:
- 12.6 **Two Year** Correction Period
- If within **two years** after the date of Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, CONTRACTOR shall promptly, without

cost to OWNER and in accordance with OWNER'S written instructions, either correct such defective Work, or, if it has been rejected by OWNER, remove it from the site and replace it with non-defective Work. If CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, OWNER may have the defective Work corrected or the rejected Work removed and replaced, and all direct, indirect and consequential costs of such removal and replacement (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) will be paid by CONTRACTOR. In special circumstances where a particular item of equipment is placed in continuous service before Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications or by Change Order.

3.5 GENERAL CONDITIONS: add new subsection 12.9 as follows:

12.9 HVAC Equipment Warranty & Preventive Maintenance

If within three years after the date of Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, CONTRACTOR shall promptly, without cost to OWNER and in accordance with OWNER'S written instructions, either correct such defective Work, or, if it has been rejected by OWNER, remove it from the site and replace it with non-defective Work. If CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, OWNER may have the defective Work corrected or the rejected Work removed and replaced, and all direct, indirect and consequential costs of such removal and replacement (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) will be paid by CONTRACTOR. In special circumstances where a particular item of equipment is placed in continuous service before Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications or by Change Order.

Additionally, the CONTRACTOR shall perform all Preventive Maintenance recommended by the Manufacturer of all mechanical equipment, including but not limited to: air handling units, air filters, ductwork, variable air volume (VAV) boxes, air quality monitoring system, water source heat pumps, geothermal pumps, geothermal well field, hydronic piping, expansion tank, air separator, CO2 sensors, thermostats, communication modules, and system controls.

All Preventive Maintenance shall be performed on a quarterly basis for the duration of the Warranty and Guarantee, starting from the first quarter after Substantial Completion. All Preventive Maintenance shall be performed by an authorized service technician as stipulated by the Manufacturer. CONTRACTOR shall provide all necessary materials and labor required to perform Preventive Maintenance, including but not limited to: air filter media.

The CONTRACTOR shall provide a Preventive Maintenance plan to the OWNER prior to approval of the first Application for Payment. During the duration of the Preventive Maintenance period, at each quarterly review, the CONTRACTOR shall provide the OWNER with a detailed report of inspections, maintenance activity, replacements, and repairs. The CONTRACTOR shall provide the OWNER with recommendations for replacements not covered by Preventive Maintenance as required.

4.0 SITE & CIVIL SPECIFICATIONS

- 4.1 See Specification Section 329200 Turf and Grasses- replace 329200 with the attached
Page 3 of 7

Specification.

5.0 SITE & CIVIL DRAWINGS

- 5.1 Refer to Drawing L2.0 and attached SKL-04. Remove existing tree and curb where indicated, to accommodate emergency fire access lane as shown on additional sheets.
- 5.2 Refer to Drawing L3.0 and attached SKL-05 for grading associated with emergency fire access lane.
- 5.3 Refer to Drawing L3.0. Note that all three contours at new sidewalk at Life Lane are labeled incorrectly as "990." Starting from west end of sidewalk, contours crossing new sidewalk shall be labeled as "984," "985," and "986," as indicated by tie in to existing adjacent contours.
- 5.4 Refer to Drawing L4.0 and attached SKL-06 for layout of emergency fire access lane.
- 5.5 Refer to Drawing L4.1 and attached SKL-07 for material information and installation detail for emergency fire access lane.
- 5.6 Refer to Drawing L4.1 and attached SKL-08 for keynotes regarding pad and screen fencing at future propane tank. Note propane tank and installation of tank will be by the Owner and are Not In Contract.
- 5.7 Refer to Drawing L6.4 and SKL-09. Add Detail G - Reinforced Turf to L6.4.
- 5.8 Refer to Drawing C1.0, Contractor shall revise sanitary sewer pipe material referenced in Note 2 and 13 from PVC to DIP.
- 5.9 Refer to Drawing C3.0, pipe material for all sanitary lines shall be DIP.
- 5.10 Refer to Drawing C1.0. Sheet note 3 shall read: PROVIDE 2 ½" PVC WATER LINE. REFER TO DETAIL C, SHEET C2.0. PROVIDE TRACER WIRE.
- 5.11 Refer to Drawing C1.0, vicinity map added and coordinates for sanitary MH. See addendum sketch SKL-01.
- 5.12 Refer to Drawing C2.0, Detail B. Addendum sketch SKL-02 shall replace detail B. Location of PIV connection ties in before the Double Detector Check valve, and the PIV has been relocated. Tag note 6, refers to PIV detail. General Note 2, indicates all pipe within the vault shall be DIP.
- 5.13 Refer to Drawing C2.0, Detail E. Addendum sketch SKL-03 Detail B provided to indicate revision of hose connection sizes to agree with latest LFUCG Fire Department guidelines.
- 5.14 Refer to Drawing L4.2. The benches in SOUTH PATIO ENLARGED PLAN – B are incorrectly keynoted as #43. Please revise to keynote #28.

6.0 STRUCTURAL DRAWINGS & SPECIFICATIONS

- 6.1 Not applicable to this Addendum.

7.0 ARCHITECTURAL SPECIFICATIONS

- 7.1 Section 054000 – COLD FORMED METAL FRAMING: the designing engineer's approval is required for any changes to the framing design, per subsection 1.5.C.
- 7.2 Section 033000 – CAST-IN-PLACE CONCRETE: revise section 3.2 – VAPOR BARRIER INSTALLATION to read: "Install vapor barrier in accordance with all requirements of ASTM E1643-11"
- 7.3 Section 072100 – THERMAL INSULATION: add the following item to subsection 2.1-FOAM-PLASTIC BOARD INSULATION:
- D. Plywood-Faced Polyisocyanurate Board Insulation: ASTM C 1289, Type V, Grade 3, water absorption of <0.1% by volume per ASTM C209, NFPA 285 approved in metal stud assemblies with stucco exterior finish. Use only at areas to receive stucco exterior finish.
1. Basis of Design: Subject to compliance with project requirements, provide Hunter Xci Ply or approved equal.
 2. Fire Retardant Treated Plywood Thickness: 3/4" with flame spread of 25 or less per ASTM E84.
 3. Insulation Thickness: as indicated on the drawings
- 7.4 Section 107000 – EXTERIOR SUN CONTROL DEVICES: this section is duplicated in the documents. The duplicated sections are identical, and the information is consistent with design intent.
- 7.5 Section 110000 – EQUIPMENT: Subsection 1.2.A – remove "Fitness Equipment" and "Art Education Equipment" from the section. These items are no longer part of the contract.
- 7.6 Section 110000 – EQUIPMENT: This section is meant to give general instruction for submittals, quality assurance, and execution. Equipment product criteria is found in the Equipment Schedules on sheets 10.10A and 10.10B. All equipment shall meet the specified requirements, and shall be part of the base bid.

8.0 ARCHITECTURAL DRAWINGS

- 8.1 Sheet A10.10B – AV EQUIPMENT SCHEDULE: Add "5 YEARS" to the WARRANTY column for item AV-17
- 8.2 Sheet 10.10B – OFFICE EQUIPMENT SCHEDULE: Revise item OF-1 Basis of Design Model to the following:
- Manufacturer: ULINE
Model Name: 2-Drawer File Cabinet
Model Number: H-1914
Design Criteria: Lockable, Full Extension Drawers, Thumb Latch Opening
Warranty: 90 days
- 8.3 Sheet 10.10B – OFFICE EQUIPMENT SCHEDULE: Revise item OF-2 Model Name to be: "4-Drawer Lateral File Cabinet"
- 8.4 Sheet 10.10A – FITNESS EQUIPMENT SCHEDULE: Add "FOR REFERENCE ONLY" to the schedule title. Fitness Equipment will not be part of the contract.

- 8.5 Sheet 10.10B – ART EQUIPMENT SCHEDULE: Add “FOR REFERENCE ONLY” to the schedule title. Art Equipment will not be part of the contract. An EXCEPTION to this item is AS-14-Kiln, which WILL be part of the contract. AS-15-Kiln shall be owner-furnished, contractor-installed.
- 8.6 A1 Sheets – Sheet note 25 to be revised to: “CORNER PROTECTION REQUIRED AT INDICATED LOCATIONS, UP TO 48” AFF”
- 8.7 Sheet A1.02B – SECOND FLOOR PLAN – AREA B: size of shower compartment and receptor shall be revised to standard dimensions. Refer to sketch **SKA-1**.

9.0 PLUMBING SPECIFICATIONS:

- 9.1 GENERAL NOTE: Distance from under-slab sanitary to highest VTR is 38'-6". Schedule-40 PVC pipe shall be suitable for plumbing systems as specified.

10.0 PLUMBING DRAWINGS

- 10.1 GENERAL NOTE: Refer to plumbing plans for plumbing fixture numbers.
- 10.2 Sheet P2.0 – The grease waste shall be changed to 6" diameter form where it exits the building to the grease trap. The sanitary leaving the grease trap shall be 6" to where it connects to the existing sanitary sewer system.

11.0 MECHANICAL SPECIFICATIONS:

- 11.1 Section 201300 – PIPE, PIPE FITTINGS, AND PIPE SUPPORT: Replace subsection 5.J.1 with the following:
- (1) Mains and branches above 2" – Piping shall be virgin polyethylene with a PE 3408 piping formulation and 345464C or greater cell classification. Pipe shall be SDR 15.5, minimum pressure rating of 110 psi at 73.4°F.
 - (2) Branches - Type "L" hard copper tubing with wrought copper fittings and 95/5 solder.
 - (3) Transitions from polyethylene to copper – refer to detail on drawings. Factory manufactured transition required with brass threads. No metal threads shall be inserted into polyethylene piping, and no polyethylene threads shall be inserted into metal piping.
 - (4) The only acceptable method for joining pipe is by a heat fusion process. Pipe shall be butt or socket fused in accordance with pipe manufacturer's procedures. Installers shall have heat fusion school certification per geothermal specifications. Provide copy of heat fusion card to Engineer for review.
 - (5) Special Notes:
 - a. Takeoffs and branch piping to individual coils or heat pumps shall not be connected to the bottom of hydronic mains. Connection to mains shall be at the side of the main. Also refer to details on the drawings.

12.0 MECHANICAL DRAWINGS

- 12.1 Water Source Heat Pump connection detail can be found on attached sketch **SKM-1**.

13.0 ELECTRICAL SPECIFICATIONS

13.1 Not applicable to this Addendum.

14.0 ELECTRICAL DRAWINGS

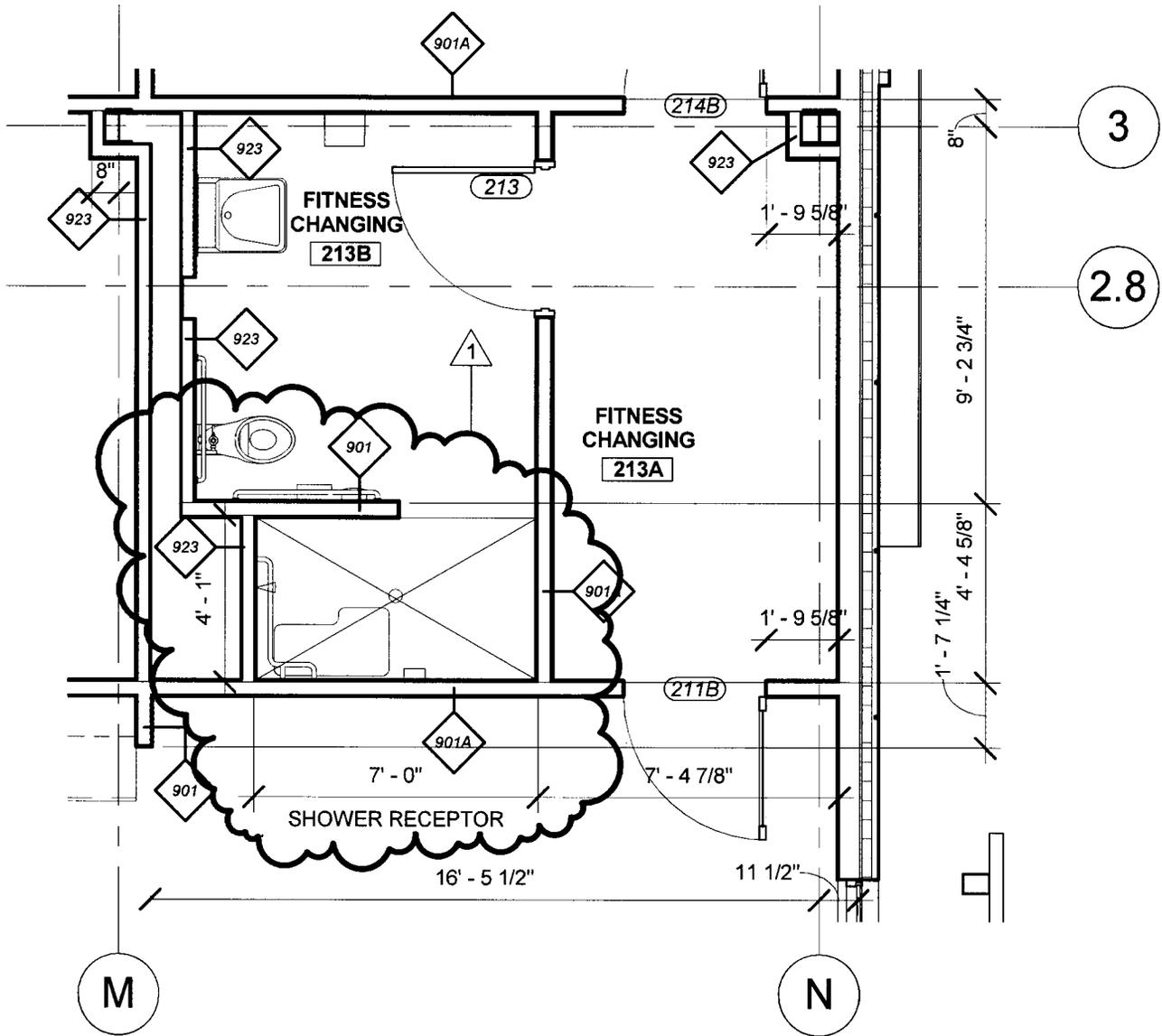
14.1 Sheets U1.1, U1.2 – SITE UTILITIES ALTERNATE #1: All trenches and Communications Hand Hole boxes shall be located no less than 8'-0" from the back of the curb at Life Lane. Coordinate final location with the owner.

14.2 Sheet E4.0 – SYSTEMS – FIRST FLOOR PLAN: Add a fire alarm horn/strobe device to room 132 Janitor/Laundry.

14.3 Sheet E4.0 – SYSTEMS – FIRST FLOOR PLAN: Add a fire alarm pull station at exterior door 131A in Mechanical room 131.

14.4 Sheet E4.1 – SYSTEMS – SECOND FLOOR PLAN: Add duct smoke detectors to ERV-1 and ERV-2 on the roof.

END OF ADDENDUM #002



1 PARTIAL SECOND FLOOR PLAN - AREA B
 SKA-1 SCALE: 1/4" = 1'-0"



LEXINGTON SENIOR CENTER
 195 LIFE LANE
 LEXINGTON, KY 40502

ADDENDUM #2

Proj. No. 201333 Date AUGUST 18, 2014

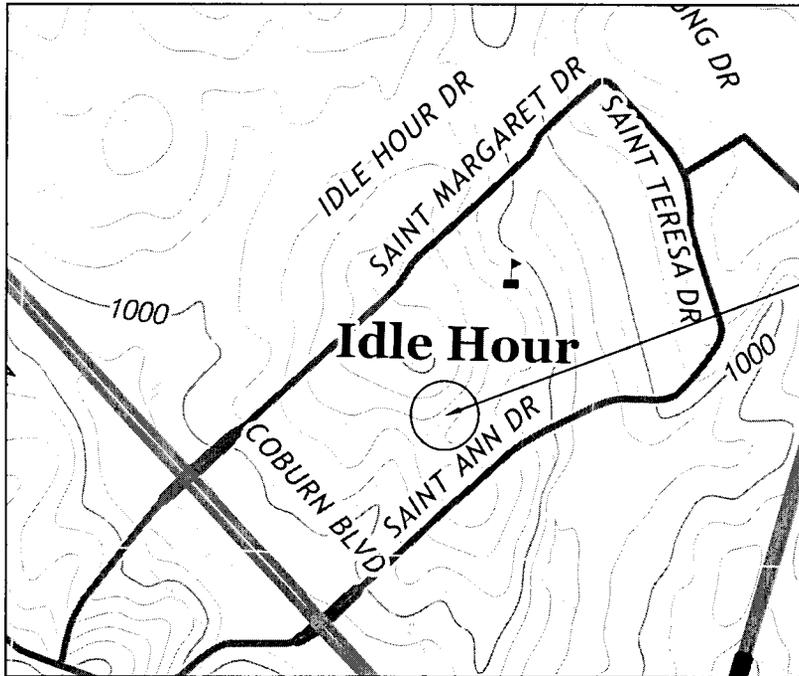
Drawn by JHD Checked by JHD

No.	REVISION	DATE
1	ADDENDUM #002	8/18/14

SKA-1

1/4" = 1'-0"

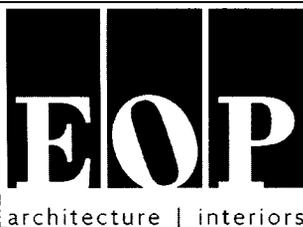
VICINITY MAP



SITE LOCATION

MANHOLE	NORTHING	EASTING
MH A	189,159.069	1,580,318.21
MH B	189,113.543	1,580,302.18

design
landscape architecture • engineering • planning



**LEXINGTON SENIOR
CENTER**

**195 LIFE LANE
LEXINGTON, KY 40502**

SHEET C1.0 ADD 002

Proj. No. 201333 Date AUGUST 18, 2014

Drawn by VA Checked by RF

No. REVISION DATE

1 ADDENDUM #002 8/18/14

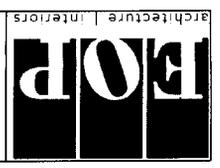
SKL-01

SKL-02	
Rev. No. 201333	Date AUGUST 18, 2014
Drawn by VLA	Checked by R.F.
REVISION	DATE
1	ADDENDUM #002
	8/18/14

C2.0, DETAIL B

LEXINGTON SENIOR CENTER

195 LIFE LANE LEXINGTON, KY 40502

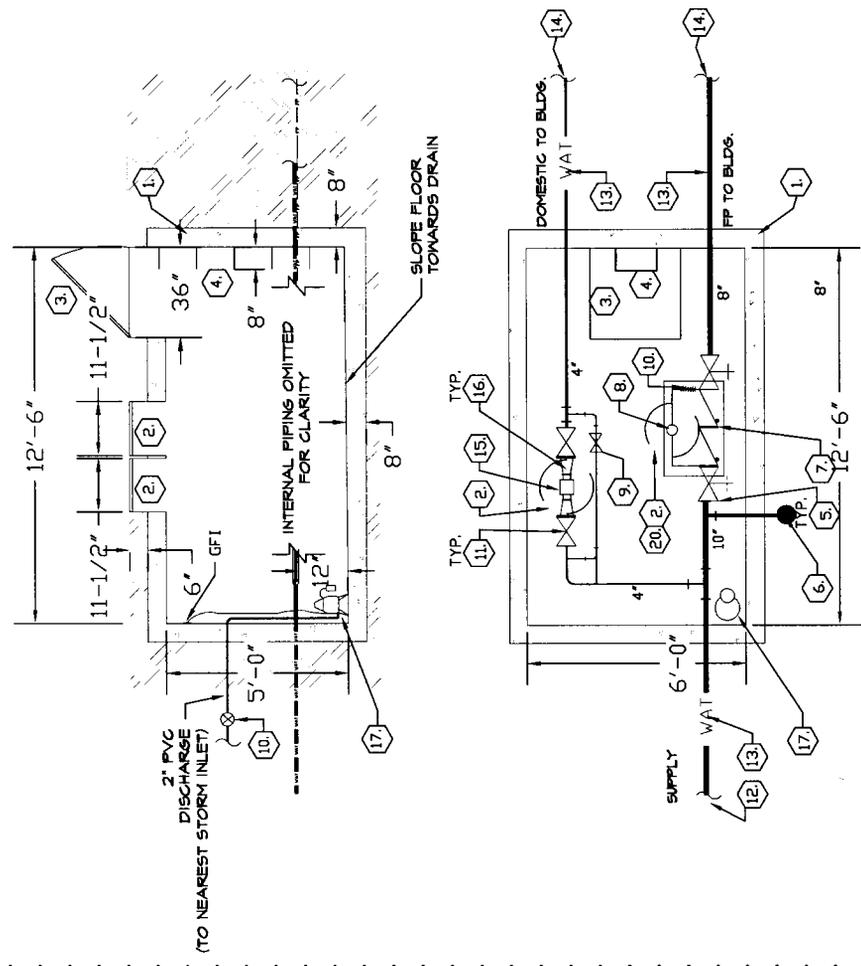


FIRE PROTECTION AND WATER METER VAULT KEYNOTES

- METER VAULT - SEE SPECIFICATIONS & LOCAL WATER UTILITY STANDARDS.
- COVER FOR READING METERS: FRAME AND COVER, FORD METER CO. INC. NO. 11 OR KAWC APPROVED EQUAL.
- METER VAULT ACCESS COVER: FRAME AND COVER, BILCO COMPANY NO K-4 WITH DOUBLE HINGE, LIFTHANDLE AND LOCKING DEVICE AS REQUIRED BY LOCAL WATER COMPANY.
- PLASTIC CORROSION RESISTANT MANHOLE STEPS 15" O.C. AS REQUIRED.
- OS&Y GATE VALVE (SUPERVISED)
- POST INDICATOR VALVE (P.I.V.) (SUPERVISED) (SEE DETAIL EC2.1)
- DOUBLE DETECTOR CHECK VALVE WITH BYPASS METER.
- BYPASS METER
- BYPASS GLOBE VALVE, NORMALLY CLOSED
- CHECK VALVE
- OS&Y GATE VALVE
- SEE SITE UTILITIES PLAN FOR COORDINATION.
- SEE DRAWINGS FOR PIPE SIZES.
- TO BLDG. - SEE SITE UTILITIES PLAN FOR CONTINUATION.
- WATER METER - VERIFY SIZE AND TYPE WITH LOCAL WATER COMPANY.
- REDUCER OR INCREASER
- 1 1/2 HP SUMP PUMP ON GFI. RUN ELECTRICAL CONDUIT AND POWER FROM BUILDING. WIRING TO BE ATTACHED TO VAULT WALLS SO THAT IT DOES NOT INTERFERE WITH FLOAT OPERATION. "PUMP ON" SHALL BE SET A MINIMUM OF 4" UNDER LOWEST ELEVATION OF POTABLE WATER / FP SYSTEM. "PUMP OFF" ELEVATION SHALL BE SET ABOVE THE VOLUTE OF THE PUMP SO THAT IT DOES NOT RUN DRY. DRILL 1/8" HOLE ON VERTICAL PORTION OF 2" DISCHARGE LINE NEAR PUMP.

GENERAL NOTES:

- INSTALL A 1/4" FET COCK ON OUTLET SIDE OF METER SETTING AND BEFORE ALL GATE VALVES IN ACCORDANCE WITH LOCAL WATER COMPANY.
- ALL PIPING IN VAULT SHALL DIP.
- SUPERVISED VALVES WILL REQUIRE ELECTRICAL CONDUIT AND WIRE TO THE BUILDING ELECTRICAL CENTER. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION.
- SLOPE VAULT FLOOR TO DRAIN TOWARDS FLOOR DRAIN. TE DRAIN INTO NEAREST STORM INLET.
- SUPPORT ALL PIPE WORK ON CONCRETE BLOCKING UNDER VALVES AND METERS.
- VAULT SHALL HAVE A MINIMUM SLOPE OF 0.5% ACROSS ITS FLOOR TOWARDS THE DRAIN.



B

COMBINED WATER METER AND FIRE PROTECTION VAULT
N.T.S.

C20 DETAIL E	
Fig. No. 201333	Date AUGUST 18, 2014
Drawn by VA	Checked by RFP
REVISION	DATE
APPENDUM #002	8/18/14

LEXINGTON SENIOR CENTER
 195 LIFE LANE LEXINGTON, KY 40502



design
 landscape architecture • engineering • planning

FIRE HYDRANTS SHALL BE MUELLER AND HAVE A 6 INCH MECHANICAL JOINT BELL CONNECTION DESIGNED FOR 200 POUNDS W/P WITH TWO -4.5" OPENINGS N.S.H.T. (ALL WITH CAPS AND CHAINS), MAIN VALVE OPENINGS 5 1/4" MATCHING LFUCG FIRE DEPTH OF BURY 4'-0" FIRE HYDRANTS SHALL CONFORM TO ANWA STANDARD SPECIFICATIONS FOR FIRE HYDRANTS ORDINARY WATER SERVICE, C502, LATEST REVISION, AND SHALL OPEN BY TURNING RIGHT.

PUMPER CONNECTION SHALL FACE THE ROAD

NOTE:
 CONFIRM THAT THE FIRE HYDRANT MEETS THE LEXINGTON FIRE DEPT'S STANDARDS RELATED TO DIRECTION OF OPENING, OPERATING NUT SIZE AND THREAD, SIZE AND ORIENTATION.

3 PIECE CAST IRON VALVE BOX MARKED "WATER"

FINISH GRADE

4" x 2' DIA CONC. COLLAR

6" GATE VALVE, 2" MEGA-LUG JOINT RESTRAINT GLANDS AND ADJUSTABLE C.I. VALVE BOX

BLOCK TEE IN ACCORDANCE TO THRUST TO BLOCK DETAIL

CARRIER PIPE

STANDARD PIPE BEDDING MATERIAL 3500 P.S.I. CONCRETE

8" MIN.

BLEED VALVE MUST REMAIN OPEN

UNDISTURBED EARTH

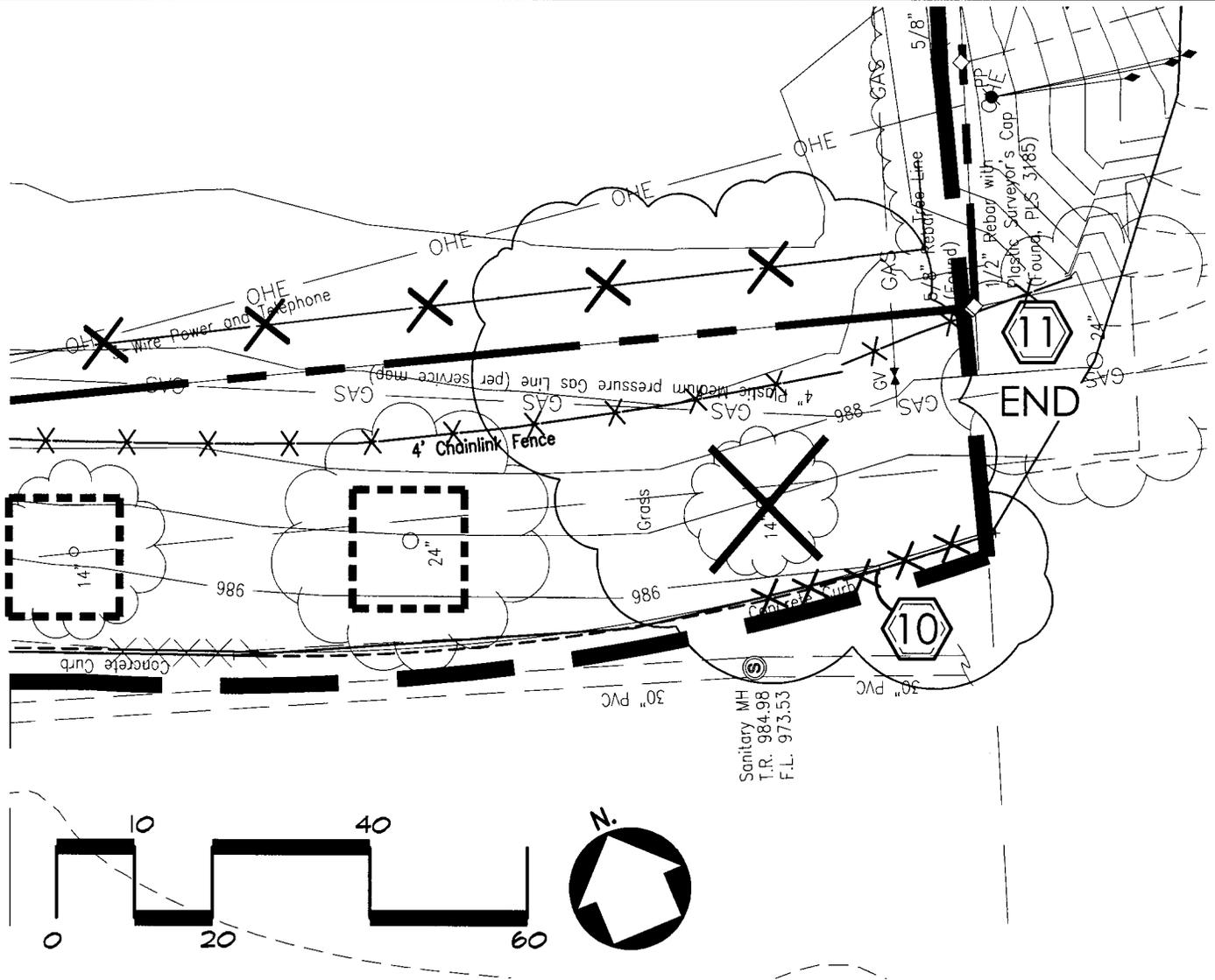
7 CUBIC FEET CRUSHED STONE FOR DRAINAGE

BLOCK FIRE HYDRANT WITH CONCRETE AS REQUIRED TO UNDISTURBED EARTH

NOTE: ALL MECHANICAL JOINT FITTINGS ARE TO BE ASSEMBLED WITH "MEGA-LUG" JOINT RESTRAINT GLANDS.

FIRE HYDRANT ASSEMBLY
 N.T.S.

E



NOTES:
 EXTEND SILT FENCE TO INCLUDE WORK AT EMERGENCY FIRE ACCESS LANE.
 REMOVE TREE INDICATED AND CLEAR AREA AT EMERGENCY FIRE ACCESS LANE, IN ACCORDANCE WITH SPECIFICATIONS.
 REMOVE EXISTING CURB AS REQUIRED TO INSTALL NEW 4" MOUNTABLE CURB, SEE L4.0 & L4.1.
 SEE SHEET L-2.0 FOR ADDITIONAL NOTES AND REQUIREMENTS.

elementdesign
 landscape architecture+civil engineering+planning



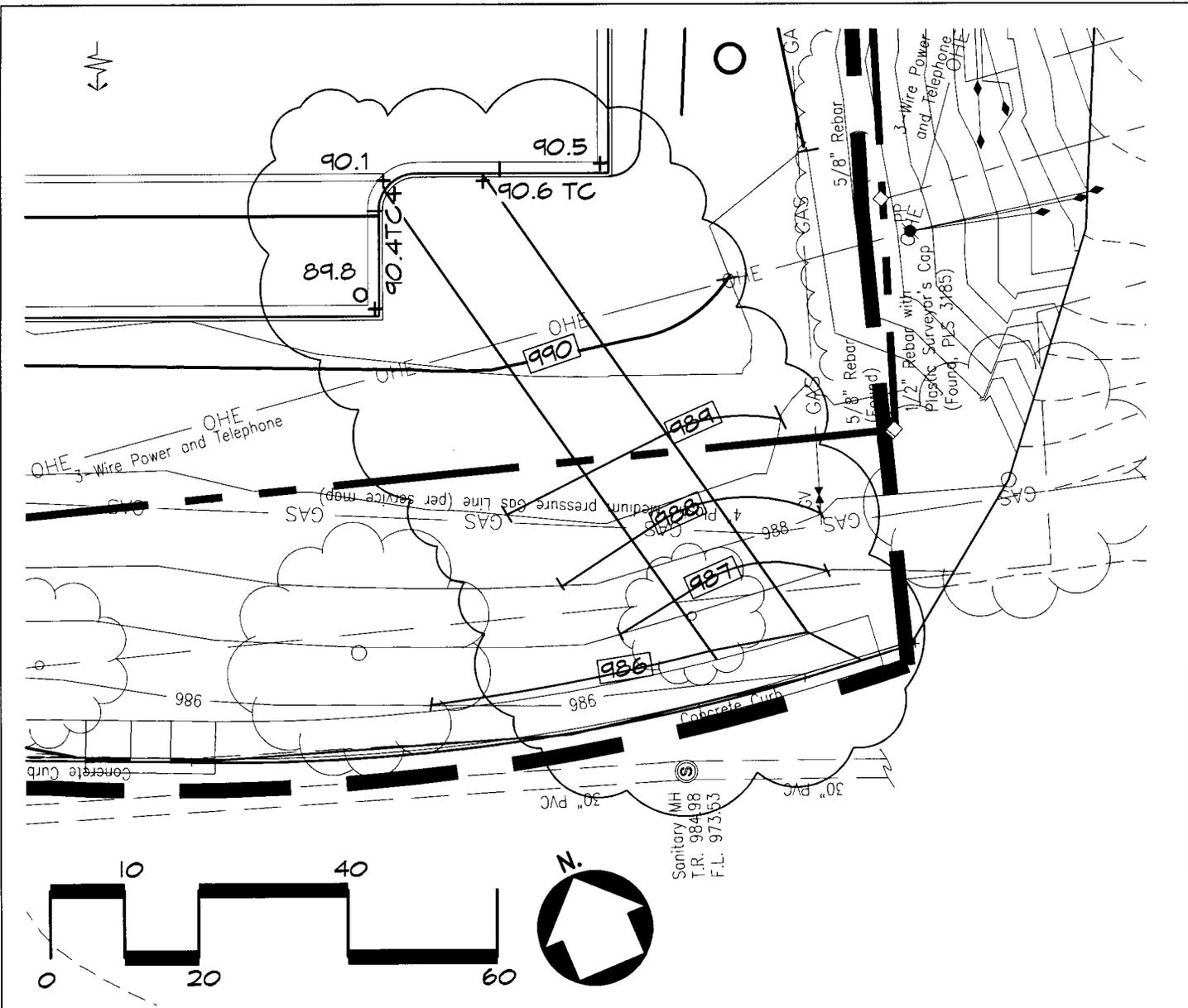
LEXINGTON SENIOR CENTER

 195 LIFE LANE
 LEXINGTON, KY 40502

SHEET L2.0 ADD 002

Proj. No. 201333	Date AUGUST 18, 2014	
Drawn by RF	Checked by RF	
No.	REVISION	DATE
1	ADDENDUM #002	8/18/14

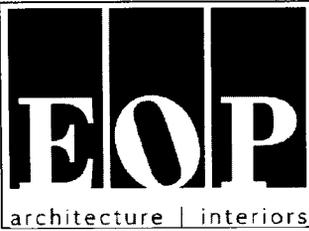
SKL-04



Sanitary MH
T.R. 984198
F.L. 973553

NOTES:
 CUT SHALL NOT EXCEED 6" AT EXISTING GRADE. NOTIFY ARCHITECT OF ANY CONFLICTS WITH EXISTING UTILITIES.
 FULL 6" CURB SHALL TRANSITION TO 4" MOUNTABLE CURB OVER 24" TO CREATE SMOOTH TAPER AND MINIMIZE SLOPE AT ADJACENT SIDEWALK. REFER TO SKL-05 & SKL-06 FOR LOCATIONS.
 MATCH GRADES WHERE NEW CURBING ABUTS EXISTING PAVEMENT AND CURBS AT LIFE LANE.
 REFER TO SHEET L3.0 FOR ADDITIONAL NOTES AND REQUIREMENTS.

elementdesign
 landscape architecture+civil engineering+planning



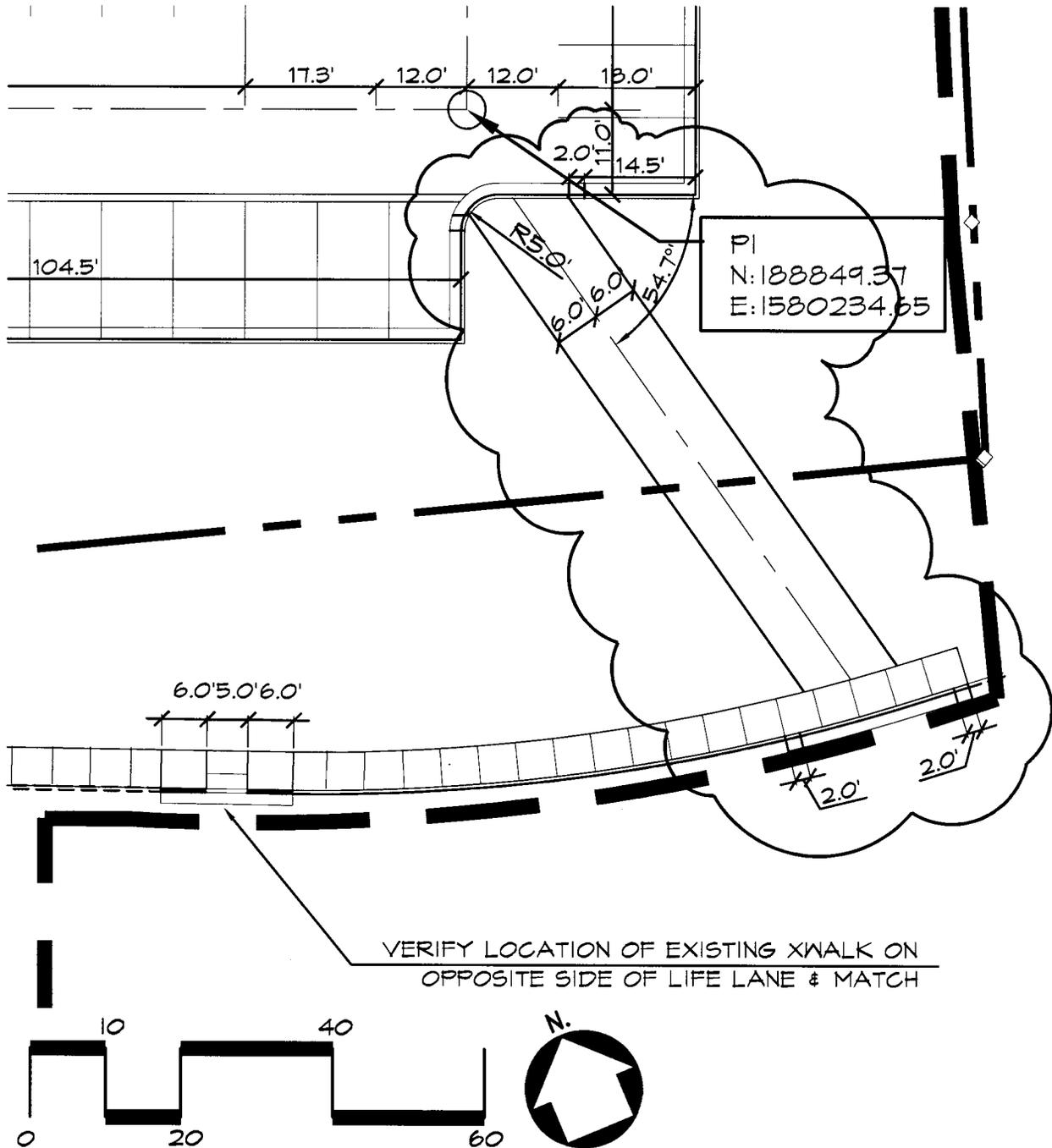
LEXINGTON SENIOR CENTER

 195 LIFE LANE
 LEXINGTON, KY 40502

SHEET L3.0 ADD 002

Proj. No. 201333	Date AUGUST 18, 2014
Drawn by RF	Checked by RF
	REVISION DATE
1	ADDENDUM #002 8/18/14

SKL-05



NOTES:

FULL 6" CURB SHALL TRANSITION TO 4" MOUNTABLE CURB OVER 24" TO CREATE SMOOTH TAPER AND MINIMIZE SLOPE AT ADJACENT SIDEWALK. REFER TO SKL-06 FOR ADDITIONAL NOTES.
 REFER TO SHEET L4.0 FOR ADDITIONAL NOTES AND REQUIREMENTS.

elementdesign
 landscape architecture+civil engineering+planning



LEXINGTON SENIOR CENTER

 195 LIFE LANE
 LEXINGTON, KY 40502

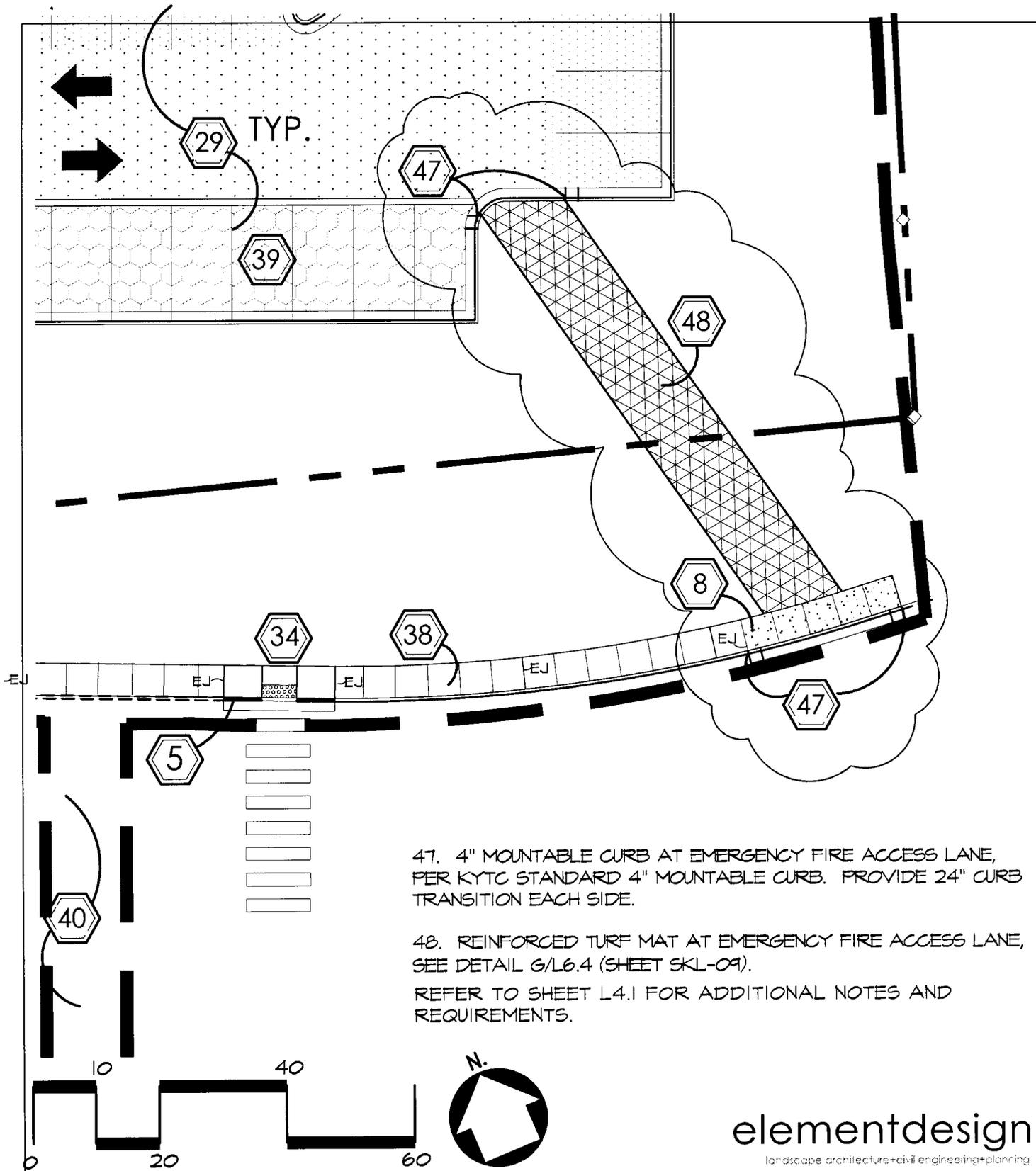
SHEET L4.0 ADD 002

Proj. No. 201333 Date AUGUST 18, 2014

Drawn by RF Checked by RF

No.	REVISION	DATE
1	ADDENDUM #002	8/18/14

SKL-06

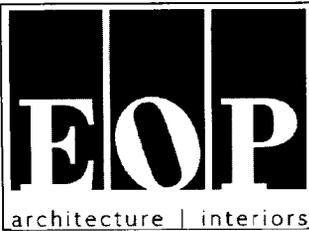


47. 4" MOUNTABLE CURB AT EMERGENCY FIRE ACCESS LANE, PER KYTC STANDARD 4" MOUNTABLE CURB. PROVIDE 24" CURB TRANSITION EACH SIDE.

48. REINFORCED TURF MAT AT EMERGENCY FIRE ACCESS LANE, SEE DETAIL G/L6.4 (SHEET SKL-09).

REFER TO SHEET L4.1 FOR ADDITIONAL NOTES AND REQUIREMENTS.

elementdesign
landscape architecture+civil engineering+planning



LEXINGTON SENIOR CENTER

195 LIFE LANE
LEXINGTON, KY 40502

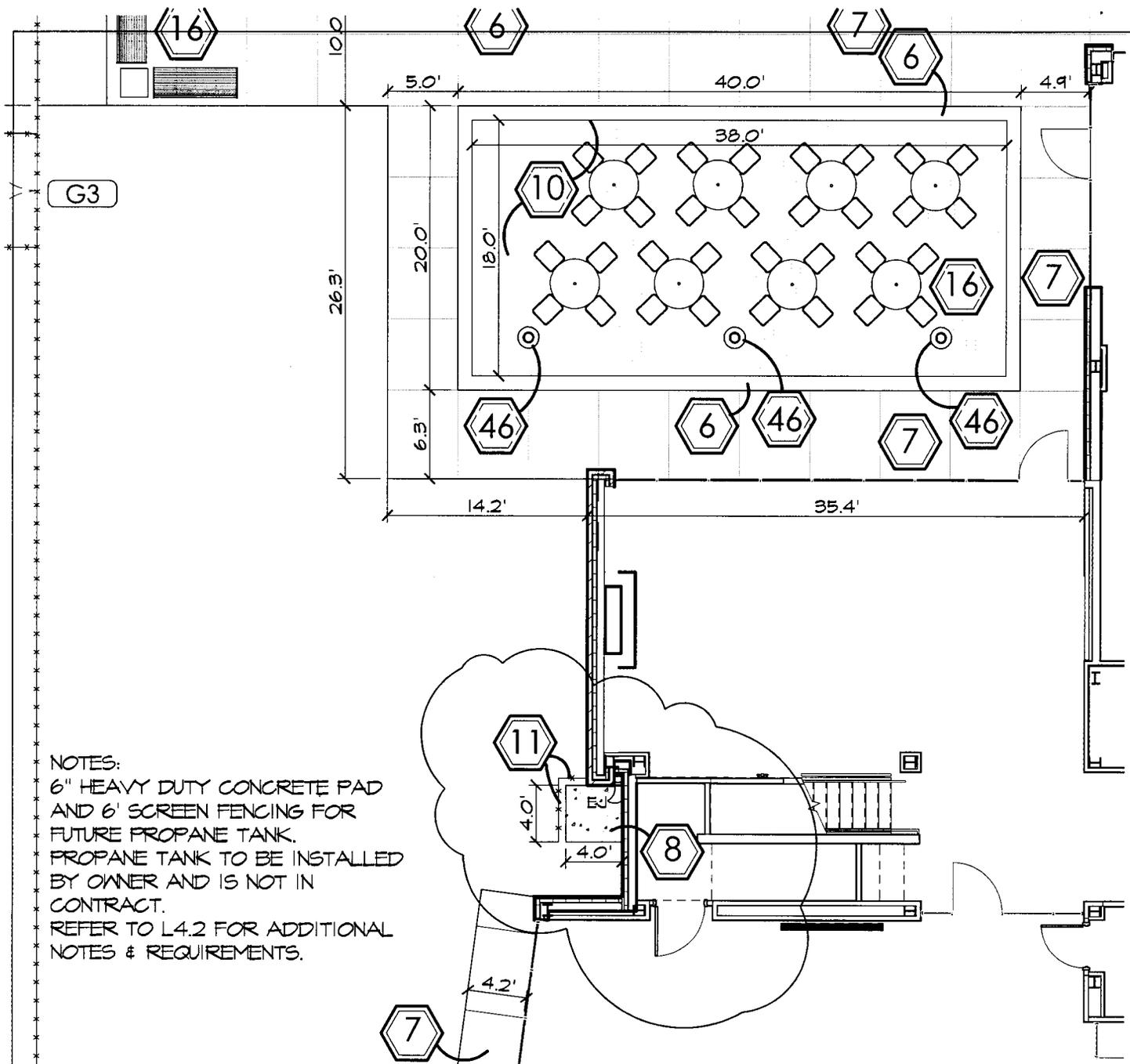
SHEET L4.1 ADD 002

Proj. No. 201333 Date AUGUST 18, 2014

Drawn by RF Checked by RF

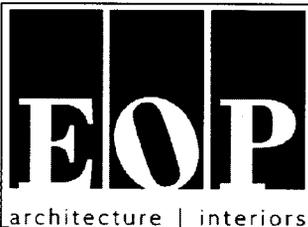
No.	REVISION	DATE
1	ADDENDUM #002	8/18/14

SKL-07



NOTES:
 6" HEAVY DUTY CONCRETE PAD
 AND 6' SCREEN FENCING FOR
 FUTURE PROPANE TANK.
 PROPANE TANK TO BE INSTALLED
 BY OWNER AND IS NOT IN
 CONTRACT.
 REFER TO L4.2 FOR ADDITIONAL
 NOTES & REQUIREMENTS.

elementdesign
 landscape architecture+civil engineering+planning



LEXINGTON SENIOR
 CENTER

195 LIFE LANE
 LEXINGTON, KY 40502

SHEET L4.2 ADD 002

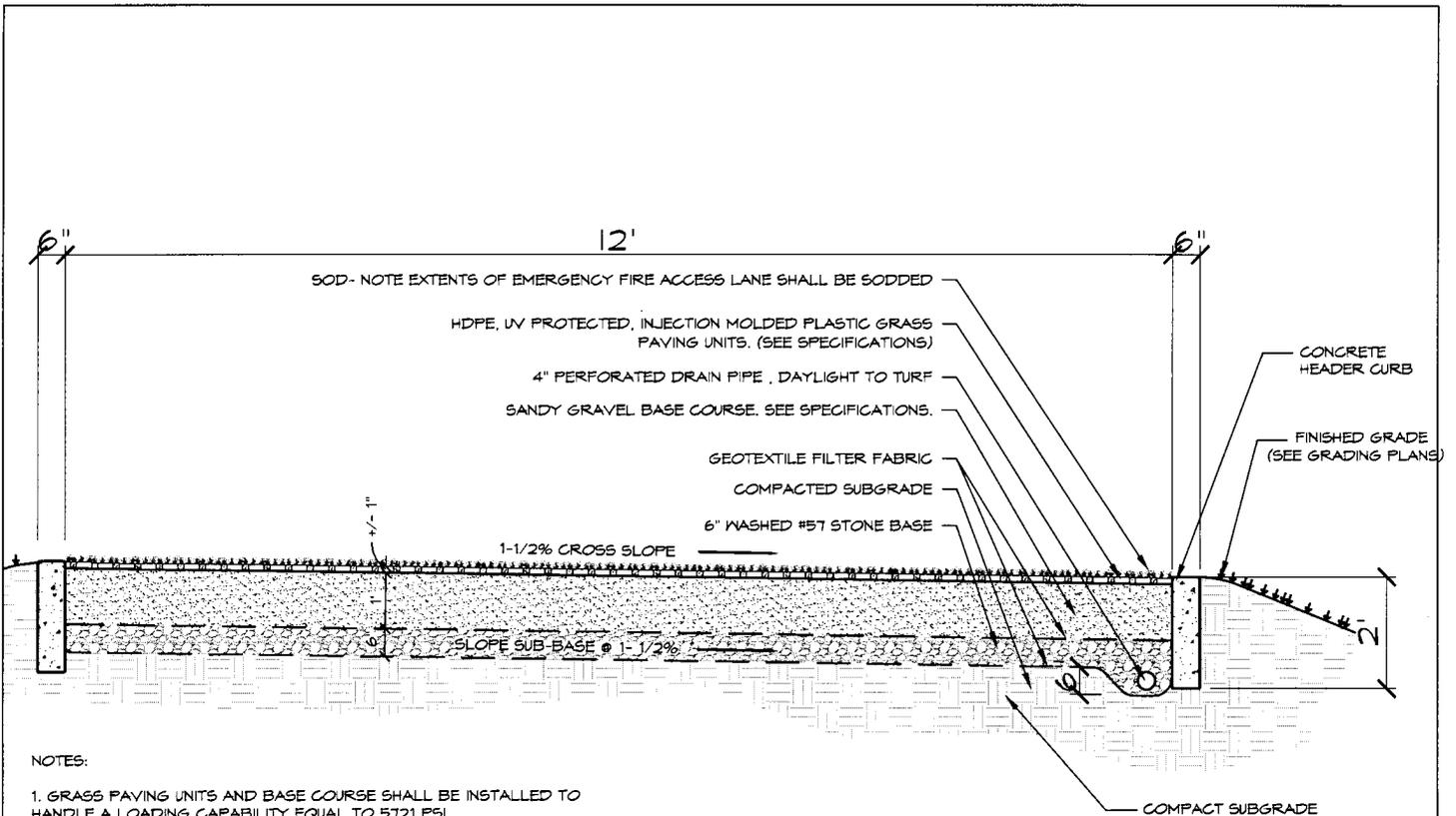
Proj. No. 201333 Date AUGUST 18, 2014

Drawn by RF Checked by RF

No. REVISION DATE

1	ADDENDUM #002	8/18/14
---	---------------	---------

SKL-08



NOTES:

1. GRASS PAVING UNITS AND BASE COURSE SHALL BE INSTALLED TO HANDLE A LOADING CAPABILITY EQUAL TO 5721 PSI.
2. REFER TO SPECIFICATION SECTION 329200 TURF AND GRASSES.

REINFORCED TURF
N.T.S.



elementdesign
landscape architecture+civil engineering+planning



LEXINGTON SENIOR CENTER

195 LIFE LANE
LEXINGTON, KY 40502

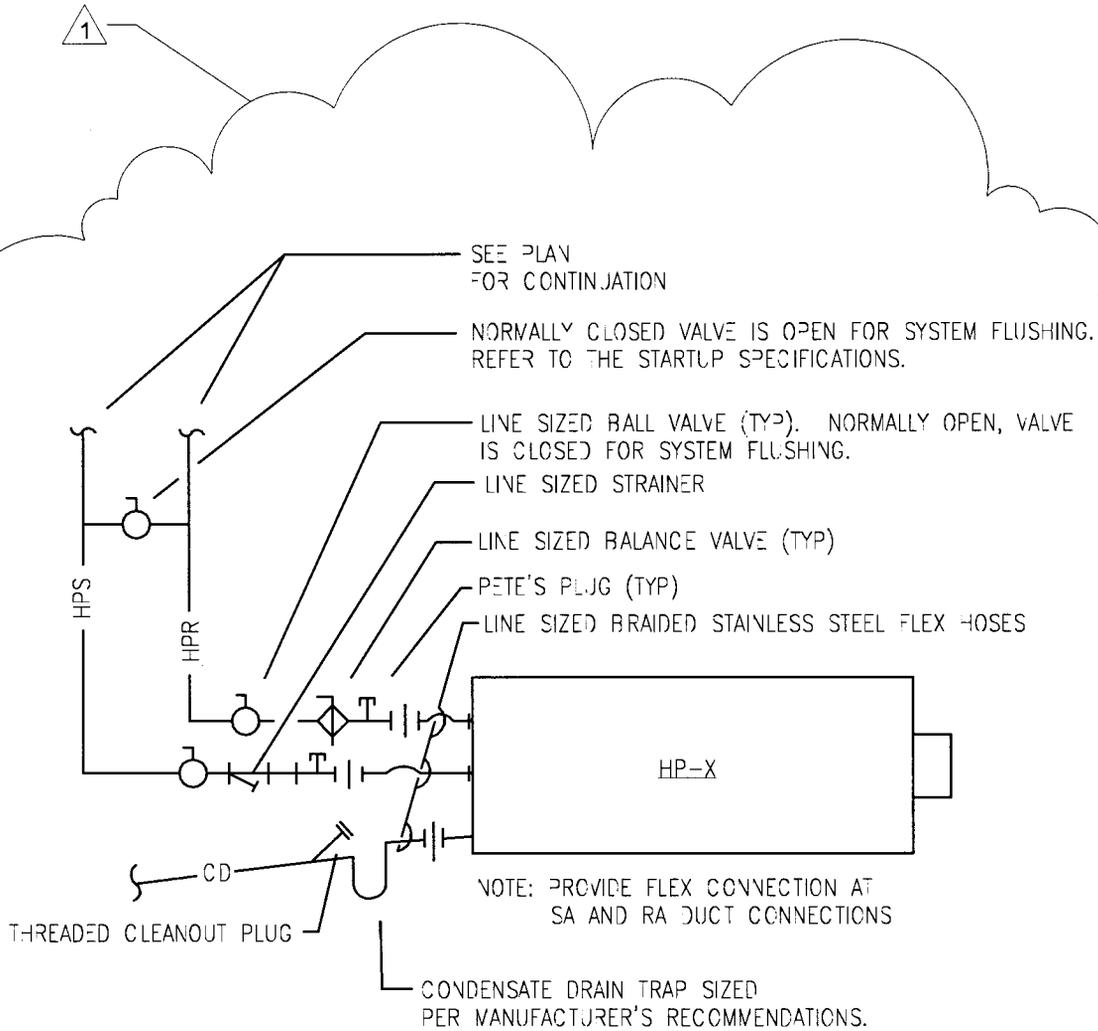
SHEET L6.4 ADD 002

Proj. No. 201333 Date AUGUST 18, 2014

Drawn by RF Checked by RF

No.	REVISION	DATE
1	ADDENDUM #002	8/18/14

SKL-09



NOTE: HANG HEAT PUMPS ACCORDING TO STRUCTURAL ENGINEERS REQUIREMENTS.

HEAT PUMP PIPING SCHEMATIC

NO SCALE



Lexington Senior Center

195 LIFE LANE
LEXINGTON, KY 40502

MECHANICAL DETAILS

Proj. No. LSC13 Date AUGUST 18, 2014

Drawn by CMS Checked by SAC

REVISION DATE

1 ADDENDUM #2 08/18/14

SKM-1

1/8" = 1'-0"

SECTION 329200 - TURF AND GRASSES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General, Supplementary and Special Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

- 1. Seeding.
- 2. Sodding.
- 3. Lawn renovation.
- 4. Erosion-control material(s).
- 5. Grass paving.

- B. Related Sections:

- 1. Division 31 Section "Site Clearing" for topsoil stripping and stockpiling.
- 2. Division 31 Section "Earth Moving" for excavation, filling and backfilling, and rough grading.

1.3 DEFINITIONS

- A. Finish Grade: Elevation of finished surface of planting soil.
- B. Planting Soil: Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.
- C. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill immediately beneath planting soil.
- D. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Certification of Grass Seed: From seed vendor for each grass-seed monostand or mixture stating the botanical and common name and percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.

1. Certification of each seed mixture for turfgrass sod, identifying source, including name and telephone number of supplier.
- C. Qualification Data: For qualified landscape Installer.
- D. Product Certificates: For soil amendments and fertilizers, from manufacturer.
- E. Material Test Reports: For existing surface soil.
- F. Samples for Verification: For each of the following:
 1. Erosion Control Blanket: 12 by 12 inches.
 2. Turf Reinforcement Mat: 12 by 12 inches.
- G. Planting Schedule: Indicating anticipated planting dates for each type of planting.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful lawn and meadow establishment.
 1. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when planting is in progress.
 2. Maintenance Proximity: Not more than two hours' normal travel time from Installer's place of business to Project site.
- B. Soil-Testing Laboratory Qualifications: An independent laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.
- C. Topsoil Analysis: Furnish soil analysis by a qualified soil-testing laboratory stating percentages of organic matter; gradation of sand, silt, and clay content; cation exchange capacity; deleterious material; pH; and mineral and plant-nutrient content of topsoil.
 1. Report suitability of topsoil for lawn growth. State-recommended quantities of nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory topsoil.
- D. Preinstallation Conference: Conduct conference at Project site.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Seed: Deliver seed in original sealed, labeled, and undamaged containers.
- B. Sod: Harvest, deliver, store, and handle sod according to requirements in TPI's "Specifications for Turfgrass Sod Materials" and "Specifications for Turfgrass Sod Transplanting and Installation" in its "Guideline Specifications to Turfgrass Sodding." Deliver sod in time for planting within 24 hours of harvesting. Protect sod from breakage and drying.

1.7 PROJECT CONDITIONS

- A. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with initial maintenance periods to provide required maintenance from date of Substantial Completion.
 - 1. Spring Planting: March 1st – April 30th.
 - 2. Fall Planting: September 1st – October 15th.
- B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit.

1.8 MAINTENANCE SERVICE

- A. Initial Lawn Maintenance Service: Provide full maintenance by skilled employees of landscape Installer. Maintain as required in Part 3. Begin maintenance immediately after each area is planted and continue until acceptable lawn is established, but for not less than the following periods:
 - 1. Seeded Lawns: 60 days from date of Project Substantial Completion.
 - a. When initial maintenance period has not elapsed before end of planting season, or if lawn is not fully established, continue maintenance during next planting season.
 - 2. Sodded Lawns: 60 days from date of Project Substantial Completion.

PART 2 - PRODUCTS

2.1 SEED

- A. Grass Seed: Fresh, clean, dry, new-crop seed complying with AOSA's "Journal of Seed Technology; Rules for Testing Seeds" for purity and germination tolerances.
- B. Seed Species: Seed of grass species as follows, with not less than 95 percent germination, not less than 85 percent pure seed, and not more than 0.5 percent weed seed:
 - 1. Sun and Partial Shade: Proportioned by weight as follows:
 - a. 85 percent blend three species of Turf Type Tall Fescues.
 - b. 15 percent Kentucky Bluegrass (*Poa pratensis*).

2.2 TURFGRASS SOD

- A. Turfgrass Sod: Certified, complying with TPI's "Specifications for Turfgrass Sod Materials" in its "Guideline Specifications to Turfgrass Sodding." Furnish viable sod of

uniform density, color, and texture, strongly rooted, and capable of vigorous growth and development when planted.

- B. Turfgrass Species: Sod of grass species as follows, with not less than 95 percent germination, not less than 85 percent pure seed, and not more than 0.5 percent weed seed:
 - 1. Full Sun: Blend of three "fine blade turf type" Tall Fescue cultivars acceptable to the Architect.
 - 2.

2.3 TOPSOIL

- A. Topsoil: ASTM D 5268, pH range of 5.5 to 7, a minimum of 2 percent organic material content; free of stones 1 inch or larger in any dimension and other extraneous materials harmful to plant growth.
 - 1. Topsoil Source: Reuse surface soil stockpiled on-site. Verify suitability of stockpiled surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.
 - a. Supplement with imported or manufactured topsoil from off-site sources when quantities are insufficient. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches deep; do not obtain from bogs or marshes.

2.4 INORGANIC SOIL AMENDMENTS

- A. Lime: ASTM C 602, agricultural limestone containing a minimum of 80 percent calcium carbonate equivalent and as follows:
 - 1. Class: T, with a minimum of 99 percent passing through No. 8 sieve and a minimum of 75 percent passing through No. 60 sieve.

2.5 PLANTING ACCESSORIES

- A. Selective Herbicides: EPA registered and approved, of type recommended by manufacturer for application.

2.6 FERTILIZER

- A. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:

1. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing agency.

2.7 MULCHES

- A. Straw Mulch: Provide air-dry, clean, mildew- and seed-free, salt hay or threshed straw of wheat, rye, oats, or barley.
- B. Asphalt Emulsion: ASTM D 977, Grade SS-1; nontoxic and free of plant-growth or germination inhibitors.

2.8 EROSION-CONTROL MATERIALS

- A. Erosion-Control Blankets: Biodegradable wood excelsior, straw, or coconut-fiber mat enclosed in a photodegradable plastic mesh. Include manufacturer's recommended steel wire staples, 6 inches long.
- B. Turf Reinforcement Mat: North American Green P550 or a closely similar product acceptable to the Architect.

2.9 PLANTING SOIL MIX

- A. Planting Soil Mix: Topsoil mixed with the following soil amendments and fertilizers in the following quantities:
 1. Weight of Lime per 1000 Sq. Ft.: As determined by Soil Test.
 2. Weight of Sulfur per 1000 Sq. Ft.: As determined by Soil Test..
 3. Weight of Commercial Fertilizer per 1000 Sq. Ft.: As determined by Soil Test.

2.10 GRASS-PAVING MATERIALS

- A. Grass Paving: Cellular, non-biodegradable plastic mats, designed to contain small areas of soil and enhance the ability of turf to support vehicular and pedestrian traffic, of 1-inch nominal mat thickness. Include manufacturer's recommended anchorage system for slope conditions.
 1. Basis-of-Design Product: Subject to compliance with requirements, provide Invisible Structures, Inc.; Grasspave2 or a comparable product by one of the following:
 - a. Grid Technologies, Inc.; Netlon 50.
 - b. Invisible Structures, Inc.; Grasspave2.
 - c. NDS, Inc.; Grassroad Paver8 Plus.
 - d. Presto Products Company, a business of Alcoa; Geoblock Porous Pavement System.
 - e. RK Manufacturing, Inc.; Grassy Pavers.
- B. Base Course: Sound crushed stone or gravel complying with Division 31 Section "Earth Moving" for base-course material.

- C. Sand: Sound, sharp, washed, natural sand or crushed stone complying with gradation requirements in ASTM C 33 for fine aggregate.
- D. Proprietary Growing Mix: As submitted and acceptable to Architect.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas to receive lawns and grass for compliance with requirements and other conditions affecting performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities, trees, shrubs, and plantings from damage caused by planting operations.
 - 1. Protect grade stakes set by others until directed to remove them.
- B. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

3.3 LAWN PREPARATION

- A. Limit lawn subgrade preparation to areas to be planted.
- B. Newly Graded Subgrades: Loosen subgrade to a minimum depth of 6 inches. Remove stones larger than 1 inch in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
 - 1. Spread topsoil, apply soil amendments and fertilizer on surface, and thoroughly blend planting soil mix.
 - a. Delay mixing fertilizer with planting soil if planting will not proceed within a few days.
 - b. Mix lime with dry soil before mixing fertilizer.
 - 2. Spread planting soil mix to a depth of 6 inches but not less than required to meet finish grades after light rolling and natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
 - a. Spread approximately 1/2 the thickness of planting soil mix over loosened subgrade. Mix thoroughly into top 2 inches of subgrade. Spread remainder of planting soil mix.
 - b. Reduce elevation of planting soil to allow for soil thickness of sod.

- C. **Unchanged Subgrades:** If lawns are to be planted in areas unaltered or undisturbed by excavating, grading, or surface-soil stripping operations, prepare surface soil as follows:
1. Remove existing grass, vegetation, and turf. Do not mix into surface soil.
 2. Loosen surface soil to a depth of at least 6 inches. Apply soil amendments and fertilizers according to planting soil mix proportions and mix thoroughly into top 4 inches of soil. Till soil to a homogeneous mixture of fine texture.
 - a. Apply fertilizer directly to surface soil before loosening.
 3. Remove stones larger than 1 inch in any dimension and sticks, roots, trash, and other extraneous matter.
 4. Legally dispose of waste material, including grass, vegetation, and turf, off Owner's property.
- D. **Finish Grading:** Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Grade to within plus or minus 1/2 inch of finish elevation. Roll and rake, remove ridges, and fill depressions to meet finish grades. Limit finish grading to areas that can be planted in the immediate future.
- E. **Moisten prepared lawn areas before planting if soil is dry.** Water thoroughly and allow surface to dry before planting. Do not create muddy soil.
- F. **Before planting, restore areas if eroded or otherwise disturbed after finish grading.**

3.4 PREPARATION FOR EROSION-CONTROL MATERIALS

- A. Prepare area as specified in "Lawn Preparation" Article.
- B. For erosion-control blanket and turf reinforcement mat, install from top of slope, working downward, and as recommended by material manufacturer for site conditions. Fasten as recommended by material manufacturer.
- C. **Moisten prepared area before planting if surface is dry.** Water thoroughly and allow surface to dry before planting. Do not create muddy soil.

3.5 PREPARATION FOR GRASS-PAVING MATERIALS

- A. Reduce subgrade elevation soil to allow for thickness of grass-paving system. Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Grade so that installed paving is within plus or minus 1/2 inch of finish elevation. Roll and rake, remove ridges, and fill depressions.
- B. Install base course and proprietary growing mix as recommended by paving-material manufacturer for site conditions; comply with details shown on Drawings. Compact according to paving-material manufacturer's written instructions.
- C. Install paving mat and fasten according to paving-material manufacturer's written instructions.

- D. Before planting, fill cells of paving mat with proprietary growing mix and compact according to manufacturer's written instructions.
- E. Moisten prepared area before planting if surface is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.

3.6 SEEDING

- A. Sow seed with spreader or seeding machine. Do not broadcast or drop seed when wind velocity exceeds 5 mph. Evenly distribute seed by sowing equal quantities in two directions at right angles to each other.
 - 1. Do not use wet seed or seed that is moldy or otherwise damaged.
 - 2. Do not seed against existing trees. Limit extent of seed to outside edge of planting saucer.
- B. Sow grass seed at a total rate of 7 to 8 lb/1000 sq. ft.
- C. Rake seed lightly into top 1/8 inch of soil, roll lightly, and water with fine spray.
- D. Protect seeded areas with erosion-control mats where shown, installed and anchored according to manufacturer's written instructions.
- E. Protect seeded areas with slopes not exceeding 1:6 by spreading straw mulch. Spread uniformly at a minimum rate of 2 tons/acre to form a continuous blanket 1-1/2 inches in loose depth over seeded areas. Spread by hand, blower, or other suitable equipment.
 - 1. Bond straw mulch by spraying with asphalt emulsion at a rate of 10 to 13 gal./1000 sq. ft.. Take precautions to prevent damage or staining of structures or other plantings adjacent to mulched areas. Immediately clean damaged or stained areas.

3.7 SODDING

- A. Lay sod within 24 hours of harvesting. Do not lay sod if dormant or if ground is frozen or muddy.
- B. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod; do not stretch or overlap. Stagger sod strips or pads to offset joints in adjacent courses. Avoid damage to subgrade or sod during installation. Tamp and roll lightly to ensure contact with subgrade, eliminate air pockets, and form a smooth surface. Work sifted soil or fine sand into minor cracks between pieces of sod; remove excess to avoid smothering sod and adjacent grass.
 - 1. Lay sod across angle of slopes exceeding 1:3.
 - 2. Anchor sod on slopes exceeding 1:6 with wood pegs spaced as recommended by sod manufacturer but not less than 2 anchors per sod strip to prevent slippage.

- C. Saturate sod with fine water spray within two hours of planting. During first week after planting, water daily or more frequently as necessary to maintain moist soil to a minimum depth of 1-1/2 inches below sod.

3.8 LAWN RENOVATION

- A. Renovate existing lawn.
- B. Renovate existing lawn damaged by Contractor's operations, such as storage of materials or equipment and movement of vehicles.
 - 1. Reestablish lawn where settlement or washouts occur or where minor regrading is required.
 - 2. Provide new topsoil as required.
- C. Remove sod and vegetation from diseased or unsatisfactory lawn areas; do not bury in soil.
- D. Remove topsoil containing foreign materials resulting from Contractor's operations, including oil drippings, fuel spills, stone, gravel, and other construction materials, and replace with new topsoil.
- E. Mow, dethatch, core aerate, and rake existing lawn.
- F. Remove weeds before seeding. Where weeds are extensive, apply selective herbicides as required. Do not use pre-emergence herbicides.
- G. Remove waste and foreign materials, including weeds, soil cores, grass, vegetation, and turf, and legally dispose of them off Owner's property.
- H. Till stripped, bare, and compacted areas thoroughly to a soil depth of 6 inches.
- I. Apply soil amendments and initial fertilizers required for establishing new lawns and mix thoroughly into top 4 inches of existing soil. Provide new planting soil to fill low spots and meet finish grades.
- J. Apply seed and protect with straw mulch as required for new lawns.
- K. Water newly planted areas and keep moist until new lawn is established.

3.9 LAWN MAINTENANCE

- A. Maintain and establish lawn by watering, fertilizing, weeding, mowing, trimming, replanting, and other operations. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth lawn. Provide materials and installation the same as those used in the original installation.
 - 1. In areas where mulch has been disturbed by wind or maintenance operations, add new mulch and anchor as required to prevent displacement.

- B. Watering: Provide and maintain temporary piping, hoses, and lawn-watering equipment to convey water from sources and to keep lawn uniformly moist to a depth of 4 inches.
 - 1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly planted areas.
 - 2. Water lawn with fine spray at a minimum rate of 1 inch per week unless rainfall precipitation is adequate.
- C. Mow lawn as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than 1/3 of grass height. Remove no more than 1/3 of grass-leaf growth in initial or subsequent mowings. Do not delay mowing until grass blades bend over and become matted. Do not mow when grass is wet. Schedule initial and subsequent mowings to maintain the following grass height:
 - 1. Mow grass to a height of 2 to 3 inches.
- D. Lawn Postfertilization: Apply fertilizer after initial mowing and when grass is dry.
 - 1. Use fertilizer that will provide actual nitrogen of at least 1 lb/1000 sq. ft. to lawn area.

3.10 SATISFACTORY LAWNS

- A. Lawn installations shall meet the following criteria as determined by Architect:
 - 1. Satisfactory Seeded Lawn: At end of maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 90 percent over any 10 sq. ft. and bare spots not exceeding 5 by 5 inches.
 - 2. Satisfactory Sodded Lawn: At end of maintenance period, a healthy, well-rooted, even-colored, viable lawn has been established, free of weeds, open joints, bare areas, and surface irregularities.
- B. Use specified materials to reestablish lawns that do not comply with requirements and continue maintenance until lawns are satisfactory.

3.11 CLEANUP AND PROTECTION

- A. Promptly remove soil and debris, created by lawn work, from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- B. Erect temporary fencing or barricades and warning signs as required to protect newly planted areas from traffic. Maintain fencing and barricades throughout initial maintenance period and remove after lawn is established.
- C. Remove nondegradable erosion-control measures after grass establishment period.

END OF SECTION 329200



Lexington-Fayette Urban County Government
DEPARTMENT OF FINANCE & ADMINISTRATION

Jim Gray
Mayor

William O'Mara
Commissioner

ADDENDUM #3

Bid Number: **#99-2014**

Date: August 25, 2014

Subject: **Construction of Replacement Senior Citizens' Center**

Please address inquiries to:
Theresa Maynard (859) 258-3320

TO ALL PROSPECTIVE BIDDERS:

Please be advised of the following clarifications to the above referenced bid.

1.0 PURPOSE OF ADDENDUM:

- 1.1 The purpose of this Addendum is to clarify and/or revise the requirements of the construction documents produced by EOP Architects and consultants dated July 29, 2014 for the above noted project.
- 1.2 The Contractor shall be governed by this Addendum insofar as it applies to the work of each Sub-Contractor.
- 1.3 The Contractor shall acknowledge receipt of this Addendum and all other Addenda on the Form of Proposal at the time his price bid is presented.

2.0 GENERAL NOTES

- 2.1 The owner, architect, or consultants will not make determinations on approved equals prior to bid. We encourage all manufacturers/providers who meet the project requirements to submit their bid. Any "or equals" noted by a vendor must include proof of equality in their bid submission.
- 2.2 Per FOR OF PROPOSAL, Section 4, OWNER reserves the right to accept or reject any bid alternatives to the lump sum base bid. Alternates will not necessarily be accepted in the order in which they are printed.
- 2.3 The Contractor shall be responsible for Builder's Risk insurance for the duration of the project.
- 2.4 **The Building Permit Fee for this project WILL be waived. This note supersedes Addendum #2.**

Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the bid and specifications are unchanged. This letter should be signed, attached to and become a part of your bid.

COMPANY: _____

ADDRESS: _____

SIGNATURE OF PROPOSER: _____



August 25, 2014

Bid Number: 99-2014
Architect's Project Number: 201333

LFUCG Replacement Senior Citizen Center
Lexington, Kentucky

ADDENDUM #003

ATTACHMENTS:

Specifications:

014110 Structural Tests and Special Inspections
033000 Cast in Place Concrete
051200 Structural Metal Framing
052100 Metal Joists
053100 Metal Decking, Fasteners and Shear Studs

Drawings:

SKA-2
SKA-3
SKA-4
SKA-5
SKL-10
SKS-01
SKS-02
SKS-03
SKS-04

1.0 PURPOSE OF ADDENDUM:

- 1.1 The purpose of this Addendum is to clarify and/or revise the requirements of the construction documents produced by EOP Architects and consultants dated July 29, 2014 for the above noted project.
- 1.2 The Contractor shall be governed by this Addendum insofar as it applies to the work of each Sub-Contractor.
- 1.3 The Contractor shall acknowledge receipt of this Addendum and all other Addenda on the Form of Proposal at the time his price bid is presented.

2.0 GENERAL NOTES

- 2.1 The owner, architect, or consultants will not make determinations on approved equals prior to bid. We encourage all manufacturers/providers who meet the project requirements to submit their bid. Any "or equals" noted by a vendor must include proof of equality in their bid submission.

- 2.2 Per FOR OF PROPOSAL, Section 4, OWNER reserves the right to accept or reject any bid alternatives to the lump sum base bid. Alternates will not necessarily be accepted in the order in which they are printed.
- 2.3 The Contractor shall be responsible for Builder's Risk insurance for the duration of the project.
- 2.4 The Building Permit Fee for this project WILL be waived. This note supersedes Addendum #2.

3.0 FRONT END DOCUMENTS

- 3.1 FORM OF PROPOSAL, Section 4 – BID SCHEDULE – SCHEDULE OF VALUES. Add the following to Bid Alternative #1: Fiber Cable/Infrastructure Installation:

The base bid shall include all fiber optic cable installation inside the building, as described in the Contract Documents.

4.0 SITE & CIVIL SPECIFICATIONS

- 4.1 Section 312000 – EARTH MOVING: Add section 3.23.

3.23 GRANULAR BACKFILL

A. Backfill against all below grade walls with compacted granular material.

B. Place granular backfill starting from 6 inches below final grade and extending downward at a 45 degree angle to the top of footing excavation.

- 4.2 Section 312000 – EARTH MOVING: Revise section 2.1 to add:

L. Granular Backfill: KTC No. 57 crushed building stone

- 4.3 Section 312000 – EARTH MOVING: Revise section 1.4-Definitions as follows:

A. Backfill

- 1. Soil Material or controlled low-strength material used to fill and excavation

- a. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.

- b. Final Backfill: Backfill placed over initial backfill to fill a trench.

- 2. Granular Backfill: granular material placed against below grade walls

5.0 SITE & CIVIL DRAWINGS

- 5.1 Sheet C2.0, Detail B - Domestic line inside the vault shall be 4" DIP. Pipe size reduction to 2 ½" shall occur outside the vault at the next convenient joint after exiting the vault towards the building, or 5'.
- 5.2 Sheet L4.1: Revise material key note 8 to read: "8" HEAVY DUTY CONCRETE PAVEMENT, SEE DETAIL J/L6.1"

- 5.3 Refer to Drawing C1.0 and attached SKL-10. Add note 15 as written on SKL-10. Note where 8" water line is shown connecting to existing 12" line, new water line will need to cross existing paved parking lot at Southland Christian Church, including crossing an existing trench drain. The Contractor is responsible for reviewing the existing conditions in the field to become familiar with the existing conditions. The Contractor will also be responsible for crossing beneath the existing trench drain to make the proposed water line connection. Ensure 18" separation between the bottom of the existing trench drain and the top of the water line- notify Civil Engineer if 18" separation cannot be reasonably achieved. The Contractor shall concrete encase water line 10' to each side of the crossing of new water line and existing trench drain, per 10 State Standards, current edition. The Contractor shall also restore to existing conditions all existing structures including (but not limited to) pavements, curbs, and lawn areas disturbed by construction of the water line as indicated in the Documents.
- 5.4 Refer to Drawing L4.1, Keynote 4. Note there are a total of 14 accessible parking spaces.
- 5.5 Refer to Drawing L4.1, Keynote 5. Note that curb and gutter extends around the entire parking lot perimeter, including at the permeable pavers.
- 5.6 Refer to Drawing L4.1, Keynote 29. Note that all parking spaces shall have a double painted parking aisle stripe.
- 5.7 Refer to Drawing L4.2, Keynote 6. Note concrete isolation band extends around all four sides of pavers, provide control joints to align with control joints at adjacent concrete walk, with diagonal control joint at corners. Dowel isolation band to adjacent paver concrete base and adjacent concrete sidewalk.
- 5.8 Refer to Drawings L4.0, L4.1 and L4.2- note that Contractor shall install thermoplastic directional arrows shown on asphalt pavement, final location shall be determined in the field with Owner and Architect.
- 5.9 Refer to Drawing L4.2, South Patio Enlarged Plan B. Revised Keynote 12 to Keynote 13; this indicates Building Identification Sign.
- 5.10 Refer to Drawing L4.1, South Patio Enlarged Plan B. Delete Keynote 29 shown adjacent to thermoplastic cross walk striping.
- 5.11 Refer to Drawings L4.0 and L4.1, Keynote 37. Note there are 24 bollards as indicated by Keynote 37.

6.0 STRUCTURAL DRAWINGS & SPECIFICATIONS

- 6.1 SPECIFICATIONS updated to reflect changes in KBC 2013 based on IBC 2012
- 6.1.1 Replace 014110 STRUCTURAL TEST AND SPECIAL INSPECTIONS with attached revised section.
- 6.1.2 Replace 033000 CAST IN PLACE CONCRETE with attached revised section.
- 6.1.3 Replace 051200 STRUCTURAL METAL FRAMING with attached revised section.
- 6.1.4 Replace 052100 METAL JOISTS with attached revised section.

- 6.1.5 Replace 053100 – METAL DECKING, FASTENERS AND SHEAR STUDS with attached revised section.
- 6.2 Sheet S-1.0: Revise General Notes as follows:
- 6.2.1 PARA C - Remove "CONTRACTOR(S) SHALL FOLLOW THE PROCEDURES LISTED BELOW AS WELL AS ADDITIONAL INFORMATION AND SUPPLEMENTAL PROCEDURES FROM THIS REPORT FOR HANDLING OF SITE SOIL AND ROCK MATERIALS.
- 6.2.2 PARA C.4 – Remove "FOLLOW PROCEDURES IN THE SUBSURFACE REPORT UNDER SECTION 5 RECOMMENDATIONS OF THE SUBSURFACE REPORT. Add "SEE EARTH MOVING SPECIFICATION SECTION 312000"
- 6.2.3 PARA C – Add C.9 "BACKFILL AGAINST BELOW GRADE WALLS WITH COMPACTED GRANULAR BACKFILL."
- 6.2.4 PARA G – Add Paragraph G. LIGHT GAGE FRAMING. Add Item 1: "PLYWOOD ON WALLS MAY BE PLACED WITH JOINTS OCCURRING HORIZONTALLY OR VERTICALLY AND STAGGERED. ALL PANEL EDGES SHALL BE SUPPORTED WITH #16 GAUGE STUD BLOCKING. SCREW PLYWOOD TO STUDS WITH #10 BUGLE HEAD BUILDDEX TRAXX SCREWS OR EQUIVALENT. SCREWS TO BE SPACED AT 6" O.C. AT PANEL EDGES AND AT 12" O.C. AT INTERMEDIATE STUDS."
- 6.3 Sheet S-2.2 – Information added for projector framing in multi-purpose room. See SKS-02
- 6.4 Sheet S-4.4 – Information added to Section 8. See SKS-01
- 6.5 Sheet S-4.4 – C8x11.5 added at the top of ALL stair locations. See SKS-04
- 6.6 Sheet S-5.2 – Add section through projector framing in multi-purpose room. See SKS-03
- 6.7 Sheet S-9.1 – Section 3- Remove "5/8" OSB, ATTACH WITH #10-18 SCREWS @ 6" O.C. @ PANEL EDGE AND @ 12" O.C. @ INTERMEDIATE." and replace with "1 ½" WIDE RIB ROOF DECK."

7.0 ARCHITECTURAL SPECIFICATIONS

- 7.1 Section 017700 – CLOSEOUT PROCEDURES: Delete subsection 1.10.
- 7.2 Section 018113.13 – SUSTAINABLE DESIGN REQUIREMENTS: Add subsection 1.4.B:
B. Administrative costs, including project registration and review fees, are included in the Architect's scope of work. The Contractor shall be responsible for costs associated with the required documentation and submittals.
- 7.3 Section 064116 – PLASTIC LAMINATE CLAD ARCHITECTURAL CABINETS: Per Section 2.1.A, the project will require participation in the AWI Quality Certification Program.
- 7.4 Section 064116 – PLASTIC LAMINATE CLAD ARCHITECTURAL CABINETS: Add the following to section 1.5.A: "Vendor/fabricator is Chain-of-Custody certified by a certifier approved by the Forest Stewardship Council (FSC)."

- 7.5 Section 075323 – EPDM ROOFING: revise subsection 2.3.D to the following:
"Cover Board: High-density polyisocyanurate board, ½" thick" to match the drawings."
- 7.6 Section 07523 – EDPM ROOFING: roofing adhesives are to meet the Volatile Organic Compound limits stated in section 018113.13 SUSTAINABLE DESIGN REQUIREMENTS, and shall have a maximum of 250 g/L per section 2.6.A.

ARCHITECTURAL DRAWINGS

- 7.7 Sheet A1.03 – ROOF PLAN OVERALL: Revise Sheet Notes as follows:
1. Typical roof construction: EPDM roofing membrane over sloped structure. Tapered insulation as required for crickets. Minimum cricket slope: ½"/12". Detail per A4 sheets.
 2. Standing Seam Metal Roofing over sloped structure. Detail per A4 sheets.
 3. Pre-finished metal downspout. Refer to floor plans for additional locations and sizes. All downspouts that run to grade shall terminate into a cast-iron boot. Top of all boots to extend minimum of 12" above finish grade.
 4. Roof drain. Refer to details on A4 sheets.
 5. Roof hatch. Refer to details on A4 sheets.
 6. 6" prefinished metal gutter. Refer to details on A4 sheets.
 7. Concrete splash block.
 8. Roof overflow drain. Refer to details on A4 sheets.
- 7.8 Sheet A1.03 – ROOF PLAN OVERALL: Revise plan legend as follows:
- 7.8.1 Delete symbol and reference to Steel Roof Ladder from the Legend. Refer to roof hatch detail on A4.19.
- 7.9 SKA-2 Clarifies the construction of the freestanding bar at 206-TV
- 7.10 SKA-3 Clarifies the construction of the freestanding bar at 207-Billiards.
- 7.11 SKA-4 Clarifies the typical construction of the freestanding bars. All dimensions are typical except where superseded by the sections on SKA-2 and SKA-3.
- 7.12 SKA-5 Clarifies the typical construction of the group restroom vanity and lavatory.
- 7.13 Sheet A5.03: All wood trim to be clear finished maple.
- 7.14 Sheet A6.09: at drawing D3, base cabinet at coat shelf shall have doors similar to A1/A6.09.
- 7.15 Sheet A6.11: countertops at Art Rooms to be solid surface. Section detail at sink to be similar to A3/A8.02. Section detail at base cabinet to be similar to A2/A8.02.
- 7.16 Sheet A6.20: All wood trim to be clear finished maple.

7.17 Sheet A8.05: All shelves above counter and magazine racks are to be clear finished maple.

7.18 Sheet A8.05: at drawings A1 and B1, an intermediate wood vertical support is required to prevent sag of the shelves above counter.

8.0 PLUMBING SPECIFICATIONS

8.1 Not applicable to this Addendum.

9.0 PLUMBING DRAWINGS

9.1 Not applicable to this Addendum.

10.0 MECHANICAL SPECIFICATIONS

10.1 Not applicable to this Addendum.

11.0 MECHANICAL DRAWINGS

11.1 Not applicable to this Addendum.

12.0 ELECTRICAL SPECIFICATIONS

12.1 Not applicable to this Addendum.

13.0 ELECTRICAL DRAWINGS

13.1 Sheet E1.0 – Electrical Legend – change the description for the fire alarm symbol that is called out as a “strobe unit only” to be a “horn/ADA strobe” device.

END OF ADDENDUM #002



Lexington-Fayette Urban County Government
DEPARTMENT OF FINANCE & ADMINISTRATION

Jim Gray
Mayor

William O'Mara
Commissioner

ADDENDUM #4

Bid Number: **#99-2014**

Date: August 25, 2014

Subject: **Construction of Replacement Senior Citizens' Center**

Please address inquiries to:
Theresa Maynard (859) 258-3320

TO ALL PROSPECTIVE BIDDERS:

Please be advised of the following clarifications to the above referenced bid.

- **See attached sketches and specifications to be added to Addendum #3.**


Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the bid and specifications are unchanged. This letter should be signed, attached to and become a part of your bid.

COMPANY: _____

ADDRESS: _____

SIGNATURE OF PROPOSER: _____

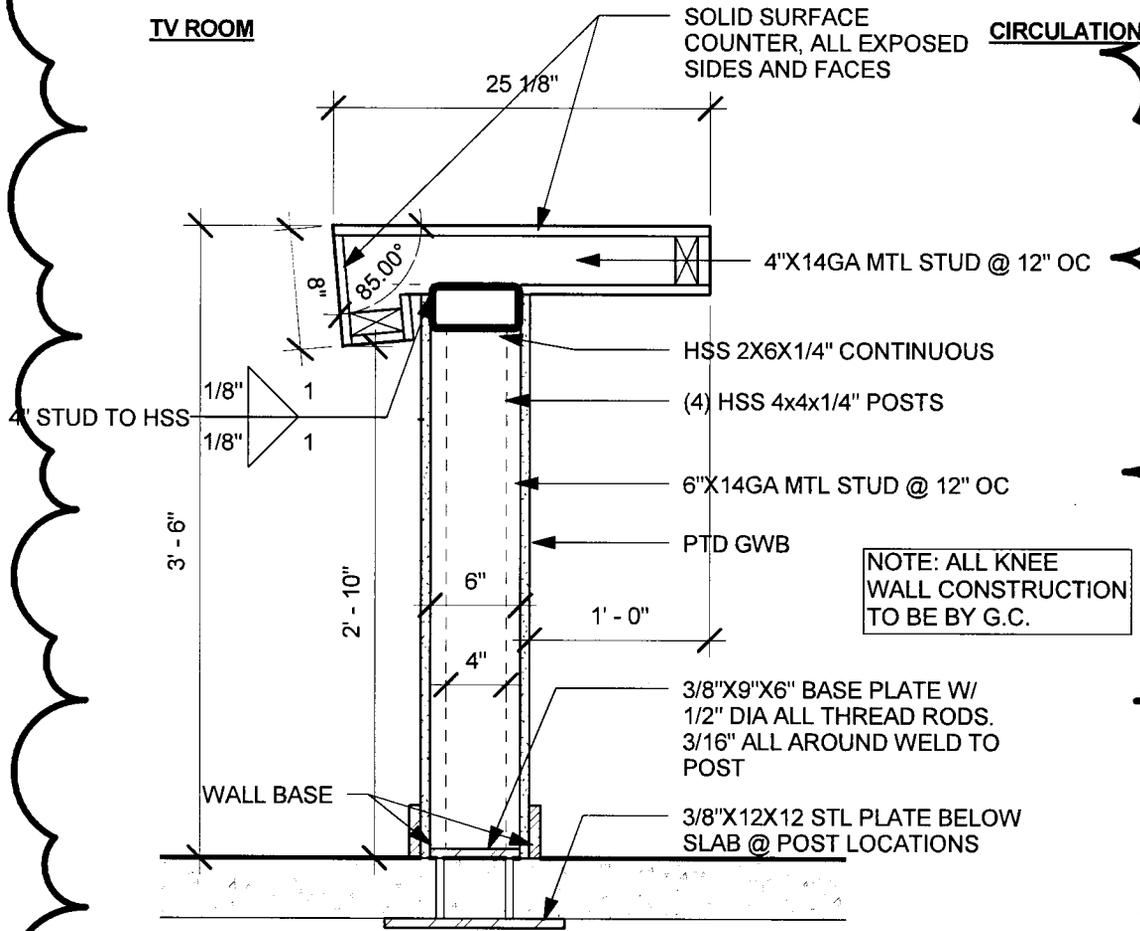
2

FABRICATION NOTES

- Base plate to be 9x6x3/8", run 9" dimension parallel with wall.
- Fasten to floor with 4 - 1/2" dia. through bolts/all threaded rod to 12x12x3/8" plate on bottom of slab. Bottom plate to span 2 deck ribs.
- Weld tubes and plates together with 3/16" all around welds.
- Space posts with end posts 6" from ends of wall and other 2 posts spaced equal distanced apart no greater than 4'-0" apart.

TV ROOM

CIRCULATION



1 TV BAR
SKA-2 SCALE: 1" = 1'-0"



LEXINGTON SENIOR CENTER
195 LIFE LANE
LEXINGTON, KY 40502

ADDENDUM #3

Proj. No. 201333 Date AUGUST 18, 2014

Drawn by Author Checked by Checker

No. REVISION DATE

2 ADDENDUM #003 8/25/14

SKA-2

1" = 1'-0"

FABRICATION NOTES

- Base plate to be 9x6x3/8", run 9" dimension parallel with wall.
- Fasten to floor with 4 - 1/2" dia. through bolts/all threaded rod to 12x12x3/8" plate on bottom of slab. Bottom plate to span 2 deck ribs.
- Weld tubes and plates together with 3/16" all around welds.
- Space posts with end posts 6" from ends of wall and other 2 posts spaced equal distanced apart no greater than 4'-0" apart.

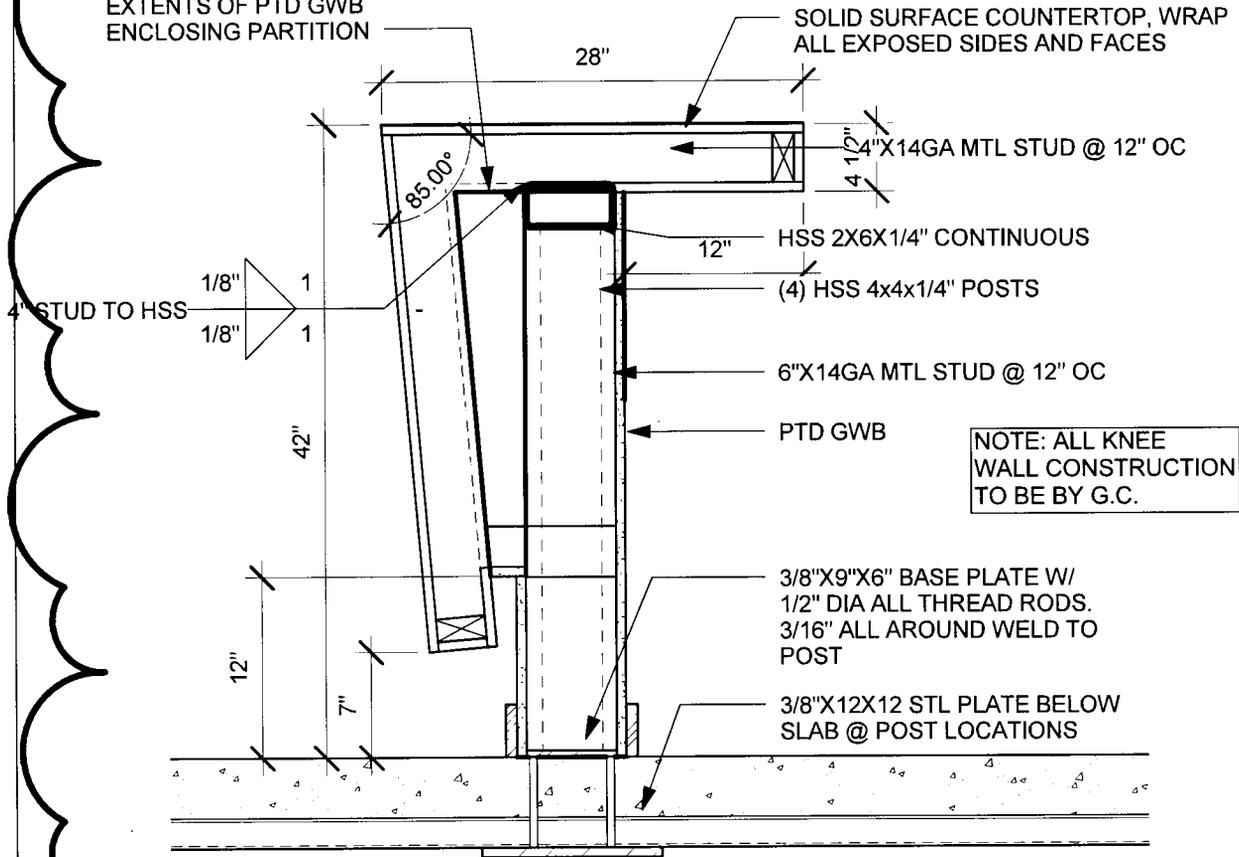
2

BILLIARDS

CORRIDOR

EXTENTS OF PTD GWB ENCLOSING PARTITION

SOLID SURFACE COUNTERTOP, WRAP ALL EXPOSED SIDES AND FACES



1
SKA-3

BILLIARDS BAR

SCALE: 1" = 1'-0"



LEXINGTON SENIOR CENTER

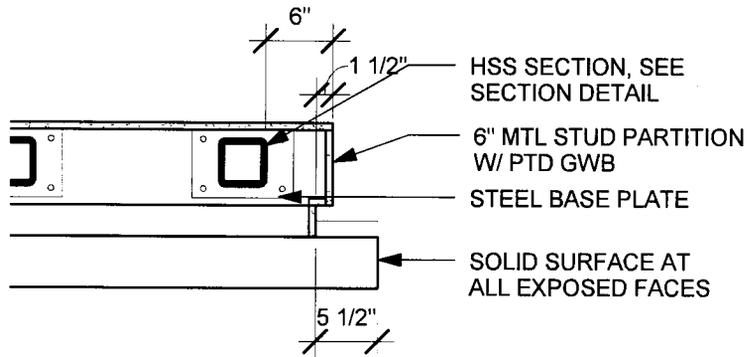
195 LIFE LANE
LEXINGTON, KY 40502

ADDENDUM #3

Proj. No.	201333	Date	AUGUST 18, 2014
Drawn by	Author	Checked by	Checker
No.	REVISION	DATE	
2	ADDENDUM #003	8/25/14	

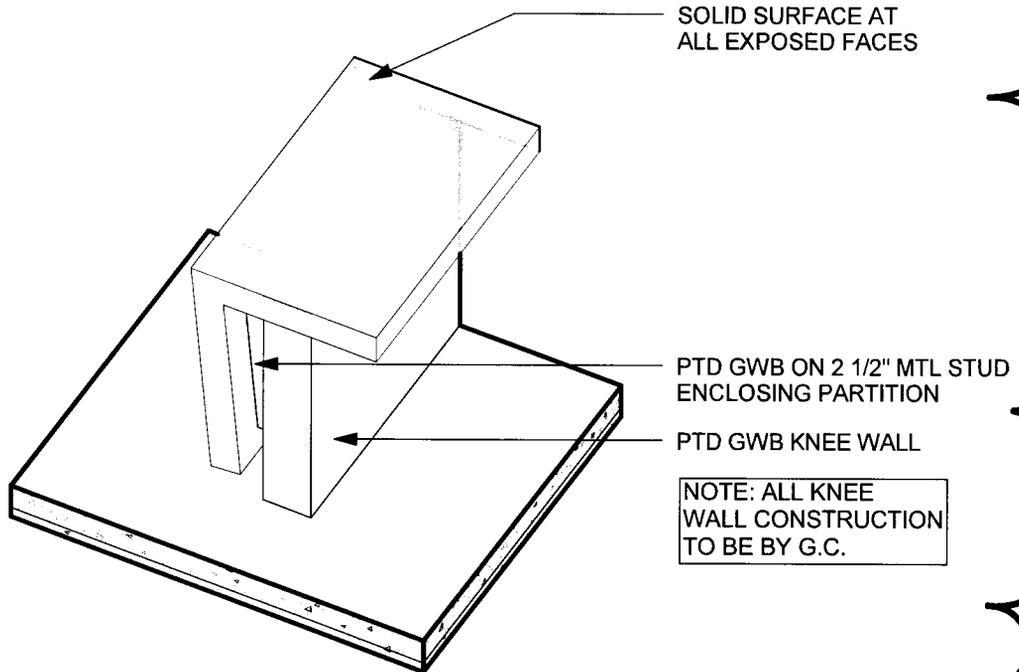
SKA-3

1" = 1'-0"



2

1 TYP SOLID SURFACE BAR - PLAN
SKA-4 SCALE: 3/4" = 1'-0"



2 TYP SOLID SURFACE BAR - 3D
SKA-4 SCALE:



LEXINGTON SENIOR CENTER
195 LIFE LANE
LEXINGTON, KY 40502

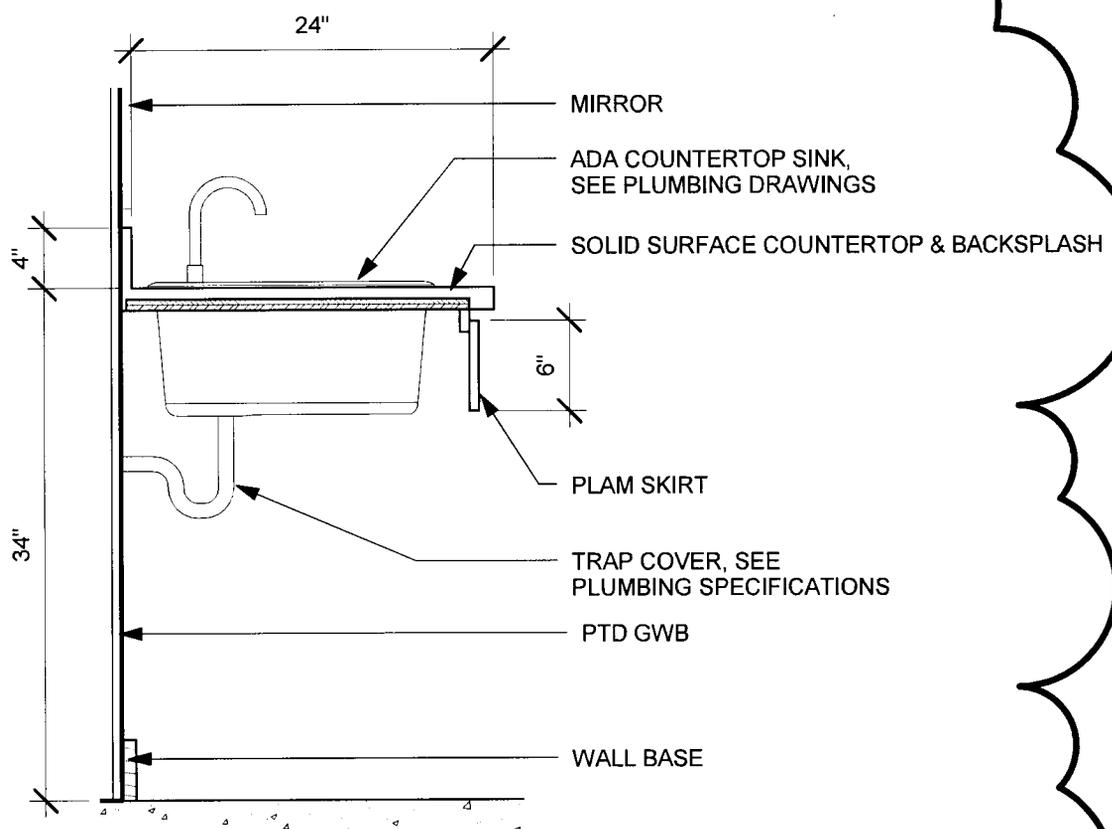
ADDENDUM #3

Proj. No.	201333	Date	AUGUST 18, 2014
Drawn by	Author	Checked by	Checker
No.	REVISION	DATE	
2	ADDENDUM #003	8/25/14	

SKA-4

3/4" = 1'-0"

2



1 TYP GROUP TOILET LAVATORY/VANITY
 SKA-5 SCALE: 1" = 1'-0"



LEXINGTON SENIOR CENTER
 195 LIFE LANE
 LEXINGTON, KY 40502

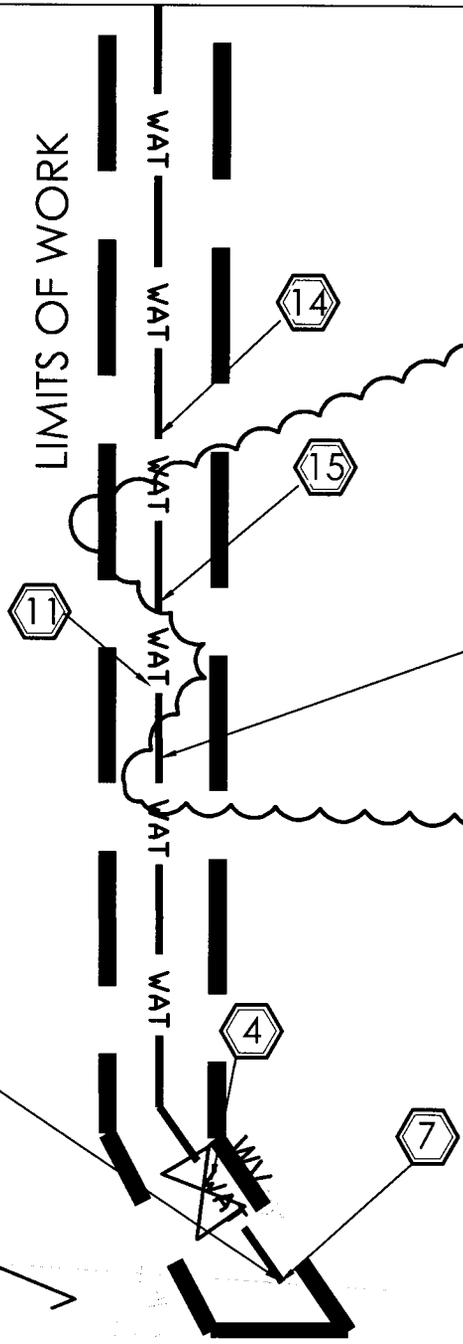
ADDENDUM #3

Proj. No.	201333	Date	AUGUST 18, 2014
Drawn by	Author	Checked by	Checker
No.	REVISION	DATE	
2	ADDENDUM #003	8/25/14	

SKA-5

1" = 1'-0"

LIMITS OF WORK



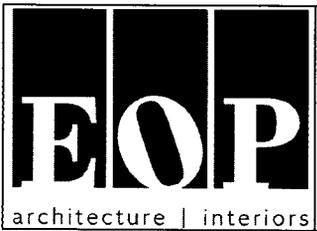
EXISTING
TRENCH
DRAIN
(FIELD
VERIFY
LOCATION)

EXISTING
WATER
VAULT

15

Ensure 18" separation between the bottom of the existing trench drain and the top of the water line- notify Civil Engineer if 18" separation cannot be reasonably achieved. The Contractor shall concrete encase water line 10' to each side of the crossing of new water line and existing trench drain, per 10 State Standards, current edition.

elementdesign
landscape architecture+civil engineering+planning



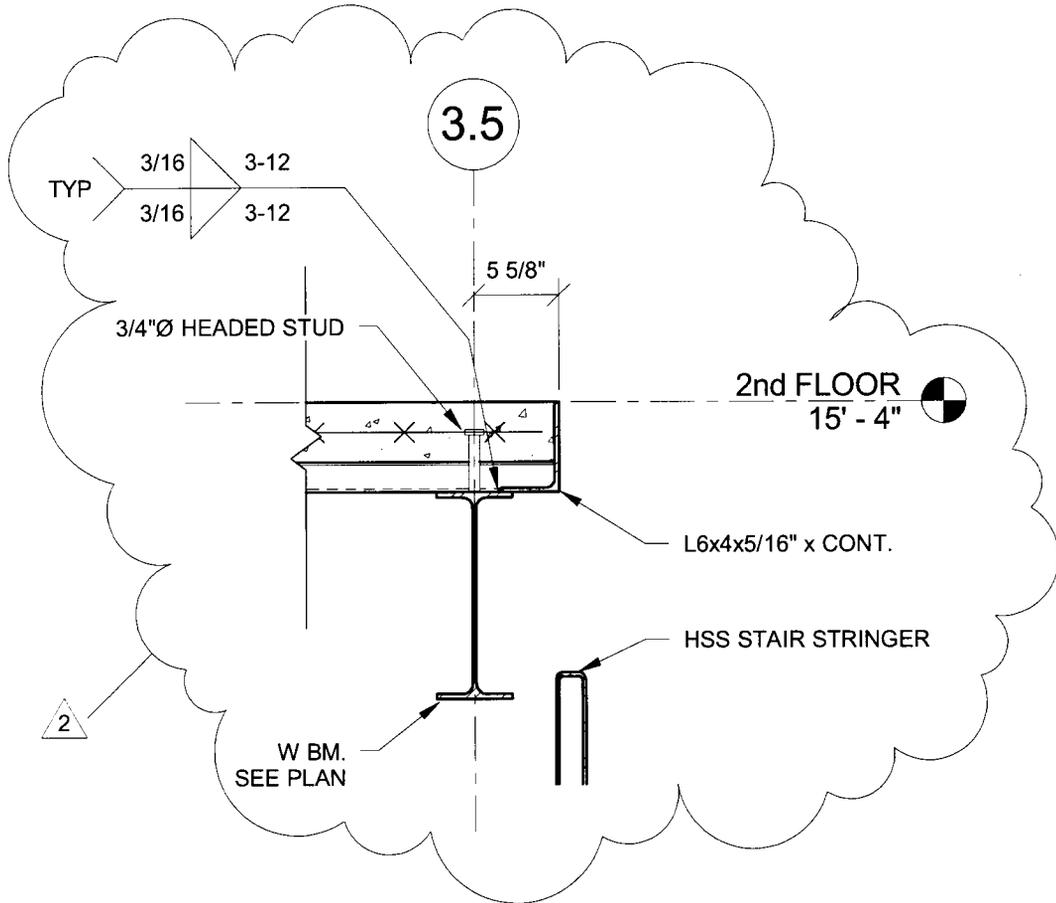
LEXINGTON SENIOR CENTER

195 LIFE LANE
LEXINGTON, KY 40502

SHEET C1.0 ADD 003

Proj. No.	201333	Date	AUGUST 24, 2014
Drawn by	VA	Checked by	RF
No.	REVISION	DATE	
1	ADDENDUM #003	8/24/14	

SKL-10



8/S-4.4
 SCALE = 1" = 1'-0"



**Lexington Senior
 Citizens Center**

 195 Life Lane
 Lexington, KY 40502

SECTION

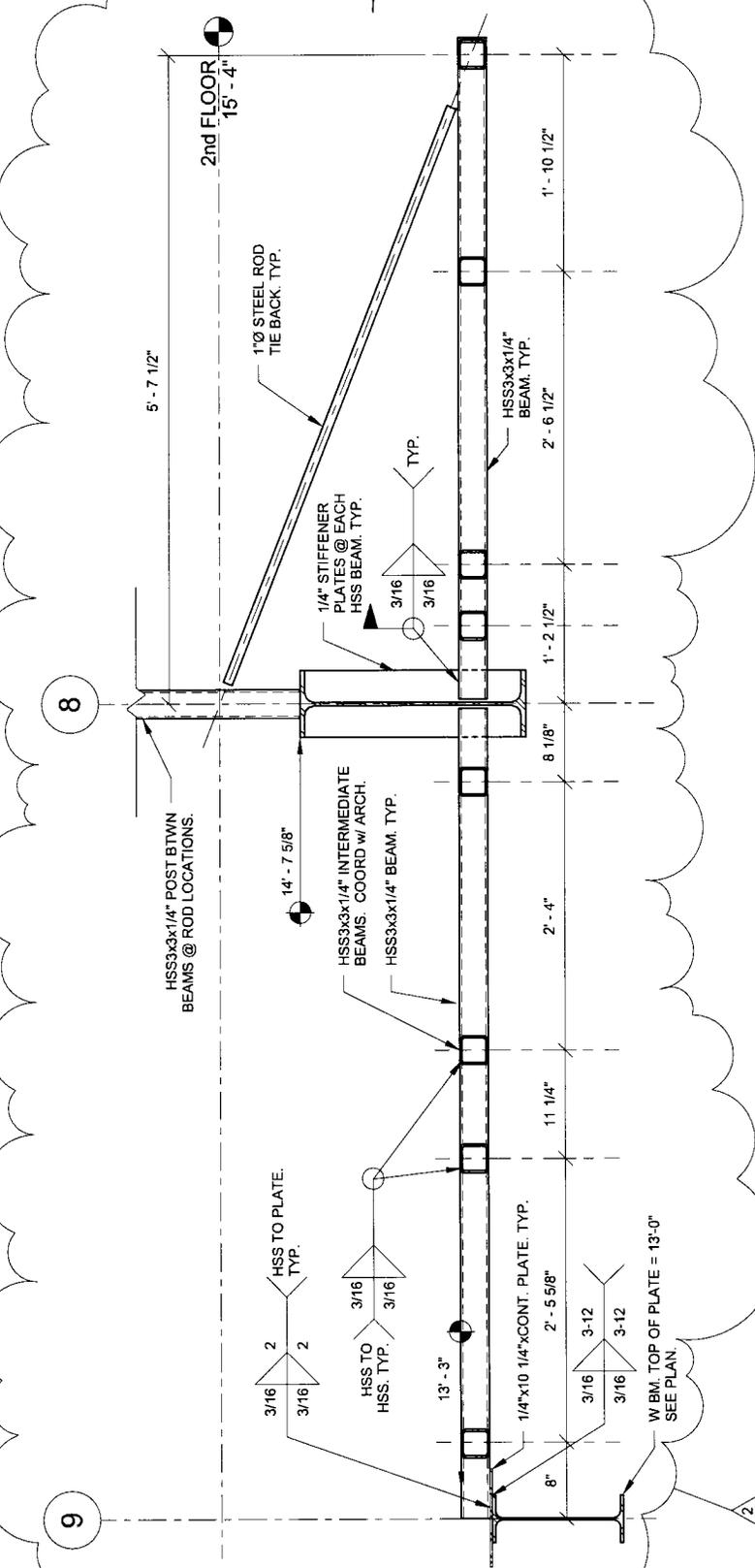
Proj. No.	13067.40	Date	August 25, 2014
Drawn by	ARH, KLS	Checked by	EAB
No.	REVISION	DATE	
2	ADDENDUM #003	8/25/14	

SKS-01

1" = 1'-0"

2	ADDENDUM #003	8/25/14	1" = 1'-0"
1	REVISION	DATE	
	Drawn by ARH, KLS	Checked by EAB	
	Proj No 1306740	Date August 26, 2014	

SECTION



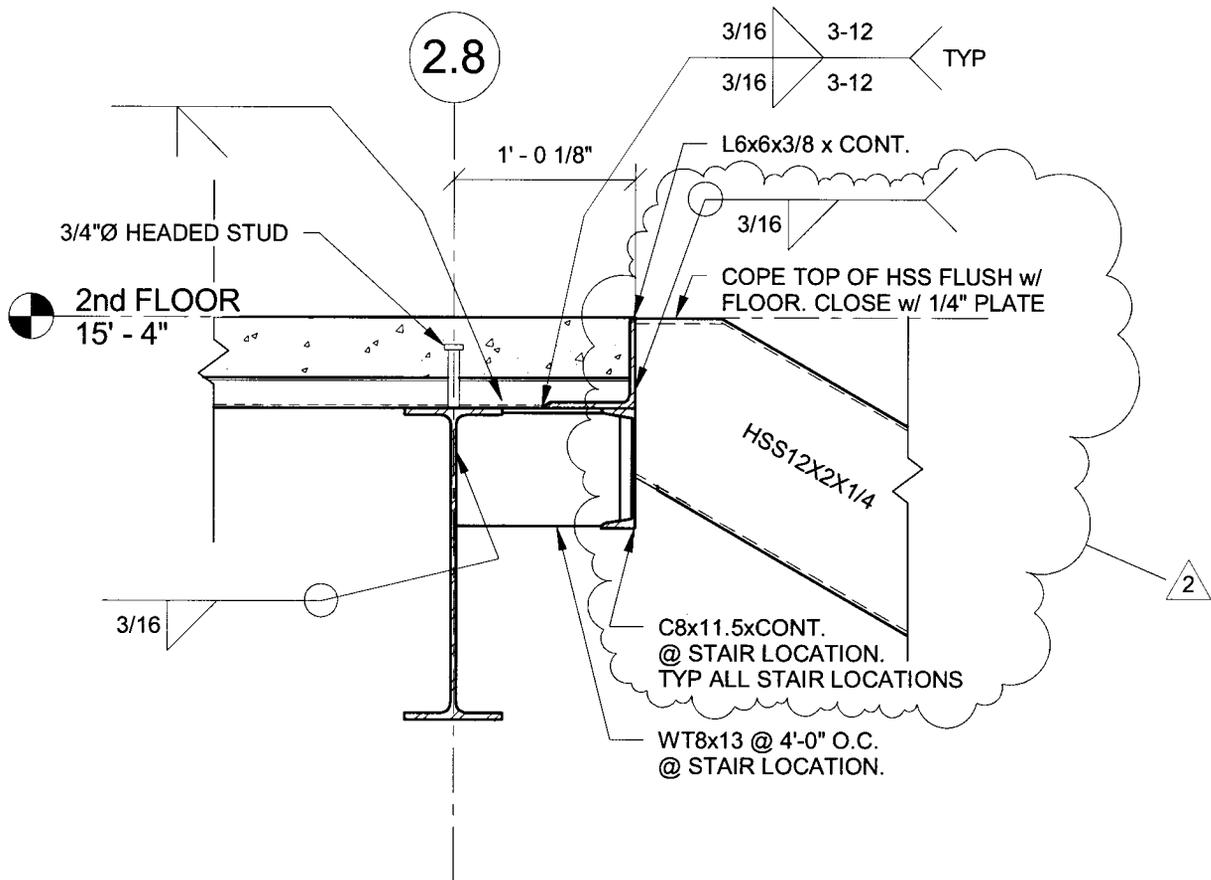
11/S-5.2

1 SECTION
SKS-03 1" = 1'-0"



195 Life Lane
Lexington, KY 40502

Lexington Senior Citizens Center



6 / S-4.4

SCALE = 1" = 1'-0"



architecture | interiors

**Lexington Senior
Citizens Center**

**195 Life Lane
Lexington, KY 40502**

SECTION

Proj. No. 13067.40 Date August 25, 2014

Drawn by ARH, KLS Checked by EAB

No. REVISION DATE

2 ADDENDUM #003 8/25/14

SKS-04

1" = 1'-0"

SECTION 014110 – STRUCTURAL TESTS AND SPECIAL INSPECTIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements required for compliance with the with the 2013 Edition of the Kentucky Building Code and Addenda, Chapter 17, Structural Tests and Special Inspections.
- B. The owner will engage one or more qualified special inspectors and/or testing agencies to conduct structural tests and special inspections specified in this section and related sections and as may be specified in other divisions of these specifications.
- C. Related Structural Sections include:
 - 1. 023000 EARTHWORK
 - 2. 033000 CAST-IN-PLACE CONCRETE
 - 3. 051200 STRUCTURAL METAL FRAMING
 - 4. 052100 STEEL JOISTS.
 - 5. 053100 STEEL DECK.
- D. All Trade Contractors, whose construction requires SPIN, shall have responsibility to coordinate with, work with, provide necessary access to, supply data to, and fully cooperate with the Special Inspector (SI) and all his/her agents. The Contractor shall not allow any testing of inspections to take place for any work without the presence of the SI or his/her agents and shall give adequate notice of cancellation, construction schedule, schedule change and delays to the SI that may impact the cost of SPIN. Time spent for jobsite visits, inspections, or testing for which the contractor failed to cancel with adequate time in advance of notice to re-schedule shall be compensated for by the Contractor. Special Inspector is also responsible for contacting the Contractor on a daily basis to determine the activities that requires Special Inspections and appropriate time for his/her visit. Both parties are responsible for insuring that every structural element that requires Special Inspections is properly carried out. If Special Inspection services fail to be performed, the Contractor is responsible for remedial action that is acceptable to the Design Professional in responsible Charge.
- E. All fabrication of structural load-bearing members and assemblies, including wood trusses, metal buildings, precast concrete, bar joists, and structural steel, shall have special inspections during fabrication except where the work is done on the premises of a certified plant which is reviewed by the special inspector to perform such work without special inspection. If a fabricator does not have current certification the fabricator may request the special inspector to perform a review of the fabricator's plant and process of fabrication of the structural elements. The cost to perform this inspection will be reimbursed to the owner IBC Section 1705.2.

1.3 CONFLICTING REQUIREMENTS, REPORTS, AND TEST RESULTS

- A. General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to the registered Design Professional in responsible charge for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to the registered design profession in responsible charge for a decision before proceeding.
- C. The Special Inspector's reports and testing agencies results shall have precedence over reports and test results provided by the contractor.
- D. Where a conflict exists between the construction documents and approved shop drawings / submittal data, the construction documents shall govern unless the shop drawings / submittal data are more restrictive. All conflicts shall be brought to the attention of the registered Design Professional in responsible charge.

PART 2 - PRODUCTS (not used)

PART 3 - EXECUTION

3.1 CONTRACTOR'S RESPONSIBILITY

- A. The general contractor shall ensure that copies of the reviewed plans and specifications, and the EOR-reviewed shop drawings, are provided to the special inspector prior to the start of the affected work.
- B. The contractor shall coordinate the inspection and testing services with the progress of the work. The contractor shall provide sufficient notice (a minimum of 24-hours' notice), so that the special inspector has time to inspect the work prior to concealment. The contractor shall provide access to and means for safe and proper inspection of the work. It is the contractor's responsibility to verify that all work requiring special inspection is inspected and/or tested prior to concealment.
- C. The contractor shall submit schedules to the Owner, registered Design Professional in responsible charge, Construction Manager and testing and inspecting agencies. Schedules will note milestones and durations of time for materials requiring structural tests and special inspections.

3.2 REPAIR AND PROTECTION

- A. General: Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.
- B. On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

- C. Protect construction exposed by or for quality-control service activities.
- D. If damage or repair work requires design by a registered engineer.

3.3 TESTING AND INSPECTION

- A. Delineation of Owner's responsibility for Special Inspection and Contractor's responsibility for testing shall be in accordance with the attached Schedule of Special Inspections. This delineation shall be confirmed at the pre-construction meeting in conjunction with Architect and EOR.
- B. **CAST-IN-PLACE CONCRETE:** The special inspections engineer of record shall conduct Special Inspections in accordance with IBC-1705.3 Concrete construction, IBC-Table 1705.3 and the requirements of the approved statement of special inspections.
 - 1. Elements. All structural elements of cast-in-place concrete, including reinforced, prestressed, or post-tensioned concrete, mat foundations, and concrete topping on stay-in-place steel decking, both composite and non-composite designs, except as listed below
 - 2. Construction loads. The general contractor shall coordinate construction operations so that at all times the dead loads, live loads and construction loads delivered to the building while it is under construction shall be within the capacity of the building to carry such loads. In addition, no structural loads shall be imposed on any vertical load carrying member which is less than seven days old, unless the concrete strength criteria established by the structural engineer of record for carrying such loads is satisfied.
 - 3. Posting of concrete placement schedule. As construction proceeds, the general contractor shall post the updated concrete placement schedule, which shall indicate building floor level, placement number, and date of placement, on the door of the general contractor field office. This schedule shall be available for use in case of emergency by local Fire and Rescue Department.
 - 4. Fabrication and Erection Documents. The following fabrication and erection documents shall be prepared, signed and sealed by registered design professionals with experience in the requisite disciplines:
 - a. Concrete formwork and shoring designs
 - b. Concrete formwork stripping and reshoring schedules
 - c. Tendons to be post-tensioned
 - 5. Concrete formwork, shoring and re-shoring erection. Prior to placement of concrete, the special inspections engineer of record shall verify that:
 - a. Formwork materials, cleanliness, size, and installation conform to approved formwork fabrication and erection documents.
 - b. Shoring and re-shoring is installed in conformance with the approved Documents and IBC-Table 1704.4 Item 11 required verification and inspection of concrete construction, inspection of concrete formwork, shoring and re-shoring requires periodic Special Inspection of formwork, shoring and re-shoring. Inspection reports shall be submitted within three working days of each inspection.

6. Reinforcing steel. The Special Inspections engineer of record shall conduct Special Inspections of steel reinforcement, in compliance with approved construction documents and approved fabrication and erection documents.
 7. Reinforcing steel placement requires periodic special inspection.
 - a. Welding of steel reinforcement requires continuous or periodic special inspection, depending upon the use of the reinforcing steel, in accordance with IBC-Table 1705.2.2.
 - b. The special inspections engineer of record shall conduct periodic special inspections to verify weldability of steel reinforcement other than ASTM A706.
 - c. The special inspections engineer of record shall conduct continuous special inspections of welding for reinforcement resisting shear, flexural and axial loads in intermediate and special moment frames, and boundary elements of special reinforced concrete shear walls and shear reinforcement.
 - d. Periodic special inspection of welding is required for other reinforcement.
 8. Embedded bolts, anchors, dowels and imbeds securely fastened in place require periodic special inspection prior to and during concrete placement and consolidation. IBC Table 1705.3
 9. Post Installed anchors. Inspection of anchors post-installed in hardened concrete members. IBC Table 1705.3 and Specification section 050020.
 10. Concrete. The special inspections engineer of record shall:
 - a. Verify use of proper concrete design mix.
 - b. Monitor placement of concrete.
 - c. Conduct special inspections and testing listed in IBC-Table 1705.3. Continuous monitoring of concrete delivery shall be required at the point of discharge from trucks/batch plant, and at the point of deposit/consolidation of concrete.
- C. **STRUCTURAL STEEL.** The requirements of AISC 360-10 shall apply when construction includes structural hot-rolled steel building elements or structural cold-formed steel building elements for sprayed fire-resistant materials and for mastic and intumescent fire-resistant coatings.
1. Inspection of steel fabricators and fabrication procedures. The special inspections engineer of record shall conduct special inspection of the steel fabricator and fabrication procedures, as required by IBC-1704.2.5 Inspection of Fabricators, for all steel fabricated assemblies that are themselves subject to special inspections, except as exempted in AISC 360-10. The report of special inspection of the fabricator and fabrication procedures shall be submitted to the EOR.
 2. Certification. The fabricator may demonstrate to the special inspections engineer of record that the requirements of IBC-1704.2.5 Inspection of fabricators have been met by furnishing AISC STD Certification, or furnishing evidence of compliance with the AISC certification program in the appropriate category.
 3. Procedures implementation. The special inspections engineer of record shall state in writing that the fabricator complies with the fabrication and quality control procedures outlined above. Verification may be on a job basis or by inspection within the previous twelve months.

4. Steel elements. Structural steel elements as listed below shall be subject to special inspections:
 - a. Rigid or semi-rigid "moment" connections, field welded or bolted
 - b. Bolted connections required to be pretensioned beyond snug tight conditions
 - c. Beam or column elements with clear spans greater than 50'-0" in length or height
 - d. Trusses, open-webbed joist girders or joists (other than those manufactured to SJI specifications)
 - e. Floor decks and roof decks, when designed to act as diaphragms to distribute lateral forces to wind resisting frames
 - f. Cable supported structures, except tents
 - g. Bolted or welded lateral bracing elements
5. Preparation of fabrication and erection documents. The structural steel fabrication and erection documents shall include designs and details for welded and bolted connections.
 - a. Details for connections shall clearly indicate moment connections
 - b. Details for welded connections shall clearly indicate the type of design and the size and type of welds
 - c. Details for bolted connections shall clearly indicate the type of design (simple bearing or slip-critical moment), amount of tensioning required (snug tight or fully tensioned) and the ASTM specifications for the bolts, nuts and washers
 - d. Erection shoring. Shoring for composite construction (concrete slab/steel beam or concrete slab/steel joist), or shoring for erection of structural steel shall be designed to meet the structural engineer of record's requirements
6. Review and approval. Prior to fabrication and erection of steel elements, the structural steel fabrication and erection documents shall be submitted to the structural engineer of record, for approval for compliance with the District-approved construction documents and in accordance with the following requirements:
 - a. The structural engineer of record's approval for primary structural elements shall specifically include approval of fabrication drawings developed by the steel fabricator.
 - b. The structural engineer of shall approve the effects the secondary structural elements impose on the primary structural system. The general contractor shall submit two sets of the structural engineer of record-approved structural steel fabrication and erection documents, including the structural engineer of record's approval of connections, to the Special Inspector. The special inspections engineer of record shall use the approved documents to conduct special inspections during construction
7. Material receiving. The special inspections engineer of record shall conduct special inspections of steel elements, welding material, and high strength bolts upon receipt on the construction site and in accordance with AISC 360-10. High strength bolts and nuts shall be clearly marked with an identifiable manufacturer's mark on both the bolt head and nut. All shipments of high-strength bolts, nuts, and washers, whether from manufacturer, distributor, or reseller, shall include manufacturer's current test reports for chemical composition (ASTM A751) and mechanical properties, including proof load testing (ASTM F606).
8. Steel elements. The special inspections engineer of record shall conduct special inspections of steel elements in accordance with AISC 360-10.

9. Steel erection. Erection shall be in conformance with industry standard practice (AISC 303). Adequate guying and bracing shall be used during the erection process to maintain the stability of the structure. Structural steel, joists, etc. shall not be erected on concrete or masonry footings, piers, walls, etc. less than seven days old, or less than 75 percent strength (concrete f_c or masonry f_m), unless the concrete and masonry strength criteria that have been established by the structural engineer of record for carrying such loads are satisfied. The special inspections engineer of record shall conduct special inspections of anchor bolts, bolts, welding, connections, and details. Any observed discrepancies between the approved construction documents and the approved structural steel fabrication and erection documents shall be brought to the immediate attention of the structural engineer of record. All steel elements shall be inspected before they are covered by fire-resistant materials or otherwise concealed.
10. High strength bolts. Installation shall conform to the approved construction documents, Approved structural steel fabrication and erection documents, and the RCSC specification. In the event any bolt, nut, or washer is broken during normal installation (except bolts purposely over-torqued in order to draw the parts together), the special inspections engineer of record shall bring such failures to the immediate attention of the structural engineer of record. The special inspections engineer of record shall observe the on-site proof load testing of any suspect bolt(s) per ASTM and AISC standards. Should the bolts fail load testing, they shall be rejected and the structural engineer of record shall make recommendations in writing for remedial actions. All test results and recommendations shall be reported to the EOR.
11. Welding. All welders and weld special inspectors shall be certified in accordance with AWS D1.1. Weld inspection shall be in conformance with AISC 360-10. Periodic special inspection rather than continuous special inspection is permitted for the following items:
 - a. Single pass fillet welds not exceeding 5/16 inch in size
 - b. Floor and roof deck welding
 - c. Welded studs when used for structural diaphragm
 - d. Welded sheet steel for cold-formed steel framing members such as studs and joists
 - e. Welding of stairs and railing systems
12. Rigid or semi-rigid connections. When field welding of rigid or semi-rigid connections is required, or when bolted connections are pretensioned beyond snug tight conditions, the special inspections engineer of record shall conduct special inspections of the connections.
13. Details: The special inspections engineer of record shall conduct special inspection of the steel frame to verify compliance with the details shown on the approved construction documents and the approved fabrication and erection documents, such as bracing, stiffening, member locations, and proper application of joint details at each connection.
14. Composite construction: The special inspections engineer of record shall conduct special inspection of shoring required for erection of composite construction.

PART 4 - SCHEDULES AND FORMS (ATTACHED)

4.1 STATEMENT OF SPECIAL INSPECTIONS.

STRUCTURAL TESTS AND SPECIAL INSPECTIONS

014110-6

4.2 SCHEDULE OF SPECIAL INSPECTIONS.

- A. See individual material specification sections for schedule of special inspections required.

END OF SECTION 014110



August 25, 2014

Mr. Rick Eckoff
EOP Architects
201 W Short St. Suite 700
Lexington, KY 40507

RE: Special Inspection Requirements
LFCUG Senior Citizen Center
Lexington, KY 40502
BFMJ Project No.: 13067.40

Dear Eric Zabilka,

The attached letter is The Statement of Special Inspections that is required on the structural portion of this project by the 2013 Kentucky Building Code, Chapter 17 and is a condition of permit issuance. This Statement of Special Inspections must accompany the plans and specifications when submitted to the Building Officials for building permit application.

We have specified that the Owner employ the Special Inspection Agency and that both the Engineer and Architect of Record approve the Inspection Agency. We will allow a Materials Testing company to serve as the Special Inspection Agency if it has a qualified Registered Professional Engineer for overseeing the Special Inspection services. Material testing companies will still be required to do the actual material testing as they have done in the past; such as make concrete cylinders, welding inspections, etc, as long as they have the certification required as listed in the specifications. The Special Inspector shall provide weekly reports to the Building Official, Owner, Structural Engineer, and Architect and Construction Manager.

Please insure that your specifications do not conflict with these requirements. This letter and attachments will also be inserted into Specification Section 014110 for the Construction Manager and Trade Contractor's information and use.

Sincerely,

Buell Fryer McReynolds Jahed, Inc.

Ethan A. Buell, PE, SECB
Principal



August 25, 2014

To: Department of Housing, Building and Construction
101 Sea Hero Road, Suite 200
Frankfort, Kentucky 40601-5405

RE: STATEMENT OF SPECIAL INSPECTIONS
LFCUG Senior Citizen Center
BFMJ Project No.: 13067.40

The Special Inspections Program shall be overseen by a Professional Engineer licensed in and practicing in the Commonwealth of Kentucky. Special Inspectors shall be a licensed Professional Engineer in the State of Kentucky or is performing appropriate duties directly under the supervision of a licensed Professional Engineer in the State of Kentucky and has a thorough understanding of the Special Inspection requirements of the 2013 Kentucky Building Code. The Special Inspector(s) shall be an individual or individuals certified or experienced to perform such inspections in a particular field and approved by the Design Engineer of Record.

The Special Inspector shall keep records of all inspections and furnish reports to the building official and to the registered design professional in responsible charge. Periodic reports shall be provided and shall indicate that work inspected was done in conformance to approved construction documents. Discrepancies shall be brought to the immediate attention of the contractor for correction. If the discrepancies are not corrected to the satisfaction of the Special Inspector, the discrepancies shall be brought to the immediate attention of the Building Official and to the registered Design Professional in responsible charge.

A weekly report of inspections documenting required Special Inspections and correction of any discrepancies noted in the inspections shall be submitted. At the completion of the Special Inspections, the Licensed Professional Engineer in charge of performing the Special Inspection shall certify the final Special Inspection report and affix his/her seal to the report. Provide three (3) copies of this report; two to the Architect and one to the Structural Engineer of Record. BFMJ, Inc will review this letter and if agreement will provide a letter to the Architect of Record, EOP Architects, 201 W. Short St. Suite 700, Lexington, KY 40507 with a copy to your office stating our approval.

Special Inspections shall be performed for the following manufacturers, materials, fabricators and workmanship:

PART I:

SHOP INSPECTION OF FABRICATORS/MANUFACTURERS:

1. CONCRETE BATCH PLANT
2. STRUCTURAL STEEL FABRICATION SHOP
3. METAL FABRICATION SHOP

Inspections will include, but are not limited to checking for an in place Quality Control Program, proof of workmanship and fabricator's ability to conform to approved construction documents and referenced standards.

Inspection of Fabricators/Manufacturers may be omitted with Proof of Certification by a national recognized certification program if performed in accordance with KBC requirements.

PART II:**INSPECTION AND TESTING OF ON SITE MATERIALS AND WORKMANSHIP:****Soils:**

Earth Moving: From Specification # 03100 Earthmoving
Section # 1.7 Quality Assurance
Section # 3.19 Quality Control

Steel Construction:

Structural Steel: From Specification # 051200 Structural Metal Framing with LEED and Tolerances
Section # 1.4 Quality Assurance
Section # 3.2 Quality Control

Bar Joist: From Specification # 052100 Metal Joists & Joist Girders
Section # 1.4 Quality Assurance
Section # 3.2 Quality Control

Metal Deck: From Specification # 053100 Metal Decking, Fasteners and Shear Studs
Section # 1.4 Quality Assurance
Section # 3.3 Quality Control

Concrete Construction:

Concrete: From Specification # 03300 Cast-in-Place Concrete
Section # 1.4 Quality Assurance
Section # 3.15 Quality Control

Also, please note that applicable tables from Chapter 17 are attached for convenience and that the [Contractor/Owner] and his Inspector(s) must utilize the entire chapter of the 2013 Kentucky Building Code and any Supplements for proper execution.

Sincerely,

Buell Fryer McReynolds Jahed, Inc.



Ethan A. Buell, PE, SECB
Principal

**TABLE 1705.3
REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION**

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD ^a	IBC REFERENCE
1. Inspection of reinforcing steel, including prestressing tendons, and placement.		X	ACI 318, 5.5, 7.1-7.7	1918.4
2. Inspection of reinforcing steel welding in accordance with Table 1705.2.2, Item 2b.	—	—	AWS 11.4 ACI 318, 7.5.2	—
3. Inspection of anchors cast in concrete where allowable loads have been increased or where strength designs used.		X	ACI 318 8.1.3, 21.2.8	1918.5, 1919.1
4. Inspection of anchors post-installed in hardened concrete members ^b .	—	X	ACI 318 8.6, 8.1.3, 21.2.8	1919.1
5. Verifying use of required design mix.	—	X	ACI 318, Ch. 4, 5.2, 5.4	1914.2, 1919.2, 1919.3
6. At the time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	X	—	ASTM C 172 ASTM C 31 ACI 318, 5.6, 5.8	1918.10
7. Inspection of concrete and slabcrete placement for proper application techniques.	X		ACI 318, 5.9, 5.10	1910.6, 1919.7, 1919.8
8. Inspection for maintenance of specified curing temperature and techniques.	—	X	ACI 318, 5.11-5.13	1919.9
9. Inspection of prestressed concrete: a. Application of prestressing forces. b. Grouting of bonded prestressing tendons in the seismic force-resisting system.	X X	—	ACI 318, 18.20 ACI 318, 18.18.4	—
10. Erection of precast concrete members.	—	X	ACI 318, Ch. 16	—
11. Verification of in-situ concrete strength prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs.	—	X	ACI 318, 6.2	—
12. Inspect formwork for shape, location and dimensions of the concrete member being formed.		X	ACI 318, 6.1.1	

For SI: ¹ inch = 25.4 mm.

a. Where applicable, see also Section 1705.11, Special Inspections for seismic resistance.

b. Special requirements for special inspections shall be included in the inspection report for the anchor issued by an approved source in accordance with ACI 308.2 or other local "treated" procedures. Where specific requirements are not provided, special inspection requirements shall be specified to the registered design professional and shall be approved by the building official prior to the commencement of the work.

**TABLE 1705.6
REQUIRED VERIFICATION AND INSPECTION OF SOILS**

VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED
1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	—	X
2. Verify excavations are extended to proper depth and have reached proper material.	—	X
3. Perform classification and testing of compacted fill materials.	—	X
4. Verify use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill.	X	—
5. Prior to placement of compacted fill, observe subgrade and verify that site has been prepared properly.	—	X

TABLE 1705.2.2
REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION OTHER THAN STRUCTURAL STEEL

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD*
1. Material verification of cold formed steel deck:			
a. Identification markings to conform to ASTM standards specified in the approved construction documents.		X	Applicable ASTM material standards
b. Manufacturer's certified test reports.		X	
2. Inspection of welding:			
a. Cold formed steel deck:			
1) Floor and roof deck welds.		X	AWS D1.3
b. Reinforcing steel:			
1) Verification of weldability of reinforcing steel other than ASTM A 306.		X	
2) Reinforcing steel resisting flexure and axial forces in intermediate and special moment frames and boundary elements of special structural walls of concrete and shear reinforcement.	X	—	AWS D1.4 ACI 318: Section 3.5.2
3) Shear reinforcement.	X	—	
4) Other reinforcing steel.	—	X	

For SI: 1 in = 25.4 mm

* Where applicable, see also Section 1705.1.1, Special inspections for seismic retrofits.

STRUCTURAL STEEL
SPECIAL INSPECTION TABLE

INSPECTION TASK	FREQUENCY OF INSPECTION	
	Continuous	Periodic
1. Material verification of high-strength bolts, nuts and washers: a. Identification markings to conform to ASTM standards specified in the approved construction documents. b. Manufacturer's certificate of compliance required.		X
2. Inspection of high-strength bolting: a. Bearing-type connections b. Slip-critical connections	X	X X
3. Material verification of structural steel: a. Identification markings to conform to ASTM standards specified in the approved construction documents. b. Manufacturers' certified mill test reports.		X X
4. Material verification of weld filler materials: a. Identification markings to conform to AWS specification in the approved construction documents. b. Manufacturer's certificate of compliance required.		X X
5. Inspection of welding a. Structural steel 1) Complete and partial penetration of groove welds 2) Multi-pass fillet welds 3) Single-pass fillet welds > 5/16" 4) Single-pass fillet welds < 5/16"	X X X	X
6. Inspection of steel frame joint details for compliance a. Details such as bracing and stiffening b. Member locations c. Application of joint details at each connection.		X

SECTION 033000 – CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this Section.

1.2 DESCRIPTION OF WORK

- A. Provide labor, transportation, materials, tools, equipment and appliances necessary for proper and complete installation of all concrete work.
- B. Related Requirements:
 - 1. Section 014110 "Special Inspections" for administrative procedures for special inspections required for concrete.
 - 2. Section 033300 "Architectural Concrete" for forming and finishing requirements for exposed-to-view concrete walls.
 - 3. Section 033543 "Polished Concrete Floors" for architectural finishes applied to cast-in-place concrete floor slabs.
 - 4. Section 034500 "Precast Architectural Concrete" for precast concrete used in sitework.
 - 5. Section 321313 "Concrete Paving" for concrete pavement and flatwork finishes.
 - 6. Section 321316 "Decorative Concrete Paving" for specialty finishes on concrete sitework.

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's product data with application and installation instructions for proprietary materials and items, including reinforcement and forming accessories, admixtures, patching compounds, waterstops, joint systems, curing compounds, dry-shake finish materials, shrinkage-resistant grout, and any others that may be requested by Engineer or Architect.
- B. Shop Drawings, General: All shop drawings submitted shall be a complete set of original drawings created by the Supplier. No partial or incomplete submittals or duplication of Engineer's or Architect's original documents will be permitted.
 - 1. Minimum Requirements for Electronically Submitted Structural Shop Drawings:
 - a. No partial submittals will be accepted. Submittal will be returned without review.
 - b. No incomplete submittals will be accepted.
 - c. Submittal must include:
 - 1) One hard copy of both erection drawings and piece drawings. (Number of hard copies may be increased or decreased at pre-construction meeting)
 - 2) Hard copy must have been reviewed and noted as such by general contractor/construction manager.
 - 3) All piece marks must be on erection drawings.
 - 4) All elements of the erection drawings must be named and in piece drawings.
 - 5) A list of drawings submitted must be enclosed.
 - 6) Submitted drawing must be in PDF format.
 - 2. Shop drawings must not only bear the Contractor's stamp of approval but shall also show evidence that each item has been thoroughly checked. Failure to comply with this requirement shall result in the Engineer's return of the submission (without review or action) for the Contractor's proper submission and review. No exceptions shall be taken.
 - 3. Copies of shop drawings used in the field shall bear the Engineer's and Architect's review stamp with items checked to indicate a satisfactory final review.

- C. Shop Drawings; Reinforcement: Prior to fabrication, submit shop drawings for fabrication, bending, and placement of concrete reinforcement. Comply with ACI 315 "Manual of Standard Practice for Detailing Reinforced Concrete Structures" showing bar schedules, stirrup spacing, diagrams of bent bars, and arrangement of concrete reinforcement. Include special reinforcement required and openings through concrete structures.
- D. Shop Drawings; Formwork: Submit shop drawings for fabrication and erection of specific finished concrete surfaces as indicated. Show general construction of forms including jointing, special form joint or reveals, location and pattern of form tie placement, and other items, which affect exposed concrete visually.
 - 1. Architect/Engineer's review is for general architectural applications and features only. Design of formwork for structural stability and efficiency is the Contractor's responsibility.
- E. Samples: Submit samples of materials as specified and as otherwise requested by Engineer or Architect, including names, sources and descriptions.
- F. Laboratory Test Reports: Submit laboratory test reports for concrete materials and mix design test as specified.
- G. Materials Certificates: Provide materials certificates in lieu of materials laboratory test reports when permitted by Engineer. Material certificates shall be signed by manufacturer and Contractor, certifying that each material item complies with, or exceeds, specified requirements.
- H. All submittals required in Section 1.4, "Quality Assurance."

1.4 QUALITY ASSURANCE

- A. Codes and Standards: Comply with provisions of following codes, specifications and standards, except where more stringent requirements are shown or specified.
 - 1. ACI 301 "Specifications for Structural Concrete for Buildings".
 - 2. ACI 304 "Recommended Practices for Measuring, Mixing, Transporting and Placing Concrete".
 - 3. ACI 318 "Building Code Requirements for Reinforced Concrete".
 - 4. Concrete Reinforcing Steel Institute, "Manual of Standard Practice".
 - 5. ANSI/AWS D1.4 "Structural Welding Code -- Reinforcing Steel".
 - 6. ACI 117 - 90 "Standard Tolerances for Concrete Construction and Materials".
- B. Materials and operations shall be tested and inspected as work progresses. Failure to detect defective work shall not prevent rejection when defect is discovered, nor shall it obligate the Owner for final acceptance.
- C. All sampling and/or testing in the field shall be made by an ACI Concrete Field Testing Technician Grade I in accordance with ACI CP1 or equivalent.
- D. Testing agencies shall meet the requirements of "Standard Recommended Practice for Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as Used in Construction," ASTM E 329, latest edition.
- E. Concrete Testing Service:
 - 1. Owner is to engage a testing laboratory acceptable to Engineer and Architect to perform the following services:
 - a. Qualification of proposed materials and the establishment of mix designs in accordance with "Building Code Requirements for Reinforced Concrete," ACI 318, latest edition and as noted under Proportioning and Design of Mixes listed elsewhere in this section.
 - b. See Section 3.15 Quality Control Testing During Construction For Required Tests.
 - c. Testing services needed or required by the Contract.
 - d. Correct deficiencies in structural work, which inspections have indicated to be not in compliance with requirements. Perform additional tests, at Contractor's expense, as

may be necessary to reconfirm any non-compliance of original work, and as may be necessary to show compliance of corrected work.

F. Special Inspections:

1. The Owner is to hire the Special Inspector(s) to meet the requirements for concrete construction listed in Chapter 17 of the 2013 KBC, Section 1705.3.
2. The concrete batch plant is to submit all necessary paperwork or hire a Special Inspector to meet the requirements for inspection of fabricators listed in Chapter 17 of the 2013 KBC, Section 1704.2.5.
3. The General Contractor is responsible for providing access to the site for the Owner's Special Inspector and for coordinating the Special Inspector's site visits with ongoing work.

G. Materials and installed work may require testing and retesting, as directed by Engineer or Architect, at any time during progress of work. Allow free access to material stockpiles and facilities. Tests including retesting of rejected materials and installed work, shall be done at Contractor's expense.

H. Pre-installation Conference:

1. At least 14 days prior to the start of the concrete construction schedule, the Contractor shall conduct a pre-installation conference at the project site to review the proposed mix designs and to discuss the required methods and procedures to achieve the required concrete construction.
2. The Contractor shall require representatives of every party who is concerned with the concrete work to attend the conference, including, but not limited to, the following:
 - a. Contractor's superintendent
 - b. Material Testing Agency
 - c. Concrete subcontractor
 - d. Engineer
 - e. Special Inspector
 - f. Architect
 - g. Owner
3. Minutes of meeting shall be recorded, typed, printed and distributed by General Contractor within three days of the meeting.

1.5 PROJECT CONDITIONS

- A. Protection of Footings Against Freezing: Cover completed work at footing level with sufficient temporary or permanent cover as required to protect footings and adjacent subgrade against possibility of freezing; maintain cover for time period as necessary.
- B. Protect adjacent finish materials against spatter during concrete placement.

PART 2 - PRODUCTS

2.1 FORM MATERIALS

- A. Forms for Exposed Finish Concrete: See specification Section 033300 "Architectural Concrete".
- B. Forms for Unexposed Finish Concrete: Plywood, lumber, metal or other acceptable material. Provide lumber dressed on at least 2 edges and one side for tight fit.
- C. Forms for Cylindrical Columns and Supports: fiberglass reinforced plastic, or paper or fiber tubes. Construct paper or fiber tubes of laminated plies using water-resistant adhesive with wax-impregnated exterior for weather and moisture protection. Provide units with sufficient wall thickness to resist loads imposed by wet concrete without deformation.

- D. Form Coatings: Provide commercial formulation form-coating compounds that will not bond with, stain, nor adversely affect concrete surfaces, and will not impair subsequent treatments of concrete surfaces.
- E. Form Ties: Factory-fabricated, adjustable-length, removable or snapoff metal form ties, designed to prevent form deflection and to prevent spalling concrete upon removal. Provide units which will leave no metal closer than 1-1/2" to surface.
 - 1. Provide ties which, when removed, will leave holes not larger than 1" diameter in concrete surface.

2.2 REINFORCING MATERIALS

- A. Reinforcing Bars: ASTM A 615, Grade 60, deformed. Bars indicated to be welded shall conform to ASTM A706.
- B. Welded Wire Fabric: ASTM A 185 welded steel wire fabric. Provide flat sheets only.
- C. Welded Deformed Steel Wire Fabric: ASTM A 497. Provide flat sheets only.
- D. Supports for Reinforcement: Provide supports for reinforcement including bolsters, chairs, spacers and other devices for spacing, supporting and fastening reinforcing bars and welded wire fabric in place. Use wire bar type supports complying with CRSI recommendations, unless otherwise acceptable.
 - 1. For slabs-on-grade, use supports with sand plates or horizontal runners where base material will not support chair legs.
 - 2. For exposed-to-view concrete surfaces, where legs of supports are in contact with forms, provide supports with legs which are plastic protected (CRSI, Class I) or stainless steel protected (CRSI, Class 2).
 - 3. For elevated slabs on metal deck, use standard chairs to position reinforcement at mid-height above deck ribs, unless otherwise shown.

2.3 CONCRETE MATERIALS

- A. Portland Cement: ASTM C 150, Type I, Type II, Type II Table 2, or Type III, unless otherwise acceptable to Engineer.
 - 1. Use one brand of cement throughout project, unless otherwise acceptable to Architect/Engineer.
- B. Fly-Ash: ASTM C 618, Type F [or C].
 - 1. Limit use of fly-ash in lightweight concrete to not exceed 10% of cement content by weight nor 50 pounds of fly ash per cubic yard. Substitute fly-ash at a ratio of 1 or 1.25 times the weight of cement. In normal weight concrete limit use of fly ash to not exceed 15% of cement content by weight nor 80 pounds of fly ash per cubic yard.
- C. Normal Weight Aggregates: ASTM C 33, and as herein specified. Provide aggregates from a single source for exposed concrete.
 - 1. Fine Aggregates - shall consist of natural sand having clean, hard, strong, durable, uncoated grains free from injurious amounts of dust, organic matter, loam, or other deleterious matter.
 - 2. Coarse Aggregate - shall be crushed stone or gravel having clean, hard, uncoated particles and free from injurious amounts of soft, friable, thin, elongated or laminated pieces. Aggregates shall not absorb more than 3% moisture by weight. Coarse aggregates shall be standard size #67.
- D. Aggregate for Concrete Fill (Grout): Pea gravel or 3/8" crushed limestone.
- E. Water: Drinkable.

- F. Air-Entraining Admixture: ASTM C 260 products. Subject to compliance with requirements, provide one of the following:
- "Air-Mix"; Euclid Chemical Company
 - "Sika AER"; Sika Corporation
 - "MB-VR" or "Micro-Air"; Master Builders
 - "Darex II"; W. R. Grace
 - "RVR-15" or "RSA-10"; Russtech
 - Or equal
- G. Water-Reducing Admixture: ASTM C 494, Type A, and contain not more than 0.1% chloride ions. Type A, Water-Reducing admixture shall be a hydroxolated polymer type admixture. Admixtures that are predominantly composed of hydroxolated carboxylic acid or lignin sulfonates are not permitted.
1. Products: Subject to compliance with requirements, provide one of the following:
- "Eucon WR-75" or "WR-89"; Euclid Chemical Company
 - "Plastocrete 161"; Sika Corporation
 - "Polyheed 997" or "Pozzolith 322N"; Master Builders
 - "WRDA-Hycol" or "Daracem 55"; W. R. Grace
 - "Finishease-NC" or "LC-400"; Russtech
 - Or equal
- H. High-Range Water-Reducing Admixture (Super Plasticizer): ASTM C 494, Type F or Type G and contain not more than 0.1% chloride ions. Superplasticizer shall have the performance capabilities to be added to the concrete at the Ready mix plant without rapid slump loss problems. Job site added superplasticizers shall not be permitted.
1. Products: Subject to compliance with requirements, provide one of the following:
- Eucon 37"; Euclid Chemical Corp.
 - "Sikament 300"; Sika Corporation
 - "Rheobuild 1000" or Polyheed 997"; Master Builder
 - "WRDA-19" or "Daracem 100"; W.R. Grace
 - "Superflo 440, 440R or 443", Russtech
 - Or equal
- I. Water-Reducing, Accelerator Admixture: ASTM C 494, Type C or E. Only non- chloride accelerators shall be permitted.
1. Products: Subject to compliance with requirements, provide one of the following:
- "Accelguard 80"; Euclid Chemical Co.
 - "Pozzutec 20"; Master Builders.
 - "LCNC-166"; Russtech
 - "Polarsek"; W.R. Grace
 - Or equal
- J. Water-Reducing, Retarding Admixture: ASTM C 494, Type D, and contain not more than 0.1% chloride ions.
1. Products: Subject to compliance with requirements, provide one of the following:
- "Eucon Retarder 75"; Euclid Chemical Company
 - "Plastiment"; Sika Corporation
 - "Pozzolith 122-R", Master Builders
 - "Daratard-17"; W. R. Grace Co.
 - "LC-400R" or "LC-400P"; Russtech
 - "Superflo 440R"; Russtech
 - Or equal

- K. Prohibited Admixtures: Calcium chloride thycyanates or admixtures containing more than 0.1% chloride ions are not permitted.

2.4 RELATED MATERIALS

- A. Reglets: Where resilient or elastomeric sheet flashing or bituminous membranes are terminated in reglets, provide reglets of not less than 26 gauge galvanized sheet steel. Fill reglet or cover face opening to prevent intrusion of concrete or debris.
- B. Dovetail Anchor Slots: Hot-dip galvanized sheet steel, not less than 0.0336 inch thick (22 gage) with bent tab anchors. Fill slot with temporary filler or cover face opening to prevent intrusion of concrete or debris.
- C. Waterstops: Provide flat type waterstops at construction joints and other joints as shown. Size to suit joints.
1. Modified Bitumen Waterstops: Synko-Flex by The Henry Company Sealants Division, Houston, Texas (800) 231-4551.
 2. Bentonite Waterstop: Volclay-RX by the American Colloid Company, Arlington Heights, Illinois 60004.
- D. Granular Base: Compacted layer of GDA stone, unless otherwise approved or directed by Architect.

Vapor Barrier: Provide vapor retarder cover above prepared base material for slabs on grade which meets ASTM E 1745 Class A. Use only materials which are resistant to decay when tested in accordance with ASTM E 154 and has maximum Water Vapor Permeance value of 0.009 perms or less when tested with ASTM E 96 as follows:

Perminator 15 mil by W.R. Meadows.

Stego-Wrap 15 mil by Stego Industries

Or equal

- E. Non-Shrink Grout: CE-CRD-C 621, Type D, non-metallic, factory pre-mixed grout.
1. Products: Subject to compliance with requirements, provide one of the following:
 - a. "5 Star Grout"; Five Star Products
"5 Star Instant Grout"; Five Star Products
"Master Flow 928"; Master Builders
 - 1) Or equal
- F. Moisture-Retaining Cover: Must be applied to all horizontal surfaces to receive polishing. One of the following, complying with ANSI/ASTM C 171.
1. Waterproof paper.
 2. Polyethylene film.
 3. Polyethylene-coated burlap.
- G. Concrete Curing Compound shall be applied to vertical wall surfaces and exterior slabs and walkways and shall comply with ASTM C-309, Type 1, Class B. Manufacturers offering products complying with requirements include:
- Master Builders; MB429
Sonneborn-Contech; Kure-N-Seal 800
W. R. Meadows, Inc.; CS-309
Or equal
- H. Bonding Compound: Polyvinyl acetate, rewettable type.
1. Products: Subject to compliance with requirements, provide one of the following:

"Weldcrete"; Larson Products.
"Everbond"; L & M Construction Chemicals.
"Euroweld"; Euclid Chemical Co.
"Daraweld C"; W.R. Grace
"Sonocrete"; Sonneborn-Contech.
Or equal

- I. Epoxy Adhesive: 100% solids, two component material suitable for use on dry or damp surfaces.
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - "Thiopoly"; W.R. Grace.
 - "Sikadur Hi-Mod"; Sika Chemical Corp.
 - "Euco Epoxy"; Euclid Chemical Co.
 - Or equal
- J. Expansion Joint Material: Shall be a pre-formed expansion joint filler for concrete paving and structural construction (non-extruding and resilient bituminous types) per ASTM D 1751.

2.5 PROPORTIONING AND DESIGN OF MIXES

- A. General - concrete shall be composed of portland cement, fine aggregate, coarse aggregate, water, and as specified, admixtures. Proportions of ingredients shall produce concrete that will work readily into corners and angles of forms, bond to reinforcement, without segregation or excessive bleed water forming on surface. Proportioning of materials shall be in accordance with ACI 211.1-91, "Recommended Practice for Selecting Proportions for Normal, Heavyweight & Mass Concrete."
- B. Prepare design mixes for each type and strength of concrete by either laboratory trial batch or field experience methods as specified in ACI 301. If trial batch method is used, use an independent testing facility acceptable to Engineer for preparing and reporting proposed mix designs. The testing facility shall not be the same as used for field quality control testing unless otherwise acceptable to Engineer.
- C. Self-consolidating concrete may be used on this project. Maximum spread 24". If a self-consolidating concrete is used in any exposed walls, all exposed walls will require the use of the same mix. Form layout must remain the same as defined in specification section "033330 – ARCHITECTURAL CONCRETE"
- D. Submit written reports to Engineer of each proposed mix for each class of concrete at least 45 days prior to start of work. Do not begin concrete production until mixes have been reviewed and approved by Engineer.
- E. Required Average Strength Above Specified Strength: Determinations of required average strength (fcr) shall be in accordance with ACI 318, "Building Code Requirements for Reinforced Concrete," and evaluations of compressive strength results of field concrete shall be in accordance with ACI 214-88, "Recommended Practice for Evaluation of Strength Test Results of Concrete."
 - 1. Trial Mixes when the ready-mix producer does not have a record of past performance, the combination of materials and the proportions selected shall be selected from trial mixes having proportions and consistencies suitable for the work based on ACI 211.1, using at least three different water-cement ratios which will produce a range of strengths encompassing those required.
 - a. Average strength (fcr) required shall be 1200 psi (8.3 MPa) above specified strength.
 - 2. Past Field Experience - proportions shall be established on the actual field experience of the ready-mix producer with the materials proposed to be employed. Standard deviations shall be determined by 30 consecutive tests (or two groups of tests totaling 30 or more).
 - a. Average strength (fcr) shall exceed specified strength (f'c) by at least:

400 psi (2.8 MPa) - standard deviation is less than 300
550 psi (3.8 MPa) - standard deviation is 300 to 400
700 psi (4.8 MPa) - standard deviation is 400 to 500
900 psi (6.2 MPa) - standard deviation is 500 to 600
1200 psi (8.3 MPa) - standard deviation is above 600 or unknown

- F. Design mixes to provide normal weight concrete with the design strengths as indicated on drawings. The average strength shall exceed specified compressive strength as required in accordance with ACI 318.
- G. Adjustment to Concrete Mixes: Mix design adjustments may be requested by Contractor when characteristics of materials, job conditions, weather, test results, or other circumstances warrant; at no additional cost to Owner and as accepted by Engineer. Laboratory test data for revised mix design and strength results must be submitted to and accepted by Engineer before using in work.
- H. Admixtures:
1. Use Type A water-reducing admixture in concrete.
 2. High range water-reducing admixture (super plasticizer) or mid-range water reducing admixture may be used in concrete with Engineer's approval.
 3. Use accelerating admixture in concrete slabs placed at ambient temperatures below 50° F (10° C).
 4. Use air-entraining admixture in exterior exposed concrete, unless otherwise indicated. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having air content within following limits:
 - a. Concrete structures and slabs exposed to freezing and thawing or subjected to hydraulic pressure:
 - 1) 5% ± 1%
 5. Use admixtures for water-reducing and set-control in strict compliance with manufacturer's directions.
- I. Slump Limits: Proportion and design mixes to result in concrete slump at point of placement as follows:
1. Slabs, ramps and sloping surfaces: Not more than 3" with ordinary WRA, or 6" with MRWR.
 2. Reinforced foundation systems: Not less than 2-1/2" and not more than 4" except Foundation Walls slump to be 5" to 6". Note that Drilled Shafts are prescribed under Section 316300.
 3. Other concrete: Not less than 1" nor more than 4".
 4. Concrete containing MRWR admixture (mid-range): Not more than 6".
 5. Concrete containing HRWR admixture (super plasticizer): Not more than 8".

2.6 CONCRETE MIXES

- A. Ready-Mix Concrete: Comply with requirements of ASTM C 94, and as herein specified.
1. Delete references for allowing additional water to be added to batch for material with insufficient slump. Addition of water to batch will not be permitted.
 2. During hot weather, or under conditions contributing to rapid setting of concrete, a shorter mixing time than specified in ASTM C 94 may be required.
 3. When air temperature is between 85°F (30°C) and 90°F (32°C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes, and when air temperature is above 90°F (32°C), reduce mixing and delivery time to 60 minutes. Mixing and delivery time will not have to be reduced if Type D retarder is incorporated in the mix.
 4. Provide batch ticket for each batch discharged and used in work, indicating project identification name and number, date, mix type, mix time, quantity, and amount of water introduced.

PART 3 - EXECUTION

3.1 FORMS

General: Coordinate the installation of joint materials and vapor retarders with placement of forms and reinforcing steel. Side forms of footings may not be omitted and concrete placed directly against excavation except when a written request by Contractor and accepted by the Engineer and Architect in writing. When omission of forms is accepted, provide additional concrete required beyond the minimum design profiles and dimensions of the footings as detailed at contractor's cost. NOTE THAT THE EXTERIOR GRADE BEAM FACES WILL ALWAYS REQUIRE FORMING.

- A. Design, erect, support, brace and maintain formwork to support vertical and lateral loads that might be applied until such loads can be supported by concrete structure. Construct formwork so concrete members and structures are of correct size, shape, alignment, elevation and position.
- B. Design formwork to be readily removable without impact, shock or damage to cast-in-place concrete surfaces and adjacent materials.
- C. Construct forms to sizes, shapes, lines and dimensions shown, and to obtain accurate alignment, location, grades, level and plumb work in finished structures. Provide for openings, offsets, sinkages, keyways, recesses, moldings, rustications, reglets, chamfers, blocking, screeds, bulkheads, anchorages and inserts, and other features required in work. Use selected materials to obtain required finishes. Solidly butt joints and provide back-up at joints to prevent leakage of cement paste.
- D. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush plates or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces where slope is too steep to place concrete with bottom forms only. Kerf wood inserts for forming keyways, reglets, recesses, and the like, to prevent swelling and for easy removal.
- E. Provide temporary openings where interior area of formwork is inaccessible for cleanout, for inspection before concrete placement, and for placement of concrete. Securely brace temporary openings and set tightly to forms to prevent loss of concrete mortar. Locate temporary openings on forms at inconspicuous locations.
- F. Chamfer exposed corners and edges as indicated, using wood, metal, PVC or rubber chamfer strips fabricated to produce uniform smooth lines and tight edge joints.
- G. Form Ties: Factory-fabricated, adjustable-length, removable or snapoff metal form ties, designed to prevent form deflection, and to prevent spalling concrete surfaces upon removal.
 - 1. Unless otherwise indicated, provide ties so portion remaining within concrete after removal is at least 1-1/2" inside concrete.
 - 2. Unless otherwise shown, provide form ties, which will not leave holes larger than 1" diameter in concrete surface.
- H. Provisions for Other Trades: Provide openings in concrete formwork to accommodate work of other trades. Determine size and location of openings, recesses and chases from trades providing such items. Accurately place and securely support items built into forms.
- I. Cleaning and Tightening: Thoroughly clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt or other debris just before concrete is placed. Retighten forms and bracing after concrete placement as required to eliminate mortar leaks and maintain proper alignment.

3.2 VAPOR BARRIER INSTALLATION

- A. Place vapor barrier above compacted granular base.

- B. Lap joints 6" and seal with appropriate tape.

3.3 PLACING REINFORCING

- A. Comply with Concrete Reinforcing Steel Institute's recommended practice for "Placing Reinforcing Bars", for details and methods of reinforcement placement and supports, and as herein specified.
 - 1. Avoiding cutting or puncturing vapor barrier during reinforcement placement and concreting operations.
- B. Clean reinforcement of loose rust and mill scale, earth, ice and other materials, which reduce or destroy bond with concrete.
- C. Accurately position, support and secure reinforcement against displacement by formwork, construction, or concrete placement operations. Locate and support reinforcing by metal chairs, runners, bolsters, spacers, and hangers, as required.
- D. Arrange, space and securely tie bars and bar supports to hold reinforcement in position during concrete placement operations. Set wire ties so ends are directed into concrete, not toward exposed concrete surfaces.
- E. Lap adjoining pieces of welded wire fabric at least one full mesh and lace splices with wire. Offset end laps in adjacent widths to prevent continuous laps in either direction. All WWR shall be properly supported with standard chairs or concrete brick (for slab on grade). 'Hooking and lifting' or 'floating-in' will not be permitted for any type of construction (slab on grade or supported slabs).

3.4 JOINTS

- A. Construction Joints: Locate and install construction joints, which are not shown on drawings, so as not to impair strength and appearance of the structure, as acceptable to Engineer and Architect. Submit locations to Engineer and Architect for review.
- B. Provide keyways at least 1-1/2" deep in construction joints in walls, slabs and between walls and footings; accepted bulkheads designed for this purpose may be used for slabs.
- C. Place construction joints perpendicular to the main reinforcement. Continue reinforcement across construction joints.
- D. Waterstops: Provide waterstops in construction joints as indicated. Install waterstops to form continuous diaphragm in each joint. Make provisions to support and protect exposed waterstops during progress of work. Fabricate field joints in waterstops in accordance with manufacturer's printed instructions.
- E. Isolation Joints in Slabs-on-Ground (IJ): Construct isolation joints in slabs-on-ground at points of contact between slabs on ground and vertical surfaces, such as column pedestals, foundation walls, grade beams and elsewhere as indicated.
 - 1. Use #30 roofing felt at the isolation joint.
 - 2. Joint filler and sealant materials are specified in Division-7 sections of these specifications.
- F. Contraction (Control) Joints (CJ) in Slabs-On-Ground: Construct control joints in slabs-on-ground to form panels of patterns as shown or noted. Sawcut joints 1/4 of slab depth or use inserts 1/4" wide x 1/4 of slab depth unless otherwise indicated.
 - 1. Form contraction joints by inserting premolded hardboard or fiberboard strip into fresh concrete until top surface of strip is flush with slab surface. After concrete has cured, remove inserts and clean groove of loose debris.
 - 2. Control joints may be formed by saw cuts as soon after slab finishing without dislodging aggregate but no later than twelve (12) hours of placing concrete.
 - 3. Joint sealant material is specified in Division-7 sections of these specifications.

- G. Expansion Joints (EJ) in Slabs-On-Ground: Construct expansion joints in slabs on ground between exterior and interior Concrete Slabs and between exterior slabs and vertical surfaces and where otherwise indicated on the drawings.

1. Sealants and caulk materials are specified in Division 7 sections of these specifications.

3.5 INSTALLATION OF EMBEDDED ITEMS

- A. General: Set and build into work anchorage devices and other embedded items required for other work that is attached to, or supported by cast-in-place concrete. Use setting drawings, diagrams, instructions and directions provided by suppliers of items to be attached thereto.
- B. Edge Forms and Screed Strips for Slabs: Set edge forms or bulkheads and intermediate screed strips for slabs to obtain required elevations and contours in finished slab surface. Provide and secure units sufficiently strong to support types of screed strips by use of strike-off templates or accepted compacting type screeds.
- C. Install reglets to receive top edge of foundation sheet waterproofing, and to receive thru-wall flashings in outer face of concrete frame at exterior walls, where flashing is shown at lintels, relieving angles, and other conditions.
- D. Install dovetail anchor slots in concrete structures as noted on drawings.

3.6 PREPARATION OF FORM SURFACES

- A. Clean reused forms of concrete matrix residue, repair and patch as required to return forms to acceptable surface condition.
- B. Coat contact surfaces of forms with a form-coating compound before reinforcement is placed.
- C. Thin form-coating compounds only with thinning agent of type, and in amount, and under conditions of form-coating compound manufacturer's directions. Do not allow excess form-coating material to accumulate in forms or to come into contact with concrete surfaces against which fresh concrete will be placed. Apply in compliance with manufacturer's instructions.
- D. Coat steel forms with a non-staining, rust-preventative form oil or otherwise protect against rusting. Rust-stained steel formwork is not acceptable.

3.7 CONCRETE PLACEMENT

- A. Preplacement Inspection: Before placing concrete, inspect and complete formwork installation, reinforcing steel, and items to be embedded or cast-in. Notify other crafts to permit installation of their work; cooperate with other trades in setting such work. Moisten wood forms immediately before placing concrete where form coatings are not used.
1. Apply temporary protective covering to lower 2'-0" of finished walls adjacent to poured floor slabs and similar conditions, and guard against spattering during placement.
- B. General: Comply with ACI 304, and as herein specified. Deposit concrete continuously or in layers of such thickness that no concrete will be placed on concrete which has hardened sufficiently to cause the formation of seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as herein specified. Deposit concrete as nearly as practicable to its final location to avoid segregation.

When placing operations will involve dropping concrete more than 5 feet, the concrete shall be dropped through a tube fitted with a hopper head, or through other approved devices, as necessary to prevent segregation. This requirement shall not apply to cast-in-place piling or caissons when concrete placement is completed before initial set occurs in the first placed concrete.

- C. Placing Concrete in Forms: Deposit concrete in forms in horizontal layers not deeper than 24" and in a manner to avoid inclined construction joints. Where placement consists of several layers, place each layer while preceding layer is still plastic to avoid cold joints.
 - D. Consolidate placed concrete by mechanical vibrating equipment supplemented by hand-spading, rodding or tamping. Use equipment and procedures for consolidation of concrete in accordance with ACI recommended practices.
 - E. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations not farther than visible effectiveness of machine. Place vibrators to rapidly penetrate placed layer and at least 6" into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to set. At each insertion limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing segregation of mix.
 - F. Placing Concrete Slabs: Deposit and consolidate concrete slabs in a continuous operation, within limits of construction joints, until the placing of a panel or section is completed.
 - G. Consolidate concrete during placing operations so that concrete is thoroughly worked around reinforcement and other embedded items and into corners.
 - H. Bring slab surfaces to correct level with straightedge and strikeoff. Use bull floats or darbies to smooth surface, free of humps or hollows. Do not disturb slab surfaces prior to beginning finishing operations.
 - I. Maintain reinforcing in proper position during concrete placement operations.
 - J. Cold Weather Placing:
 - 1. Protect concrete work from physical damage or reduced strength, which could be caused by frost, freezing actions, or low temperatures, in compliance with ACI 306 and as herein specified.
 - 2. When air temperature has fallen to or is expected to fall below 40°F (4°C), uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50°F (10°C), and not more than 80°F (27°C) at point of placement.
 - 3. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
 - 4. Do not use calcium chloride, salt and other materials containing antifreeze agents or chemical accelerators, unless otherwise accepted in mix designs.
 - K. Hot Weather Placing:
 - 1. When hot weather conditions exist that would seriously impair quality and strength of concrete, place concrete in compliance with ACI 305 and as herein specified.
 - 2. Cool ingredients before mixing to maintain concrete temperature at time of placement below 90° F (32° C). Mixing water may be chilled, or chopped ice may be used to control temperature provided water equivalent of ice is calculated to total amount of mixing.
 - 3. Cover reinforcing steel with water-soaked burlap if it becomes too hot, so that steel temperature will not exceed the ambient air temperature immediately before embedment in concrete.
 - 4. Fog spray forms, reinforcing steel and subgrade thoroughly just before concrete is placed.
 - 5. Use water-reducing retarding admixture (Type D) when required by high temperatures, low humidity, or other adverse placing conditions.
- 3.8 FINISH OF FORMED SURFACES
- A. Rough Form Finish: For formed concrete surfaces not exposed to view in the finish work or by other construction, unless otherwise indicated. This is the concrete surface having texture imparted by form facing material used, with tie holes and defective areas repaired and patched and fins and other projections exceeding 1/4" in height rubbed down or chipped off.

- B. Smooth Form Finish: Provide a smooth form finish to formed concrete surfaces exposed-to-view, or that are to be covered with a coating or waterproofing material applied directly to concrete, or a covering material applied directly to concrete, such as waterproofing, dampproofing, painting or other similar system. This is an as-cast concrete surface obtained with selected form facing material, arranged orderly and symmetrically with a minimum of seams. Repair and patch defective areas, with fins or other projections completely removed and smoothed.
- C. Related Uniform Surfaces: At tops of walls where horizontal offsets surfaces occur adjacent to formed surfaces, strike-off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

3.9 MONOLITHIC SLAB FINISHES

- A. Scratch Finish: Apply scratch finish to monolithic slab surfaces that are to receive concrete floor topping or mortar setting beds for tile, portland cement terrazzo, and other bonded applied cementitious finish flooring material, and as otherwise indicated.
 - 1. After placing slabs, plane surface to tolerances for floor flatness (F_F) of 15 and floor levelness (F_L) of 13. Slope surfaces uniformly to drains where required. After leveling, roughen surface before final set, with stiff brushes, brooms or rakes.
- B. Float Finish: Apply float finish to monolithic slab surfaces to receive trowel finish and other finishes as hereinafter specified, and slab surfaces which are to be covered with membrane or elastic waterproofing, membrane or elastic roofing, or sand-bed terrazzo, and as otherwise indicated.
 - 1. After screeding, consolidating, and leveling concrete slabs, do not work surface until ready for floating. Begin floating when surface water has disappeared or when concrete has stiffened sufficiently to permit operation of power-driven floats, or both. Consolidate surface with power-driven floats, or by hand-floating if area is small or inaccessible to power units. Cut down high spots and fill low spots. Uniformly slope surfaces to drains. Immediately after leveling, refloat surface to a uniform, smooth, granular texture. Flatness and levelness requirements are listed later in this section.
- C. Trowel Finish: Apply trowel finish to monolithic slab surfaces to be exposed-to-view, and slab surfaces to be covered with resilient flooring, carpet, paint or other thin film finish coating system.
 - 1. After floating, begin first trowel finish operation using a power-driven trowel. Begin final troweling and when surface produces a ringing sound as trowel is moved over surface. Consolidate concrete surface by final hand-troweling operation, free of trowel marks, uniform in texture and appearance, and with a surface plane tolerance equal to the limits specified in the 'float finish' paragraph 'B' above. Grind smooth surface defects that would telegraph through applied floor covering system. Flatness and levelness requirements are listed later in this section.
- D. Trowel and Fine Broom Finish: Where ceramic or quarry tile is to be installed with thin-set mortar, apply trowel finish as specified, then immediately follow with slightly scarifying surface by fine broom. Flatness and levelness requirements are listed later in this section.
- E. Non-Slip Broom Finish: Apply non-slip broom finish to exterior concrete loading dock, stairs, stoops, and elsewhere as indicated. Flatness and levelness requirements are listed later in this section.
 - 1. Immediately after trowel finishing, slightly roughen concrete surface by brooming with fiber bristle broom perpendicular to main traffic route. Coordinate required final finish with Architect before application.
- F. Flatness and Levelness Requirements (unless otherwise noted):
 - 1. Slab on Grade: Check and level surface plane to a tolerance for floor flatness (F_F) =28 overall value and minimum local value of 23 and floor levelness (F_L)= 20 overall value and minimum local value of 18.

2. All testing and sampling to conform to ASTM E11-55.

3.10 CONCRETE CURING AND PROTECTION

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
- B. Start initial curing as soon as free water has disappeared from concrete surface after placing and finishing. Weather permitting; keep continuously moist for not less than 7 days.
- C. Begin final curing procedures immediately following initial curing and before concrete has dried. Continue final curing for at least 7 days in accordance with ACI 301 procedures. Avoid rapid drying at end of final curing period.
- D. Curing Methods: Perform curing of concrete by curing and sealing compound, by moist curing, by moisture-retaining cover curing, and by combinations thereof, as herein specified.
 1. Provide curing and sealing compound to exterior slabs, walks, and curbs as follows:
 - a. Apply specified curing and sealing compound to exterior concrete slabs and vertical surfaces as soon as final finishing operations are complete (within 2 hours). Apply uniformly in continuous operation by power-spray or roller in accordance with manufacturer's directions. Recoat areas subjected to heavy rainfall within 3 hours after initial application. Maintain continuity of coating and repair damage during curing period. Coordinate curing/sealing compounds with coating materials to verify compatibility of materials.
 - b. Use moisture retaining covering in lieu of membrane curing compound on all interior horizontal surfaces which are to be covered with coating materials applied directly to concrete, liquid floor hardener, waterproofing, dampproofing, membrane roofing, flooring, (such as ceramic or quarry tile or glue down carpet), resinous epoxy finish, painting, and other coatings and finish materials, unless it can be documented that no reaction or bonding problem will be developed. See finish schedule(s) for proper coordination and extent of these materials.
 2. Provide moist curing by one of the following methods:
 - a. Keep concrete surface continuously wet by covering with water.
 - b. Continuous water-fog spray.
 - c. Covering concrete surface with specified absorptive cover, thoroughly saturating cover with water and keeping continuously wet. Place absorptive cover to provide coverage of concrete surfaces and edges, with 4" lap over adjacent absorptive covers.
 3. Provide moisture-cover curing as follows:
 - a. Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width with sides and ends lapped at least 3" and sealed by waterproof tape or adhesive. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
 4. Curing Formed Surfaces: Cure formed concrete surfaces, including underside of beams, supported slabs and other similar surfaces by moist curing with forms in place for full curing period or until forms are removed. If forms are removed, continue curing by methods specified above, as applicable.

3.11 REMOVAL OF FORMS

- A. Formwork not supporting weight of concrete, such as sides of beams, walls, columns, and similar parts of the work, may be removed after cumulatively curing at not less than 50°F (10°C) for 24 hours after placing concrete, provided concrete is sufficiently hard to not be damaged by form removal operations, and provided curing and protection operations are maintained.

- B. Formwork supporting weight of concrete, such as beam soffits, joists, slabs and other structural elements, may not be removed in less than 14 days and until concrete has attained 100% 28 day design minimum compressive strength. Determine potential compressive strength of in-place concrete by testing field-cured specimens representative of concrete location or members. Reshore two way slabs and/or structures to receive subsequent forming loads as specified in following articles.

3.12 RE-USE OF FORMS

- A. Clean and repair surfaces of forms to be re-used in work. Split, frayed, delaminated or otherwise damaged form facing material will not be acceptable for exposed surfaces. Apply new form coating compound as specified for new formwork.
- B. When forms are extended for successive concrete placement, thoroughly clean surfaces, remove fins and laitance, and tighten forms to close joints. Align and secure joint to avoid offsets. Do not use "patched" forms for exposed concrete surfaces, except as acceptable to Architect/Engineer.

3.13 MISCELLANEOUS CONCRETE ITEMS

- A. Filling-In: Fill-in holes and openings left in concrete structures for passage of work by other trades, unless otherwise shown or directed, after work of other trades is in place. Mix, place and cure concrete as herein specified, to blend with in-place construction. Provide other miscellaneous concrete filling shown on required to complete work.
- B. Curbs: Provide monolithic finish to interior curbs by stripping forms while concrete is still green and steel-troweling surfaces to a hard, dense finish with corners, intersections and terminations slightly rounded.
- C. Equipment Bases and Foundations: Provide machine and equipment bases and foundations, as shown on drawings. Set anchor bolts for machines and equipment to template at correct elevations, complying with certified diagrams or templates of manufacturer furnishing machines and equipment.
- D. Grout base plates and foundations as indicated, using specified non-shrink non-metallic grout, unless otherwise indicated.
- E. Steel Pan Stairs: Provide concrete fill for steel pan stair treads and landings and associated items. Cast-in safety inserts and accessories as shown on drawings. Screed, tamp, and finish concrete surfaces as scheduled.

3.14 CONCRETE SURFACE REPAIRS

- A. Patching Defective Areas: Repair and patch defective areas with cement mortar immediately after removal of forms, when acceptable to Engineer.
- B. Cut out honeycomb, rock pockets, voids over 1/4" in any dimension, and holes left by tie rods and bolts, down to solid concrete but in no case to a depth of less than 1". Make edges of cuts perpendicular to the concrete surface. Thoroughly clean, dampen with water and brush coat the area to be patched with specified bonding agent. Place patching mortar after bonding compound has dried.
- C. For exposed-to-view surfaces, blend white portland cement and standard portland cement so that, when dry, patching mortar will match color surrounding. Provide test areas at inconspicuous location to verify mixture and color match before proceeding with patching. Compact mortar in place and strike-off slightly higher than surrounding surface.
- D. Repair of Formed Surfaces: Remove and replace concrete having defective surfaces if defects cannot be repaired to satisfaction of Engineer or Architect. Surface defects, as such, include color and texture irregularities, cracks, spalls, air bubbles, honeycomb, rock pockets; fins and other projections on surface; and stains and other discolorations that cannot be removed by cleaning.

- Flush out form tie holes, fill with dry pack mortar, or precast cement cone plugs secured in place with bonding agent.
- E. Repair concealed formed surfaces, where possible, that contain defects that affect the durability of concrete. If defects cannot be repaired, remove and replace concrete.
 - F. Repair of Unformed Surfaces: Test unformed surfaces, such as monolithic slabs, for smoothness and verify surface plane to tolerances specified for each surface and finish. Correct low and high areas as herein specified. Test unformed surfaces sloped to drain for trueness of slope, in addition to smoothness, using a template having required slope.
 - G. Repair finished unformed surfaces that contain defects, which affect durability of concrete. Surface defects, as such, include crazing, cracks in excess of 0.01" wide or which penetrate to reinforcement or completely through non-reinforced sections regardless of width, spalling, pop-outs, honeycomb, rock pockets, and other objectionable conditions.
 - H. Correct high areas in unformed surfaces by grinding, after concrete has cured at least 14 days.
 - I. Correct low areas in unformed surfaces during, or immediately after completion of surface finishing operations by cutting out low areas and replacing with fresh concrete. Finish repaired areas to blend into adjacent concrete. Proprietary patching compounds may be used when acceptable to Architect/Engineer.
 - J. Repair defective areas, except random cracks and single holes not exceeding 1" diameter, by cutting out and replacing with fresh concrete. Remove defective areas to sound concrete with clean, square cuts and expose reinforcing steel with at least 3/4" clearance all around. Dampen concrete surfaces in contact with patching concrete and apply bonding compound. Mix patching concrete of same materials to provide concrete of same type or class as original concrete. Place, compact and finish to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.
 - K. Repair isolated random cracks and single holes not over 1" in diameter by dry-pack method. Groove top of cracks and cut-out holes to sand concrete and clean of dust, dirt and loose particles. Dampen cleaned concrete surfaces and apply bonding compound. Mix dry-pack, consisting of one part portland cement to 2-1/2 parts fine aggregate passing a No. 16 mesh sieve, using only enough water as required for handling and placing. Place dry-pack after bonding compound has dried. Compact dry-pack mixture in place and finish to match adjacent concrete. Keep patched area continuously moist for not less than 72 hours.
 - L. Perform structural repairs with prior approval of Engineer for method and procedure, using specified epoxy adhesive and mortar.
 - M. Underlayment Application: Leveling of floors for subsequent finishes may be achieved by use of specified underlayment material.
 - N. Repair methods not specified above may be used, subject to acceptance of Engineer and Architect.

3.15 QUALITY CONTROL TESTING DURING CONSTRUCTION

- A. Sampling Fresh Concrete, ASTM C 172, except modified for slump to comply with ASTM C 94. Sampling and testing for quality control during placement of concrete shall include the following:
 - 1. Slump: ASTM C 143; one test for each set of compressive strength test specimens.
 - 2. Air Content: ASTM C 173, volumetric method for lightweight or normal weight concrete; ASTM C 231 pressure for normal weight concrete; one for each set of compressive strength test specimens. (Regardless of air-entrained or not).
 - 3. Concrete Temperature: Test hourly when air temperature is 40°F (4°C) and below, and when 80°F (27°C) and above.
 - 4. Compression Test Specimen: ASTM C 31; one set of 4 standard cylinders for each compressive strength test, unless otherwise directed. Mold and store cylinders for

- laboratory cured test specimens except when field-cure test specimens are required, 1 reserved for later testing if required.
5. Compressive Strength Tests: ASTM C 39; one set for each 100 cu. yds. or fraction thereof, of each concrete class placed in any one day or for each 5,000 sq. ft. of surface area placed; 1 specimen tested at 7 days, 2 specimens tested at 28 days, 1 reserved for later testing if required.
 - a. When frequency of testing will provide less than 5 strength tests for a given class of concrete, conduct testing from at least 5 randomly selected batches or from each batch if fewer than 5 are used.
 - b. When total quantity of a given class of concrete is less than 50 cu. yards., strength test may be waived by Engineer if, in his judgment, adequate evidence of satisfactory strength is provided.
 - c. When strength of field-cured cylinders is less than 85% of companion laboratory-cured cylinders, evaluate current operations and provide corrective procedures for protecting and curing the in-place concrete.
 - d. Strength level of concrete will be considered satisfactory if 90% of strength test results and averages of all sets of three consecutive strength test results equal or exceed specified compressive strength, and no individual strength test result falls below specified compressive by more than 500 psi.
 6. Weight: Measure the weight of each set of cylinders and record the calculated unit weight.
- B. As previously described, floor flatness and levelness is to be measured within 72 hours and before any shoring is removed per ASTM E-11. See previous section under Part III Execution for additional requirements.
 - C. Test results will be reported in writing from the testing agency to the Engineer, Owner, Architect and Contractor on same day that tests are made. Reports of compressive strength tests shall contain the project identification name and number, date of concrete placement, name of concrete testing service, concrete type and class, location of concrete batch in structure, design compressive strength at 28 days, concrete mix proportions and materials; compressive breaking strength and type of break for both 7-day tests and 28-day tests.
 - D. Additional Tests: The testing service will make additional tests of in-place concrete when test results indicate specified concrete strengths and other characteristics have not been attained in the structure, as directed by Engineer or Architect. Testing service may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42, or by other methods as directed. Contractor shall pay for such tests conducted, and any other additional testing as may be required, when unacceptable concrete is verified.

END SECTION 033000

SECTION 051200 – STRUCTURAL METAL FRAMING**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division I Specification sections, apply to work of this section.
- B. Requirements of non-shrink grout of this section are as listed in Division 3, Section - "Concrete Work".

1.2 DESCRIPTION OF WORK

- A. Extent of structural steel work is shown on drawings, including schedules, notes and details to show size and location of members, typical connections, and type of steel required.
- B. Structural steel is that work defined in AISC "Code of Standard Practice" and as otherwise shown on drawings.
- C. Source Quality Control: Materials and fabrication procedures are subject to inspection and tests in mill, shop and field, conducted by a qualified inspection agency. Such inspections and tests will not relieve Contractor of responsibility for providing materials and fabrication procedures in compliance with specified requirements.
 - 1. Promptly remove and replace materials or fabricated components that do not comply.
- D. Design of Members and Connections: Details shown are typical; similar details apply to similar conditions, unless otherwise indicated. Verify dimensions at site whenever possible without causing delay in the work.
 - 1. Promptly notify Engineer whenever design of members and connections for any portion of structure are not clearly indicated.
- E. Miscellaneous Metal Fabrications are specified elsewhere in Division 5.
- F. Refer to Division 3 for anchor bolt installation in Concrete; Division 4 for Masonry.

1.3 SUBMITTALS

- A. Product Data: When requested by the Engineer or Architect, submit producers or manufacturer's specifications and installation instructions for following products. Include laboratory test reports and other data to show compliance with specifications (including specified standards).
 - 1. Structural steel (each type), including certified copies of mill reports covering chemical and physical properties.
 - 2. High-strength bolts (each type), including nuts and washers.
 - 3. Structural steel primer paint.
- B. Shop Drawings, General: All shop drawings submitted shall be a complete set of original drawings created by the Supplier. No partial or incomplete submittals or duplication of Engineer's or Architect's original documents will be permitted.
 - 1. All shop drawing submittals shall include 3 sets of prints for structural consultant to review and mark up. (Note number of prints may be increased by Architect/Engineer at the Preconstruction Conference.)
 - 2. Shop drawings must not only bear the Contractor's stamp of approval but shall also show evidence that each item has been thoroughly checked. Failure to comply with this requirement shall result in the Engineer's return of the submission (without review or action) for the Contractor's proper submission and review. No exceptions shall be taken.
 - 3. Copies of shop drawings used in the field shall bear the Engineer's and Architect's review stamp with items checked to indicate a satisfactory final review.

4. Minimum Requirements for Electronically Submitted Structural Shop Drawings:
 - a. No partial submittals will be accepted. Submittal will be returned without review.
 - b. No incomplete submittals will be accepted.
 - c. Submittal must include:
 - d. One hard copy of both erection drawings and piece drawings.
 - e. Hard copy must have been reviewed and noted as such by general contractor/construction manager.
 - f. All piece marks must be on erection drawings.
 - g. All elements of the erection drawings must be named and in piece drawings.
 - h. A list of drawings submitted must be enclosed.
 - i. Submitted drawings must be in PDF format.
- C. Test Reports: Submit copies of reports of tests conducted on shop and field bolted and welded connections. Include data on type(s) of tests conducted and test results.
- D. Fabricator Certifications per Chapter 17 of the 2012 IBC Section 1704.2.5.

1.4 QUALITY ASSURANCE

- A. Acceptable Fabricators:
 1. Firms acceptable as fabricators for structural steel Work under this Section shall be certified from The American Institute of Steel Construction (or) shall be certified by an approved independent professional testing agency as being qualified for Category 1 Conventional Steel Structures in conformance to the requirements of the AISC Quality Certification Program.
- B. Codes and Standards: Comply with provisions of following, except as otherwise indicated:
 1. AISC "Code of Standard Practice for Steel Buildings and Bridges".
 - a. Add to Section 3.1.4: Structure is to be braced by the Erector until all structural steel elements and the following non-structural steel elements have been fully connected or in place before releasing temporary bracing and guywires used for plumbness and lateral stability:
 - Metal floor deck
 - Bar joists/Joist girders
 - Elevated concrete floor slabs
 - Metal roof deck
 - b. Add to Section 3.2: Coordination of size and number of floor and roof openings and their supporting frame work shown on the architectural, electrical, mechanical and structural drawings is the responsibility of the Owner's Designated Representative for Construction.
 - c. In Section 3.3 replace the first sentence of the 2nd paragraph with the following: When discrepancies exist between the Design Drawings and specifications, the specifications shall govern.
 - d. Add to Section 3.4 the following: Plan drawings may be drawn to a scale smaller than 1/8" to the foot. However, drawings that are deemed illegible by the Fabricator shall be brought to the attention of the Owner's Designated Representative for Design prior to bidding of the project. After that time period, drawings will be deemed legible.
 - e. Add to Section 4.2 the following: When the Fabricator requests a change or modification to the contract drawings, such as splices in any structural element, modifications that revise the original design intent of the Drawings or changes to the Connection Details, the Fabricator shall notify the Owner's Designated Representatives for Design and Construction in writing in advance of the submission of the Shop and Erection drawings. The Owner's Designated Representatives for Design shall review and request additional information as needed from the

Fabricator for purposes of approving or rejecting the request in a timely manner. Included in this fabricator's written request shall be construction cost savings and/or schedule improvements. (The Owner's Designated Representatives for Design may charge a fee for additional design cost for review of alternates. The Fabricator shall be responsible to pay these design costs. If the Owner's Designated Representatives for Design approves such changes, he shall at that time submit any fee they require to provide these additional services. Acceptance by the Fabricator of this approval also includes acceptance of responsibility of the Owner's Designated Representatives for Design, design fee which shall be paid in a timely manner, within 60 days of receipt of invoice from the Owner's Designated Representatives for Design). All pre-approved Fabricator changes to the Contract Documents shall also be indicated by the Fabricator on the Shop and Erection drawings by either clouding or other method that clearly brings this information to the attention of the Owner's Designated Representatives for Design and Construction.

- f. Add to Section 4.4.1: (d) Corrections or comments made on the shop drawings during the Owner's Designated Representative for Design's review do not relieve the Fabricator or the Owner's Designated Representative for Construction from compliance with requirements of the drawings and specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the contract documents. The contractor is responsible for confirming and correlating all quantities and dimensions, selecting fabrication processes and techniques of construction; coordinating his work with that of all other trades; and performing his work in a safe and satisfactory manner.
 - g. Modify Section 4.4.2 by deleting this paragraph in its entirety and replace it with the following: Any additions, deletions or revisions that are indicated on the approved Shop and Erection Drawings shall constitute authorization by the Owner that the additions, deletions or revisions may be released for construction unless these items will result in an additional cost and/or schedule delay. If an increase in cost or delay is required, the Fabricator and Erector shall promptly notify the Owner's Designated Representatives for Design and Construction of the change order or extra work order and /or schedule change to obtain authorization from the Owner's Designated Representatives for Design and Construction prior to commencing any work related to the additions, deletions or revisions.
 - h. Replace Section 4.5 with the following: When the Shop and Erection Drawings are not to be furnished as part of the Fabricator's contract with the Owner's Designate Representative for Construction, but are furnished by others, they shall be delivered to the Fabricator in a timely manner. These Shop and Erection Drawings shall be prepared, insofar as is practical, in accordance with the shop fabrication and detailing standards of the Fabricator. Those contracted to provide the Shop and Erection Drawings shall be responsible for the completeness or accuracy of Shop and Erection Drawings so furnished, and for the general fit-up of the members that are fabricated from them. Those providing the Shop and Erection Drawings shall meet all of the requirements of the Contract Documents.
2. AISC "Specifications for Structural Steel Buildings Load and Resistance Factor Design", including "Commentary" and Supplements thereto as issued.
 3. AISC "Load and Resistance Factor Design Specification for Structural Joints using ASTM A 325 or A 490 Bolts" approved by the Research Council on Structural Connections of the Engineering Foundation.
 4. ANSI/AWS D1.1 "Structural Welding Code -- Steel".
 5. ASTM A 6 "General Requirements for Rolled Steel Plates, Shapes, Sheet Piling, and Bars for Structural Use".
- C. Qualifications for Welding Work: Qualify welding processes and welding operators in accordance with AWS "Standard Qualification Procedure".

1. Provide certification that welders to be employed in work have satisfactorily passed AWS qualification tests.
 - a. If recertification of welders is required, retesting will be Contractor's responsibility.
 - D. Special Inspections:
 1. The steel fabricator is to submit all necessary paperwork or hire a Special Inspector to meet the requirements for inspection of fabricators listed in Chapter 17 of the 2013 KBC, Section 1704.2.5.
 2. The Owner is to hire the Special Inspector(s) to meet the requirements for steel construction listed in Chapter 17 of the 2013 KBC, Section 1705.2
 3. The General Contractor is responsible for providing access to the site for the Owner's Special Inspector and for coordinating the Special Inspector's site visits with ongoing work.
 - E. The Owner is to engage an independent testing laboratory acceptable to the Engineer/Architect to perform testing as called out in Section 3.2.
 - F. Pre-Installation Conference:
 1. At least 14 days prior to the start of the scheduled steel erection, the Contractor shall conduct a pre-installation conference at the project site to review the erection procedures.
 2. The Contractor shall require representatives of every party who is concerned with the concrete work to attend the conference, including, but not limited to, the following:
 - a. Contractor's superintendent
 - b. Material Testing Agency
 - c. Steel Erector
 - d. Steel Fabricator
 - e. Owner
 - f. Architect
 - g. Structural Engineer
 - h. Special Inspector
 3. Minutes of the meeting shall be recorded, typed and printed and distributed by the General Contractor within three (3) days of the meeting.
- 1.5 DELIVERY, STORAGE AND HANDLING
- A. Deliver materials to site at such intervals to insure uninterrupted progress of work.
 - B. Deliver anchor bolts and anchorage devices, which are to be embedded in cast-in-place concrete or masonry, in ample time to not delay work.
 - C. Store materials to permit easy access for inspection and identification. Keep steel members off ground, using pallets, platforms, or other supports. Protect steel members and packaged materials from corrosion and deterioration.
 1. Do not store materials on structure in a manner that might cause distortion or damage to members or supporting structures. Repair or replace damaged materials or structures as directed.
- 1.6 DELIVERY, STORAGE AND HANDLING
- A. Product Data: For each type of product.
 - B. LEED Submittals:
 1. Product Data for Credit MR 4: For products having recycled content, documentation indicating percentages by weight of postconsumer and pre-consumer recycled content. Include statement indicating cost for each product having recycled content.
 - 2.

3. Laboratory Test Reports for Credit IEQ 4.2: For primers, documentation indicating that products comply with the testing and product requirements of the California Department of Public Health's (formerly, the California Department of Health Services) "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Metal Surfaces, General: For fabrication of work which will be exposed to view, use only materials which are smooth and free of surface blemishes including pitting, seam marks, roller marks, rolled trade names and roughness. Remove such blemishes by grinding, or by welding and grinding, prior to cleaning, treating and application of surface finishes.
- B. Wide Flange Sections: High Strength Low-Alloy Steel: ASTM A992 (grade 50 Steel).
- C. Steel Channels, Angles and Bars: ASTM A36.
- D. Plates: ASTM A 36 typical; Unless Noted Otherwise in Sections.
- E. Cold-Formed Steel Tubing: ASTM A500, Grade B.
- F. Anchor Bolts: ASTM F1554, Gr. 36. Steel Castings: ASTM A 27, Grade 65-35, medium-strength carbon steel.
- G. High-Strength Threaded Fasteners: Heavy hexagon structural bolts, heavy hexagon nuts, and hardened washers, as follows:
 1. Quenched and tempered medium-carbon steel bolts, nuts and washers, complying with ASTM A325-N bearing type; Unless Noted Otherwise in Sections.
 2. Direct tension indicator washers or bolts may be used at Contractor's option with Engineer's prior approval.
- H. Electrodes for Welding: Comply with AWS Code.
 1. For high-strength low-alloy steel, provide electrodes, welding rods and filler metals equal in strength and compatible in appearance with parent metal joined.
- I. Structural Steel Primer Paint:
 1. SSPC-Paint 15, Type I, Grey oxide. (Fabricator to verify this system is "VOC-compliant" for his location).
 2. Galvanized members are not to be primed, rather they are to be cleaned and coated per the appropriate following clauses.
 3. Primer Paint for steel members receiving Intumescent Fireproofing Paint must be compatible with Manufactures specifications.
- J. High Density High Solids Barrier Epoxy
 1. Interzone 954 by International Protective Coatings
 2. Tnemec Chembuild 135
 3. Sherwin Williams Macropoxy HS
 4. Owner approved equal.
- K. Non-Shrink Grout: CE-CRD-C 621, Type D, non-metallic, factory pre-mixed grout.
 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. "5 Star Grout"; Five Star Products
 - b. "5 Star Instant Grout"; Five Star Products
 - c. "Master Flow 928"; Master Builders

- d. Or equal
- L. Shop Fabrication and Assembly: Fabricate and assemble structural assemblies in shop to greatest extent possible. Connect base plates to columns in the shop unless indicated otherwise.
 - 1. Properly mark and match-mark materials for field assembly. Fabricate for delivery sequence that will expedite erection and minimize field handling of materials.
 - 2. Where an exposed finish is required, complete assembly, including welding of units, before start of finishing operations. Provide finish surfaces of members exposed in final structure free of markings, burrs, and other defects.
- M. Connections: Beam connections shall be as detailed. At any connection that is not detailed, use a similar type of connection. Details must be submitted in writing and accepted by the Engineer of Record before submitting shop drawings. A registered Professional Engineer licensed to do business in Kentucky must stamp submittal of proposed changes. Submittal shall include as a minimum, a complete detail, load capacity of connection, and location of where the detail is to be used and cost savings to Owner. The contractor shall reimburse the Engineer of Record on a time and material basis for checking all proposed changes.
 - 1. Weld or bolt shop connections, as indicated. Use welded connections if not indicated.
 - 2. Bolt field connections, except where welded connections or other connections are indicated.
 - a. Provide high-strength threaded fasteners in bearing type connections for all bolted connections, except where erection or unfinished bolts are indicated.
- N. High-Strength Bolted Construction: Install high-strength threaded fasteners in accordance with AISC "Specifications for Structural Joints using ASTM A325-N or A490-N Bolts." (RCSC)
- O. Welded Construction: Comply with AWS Code for procedures, appearance and quality of welds, and methods used in correcting welding work.
 - 1. Assemble and weld built-up sections by methods that will produce true alignment or axes without warp.
 - 2. For high-strength low-alloy steels, follow welding procedures as recommended by steel producer for exposed and concealed connections.
- P. Shear Connectors: Prepare steel surfaces as recommended by manufacturer of shear connectors. Field weld shear connectors, spaced as shown, to beams and girders in composite construction. Use automatic end welding of headed stud shear connectors in accordance with manufacturer's printed instructions.
- Q. Angles at Columns at Steel Deck: Provide four (4) angles 3 x 3 x 3/16 on 45 degree layout to support cut edges of deck around all columns.
- R. Steel Wall Framing: Select members that are true and straight for fabrication of steel wall framing. Straighten as required to provide uniform, square and true members in completed wall framing.

2.2 SHOP PRIME PAINTING

- A. General: Shop prime paint all structural steel, except members defined below.
 - 1. Do not prime paint surfaces that are to be field welded, are to receive shear studs, or have friction-type connections.
 - 2. Do not prime paint surfaces that are scheduled to receive sprayed-on fireproofing.
 - 3. Do not prime paint surfaces to receive galvanizing.
 - 4. Galvanizing: Unless otherwise specified, protect all exterior lintels and all exposed steel by galvanizing in conformance with ASTM A 153 and ASTM A 123.
 - 5. Shop Prime surfaces that are to receive Intumescent Fireproofing Paint with compatible primer.

- B. Surface Preparation: After inspection and before shipping, clean steel work to be painted. Remove loose rust, loose mill scale, and spatter, slag or flux deposits. Clean steel in accordance with Steel Structures Painting Council (SSPC) as follows:
1. SP-2 "Hand Tool Cleaning" (for red-oxide primer).
 2. SP-7 "Brush Off Blast Cleaning" (for galvanized surfaces).
 3. Painting: Immediately after surface preparation, apply structural steel primer paint in accordance with manufacturer's instructions and at a rate to provide dry film thickness of not less than 1.5 mils. Use painting methods that result in full coverage of joints, corners, edges and exposed surfaces. Protected or enclosed steel to receive ordinary paint. Steel exposed to weather (including lintels) that are not galvanized are to receive zinc-rich primer.

PART 3 - EXECUTION

3.1 ERECTION

- A. Surveys: Employ a [registered professional engineer or] land surveyor for accurate erection of structural steel. Check elevations of concrete and masonry bearing surfaces, and locations of anchor bolts and similar devices, before erection work proceeds, and report discrepancies to Engineer and Architect. Do not proceed with erection until corrections have been made, or until compensating adjustments to structural steel work have been agreed upon with Engineer and Architect.
- B. Temporary Shoring and Bracing: Provide temporary shoring and bracing members with connections of sufficient strength to bear imposed loads. Remove temporary members and connections when permanent members are in place and final connections are made. Provide temporary guy lines to achieve proper alignment of structures as erection proceeds.
- C. Temporary Planking: Provide temporary planking and working platforms as necessary to effectively complete work.
- D. Anchor Bolts: Furnish anchor bolts and other connectors required for securing structural steel to foundations and other in-place work.
1. Furnish templates and other devices as necessary for presetting bolts and other anchors to accurate locations.
 - a. Refer to Division 3 of these specifications for anchor bolt installation requirements in concrete, and Division 4 for masonry installation.
- E. Setting Bases and Bearing Plates: Clean concrete and masonry bearing surfaces of bond-reducing materials and roughen to improve bond to surfaces. Clean bottom surface of base and bearing plates.
1. Set loose and attached base plates and bearing plates for structural members on wedges or other adjusting devices. Leveling plates will not be accepted.
 2. Tighten anchor bolts after supported members have been positioned and plumbed. Do not remove wedges or shims, but if protruding, cut off flush with edge of base or bearing plate prior to packing with grout.
 3. Pack grout solidly between bearing surfaces and base plates to ensure that no voids remain. Finish exposed surfaces, protect installed materials, and allow to cure.
 - a. See Specification 033000 for grout materials.
 - b. For proprietary grout materials, comply with manufacturer's instructions.
- F. After erection of columns and installation of grout, coat all exposed steel below finished floor elevation with one coat of a two component high density, high solids barrier epoxy over shop primer, after erection.

- G. Field Assembly: Set structural frames accurately to lines and elevations indicated. Align and adjust various members forming part of complete frame or structure before permanently fastening. Clean bearing surfaces and other surfaces that will be in permanent contact before assembly. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.
 - 1. Level and plumb individual members of structure within specified AISC tolerances.
 - 2. Splice members only where indicated and accepted on shop drawings.
- H. Erection Bolts: On exposed welded construction, remove erection bolts, fill holes with plug welds and grind smooth at exposed surfaces.
- I. Comply with AISC Specifications for bearing, adequacy of temporary connections, alignment, and removal of paint on surfaces adjacent to field welds.
 - 1. Do not enlarge unfair holes in members by burning or by use of drift pins. Ream holes that must be enlarged to admit bolts.
- J. Gas Cutting: Do not use gas-cutting torches in field for correcting fabrication errors in primary structural framing. Cutting will be permitted only on secondary members which are not under stress, only upon written approval by the Engineer. Finish gas-cut sections equal to a sheared appearance when permitted.
- K. Angles at Columns for Deck Support: Weld flat top leg of angles 3 x 3 x 3/16 (4 per column) to main beams on 45 degree angle, with vertical leg coped appropriately.
- L. Touch-up Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint. Apply paint to exposed areas using same materials as used for shop painting. Apply by brush or spray to provide minimum dry film thickness of 2.0 mils.
- M. For Galvanized Surfaces: Clean field welds, bolted connections and abraded areas and apply galvanizing repair paint to comply with ASTM A 780.

3.2 QUALITY CONTROL

- A. The Owner will engage an independent testing and inspection agency approved by the Structural Engineer to inspect high-strength bolted connections and welded connections and to perform tests and prepare test reports.
 - 1. Testing agency shall conduct and interpret tests and state in each report whether test specimens comply with requirements, and specifically state any deviations there from.
 - 2. Contractor to notify testing agency when work is available to be inspected in a timely manner and to provide access for testing agency to places where structural steel work is being fabricated or produced so that required inspection and testing can be accomplished.
- B. Correct deficiencies in structural steel work which inspections and laboratory test reports have indicated to be not in compliance with requirements. Perform additional tests, at Contractor's expense, as may be necessary to reconfirm any non-compliance of original work, and as may be necessary to show compliance of corrected work.
- C. Shop Bolted Connections: Inspect in accordance with AISC specifications.
- D. Shop Welding: Inspect and test during fabrication of structural steel assemblies, as follows:
 - 1. Certify welders and conduct inspections and tests as required. Record types and locations of defects found in work. Record work required and performed to correct deficiencies.
 - 2. Perform visual inspection of all welds. Record weld size, length, dimensions of connecting plates, as well as relative weld quality: (Unacceptable, Borderline – needs more testing, or acceptable. A chart should be made showing the above, plus exact weld location, include which face of column if applicable (N, S, E, or W), date, inspector, remarks, and any follow up work where required).

3. Perform tests on 100 percent of moment connection and full penetration welds as follows: Inspection procedures listed are to be used as noted for specific type of weldments to be tested.
 - a. Liquid Penetrant Inspection: ASTM E 165 (for fillet welds).
 - b. Magnetic Particle Inspection: ASTM E 709 (for fillet welds).
 - c. Radiographic Inspection: ASTM E 94 and ASTM E 142; minimum quality level "2-2T" (for groove and penetration welds).
 - d. Ultrasonic Inspection: ASTM E 164 (for groove and penetration welds).
- E. Field Bolted Connections: Inspect in accordance with AISC specifications.
- F. All Field Welding except Composite Studs (see item "G" below for stud testing): Inspect and test during erection of structural steel as follows:
 1. Certify welders and conduct inspections and tests as required. Record types and locations of defects found in work. Record work required and performed to correct deficiencies.
 2. Perform visual inspection of all welds. Record weld size, length, dimensions of connecting plates, as well as relative weld quality: (Unacceptable, Borderline - needs more testing, or acceptable. A chart should be made showing the above, plus exact weld location, include which face of column (N, S, E, or W) if applicable, date, inspector, remarks, and any follow up work where required).
 3. Perform tests on 25 % of fillet welds as follows:
 - a. Liquid Penetrant Inspection: ASTM E 165.
 - b. Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration not acceptable.
 4. Perform tests on 100% of moment connection welds, full penetration welds, truss splices, brace connections, and other critical areas as follows:
 - a. Radiographic Inspection: ASTM E 94 and ASTM E 142; minimum quality level "2-2T".
 - b. Ultrasonic Inspection: ASTM E 164.
- G. Composite Stud Welding: Inspect in accordance with the AWS Structural Welding Code - Steel, Chapter 6 and Chapter 7. Note: See Section 053100 for all requirements pertaining to studs other than field inspection, which is listed below.
 1. All studs shall be visually inspected by a qualified independent person approved by the Engineer.
 2. Perform bend test in accordance with the referenced AWS Code on 20% of all studs. Note: Contractor shall submit copies of Pre-Production Testing results to the Engineer prior to starting any large-scale stud welding. Also submit test results to engineer same day tests are performed.
 3. If the failure rate of the bend testing exceeds 5% of the sample, then immediate corrective actions and increased sampling will be required. Contact the Architect and Engineer immediately for resolution.
- H. Materials and installed work may require testing and retesting as directed by the Special Inspector and/or Engineer at any time during progress of work. Notify the Special Inspector and/or Engineer at least 24 hours in advance to any and all required material to be tested and/or inspected. Allow free access to materials and facilities. Testing and retesting of rejected materials or installed work shall be done by the Owner, the cost of which shall be reimbursed to the owner by the Contractor.

END SECTION 051200

SECTION 052100 - METAL JOISTS

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

1.2 DESCRIPTION OF WORK

- A. Extent of steel joists is shown on drawings, including basic layout and type of joists required.

1.3 SUBMITTALS

- A. Product Data: When requested by the Engineer or Architect submit manufacturer's specifications and installation instructions for each type of joist and accessories. Include manufacturer's certification that joists comply with SJI "Specifications".

- B. Shop Drawings, General: All shop drawings submitted shall be a complete set of original drawings created by the Supplier. Neither partial or incomplete submittals nor duplication of Engineer's or Architect's original documents will be permitted.

1. All shop drawing submittals shall include 2 sets of prints and 1 sepia for structural consultant to review and mark up. (Note number of prints may be increased by Architect/Engineer at the Preconstruction Conference.)
2. Shop drawings must not only bear the Contractor's stamp of approval but shall also show evidence that each item has been thoroughly checked. Failure to comply with this requirement shall result in the Engineer's return of the submission (without review or action) for the Contractor's proper submission and review. No exceptions shall be taken.
3. Copies of shop drawings used in the field shall bear the Engineer's and Architect's review stamp with items checked to indicate a satisfactory final review.
4. Minimum Requirements for Electronically Submitted Structural Shop Drawings:
 - a. No partial submittals will be accepted. Submittal will be returned without review.
 - b. No incomplete submittals will be accepted.
 - c. Submittal must include:
 - 1) One hard copy of both erection drawings and piece drawings.
 - 2) Hard copy must have been reviewed and noted as such by general contractor/construction manager.
 - 3) All piece marks must be on erection drawings.
 - 4) All elements of the erection drawings must be named and in piece drawings.
 - 5) A list of drawings submitted must be enclosed.
 - 6) Submitted drawing must be in PDF format.

- C. Shop Drawings, Steel Joists: Submit detailed drawings showing layout of joist units, special connections, jointing and accessories. Include mark, number, type, location and spacing of joists and bridging.

1. Provide templates or location drawings for installation of anchor bolts.

- D. All submittals required in Section 1.4, Quality Assurance.

1.4 QUALITY ASSURANCE

- A. Provide joists fabricated in compliance with the following, and as herein specified.

1. Steel Joist Institute (SJI) "Standard Specifications, Load Tables and Weight Tables" for:
 - a. K-Series Open Web Steel Joists (K-StJst)
 - b. LH-Series Longspan Steel Joists (LH-StJst)
 - c. DLH-Series Deep Longspan Steel Joists (DLH-StJst)

2. Vulcraft "Specifications, Load Tables, and Weight Tables" for:
 - a. VS Series Joist substitutes
 - b. CS Series Joists
 - c. SLH Series Joists
 - d. KSP Series Joists
 - B. Qualification of Field Welding: Qualify welding processes and welding operators in accordance with American Welding Society (AWS) "Standard Qualification Procedure".
 1. Provide certification that welders to be employed in work have satisfactorily passed AWS qualification tests.
 - a. If recertification of welders is required, retesting will be Contractor's responsibility.
 - C. Joists welded in place are subject to inspection and testing. Expense of removing and replacing any portion of steel joists for testing purposes will be born by Owner if welds are found to be satisfactory. Remove and replace work found to be defective and provide new acceptable work.
 - D. Inspect joists in accordance with SJI Specifications.
 - E. Special Inspection
 1. The joist fabricator is to submit all necessary paperwork or hire a Special Inspector to meet the requirements for inspection of fabricators listed in Chapter 17 of the 2013 KBC, Section 1704.2.5.
 2. The Owner is to hire the Special Inspector to meet the requirements for steel construction listed in Chapter 17 of the 2013 KBC, Section 1705.2.
 3. The General Contractor is responsible for providing access to the site for the Owner's Special Inspector and for coordinating the Special Inspector's site visits with ongoing work.
 - F. The Owner is to hire the material testing laboratory to perform tests as described in Section 3.2 Quality Control.
- 1.5 DELIVERY, STORAGE AND HANDLING
- Deliver, store and handle steel joists as recommended in SJI "Specifications". Handle and store joists in a manner to avoid deforming members and to avoid excessive stresses.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Steel: Comply with SJI "Specifications". VS, CS, and SLH Series Joists and special joists indicated by suffix "SP" shall comply with Vulcraft "Specifications".
- B. Unfinished Threaded Fasteners: ASTM A 307, Grade a, regular hexagon type, low carbon steel.
- C. High-Strength Threaded Fasteners: ASTM A 325 structural bolts with nuts and hardened washers.
- D. Steel Prime Paint: Comply with "SJI Specifications".

2.2 FABRICATION

- A. General: Fabricate steel joists in accordance with SJI "Specification". Characteristics of VS, CS, KSP and SLH Series Joists not addressed by SJI "Specifications" shall comply with Vulcraft "Specifications".
- B. Holes in Chord Members: Provide holes in chord members where shown for securing other work to steel joists; however, deduct area of holes from the area of chord when calculating strength of member.

- C. Extended Ends: Provide extended ends on joists and joist girders where shown, complying with manufacturer's standards and requirements of applicable SJI "Specifications" and load tables.
- D. Bridging: Provide horizontal or diagonal type bridging for "Open Web" joists, and joist girders complying with SJI "Specifications".
 - 1. Provide diagonal type bridging for LH and DLH joists, complying with SJI "Specifications" and SLH Series Joists complying with Vulcraft "Specifications".
 - 2. Provide bridging anchors for ends of bridging lines terminating at walls or beams.
- E. End Anchorage: Provide end anchorages to secure joists to adjacent construction, complying with SJI "Specifications" unless otherwise indicated. (or for CS, VS, KSP and SLH Series Joist, complying with Vulcraft "Specifications") unless otherwise indicated.
- F. Shop Painting: Remove loose scale, heavy rust, and other foreign materials from fabricated joists and accessories before application of shop paint. Apply one shop coat of primer paint to steel joists and accessories, by spray, dipping, or other method to provide a continuous dry paint film thickness of not less than 0.80 mil, unless otherwise required by "Finish Paint" section - see Division "9".

PART 3 - EXECUTION

3.1 ERECTION

- A. Place and secure steel joists in accordance with SJI "Specifications", final shop drawings, and as herein specified.
- B. Anchors: Furnish anchor bolts and other devices to be built into concrete and masonry construction.
 - 1. Furnish unfinished threaded fasteners for anchor bolts, unless otherwise indicated.
 - 2. Refer to Division-4 sections for installation of anchors set in masonry.
- C. Placing Joists: Do not start placement of steel joists until supporting work is in place and secured. Place joists on supporting work, adjust and align in accurate locations and spacing before permanently fastening.
 - 1. Provide temporary bridging, connections, and anchors to ensure lateral stability during construction.
 - a. Where "open web" joist lengths are 40 feet and longer, install a center row of bolted bridging to provide lateral stability before slackening of hoisting lines.
- D. Bridging: Install bridging simultaneously with joist erection, before construction loads are applied. Anchor ends of bridging lines at top and bottom chords where terminating at walls or beams.
- E. Fastening Joists:
 - 1. Field weld joists to supporting steel framework as indicated on the drawings and in accordance with SJI "Specifications" for type of joists used (for CS, VS, KSP and SLH Series Joists, comply with Vulcraft "Specifications"). Coordinate welding sequences and procedure with placing of joists.
 - 2. Bolt joists and joist girders to supporting steel framework where indicated on the drawings and in accordance with SJI "Specifications" for type of joists and joist girders used.
 - a. Provide unfinished threaded fasteners for bolted connections except where high-strength bolts or welded connections are shown.
 - b. Provide unfinished threaded fasteners for bolted connections, unless otherwise indicated.

- F. Touch-Up Painting: After joist installation, paint field bolt head and nuts, and welded areas, abraded or rusty surfaces on joist and steel supporting members. Wire brush surfaces and clean with solvent before painting. Use same type of paint as used for shop painting.

3.2 QUALITY CONTROL

- A. The Owner will engage an independent testing and inspection agency approved by the Structural Engineer to inspect in-place work and perform any tests required.
- B. Inspect in-place work for conformance to approved shop drawings and construction documents.
- C. Test all field bolting and field welding: Inspect and test during erection of bar joists per Specification 051200 – Structural Metal Framing, Section 3.2 Quality Control.

END SECTION 052100

SECTION 053100 – METAL DECKING, FASTENERS, AND SHEAR STUDS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections apply to work of this section.

1.2 DESCRIPTION OF WORK

- A. Extent of metal decking is indicated on drawings, including basic layout and type of deck units required.

1.3 SUBMITTALS

- A. Product Data: When requested by Engineer or Architect submit manufacturer's specifications and installation instructions for each type of decking and accessories. Include manufacturer's certification as may be required to show compliance with these specifications.

- B. Shop Drawings, General: All shop drawings submitted shall be a complete set of original drawings created by the Supplier. No partial or incomplete submittals or duplication of Engineer's or Architect's original documents will be permitted.

- 1. Minimum Requirements for Electronically Submitted Structural Shop Drawings:

- a. No partial submittals will be accepted. Submittal will be returned without review.
- b. No incomplete submittals will be accepted.
- c. Submittal must include:
 - 1) One hard copy of both erection drawings and piece drawings. (Number of hard copies may be increased or decreased at pre-construction meeting)
 - 2) Hard copy must have been reviewed and noted as such by general contractor/construction manager.
 - 3) All piece marks must be on erection drawings.
 - 4) All elements of the erection drawings must be named and in piece drawings.
 - 5) A list of drawings submitted must be enclosed.
 - 6) Submitted drawing must be in PDF format.

- 2. Shop drawings must not only bear the Contractor's stamp of approval but shall also show evidence that each item has been thoroughly checked. Failure to comply with this requirement shall result in the Engineer's return of the submission (without review or action) for the Contractor's proper submission and review. No exceptions shall be taken.

- 3. Copies of shop drawings used in the field shall bear the Engineer's and Architect's review stamp with items checked to indicate a satisfactory final review.

- C. Shop Drawings, Metal Decking: Submit detailed drawings showing layout and types of deck panels, anchorage details, and conditions requiring closure panels, supplementary framing, sump pans, cant strips, cut openings, special jointing or other accessories.

- D. All submittals required in Section 1.4, Quality Assurance.

1.4 QUALITY ASSURANCE

- A. Codes and Standards: Comply with provisions of the following codes and standards, except as otherwise indicated or specified:

- 1. AISI "Specification for the Design of Cold-Formed Steel Structural Members".
- 2. ANSI/AWS D1.3 "Structural Welding Code -- Sheet Steel".
- 3. SDI "Design Manual for Floor Decks and Roof Decks".

- B. Qualifications of Field Welding: Qualify welding processes and welding operators in accordance with AWS "Standard Qualification Procedure".
 - 1. Provide certification that welders to be employed in work have satisfactorily passed AWS qualification tests according to AWS D.1-1 "Structural Welding Code" and AWS D1.3, "Structural Welding Code for Sheet Steel".
 - a. Insure that each welder has valid and current AWS certification card on site at all times. If recertification of welders is required, retesting will be Contractor's responsibility.
- C. Underwriters' Label: Provide metal floor deck units listed in Underwriters' Laboratories "Fire Resistance Directory".
- D. FM Listing: Provide metal roof deck units which have been evaluated by Factory Mutual System and are listed in "Factory Mutual Approval Guide" for "Class I" fire rated construction.
- E. Owner to engage an independent testing laboratory acceptable to Engineer/Architect to perform testing as called out in Section 3.3.
- F. Special Inspection
 - 1. The metal deck supplier is to submit all necessary paperwork or hire a Special Inspector to meet the requirements for inspection of fabricators listed in Chapter 17 of the 2013 KBC, Section 1704.2.5.
 - 2. The Owner is to hire the Special Inspector to meet the requirements for steel construction listed in Chapter 17 of the 2002 KBC, Section 1705.2.
 - 3. The General Contractor is responsible for providing access to the site for the Owner's Special Inspector and for coordinating the Special Inspector's site visits with ongoing work.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Manufacturer: Subject to compliance with requirements, provide products of one of the following:
 - 1. Metal Roof Deck Units:
 - Bowman/E.G. Smith, Div. Cyclops Corp.
 - Epic Metals Corp.
 - Mac-Fab Products, Inc.
 - Roll Form Products
 - United Steel Deck, Inc.
 - Vulcraft/Div. Nucor Corp.
 - Wheeling Corrugating Co.
 - Wolverine Deck Co.
 - Or Equal
 - 2. Composite Metal Floor Deck Units:
 - Bowman/E.G. Smith, Div. Cyclops Corp.
 - Epic Metals Corp.
 - Mac-Fab Products, Inc.
 - Roll Form Products, Inc.
 - United Steel Deck, Inc.
 - Vulcraft/Div. Nucor Corp.
 - Wheeling Corrugating Co.
 - Or Equal

2.2 MATERIALS

- A. Steel for Galvanized Metal Deck Units: ASTM A446, Grade A.
- B. Miscellaneous Steel Shapes: ASTM A36.
- C. Shear Connectors: Headed stud type, ASTM A108, Grade 1015 or 1020, cold formed carbon steel; with dimensions complying with AISC Specifications.
- D. Sheet Metal Accessories: ASTM A526, commercial quality, galvanized.
- E. Galvanizing: ASTM A525, G90.
- F. Galvanizing Repair Paint: High zinc-dust content paint for repair of damaged galvanized surfaces complying with Military Specifications Mil- P-21035 (Ships).
- G. Paint: Manufacturer's baked-on, rust-inhibitive paint, for application to metal surfaces that have been chemically cleaned and phosphate chemical treated.
- H. Flexible Closure Strips: Manufacturer's standard vulcanized, closed-cell, synthetic rubber.

2.3 FABRICATION

- A. General: Form deck units in lengths to span 3 or more spans, with flush, telescoped or nested 2" laps at ends and interlocking or nested side laps, unless otherwise indicated.
- B. Roof Deck Units: Deck shall be galvanized on both sides. Provide deck configurations complying with SDI "Roof Deck Specifications", of metal thickness, (gauge) depth and type as follows:
 1. Steel roof deck shall be 1-1/2" deep 20 gauge, "Intermediate Type" and shall have the following minimum section properties:

$$I_p = 0.145 \text{ In}^4/\text{FT} \quad I_n = 0.157 \quad \text{Shear Capacity} = 250 \text{ PLF}$$

$$S_N = 0.148 \text{ In}^3/\text{FT} \quad S_P = 0.139 \text{ In}$$

- C. Open-Beam Composite Units: Composite floor deck shall be galvanized on both sides. Fabricate deck units with integral embossing or raised pattern to furnish mechanical bond with concrete slabs. Fabricate open-beam deck units with fluted section having interlocking side laps of metal thickness, (gauge) depth as follows:
 1. Composite floor deck shall be 3" (inches) deep, 19-gauge G-90, with the following minimum section properties:

$$I_p = 1.104 \text{ In}^4/\text{Ft} \quad I_n = 1.102 \text{ In}^4/\text{Ft}$$

$$S_P = 0.654 \text{ In}^3/\text{Ft} \quad S_N = 0.676 \text{ In}^3/\text{Ft}$$

2. Composite floor deck shall be 2" (inches) deep, 16-gauge G-90, with the following minimum properties:

$$I_p = 0.704 \text{ In}^4/\text{Ft} \quad I_n = 0.704 \text{ In}^4/\text{Ft}$$

$$S_p = 0.653 \text{ In}^3/\text{Ft} \quad S_n = 0.653 \text{ In}^3/\text{Ft}$$

3. Composite floor deck shall be 1-1/2" (inches) deep, 20 gauge G90, with the following minimum properties:

$$I_p = 0.186 \text{ in}^4/\text{Ft} \quad I_n = 0.222 \text{ In}^4/\text{Ft}$$

$$S_p = 0.224 \text{ in}^3/\text{Ft} \quad S_n = 0.231 \text{ In}^3/\text{FT}$$

- D. Metal Cover Plates: Fabricate metal cover plates for end-abutting floor deck units of not less than thickness as decking. Form to match contour of deck units and approximately 6" wide.
- E. Metal Closure Strips: Fabricate metal closure strips, for openings between decking and other construction, of not less than 0.045" min. (18 gauge) sheet steel. Form to provide tight-fitting closures at open ends of flutes and sides of decking.
- F. Roof Sump Pans: Fabricate from single piece of 0.071" min. (14 gauge) galvanized sheet steel with level bottoms and sloping sides to direct water flow to drain, unless otherwise shown. Provide sump pans of adequate size to receive roof drains and with bearing flanges not less than 3" wide. Recess pans not less than 1-1/2" below roof deck surface, unless otherwise shown or required by deck configuration. Holes for drains will be cut in the field.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: Install deck units and accessories in accordance with manufacturer's recommendations and final shop drawings, and as specified herein.
 - 1. Place deck units on supporting steel framework and adjust to final position with ends accurately aligned with each unit spanning three or more supports and bearing on supporting members before being permanently fastened. Do not stretch or contract side lap interlocks.
 - 2. Place deck units in straight alignment for entire length of run of cells and with close alignment between cells at ends of abutting units.
 - 3. Place deck units flat and square, secured to adjacent framing without warp or excessive deflection.
 - 4. Do not place deck units on concrete supporting structure until concrete has cured and is dry.
 - 5. Coordinate and cooperate with structural steel erector in locating decking bundles to prevent overloading of structural members.
 - 6. Do not use floor deck units for storage or working platforms until permanently secured.
- B. Fastening Deck Units:
 - 1. Minimum requirements for attachment of the deck units to their supporting members shall be as indicated. In addition, attachment criteria for the deck units to their supporting structure shall be verified by the deck manufacturer as adequate to resist the diaphragm shear loads as listed in fabrication paragraph and uplift loads as listed below:
 - a. Floor Deck Units:(Composite)
 - 1) Floor deck units shall be anchored to supporting members with nominal 5/8 inch diameter arc puddle welds at edge ribs plus a sufficient number of interior ribs to provide a maximum average spacing of 12 inches. The maximum spacing between adjacent points of attachments shall not exceed 18 inches.
 - 2) Where stud welds are being applied through the deck, see drawings for locations, onto its supporting members the stud welds can be used to replace the puddle welds. The deck should be welded sufficiently to act as a working platform and to prevent blow off.
 - 3) To prevent sideslip or sagging at edges of deck units, fasten side-laps of units as recommended by the steel deck manufacturer.
 - b. Roof Deck Units:
 - 1) Fasten roof deck units to steel supporting members in the general field area immediately after alignment, with Factory Mutual approved screws or powder actuated fasteners with a minimum size of #12 Traxx screws or equivalent.

- Space fasteners at interior ribs at no more than 12 inch on center. Side laps of adjacent units shall be lapped one corrugation.
- 2) Mechanically fasten side laps of adjacent deck units at supports and 1/3 points between supports, using No. 10 TRAXX screws or equivalent.
 - 3) Split or partial panels shall be connected to steel support members at each rib regardless of adjacent fastener pattern.
 - 4) Uplift Loading: Install and anchor roof deck units to resist gross uplift loading of 45 lbs. per square foot at eave overhang and 30 lbs. per square foot for other roof areas.
 - 5) At exterior corners of building fasten 10'-0" x 10'-0" areas of deck to supporting members at 6" on center.
 - 6) At perimeter of building fasten a 6'-0" wide strip of deck to supporting members at 6" on center.
 - a) On roofs with slopes of 2 to 12 or greater treat each side of ridge line or hip as a building perimeter.
2. Comply with AWS requirements and procedures for manual shielded metal arc welding, appearance and quality of welds, and methods used in correcting welding work.
 3. Cutting and Fitting: Cut and neatly fit deck units and accessories around other work projecting through or adjacent to the decking, as shown.
 4. Reinforcement at Openings: Provide additional metal reinforcement and closure pieces as required for strength continuity of decking and support of other work shown.
 5. Joint Covers: Provide metal joint covers at abutting ends and changes in direction of floor deck units, except where taped joints are required.
 6. Roof Sump Pans: Place over openings provided in roof decking and screw to top decking surface. Space screws not more than 12" o.c. with at least one screw at each corner. Cut opening in roof sump bottom to accommodate drain size indicated.
 7. Shear Connectors: Weld shear connectors to supports through decking units in accordance with manufacturer's instructions. Do not weld shear connectors through two layers (lapped ends) of decking units. Weld only on clean, dry deck surfaces. See Section 05100 for required field testing of stud welding.
 8. Cant Strips: Weld to top surface of roof decking, and secure to wood nailers with galvanized nails, and to steel framing with welds at 12" o.c. Lap end joints not less than 3", and secure with galvanized sheet metal screws.
 9. Closure Strips: Provide metal closure strips where indicated at open uncovered ends and edges of roof decking, and in voids between decking and other construction. Screw into position to provide a complete decking installation.
 - a. Provide flexible closure strips instead of metal closures, at Contractor's option, wherever their use will ensure complete closure. Install with adhesive in accordance with manufacturer's instructions.
 10. Touch-Up Painting: After decking installation, wire brush, clean and paint scarred areas, welds and rust spots on top and bottom surfaces of decking units and supporting steel members.
 - a. Touch-up galvanized surfaces with galvanizing repair paint applied in accordance with manufacturer's instructions.
 - b. Touch-up painted surfaces with same type of shop paint used on adjacent surfaces and in accordance with manufacturer's instructions.
 - c. In areas where shop-painted surfaces are to be exposed, apply touch-up paint to blend into adjacent surfaces.
 - d. Provide applied finish coat of paint to all exposed surfaces as outlined in Division 9 under Painting.
 11. Composite Shear Studs:

- a. Contractor to review location of all construction joints a minimum of ten (10) days in advance of any slab pour with the engineer of record (BFMJ ENGR) for a written approval. Note that all slab reinforcement must run continuous through the construction joint (s).
- b. Minimum longitudinal spacing of studs on beams shall be 4-1/2".
- c. Maximum longitudinal spacing of studs on beam shall be 32".
- d. Minimum transverse spacing of studs on beams and girders shall be 3".
- e. All studs shall be 3/4" diameter x 6" long (after welding) for 3" composite deck.
- f. All studs shall be 3/4" diameter x 4" long (after welding) for 11/ 2" composite deck.
- g. Place studs in one row along beam centerline, symmetrically about mid-span of beam, starting at end of beam except as noted by legend for nonsymmetrical placement.
- h. Where deck ribs are perpendicular to beam:
 - 1) Locate studs in valleys of deck directly over beam web, at a uniform spacing.
 - 2) Where specified number of studs exceeds number of deck ribs available, use the excess studs to make pairs of studs in valleys near ends of beam.
- i. Where deck ribs are parallel to beam:
 - 1) Space studs uniformly throughout span directly over the beam web. Studs must be in deck valley to fully engage the concrete.
 - 2) When deck valley does not occur at the beam/girder, break deck centered on the web of the beam. If possible allow 4 3/4" width centered over the web. When the flange width is 4", break deck so that there is minimum 3" width of concrete centered on over the web. Weld the broken-deck on two sides of the studs to the top flange per ANSI/AWS d1.3
- j. If longitudinal stud spacing exceeds 18", plug weld deck to beam halfway between studs. Note provide additional plug welds as required if resulting spacing between weld and stud is more than 18".

3.2 SUPPORT FOR OTHER TRADES

- A. Floor Deck: Do not use metal decking (or concrete slab above) for suspension of any piping, ductwork, or utilities. Hang items from top flange of beams or provide additional structure to span between floor beams as required.
 1. Embedded or pre-placed hanger tabs for ceiling may be permitted if approved by Architect. Submit cut sheets with shop drawings.
- B. Roof Deck: Do not use metal decking for suspension of any piping, ductwork, or utilities. Hang items from top flange of beams or provide additional structure to span between roof joist as required.
 1. Embedded or pre-placed hanger tabs for ceiling may be permitted if approved by Architect. Submit cut sheets with shop drawings.

3.3 QUALITY CONTROL TESTING DURING CONSTRUCTION

- A. The Owner will engage in an independent testing and inspection agency approved by the Structural Engineer to inspect metal deck connections and to prepare inspection reports.
 1. Coordinate this section with 014110 and other related specifications.
 2. All deck fasteners and shear studs are to be inspected by the independent testing agency as described in Section 051200, Quality Control section.
 3. Contractor to notify testing agency when work is available to be inspected in a timely manner and to provide access for testing agency to places where work is being performed so that required inspection and testing can be accomplished.
 4. Testing agency shall conduct tests and state in each report whether test specimens comply with requirements, and specifically state any deviations there from.

5. Test results will be reported in writing from the testing agency to the Architect, Owner, Engineer and Contractor on same day that tests are made. Reports of tests shall contain the project identification name and number, date, exact location in structure, name of testing service, fastener type and size and clear description of specification on conformance and where any areas may be deficient.
- B. Correct deficiencies in metal deck work which inspections and laboratory test reports have indicated to be not in compliance with requirements. Perform additional tests, at Contractor's expense, as may be necessary to reconfirm any non-compliance of original work, and as may be necessary to show compliance of corrected work.

END OF SECTION 053100



Lexington-Fayette Urban County Government
DEPARTMENT OF FINANCE & ADMINISTRATION

Jim Gray
Mayor

William O'Mara
Commissioner

ADDENDUM #5

Bid Number: **#99-2014**

Date: August 27, 2014

Subject: **Construction of Replacement Senior Citizens' Center**

Please address inquiries to:
Theresa Maynard (859) 258-3320

TO ALL PROSPECTIVE BIDDERS:

Please be advised of the following clarifications to the above referenced bid.

- **Additional Answers to Questions.**

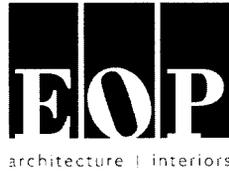

Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the bid and specifications are unchanged. This letter should be signed, attached to and become a part of your bid.

COMPANY: _____

ADDRESS: _____

SIGNATURE OF PROPOSER: _____



August 27, 2014

Bid Number: 99-2014
Architect's Project Number: 201333

LFUCG Replacement Senior Citizen Center
Lexington, Kentucky

ADDENDUM #005

ATTACHMENTS:

1.0 PURPOSE OF ADDENDUM:

- 1.1 The purpose of this Addendum is to clarify and/or revise the requirements of the construction documents produced by EOP Architects and consultants dated July 29, 2014 for the above noted project.
- 1.2 The Contractor shall be governed by this Addendum insofar as it applies to the work of each Sub-Contractor.
- 1.3 The Contractor shall acknowledge receipt of this Addendum and all other Addenda on the Form of Proposal at the time his price bid is presented.

2.0 GENERAL NOTES

- 2.1 The owner, architect, or consultants will not make determinations on approved equals prior to bid. We encourage all manufacturers/providers who meet the project requirements to submit their bid. Any "or equals" noted by a vendor must include proof of equality in their bid submission.

3.0 FRONT END DOCUMENTS

- 3.1 The following section shall be deleted from section 9 of the Contract Agreement:

105613 Metal Shelving

This scope is covered by section 110000 Equipment and by the Equipment Schedule in the Drawings.

- 3.2 The following sections shall be included in the Table of Contents of Book 2 of the Specifications:

201330 Heat Transfer Fluid
203100 Testing
250300 Air Quality Monitoring System
275223 Nurse Call

4.0 SITE & CIVIL SPECIFICATIONS

4.1 Not applicable to this Addendum.

5.0 SITE & CIVIL DRAWINGS

5.1 Not applicable to this Addendum

6.0 STRUCTURAL DRAWINGS & SPECIFICATIONS

6.1 Not applicable to this Addendum

7.0 ARCHITECTURAL SPECIFICATIONS

7.1 Section 033000 – CAST-IN-PLACE CONCRETE: revise section 3.2.B – VAPOR BARRIER INSTALLATION to: "Install vapor barrier in accordance with all requirements of ASTM E1643-11"

8.0 ARCHITECTURAL DRAWINGS

8.1 Not applicable to this Addendum.

9.0 PLUMBING SPECIFICATIONS

9.1 Not applicable to this Addendum.

10.0 PLUMBING DRAWINGS

10.1 Not applicable to this Addendum.

11.0 MECHANICAL SPECIFICATIONS

11.1 Not applicable to this Addendum.

12.0 MECHANICAL DRAWINGS

12.1 Not applicable to this Addendum.

13.0 ELECTRICAL SPECIFICATIONS

13.1 Not applicable to this Addendum.

14.0 ELECTRICAL DRAWINGS

14.1 Sheet E4.3, E4.4 – Communications Riser: cable distribution notes on Communications Riser Diagram – Telecom 162 and Communications Riser Diagram – Telecom 230 are in conflict with the specifications Section 270610 – Voice/Data/Video Communications System (section 3-c) regarding the appropriate pathway hardware for cabling. J-hooks shall be an acceptable method for cabling path between conduit stub-up and cable tray.

END OF ADDENDUM #005

TABLE OF CONTENTS

CONTRACT DOCUMENTS

CONSTRUCTION SERVICES FOR REPLACEMENT SENIOR CITIZEN CENTER

PART I	ADVERTISEMENT FOR BIDS
PART II	INFORMATION FOR BIDDERS
PART III	FORM OF PROPOSAL
PART IV	GENERAL CONDITIONS
PART V	SPECIAL CONDITIONS
PART VI	CONTRACT AGREEMENT
PART VII	PERFORMANCE AND PAYMENT BONDS
PART VIII	ADDENDA
PART IX	TECHNICAL SPECIFICATIONS
APPENDIX A	STANDARD DRAWINGS

PART 1
ADVERTISEMENT FOR BIDS

INDEX

1.	INVITATION	AB-2
2.	DESCRIPTION OF WORK	AB-2
3.	OBTAINING PLANS, SPECIFICATIONS, AND BID DOCUMENTS	AB-2
4.	METHOD OF RECEIVING BIDS.....	AB-3
5.	METHOD OF AWARD	AB-3
6.	BID WITHDRAWAL.....	AB-3
7.	BID SECURITY	AB-3
8.	SUBMISSION OF BIDS	AB-3
9.	RIGHT TO REJECT.....	AB-4
10.	NOTIFICATION TO THE LFUCG FOR AFFIRMATIVE ACTION	AB-4
11.	NOTICE CONCERNING DBE GOAL.....	AB-4
12.	PRE-BID MEETING	AB-5

ADVERTISEMENT FOR BIDS

1. INVITATION

Sealed proposals for the following work will be received by the Lexington-Fayette Urban County Government (LFUCG) until 2:00 p.m., local time, **Tuesday, September 2, 2014**, for furnishing all labor and/or materials and performing all work as set forth by this advertisement, conditions (general and special), specifications, and/or the drawings prepared by and for Lexington-Fayette Urban County Government, **Department of General Services**. Immediately following the scheduled closing time for reception of bids, all proposals which have been submitted in accordance with the above will be publicly opened and read aloud.

2. DESCRIPTION OF WORK

Consisting of the construction and/or furnishing of items in the Bid Schedule beginning on page P-6, Part III, Form of Proposal, and as indicated in the construction documents and drawings, for the Construction of a Replacement Senior Citizen Center in Lexington-Fayette County, Kentucky.

3. OBTAINING PLANS, SPECIFICATIONS, AND BID DOCUMENTS

Plans, Specifications, and Contract Documents may be obtained from the official bid document distributor, LYNN IMAGING, 328 Old Vine Street, Lexington, KY 40507, (859) 255-1021 or (www.lynnimaging.com) and click on plan room for a non-refundable price of reproduction for each full set of plans and documents.

Specifications, Plans, and Bid Documents may be examined at the following places:

LFUCG
Division of Central Purchasing
200 East Main Street, Third Floor, Rm 338
Lexington, Kentucky 40507
(859) 258-3320

4. METHOD OF RECEIVING BIDS

Bids will be received from Prime Contracting firms on a **Lump Sum Basis** for total Project. The Bidder must include a price for all bid items to be considered. Bids shall be submitted in the manner and subject to the conditions as set forth and described in the Instruction to Bidders and Special Conditions.

Sealed bids shall be clearly marked on the outside of the container as follows: Company Name and Address, Bid Invitation Number, and the Project Name. Bids are to remain sealed until official Bid closure time.

Mailed bids/proposals should be sent to the Director, Division of Central Purchasing, 200 East Main Street, Lexington, KY 40507.

5. METHOD OF AWARD

The Contract, if awarded, will be to the lowest, qualified responsible bidder for the total project whose qualifications indicate the award will be in the best interest of the OWNER and whose bid/proposal complies with all the prescribed requirements. No Notice of Award will be given until the OWNER has concluded such investigation as deemed necessary to establish the responsibility, qualifications and financial ability of Bidders to do the work in accordance with the Contract Documents to the satisfaction of the OWNER within the time prescribed. The OWNER reserves the right to reject the Bid of any Bidder who does not pass such investigation to the OWNER's satisfaction. In analyzing Bids, the OWNER may take into consideration alternate and unit prices, if requested by the Bid forms.

6. BID WITHDRAWAL

No bidder may withdraw his bid for a period of sixty (60) calendar days after the closing date for receipt of bids. Errors and omissions will not be cause for withdrawal of bid without forfeit of bid bond. Bids may be withdrawn in person prior to the closing date of receipt of bids.

7. BID SECURITY

If the bid is \$50,000 or greater, bid shall be accompanied by a certified /cashier's check or bid bond payable to the Lexington-Fayette Urban County Government in an amount not less than Five Percent (5%) of the base bid. Bid bond shall be executed by a Surety Company authorized to do business in the Commonwealth of Kentucky and countersigned by a licensed Kentucky Resident Agent, representing the Surety Company. Bid Bonds are not required for bids under \$50,000. A certified check or cashier's check is also acceptable forms of bid security.

8. SUBMISSION OF BIDS

CONTRACTORS shall submit their bids to the Lexington-Fayette Urban County Government, Division of Purchasing, Third Floor, 200 East Main Street, Lexington,

Kentucky 40507. Bids shall be submitted in a sealed envelope not later than 2:00 p.m. local time, **Tuesday, September 2, 2014**. Sealed proposals shall be clearly marked on the outside of the container as follows: Company Name and Address, Bid Invitation Number, and Project Name to be opened at 2:00 p.m. local time **Tuesday, September 2, 2014**. Bids are to remain sealed until official Bid closure time. Bids received after the scheduled closing time for receipt of bids will not be considered and will be returned unopened.

9. RIGHT TO REJECT

The Lexington-Fayette Urban County Government reserves the right to reject any and all bids and to waive all informalities and/or technicalities where the best interest of the Lexington-Fayette Urban County Government may be served.

10. NOTIFICATION TO THE LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT FOR AFFIRMATIVE ACTION PLAN AND CURRENT WORKFORCE

The successful bidder must submit with their bid the following items to the Lexington-Fayette Urban County Government:

1. Affirmative Action Plan for his/her firm.
2. Current Workforce Analysis Form.

Failure to submit these items as required herein may result in disqualification of the Bidder from the award of the contract.

All submissions should be directed to:

Lexington-Fayette Urban County Government
Division of Purchasing
200 East Main Street, 3rd Floor, Room 338
Lexington, Kentucky 40507

11. NOTICE CONCERNING MWDBE GOAL

Notice of requirement for Affirmative Action to ensure Equal Employment Opportunities and Disadvantaged Business Enterprises (DBE) Contract participation. Disadvantaged Business Enterprises (DBE) consists of Minority-Owned Business Enterprises (MBE) and Woman-Owned Business Enterprises (WBE).

The Lexington-Fayette Urban County Government has set a goal that not less than ten percent (10%) of the total value of this Contract be subcontracted to Disadvantaged Business Enterprises, which is made up of MBEs and WBEs. The goal for the utilization of Disadvantaged Business Enterprises as subcontractors is a recommended goal. Contractor(s) who fail to meet such goal will be expected to provide written explanations to the Director of the Division of Purchasing of efforts they have made to accomplish the recommended goal, and the extent to which they are successful in accomplishing the

recommended goal will be a consideration in the procurement process. Depending on the funding source, other DBE goals may apply.

For assistance in locating Disadvantaged Business Enterprises Subcontractors contact:

Marilyn Clark, Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street, 3rd Floor, Room 338
Lexington, Kentucky 40507

12. PRE-BID MEETING

A non-mandatory pre-bid meeting will be held at **9:00 AM** local time on **Monday, August 11, 2014** at the Phoenix Building, 3rd Floor Conference Room, 101 East Vine Street, Lexington, Kentucky.

END OF SECTION

PART II
INFORMATION FOR BIDDERS

INDEX

1.	RECEIPT AND OPENING OF BIDS	IB-2
2.	PREPARATION OF BID.....	IB-2
3.	SUBCONTRACTS.....	IB-2
4.	QUALIFICATION OF BIDDER	IB-3
5.	BID SECURITY	IB-4
6.	LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT.....	IB-4
7.	TIME OF COMPLETION AND LIQUIDATED DAMAGES.....	IB-4
8.	EXAMINATION OF CONTRACT DOCUMENTS AND SITE.....	IB-5
9.	ADDENDA AND INTERPRETATIONS	IB-5
10.	SECURITY FOR FAITHFUL PERFORMANCE	IB-6
11.	POWER OF ATTORNEY	IB-6
12.	TAXES AND WORKMEN'S COMPENSATION	IB-6
13.	LAWS AND REGULATIONS	IB-6
14.	EROSION AND SEDIMENT CONTROL AND PERMITS	IB-6
15.	PREVAILING WAGE LAW AND MINIMUM HOURLY RATES.....	IB-7
16.	AFFIRMATIVE ACTION PLAN.....	IB-7
17.	CONTRACT TIME.....	IB-7
18.	SUBSTITUTION OR "OR-EQUAL" ITEMS.....	IB-7
19.	ALTERNATE BIDS.....	IB-8
20.	SIGNING OF AGREEMENT.....	IB-8
21.	ASSISTANCE TO BE OFFERED TO DBE CONTRACTORS.....	IB-8
22.	LFUCG NON-APPROPRIATION CLAUSE.....	IB-10

PART II

INFORMATION FOR BIDDERS

1. **RECEIPT AND OPENING OF BIDS**

The Lexington-Fayette Urban County Government (herein called the OWNER) invites bids from firms on the project described in the Advertisement for Bids. The OWNER will receive bids at the Division of Purchasing, at the time and in the manner set forth in the Advertisement for Bids, and the Bids will then be publicly opened and read aloud. The OWNER may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. Any bid may be withdrawn prior to the scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No bidder may withdraw a bid within 60 days after the actual time and date of the bid opening, but OWNER may, in its sole discretion, release any bid and return the Bid Security prior to that date.

The Lexington-Fayette Urban County Government assumes no responsibility for bids that are not addressed and delivered as indicated above. Bids that are not delivered to the Division of Central Purchasing by the stated time and date will be rejected.

2. **PREPARATION OF BID**

Each bid must be submitted on the prescribed Form of Proposal. All blank spaces for the bid prices must be filled in, either in ink or typewritten, for both unit prices and extensions. Totals for each bid item must be added to show the total amount of the bid. Each bid must be submitted in a sealed envelope bearing on the outside the name of the bidder, their address, the name of the project, the invitation number and time and date for which the bid is submitted. Bids must be addressed to the Director of Purchasing, Lexington-Fayette Urban County Government, Third Floor, 200 East Main Street, Lexington, Kentucky 40507. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed as specified above.

3. **SUBCONTRACTS**

The bidder is specifically advised that any person, firm, or other party to whom it is proposed to award a subcontract under this Contract must be acceptable to the OWNER. All proposed subcontractors must be identified on the Form of Proposal. Prior to the award of Contract, the OWNER or the OWNER'S representative will advise the CONTRACTOR of the acceptance and approval thereof or of any action necessary to be taken. Should any Subcontractor be rejected by the OWNER, the CONTRACTOR shall present a new name and/or firm to the OWNER at no change in the Contract Price.

4. QUALIFICATION OF BIDDER

The OWNER may make such investigations as the OWNER deems necessary to determine the ability of the bidder to perform the Work, and the bidder shall furnish to the OWNER all such information and data for this purpose as the OWNER may request. The OWNER reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the OWNER that such bidder is properly qualified to carry out the obligations of the Contract and to complete the Work contemplated therein. Conditional bids will not be accepted.

In evaluating Bids, OWNER shall consider the qualifications of the BIDDERS, whether or not the Bids comply with the prescribed requirements, and alternatives and unit prices, as requested. OWNER may consider maintenance requirements, performance data, and disruption or damage to private property. It is OWNER'S intent to accept alternatives, if requested by the bid forms, in the order in which they are listed in the Bid Form but OWNER may accept or decline them in any order or combination. The contract, if awarded, will be awarded to the lowest, qualified, responsible BIDDER based upon OWNER'S evaluation which indicates that the award will be in the best interest of OWNER and the general public.

In the event there is any question as to the bidder's qualifications and ability to complete the work, a final determination will be made in accordance with a fair evaluation by the Urban County Government of the above listed elements.

- A. If the OWNER requires filling out a detailed financial statement, the bidder may provide its current certified financial statement(s) for the required time interval.
- B. Corporate firms are required to be registered and in good standing with the requirements and provisions of the Office of the Secretary of State, Commonwealth of Kentucky.
- C. Good standing with Public Works Act - any CONTRACTOR and/or subcontractors in violation of any wage or work act provisions (KRS 337.510 to KRS 337.550) are prohibited by Statutory Act (KRS 337.990) from bidding on or working on any and all public works contracts, either in their name or in the name of any other company, firm or other entity in which he might be interested. No bid from a prime contractor in violation of the Act can be considered, nor will any subcontractor in violation of the Act be approved and/or accepted. The responsibility for the qualifications of the subcontractor is solely that of the prime contractor.
- D. Documents Required of CONTRACTOR - (1) A sworn statement signed by the President or owner of the Company regarding all current work in progress anywhere; (2) A document showing the percent of completion of each project and the total worth of each project; and (3) Documentation showing the percentage of the DBE employment levels on each project of the Bidder's current work force, and DBE participation levels for Subcontractors.

- E. Optional OWNER Requirements - The OWNER, at its discretion, may require the BIDDER/CONTRACTOR to provide: (1) a current detailed financial statement for a period including up to 3 prior years; (2) financial security or insurance in amounts and kinds acceptable to the OWNER to meet the financial responsibility requirements for the CONTRACTOR to indemnify the OWNER. (3) Additional information and/or DBE work force data, as well as DBE participation data.

Each bidder agrees to waive any claim it has or may have against the Owner, the Architect/Engineer, and their respective employees, arising out of or in connection with the administration, evaluation, or recommendation of any bid.

5. BID SECURITY

- A. Each bid must be accompanied by a bid bond prepared on a Form of Bid Bond and attached hereto, duly executed by the bidder as principal and having as surety thereon a surety company approved by the OWNER, in the amount of 5% of the bid. Such bid bond will be returned to the unsuccessful bidder(s) only upon written request to the Director of Central Purchasing within seven (7) days of opening of bids. Bid bond shall be made payable to the Lexington-Fayette Urban County Government. Bid security is not required for projects under \$50,000.
- B. Bonds shall be placed with an agent licensed in Kentucky with surety authorized to do business within the state. When the premium is paid for such coverage, the full commission payable shall be paid to such local agent who shall not divide such commission with any person other than a duly licensed resident local agent.

6. LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT

The successful bidder, upon his failure or refusal to execute and deliver the Contract and bonds required within ten (10) days after he has received notice of the acceptance of his bid, shall forfeit to the OWNER, as liquidated damages for such failure or refusal, the security deposited with his bid.

7. TIME OF COMPLETION AND LIQUIDATED DAMAGES

Bidder must agree to commence work on or before a date to be specified in a written "Notice to Proceed" from the OWNER and to fully complete the Project within the time as specified in the Contract. Bidder must agree also to pay \$500 per day as liquidated damages, or the sum as specified in the Contract for each consecutive calendar day thereafter as hereinafter provided in the General Conditions.

8. EXAMINATION OF CONTRACT DOCUMENTS AND SITE

- A. It is the responsibility of each Bidder before submitting a Bid, to (a) examine the Contract Documents thoroughly, (b) visit the site(s) to become familiar with local conditions that may affect cost, progress, performance or furnishing of the work, (c) consider Federal, State and Local laws and regulations that may affect cost, progress, performance or furnishing of the work, (d) study and carefully correlate Bidder's observations with the Contract Documents, and (e) notify Engineer of all conflicts, errors or discrepancies in the Contract Documents.

- B. Bidders should examine the requirements of section 4 of the General Conditions for information pertaining to subsurface conditions, underground structures, underground facilities, and availability of lands, easements, and rights-of-way. The completeness of data, presented in the Contract Documents, pertaining to subsurface conditions, underground structures, and underground facilities for the purposes of bidding or construction is not assured. The Bidder will, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests and studies and obtain any additional information and data which pertain to the physical conditions (surface and subsurface) which may affect cost, progress, performance or furnishing of the Work and which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price, and other terms and conditions of the Contract Documents. On request in advance, OWNER will provide access to the site to conduct such explorations and tests as each Bidder deems necessary for submission of a bid. Bidder shall fill all holes, clean up and restore the site to its former condition upon completion of such explorations.

- C. The submission of a Bid will constitute an incontrovertible representation by the Bidder that Bidder has complied with every requirement of this paragraph 8; that without exception the Bid is premised upon furnishing and performing the Work required by the Contract Documents and such means, methods, techniques, sequences or procedures of construction as may be indicated in or required by the Contract Documents; and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

9. ADDENDA AND INTERPRETATIONS

No interpretation of the meaning of the Contract Documents will be made to any bidder orally. Every request for such interpretation should be in writing addressed to the Director of Central Purchasing, who in turn will have an Addendum issued for the Lexington-Fayette Urban County Government, and to be given consideration must be received prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications. Acknowledgement of the receipt of addenda must be included with all submitted bids. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under his bid as submitted. All addenda so issued shall become part of the Contract Documents.

10. SECURITY FOR FAITHFUL PERFORMANCE

- A. Simultaneously with his delivery of the executed Contracts, the CONTRACTOR shall furnish a surety bond or bonds as security for the faithful performance of this Contract and for payment of all persons performing labor on the Project under this Contract and furnishing materials in connection with this Contract, as specified in the General Conditions. The surety on such bond or bonds shall be a duly authorized surety company satisfactory to the OWNER and authorized to do business in the Commonwealth of Kentucky.
- B. All bonds required by this Contract and laws of this State shall be placed with agents licensed in the State of Kentucky. When the premium is paid for such coverage's, the full commission shall be paid to such local agent who shall not divide such commission with any person other than a duly licensed resident local agent.
- C. **Contractor shall use standard Performance and Payment Bond forms such as documents provided with this contract book or AIA form A312-1984 (or later). Each document will be for 100% of the Contract Bid Amount.**

11. POWER OF ATTORNEY

Attorney-in-fact who signs bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

12. TAXES AND WORKMEN'S COMPENSATION

The CONTRACTOR and subcontractor will be required to accept liability for payment of all payroll taxes, sales and use tax, and all other taxes or deductions required by local, state or federal law, such as old age pension, social security, or annuities measured by wages. Each shall carry Workmen's Compensation Insurance to the full amounts as required by Statutes and shall include the cost of all foregoing items in the proposal. The CONTRACTOR will not otherwise be reimbursed or compensated for such tax payments. The CONTRACTOR is urged to ascertain at his own risk his actual tax liability in connection with the execution or performance of his Contract.

13. LAWS AND REGULATIONS

The bidder's attention is directed to the fact that all applicable state laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the Project shall apply to the Contract throughout, and they will be deemed to be included in the contract, the same as though herein written out in full.

14. EROSION AND SEDIMENT CONTROL AND PERMITS

The CONTRACTOR and Subcontractors performing work on projects on behalf of the OWNER shall also comply with all applicable federal, state, and local environmental

regulations and all requirements and conditions set forth in "special" permits including but not limited to Corp of Engineers 404 permits, 401 Water Quality Certifications, Stream Crossing and Floodplain Encroachment Permits as described in Part 4 General Conditions Paragraph 5.17.

15. PREVAILING WAGE LAW AND MINIMUM HOURLY RATES

Federal or state wage rates and regulations, if required for this Project, will be as described in the Special Conditions.

16. AFFIRMATIVE ACTION PLAN

The successful Bidder must submit with their bid, the following items to the Urban County Government:

1. Affirmative Action Plan of the firm
2. Current Work Force Analysis Form
3. Good Faith Effort Documentation
4. List of Disadvantaged Business Enterprise Subcontractors and the Dollar Value of each Subcontract

A Work Force Analysis Form shall be submitted for each Contract. Failure to submit these items as required herein may result in disqualification of the Bidder from award of the Contract.

All submissions should be directed to:

Director, Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street, Third Floor
Lexington, KY 40507

17. CONTRACT TIME

The number of calendar days within which the Work is to be substantially completed and ready for final payment (the Contract Time) is set forth in the Form of Proposal and the Agreement.

18. SUBSTITUTE, COMPARABLE OR "OR-EQUAL" ITEMS

The Contract, if awarded, will be on the basis of materials and equipment described in the Drawings or specified in the Specifications without consideration of possible substitute, comparable, or "or-equal" items. Whenever it is indicated in the Drawings or specified in the Specifications that a substitute, comparable, or "or-equal" item of material or equipment may be furnished or used by the CONTRACTOR if acceptable to the ENGINEER and

OWNER, application for such acceptance will not be considered by the ENGINEER and OWNER until after the effective date of the Agreement. The procedure for submission of any such application by the CONTRACTOR and consideration by the ENGINEER and OWNER is set forth in the General Conditions.

19. ALTERNATE BIDS

Bidders shall submit alternate bids/proposals only if and when such alternate bids/proposals have been specifically requested in an Invitation for Bids. If alternate bids/proposals are requested in an Invitation for Bids, the form of submission of such alternate bid and the conditions under which such alternate bids will be considered for award of a contract will be established in the Invitation.

Any Bidder who submits a bid incorporating an alternate proposal when alternate bids/proposals have not been requested in the Invitation for Bids shall have his/her bid rejected as non-responsive.

Any Bidder who submits a bid incorporating two (2) or more prices for an item or groups of items (unless such method of pricing is requested in the Invitation for Bids), or which imposes conditions for acceptance other than those established in the Invitation for Bids, shall have their bid rejected as non-responsive.

20. SIGNING OF AGREEMENT

When OWNER gives a Notice of Award to the successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Agreement with all other written Contract Documents attached. Within ten days thereafter, CONTRACTOR shall sign and deliver the required number of counterparts of the Agreement and attached documents to OWNER with the required Bonds, Certificate of Insurance, and Power of Attorney. The OWNER will deliver one fully signed counterpart to CONTRACTOR at such time as it has been signed by the Mayor.

21. ASSISTANCE TO BE OFFERED TO DISADVANTAGED BUSINESS ENTERPRISE (MWDBE) CONTRACTORS

A. Outreach for MWDBE(s)

The Lexington-Fayette Urban County Government (LFUCG) maintains a database of MWDBE contractors and organizations. When a LFUCG construction project is advertised for bidding, notices are sent to companies registered at <https://lfucg.economicengine.com>. The notices describe the project and indicate the deadline for submitting bids.

If you wish to be added to the LFUCG MWDBE contractor database, please contact:

Marilyn Clark, Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street, Room 338
Lexington, Kentucky 40507
mclark@lexingtonky.gov

B. Bid Bond Assistance for MWDBE(s)

For those MWDBE contractors who wish to bid on LFUCG project, bid bond assistance is available. This bid bond assistance is in the form of a "Letter of Certification" which is accepted by the LFUCG's Division of Purchasing, in lieu of a bid bond. The "Letter of Certification" must be included in the bid package when it is submitted to the Division of Purchasing. The "Letter of Certification" will reference the specific project for which the bid is being submitted, and the time and date on which the bid is due. Bid bond assistance must be requested from the Lexington-Fayette Urban County Government's Division of Central Purchasing.

C. Eligibility for Bid Bond Assistance for MWDBE(s)

In order to be eligible for any Bid bonding assistance, a MWDBE construction company must be owned or controlled at the level of 51% or more by a member or members of a minority group or females. Prior to receiving assistance, a statement providing evidence of ownership and control of the company by a member or members of a minority group or females must be signed by the Owner or corporate officer and by an attorney or accountant submitted to:

Marilyn Clark, Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street, Room 338
Lexington, Kentucky 40507
mclark@lexingtonky.gov

D. MWDBE Subcontractors

The LFUCG will, upon request, assist prime contractors in the procurement of eligible DBE subcontractors in an effort to achieve 10% minimum MWDBE goal.

For a list of eligible subcontractors, please contact:

Marilyn Clark, Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street, Room 338
Lexington, Kentucky 40507
mclark@lexingtonky.gov

22. LFUCG NON-APPROPRIATION CLAUSE

Contractor acknowledges that the LFUCG is a governmental entity, and the contract validity is based upon the availability of public funding under the authority of its statutory mandate.

In the event that public funds are unavailable and not appropriated for the performance of the LFUCG's obligations under this contract, then this contract shall automatically expire without penalty to the LFUCG thirty (30) days after written notice to Contractor of the unavailability and non-appropriation of public funds. It is expressly agreed that the LFUCG shall not activate this non-appropriation provision for its convenience or to circumvent the requirements of this contract, but only as an emergency fiscal measure during a substantial fiscal crisis, which affects generally its governmental operations.

In the event of a change in the LFUCG's statutory authority, mandate and mandated functions, by state and federal legislative or regulatory action, which adversely affects the LFUCG's authority to continue its obligations under this contract, then this contract shall automatically terminate without penalty to the LFUCG upon written notice to Contractor of such limitation or change in the LFUCG's legal authority.

PART III
FORM OF PROPOSAL

INDEX

1.	FORM OF PROPOSAL	P-2
2.	LEGAL STATUS OF BIDDER.....	P-4
3.	BIDDERS AFFIDAVIT	P-5
4.	BID SCHEDULE – SCHEDULE OF VALUES	P-6
5.	STATEMENT OF BIDDER'S QUALIFICATIONS	P-10
6.	LIST OF PROPOSED SUBCONTRACTORS	P-13
7.	LEXINGTON FAYETTE URBAN COUNTY GOVERNMENT MWDDBE PARTICIPATION GOALS, FORMS, AND GOOD FAITH EFFORTS.....	P-14
8.	AUTHENTICATION OF BID AND STATEMENT OF NON-COLLUSION AND NON-CONFLICT OF INTEREST.....	P-26
9.	STATEMENT OF EXPERIENCE.....	P-27
10.	EQUAL OPPORTUNITY AGREEMENT.....	P-29
11.	EQUAL EMPLOYMENT OPPORTUNITY AFFIRMATIVE ACTION POLICY	P-32
12.	WORKFORCE ANALYSIS	P-33
13.	EVIDENCE OF INSURABILITY	P-34
14.	DEBARRED FIRMS.....	P-35
15.	DEBARRED CERTIFICATION	P-36

PART III

Invitation to Bid No. 99-2014

Construction Services for Replacement Senior Citizen Center

1. FORM OF PROPOSAL

Place: Lexington, Kentucky

Date: _____

The following Form of Proposal shall be followed exactly in submitting a proposal for this Work.

This Proposal Submitted by _____

(Name and Address of Bidding Contractor)

(Hereinafter called "Bidder"), organized and existing under the laws of the State of _____, doing business as _____
_____ "a corporation," "a partnership", or an "individual" as applicable.

To: Lexington-Fayette Urban County Government
(Hereinafter called "OWNER")
Office of the Director of Purchasing
200 East Main Street, 3rd Floor
Lexington, KY 40507

Gentlemen:

The Bidder, in compliance with your Invitation for Bids for **Construction Services for Replacement Senior Citizen Center** having examined the Plans and Specifications with related documents, having examined the site for proposed Work, and being familiar with all of the conditions surrounding the construction of the proposed Project, including the availability of materials and labor, hereby proposes to furnish all labor, materials, and supplies, and to construct the Project in accordance with the Contract Documents, within the time set forth therein, and at the lump sum and/or unit prices stated hereinafter. These prices are to cover all expenses incurred in performing the Work required under the Contract Documents, of which this proposal is a part. The OWNER will issue work orders for work to be performed under this Contract.

BIDDER hereby agrees to commence work under this contract on or before a date to be specified in the Notice to Proceed and to fully complete the project within the time provided in the Purchase Order or Work Orders issued by the OWNER. BIDDER further agrees to pay liquidated damages, the sum of \$~~200~~500 for each consecutive calendar day thereafter.

The Bidder hereby acknowledges receipt of the following addenda:

Addendum No. ____ Date _____

Insert above the number and the date of any Addendum issued and received. If none has been issued and received, the word "NONE" should be inserted.

2. **LEGAL STATUS OF BIDDER**

Bidder _____

Date _____

* 1. A corporation duly organized and doing business under the laws of the State of _____, for whom _____, bearing the official title of _____, whose signature is affixed to this Bid/Proposal, is duly authorized to execute contracts.

* 2. A Partnership, all of the members of which, with addresses are: (Designate general partners as such)

* 3. An individual, whose signature is affixed to this Bid/Proposal (please print name)

*(The Bidder shall fill out the appropriate form and strike out the other two.)

3. **BIDDERS AFFIDAVIT**

Comes the Affiant, _____, and after being first duly sworn, states under penalty of perjury as follows:

1. His/her name is _____ and he/she is the individual submitting the bid or is the authorized representative of _____, the entity submitting the bid (hereinafter referred to as "Bidder").
 2. Bidder will pay all taxes and fees, which are owed to the Lexington-Fayette Urban County Government at the time the bid is submitted, prior to award of the contract and will maintain a "current" status in regard to those taxes and fees during the life of the contract.
 3. Bidder will obtain a Lexington-Fayette Urban County Government business license, if applicable, prior to award of the contract.
 4. Bidder has authorized the Division of Central Purchasing to verify the above-mentioned information with the Division of Revenue and to disclose to the Urban County Council that taxes and/or fees are delinquent or that a business license has not been obtained.
 5. Bidder has not knowingly violated any provision of the campaign finance laws of the Commonwealth of Kentucky within the past five (5) years and the award of a contract to the Bidder will not violate any provision of the campaign finance laws of the Commonwealth.
 6. Bidder has not knowingly violated any provision of Chapter 25 of the Lexington-Fayette Urban County Government Code of Ordinances, known as the "Ethics Act."
 7. Bidder acknowledges that "knowingly" for purposes of this Affidavit means, with respect to conduct or to circumstances described by a statute or ordinance defining an offense, that a person is aware or should have been aware that his conduct is of that nature or that the circumstance exists.
- Further, Affiant sayeth naught.

(Affiant)

STATE OF _____

COUNTY OF _____

The foregoing instrument was subscribed, sworn to and acknowledged before me by

_____ on this the _____ day of _____, 20_____.

My Commission expires: _____

NOTARY PUBLIC, STATE AT LARGE

4. BID SCHEDULE – SCHEDULE OF VALUES

The Bidder agrees to perform all the Work described in the Specifications and shown on the Plans for the following proposed lump sum and/or unit prices, if applicable, which shall include the furnishing of all labor, materials, supplies, equipment and/or vehicle usage, services, all items of cost, overhead, taxes (federal, state, local), and profit for the CONTRACTOR and any Subcontractor involved, within the time set forth herein.

Form of proposal must include bid prices written in words, unit price written in numbers and total amount bid (unit price x quantity) per line item OR bid may be considered non-responsive. In case of price discrepancy, unit bid price written in words will prevail followed by unit price written in numbers then total amount bid per line item.

Unit prices are solely for the purpose of calculating and negotiating unanticipated, additional work beyond the scope detailed on the plans and specifications. Any additional work by the contractor without prior approval from Owner shall be at his own expense.

For a lump sum based bid, the item total is the bid amount the Division uses for bid comparison.

The LFUCG’s decision on the bid amount is final.

Contract award will be made based on the lump sum base bid with any combination of bid alternatives selected. Bid alternatives will be added or deducted from the lump sum base bid, if they are accepted, prior to Notice of Award being made.

OWNER reserves the right to accept or reject any bid alternatives to the lump sum base bid. Consideration of equipment alternatives of the selected Bidder will be made by OWNER within 60 days after the Effective Date of the Agreement.

Item No.	Description w/Unit Bid Price Written in Words	Quantity	Unit	Total Bid Amount
A.	Base Bid Scope of Work _____ Dollars _____ Cents (Lump Sum)		LS	\$ _____
B.	Bid Alternate #1 Fiber Cable/Infrastructure Installation _____ Dollars _____ Cents (Lump Sum)		LS	\$ _____
C.	Bid Alternate #2 General Construction Extended Warranty _____ Dollars _____ Cents (Lump Sum)		LS	\$ _____
D.	Bid Alternate #3 HVAC System Extended Warranty and Preventive Maintenance _____ Dollars _____ Cents (Lump Sum)		LS	\$ _____
E.	Bid Alternate #4 Upgrade HVAC Controls Server Software to Current Version _____ Dollars _____ Cents (Lump Sum)		LS	\$ _____

If a bid alternative is selected by OWNER, the awarded Contract price will include the selected alternative(s).

BID ALTERNATIVE #1: Fiber Cable/Infrastructure Installation

CONTRACTOR shall include in the cost of bid alternative ALL work associated with providing the scope listed below.

The price of \$ _____ shall be added to the contract lump sum base bid if OWNER elects to have CONTRACTOR provide and install all work related to providing fiber interduct; pull boxes, fiber cable, and all associated component parts to extend existing fiber from Fire Station #9, under Richmond Road along Life Lane and to the new Senior Citizen Center building communications entrance as noted on the construction documents. The fiber route is designated on the plans. All fiber will be placed underground. Scope is to include all work to complete the installation of fiber as described above and on the construction documents.

BID ALTERNATIVE #2: General Construction Extended Warranty

CONTRACTOR shall include in the cost of bid alternative ALL work associated with providing the scope listed below.

The price of \$ _____ shall be added to the contract lump sum base bid if OWNER elects to have CONTRACTOR to provide an additional 3 year warranty on construction by the General Contractor. The base bid includes a 2 year warranty on construction by the General Contractor. Acceptance of this alternate would increase the total warranty time to 5 years.

BID ALTERNATIVE #3: HVAC System Extended Warranty and Preventive Maintenance

CONTRACTOR shall include in the cost of bid alternative ALL work associated with providing the scope listed below.

The price of \$ _____ shall be added to the contract lump sum base bid if OWNER elects to have CONTRACTOR to provide an additional 2 years of HVAC warranty and preventive maintenance on all HVAC systems and related components. The base bid includes 3 years of warranty and preventive maintenance. Acceptance of this alternate would increase the total HVAC System Warranty and Preventive Maintenance to 5 years.

BID ALTERNATIVE #4: Update HVAC Controls Server Software to Current Version

CONTRACTOR shall include in the cost of bid alternative ALL work associated with providing the scope listed below.

The price of \$ _____ shall be added to the contract lump sum base bid if OWNER elects to have CONTRACTOR update the HVAC Controls server software to the most current version. The price shall include all licensing fees and configuration changes necessary to maintain full functionality of the existing buildings on the server.

UNIT PRICING

The following List of Unit Prices is required by the Owner to be completely executed and submitted with each Bidder's Proposal. Each unit price shall include the furnishing of all labor, materials, supplies and services, and shall include all items of cost, overhead and profit for the Contractor and any Sub-Contractors involved, and shall be used uniformly, without modification, for either additions or deductions from the Bid. These unit prices as established shall also be used to determine the equitable adjustment of the Contract Price in connection with changes, or extra work performed under the Contract.

A. Unit-Price No. 1: Removal of unsatisfactory soil and replacement with satisfactory soil material.

1. _____ Dollars (\$ _____) per CY.

B. Unit-Price No. 2: Rock excavation and replacement with satisfactory soil material.

1. _____ Dollars (\$ _____) per CY.

C. Unit-Price No. 3: Structural Over-Excavation (Soil)

1. _____ Dollars (\$ _____) per CY.

D. Unit-Price No. 4: Structural Over—Machine (Bedrock-Mass)

1. _____ Dollars (\$ _____) per CY.

E. Unit-Price No. 5: Structural Over-Excavation – Machine (Bedrock-Trench)

1. _____ Dollars (\$ _____) per CY.

F. Unit-Price No. 6: Structural Backfill (Compacted Crushed Stone)

1. _____ Dollars (\$ _____) per CY/Ton.

G. Unit-Price No. 7: Structural Backfill (Structural Flowable Fill)

1. _____ Dollars (\$ _____) per CY.

H. Unit-Price No. 8: Steel Geothermal Casing.

1. _____ Dollars (\$ _____) per LF.

I. Unit-Price No. 9: Provide Exit Sign

1. _____ Dollars (\$ _____) each.

J. Unit-Price No. 10: Provide Data Receptacle.

1. _____ Dollars (\$ _____) each.

K. Unit-Price No. 11: Provide Duplex Receptacle.

1. _____ Dollars (\$ _____) each.

L. Unit-Price No. 12: Provide Horn & Strobe Fire Alarm Device.

1. _____ Dollars (\$ _____) each.

M. Unit-Price No. 13: Provide Wall-Pack Exterior Lighting Fixture.

1. _____ Dollars (\$ _____) each.

N. Unit-Price No. 14: Provide 4" thick Concrete Sidewalk.

1. _____ Dollars (\$ _____) SF.

Submitted by:

Firm

Address

City, State & Zip

***Bid must be signed:
(original signature)***

Signature of Authorized Company Representative – Title

Representative/s Name (Typed or Printed)

Area Code – Phone – Extension

Fax #

E-Mail Address

OFFICIAL ADDRESS:

_____ (Seal if Bid is by Corporation)

By signing this form you agree to ALL terms, conditions, and associated forms in this bid package

5. **STATEMENT OF BIDDER'S QUALIFICATIONS**

The following statement of the Bidder's qualifications is required to be filled in, executed, and submitted with the Proposal:

- 1. Name of Bidder: _____
- 2. Permanent Place of Business: _____
- 3. When Organized: _____
- 4. Where Incorporated: _____
- 5. Construction Plant and Equipment Available for this Project:

(Attach Separate Sheet If Necessary)

- 6. Financial Condition:

If specifically requested by the OWNER, the apparent low Bidder is required to submit its latest three (3) years audited financial statements to the OWNER'S Division of Central Purchasing within seven (7) calendar days following the bid opening.
- 7. In the event the Contract is awarded to the undersigned, surety bonds will be furnished by:

(Surety)

Signed: _____ (Representative of Surety)

8. The following is a list of similar projects performed by the Bidder: (Attach separate sheet if necessary).

<u>NAME</u>	<u>LOCATION</u>	<u>CONTRACT SUM</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

9. The Bidder has now under contract and bonded the following projects:

<u>NAME</u>	<u>LOCATION</u>	<u>CONTRACT SUM</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

10. List Key Bidder Personnel who will work on this Project.

<u>NAME</u>	<u>POSITION DESCRIPTION</u>	<u>NO. OF YEARS WITH BIDDER</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

11. DBE Participation on current bonded projects under contract:

<u>SUBCONTRACTORS</u> <u>(LIST)</u>	<u>PROJECT</u> <u>(SPECIFIC TYPE)</u>	<u>DBE</u>	<u>% of WORK</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

(USE ADDITIONAL SHEETS IF NECESSARY)

12. We acknowledge that, if we are the apparent low Bidder, we may be required to submit to the OWNER within 7 calendar days following the Bid Opening, a sworn statement regarding all current work on hand and under contract, and a statement on the OWNER'S form of the experience of our officers, office management and field management personnel. Additionally, if requested by the OWNER, we will within 7 days following the request submit audited financial statements and loss history for insurance claims for the 3 most recent years (or a lesser period stipulated by the OWNER).

6. LIST OF PROPOSED MANUFACTURERS AND SUBCONTRACTORS

The following list of proposed manufacturers and subcontractors is required by the OWNER to be executed, completed and submitted with the BIDDER'S FORM OF PROPOSAL. All manufacturers and subcontractors are subject to approval of the Lexington-Fayette Urban County Government. Failure to submit this list completely filled out may be cause for rejection of bid.

<u>BRANCH OF WORK</u>	<u>SUBCONTRACTOR</u>	<u>DBE</u> % of Work <u>Yes/No</u>
1. General Labor	_____	
2. Site Clearing	_____	
3. Earthwork	_____	
4. Storm Drainage	_____	
5. Sanitary Distribution	_____	
6. Water Distribution	_____	
7. Site Concrete	_____	
8. Asphalt	_____	
9. Unit Paving/Permeable Pavers	_____	
10. Site Fencing and Furnishings	_____	
11. Plantings	_____	
12. Concrete	_____	
13. Masonry	_____	
14. Exterior Cladding	_____	
15. Structural Steel Erector	_____	
16. Structural Steel Fabricator	_____	
17. Cold-Formed Steel Stud Installer	_____	
18. Thermal Insulation	_____	
19. Roofing	_____	

- 20. Hollow Metal Doors and Frames _____
- 21. Aluminum Storefront/Curtain Wall _____
- 22. Door Hardware _____
- 23. Glazing _____
- 24. Gypsum Board / Metal Framing _____
- 25. Acoustic Panel/Tile Ceilings _____
- 26. Resilient Flooring _____
- 27. Painting _____
- 28. Fire Alarm System _____
- 29. Voice/Data _____
- 30. Fire Protection _____
- 31. Plumbing _____
- 32. Mechanical _____
- 33. Electrical _____
- 34. Geothermal _____
- 35. Sheet Metal _____
- 36. Controls _____
- 37. Final Cleaning _____

Materials and/or Equipment

Manufacturer or Brand Name

- 1. Veneer Stone _____
- 2. Precast Architectural Concrete _____
- 3. Laminate Cladding _____
- 4. Metal Plate Wall Panel _____
- 5. Formed Metal Wall Panel _____
- 6. Aluminum Storefront/Curtain Wall _____
- 7. EPDM Roofing _____

- 8. Metal Roofing _____
- 9. Polyisocyanurate Insulation _____
- 10. Batt Insulation _____
- 11. Flocked Resilient Floor Tile _____
- 12. Resilient Floor Tile _____
- 13. Resilient Floor Sheet _____
- 14. Cork Floor Tile _____
- 15. Wood Flooring _____
- 16. Acoustic Ceiling Panel _____
- 17. Gypsum Board _____
- 18. Interior Stair Railing _____
- 19. Locksets (attach list) _____
- 20. Washroom Accessories _____
- 21. Elevator _____
- 22. Water Source Heat Pumps _____
- 23. Plumbing Fixtures _____
- 24. Drinking Fountain _____
- 25. Energy Recovery Units _____
- 26. Hydronic Pumps _____
- 27. Grilles Registers & Diffusers _____
- 28. Fire Protection Sprinkler System _____
- 29. Fire Alarm System _____
- 30. Light Fixtures (attach list) _____
- 31. Panelboard, Switchboards, Disconnects _____
- 32. Fitness Equipment _____

7. **LEXINGTON FAYETTE URBAN COUNTY GOVERNMENT MWDBE PARTICIPATION GOALS, FORMS, AND GOOD FAITH EFFORTS**

A. GENERAL

- 1) The LFUCG request all potential contractors to make a concerted effort to include Minority-Owned (MBE), Woman-Owned (WBE) and Disadvantaged (DBE) Business Enterprises as subcontractors or suppliers in their bids.
- 2) Toward that end, the LFUCG has established 10% of total procurement costs as a Goal for participation of Minority-Owned, Woman-Owned and Disadvantaged Businesses on this contract.
- 3) **It is therefore a request of each Bidder to include in its bid, the same goal (10%) for MWDBE participation and other requirements as outlined in this section.**

B. PROCEDURES

- 1) The successful bidder will be required to report to the LFUCG, the dollar amounts of all payments submitted to Minority-Owned or Woman-Owned subcontractors and suppliers for work done or materials purchased for this contract. (See Subcontractor Monthly Payment Report)
- 2) Replacement of a Minority-Owned or Woman-Owned subcontractor or supplier listed in the original submittal must be requested in writing and must be accompanied by documentation of Good Faith Efforts to replace the subcontractor / supplier with another MWDBE Firm; this is subject to approval by the LFUCG. (See LFUCG MWDBE Substitution Form)
- 3) For assistance in identifying qualified, certified businesses to solicit for potential contracting opportunities, bidders may contact:
 - a) The Lexington-Fayette Urban County Government, Division of Central Purchasing (859-258-3320)
- 4) The LFUCG will make every effort to notify interested MWDBE subcontractors and suppliers of each Bid Package, including information on the scope of work, the pre-bid meeting time and location, the bid date, and all other pertinent information regarding the project.

C. DEFINITIONS

- 1) A Minority-Owned Business Enterprise (MBE) is defined as a business which is certified as being at least 51% owned and operated by persons of African American, Hispanic, Asian, Pacific Islander, American Indian or Alaskan Native Heritage.
- 2) A Woman-Owned Business Enterprise (WBE) is defined as a business which is certified as being at least 51% owned and operated by one or more Non-Minority Females.

- 3) A Disadvantaged Business (DBE) is defined as a business which is certified as being at least 51% owned and operated by a person(s) that are economically and socially disadvantaged.
- 4) Good Faith Efforts are efforts that, given all relevant circumstances, a bidder or proposer actively and aggressively seeking to meet the goals, can reasonably be expected to make. In evaluating good faith efforts made toward achieving the goals, whether the bidder or proposer has performed the efforts outlined in the Obligations of Bidder for Good Faith Efforts outlined in this document will be considered, along with any other relevant factors.

D. OBLIGATION OF BIDDER FOR GOOD FAITH EFFORTS

- 1) **The bidder shall make a Good Faith Effort to achieve the Participation Goal for MWDBE subcontractors/suppliers. The failure to meet the goal shall not necessarily be cause for disqualification of the bidder; however, bidders not meeting the goal are required to furnish with their bids written documentation of their Good Faith Efforts to do so.**
- 2) Award of Contract shall be conditioned upon satisfaction of the requirements set forth herein.
- 3) The Form of Proposal includes a section entitled "MWDBE Participation Form". The applicable information must be completed and submitted as outlined below.
- 4) **Failure to submit this information as requested may be cause for rejection of bid.**

E. DOCUMENTATION REQUIRED FOR GOOD FAITH EFFORTS

- 1) Bidders reaching the Goal are required to submit only the MWDBE Participation Form." The form must be fully completed including names and telephone number of participating MWDBE firm(s); type of work to be performed; estimated value of the contract and value expressed as a percentage of the total Lump Sum Bid Price. The form must be signed and dated, and is to be submitted with the bid.
- 2) Bidders not reaching the Goal must submit the "MWDBE Participation Form", the "Quote Summary Form" and a written statement documenting their Good Faith Effort to do so. If bid includes no MWDBE participation, bidder shall enter "None" on the subcontractor / supplier form). In addition, the bidder must submit written proof of their Good Faith Efforts to meet the Participation Goal:
 - a. Advertised opportunities to participate in the contract in at least two (2) publications of general circulation media; trade and professional association publications; small and minority business or trade publications; and publications or trades targeting minority, women and disadvantaged businesses not less than fifteen (15) days prior to the deadline for submission of bids to allow MWDBE firms to participate.
 - b. Included documentation of advertising in the above publications with the bidders good faith efforts package

- c. Attended LFUCG Central Purchasing Economic Inclusion Outreach event
- d. Attended pre-bid meetings that were scheduled by LFUCG to inform MWDBEs of subcontracting opportunities
- e. Sponsored Economic Inclusion event to provide networking opportunities for prime contractors and MWDBE firms
- f. Requested a list of MWDBE subcontractors or suppliers from LFUCG Economic Engine and showed evidence of contacting the companies on the list(s).
- g. Contacted organizations that work with MWDBE companies for assistance in finding certified MWDBE firms to work on this project. Those contacted and their responses should be a part of the bidder's good faith efforts documentation.
- h. Sent written notices, by certified mail, email or facsimile, to qualified, certified MWDBEs soliciting their participation in the contract not less than seven (7) days prior to the deadline for submission of bids to allow them to participate effectively.
- i. Followed up initial solicitations by contacting MWDBEs to determine their level of interest.
- j. Provided the interested MWDBE firm with adequate and timely information about the plans, specifications, and requirements of the contract.
- k. Selected portions of the work to be performed by MWDBE firms in order to increase the likelihood of meeting the contract goals. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate MWDBE participation, even when the prime contractor may otherwise perform these work items with its own workforce
- l. Negotiated in good faith with interested MWDBE firms not rejecting them as unqualified without sound reasons based on a thorough investigation of their capabilities. Any rejection should be so noted in writing with a description as to why an agreement could not be reached.
- m. Included documentation of quotations received from interested MWDBE firms which were not used due to uncompetitive pricing or were rejected as unacceptable and/or copies of responses from firms indicating that they would not be submitting a bid.
- n. Bidder has to submit sound reasons why the quotations were considered unacceptable. The fact that the bidder has the ability and/or desire to perform the contract work with its own forces will not be considered a sound reason for rejecting a

MWDBE quote. Nothing in this provision shall be construed to require the bidder to accept unreasonable quotes in order to satisfy MWDBE goals.

o. Made an effort to offer assistance to or refer interested MWDBE firms to obtain the necessary equipment, supplies, materials, insurance and/or bonding to satisfy the work requirements of the bid proposal

p. Made efforts to expand the search for MWBE firms beyond the usual geographic boundaries.

q. Other--any other evidence that the bidder submits which may show that the bidder has made reasonable good faith efforts to include MWDBE participation.

Failure to submit any of the documentation requested in this section may be cause for rejection of bid. Bidders may include any other documentation deemed relevant to this requirement. Documentation of Good Faith Efforts are to be submitted with the Bid, if the participation Goal is not met.



MINORITY BUSINESS ENTERPRISE PROGRAM

Marilyn Clark
Minority Business Enterprise Liaison
Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street
Lexington, KY 40507
mclark@lexingtonky.gov
859-258-3323

OUR MISSION: The mission of the Minority Business Enterprise Program is to facilitate the full participation of minority and women owned businesses in the procurement process and to promote economic inclusion as a business imperative essential to the long term economic viability of Lexington-Fayette Urban County Government.

To that end the city council adopted and implemented resolution 167-91—Disadvantaged Business Enterprise (DBE) 10% Goal Plan in July of 1991. The resolution states in part (a full copy is available in Central Purchasing):

“A Resolution supporting adoption of the administrative plan for a ten percent (10%) Minimum goal for disadvantaged business enterprise participation in Lexington-Fayette Urban County Government construction and professional services contracts; Providing that as part of their bids on LFUCG construction contracts, general Contractors shall make a good faith effort to award at least ten percent (10%) of All subcontracts to disadvantaged business enterprises; providing that divisions of LFUCG shall make a good faith effort to award at least ten percent of their Professional services and other contracts to disadvantaged business enterprises...”

A Disadvantaged Business Enterprise is defined as a business that has been certified as being at least 51% owned, operated and managed by a U.S. Citizen of the following groups:

- African-American
- Hispanic-American
- Asian/Pacific Islander
- Native American/Native Alaskan
- Non-Minority Female
- Economically and Socially Disadvantaged

We have compiled the list below to help you locate certified MBE, WBE and DBE certified businesses. Below is a listing of contacts for LFUCG Certified MWDBEs in Economic Engine (<https://lfucg.economicengine.com>)

Business	Contact	Email Address	Phone
LFUCG	Marilyn Clark	mclark@lexingtonky.gov	859-258-3323
Commerce Lexington - Minority Business Development	Tyrone Tyra	ttyra@commercelexington.com	859-226-1625
Tri-State Minority Supplier Diversity Council	Sonya Brown	sbrown@tsmsdc.com	502-625-0137
Small Business Development Council	Dee Dee Harbut UK SBDC	dharbut@uky.edu	
	Shiree Mack	smack@uky.edu	
Community Ventures Corporation	James Coles	jcoles@cycky.org	859-231-0054
KY Department of Transportation	Melvin Bynes	Melvin.bynes@ky.gov	502-564-3601
	Shella Eagle	Shella.Eagle@ky.gov	502-564-3601
Ohio River Valley Women's Business Council (WBENC)	Rea Waldon	rwaldon@gcul.org	513-487-6534
Kentucky MWBE Certification Program	Yvette Smith, Kentucky Finance Cabinet	Yvette.Smith@ky.gov	502-564-8099
National Women Business Owner's Council (NWBOC)	Janet Harris-Lange	janet@nwbo.org	800-675-5066
Small Business Administration	Robert Coffey	robertcoffey@sba.gov	502-582-5971
LaVoz de Kentucky	Andres Cruz	lavozydeky@yahoo.com	859-621-2106
The Key News Journal	Patrice Muhammad	paatricem@keynewsjournal.com	859-373-9428



LFUCG MWDBE PARTICIPATION FORM

Bid/RFP/Quote Reference # _____

The MWDBE subcontractors listed have agreed to participate on this Bid/RFP/Quote. If any substitution is made or the total value of the work is changed prior to or after the job is in progress, it is understood that those substitutions must be submitted to Central Purchasing for approval immediately.

MWDBE Company, Name, Address, Phone, Email	Work to be Performed	Total Dollar Value of the Work	% Value of Total Contract
1.			
2.			
3.			
4.			

The undersigned company representative submits the above list of MWDBE firms to be used in accomplishing the work contained in this Bid/RFP/Quote. Any misrepresentation may result in the termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and false claims.

Company

Company Representative

Date _____

Title _____



LFUCG MWDBE SUBSTITUTION FORM

Bid/RFP/Quote Reference # _____

The substituted MWDBE subcontractors listed below have agreed to participate on this Bid/RFP/Quote. These substitutions were made prior to or after the job was in progress. These substitutions were made for reasons stated below and are now being submitted to Central Purchasing for approval. By the authorized signature of a representative of our company, we understand that this information will be entered into our file for this project.

SUBSTITUTED MWDBE Company Name, Address, Phone, Email	MWDBE Formally Contracted/ Name, Address, Phone, Email	Work to Be Performed	Reason for the Substitution	Total Dollar Value of the Work	% Value of Total Contract
1.					
2.					
3.					
4.					

The undersigned acknowledges that any misrepresentation may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and false claims.

Company _____

Company Representative _____

Date _____

Title _____



MWDBE QUOTE SUMMARY FORM

Bid/RFP/Quote Reference # _____

The undersigned acknowledges that the minority subcontractors listed on this form did submit a quote to participate on this project.

Company Name	Contact Person
Address/Phone/Email	Bid Package / Bid Date

MWDBE Company Address	Contact Person	Contact Information (work phone, Email, cell)	Date Contacted	Services to be performed	Method of Communication (email, phone meeting, ad, event etc)	Total dollars \$\$ Do Not Leave Blank (Attach Documentation)	MBE * AA HA AS NA Female

(MBE designation / AA=African American / HA= Hispanic American/AS = Asian American/Pacific Islander/ NA= Native American)

The undersigned acknowledges that all information is accurate. Any misrepresentation may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and claims.

Company

Company Representative

Date

Title



LFUCG SUBCONTRACTOR MONTHLY PAYMENT REPORT

The LFUCG has a 10% goal plan adopted by city council to increase the participation of minority and women owned businesses in the procurement process. In order to measure that goal LFUCG will track spending with MWDBE vendors on a monthly basis. By the signature below of an authorized company representative, you certify that the information is correct, and that each of the representations set forth below is true. Any misrepresentation may result in termination of the contract and/or prosecution under applicable Federal and State laws concerning false statements and false claims. Please submit this form monthly to the Division of Central Purchasing/ 200 East Main Street / Room 338 / Lexington, KY 40507.

Bid/RFP/Quote # _____
Total Contract Amount Awarded to Prime Contractor for this Project _____

Project Name/ Contract #	Work Period/ From: _____ To: _____
Company Name:	Address:
Federal Tax ID:	Contact Person:

Subcontractor Vendor ID (name, address, phone, email)	Description of Work	Total Subcontract Amount	% of Total Contract Awarded to Prime for this Project	Total Amount Paid for this Period	Purchase Order number for subcontractor work (please attach PO)	Scheduled Project Start Date	Scheduled Project End Date

By the signature below of an authorized company representative, you certify that the information is correct, and that each of the representations set forth below is true. Any misrepresentations may result in the termination of the contract and/or prosecution under applicable Federal and State laws concerning false statements and false claims.

 Company

 Company Representative

Date

Title

LFUCG STATEMENT OF GOOD FAITH EFFORTS

Bid/RFP/Quote # _____

By the signature below of an authorized company representative, we certify that we have utilized the following Good Faith Efforts to obtain the maximum participation by MWDBE business enterprises on the project and can supply the appropriate documentation.

_____ Advertised opportunities to participate in the contract in at least two (2) publications of general circulation media; trade and professional association publications; small and minority business or trade publications; and publications or trades targeting minority, women and disadvantaged businesses not less than fifteen (15) days prior to the deadline for submission of bids to allow MWDBE firms to participate.

_____ Included documentation of advertising in the above publications with the bidders good faith efforts package

_____ Attended LFUCG Central Purchasing Economic Inclusion Outreach event

_____ Attended pre-bid meetings that were scheduled by LFUCG to inform MWDBEs of subcontracting opportunities

_____ Sponsored Economic Inclusion event to provide networking opportunities for prime contractors and MWDBE firms

_____ Requested a list of MWDBE subcontractors or suppliers from LFUCG Economic Engine and showed evidence of contacting the companies on the list(s).

_____ Contacted organizations that work with MWDBE companies for assistance in finding certified MWDBE firms to work on this project. Those contacted and their responses should be a part of the bidder's good faith efforts documentation.

_____ Sent written notices, by certified mail, email or facsimile, to qualified, certified MWDBEs soliciting their participation in the contract not less than seven (7) days prior to the deadline for submission of bids to allow them to participate effectively.

_____ Followed up initial solicitations by contacting MWDBEs to determine their level of interest.

_____ Provided the interested MWDBE firm with adequate and timely information about the plans, specifications, and requirements of the contract.

- _____ Selected portions of the work to be performed by MWDBE firms in order to increase the likelihood of meeting the contract goals. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate MWDBE participation, even when the prime contractor may otherwise perform these work items with its own workforce

- _____ Negotiated in good faith with interested MWDBE firms not rejecting them as unqualified without sound reasons based on a thorough investigation of their capabilities. Any rejection should be so noted in writing with a description as to why an agreement could not be reached.

- _____ Included documentation of quotations received from interested MWDBE firms which were not used due to uncompetitive pricing or were rejected as unacceptable and/or copies of responses from firms indicating that they would not be submitting a bid.

- _____ Bidder has to submit sound reasons why the quotations were considered unacceptable. The fact that the bidder has the ability and/or desire to perform the contract work with its own forces will not be considered a sound reason for rejecting a MWDBE quote. Nothing in this provision shall be construed to require the bidder to accept unreasonable quotes in order to satisfy MWDBE goals.

- _____ Made an effort to offer assistance to or refer interested MWDBE firms to obtain the necessary equipment, supplies, materials, insurance and/or bonding to satisfy the work requirements of the bid proposal

- _____ Made efforts to expand the search for MWDBE firms beyond the usual geographic boundaries.

- _____ Other - any other evidence that the bidder submits which may show that the bidder has made reasonable good faith efforts to include MWDBE participation.

Failure to submit any of the documentation requested in this section may be cause for rejection of bid. Bidders may include any other documentation deemed relevant to this requirement. Documentation of Good Faith Efforts are to be submitted with the Bid, if the participation Goal is not met.

The undersigned acknowledges that all information is accurate. Any misrepresentations may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and claims.

Company

Company Representative

Date

Title

8. AUTHENTICATION OF BID AND STATEMENT OF NON-COLLUSION, NON-CONFLICT OF INTEREST

I hereby swear (or affirm) under the penalty for false swearing:

1. That I am the Bidder (if the Bidder is an individual), a partner of the Bidder (if the Bidder is a partnership), or an officer or employee of the bidding corporation having authority to sign on its behalf (if the Bidder is a corporation);
2. That the attached bid has been arrived at by the Bidder independently, and has been submitted without collusion with, and without any agreement, understanding or planned common course of action, with any other contractor, vendor of materials, supplies, equipment or services described in the Invitation to Bid, designed to limit independent bidding or competition;
3. That the contents of the bid or bids have not been communicated by the Bidder or its employees or agents to any person not an employee or agent of the Bidder or its surety on any bond furnished, with the bid or bids, and will not be communicated to any such person, prior to the official opening of the bid or bids;
4. That the Bidder is legally entitled to enter into the contracts with the Lexington-Fayette Urban County Government, and is not in violation of any prohibited conflict of interest;
5. (Applicable to corporation only) That as a foreign corporation, we are registered with the Secretary of State, Commonwealth of Kentucky, and authorized to do business in the State _____ or, that as a domestic corporation, we are in good standing with the Secretary of State, Commonwealth of Kentucky _____. Check the statement applicable.
6. This offer is for 60 calendar days from the date this bid is opened. In submitting the above, it is expressly agreed that, upon proper acceptance by the Lexington-Fayette Urban County Government of any or all items bid above, a contract shall thereby be created with respect to the items accepted.
7. That I have fully informed myself regarding the accuracy of the statements made in this statement.
8. That I certify that Subcontractors have not and will not be awarded to any firm(s) that have been debarred from noncompliance with the Federal Labor Standards, Title VI of the Civil Rights Act of 1964 As Amended, Executive Order 11246 As Amended or any other Federal Law.

9. STATEMENT OF EXPERIENCE

NAME OF INDIVIDUAL: _____

POSITION/TITLE: _____

STATEMENT OF EXPERIENCE: _____

NAME OF INDIVIDUAL: _____

POSITION/TITLE: _____

STATEMENT OF EXPERIENCE: _____

NAME OF INDIVIDUAL: _____

POSITION/TITLE: _____

STATEMENT OF EXPERIENCE: _____

NAME OF INDIVIDUAL: _____

POSITION/TITLE: _____

STATEMENT OF EXPERIENCE: _____

NAME OF INDIVIDUAL: _____

POSITION/TITLE: _____

STATEMENT OF EXPERIENCE: _____

NAME OF INDIVIDUAL: _____

POSITION/TITLE: _____

STATEMENT OF EXPERIENCE: _____

* Include all officers, office management's, Affirmative Action officials, and field management personnel. (Attach separate sheets if necessary.)

10. EQUAL OPPORTUNITY AGREEMENT

The Law

- * Title VII of the Civil Rights Act of 1964 (amended 1972) states that it is unlawful for an employer to discriminate in employment because of race, color, religion, sex, age (40-70 years) or national origin.
- * Executive Order No. 11246 on Nondiscrimination under Federal contract prohibits employment discrimination by contractor and subcontractor doing business with the Federal Government or recipients of Federal funds. This order was later amended by Executive Order No. 11375 to prohibit discrimination on the basis of sex.
- * Section 503 of the Rehabilitation Act of 1973 States:
The Contractor will not discriminate against any employee or applicant for employment because of physical or mental handicap.
- * Section 2012 of the Vietnam Era Veterans Readjustment Act of 1973 requires Affirmative Action on behalf of disabled veterans and veterans of the Vietnam Era by contractors having Federal Contracts.
- * Section 206 (A) of Executive Order 12086, Consolidation of Contract Compliance Functions for Equal Employment Opportunity, states:
The Secretary of Labor may investigate the employment practices of any Government contractor or sub-contractor to determine whether or not the contractual provisions specified in Section 202 of this order have been violated.

The Lexington-Fayette Urban County Government practices Equal Opportunity in recruiting, hiring and promoting. It is the Government's intent to affirmatively provide employment opportunities for those individuals who have previously not been allowed to enter into the mainstream of society. Because of its importance to the local Government, this policy carries the full endorsement of the Mayor, Commissioners, Directors, and all supervisory personnel. In following this commitment to Equal Employment Opportunity and because the Government is the benefactor of the Federal funds, it is both against the Urban County Government policy and illegal for the Government to let contracts to companies which knowingly or unknowingly practice discrimination in their employment practices. Violation of the above mentioned ordinances may cause a contract to be canceled and the contractor may be declared ineligible for future consideration.

Please sign this statement in the appropriate space acknowledging that you have read and understand the provisions contained herein. Return this document as part of your application packet.

Bidders

I/We agree to comply with the Civil Rights Laws listed above that govern employment rights of minorities, women, Vietnam veterans, handicapped, and aged persons.

Signature

Name of Business

The Entity (regardless of whether construction contractor, non-construction contractor or supplier) agrees to provide equal opportunity in employment for all qualified persons, to prohibit discrimination in employment because of race, color, creed, national origin, sex or age, and to promote equal employment through a positive, continuing program from itself and each of its sub-contracting agents. This program of equal employment opportunity shall apply to every aspect of its employment policies and practices.

The Kentucky equal Employment Opportunity Act of 1978 (KRS 45.560-45.640) requires that any count, city, town, school district, water district, hospital district, or other political subdivision of the state shall include in directly or indirectly publicly funded contracts for supplies, materials, services, or equipment hereinafter entered into the following provisions:

During the performance of this contract, the contractor agrees as follows:

- (1) *The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, age or national origin;*
- (2) *The contractor will state in all solicitations or advertisements for employees placed by or on behalf of the contractors that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, age or national origin;*
- (3) *The contract will post notices in conspicuous places, available to employees and applicants for employment, setting forth the provisions of the non-discrimination clauses required by this section; and*
- (4) *The contractor will send a notice to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding advising the labor union or workers' representative of the contractor's commitments under the nondiscrimination clauses.*

The Act further provides:

KRS 45.610. Hiring minorities – Information required

- (1) *For the length of the contract, each contractor shall hire minorities from other sources within the drawing area, should the union with which he has collective bargaining agreements be unwilling to supply sufficient minorities to satisfy the agreed upon goals and timetable.*
- (2) *Each contractor shall, for the length of the contract, furnish such information as required by KRS 45.560 to KRS 45.640 and by such rules, regulations and orders issued pursuant thereto and will permit access to all books and records pertaining to his employment practices and work sites by the contracting agency and the department for purposes of investigation to ascertain compliance with KRS 45.560 to 45.640 and such rules, regulations and orders issued pursuant thereto.*

KRS 45.620. Action against contractor – Hiring of minority contractor or subcontractor

- (1) *If any contractor is found by the department to have engaged in an unlawful practice under this chapter during the course of performing under a contract or subcontract covered under KRS 45.560 to 45.640, the department shall so certify to the contracting agency and such certification shall be binding upon the contracting agency unless it is reversed in the course of judicial review.*
- (2) *If the contractor is found to have committed an unlawful practice under KRS 45.560 to 45.640, the contracting agency may cancel or terminate the contract, conditioned upon a program for future compliance approved by the contracting agency and the department. The contracting agency may declare such a contractor ineligible to bid on further contracts with that agency until such time as the contractor complies in full with the requirements of KRS 45.560 – 45.640.*
- (3) *The equal employment provisions of KRS 45.560 to 45.640 may be met in part by a contractor by subcontracting to a minority contractor or subcontractor. For the provisions of KRS 45.560 to 45.640, a minority contractor or subcontractor shall mean a business that is owned and controlled by one or more persons disadvantaged by racial or ethnic circumstances.*

KRS 45.630 Termination of existing employee not required, when

Any provision of KRS 45.560 to 45.640 notwithstanding, no contractor shall be required to terminate an existing employee upon proof that that employee was employed prior to the date of the contract.

KRS 45.640 Minimum skills

Nothing in KRS 45.560 to 45.640 shall require a contractor to hire anyone who fails to demonstrate the minimum skills required to perform a particular job.

It is recommended that all of the provisions quoted above to be included as special conditions in each contract. In the case of a contract exceeding \$250,000, the contractor is required to furnish evidence that his work-force in Kentucky is representative of the available work-force in the area from which he draws employees, or to supply an Affirmative Action plan which will achieve such representation during the life of the contract.

11. **EQUAL EMPLOYMENT OPPORTUNITY AFFIRMATIVE ACTION POLICY**

It is the policy of _____
to assure that all applicants for employment and all employees are treated on a fair and equitable basis without regard to their race, religion, sex, color, handicap, natural origin or age.

Such action shall include employment, promotion, demotion, recruitment or recruitment advertising, layoff or termination, rates of pay and other forms of compensation, and selection for training, whether apprenticeship and/or on-the-job-training.

Furthermore, this company agrees to make special recruitment efforts to hire the protected class whenever feasible. This company also agrees to adhere to all applicable federal, state, and local laws relating to Equal Employment Opportunity for all individuals.

12. WORKFORCE ANALYSIS FORM

Name of Organization: _____ Date: _____ / _____ / _____

Categories	Total		White		Black		Other		Total	
	M	F	M	F	M	F	M	F	M	F
Administrators										
Professionals										
Superintendents										
Supervisors										
Foremen										
Technicians										
Protective Service										
Para-Professionals										
Office/Clerical										
Skilled Craft										
Service/Maintenance										
Total:										

Prepared By: _____

13. EVIDENCE OF INSURABILITY

LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT CONSTRUCTION PROJECT

(Use separate form for each Agency or Brokerage agreeing to provide coverage)

Names Insured: _____ Employee ID: _____

Address: _____ Phone: _____

Project to be insured: _____

In lieu of obtaining certificates of insurance at this time, the undersigned agrees to provide the above Named Insured with the minimum coverage listed below. These are outlined in the Insurance and Risk Management of Part V (Special Conditions), including all requirements, and conditions:

Section Items	Coverage	Minimum Limits and Policy Requirements	Limits Provided To Insured	Name of Insurer	A.M. Best's Code	Rating
SC-3, Section 2, Part 4.1 – see provisions	CGL	\$1,000,000 per occ. And \$2,000,000 aggregate	\$			
SC-3, Section 2, Part 4.1 – see provisions	AUTO	\$2,000,000/per occ.	\$			
SC-3, Section 2, Part 4.1 – see provisions	WC	Statutory w /endorsement as noted	\$			

Section 2 includes required provisions, statements regarding insurance requirements, and the undersigned agrees to abide by all provisions for the coverage's checked above unless stated otherwise when submitting.

Agency or Brokerage _____ Name of Authorized Representative _____

Street Address _____ Title _____

City _____ State _____ Zip _____ Authorized Signature _____

Telephone Number _____ Date _____

NOTE: Authorized signatures may be the agent's if agent has placed insurance through an agency agreement with the insurer. If insurance is brokered, authorized signature must be that of authorized representative of insurer.

IMPORTANT: Contract may not be awarded if a completed and signed copy of this form for all coverage's listed above is not provided with the bid.

14. DEBARRED FIRMS

PROJECT NAME: _____

BID NUMBER: _____

**LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
LEXINGTON, KY**

All prime Contractors shall certify that Subcontractors have not and will not be awarded to any firms that has been debarred for noncompliance with the Federal Labor Standards, Title VI of the Civil Rights Act of 1964 As Amended, Executive Order 11246 As Amended or any other Federal Law.

All bidders shall complete the attached certification in duplicate and submit both copies to the Owner with the bid proposal. The Owner (grantee) shall transmit one copy to the Lexington-Fayette Urban County Government, Division of Community Development, within fourteen (14) days after bid opening.

The undersigned hereby certifies that the firm of _____ has not and will not award a subcontract, in connection with any contract award to it as the result of this bid, to any firm that has been debarred for noncompliance with the Federal labor Standards, Title VI of the civil Rights Act of 1964, Executive Order 11246 as amended or any Federal Law.

Name of Firm Submitting Bid

Signature of Authorized Official

Title

Date

15. DEBARMENT CERTIFICATION

All contractors/subcontractors shall complete the following certification and submit it with the bid proposal.

The contractor/subcontractor certifies in accordance with Executive Order 12549 (Debarment and Suspension 2/18/86) that to the best of its knowledge and belief, that it and its principals:

- 1) Are not presently debarred, suspended, proposed for debarment, declared negligible, or voluntarily excluded from covered transactions or contract by any Federal department or agency for noncompliance with the Federal Labor Standards, Title VI of the Civil Rights Act of 1964 as amended, Executive Order 11246 as amended or any other Federal law;
 - a) Have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
 - b) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(a) of this certification; and
 - c) Have not within a three year period preceding this bid has one or more public (Federal, State or local) transactions or contracts terminated for cause or default.
- 2) Where the contractor is unable to certify to any of the statements in this certification, such prospective contractors shall attach an explanation to this certification form.

Firm Name: _____

Project: _____

Printed Name and Title of Authorized Representative: _____

Signature: _____

Date: _____

END OF SECTION

PART IV
GENERAL CONDITIONS
TABLE OF CONTENTS

Article Number	Title	Page
1.	DEFINITIONS	GC-6
2.	PRELIMINARY MATTERS.....	GC-10
3.	CONTRACT DOCUMENTS: INTENT, CONFLICTS, AMENDING AND REUSE	GC-11
4.	AVAILABILITY OF LANDS; PHYSICAL CONDITIONS; REFERENCE POINTS	GC-13
5.	CONTRACTOR'S RESPONSIBILITIES	GC-15
6.	OTHER WORK	GC-26
7.	OWNER'S RESPONSIBILITIES.....	GC-27
8.	ARCHITECT'S STATUS DURING CONSTRUCTION.....	GC-28
9.	CHANGES IN THE WORK	GC-30
10.	CHANGE OF CONTRACT PRICE.....	GC-31
11.	CHANGE OF CONTRACT TIME	GC-38
12.	WARRANTY AND GUARANTEE; TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK.....	GC-38
13.	PAYMENTS TO CONTRACTOR AND COMPLETION	GC-42
14.	SUSPENSION OF WORK AND TERMINATION.....	GC-45
15.	MISCELLANEOUS	GC-48

DETAILED TABLE OF CONTENTS OF GENERAL CONDITIONS

1. Definitions
2. Preliminary Matters
 - 2.1 Delivery of Bonds
 - 2.2 Copies of Documents
 - 2.3 Commencement of Contract Time; Notice to Proceed
 - 2.4 Starting the Project
 - 2.5 Before Starting Construction
 - 2.6 Submittal of Schedules
 - 2.7 Preconstruction Conference
 - 2.8 Finalizing Schedules
3. Contract Documents, Intent, Conflicts, Amending, and Reuse
 - 3.1 General
 - 3.2 Intent
 - 3.3 Conflicts
 - 3.4 Amending and Supplementing Contract Documents
 - 3.5 Reuse of Documents
4. Availability of Lands, Physical Conditions, Reference Points
 - 4.1 Availability of Lands
 - 4.2 Physical Conditions
 - 4.3 Physical Conditions - Underground Facilities
 - 4.4 Reference Points
5. CONTRACTOR'S Responsibilities
 - 5.1 Supervision
 - 5.2 Superintendence
 - 5.3 Labor
 - 5.4 Start-Up and Completion of Work
 - 5.5 Materials and Equipment
 - 5.6 Adjusting Progress Schedule
 - 5.7 Substitutes or "Or-Equal" Items
 - 5.8 Subcontractors, Suppliers and Others
 - 5.9 Patent Fees and Royalties
 - 5.10 Permits
 - 5.11 Laws and Regulations
 - 5.12 Taxes
 - 5.13 Use of Premises

- 5.14 Record Drawings
- 5.15 Shop Drawings and Samples
- 5.16 Continuing the Work
- 5.17 Erosion and Sediment Control

- 6. Other Work
 - 6.1 Related Work at Site
 - 6.2 Other Contractors or Utility Owners
 - 6.3 Delays Caused By Others
 - 6.4 Coordination

- 7. OWNER'S Responsibilities
 - 7.1 Communications
 - 7.2 Data and Payments
 - 7.3 Lands, Easements, and Surveys
 - 7.4 Change Orders
 - 7.5 Inspections, Tests, and Approvals
 - 7.6 Stop or Suspend Work

- 8. ARCHITECT'S Status During Construction
 - 8.1 OWNER'S Representative
 - 8.2 Visits to Site
 - 8.3 Project Representation
 - 8.4 Clarification and Interpretations
 - 8.5 Authorized Variations in Work
 - 8.6 Rejecting Defective Work
 - 8.7 Shop Drawings
 - 8.8 Change Orders
 - 8.9 Payments
 - 8.10 Determinations for Unit Prices
 - 8.11 Decisions on Disputes
 - 8.12 Limitations on ARCHITECT'S Responsibilities

- 9. Changes in the Work
 - 9.1 OWNER May Order Changes
 - 9.2 Claims
 - 9.3 Work Not in Contract Documents
 - 9.4 Change Orders
 - 9.5 Notice of Change

10. Change of Contract Price
 - 10.1 Total Compensation
 - 10.2 Claim for Increase or Decrease in Price
 - 10.3 Value of Work
 - 10.4 Cost of the Work
 - 10.5 Not to Be Included in Cost of the Work
 - 10.6 CONTRACTOR'S Fee
 - 10.7 Itemized Cost Breakdown
 - 10.8 Cash Allowance
 - 10.9 Unit Price Work

11. Change of Contract Time
 - 11.1 Change Order
 - 11.2 Justification for Time Extension
 - 11.3 Time Limits

12. Warranty and Guarantee; Tests and Inspections; Correction, Removal or Acceptance of Defective Work
 - 12.1 Warranty and Guarantee
 - 12.2 Access to Work
 - 12.3 Tests and Inspections
 - 12.4 OWNER May Stop Work
 - 12.5 Correction or Removal of Defective Work
 - 12.6 One Year Correction Period
 - 12.7 Acceptance of Defective work
 - 12.8 OWNER May Correct Defective Work

13. Payments to CONTRACTOR and Completion
 - 13.1 Schedule of Values
 - 13.2 Application for Progress Payments
 - 13.3 CONTRACTOR'S Warranty of Title
 - 13.4 Review of Application for Progress Payments
 - 13.5 Partial Utilization
 - 13.6 Final Inspection
 - 13.7 Final Application for Payment
 - 13.8 Final Payment and Acceptance
 - 13.9 CONTRACTOR'S Continuing Obligation
 - 13.10 Waiver of Claims

14. Suspension of Work and Termination

- 14.1 OWNER May Suspend Work
- 14.2 OWNER May Terminate
- 14.3 CONTRACTOR'S Services Terminated
- 14.4 Payment After Termination
- 14.5 CONTRACTOR May Stop or Terminate

15. Miscellaneous

- 15.1 Claims for Injury or Damage
- 15.2 Non-Discrimination in Employment
- 15.3 Temporary Street Closing or Blockage
- 15.4 Percentage of Work Performed by Prime CONTRACTOR
- 15.5 Clean-up
- 15.6 General
- 15.7 Debris Disposal

END OF SECTION

PART IV
GENERAL CONDITIONS

1. DEFINITIONS

Wherever used in these General Conditions or the other Contract Documents, the following terms have the meanings indicated which are applicable to both the singular and plural thereof.

1.1 Addenda

Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bid Documents or the Contract Documents.

1.2 Agreement

The written agreement between OWNER and CONTRACTOR covering the Work to be performed; other Contract Documents are attached to the Agreement and made a part thereof as provided therein.

1.3 Application for Payment

The form accepted by OWNER which is to be used by CONTRACTOR in requesting progress or final payments and which is to include such supporting documentation as is required by the Contract Documents.

1.4 Bid

The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

1.5 Bidder

An individual, partnership, or corporation, who submit a Bid for a prime contract with the OWNER, for the Work described in the proposed Contract Documents.

1.6 Bonds

Bid, performance and payment bonds and other instruments of security.

1.7 Calendar Day

A calendar day of twenty-four hours measured from midnight to the next midnight shall constitute a day.

1.8 Change Order

A document recommended by ARCHITECT, which is signed by CONTRACTOR and OWNER and authorizes an addition, deletion or revision in the Work, or an adjustment in the Contract Price or the Contract Time, issued on or after the Effective Date of the Agreement.

1.9 Contract Documents

The Advertisement for Bidders, Information for Bidders, Agreement, Addenda (which pertain to the Contract Documents), CONTRACTOR'S Bid (including documentation accompanying the Bid and any post-bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Agreement, the Bonds, these General Conditions, the Special Conditions, the Specifications and the Drawings as the same are more specifically identified in the Agreement, together with all amendments, modifications and supplements.

1.10 Contract Unit Price

The monies payable by OWNER to CONTRACTOR under the Contract Documents as stated in the Agreement. Unit Prices are to be firm for the term of this Contract.

1.11 Contract Time

The number of consecutive calendar days between the date of issuance of the Notice to Proceed and the contract completion date.

1.12 CONTRACTOR

The person, firm or corporation with whom OWNER has entered into the Agreement.

1.13 Defective

An adjective which when modifying the word Work refers to Work that is unsatisfactory, faulty or deficient, or does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents, or has been damaged prior to ARCHITECT'S recommendation of final payment (unless responsibility for the protection thereof has been assumed by OWNER).

1.13 Drawings

The drawings which show the character and scope of the Work to be performed and which have been prepared or approved by ARCHITECT and are referred to in the Contract Documents.

1.15 Effective Date of the Agreement

The date indicated in the Agreement on which it becomes effective.

1.16 ARCHITECT

Consultant, or its authorized representative, hired by the Lexington-Fayette Urban County Government Department of General Services to represent OWNER on the Project.

1.17 Field Order

A documented order issued by ARCHITECT which orders minor changes in the Work, but which does not involve a change in the Contract Price or the Contract Time.

- 1.18 Giving Notice**
Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.
- 1.19 Laws and Regulations**
Laws, rules, regulations, ordinances, codes and/or orders.
- 1.20 Notice of Award**
The written notice by OWNER to the apparent successful bidder stating that upon compliance by the apparent successful bidder with the conditions enumerated therein, within the time specified, OWNER will sign and deliver the Agreement.
- 1.21 Notice to Proceed**
A written notice given by OWNER to CONTRACTOR fixing the date on which the Contract Time will commence to run and on which CONTRACTOR shall start to perform CONTRACTOR'S obligations under the Contract Documents.
- 1.22 OWNER**
The Lexington-Fayette Urban County Government, Department of General Services or its authorized representative.
- 1.23 Partial Utilization**
Placing a portion of the Work in service for the purpose for which it is intended (or related purpose) before reaching Completion for all the Work.
- 1.24 Project**
The total construction of which the Work to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.
- 1.25 Inspector**
The authorized representative of the OWNER who is assigned to the site or any part thereof.
- 1.26 Shop Drawings**
All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for CONTRACTOR to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a Supplier and submitted by CONTRACTOR to illustrate material or equipment for some portion of the Work.
- 1.27 Specifications**

Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the Work and certain administrative details applicable thereto.

1.28 Standard Specifications

Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the Work and certain administrative details applicable thereto.

1.29 Subcontractor

An individual, firm or corporation having a direct contract with CONTRACTOR or with any other Subcontractor for the performance of a part of the Work at the site.

1.30 Special Conditions

The part of the Contract Documents which amends or supplements these General Conditions.

1.31 Supplier

A manufacturer, fabricator, supplier, distributor, materialman or vendor.

1.32 Underground Facilities

All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.

1.33 Unit Price Work

Not applicable

1.34 Work

The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work is the result of performing services, furnishing labor and furnishing and incorporating materials and equipment into the construction, all as required by the Contract Documents.

1.35 Time Period

When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

2. PRELIMINARY MATTERS

2.1 Delivery of Bonds

When the CONTRACTOR delivers the executed Agreements to OWNER, CONTRACTOR shall also deliver to OWNER, such Bonds, Insurance Certificate, and Power of Attorney as CONTRACTOR may be required to furnish.

2.2 Copies of Documents

OWNER shall furnish to CONTRACTOR up to three copies (unless otherwise specified in the Special Conditions) of the Contract Documents as are reasonably necessary for the execution of the Work. Additional copies will be furnished, upon request, at the cost of reproduction.

2.3 Commencement of Contract Time; Notice to Proceed

The Contract Time will commence to run on the day specified in the Notice to Proceed.

2.4 Starting the Project

CONTRACTOR shall start to perform the Work on the date when the Contract Time commences to run, but no Work shall be done at the site prior to the date on which the Contract Time commences to run.

2.5 Before Starting Construction

Before undertaking each part of the Work, CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. CONTRACTOR shall promptly report in writing to ARCHITECT any conflict, error or discrepancy which CONTRACTOR may discover and shall obtain a written interpretation or clarification from ARCHITECT before proceeding with any Work affected thereby; however, CONTRACTOR shall not be liable to OWNER or ARCHITECT for failure to report any conflict, error or discrepancy in the Contract Documents, unless CONTRACTOR had actual knowledge thereof or should reasonably have known thereof.

2.6 Submittal of Schedules

Within ten days after the effective date of the Agreement (unless otherwise specified) CONTRACTOR shall submit to ARCHITECT for review:

2.6.1 an estimated progress schedule indicating the starting and completion dates of the various stages of the Work;

2.6.2 a preliminary schedule of Shop Drawing submissions; and

2.6.3 a preliminary schedule of values for all of the Work which will include quantities and prices of items aggregating the Contract Price and will

subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work which will be confirmed in writing by CONTRACTOR at the time of submission.

2.7 Preconstruction Conference

Before CONTRACTOR starts the Work at the proposed site, a conference attended by CONTRACTOR, ARCHITECT, EEO-Affirmative Action Officer, and other appropriate parties will be held to discuss the following issues: (1) The scheduling of the Work to be completed; (2) The procedures for handling shop drawings and other submittals; (3) The processing of applications for payment; (4) The establishment of an understanding among the involved parties in regard to the proposed project; and (5) The establishment of procedures for effectively implementing the LFUCG's 10% minimum DBE goals.

2.8 Finalizing Schedules

At least ten days before submission of the first Application for Payment a conference attended by CONTRACTOR, ARCHITECT, OWNER and others as appropriate will be held to finalize the schedules submitted in accordance with paragraph 2.6. The finalized progress schedule will be acceptable to ARCHITECT as providing orderly progression of the Work to completion within the Contract Time, but such acceptance will neither impose on ARCHITECT responsibility for the progress or scheduling of the Work nor relieve CONTRACTOR from full responsibility thereof. The finalized schedule of Shop Drawing submissions will be acceptable to ARCHITECT as providing a workable arrangement for processing the submissions. The finalized schedule of values will be acceptable to ARCHITECT and OWNER as to form and substance.

3. CONTRACT DOCUMENTS: INTENT, CONFLICTS, AMENDING AND REUSE

3.1 General

The Contract Documents comprise the entire agreement between OWNER and CONTRACTOR concerning the Work. The Contract Documents are complementary; what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the law of the place of the Project.

3.2 Intent

It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any Work, materials or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result will be supplied whether or not specifically called for. When words which have a well-known technical or trade meaning are used to describe Work, materials or equipment such words shall be interpreted in accordance

with that meaning. Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code or laws or regulations in effect at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of OWNER, CONTRACTOR or ARCHITECT, or any of their consultants, agents or employees from those set forth in the Contract Documents, nor shall it be effective to assign to OWNER, or any of OWNER'S consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 8.12.3 or 8.12.4. Clarifications and interpretations of the Contract Documents shall be issued by ARCHITECT as provided in paragraph 8.4.

3.3 Conflicts

If, during the performance of the Work, CONTRACTOR finds a conflict, error or discrepancy in the Contract Documents, CONTRACTOR shall so report to ARCHITECT in writing at once and before proceeding with the Work affected thereby shall obtain a written interpretation or clarification from ARCHITECT; however, CONTRACTOR shall not be liable to OWNER or ARCHITECT for failure to report any conflict, error or discrepancy in the Contract Documents unless CONTRACTOR had actual knowledge thereof or should reasonably have known thereof.

In resolving such conflicts, errors and discrepancies, the documents shall be given precedence in the following order:

1. Agreement
2. Field and Change Orders
3. Addenda
4. Special Conditions
5. Instruction to Bidders
6. General Conditions
7. Specifications and Drawings

Figure dimension on drawings shall govern over scale dimensions and detailed Drawings shall govern over general Drawings.

3.4 Amending and Supplementing Contract Documents

The Contract Documents may be amended to provide for additions, deletions and revisions in the Work or to modify the terms and conditions thereof by means of a Change Order or a Field Order. Contract Price and Contract Time may only be changed by a Change Order.

3.5 Reuse of Documents

Neither CONTRACTOR nor any Subcontractor or Supplier or other person or organization performing or furnishing any of the Work under a direct or indirect contract with OWNER shall have or acquire any title to or ownership rights in any of the Drawings, Specifications or other documents (or copies of any thereof) prepared by or bearing the seal of ARCHITECT; and they shall not reuse any of them on extensions of the Project or any other project without written consent of OWNER and ARCHITECT and specific written verification or adaptation by ARCHITECT.

4. AVAILABILITY OF LANDS; PHYSICAL CONDITIONS, REFERENCE POINTS

4.1 Availability of Lands

OWNER shall furnish, as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and such other lands which are designated for the use of CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by OWNER, unless otherwise provided in the Contract Documents. If CONTRACTOR believes that any delay in OWNER'S furnishing these lands, rights-of-way or easements entitles CONTRACTOR to an extension of the Contract Time, CONTRACTOR may make a claim therefor as provided in Article 11. ARCHITECT shall determine if the claim is legitimate or not. CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.2 Physical Conditions

4.2.1 Explorations and Reports

Reference is made to the Special Conditions for identification of those reports of explorations and tests of subsurface conditions at the site that have been utilized by ARCHITECT in preparation of the Contract Documents. CONTRACTOR may rely upon the accuracy of the technical data contained in such reports, but not upon non-technical data, interpretations or opinions contained therein or for the completeness thereof for CONTRACTOR'S purposes. Except as indicated in the immediately preceding sentence and in paragraph 4.2.6, CONTRACTOR shall have full responsibility with respect to subsurface conditions at the site.

4.2.2 Existing Structures

Reference is made to the Special Conditions for identification of those drawings of physical conditions in or relating to existing surface and subsurface structures (except Underground Facilities referred to in paragraph 4.3 which are at or contiguous to the site that have been utilized by ARCHITECT in preparation of the Contract Documents. CONTRACTOR may rely upon the accuracy of the technical data contained in such drawings, but not for the completeness thereof for CONTRACTOR'S purposes. Except as indicated in the immediately preceding sentence and in paragraph

4.2.6, CONTRACTOR shall have full responsibility with respect to physical conditions in or relating to such structures.

4.2.3 Report of Differing Conditions

If CONTRACTOR believes that:

4.2.3.1 any technical data on which CONTRACTOR is entitled to rely as provided in paragraphs 4.2.1 and 4.2.2 is inaccurate, or

4.2.3.2 any physical conditions uncovered or revealed at the site differ materially from that indicated, reflected or referred to in the Contract Documents,

CONTRACTOR shall, promptly after becoming aware thereof and before performing and WORK in connection therewith (except in an emergency) notify OWNER and ARCHITECT in writing about the inaccuracy or difference.

4.2.4 ARCHITECT'S Review

ARCHITECT will promptly review the pertinent conditions, determine the necessity of obtaining additional explorations or tests with respect thereto and advise CONTRACTOR of ARCHITECT'S findings and conclusions.

4.2.5 Possible Document Change

If ARCHITECT concludes that there is a material error in the Contract Documents or that because of newly discovered conditions a change I the Contract Documents is required, a Change Order will be issued as provided in Article 10 to reflect and document the consequences of the inaccuracy or difference.

4.2.6 Possible Price and Time Adjustments

In each such case, an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, or any combination thereof, will be allowable to the extent that they are attributable to any such inaccuracy or difference.

4.3 Physical Conditions-Underground Facilities

4.3.1 Shown or Indicated

The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site is based on information and data furnished to OWNER or ARCHITECT by the owners of such underground facilities or by others. Unless it is otherwise expressly provided in the Special Conditions:

4.3.1.1 OWNER and ARCHITECT shall not be responsible for the accuracy or completeness of any such information or data; and,

4.2.1.2 CONTRACTOR shall have full responsibility for reviewing and checking all such information and data; for locating all underground facilities shown or indicated in the Contract Documents; for coordination of the Work with the owners of such underground facilities during construction; and for the safety and protection thereof and repairing any damage thereto resulting from the Work, the cost of all of which will be considered as having been included in the Contract Price.

4.3.2 Not Shown or Indicated

If an underground facility is uncovered or revealed at or contiguous to the site which was not shown or indicated in the Contract Documents and which CONTRACTOR could not reasonably have been expected to be aware of, CONTRACTOR shall, promptly after becoming aware thereof and before performing any Work affected thereby (except in an emergency), identify the owner of such Underground Facility and give written notice thereof to that owner and to OWNER and ARCHITECT. ARCHITECT will promptly review the underground facility to determine the extent to which the Contract Documents should be modified to reflect and document the consequences of the existence of the Underground Facility, and the Contract Documents will be amended or supplemented to the extent necessary. During such time, CONTRACTOR shall be responsible for the safety and protection of such underground facility. CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, to the extent that they are attributable to the existence of any underground facility that was not shown or indicated in the Contract Documents and which CONTRACTOR could not reasonably have been expected to be aware of.

4.4 **Reference Points**

OWNER shall provide engineering surveys to establish reference points for construction which in ARCHITECT'S judgment are necessary to enable CONTRACTOR to proceed with the Work. CONTRACTOR shall be responsible for laying out the Work (unless otherwise specified), shall protect and preserve the established reference points and shall make no changes or relocations without the prior written approval of OWNER. CONTRACTOR shall report to ARCHITECT whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points by a Registered Land Surveyor.

5. **CONTRACTOR'S RESPONSIBILITIES**

5.1 **Supervision**

CONTRACTOR shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. CONTRACTOR shall assure that all CONTRACTOR personnel (including subcontractors, etc.) conduct themselves in a courteous and respectful manner

toward the OWNER, ARCHITECT and the general public. Failure to comply with this condition of the Contract will result in immediate suspension of the Work. Following a review by the Commissioner of General Services, the Contract may be terminated (see GC section 14). CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences and procedures of construction, but CONTRACTOR shall not be responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence or procedure of construction which is indicated in and required by the Contract Documents. CONTRACTOR shall be responsible to see that the finished Work complies accurately with the Contract Documents.

5.2 Superintendence

CONTRACTOR shall keep on the Work at all times during its progress a competent resident superintendent, who shall not be replaced without written notice to OWNER and ARCHITECT except under extraordinary circumstances. The superintendent will be CONTRACTOR'S representative at the site and shall have authority to act on behalf of CONTRACTOR. All communications given to the superintendent shall be as binding as if given to CONTRACTOR.

5.3 Labor

CONTRACTOR shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. CONTRACTOR shall at all times maintain good discipline and order at the site. Except in connection with the safety or protection of persons or the Work or property at the site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Work at the site shall be performed during regular working hours, and CONTRACTOR will not permit overtime work or the performance of Work on Saturday, Sunday or any legal holiday without OWNER'S written consent given after prior written notice to ARCHITECT.

5.4 Start-Up and Completion of Work

Unless otherwise specified, CONTRACTOR shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up and completion of the Work.

5.5 Materials and Equipment

All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. If required by ARCHITECT, CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable supplier except as otherwise provided in the Contract Documents; but no provision of any such

instructions will be effective to assign to OWNER, or any of OWNER'S consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 8.12.3 or 8.12.4.

5.5.1 Not Clearly Specified or Indicated

In all instances where materials specified are obtainable in different sizes, weights, trade grades, qualities or finishes, etc., whose weights, trade grades, qualities or finishes, etc., are not clearly specified or indicated on the Drawings, the CONTRACTOR shall notify the ARCHITECT of all such instances at least five (5) days in advance of receiving the proposals. The ARCHITECT will then determine which size, weight, trade grade, quality, finish, etc., is required.

5.5.2 Coordination of Work

The CONTRACTOR shall see that for his own Work and for the work of each subcontractor, proper templates and patterns necessary for the coordination of the various parts of the Work are prepared. The CONTRACTOR shall furnish or require the Subcontractor to furnish such duplicates as will enable the Subcontractors to fit together and execute fully their respective portions of the Work.

5.6 Adjusting Progress Schedule

CONTRACTOR shall submit to ARCHITECT for acceptance (to the extent indicated in paragraph 2.8) adjustments in the progress schedule to reflect the impact thereon of new developments; these will conform generally to the progress schedule then in effect and additionally will comply with any provisions of the Contract Documents applicable thereto.

5.7 Substitutes or "Or-Equal" Items

5.7.1 General

Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular supplier, the naming of the item is intended to establish the type, function, and quality required. Unless the name is followed by words indicating that no substitution is permitted, materials or equipment of other Suppliers may be accepted by OWNER/ARCHITECT if sufficient information is submitted by CONTRACTOR to allow OWNER/ARCHITECT to determine that the material or equipment proposed is equivalent or equal to that named. The procedure for review by OWNER/ARCHITECT will include the following. Requests for review of substitute items of material and equipment will not be accepted by OWNER/ARCHITECT from anyone, other than CONTRACTOR. If CONTRACTOR wishes to furnish or use a substitute item of material or equipment, CONTRACTOR shall make written application to

OWNER/ARCHITECT for acceptance thereof, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified and be suited to the same use as that specified. The application will state that the evaluation and acceptance of the proposed substitute will not prejudice CONTRACTOR'S achievement of completion on time, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) to adapt the design to the proposed substitute and whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified will be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which shall be considered by OWNER/ARCHITECT in evaluating the proposed substitute. OWNER/ARCHITECT may require CONTRACTOR to furnish at CONTRACTOR'S expense additional data about the proposed substitute.

5.7.2 Substitutes

If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, CONTRACTOR may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to OWNER/ARCHITECT, if CONTRACTOR submits sufficient information to allow OWNER/ARCHITECT to determine that the substitute proposed is equivalent to that indicated or required by the Contract Documents. The procedure for review by OWNER/ARCHITECT will be similar to that provided in paragraph 5.7.1 as applied by OWNER/ARCHITECT.

5.7.3 OWNER/ARCHITECT'S Approval

OWNER/ARCHITECT will be allowed a reasonable time within which to evaluate each proposed substitute. OWNER/ARCHITECT will be the sole judge of acceptability, and no substitute will be ordered, installed or utilized without OWNER/ARCHITECT'S prior written acceptance which will be evidenced by either a Change Order or an approved Shop Drawing. OWNER may require CONTRACTOR to furnish at CONTRACTOR'S expense a special performance guarantee or other surety with respect to any substitute. OWNER/ARCHITECT will record time required by OWNER/ARCHITECT and OWNER/ARCHITECT'S consultants in evaluating substitutions proposed by CONTRACTOR and in making changes in the Contract Documents occasioned thereby. Whether or not OWNER/ARCHITECT accepts a proposed substitute, CONTRACTOR shall reimburse OWNER for the charges of OWNER/ARCHITECT and

OWNER/ARCHITECT'S consultants for evaluating each proposed substitute.

5.8 Subcontractors, Suppliers, and Others

5.8.1 Acceptable to ARCHITECT

CONTRACTOR shall not employ any Subcontractor, Supplier or other person or organization (including those acceptable to OWNER and ARCHITECT as indicated in paragraph 5.8.2), whether initially or as a substitute, against whom OWNER or ARCHITECT may have reasonable objection. CONTRACTOR shall not be required to employ any Subcontractor, Supplier or other person or organization to furnish or perform any of the Work against whom CONTRACTOR has reasonable objection.

5.8.2 Objection After Due Investigation

If the Contract Documents require the identity of certain Subcontractors, Suppliers or other persons or organizations (including those who are to furnish the principal items of materials and equipment) to be submitted to OWNER in advance of the specified date prior to the Effective Date of the Agreement for acceptance by OWNER and ARCHITECT and if CONTRACTOR has submitted a list thereof, OWNER'S or ARCHITECT'S acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the bidding documents or the Contract Documents) of any such Subcontractor, Supplier or other person or organization so identified may be revoked on the basis of reasonable objection after due investigation, in which case CONTRACTOR shall submit an acceptable substitute. No acceptance by OWNER or ARCHITECT of any such Subcontractor, Supplier or other person or organization shall constitute a waiver of any right of OWNER or ARCHITECT to reject defective Work.

5.8.3 Contractor Responsible for Acts of Subcontractors

The CONTRACTOR shall perform on the site, and with its own organization, work equivalent to at least fifty (50) percent of the total amount of Work to be performed under the Contract. This percentage may be reduced by a supplemental agreement to this Contract if, during performing the Work, the CONTRACTOR requests a reduction and the OWNER determines that the reduction would be to the advantage of the Urban County Government.

The CONTRACTOR shall, at the time he submits his proposal for the Contract, notify the OWNER in writing of the names of Subcontractors proposed for the Work. He shall not employ any Subcontractor without the prior written approval of the OWNER.

CONTRACTOR shall be fully responsible to OWNER and ARCHITECT for all acts and omissions of the Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR just as CONTRACTOR is responsible for CONTRACTOR'S own acts and omissions. Nothing in the Contract Documents shall create any contractual relationship between OWNER or ARCHITECT and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of OWNER or ARCHITECT to pay or to see to the payment of any moneys due any such Subcontractor, Supplier or other person or organization except as may otherwise be required by Laws and Regulations.

5.8.4 Division of Specifications

The divisions and sections of the Specifications and the identifications of any Drawings shall not control CONTRACTOR in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

5.8.5 Agreement Between Contractor and Subcontractors

All Work performed for CONTRACTOR by a Subcontractor will be pursuant to an appropriate agreement between CONTRACTOR and the Subcontractor which specifically binds the Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of OWNER.

5.8.6 Statements and Comments by CONTRACTOR

Neither the CONTRACTOR, his employees, nor his subcontractors shall at any time make any statement or comment as to the project scope, nature, intention, design, or construction method to any third party or parties without the explicit written consent of the OWNER.

Any third party requesting such information shall be referred to the OWNER or his representative.

Should there be any change from the original intent of the project as a result of any statement or comment by the contractor, his employees or subcontractors, contractor shall be held liable for any change in the scope, nature, design, or construction method and shall bear the full cost for the previously mentioned changes.

5.9 Patent Fees and Royalties

CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product or device which is the subject of patent rights or copyrights held by others.

5.10 Permits

Unless otherwise provided in the Special conditions, CONTRACTOR shall obtain and pay for all construction permits and licenses. OWNER shall assist CONTRACTOR, when necessary, in obtaining such permits and licenses. CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of opening of Bids, or if there are no Bids on the Effective Date of the Agreement. CONTRACTOR shall pay all charges of utility owners for connections to the Work, and OWNER shall pay all charges of such utility owners for capital costs related thereto such as plant investment fees.

5.11 Laws and Regulations

5.11.1 CONTRACTOR to Comply

CONTRACTOR shall give all notices and comply with all Laws and Regulations applicable to furnishing and performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither OWNER nor ARCHITECT shall be responsible for monitoring CONTRACTOR'S compliance with any Laws and Regulations.

5.11.2 Specifications and Drawings at Variance

If CONTRACTOR observes that the Specifications or Drawings are at variance with any Laws or Regulations, CONTRACTOR shall give OWNER and ARCHITECT prompt written notice thereof, and any necessary changes will be authorized by one of the methods indicated in paragraph 3.4. If CONTRACTOR performs any Work knowing or having reason to know that it is contrary to such Laws, or Regulations, and without such notice to OWNER and ARCHITECT, CONTRACTOR shall bear all costs arising therefrom; however, it shall not be CONTRACTOR'S primary responsibility to make certain that the Specifications and Drawings are in accordance with such Laws and Regulations.

Any party, firm or individual submitting a proposal pursuant to invitation must have paid all taxes owed to the Lexington-Fayette Urban County Government at the time the proposal is submitted, and must maintain a "current" status in regard to those taxes throughout the Contract. If applicable, business must be licensed in Fayette County.

5.12 Taxes

CONTRACTOR shall pay all sales, consumer, use and other similar taxes required to be paid by CONTRACTOR in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work. Any party, firm or individual submitting a proposal pursuant to invitation must have paid all taxes owed to the Lexington-Fayette Urban County Government at the time the proposal is submitted, and must maintain a "current" status in regard to those taxes throughout the Contract. If applicable, business must be licensed in Fayette County.

5.13 Use of Premises

5.13.1 Project Site

CONTRACTOR shall confine construction equipment, the storage of materials and equipment and the operations of workers to the staging areas or work site areas identified in and permitted by the Contract Documents and other land and areas permitted by Laws and Regulations, rights-of-way, permits and easements, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment. CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any land or areas contiguous thereto, resulting from the performance of the Work. Should any claim be made against OWNER or ARCHITECT by any such owner or occupant because of the performance of the Work, CONTRACTOR shall promptly attempt to settle with such other party by agreement or otherwise resolve the claim by arbitration or at law. CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold OWNER and ARCHITECT harmless from and against all claims, damages, losses and expenses (including, but not limited to, fees of engineers, architects, attorneys and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any such other party against OWNER or ARCHITECT to the extent based on a claim arising out of CONTRACTOR'S performance of the Work.

5.13.2 Clean Up

During the progress of the Work, CONTRACTOR shall keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the Work. At the completion of the Work, CONTRACTOR shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery, and surplus materials, and shall leave the site clean and ready for occupancy by OWNER. CONTRACTOR shall restore to original condition all property not designated for alteration by the Contract Documents.

5.13.1 Loading of Structures

CONTRACTOR shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall CONTRACTOR subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

5.14 Record Drawings

CONTRACTOR shall maintain in a safe place at the site one record copy of all Drawings, Specifications, Addenda, Change Orders, Field Orders and written interpretations and clarifications (issued pursuant to paragraph 9.4) in good order and annotated to show all changes made during construction. These record documents together with all approved samples and a counterpart of all approved Shop Drawings will be available to OWNER and ARCHITECT for reference. Upon completion of the Work, these record documents, samples and Shop Drawings will be delivered to ARCHITECT for OWNER.

5.15 Shop Drawings and Samples

5.15.1 Shop Drawing Submittals

After checking and verifying all field measurements and after complying with applicable procedures specified, CONTRACTOR shall submit to ARCHITECT for review and approval in accordance with the accepted schedule of Shop Drawing submissions (see paragraph 2.8), or for other appropriate action if so indicated in the Special Conditions, five copies (unless otherwise specified) of all Shop Drawings, which will bear a stamp or specific written indication that CONTRACTOR has satisfied CONTRACTOR'S responsibilities under the Contract Documents with respect to the review of the submission. All submissions will be identified as ARCHITECT may require. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to enable ARCHITECT to review the information as required.

5.15.2 Sample Submittals

CONTRACTOR shall also submit to ARCHITECT for review and approval with such promptness as to cause no delay in Work, all samples required by the Contract Documents. All samples will have been checked by and accompanied by a specific written indication that CONTRACTOR has satisfied CONTRACTOR'S responsibilities under the Contract Documents with respect to the review of the submission and will be identified clearly as to material, Supplier, pertinent data such as catalog numbers and the use for which intended.

5.15.3 Review by CONTRACTOR

Before submission of each Shop Drawing or sample CONTRACTOR shall have determined and verified all quantities, dimensions, specified

performance criteria, installation requirements, materials, catalog numbers and similar data with respect thereto and reviewed or coordinated each Shop Drawing or sample with other Shop Drawings and samples and with the requirements of the Work and the Contract Documents.

5.15.4 Notice of Variation

At the time of each submission, CONTRACTOR shall give ARCHITECT specific written notice of each variation that the Shop Drawings or samples may have from the requirements of the Contract Documents, and, in addition, shall cause a specific notation to be made on each Shop Drawing submitted to ARCHITECT for review and approval of each such variation.

5.15.5 ARCHITECT'S Approval

ARCHITECT will review and approve with reasonable promptness Shop Drawings and samples, but ARCHITECT'S review and approval will be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents and shall not extend to means, methods, techniques, sequences or procedures of construction (except where a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions. CONTRACTOR shall make corrections required by ARCHITECT, and shall return the required number of corrected copies of Shop Drawings and submit, as required, new samples for review and approval. CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by ARCHITECT on previous submittals.

5.15.6 Responsibility for Errors and Omissions

ARCHITECT'S review and approval of Shop Drawings or samples shall not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents unless CONTRACTOR has in writing called ARCHITECT'S attention to each such variation at the time of submission as required by paragraph 5.15.4 and ARCHITECT has given written approval of each such variation by a specific written notation thereof incorporated in or accompanying the Shop Drawing or sample approval; nor will any approval by ARCHITECT relieve CONTRACTOR from responsibility for errors or omissions in the Shop Drawings or from responsibility for having complied with the provisions of paragraph 5.15.3.

5.15.7 Cost of Related Work

Where a Shop or sample is required by the Specifications, any related Work performed prior to ARCHITECT'S review and approval of the pertinent submission will be the sole expense and responsibility of CONTRACTOR.

5.16 Continuing the Work

CONTRACTOR shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with OWNER. No Work shall be delayed or postponed pending resolutions of any disputes or disagreements, except as permitted by paragraph 14.5 or as CONTRACTOR and OWNER may otherwise agree in writing.

5.17 Erosion and Sediment Control

5.17.1 General Environmental Requirements

The CONTRACTOR and Subcontractors performing work on projects on behalf of the OWNER shall comply with all applicable federal, state, and local environmental regulations and all requirements and conditions set forth in "special" permits including but not limited to Corp of Engineers 404 permits, 401 Water Quality Certifications, Stream Crossing and Floodplain Encroachment Permits.

Any fines or penalties resulting from the failure to comply with the terms of the federal, state or local permits or perform necessary corrective action are solely the obligation of the CONTRACTOR.

5.17.2 Stormwater Pollution Prevention

A. The CONTRACTOR shall exercise due care to prevent or minimize any damage to any stream or wetland from pollution by debris, sediment or other material. The operation of equipment and/or materials in a jurisdictional wetland is expressly prohibited. Water that has been used for washing or processing, or that contains oils, sediments or other pollutants shall not be discharged from the job site. Such waters shall be collected and properly disposed of by the CONTRACTOR in accordance with applicable local, state and federal law.

B. The CONTRACTOR is solely responsible for securing all required state and local permits associated with stormwater discharges from the project including, but not necessarily limited to the KY Notice of Intent to Disturb (NOI) for Coverage of Storm Water Discharges Associated with Construction Activities under the KPDES Storm Water General Permit KYR100000 and the LFUCG, Land Disturbance Permit. Permit application preparation and all required documentation are the responsibility of the CONTRACTOR. The CONTRACTOR is solely responsible for maintaining compliance with the stormwater pollution prevention plan or erosion and sediment control plan and ensuring the following:

- a. That the Stormwater Pollution Prevention Plan (SWPPP) or erosion control plan is current and available for review on site;

- b. That any and all stormwater inspection reports required by the permit are conducted by qualified personnel and are available for review onsite; and
- c. That all best management practices (BMPs) are adequately maintained and effective at controlling erosion and preventing sediment from leaving the site.

C. The CONTRACTOR shall provide the necessary equipment and personnel to perform any and all emergency measures that may be required to contain any spillage or leakage and to remove materials, soils or liquids that become contaminated. The collected spill material shall be properly disposed at the CONTRACTOR's expense.

D. Upon completion of the work and with the concurrence of the OWNER, the CONTRACTOR must file a Notice of Termination (NOT) of Coverage Under the KPDES General Permit for Storm Water Discharges Associated with Construction Activity with the appropriate local and state authorities.

E. Any fines or penalties resulting from the failure to comply with the terms of the state or local stormwater permits or perform necessary corrective action are solely the obligation of the CONTRACTOR.

6. OTHER WORK

6.1 Related Work at Site

OWNER may perform other work related to the Project at the site by OWNER'S own forces, have other work performed by utility owners or let other direct contracts therefor which shall contain General Conditions similar to these. If the fact that such other work is to be performed was not noted in the Contract Documents, written notice thereof will be given to CONTRACTOR prior to starting any such other work; and, if such performance will involve additional expense to CONTRACTOR or requires additional time, a Change Order to the Contract will be negotiated.

6.2 Other Contractors or Utility Owners

CONTRACTOR shall afford each utility owner and other contractor who is a party to such a direct contract (or OWNER, if OWNER is performing the additional work with OWNER'S employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work, and shall properly connect and coordinate the Work with theirs. CONTRACTOR shall do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. CONTRACTOR shall not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of ARCHITECT and the others whose work will be affected. The duties and responsibilities of CONTRACTOR under this paragraph are for the

benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of CONTRACTOR in said direct contracts between OWNER and such utility owners and other contractors.

6.3 Delays Caused by Others

If any part of CONTRACTOR'S Work depends for proper execution or results upon the work of any such other contractor or utility owner (or OWNER), CONTRACTOR shall inspect and promptly report to ARCHITECT in writing any delays, defects or deficiencies in such work that render it unavailable or unsuitable for such proper execution and results. CONTRACTOR'S failure so to report will constitute an acceptance of the other work as fit and proper for integration with CONTRACTOR'S Work except for latent or non-apparent defects and deficiencies in the other work.

6.4 Coordination

If OWNER contracts with others for the performance of other work on the Project at the site, the person or organization who will have authority and responsibility for coordination of the activities among the various prime contractors will be identified in the Special Conditions, and the specific matters to be covered by such authority and responsibility will be itemized, and the extent of such authority and responsibilities will be provided, in the Special Conditions.

7. OWNER'S RESPONSIBILITIES

7.1 Communications

OWNER shall issue all communications to CONTRACTOR through ARCHITECT.

7.2 Data and Payments

OWNER shall furnish the data required of OWNER under the Contract Documents promptly after they are due.

7.3 Lands, Easements, and Surveys

OWNER'S duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in paragraphs 4.1 and 4.4. Paragraph 4.2 refers to OWNER'S identifying and making available to CONTRACTOR copies of reports of explorations and tests of subsurface conditions at the site and in existing structures which have been utilized by ARCHITECT in preparing the Drawings and Specifications.

7.4 Change Orders

OWNER is obligated to execute Change Orders as indicated in paragraph 9.4.

7.5 Inspections, Tests and Approvals

OWNER'S responsibility in respect to certain inspections, tests and approvals is set forth in paragraph 13.3.

7.6 Stop or Suspend Work

In connection with OWNER'S right to stop Work or suspend Work, see paragraph 12.4 and 14.1 Paragraph 14.2 deals with OWNER'S rights to terminate services of CONTRACTOR under certain circumstances.

8. ARCHITECT'S STATUS DURING CONSTRUCTION

8.1 OWNER'S Representative

ARCHITECT will be OWNER'S representative during the construction period. The duties and responsibilities and the limitations of authority of ARCHITECT as OWNER'S representative during construction are set forth in the Contract Documents and shall not be extended without written consent of OWNER and ARCHITECT.

8.2 Visits to Site

ARCHITECT will make visits to the site at intervals appropriate to the various stages of construction to observe the progress and quality of the executed Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents. ARCHITECT will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. ARCHITECT'S efforts will be directed toward providing for OWNER a greater degree of confidence that the completed Work will conform to the Contract Documents. On the basis of such visits and on-site observations, ARCHITECT will keep OWNER informed of the progress of the Work and will endeavor to guard OWNER against defects and deficiencies in the Work.

8.3 Project Representation

ARCHITECT will provide an Inspector to assist ARCHITECT in observing the performance of the Work. If OWNER designates another agent to represent OWNER at the site who is not ARCHITECT'S agent or employee, the duties, responsibilities and limitations of authority of such other person will be as provided in the Special Conditions.

8.4 Clarifications and Interpretations

ARCHITECT will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings or otherwise) as ARCHITECT may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents.

8.5 Authorized Variations in Work

ARCHITECT may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Time and are consistent with the overall intent of the Contract Documents. These may be accomplished by a Field Order.

8.6 Rejecting Defective Work

ARCHITECT will have authority to disapprove or reject Work which ARCHITECT believes to be defective, and will also have authority to require special inspection or testing of the Work as provided in paragraph 12.3, whether or not the Work is fabricated, installed or completed.

8.7 Shop Drawings

In connection with ARCHITECT'S responsibility for Shop Drawings and samples, see paragraphs 5.15.1 through 5.16 inclusive.

8.8 Change Orders

In connection with ARCHITECT'S responsibilities as to Change Orders, see Articles 10, 11 and 12.

8.9 Payments

In connection with ARCHITECT'S responsibilities with respect to Applications for Payment, etc., see Article 13.

8.10 Determinations for Unit Prices

ARCHITECT will determine the actual quantities and classifications of Unit Price Work performed by CONTRACTOR.

ARCHITECT will review with CONTRACTOR ARCHITECT'S preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise).

8.11 Decision on Disputes

ARCHITECT will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. Claims, disputes and other matters relating to the acceptability of the Work or the interpretation of the requirements of the Contract Documents pertaining to the performance and furnishing of the Work and claims under Articles 10 and 11 in respect of changes in the Contract Price or Contract Time will be referred initially to ARCHITECT in writing with a request for a formal decision in accordance with this paragraph, which ARCHITECT will render in writing within a reasonable time. Written notice of each such claim, dispute and other matter will be delivered to ARCHITECT promptly (but in no event later than thirty days) after the occurrence of the event giving rise thereto, and written supporting data will be submitted to ARCHITECT within sixty days after such occurrence unless ARCHITECT allows an additional period of time to ascertain more accurate data in support of the claim.

8.12 Limitations on ARCHITECT'S Responsibilities

8.12.1 CONTRACTOR, Supplier, or Surety

Neither ARCHITECTS authority to act under this Article 8 or elsewhere in the Contract Documents nor any decision made by ARCHITECT in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of ARCHITECT to CONTRACTOR, any Subcontractor, any Supplier, or any other person or organization performing any of the Work, or to any surety for any of them.

8.12.2 To Evaluate the Work

Whenever in the Contract Documents the terms "as ordered", "as directed", "as required", "as allowed", "as approved" or terms of like effect or import are used, or the adjectives "reasonable", "suitable", "acceptable", "proper", or "satisfactory" or adjectives or like "effect" or "import" are used to describe a requirement, direction, review or judgment of ARCHITECT as to the Work, it is intended that such requirement, direction, review or judgment will be solely to evaluate the Work for compliance with the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be effective to assign ARCHITECT any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 8.12.3 or 8.12.4.

8.12.3 CONTRACTOR'S Means, Methods, Etc.

ARCHITECT will not be responsible for CONTRACTOR'S means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, and ARCHITECT will not be responsible for CONTRACTOR'S failure to perform or furnish the Work in accordance with the Contract Documents.

8.12.4 Acts of Omissions of CONTRACTOR

ARCHITECT will not be responsible for the acts or omissions of CONTRACTOR or of any Subcontractor, any Supplier, or of any other person or organization performing or furnishing any of the Work.

9. **CHANGES IN THE WORK**

9.1 **OWNER May Order Change**

Without invalidating the Agreement and without notice to any surety, OWNER may, at any time or from time to time, order additions, deletions or revisions in the Work; these will be authorized by a Change Order. Upon receipt of such notice, CONTRACTOR shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

9.2 **Claims**

Claims for an increase or decrease in the Contract Price or an extension or shortening or the Contract Time that should be allowed as a result of a Change Order will be settled as provided for in Article 10 or Article 11.

9.3 Work Not in Contract Documents

CONTRACTOR shall not be entitled to an increase in the Contract Price or an extension of the Contract Time with respect to any Work performed that is not required by the Contract Documents as amended, modified and supplemented as provided in paragraph 3.4, except in the case of an emergency and except in the case of uncovering Work as provided in paragraph 12.3.4.

9.4 Change Orders

OWNER and CONTRACTOR shall execute appropriate Change Orders covering:

9.4.1 changes in the Work which are ordered by OWNER pursuant to paragraph 9.1, are required because of acceptance of defective Work under paragraph 12.7 or corrective defective Work under paragraph 12.8, or are agreed to by the parties;

9.4.2 changes in the Contract Price or Contract Time which are agreed to by the parties; and

9.4.3 changes in the Contract Price or Contract Time which embody the substance of any written decision rendered by ARCHITECT pursuant to paragraph 8.11; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and REGULATIONS, but during any such appeal, CONTRACTOR shall carry on the Work and adhere to the progress schedule as provided in paragraph 5.16.

9.5 Notice of Change

If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Time) is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be CONTRACTOR'S responsibility, and the amount of each applicable Bond will be adjusted accordingly.

10. CHANGE OF CONTRACT PRICE

10.1 Total Compensation

The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to CONTRACTOR for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by CONTRACTOR shall be at his expense without change in the Contract Price.

10.2 Claim for Increase or Decrease in Price

The Contract Price may only be changed by a Change Order. Any claim for an increase or decrease in the Contract Price shall be based on written notice delivered by the CONTRACTOR to the ARCHITECT promptly (but in no event later than thirty days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the amount of the claim with supporting data shall be delivered within sixty days after such occurrence (unless ARCHITECT allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by CONTRACTOR'S written statement that the amount claimed covers all known amounts (direct, indirect, and consequential) to which the CONTRACTOR is entitled as a result of the occurrence of said event.

10.3 Value of Work

The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:

10.3.1 Unit Prices

Where the Work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved (subject to the provisions of paragraphs 10.9.1. through 10.9.3, inclusive).

10.3.2 Lump Sum

By mutual acceptance of a lump sum (which may include an allowance for overhead and profit not necessarily in accordance with paragraph 10.6.2.1).

10.3.3 Cost Plus Fee

On the basis of the Cost of the Work (determined as provided in paragraphs 10.4 and 10.5) plus a CONTRACTOR'S fee for overhead and profit (determined as provided in paragraphs 10.6 and 10.7).

10.4 Cost of the Work

The term Cost of the Work means the sum of all costs necessarily incurred and paid by CONTRACTOR in the proper performance of the Work. Except as otherwise may be agreed to in writing by OWNER, such costs shall be in amounts no higher than those prevailing in the locality of the Project; shall include only the following items; and shall not include any of the costs itemized in paragraph 10.5:

10.4.1 Payroll Costs

Payroll costs for employees in the direct employ of CONTRACTOR in the performance of the Work under schedules of job classifications agreed upon by OWNER and CONTRACTOR. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of

fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workers' or workmen's compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. Such employees shall include superintendents and foremen at the site. The expenses of performing Work after regular working hours, on Saturday, Sunday or legal holidays, shall be included in the above to the extent authorized by OWNER.

10.4.2 Materials and Equipment Costs

Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to CONTRACTOR unless OWNER deposits funds with CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to OWNER. All trade discounts, rebates and refunds and all returns from sale of surplus materials and equipment shall accrue to OWNER, and CONTRACTOR shall make provisions so that they may be obtained.

10.4.3 Subcontractor Costs

Payments made by CONTRACTOR to the Subcontractors for Work performed by Subcontractors. If required by OWNER, CONTRACTOR shall obtain competitive bids from Subcontractors acceptable to CONTRACTOR and shall deliver such bids to OWNER who will then determine, with the advice of ARCHITECT, which bids will be accepted. If a subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work Plus a Fee, the Subcontractor's Cost of the Work shall be determined in the same manner as CONTRACTOR'S Cost of the Work. All subcontracts shall be subject to the other provisions of the Contract Documents insofar as applicable.

10.4.4 Special Consultant Costs

Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys and accountants) employed for services specifically related to the Work.

10.4.5 Supplemental Costs

10.4.5.1 The proportion of necessary transportation, travel and subsistence expenses of CONTRACTOR'S employees incurred in discharge of duties connected with the Work.

10.4.5.2 Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost less market value of such items used but not consumed which remain the property of CONTRACTOR.

10.4.5.3 Rentals of all construction equipment and machinery and the parts thereof whether rented from CONTRACTOR or others in accordance with rental agreements approved by OWNER with the advice of ARCHITECT, and the costs of transportation, loading, unloading, installation, dismantling and removal shall be in accordance with terms of said rental agreements. The rental of any such equipment, machinery or parts shall cease when the use thereof is no longer necessary for the Work.

10.4.5.4 Sales, consumer, use or similar taxes related to the Work, and for which CONTRACTOR is liable, imposed by Laws and Regulations.

10.4.5.5 Deposits lost for causes other than negligence of CONTRACTOR, any Subcontractor or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

10.4.5.6 Losses and damages (and related expenses), not compensated by insurance or otherwise, to the Work or otherwise sustained by CONTRACTOR in connection with the performance and furnishing of the Work (except losses and damages within the deductible amounts of property insurance established by OWNER), provided they have resulted from causes other than the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of OWNER. No such losses, damages and expenses shall be included in the Cost of the Work for the purpose of determining CONTRACTOR'S fee. If, however, any such loss or damage requires reconstruction and CONTRACTOR is placed in charge thereof, CONTRACTOR shall be paid a fee proportionate to that stated in paragraph 10.6.2 for services.

10.4.5.7 The cost of utilities, fuel and sanitary facilities at the site.

10.4.5.8 Minor expenses such as telegrams, long distance telephone calls, telephone service at the site, expressage and similar petty cash items in connection with the Work.

10.4.5.9 Cost of premiums for additional Bonds and insurance required because of changes in the Work and premiums for property insurance coverage within the limits of the deductible amounts established by OWNER.

10.5 Not to Be Included in Cost of the Work

The term Cost of the Work shall not include any of the following:

10.5.1 Costs of Officers and Executives

Payroll costs and other compensation of CONTRACTOR'S officers, executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by CONTRACTOR whether at the site or in CONTRACTOR'S principal or a branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in paragraph 10.4.1 or specifically covered by paragraph 10.4.4 - all of which are to be considered administrative costs covered by the CONTRACTOR'S fee.

10.5.2 Principal Office

Expenses of CONTRACTOR'S principal and branch offices other than CONTRACTOR'S office at the site.

10.5.3 Capital Expense

Any part of CONTRACTOR'S capital expenses, including interest on CONTRACTOR'S capital employed for the Work and charges against CONTRACTOR for delinquent payments.

10.5.4 Bonds and Insurance

Cost of premiums for all Bonds and for all insurance whether or not CONTRACTOR is required by the Contract Documents to purchase and maintain the same (except for the cost of premiums covered by subparagraph 10.4.5.9 above).

10.5.5 Costs Due to Negligence

Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of

defective Work, disposal of materials or equipment wrongly supplied and making good any damage to property.

10.5.6 Other Costs

Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraph 10.4.

10.6 Contractor's Fee

The CONTRACTOR'S Fee allowed to CONTRACTOR for overhead and profit shall be determined as follows:

10.6.1 a mutually acceptable fixed fee; or if none can be agreed upon,

10.6.2 a fee based on the following percentages of the various portions of the Cost of the Work:

10.6.2.1 for costs incurred under paragraphs 10.4.1 and 10.4.2, the CONTRACTOR'S fee shall be fifteen percent;

10.6.2.2 for costs incurred under paragraph 10.4.3, the CONTRACTOR'S fee shall be five percent; and if a subcontract is on the basis of Cost of the Work Plus a fee, the maximum allowable to CONTRACTOR on account of overhead and profit of all Subcontractors shall be fifteen percent;

10.6.2.3 no fee shall be payable on the basis of costs itemized under paragraphs 10.4.4, 10.4.5 and 10.5;

10.6.2.4 the amount of credit to be allowed by CONTRACTOR to OWNER for any such change which results in a net decrease in cost will be the amount of the actual net decrease plus a deduction in CONTRACTOR'S Fee by an amount equal to ten percent of the net decrease; and

10.6.2.5 when both additions and credits are involved in any one change, the adjustment in CONTRACTOR'S fee shall be computed on the basis of the net change in accordance with paragraphs 10.6.2.1 through 10.6.2.4, inclusive.

10.7 Itemized Cost Breakdown

Whenever the cost of any Work is to be determined pursuant to paragraph 10.4 or 10.5, CONTRACTOR will submit in form acceptable to ARCHITECT an itemized cost breakdown together with supporting data.

10.8 Cash Allowances

It is understood that CONTRACTOR has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be done by such Subcontractors or Suppliers and for such sums within the limit of the allowances as may be acceptable to ARCHITECT, CONTRACTOR agrees that:

10.8.1 Materials and Equipment

The allowances include the cost to CONTRACTOR (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the site, and all applicable taxes; and

10.8.2 Other Costs

CONTRACTOR'S costs for unloading and handling on the site, labor, installation costs, overhead, profit and other expenses contemplated for the allowances have been included in the Contract Price and not in the allowances. No demand for additional payment on account of any thereof will be valid.

10.8.3 Change Order

Prior to final payment, an appropriate Change Order will be issued as recommended by ARCHITECT to reflect actual amounts due CONTRACTOR on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

10.9 Unit Price Work

10.9.1 General

Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the established unit prices for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by CONTRACTOR will be made by ARCHITECT in accordance with Paragraph 8.10.

10.9.2 Overhead and Profit

Each unit price will be deemed to include an amount considered by CONTRACTOR to be adequate to cover CONTRACTOR'S overhead and profit for each separately identified item.

10.9.3 Claim for Increase in Unit Price

Where the quantity of any item of Unit Price Work performed by CONTRACTOR differs materially and significantly from the estimated quantity of such item indicated in the Agreement and there is no corresponding adjustment with respect to any other item of Work and if CONTRACTOR believes that CONTRACTOR has incurred additional expense as a result thereof, CONTRACTOR may make a claim for an increase in the Contract Price in accordance with Article 10.

11. CHANGE OF CONTRACT TIME

11.1 Change Order

The Contract Time may only be changed by a Change Order. Any claim for an extension or shortening of the Contract Time shall be based on written notice delivered to ARCHITECT promptly (but in no event later than thirty days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the extent of the claim with supporting data shall be delivered within sixty days after such occurrence (unless ARCHITECT allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by the claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant has reason to believe it is entitled as a result of the occurrence of said event. All claims for adjustment in the Contract Time shall be determined by ARCHITECT in accordance with paragraph 8.11. No claim for an adjustment in the Contract Time will be valid if not submitted in accordance with the requirements of this paragraph 11.1.

11.2 Justification for Time Extensions

The Contract Time will be extended in an amount equal to time lost due to delays beyond the control of CONTRACTOR if a claim is made therefore as provided in paragraph 11.1. Such delays shall include, but not be limited to, acts or neglect by OWNER or others performing additional work as contemplated by Article 6, or to fires, floods, labor disputes, epidemics, abnormal weather conditions or acts of God.

11.3 Time Limits

All time limits stated in the Contract Documents are of the essence of the Agreement. The provisions of this Article 11 shall not exclude recovery for damages (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court costs) for delay by either party.

12. WARRANTY AND GUARANTEE; TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

12.1 Warranty and Guarantee

CONTRACTOR warrants and guarantees to OWNER and ARCHITECT that all Work will be in accordance with the Contract Documents and will not be defective. All defective Work, whether or not in place, may be rejected, corrected or accepted as provided in this Article 12.

12.2 Access to Work

OWNER, ARCHITECT and ARCHITECT'S representatives, other representatives of OWNER, testing agencies and governmental agencies with jurisdictional interests will have access to the Work at reasonable times for their observation, inspecting and testing. CONTRACTOR shall provide proper and safe conditions for such access.

12.3 Tests and Inspections

12.3.1 Timely Notice

CONTRACTOR shall give ARCHITECT timely notice of readiness of the Work for all required inspections, tests or approvals.

12.3.2 Requirements and Responsibilities

The ARCHITECT may require such inspection and testing during the course of the Work as he/she deems necessary to ascertain and assure the integrity and acceptable quality of the materials incorporated and the work performed. Inspection presence may be either full-time or intermittent, and neither the presence nor absence at any time of the ARCHITECT or the INSPECTOR shall relieve the CONTRACTOR of sole responsibility for the acceptability and integrity of the Work or any part thereof.

The costs of sampling, testing, and inspection on-site to ascertain acceptability of the Work and materials will be borne by the OWNER except as otherwise provided. The OWNER will select a testing laboratory to perform such sampling and testing. Sampling and/or testing required by the CONTRACTOR or necessitated by failure of Work or materials to meet the above acceptability test shall be at the expense of the CONTRACTOR.

Inspection services may be performed by the employees of the OWNER or by others selected or designated by the OWNER or the ARCHITECT.

Sampling and/or testing required for manufacturing quality and/or process control, for certification that raw mineral materials or manufactured products are the quality specified in the contract, or to assure the acceptability for incorporation into the Work shall be borne by the CONTRACTOR or the material supplier.

Cost for inspection, sampling, testing, and approvals required by the laws or regulations of any public body having competent jurisdiction shall be borne by the CONTRACTOR or the material supplier.

Sampling and testing will be in accord with pertinent codes and regulations and with appropriate standards of the American Society of Testing Materials or other specified standards.

12.3.3 On-Site Construction Test and Other Testing

All inspections, tests or approvals other than those required by Laws or Regulations of any public body having jurisdiction shall be performed by organizations acceptable to OWNER and CONTRACTOR (or by ARCHITECT if so specified).

12.3.4 Covered Work

If any Work (including the work of others) that is to be inspected, tested or approved is covered without written concurrence of ARCHITECT, it must, if requested by ARCHITECT, be uncovered for observation. Such uncovering shall be at CONTRACTOR'S expense unless CONTRACTOR has given ARCHITECT timely notice of CONTRACTOR'S intention to cover the same and ARCHITECT has not acted with reasonable promptness in response to such notice.

12.3.5 CONTRACTOR'S Obligation

Neither observations by ARCHITECT nor inspections, tests or approvals by others shall relieve CONTRACTOR from CONTRACTOR'S obligations to perform the Work in accordance with the Contract Documents.

12.4 OWNER May Stop the Work

If the Work is defective, or CONTRACTOR fails to supply sufficient skilled workers or suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, OWNER may order CONTRACTOR to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of OWNER to stop the Work shall not give rise to any duty on the part of OWNER to exercise this right for the benefit of CONTRACTOR or any other party.

12.5 Correction or Removal of Defective Work

If required by ARCHITECT, CONTRACTOR shall promptly, as directed, either correct all defective Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by ARCHITECT, remove it from the site and replace it with non-defective Work. CONTRACTOR shall bear all direct, indirect and consequential costs of such correction or removal (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) made necessary thereby.

12.6 One Year Correction Period

If within one year after the date of Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, CONTRACTOR shall

promptly, without cost to OWNER and in accordance with OWNER'S written instructions, either correct such defective Work, or, if it has been rejected by OWNER, remove it from the site and replace it with non-defective Work. If CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, OWNER may have the defective Work corrected or the rejected Work removed and replaced, and all direct, indirect and consequential costs of such removal and replacement (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) will be paid by CONTRACTOR. In special circumstances where a particular item of equipment is placed in continuous service before Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications or by Change Order.

12.7 Acceptance of Defective Work

If, instead of requiring correction or removal and replacement of defective Work, OWNER prefers to accept it, OWNER may do so. CONTRACTOR shall bear all direct, indirect and consequential costs attributable to OWNER'S evaluation of and determination to accept such defective Work (such costs to be approved by ARCHITECT as to reasonableness and to include but not be limited to fees and charges of engineers, architects, attorneys and other professionals).

12.8 OWNER May Correct Defective Work

If CONTRACTOR fails within a reasonable time after written notice of ARCHITECT to proceed to correct and to correct defective Work or to remove and replace rejected Work as required by ARCHITECT in accordance with paragraph 12.5, or if CONTRACTOR fails to perform the Work in accordance with the Contract Documents, or if CONTRACTOR fails to comply with any other provision of the Contract Documents, OWNER may, after seven days' written notice to CONTRACTOR, correct and remedy any such deficiency. In exercising the rights and remedies under this paragraph OWNER shall proceed expeditiously. To the extent necessary to complete corrective and remedial action, OWNER may exclude CONTRACTOR from all or part of the site, take possession of all or part of the Work, and suspend CONTRACTOR'S services related thereto, take possession of CONTRACTOR'S tools, appliances, construction equipment and machinery at the site and incorporate in the Work all materials and equipment stored at the site or for which OWNER has paid CONTRACTOR but which are stored elsewhere. CONTRACTOR shall allow OWNER, OWNER'S representatives, agents and employees such access to the site as may be necessary to enable OWNER to exercise the rights and remedies under this paragraph. All direct, indirect and consequential costs of OWNER in exercising such rights and remedies will be charged against CONTRACTOR in an amount approved as to reasonableness by ARCHITECT, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price. Such direct, indirect and consequential costs will include but not be limited to fees and charges of engineers, architects, attorneys and other professionals, all court costs and all costs of repair

and replacement of work of others destroyed or damaged by correction, removal or replacement of CONTRACTOR'S defective Work. CONTRACTOR shall not be allowed an extension of the Contract Time because of any delay in performance of the Work attributable to the exercise by OWNER of OWNER'S rights and remedies hereunder.

13. PAYMENTS TO CONTRACTOR AND COMPLETION

13.1 Schedule of Values

The schedule of values established as provided in paragraph 2.8 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to OWNER. Progress payments on account of Unit Price Work will be based on the number of units completed.

13.2 Application for Progress Payment

At least ten days before each progress payment is scheduled (but not more often than once a month), CONTRACTOR shall submit to ARCHITECT for review an Application for Payment filled out and signed by CONTRACTOR covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice or other documentation warranting that OWNER has received the materials and equipment free and clear of all liens, charges, security interests and encumbrances (which are hereinafter in these General Conditions referred to as "Liens") and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect OWNER'S interest therein, all of which will be satisfactory to OWNER. OWNER shall, within thirty (30) calendar days of presentation to him of an approved Application for Payment, pay CONTRACTOR the amount approved by ARCHITECT. Monthly progress payments shall be ninety (90) percent of the sum obtained by applying the respective bid unit prices to the approved estimated quantities of work completed by the Contractor during the preceding month. The remaining ten (10) percent will be held by the Owner, as retainage. At such time as the ARCHITECT deems appropriate - based on the quality of work performed, progress of cleanup, and other pertinent factors - the rate of retainage, or the total amount retained, may be reduced; although, any reduction in retainage, below the ten (10) percent level, is made solely at the ARCHITECT's discretion. All remaining retainage held will be included in the final payment to the Contractor.

13.3 CONTRACTOR'S Warranty of Title

CONTRACTOR warrants and guarantees that title to all Work, materials and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to OWNER no later than the time of payment free and clear of all Liens.

13.4 Review of Applications for Progress Payment

13.4.1 Submission of Application for Payment

ARCHITECT will, after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to OWNER, or return the Application to CONTRACTOR indicating in writing ARCHITECT'S reasons for refusing to recommend payment. In the latter case, CONTRACTOR may make the necessary corrections and resubmit the Application.

13.4.2 ARCHITECT'S Recommendation

ARCHITECT may refuse to recommend the whole or any part of any payment, if, in ARCHITECT'S opinion, it would be incorrect to make such representations to OWNER. ARCHITECT may also refuse to recommend any such payment, or, because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify any such payment previously recommended, to such extent as may be necessary in ARCHITECT'S opinion to protect OWNER from loss because:

13.4.2.1 the Work is defective, or completed Work has been damaged requiring correction or replacement;

13.4.2.2 the Contract Price has been reduced by Written Amendment or Change Order;

13.4.2.3 OWNER has been required to correct defective Work or complete Work in accordance with paragraph 12.8; or

13.4.2.4 of ARCHITECT'S actual knowledge of the occurrence of any of the events enumerated in paragraphs 14.2.1 through 14.2.9 inclusive.

13.5 Partial Utilization

OWNER at any time may request CONTRACTOR in writing to permit OWNER to use any such part of the Work which OWNER believes to be ready for its intended use and has been completed. If CONTRACTOR agrees, CONTRACTOR will certify to OWNER that said part of the Work is complete and request that a Certificate of Completion be issued for that part of the Work.

13.6 Final Inspection

Upon written notice from CONTRACTOR that the entire Work or an agreed portion thereof is complete, ARCHITECT will make a final inspection with CONTRACTOR and will notify CONTRACTOR in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. CONTRACTOR shall immediately take such measures as are necessary to remedy such deficiencies.

13.7 Final Application for Payment

After CONTRACTOR has completed all such corrections to the satisfaction of ARCHITECT and delivered all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, marked-up record documents (as provided in paragraph 5.14) and other documents - all as required by the Contract Documents, and after ARCHITECT has indicated that the Work is acceptable (subject to the provisions of paragraph 13.10), CONTRACTOR may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents, together with complete and legally effective releases or waivers (satisfactory to OWNER) of all Liens arising out of or filed in connection with the Work. In lieu thereof and as approved by OWNER, CONTRACTOR may furnish receipts or releases in full; an affidavit of CONTRACTOR that the releases and receipts include all labor, services, material and equipment for which a Lien could be filed, and that all payrolls, material and equipment bills, and other indebtedness connected with the Work for which OWNER or OWNER'S property might in any way be responsible, have been paid or otherwise satisfied; and consent of the surety, if any, to final payment. If any Subcontractor or Supplier fails to furnish a release or receipt in full, CONTRACTOR may furnish a Bond or other collateral satisfactory to OWNER to indemnify OWNER against any Lien.

13.8 Final Payment and Acceptance

13.8.1 ARCHITECT'S Approval

If, on the basis of ARCHITECT'S observation of the Work during construction and final inspection, and ARCHITECT'S review of the final Application for Payment and accompanying documentation - all as required by the Contract Documents, ARCHITECT is satisfied that the Work has been completed and CONTRACTOR'S other obligations under the Contract Documents have been fulfilled, ARCHITECT will, after receipt of the final Application for Payment, indicate in writing ARCHITECT'S recommendation of payment and present the Application to OWNER for payment. Thereupon ARCHITECT will give written notice to OWNER and CONTRACTOR that the Work is acceptable, subject to the provisions of paragraph 13.10. Otherwise, ARCHITECT will return the Application to CONTRACTOR, indicating in writing the reasons for refusing to recommend final payment, in which case CONTRACTOR shall make the necessary corrections and resubmit the Application.

13.8.2 Delay in Completion of Work

If, through no fault of CONTRACTOR, final completion of the Work is significantly delayed, OWNER shall, upon receipt of CONTRACTOR'S final Application for Payment and recommendation of ARCHITECT, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by OWNER for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if Bonds have been furnished as required in paragraph 10 of Part II, Information for Bidders, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by CONTRACTOR to ARCHITECT with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

13.9 CONTRACTOR'S Continuing Obligation

CONTRACTOR'S obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. Neither recommendation of any progress or final payment by ARCHITECT, nor the issuance of a certificate of Completion, nor any payment by OWNER to CONTRACTOR under the Contract Documents, nor any use or occupancy of the Work or any part thereof by OWNER, nor any act of acceptance by OWNER nor any failure to do so, nor any review and approval of a Shop Drawing or sample submission, nor any correction of defective Work by OWNER will constitute an acceptance of Work not in accordance with the Contract Documents or a release of CONTRACTOR'S obligation to perform the Work in accordance with the Contract Documents (except as provided in paragraph 13.10).

13.10 Waiver of Claims

The making and acceptance of final payment will constitute:

13.10.1 a waiver of all claims by OWNER against CONTRACTOR, except claims arising from unsettled Liens, from defective Work appearing after final inspection or from failure to comply with the Contract Documents or the terms of any special guarantees specified therein; however, it will not constitute a waiver by OWNER of any rights in respect of CONTRACTOR'S continuing obligations under the Contract Documents; and

13.10.2 a waiver of all claims by CONTRACTOR against OWNER other than those previously made in writing and still unsettled.

14. SUSPENSION OF WORK AND TERMINATION

14.1 OWNER May Suspend Work

OWNER may, at any time and without cause, suspend the Work or any portion thereof for a period of not more than ninety days by notice in writing to CONTRACTOR and ARCHITECT which will fix the date on which Work will be resumed. CONTRACTOR shall resume the Work on the date so fixed. CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension if CONTRACTOR makes an approved claim therefor as provided in Articles 10 and 11.

14.2 OWNER May Terminate

The OWNER may terminate the Work upon the occurrence of any one or more of the following events:

14.2.1 if CONTRACTOR commences a voluntary case under any chapter of the Bankruptcy Code (Title 11, United States Code), as now or hereafter in effect, or if CONTRACTOR takes any equivalent or similar action by filing a petition or otherwise under any other federal or state law in effect at such time relating to the bankruptcy or insolvency;

14.2.2 if a petition is filed against CONTRACTOR under any chapter of the Bankruptcy Code as now or hereafter in effect at the time of filing, or if a petition is filed seeking any such equivalent or similar relief against CONTRACTOR under any other federal or state law in effect at the time relating to bankruptcy or insolvency;

14.2.3 if CONTRACTOR makes a general assignment for the benefit of creditors;

14.2.4 if a trustee, receiver, custodian or agent of CONTRACTOR is appointed under applicable law or under contract, whose appointment or authority to take charge of property of CONTRACTOR is for the purpose of enforcing a Lien against such property or for the purpose of general administration of such property for the benefit of CONTRACTOR'S creditors;

14.2.5 if CONTRACTOR admits in writing an inability to pay its debts generally as they become due;

14.2.6 if CONTRACTOR persistently fails to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 2.8 as revised from time to time);

14.2.7 if CONTRACTOR disregards Laws or Regulations of any public body having jurisdiction;

14.2.8 if CONTRACTOR disregards the authority of ARCHITECT, or

14.2.9 if CONTRACTOR otherwise violates in any substantial way any provisions of the Contract Documents;

OWNER may, after giving CONTRACTOR (and the surety) seven days' written notice and to the extent permitted by Laws and Regulations, terminate the services of CONTRACTOR, exclude CONTRACTOR from the site and take possession of the Work and of all CONTRACTOR'S tools, appliances, construction equipment and machinery at the site and use the same to the full extent they could be used by CONTRACTOR (without liability to CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the site or for which OWNER has paid CONTRACTOR but which are stored elsewhere, and finish the Work as OWNER may deem expedient. In such case CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct, indirect and consequential costs of completing the Work (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs) such excess will be paid to CONTRACTOR. If such costs exceed such unpaid balance, CONTRACTOR shall pay the difference to OWNER. Such costs incurred by OWNER will be approved as to reasonableness by ARCHITECT and incorporated in a Change Order, but when exercising any rights or remedies under this paragraph OWNER shall not be required to obtain the lowest price for the Work performed.

14.2.10 If safety violations are observed and brought to the Contractors attention and Contractor fails to take immediate corrective measures any repeat of similar safety violations, OWNER will order an immediate termination of contract. Note: it is the Contractor's responsibility to know proper safety measures as they pertain to construction and OSHA.

14.2.11 This contract may be canceled by either party thirty (30) days after delivery by canceling party of written notice of intent to cancel to the other contracting party.

14.2.12 This contract may be canceled by the Lexington-Fayette Urban County Government if it is determined that the Bidder has failed to perform under the terms of this agreement, such cancellation to be effective upon receipt of written notice of cancellation by the Bidder.

14.3 CONTRACTOR'S Services Terminated

Where CONTRACTOR'S services have been so terminated by OWNER, the termination will not affect any rights or remedies of OWNER against CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys due CONTRACTOR by OWNER will not release CONTRACTOR from liability.

14.4 Payment After Termination

Upon seven days' written notice to CONTRACTOR, OWNER may, without cause and without prejudice to any other right or remedy, elect to abandon the Work and terminate the Agreement. In such case, CONTRACTOR shall be paid for all Work executed and any expense sustained plus reasonable termination expenses, which will include, but not be limited to, direct, indirect and consequential costs (including, but not limited to, fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs).

14.5 CONTRACTOR May Stop Work or Terminate

If, through no act or fault of CONTRACTOR, the Work is suspended for a period of more than ninety days by OWNER or under an order of court or other public authority, or ARCHITECT fails to act on any Application for Payment within sixty days after it is submitted, or OWNER fails for sixty days to pay CONTRACTOR any sum finally determined to be due, then CONTRACTOR may, upon seven days' written notice to OWNER and ARCHITECT, terminate the Agreement and recover from OWNER payment for all Work executed and any expense sustained plus reasonable termination expenses. In addition and in lieu of terminating the Agreement, if ARCHITECT has failed to act on an Application for Payment or OWNER has failed to make any payment as aforesaid, CONTRACTOR may upon seven days' written notice to OWNER and ARCHITECT stop the Work until payment of all amounts then due. The provisions of this paragraph shall not relieve CONTRACTOR of the obligations under paragraph 5.16 to carry on the Work in accordance with the progress schedule and without delay during disputes and disagreements with OWNER.

15. MISCELLANEOUS

15.1 Claims for Injury or Damage

Should OWNER or CONTRACTOR suffer injury or damage to person or property because of any error, omission or act of the other party or of any of the other party's employees or agents or others for whose acts the other party is legally liable, claim will be made in writing to the other party within a reasonable time of the first observance of such injury or damage. The provisions of this paragraph 15.1 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitations or repose.

15.2 Non-Discrimination in Employment

The CONTRACTOR shall comply with the following requirements prohibiting discrimination:

15.2.1 That no person (as defined in KRS 344.010) shall bid on Lexington-Fayette Urban County Government construction projects, or bid to furnish materials or supplies to the Lexington-Fayette Urban County Government, if, within six months prior to the time of opening of bids, said person shall have been found, by declaratory judgment action in Fayette Circuit Court, to be presently engaging in an unlawful practice, as hereinafter defined. Such declaratory judgment action may be brought by an aggrieved individual or upon an allegation that an effort at conciliation pursuant to KRS 344.200 has been attempted and failed, by the Lexington-Fayette County Human Rights Commission.

15.2.2 That it is an unlawful practice for an employer:

15.2.2.1 to fail or refuse to hire, or to discharge any individual or otherwise to discriminate against an individual, with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, sex, age, or national origin; or

15.2.2.2 to limit, segregate or classify his employees in any way which would deprive or tend to deprive an individual of employment opportunities or otherwise adversely affect his status as an employee because of such individual's sex, race, color, religion, age, or national origin.

15.2.3 That it is an unlawful practice for an employer, labor organization, or joint-labor management committee controlling apprenticeship or other training or retraining, including on-the-job training programs to discriminate against an individual because of his race, color, religion, sex, age, or national origin in admission to, or employment in, any program established to provide apprenticeship or other training.

15.2.4 That a copy of this Ordinance shall be furnished all suppliers and made a part of all bid specifications.

15.2.5 This Ordinance shall take effect after it is signed, published and recorded, as required by law.

15.3 Temporary Street Closing or Blockage

The CONTRACTOR will notify the OWNER at least 72 hours prior to making any temporary street closing or blockage. This will permit orderly notification to all concerned public agencies. Specific details and restrictions on street closure or blockage are contained in the Special Conditions.

15.4 Percentage of Work Performed by prime CONTRACTOR

The CONTRACTOR shall perform on site, and with its own organization, Work equivalent to at least fifty (50%) percent of the total amount of Work to be performed under the Contract. This percentage may be reduced by a supplemental agreement to this Contract if, during performing the Work, the CONTRACTOR requests a reduction and the ARCHITECT determines that the reduction would be to the advantage of the OWNER.

15.5 Clean-up

Cleanup shall progress, to the greatest degree practicable, throughout the course of the Work. The Work will not be considered as completed, and final payment will not be made, until the right-of-way and all ground occupied or affected by the Contractor in connection with the Work has been cleared of all rubbish, equipment, excess materials, temporary structures, and weeds. Rubbish and all waste materials of whatever nature shall be disposed of, off of the project site, in an acceptable manner. All property, both public and private, which has been damaged in the prosecution of the Work, shall be restored in an acceptable manner. All areas shall be draining, and all drainage ways shall be left unobstructed, and in such a condition that drift will not collect or scour be induced.

15.6 General

The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon CONTRACTOR by paragraphs 12.1, 12.3.5, 13.3, and 15.2 and all of the rights and remedies available to OWNER and ARCHITECT thereunder, are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee or by other provisions of the Contract Documents, and the provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply. All representations, warranties and guarantees made in the Contract Documents will survive final payment and termination or completion of the Agreement.

15.7 Debris Disposal

For all LFUCG projects any trash, construction demolition debris, yard waste, dirt or debris of any kind that is removed from the project site must be disposed of in accordance with local, state, and federal regulations. The disposal site or facility must be approved in advance by the LFUCG and disposal documentation is required. The Contractor will be responsible for payment of any fines associated with improper disposal of material removed from the project site.

15.8 Close Out Procedures

The CONTRACTOR shall coordinate training for OWNER of all major building systems and equipment that are part of the Project.

The CONTRACTOR shall distribute three (3) copies of the appropriate O&M Manuals for the installed major building systems and equipment.

The CONTRACTOR shall prepare accurate record drawings that reflect Project improvements "as-built" in the field. The CONTRACTOR shall provide three (3) copies of the record drawings to the OWNER.

The CONTRACTOR shall provide an electronic version (AutoCad) of all construction documents related to the Project at the conclusion of the Project.

END OF SECTION

PART V
SPECIAL CONDITIONS
INDEX

1	BLASTING	SC-2
2	RISK MANAGEMENT PROVISIONS – INSURANCE AND INDEMNIFICATION	SC-3
3	WAGE SCALE (if applicable)	SC-6
4	WEATHER RELATED DELAYS.....	SC-14

1. **BLASTING**

Blasting shall only be allowed with the specific written permission from the OWNER and the CONTRACTOR will be fully responsible and will be required to provide additional insurance.

Blasting is only allowed by a licensed blaster in compliance with the State of Kentucky Laws, KRS Section 351.310 – 351.340 and applicable rules and regulations issued by the Department of Mines and Minerals.

CONTRACTOR shall notify each property owner and public utility company having structures or facilities in proximity to the site of the work of the intent to use explosives. Give such notice sufficiently in advance to enable those being notified to take the necessary steps to protect their property from injury. CONTRACTOR will be liable for any and all damages and claims made as a result of his blasting operations.

CONTRACTOR shall preserve the original bearing value of rock located under proposed structure foundations from damage be blasting, by concussion from the blasting or by excessive breakage. The CONTRACTOR shall bear any increase in structure costs caused by blasting damage to rock under proposed foundations.

2. **RISK MANAGEMENT PROVISIONS
INSURANCE AND INDEMNIFICATION**

Error! Bookmark not defined.

INDEMNIFICATION AND HOLD HARMLESS PROVISION

- (1) It is understood and agreed by the parties that Contractor hereby assumes the entire responsibility and liability for any and all damages to persons or property caused by or resulting from or arising out of any act or omission on the part of Contractor or its employees, agents, servants, owners, principals, licensees, assigns or subcontractors of any tier (hereinafter "CONTRACTOR") under or in connection with this agreement and/or the provision of goods or services and the performance or failure to perform any work required thereby.
- (2) CONTRACTOR shall indemnify, save, hold harmless and defend the Lexington-Fayette Urban County Government and its elected and appointed officials, employees, agents, volunteers, and successors in interest (hereinafter "LFUCG") from and against all liability, damages, and losses, including but not limited to, demands, claims, obligations, causes of action, judgments, penalties, fines, liens, costs, expenses, interest, defense costs and reasonable attorney's fees that are in any way incidental to or connected with, or that arise or are alleged to have arisen, directly or indirectly, from or by CONTRACTOR's performance or breach of the agreement and/or the provision of goods or services provided that: (a) it is attributable to personal injury, bodily injury, sickness, or death, or to injury to or destruction of property (including the loss of use resulting therefrom), or to or from the negligent acts, errors or omissions or willful misconduct of the CONTRACTOR; and (b) not caused solely by the active negligence or willful misconduct of LFUCG.
- (3) In the event LFUCG is alleged to be liable based upon the above, CONTRACTOR shall defend such allegations and shall bear all costs, fees and expenses of such defense, including but not limited to, all reasonable attorneys' fees and expenses, court costs, and expert witness fees and expenses, using attorneys approved in writing by LFUCG, which approval shall not be unreasonably withheld.
- (4) These provisions shall in no way be limited by any financial responsibility or insurance requirements, and shall survive the termination of this agreement.

FINANCIAL RESPONSIBILITY

BIDDER/CONTRACTOR understands and agrees that it shall, prior to final acceptance of its bid and the commencement of any work, demonstrate the ability to assure compliance with the above Indemnity provisions and these other risk management provisions.

INSURANCE REQUIREMENTS

YOUR ATTENTION IS DIRECTED TO THE INSURANCE REQUIREMENTS BELOW, AAND YOU MAY NEED TO CONFER WITH YOUR INSURANCE AGENTS, BROKERS, OR CARRIERS TO DETERMINE IN ADVANCE OF SUBMISSION OF A RESPONSE THE AVAILABILITY OF THE INSURANCE COVERAGES AND ENDORSEMENTS REQUIRED HEREIN. IF YOU FAIL TO COMPLY WITH THE INSURANCE REQUIREMENTS BELOW, YOU MAY BE DISQUALIFIED FROM AWARD OF THE CONTRACT.

Required Insurance Coverage

BIDDER/CONTRACTOR shall procure and maintain for the duration of this contract the following or equivalent insurance policies at no less than the limits shown below and cause its subcontractors to maintain similar insurance with limits acceptable to LFUCG in order to protect LFUCG against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by CONTRACTOR. The cost of such insurance shall be included in any bid:

Coverage	Limits
General Liability (Insurance Services Office Form CG 00 01)	\$1 million per occurrence, \$2 million aggregate or \$2 million combined single limit: Plus an Umbrella coverage of \$10 million
Commercial Automobile Liability (Insurance Services Office Form CA 0001)	combined single, \$1 million per occurrence
Worker's Compensation	Statutory
Employer's Liability	\$500,000.00

The policies above shall contain the following conditions:

- a. All Certificates of Insurance forms used by the insurance carrier shall be properly filed and approved by the Department of Insurance for the Commonwealth of Kentucky (DOI). LFUCG shall be named as an additional insured in the General Liability Policy and Commercial Automobile Liability Policy using the Kentucky DOI approved forms.
- b. The General Liability Policy shall be primary to any insurance or self-insurance retained by LFUCG.
- c. The General Liability Policy should include XCU coverage or to add an endorsement for the XCU coverage at the same limit of liability.
- d. The General Liability Policy shall include a Products and Completed Operations endorsement or Premises and Operations Liability endorsement and a Products Liability endorsement for the same limit of liability as the CGL, unless it is deemed not to apply by LFUCG.
- e. LFUCG shall be provided at least 30 days advance written notice via certified mail, return receipt requested, in the event any of the required policies are canceled or non-renewed.
- f. Said coverage shall be written by insurers acceptable to LFUCG and shall be in a form acceptable to LFUCG. Insurance placed with insurers with a rating classification of no less than Excellent (A or A-) and a financial size category of no less than VIII, as defined by the most current Best's Key Rating Guide shall be deemed automatically acceptable.

Renewals

After insurance has been approved by LFUCG, evidence of renewal of an expiring policy must be submitted to LFUCG, and may be submitted on a manually signed renewal endorsement form. If the policy or carrier has changed, however, new evidence of coverage must be submitted in accordance with these Insurance Requirements.

Deductibles and Self-Insured Programs

IF YOU INTEND TO SUBMIT A SELF-INSURANCE PLAN IT MUST BE FORWARDED TO LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT, DIVISION OF RISK MANAGEMENT, 200 EAST MAIN STREET, LEXINGTON, KENTUCKY 40507 NO LATER THAN A MINIMUM OF

FIVE (5) WORKING DAYS PRIOR TO THE RESPONSE DATE. Self-insurance programs, deductibles, and self-insured retentions in insurance policies are subject to separate approval by Lexington-Fayette Urban County Government's Division of Risk Management, upon review of evidence of BIDDER/CONTRACTOR's financial capacity to respond to claims. Any such programs or retentions must provide LFUCG with at least the same protection from liability and defense of suits as would be afforded by first-dollar insurance coverage. If BIDDER/CONTRACTOR satisfies any portion of the insurance requirements through deductibles, self-insurance programs, or self-insured retentions, BIDDER/CONTRACTOR agrees to provide Lexington-Fayette Urban County Government, Division of Risk Management, the following data prior to the final acceptance of bid and the commencement of any work:

- a. Latest audited financial statement, including auditor's notes.
- b. Any records of any self-insured trust fund plan or policy and related accounting statements.
- c. Actuarial funding reports or retained losses.
- d. Risk Management Manual or a description of the self-insurance and risk management program.
- e. A claim loss run summary for the previous five (5) years.
- f. Self-Insured Associations will be considered.

Safety and Loss Control

CONTRACTOR shall comply with all applicable federal, state, and local safety standards related to the performance of its works or services under this Agreement and take necessary action to protect the life, health and safety and property of all of its personnel on the job site, the public, and LFUCG.

Verification of Coverage

BIDDER/CONTRACTOR agrees to furnish LFUCG with all applicable Certificates of Insurance signed by a person authorized by the insurer to bind coverage on its behalf prior to final award, and if requested, shall provide LFUCG copies of all insurance policies, including all endorsements.

Right to Review, Audit and Inspect

CONTRACTOR understands and agrees that LFUCG may review, audit and inspect any and all of its records and operations to insure compliance with these Insurance Requirements.

DEFAULT

BIDDER/CONTRACTOR understands and agrees that the failure to comply with any of these insurance, safety, or loss control provisions shall constitute default and that LFUCG may elect at its option any single remedy or penalty or any combination of remedies and penalties, as available, including but not limited to purchasing insurance and charging BIDDER/CONTRACTOR for any such insurance premiums purchased, or suspending or terminating the work.

3. WAGE SCALES

KENTUCKY LABOR CABINET
PREVAILING WAGE DETERMINATION
CURRENT REVISION
LOCALITY NO. 008

Determination No. CR-8-008

Date of Determination: July 30, 2013

PROJECT NO. 034-B-01254-13-8

 x BLDG HH

This schedule of the prevailing rate of wages for Locality No. 008, which includes Fayette County, has been determined in accordance with the provisions of KRS 337.505 to 337.550. This determination shall be referred to as Prevailing Wage Determination No. CR-8-008.

Apprentices shall be permitted to work as such subject to Administrative Regulations 803 KAR 1:010. Copies of these regulations will be furnished upon request to any interested person.

Overtime is to be computed at not less than one and one-half (1 1/2) times the indicated BASE RATE for all hours worked in excess of eight (8) per day, and/or in excess of forty (40) per week. However, KRS 337.540 permits an employee and employer to agree, in writing, that the employee will be compensated at a straight time base rate for hours worked in excess of eight (8) hours in any one calendar day, but not more than ten (10) hours worked in any one calendar day, if such written agreement is prior to the over eight (8) hours in a calendar day actually being worked, or where provided for in a collective bargaining agreement. The fringe benefit rate is to be paid for each hour worked at a straight time rate for all hours worked. Fringe benefit amounts are applicable for all hours worked except when otherwise noted. Welders will receive rate for craft in which welding is incidental.

No laborer, workman or mechanic shall be paid at a rate less than that of the General Laborer except those classified as bona fide apprentices registered with the Kentucky State Apprenticeship Supervisor unless otherwise specified in this schedule of wage rates.

NOTE: The type of construction shall be determined by applying the following definitions.

BUILDING CONSTRUCTION

Building construction is the construction of sheltered enclosures with walk-in access for the purpose of housing persons, machinery, equipment, or supplies. It includes all construction of such structures, the installation of utilities and the installation of equipment, both above and below grade level, as well as incidental grading, utilities and paving.

HIGHWAY CONSTRUCTION

Highway construction includes the construction, alteration or repair of roads, streets, highways, runways, taxiways, alleys, trails, paths, parking areas, and other similar projects not incidental to building or heavy construction. It includes all incidental construction in conjunction with the highway construction project.

HEAVY CONSTRUCTION

Heavy projects are those projects that are not properly classified as either "building" or "highway". For example, dredging projects, water and sewer line projects, dams, flood control projects, sewage treatment plants and facilities, and water treatment plants and facilities are considered heavy.



Anthony Russell, Commissioner
Department of Workplace Standards
Kentucky Labor Cabinet

ASBESTOS/INSULATION WORKERS:		BASE RATE	\$24.92
		FRINGE BENEFITS	11.80

BOILERMAKERS:		BASE RATE	\$21.75
		FRINGE BENEFITS	11.76

BRICKLAYERS:		BASE RATE	\$24.31
Bricklayers:		FRINGE BENEFITS	11.40

Firebrick & Refractory:		BASE RATE	\$26.08
		FRINGE BENEFITS	11.42

Sawman & Layman:		BASE RATE	24.56
		FRINGE BENEFITS	11.40

CARPENTERS:		BASE RATE	\$21.98
Carpenters:	BUILDING	FRINGE BENEFITS	12.70
(Includes Drywall Finisher)			

Piledrivermen:	BUILDING	BASE RATE	\$22.48
		FRINGE BENEFITS	12.70

Carpenters:	HEAVY & HIGHWAY	BASE RATE	\$26.90
		FRINGE BENEFITS	14.50

Piledriver:	HEAVY & HIGHWAY	BASE RATE	\$27.15
		FRINGE BENEFITS	14.50

Divers:	HEAVY & HIGHWAY	BASE RATE	\$40.73
		FRINGE BENEFITS	14.50

CEMENT MASONS:		BASE RATE	\$15.51
		FRINGE	.59

ELECTRICIANS:		BASE RATE	\$29.48
		FRINGE BENEFITS	14.36

When workmen are required to work from bosun chairs, trusses, stacks, tanks, scaffolds, catwalks, radio and T.V. towers, structural steel (open, unprotected, unfloored raw steel) and bridges or similar hazardous locations where workmen are subject to a direct fall: 50 feet to 75 feet – add 25% above the workman's hourly rate, over 75 feet add 50% above workman's hourly rate. No premium shall be paid on work performed using JLGs, bucket trucks or other similar elevated mechanized work platforms up to 75 feet above the surface upon which the platform sits.

LINEMAN:	HEAVY HIGHWAY	BASE RATE	\$31.86
		FRINGE BENEFITS	11.63

EQUIPMENT OPERATOR:	HEAVY HIGHWAY	BASE RATE	\$28.48
		FRINGE BENEFITS	10.94

GROUNDSMAN:	HEAVY HIGHWAY	BASE RATE	\$18.87
		FRINGE BENEFITS	9.03

ELEVATOR CONSTRUCTORS:

BASE RATE	\$30.46
FRINGE BENEFITS	8.92

GLAZIERS:

BASE RATE	\$24.15
FRINGE BENEFITS	11.45

IRONWORKERS:

BASE RATE	\$26.47
FRINGE BENEFITS	19.56

LABORERS / BUILDING:

BUILDING GROUP 1: General laborers, asbestos abatement laborer, toxic waste removal laborer, water boys, tool room checker, carpenter tenders, (civil engineer helper, rodman, grade checker, excluding all field work performed by Engineering Firms), concrete pouring and curing, concrete forms stripping and wrecking, hand digging and backfilling of ditches, clearing of right of ways and building sites, wood sheeting and shoring, signalman for concrete bucket and general cleaning, and environmental laborer - nuclear, radiation, toxic and hazardous waste - Level D:

BUILDING	*BASE RATE	\$20.41
	FRINGE BENEFITS	10.69

BUILDING GROUP 2: All air tool operators, air track drills, asphalt rakers, tampers, batchers plant and scale man, chain saw, concrete saw, cutter/burner, electric hand grinder, all electric bush and chipping hammers, flagmen, forklift operators, form setter (street or highway), metal form setters, heaters, mesh handlers on walkways, streets and roadways outside building, gunnite laborers, hand spiker, introflax burning rod, joint makers, mason tender, multi-trade tender, pipe layers, plaster tender, powderman helpers, power driven Georgia buggies, power posthole diggers, railroad laborers, sandblaster laborers, scow man and deck hand, signal man, sweeper and cleaner machines, vibrator operators, vibrator/tamper operated by hand or remote control, walk behind trenching machines, mortar mixer machines, water pumpmen, and environmental laborers - nuclear, radiation, toxic and hazardous waste - Level C:

BUILDING	*BASE RATE	\$20.81
	FRINGE BENEFITS	10.69

BUILDING GROUP 3: Asphalt paver screwman, gunnite nozzleman and gunnite nozzle machine operator, sand blaster nozzleman, concrete or grout pumpman, plaster pumpman:

BUILDING	*BASE RATE	\$21.01
	FRINGE BENEFITS	10.69

BUILDING GROUP 4: Powderman and blaster, and environmental laborer - nuclear, radiation, toxic and hazardous waste - Level B:

BUILDING	*BASE RATE	\$21.11
	FRINGE BENEFITS	10.69

BUILDING GROUP 5: Caisson holes (6 ft. and over) pressure and free air including tools, and environmental laborer-nuclear, radiation, toxic and hazardous waste - Level A:

BUILDING	*BASE RATE	\$21.61
	FRINGE BENEFITS	10.69

BUILDING GROUP 6: Tunnel man and tunnel sand miner, cofferdam (pressure and free air), sand hog or mucker (pressure or free air):

BUILDING	*BASE RATE	\$21.91
	FRINGE BENEFITS	10.69

***Employees handling chemically treated materials which are harmful to the skin shall receive an additional \$.50 above base rate. Employees working on high work such as towers or smoke stacks, or any type of work fifty (50) feet above the ground or a solid floor shall receive \$1.00 above base rate. Employees**

working on boilers, kilns, melting tanks, furnaces, or when refractory is done using live fires, drying fires, heatups or any hot work shall receive \$2.00 above base rate.

LABORERS / HEAVY & HIGHWAY:

HEAVY HIGHWAY GROUP 1: Aging and curing of concrete (any mode or method), asbestos abatement worker, asphalt plant laborers, asphalt laborers, batch truck dumpers, carpenter tenders, cement mason tenders, cleaning of machines, concrete laborers, demolition laborers, dredging laborers, drill helper, environmental laborer - nuclear, radiation, toxic and hazardous waste - Level D, flagmen, grade checkers, all hand digging and hand back filling, highway marker placers, landscaping laborers, mesh handlers and placers, puddler, railroad laborers, rip-rap and grouters, right of way laborers, sign, guard rail and fence installers (all types), signal men, sound barrier installer, storm and sanitary sewer laborers, swampers, truck spotters and dumpers, and wrecking of concrete forms, general cleanup:

HEAVY & HIGHWAY	BASE RATE	\$21.35
	FRINGE BENEFITS	12.01

HEAVY HIGHWAY GROUP 2: Batter board men (sanitary and storm sewer), brickmason tenders, mortar mixer operator, scaffold builders, burner and welder, bushhammers, chain saw operator, concrete saw operators, deckhand scow man, dry cement handlers, environmental laborers - nuclear, radiation, toxic and hazardous waste - Level C, forklift operators for masonry, form setters, green concrete cutting, hand operated grouter and grinder machine operator, jack hammers, lead paint abatement, pavement breakers, paving joint machine, pipe layers-laser operators (non-metallic), plastic pipe fusion, power driven Georgia buggy or wheelbarrow, power post hole diggers, precast manhole setters, walk-behind tampers, walk-behind trenchers, sand blasters, concrete chippers, surface grinders, vibrator operators, wagon drillers:

HEAVY & HIGHWAY	BASE RATE	\$21.60
	FRINGE BENEFITS	12.01

HEAVY HIGHWAY GROUP 3: Asphalt luteman and rakers, gunnite nozzleman, gunnite operators and mixers, grout pump operator, side rail setters, rail paved ditches, screw operators, tunnel laborers (free air), and water blasters:

HEAVY & HIGHWAY	BASE RATE	\$21.65
	FRINGE BENEFITS	12.01

HEAVY HIGHWAY GROUP 4: Caisson workers (free air), cement finishers, environmental laborer - nuclear, radiation, toxic and hazardous waste - Levels A and B, miners and drillers (free air), tunnel blasters, and tunnel muckers (free air), directional and horizontal boring, air track driller (all types), powder man and blaster:

HEAVY & HIGHWAY	BASE RATE	\$22.25
	FRINGE BENEFITS	12.01

MARBLE, TILE & TERRAZZO:

Finishers:	BASE RATE	\$14.96
	FRINGE BENEFITS	0.00

Setters:	BASE RATE	\$21.89
	FRINGE BENEFITS	0.00

MILLWRIGHTS:	BASE RATE	\$24.18
	FRINGE BENEFITS	15.67

**OPERATING ENGINEERS / BUILDING:
NCCCO OR OECF CERTIFIED**

BUILDING CLASS A-1: Crane, dragline, hoist (1 drum when used for stack or chimney construction or repair); hoisting engineer (2 or more drums), orangepeel bucket, overhead crane, piledriver, truck crane, tower crane, hydraulic crane:

BUILDING	BASE RATE	\$27.90
	FRINGE BENEFITS	13.90

BUILDING CLASS A: Articulating dump, auto patrol, batcher plant, bituminous paver, cableway, central compressor plant, clamshell, concrete mixer (21 cu. ft. or over), concrete pump, crane, crusher plant, derrick, derrick boat, directional boring machine, ditching and trenching machine, dragline, dredge operator, dredge engineer, elevating grader and all types of loaders, forklift (regardless of lift height), GPS systems (on equipment within the classification), hoe type machine, hoist (1 drum when used for stack or chimney construction or repair), hoisting engineer (2 or more drums), laser or remote controlled equipment (within the classification), locomotive, motor scraper, carry-all scoop, bulldozer, heavy duty welder, mechanic, orangepeel bucket, piledriver, power blade, motor grader, roller (bituminous), scarifier, shovel, tractor shovel, truck crane, winch truck, push dozer, highlift, all types of boom cats, self contained core drill, hopto, tow or push boat, a-frame winch truck, concrete paver, gradeall, hoist, hyster, pumpcrete, Ross carrier, boom, tail boom, rotary drill, hydro hammer, mucking machine, rock spreader attached to equipment, scoopmobile, KeCal loader, tower cranes (French, German and other types), hydrocrane, backfiller, gurries, sub-grader, tunnel mining machines including moles, shields, or similar types of tunnel mining equipment:

BUILDING	*BASE RATE	\$26.84
	FRINGE BENEFITS	13.90

***Operators on cranes with boom one-hundred fifty feet (150') and over including jib, shall receive seventy-five cents (\$.75) above base rate. All cranes with piling leads will receive \$.50 above base rate regardless of boom length**

BUILDING CLASS B: All air compressors (over 900 CFM), bituminous mixer, joint sealing machine, concrete mixer (under 21 cu. ft.), form grader, roller (rock), tractor (50 HP and over), bull float, finish machine, outboard motor boat, flexplane, fireman, boom type tamping machine, truck crane oiler, greaser on grease facilities servicing heavy equipment, switchman or brakeman, mechanic helper, whirley oiler, self-propelled compactor, tractair and road widening trencher and farm tractor with attachments (except backhoe, highlift and endloader), elevator (regardless of ownership when used for hoisting any building material), hoisting engineer (1-drum or buck hoist), firebrick (masonry excluded), well points, grout pump, throttle-valve man, tugger, electric vibrator compactor, and caisson drill helper:

BUILDING	BASE RATE	\$23.94
	FRINGE BENEFITS	13.90

BUILDING CLASS C: Bituminous distributor, cement gun, conveyor, mud jack, paving joint machine, roller (earth), tamping machine, tractors (under 50 HP), vibrator, oiler, concrete saw, burlap and curing machine, hydro-seeder, power form handling equipment, deckhand steersman, hydraulic post driver, and drill helper:

BUILDING	BASE RATE	\$23.13
	FRINGE BENEFITS	13.90

**OPERATING ENGINEERS / HEAVY HIGHWAY:
NCCCO OR OECF CERTIFIED**

HEAVY HIGHWAY CLASS A-1: Cableway, carry deck crane, cherry picker, clamshell, crane, derrick, derrick boat, dragline, hoist engine (2 or more drums), hydraulic boom truck, hydrocrane, orangepeel bucket, overhead crane, piledriver, rough terrain crane, tower cranes (French, German & other types), truck crane:

HEAVY HIGHWAY	BASE RATE	\$29.07
	FRINGE BENEFITS	13.90

OPERATING ENGINEERS / HEAVY HIGHWAY: CONTINUED

HEAVY HIGHWAY CLASS A: A-frame winch truck, auto patrol, backfiller, batcher plant, bituminous paver, bituminous transfer machine, all types of boom cats, bulldozer, cableway, carry-all scoop, carry deck crane, central compressor plant operator, clamshell, concrete mixer (21 cu. ft. or over), concrete paver, truck-mounted concrete pump, core drills, crane, crusher plant, derrick, derrick boat, ditching and trenching machine, dragline, dredge operator, dredge engineer, earth movers, elevating grader and all types of loaders, grade-all, guries, heavy equipment robotics operator/mechanic, high lift, hoe-type machine, hoist (two or more drums), hoisting engine (two or more drums), horizontal directional drill operator, hydraulic boom truck, hydrocrane, hyster, KeCal loader, Letourneau, Locomotive, mechanic, mechanically operated laser screed, mechanic welder, mucking machine, motor scraper, orangepeel bucket, piledriver, power blade, pumpcrete push doxer, rock spreader attached to equipment, all rotary drills, roller (bituminous), scarifier, scoopmobile, shovel, side boom, subgrader, tallboom, telescoping type forklift, tow or push boat, tower cranes (French, German and other types) tractor shovel and truck crane, tunnel mining machines including moles, shields, or similar types of tunnel mining equipment: HEAVY & HIGHWAY

	BASE RATE	\$28.00
	FRINGE BENEFITS	13.90

Operators on cranes with booms one hundred fifty feet (150') and over including jib shall receive \$.50 above base rate.

HEAVY HIGHWAY CLASS B: All air compressors (over 900 cu. ft. per min.), bituminous mixer, boom type tamping machine, bull float, concrete mixer (under 21 cu. ft.), dredge engineer, electric vibrator compactor/self-propelled compactor, elevator (one drum or buck hoist), elevator (regardless of ownership when used to hoist building material), finish machine, firemen, flexplane, forklift (regardless of lift height), form grader, hoist (one drum), joint sealing machine, mechanic helper, outboard motor boat, power sweeper (riding type), roller (rock), ross carrier, skid mounted or trailer mounted concrete pumps, skid steer machine with all attachments, switchman or brakeman, throttle valve man, Tract air and road widening trencher, tractor (50 HP and over), truck crane oiler, tugger, welding machine, well points, and whirley oiler:

	HEAVY & HIGHWAY BASE RATE	
	\$25.45	
	FRINGE BENEFITS	13.90

HEAVY HIGHWAY CLASS B2: Greaser on grease facilities servicing heavy equipment, all off road material handling equipment, including articulating dump trucks:

	HEAVY & HIGHWAY	
	BASE RATE	\$25.85
	FRINGE BENEFITS	13.90

HEAVY HIGHWAY CLASS C: Bituminous distributor, burlap and curing machine, caisson drill and core drill helper (track or skid mounted), cement gun, concrete saw, conveyor, deckhand oiler, grout pump, hydraulic post driver, hydro seeder, mud jack, oiler, paving joint machine, power form handling equipment, pump, roller (earth), steermen, tamping machine, tractors (under 50 H.P.) and vibrator:

	HEAVY & HIGHWAY	
	BASE RATE	\$25.17
	FRINGE BENEFITS	13.90

****Operators on cranes with booms one hundred fifty feet (150') and over including jib shall receive \$.50 above base rate.**

PAINTERS:

Brush, roller & paperhanger:

	BASE RATE	\$17.87
	FRINGE BENEFITS	9.10

Spray, sandblast, waterblast (4000+ PSI), fireproofing & lead abatement:

	BASE RATE	\$18.37
	FRINGE BENEFITS	9.10

PLASTERERS:		BASE RATE	\$20.65
		FRINGE BENEFITS	5.85

PLUMBERS & PIPEFITTERS:		BASE RATE	\$30.00
		FRINGE BENEFITS	15.56

ROOFERS: (Excluding Metal Roofs)		BASE RATE	\$16.65
		FRINGE BENEFITS	4.95

SHEETMETAL WORKERS: (Including Metal Roofs)		BASE RATE	\$28.00
		FRINGE BENEFITS	13.59

SPRINKLER FITTERS:		BASE RATE	\$30.14
		FRINGE BENEFITS	17.37

TRUCK DRIVERS / BUILDING:

Truck Helper and Warehouseman:	BUILDING	BASE RATE	\$19.05
		*FRINGE BENEFITS	11.08

Driver - 3 tons and under, Greaser, Tire Changer and Mechanic Helper:	BUILDING	BASE RATE	\$19.17
		*FRINGE BENEFITS	11.08

Driver - over 3 tons, Drivers, Semi-Trailer or Pole Trailer; Dump Trucks, Tandem Axle; Farm Tractor when used to pull building material or equipment:	BUILDING	BASE RATE	\$19.28
		*FRINGE BENEFITS	11.08

Drivers, Concrete Mixer Trucks (all types, hauling on job sites only); Truck Mechanics:	BUILDING	BASE RATE	\$19.35
		*FRINGE BENEFITS	11.08

Drivers, Euclid and other Heavy Earth Moving Equipment and Low Boy, Winch Truck and A-Frame Truck and Monorail Truck when used to transport building materials, Forklift Truck when used inside warehouse or storage area:	BUILDING	BASE RATE	\$19.45
		*FRINGE BENEFITS	11.08

BUILDING TRUCK DRIVERS: Drivers working or hauling to or from any hazardous or toxic site will add \$4.00 to base rate. *TRUCK DRIVER FRINGE BENEFITS apply to employees who have been employed a minimum or twenty (20) calendar days within any ninety (90) consecutive day period of that employer.

TRUCK DRIVERS / HEAVY HIGHWAY:

Mobile batch truck helper:	HEAVY & HIGHWAY	BASE RATE	\$16.57
		FRINGE BENEFITS	7.34

Greaser, tire changer and mechanic helper:	HEAVY & HIGHWAY	BASE RATE	\$16.68
		FRINGE BENEFITS	7.34

TRUCK DRIVERS / HEAVY HIGHWAY: (CONTINUED)

Single axle dump, flatbed, semi-trailer or pole trailer when used to pull building materials and equipment, tandem axle dump, distributor and truck mechanic:

HEAVY & HIGHWAY	BASE RATE	\$16.86
	FRINGE BENEFITS	7.34

Euclid and other heavy earthmoving equipment and lowboy, articulator cat, 5-axle vehicle, winch and A-frame when used in transporting materials, ross carrier, forklift when used to transport building materials, and pavement breaker:

HEAVY & HIGHWAY	BASE RATE	\$16.96
	FRINGE BENEFITS	7.34

END OF DOCUMENT
CR-8-008
JULY 30, 2013

4. WEATHER RELATED DELAYS

- A. The Project Completion date shall be established with the understanding that no extension of time will be granted for weather related delays that are within the average temperature or number of rain or snow days within a particular month. The average weather conditions shall be established by referencing the records of the National Oceanic and Atmospheric Administration (NOAA) and as defined herein.
- B. Extensions of inclement weather shall be granted only when the work affected must be on schedule at the time of delay. No time will be granted for work which is behind schedule in excess of the actual delay caused by the weather, assuming the work had been on schedule.
- C. Time granted for weather delays shall be requested on a monthly basis.
- D. The weather experienced at the project site during the contract period must be found to be unusually severe, that is more severe than the adverse weather anticipated for the project location during any given month. The unusually severe weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without the fault or negligence of the contractor.
- E. The anticipated adverse weather delays shall be based on the National Oceanic and Atmospheric Administration (NOAA) climatology ten year average for the **Lexington Bluegrass Airport KY US location (see attached)**. The Mean Number of Days of daily precipitation using ≥ 0.10 will determine the base line for monthly anticipated adverse weather evaluations. The contractor's progress schedule must reflect these anticipated adverse weather delays in all weather dependant activities. Upon acknowledgement of the Notice to Proceed (NTP) and continuing throughout the contract, the contractor will record the occurrence of actual adverse weather and resultant impact to normally scheduled work. Actual adverse weather delay days must prevent work on critical path activities for 50 percent or more of the contractor's scheduled work date. The number of actual adverse weather delay days shall be calculated chronologically from the first to the last day of each month, and be recorded as full days. The number of actual adverse weather days greater than the number of anticipated adverse weather days, listed above, shall be the number of unusually severe weather days for the purposes of any contract extensions (actual adverse weather days - anticipated adverse weather days = unusually severe weather days.)
- F. Definitions:
 - 1. "Unusually severe weather" - weather that is more severe than the adverse weather anticipated for the season or location involved.
 - 2. "Adverse weather" - atmospheric conditions at a definite time and place that are unfavorable to construction activities.
- G. NOAA Weather Chart for Frankfort, Kentucky.
 - 1. See NOAA Weather Charts for **Lexington Bluegrass Airport, KY US** on the following pages.

07/24/2014

**Summary of
Monthly Normals
1981-2010**

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data, and Information
Service

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801
www.ncdc.noaa.gov

Station: **LEXINGTON BLUEGRASS AIRPORT, KY US**

GHCND:USW00093820
Elev: 981 ft Lat: 38.041° N Lon: 84.606° W

Month	Mean				Temperature (°F)												Mean Number of Days					
	Daily Max	Daily Min	Long Term Max Std. Dev.	Long Term Min Std. Dev.	Cooling Degree Days Base (above)						Heating Degree Days Base (below)						Max >= 100	Max >= 90	Max >= 50	Max <= 32	Min <= 0	
					55	60	65	70	72	55	60	65	57	60	65							
1	40.9	24.9	5.3	4.9	5.0	3	2	-7777	-7777	0	0	688	749	840	995	0.0	0.0	7.6	7.3	22.6	0.7	
2	45.6	28.1	36.9	4.4	3.9	4.0	6	4	-7777	0	0	514	568	650	788	0.0	0.0	10.7	4.0	18.6	0.2	
3	55.4	35.7	45.5	3.5	2.7	3.0	36	24	2	-7777	-7777	329	379	460	605	0.0	0.0	20.3	0.7	11.9	0.0	
4	65.8	44.7	55.3	3.3	2.8	2.9	123	95	59	20	3	1	116	147	202	313	0.0	0.0	27.7	0.0	2.7	0.0
5	74.4	53.9	64.2	3.6	3.4	3.4	298	247	177	85	27	13	15	25	48	111	0.0	-7777	31.0	0.0	0.0	0.0
6	82.9	62.5	72.7	2.7	2.0	2.1	531	471	383	242	120	81	0	2	11	0.0	0.0	2.9	30.0	0.0	0.0	0.0
7	86.1	66.3	76.2	2.7	1.9	2.2	657	595	502	347	198	145	0	-7777	-7777	0.1	7.2	31.0	0.0	0.0	0.0	0.0
8	85.6	65.0	75.3	3.2	2.3	2.7	629	567	474	321	177	127	0	7777	7777	2	7.3	31.0	0.0	0.0	0.0	0.0
9	78.8	57.5	68.1	3.4	2.2	2.5	400	344	264	146	61	38	5	10	19	52	0.0	2.0	30.0	0.0	0.0	0.0
10	67.5	46.6	57.0	2.8	3.3	2.8	146	112	71	25	5	2	82	110	162	272	0.0	0.1	29.9	0.0	1.5	0.0
11	55.4	37.3	46.3	4.0	3.2	3.4	34	22	10	2	-7777	-7777	293	341	420	561	0.0	0.0	20.0	0.3	9.7	0.0
12	43.9	28.0	36.0	5.6	5.2	5.3	7	4	2	-7777	0	0	597	657	747	901	0.0	0.0	9.8	5.0	19.8	0.4
Summary	65.2	45.9	55.5	3.7	3.2	3.3	2870	2487	1956	1190	591	407	2639	2987	3550	4611	0.3	19.5	279.0	17.3	86.8	1.3

@ Denotes mean number of days greater than 0 but less than 0.05; or insufficient data for calculation.

4444: year round risk of frost-freeze

-6666: parameter undefined; insufficient occurrences to compute value

-7777: a non-zero value that would round to zero

9999: Empty, or blank, cells indicate an average greater than 0 but less than 0.05.

07/24/2014

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data, and Information
Service

**Summary of
Monthly Normals
1981-2010**

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801
www.ncdc.noaa.gov

Station: **LEXINGTON BLUEGRASS AIRPORT, KY US**

GHCND:USW00093820
Elev: 981 ft. Lat: 38.041° N Lon: 84.606° W

Month	Precipitation (in.)													
	Totals						Mean Number of Days						Probability that precipitation will be equal to or less than the indicated amount	
	Means			Daily Precipitation			Daily Precipitation			Monthly Precipitation vs. Probability Levels				
	>= 0.01	>= 0.10	>= 1.00	>= 0.01	>= 0.10	>= 1.00	>= 0.50	>= 1.00	>= 1.50	>= 2.00	>= 2.50	.25	.50	.75
1	12.1	6.2	2.1	12.1	6.2	2.1	1.91	0.8	0.8	0.8	0.8	1.91	3.39	4.33
2	11.1	6.3	2.0	11.1	6.3	2.0	2.12	0.6	0.6	0.6	0.6	2.12	2.56	3.98
3	12.4	7.7	2.8	12.4	7.7	2.8	2.43	0.9	0.9	0.9	0.9	2.43	3.73	4.62
4	12.1	7.3	2.4	12.1	7.3	2.4	2.31	0.7	0.7	0.7	0.7	2.31	3.63	4.63
5	12.5	8.5	3.6	12.5	8.5	3.6	3.02	1.3	1.3	1.3	1.3	3.02	4.78	6.14
6	10.9	7.3	3.2	10.9	7.3	3.2	2.58	1.0	1.0	1.0	1.0	2.58	4.11	5.38
7	10.4	7.5	3.2	10.4	7.5	3.2	3.36	1.5	1.5	1.5	1.5	3.36	4.01	5.80
8	8.7	6.1	2.1	8.7	6.1	2.1	2.58	0.8	0.8	0.8	0.8	2.58	3.61	4.18
9	7.8	4.9	1.9	7.8	4.9	1.9	1.33	0.8	0.8	0.8	0.8	1.33	2.25	4.16
10	8.7	5.3	2.1	8.7	5.3	2.1	1.56	0.7	0.7	0.7	0.7	1.56	2.43	4.24
11	10.7	6.7	2.5	10.7	6.7	2.5	2.00	0.8	0.8	0.8	0.8	2.00	3.24	4.97
12	12.4	7.4	2.8	12.4	7.4	2.8	2.72	0.7	0.7	0.7	0.7	2.72	3.43	4.54
Summary	129.8	81.2	30.7	129.8	81.2	30.7	27.92	10.6	10.6	10.6	10.6	27.92	41.17	57.17

@ Denotes mean number of days greater than 0 but less than 0.05; or insufficient data for calculation.

-4444: year-round risk of frost freeze

-6666: parameter undefined; insufficient occurrences to compute value

-7777: a non-zero value that would round to zero

9999: Empty, or blank, cells indicate an average greater than 0 but less than 0.05.

07/24/2014

**Summary of
Monthly Normals
1981-2010**

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data, and Information
Service

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801
www.ncdc.noaa.gov

Station: **LEXINGTON BLUEGRASS AIRPORT, KY US**

GHCND:USW00093820
Elev: 981 ft. Lat: 38.041° N Lon: 84.606° W

Month	Snow (In.)												
	Snowfall >= Thresholds						Snow Depth >= Thresholds						Snow Probabilities Probability that snow will be equal to or less than the indicated amount Monthly Snow vs. Probability Levels Values derived from the incomplete gamma distribution.
	0.1	1.0	3.0	5.0	10.0	1	3	5	10	25	50	75	
Totals	Mean Number of Days												
Means	Snowfall >= Thresholds												
Snowfall Mean	0.1	1.0	3.0	5.0	10.0	1	3	5	10	25	50	75	
1	4.8	1.2	0.3	0.1	-7777	3.8	1.5	0.6	0.2	0.6	2.3	5.1	
2	3.7	1.4	0.5	0.1	-7777	3.8	1.5	0.7	0.2	0.6	3.6	7.5	
3	1.4	0.4	0.1	-7777	0.0	0.8	0.2	0.1	0.0	0.0	0.3	2.1	
4	0.3	0.1	-7777	0.0	0.0	-7777	0.0	0.0	0.0	0.0	0.0	0.0	
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11	0.5	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.4	
12	3.0	0.8	0.1	0.0	0.0	2.7	1.0	0.1	0.0	0.3	1.7	3.5	
Summary	13.0	4.0	1.0	0.2	0.0	11.2	4.2	1.5	0.4	1.5	7.9	18.6	

@ Denotes mean number of days greater than 0 but less than 0.05; or insufficient data for calculation.

.4444: year-round risk of frost freeze

-6666: parameter undefined; insufficient occurrences to compute value

-7777: a non-zero value that would round to zero

9999: Empty, or blank, cells indicate an average greater than 0 but less than 0.05.

07/24/2014

**Summary of
Monthly Normals
1981-2010**

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data, and Information
Service

National Climatic Data Center
Federal Building
151 Palton Avenue
Asheville, North Carolina 28801
www.ncdc.noaa.gov

Station: LEXINGTON BLUEGRASS AIRPORT, KY US

Elev: 981 ft. Lat: 38.041° N Lon: 84.606° W
GHCND:USW00093820

Base	Growing Degree Units (Monthly)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
40	59	84	232	463	749	981	1122	1094	844	530	240	85
45	27	42	141	329	594	831	967	939	694	384	147	42
50	11	17	76	213	441	681	812	784	545	252	78	18
55	3	6	36	123	298	531	657	629	400	146	34	7
60	.7777	2	12	59	177	383	502	474	264	71	10	2
50:86	29	46	132	271	466	666	779	751	548	309	125	40

Base	Growing Degree Units (Accumulated Monthly)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
40	59	143	375	838	1587	2568	3690	4784	5628	6158	6398	6483
45	27	69	210	539	1133	1964	2931	3870	4564	4948	5095	5137
50	11	28	104	317	758	1439	2251	3035	3580	3832	3910	3928
55	3	9	45	168	466	997	1654	2283	2683	2829	2863	2870
60	.7777	2	14	73	250	633	1135	1609	1873	1944	1954	1956
50:86	29	75	207	478	944	1610	2389	3140	3688	3997	4122	4162

Note: For corn, temperatures below 50 are set to 50, and temperatures above 86 are set to 86
M indicates the value is missing
.4444: year-round risk of frost freeze
-6666: parameter undefined; insufficient occurrences to compute value
.7777: a non-zero value that would round to zero
9999: Empty, or blank, cells indicate an average greater than 0 but less than 0.05.

END OF SECTION

PART VI
CONTRACT AGREEMENT

INDEX

1.	SCOPE OF WORK.....	CA-2
2.	TIME OF COMPLETION.....	CA-2
3.	ISSUANCE OF WORK ORDERS	CA-2
4.	THE CONTRACT SUM	CA-2
5.	PROGRESS PAYMENTS	CA-3
6.	ACCEPTANCE AND FINAL PAYMENT.....	CA-3
7.	THE CONTRACT DOCUMENTS.....	CA-3
8.	EXTRA WORK.....	CA-3
9.	ENUMERATION OF SPECIFICATIONS AND DRAWINGS.....	CA-4

PART VI

CONTRACT AGREEMENT

THIS AGREEMENT, made on the _____ day of _____, 20____, by and between **Lexington-Fayette Urban County Government**, acting herein called "OWNER" and _____ **(bidder's name)** _____, doing business as *(an individual) (a partnership) (a corporation) located in the City of _____, County of _____, and State of _____, hereinafter called "CONTRACTOR."

WITNESSETH: That the CONTRACTOR and the OWNER in consideration of _____ Dollars and _____ Cents (\$ _____) quoted in the proposal by the CONTRACTOR, dated _____, hereby agree to commence and complete the construction described as follows:

1. SCOPE OF WORK

The CONTRACTOR shall furnish all the materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and other accessories and services necessary to complete the said project in accordance with the conditions and prices stated in the Proposal, the General Conditions, and the Special Conditions of the Contract, the Specifications and Contract Documents therefore as prepared by **EOP Architecture for the Construction of Replacement Senior Citizen Center project.**

2. TIME OF COMPLETION

The time period estimated and authorized by the OWNER for the proper execution of the Work by the Contract is **four hundred and twenty (420) days to Substantial Completion, with an additional thirty (30) days to Final Completion.** The time shall begin ten (10) days after the CONTRACTOR is given the Notice to Proceed with the Work.

3. ISSUANCE OF WORK ORDERS

Notice to begin Work will be given in whole or for part of the Work as determined by the OWNER pending the availability of funds. The order of construction will be as determined by the ARCHITECT after consultation with the CONTRACTOR and the OWNER.

4. THE CONTRACT SUM

The OWNER agrees to pay the CONTRACTOR in current funds for the performance of the Contract, as quoted in the proposal, subject to any additions and deductions, as provided therein.

5. PROGRESS PAYMENTS

The OWNER shall make payments on account of the Contract, as provided in accordance with the General Conditions, as estimated by the ARCHITECT, less the aggregate of previous payments.

6. ACCEPTANCE AND FINAL PAYMENT

Final payment shall be due within ninety (90) days after completion of the Work, provided the Work be then fully completed and the Contract fully accepted.

Before issuance of final certificate, the CONTRACTOR shall submit evidence satisfactory to the ARCHITECT that all payrolls, material bills, and other indebtedness connected with the Work has been paid.

If, after the Work has been substantially completed, full completion thereof is materially delayed through no fault of the CONTRACTOR, and the ARCHITECT so certifies, the OWNER shall upon certificate of the ARCHITECT, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

7. THE CONTRACT DOCUMENTS

The Advertisement for Bids, Information for Bidders, the General Conditions, Performance and Payment Bonds, Contract Agreement, Special Conditions, Technical Specifications, any and all Addenda, and Proposal, and Plan Drawings form the Contract, and they are fully a part of the Contract as if hereto attached or herein repeated.

8. EXTRA WORK

The OWNER, without invalidating the Contract, may order extra work or make changes by altering, adding to or deducting from the Work, the Contract Sum being adjusted accordingly. All such Work shall be executed and paid for in accordance with the General Conditions, which is a part of this Contract.

9. THE FOLLOWING IS AN ENUMERATION OF THE SPECIFICATIONS AND DRAWINGS (CONTRACT DOCUMENTS):

SPECIFICATIONS^{[LFUCG1][HD2]}

SECTION NO.	TITLE	PAGES
I	Advertisement for Bids	AB 1 thru 5
II	Information for Bidders	IB 1 thru 15
III	Form of Proposal	P 1 thru 29
IV	General Conditions	GC 1 thru 50
V	Special Conditions	SC 1 thru 8
VI	Contract Agreement	CA 1 thru 5
VII	Performance and Payment Bonds	PB 1 thru 7
VIII	Addenda	AD 1 thru 1
IX	Technical Specifications	

DIVISION 1 – GENERAL REQUIREMENTS

- 010800 GENERAL COMMISSIONING REQUIREMENTS
- 010801 FUNCTIONAL TESTING
- 010802 TESTING AND BALANCING
- 012200 UNIT PRICES
- 012300 ALTERNATES
- 012500 SUBSTITUTION PROCEDURES
- 012600 CONTRACT MODIFICATION PROCEDURES
- 012900 PAYMENT PROCEDURES
- 013100 PROJECT MANAGEMENT AND COORDINATION
- 013200 CONSTRUCTION PROGRESS DOCUMENTATION
- 013233 PHOTOGRAPHIC DOCUMENTATION
- 013300 SUBMITTAL PROCEDURES
- 014000 QUALITY REQUIREMENTS
- 014110 STRUCTURAL SPECIAL INSPECTIONS
- 015000 TEMPORARY FACILITIES AND CONTROLS
- 016000 PRODUCT REQUIREMENTS
- 017300 EXECUTION
- 017419 CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL
- 017700 CLOSEOUT PROCEDURES
- 017823 OPERATION AND MAINTENANCE DATA
- 017839 PROJECT RECORD DOCUMENTS
- 017900 DEMONSTRATION AND TRAINING
- 017901 DEMONSTRATION AND TRAINING OF COMMISSIONED SYSTEMS
- 018113.13 SUSTAINABLE DESIGN REQUIREMENTS – LEED FOR NEW CONSTRUCTION

DIVISION 3 – CONCRETE

- 033000 CAST-IN-PLACE CONCRETE

DIVISION 4 – MASONRY

042000 CONCRETE UNIT MASONRY
044313.13 ANCHORED STONE MASONRY VENEER
047200 CAST STONE MASONRY

DIVISION 5 – METALS

051200 STRUCTURAL STEEL FRAMING
052100 STEEL JOIST FRAMING
053100 METAL DECKING, FASTENERS AND SHEAR STUDS
054000 COLD-FORMED METAL FRAMING
055000 METAL FABRICATIONS
055100 METAL STAIRS
055214 PIPE AND TUBE RAILINGS
057300 DECORATIVE METAL RAILINGS

DIVISION 6 – WOOD AND PLASTICS

061053 MISCELLANEOUS ROUGH CARPENTRY
061063 EXTERIOR ROUGH CARPENTRY
061600 SHEATHING
062023 INTERIOR FINISH CARPENTRY
064116 PLASTIC-LAMINATE-FACED ARCHITECTURAL CABINETS
064216 COMPOSITE WOOD PANELING

DIVISION 7 – THERMAL AND MOISTURE PROTECTION

071113 BITUMINOUS DAMPROOFING
071353 ELASTOMERIC SHEET WATERPROOFING
071900 WATER REPELLANTS
072100 THERMAL INSULATION
072726 FLUID-APPLIED MEMBRANE AIR BARRIERS
074113.16 STANDING-SEAM METAL ROOF PANELS
074200 EXTERIOR SOLID PHENOLIC CLADDING
074213.13 FORMED METAL WALL PANELS
074213 METAL COMPOSITE WALL PANELS
075323 ETHYLENE-PROPYLENE-DIENE-MONOMER (EPDM) ROOFING
076200 SHEET METAL FLASHING AND TRIM
077100 ROOF SPECIALTIES
077200 ROOF ACCESSORIES
077253 SNOW GUARDS
078413 PENETRATION FIRESTOPPING
079200 JOINT SEALANTS
079500 EXPANSION CONTROL

DIVISION 8 – OPENINGS

081113 HOLLOW METAL DOORS AND FRAMES
081416 FLUSH WOOD DOORS
083113 ACCESS DOORS AND FRAMES
083313 COILING COUNTER DOORS
084113 ALUMINUM-FRAMED ENTRANCES & STOREFRONTS
084413 GLAZED ALUMINUM CURTAIN WALLS

086300 METAL FRAMED SKYLIGHTS
087100 DOOR HARDWARE
088000 GLAZING
088300 MIRRORS
089119 FIXED LOUVERS

DIVISION 9 – FINISHES

092116.23 GYPSUM BOARD SHAFT WALL ASSEMBLIES
092216 NON-STRUCTURAL METAL FRAMING
092900 GYPSUM BOARD
095113 ACOUSTIC PANEL CEILINGS
095426 WOOD PANEL CEILINGS
096229 CORK FLOORING
096400 WOOD FLOORING
096513 RESILIENT BASE AND ACCESSORIES
096516 RESILIENT SHEET FLOORING
096543 LINOLEUM FLOORING
096810 FLOCKED RESILIENT TILE FLOORING
096813 TILE CARPETING
099113 EXTERIOR PAINTING
099123 INTERIOR PAINTING

DIVISION 10 – SPECIALTIES

101100 VISUAL DISPLAY UNITS
101426 POST AND PANEL SIGNAGE
102113 TOILET COMPARTMENTS
102238 OPERABLE PANEL PARTITIONS
102600 WALL PROTECTION
102800 TOILET, BATH, AND LAUNDRY ACCESSORIES
103100 MANUFACTURED GAS FIREPLACES
104413 FIRE PROTECTION CABINETS
104416 FIRE EXTINGUISHERS
105123 PLASTIC LAMINATE CLAD LOCKERS
107000 EXTERIOR SUN CONTROL DEVICES
105613 METAL SHELVING
107500 FLAGPOLES

DIVISION 11 – EQUIPMENT

110000 EQUIPMENT
115213 PROJECTION SCREENS

DIVISION 12– FURNISHINGS

122413 ROLLER WINDOW SHADES
123661 SIMULATED STONE COUNTERTOPS
129300 SITE FURNISHINGS

DIVISION 14–CONVEYING EQUIPMENT

142400 HYDRAULIC ELEVATORS
144200 WHEELCHAIR LIFTS

DIVISION 20 – MECHANICAL SYSTEMS

- 200100 GENERAL PROVISIONS
- 200300 REQUIRED SHOP DRAWINGS, DESCRIPTIVE LITERATURE, MAINTENANCE
MANUALS, PARTS LISTS, SPECIAL KEYS AND TOOLS
- 200500 COORDINATION AMONG TRADES, CONNECTION OF EQUIPMENT
- 200800 COMMISSIONING OF MECHANICAL SYSTEMS
- 201100 SLEEVING, CUTTING, PATCHING AND REPAIRING
- 201200 EXCAVATION, TRENCHING, BACKFILLING AND GRADING
- 201300 PIPE, FITTINGS, AND SUPPORTS
- 201320 GEOTHERMAL (EARTH-COUPLED) LOOP PIPING SYSTEM
- 201330 HEAT TRANSFER FLUID
- 202100 VALVES AND COCKS
- 202110 ACCESS TO VALVES, EQUIPMENT, FILTERS, ETC.
- 202200 INSULATION
- 202300 THERMOMETERS AND OTHERS, MONITORING INSTRUMENTS
- 202400 IDENTIFICATION, TAGS, CHARTS, ETC.
- 202500 HANGERS, CLAMPS, ATTACHMENTS, ETC.

DIVISION 21 – FIRE PROTECTION

- 210100 FIRE PROTECTION

DIVISION 22 – PLUMBING SYSTEMS

- 220100 PLUMBING SPECIALTIES
- 220200 PLUMBING FIXTURES, FITTINGS, AND TRIM
- 220300 PLUMBING EQUIPMENT
- 221113 FACILITY WATER DISTRIBUTION PIPING
- 221313 FACILITY SANITARY SEWERS

DIVISION 23 – HVAC SYSTEMS

- 230100 PUMPS
- 230200 HVAC EQUIPMENT
- 230300 CONDENSATE DRAINAGE
- 231100 REGISTERS, GRILLES, DIFFUSER, AND LOUVERS
- 231200 SHEET METAL AND FLEXIBLE DUCT

DIVISION 25 – BUILDING AUTOMATION SYSTEMS

- 250200 CONTROLS- DIRECT DIGITAL
- 250300 AIR QUALITY MONITORING SYSTEM

DIVISION 26 – ELECTRICAL SYSTEMS

- 260501 GENERAL PROVISIONS
- 260502 SCOPE OF THE ELECTRICAL WORK
- 260503 SHOP DRAWINGS, LITERATURE, MANUALS, PARTS LISTS, & SPECIAL
TOOLS
- 260504 SLEEVING, CUTTING, PATCHING, AND REPAIRING
- 260508 COORDINATION AMONG TRADES, SYSTEMS INTERFACING AND
CONNECTION OF EQUIPMENT FURNISHED BY OTHERS

260519 CONDUCTORS, IDENTIFICATIONS, SPLICING DEVICES AND CONNECTORS
260526 GROUNDING AND BONDING
260531 CABINETS, OUTLET BOXES AND PULL BOXES
260533 RACEWAYS AND FITTINGS FOR ELECTRICAL SYSTEMS
260544 EXCAVATION, TRENCHING, BACKFILLING AND GRADING
260553 IDENTIFICATION FOR ELECTRICAL SYSTEMS
260800 COMMISSIONING OF ELECTRICAL SYSTEMS
262400 ELECTRICAL DISTRIBUTION EQUIPMENT
262726 WIRING DEVICES AND PLATES
263213 EMERGENCY GENERATOR
263313 SURGE SUPPRESSION SYSTEMS
265113 LIGHTING FIXTURES AND LAMPS

DIVISION 27 – COMMUNICATIONS SYSTEMS

270610 VOICE / DATA / VIDEO COMMUNICATIONS SYSTEM
270640 CATV DISTRIBUTION SYSTEM
275223 NURSE CALL

DIVISION 28 – ELECTRONIC SAFETY AND SECURITY SYSTEMS

281600 SECURITY INTRUSION DETECTION SYSTEM
282300 DIGITAL VIDEO SURVEILLANCE SYSTEM
283100 FIRE ALARM SYSTEM

DIVISION 31 – EARTHWORK

311000 SITE CLEARING
312000 EARTH MOVING

DIVISION 32 – EXTERIOR IMPROVEMENTS

321216 ASPHALT PAVING
321313 CONCRETE PAVING
321373 CONCRETE PAVING JOINT SEALANTS
321400 UNIT PAVERS
321443 POROUS UNIT PAVING
323119 ORNAMENTAL METAL FENCE PANELS
329200 TURF AND GRASSES
329300 PLANTS

DIVISION 33 – UTILITIES

334100 STORM UTILITY DRAINAGE PIPING
334600 SUBDRAINAGE

APPENDIX A Standard Drawings

PLAN DRAWINGS –

COV	COVER SHEET
CODE.1	CODE
CODE.2	CODE
SD1.0	SITE SURVEY (1 OF 3)
SD1.2	SITE SURVEY (1 OF 3)
SD1.3	SITE SURVEY (1 OF 3)
C1.0	SITE UTILITIES PLAN
C2.0	UTILITY DETAILS
C2.1	UTILITY DETAILS
C3.0	UTILITY PROFILES
C3.1	UTILITY PROFILES
C3.2	UTILITY PROFILES
L0.1	BERM WALL
L1.0	STORM WATER POLLUTION PREVENTION PLAN
L2.0	SITE DEMOLITION PLAN
L3.0	SITE GRADING & DRAINAGE PLAN
L3.1	SITE DRAINAGE
L4.0	SITE LAYOUT
L4.1	SITE MATERIALS
L4.2	ENLARGED PLANS
L5.0	SITE LANDSCAPE PLAN
L5.1	LANDSCAPE DETAILS
L6.0	SITE DETAILS
L6.1	SITE DETAILS
L6.2	SITE DETAILS
L6.3	SITE DETAILS
L6.4	SITE DETAILS
S1.0	GENERAL NOTES
S2.1	FOUNDATION/FIRST FLOOR PLAN
S2.2	SECOND FLOOR PLAN
S2.3	ROOF PLAN
S3.1	FOUNDATION DETAILS
S3.2	FOUNDATION DETAILS
S4.1	FRAMING DETAILS
S4.2	FRAMING DETAILS

S4.3 FRAMING DETAILS
S4.4 FRAMING DETAILS
S5.1 ROOF FRAMING DETAILS
S5.2 ROOF FRAMING DETAILS
S5.3 ROOF FRAMING DETAILS
S6.1 GABLE ROOF DETAILS
S6.2 GABLE ROOF DETAILS
S6.3 GABLE ROOF DETAILS
S7.1 SUNSCREEN DETAILS
S7.2 SUNSCREEN DETAILS
S8.1 CANOPY
S8.2 MAIN CANOPY DETAILS
S8.3 SUNSCREEN CANOPY
S9.1 SHED PLAN AND DETAILS

A0.01 WALL TYPES
A1.01 FIRST FLOOR PLAN – OVERALL
A1.01A FIRST FLOOR PLAN – AREA A
A1.01B FIRST FLOOR PLAN – AREA B
A1.01C FIRST FLOOR PLAN – AREA C
A1.01D FIRST FLOOR PLAN – AREA D
A1.02 SECOND FLOOR PLAN – OVERALL
A1.02A SECOND FLOOR PLAN – AREA A
A1.02B SECOND FLOOR PLAN – AREA B
A1.02C SECOND FLOOR PLAN – AREA C
A1.02D SECOND FLOOR PLAN – AREA D
A1.03 ROOF PLAN – OVERALL
A1.10 RESTROOM PLANS & ELEVATIONS
A1.11 RESTROOM PLANS & ELEVATIONS
A1.20 ENLARGED PLANS & COLUMN WRAPS
A1.30 ENLARGED SHED PLANS & DETAILS
A2.01 FIRST FLOOR - REFLECTED CEILING PLAN
A2.01A FIRST FLOOR RCP- AREA A
A2.01B FIRST FLOOR RCP- AREA B
A2.01C FIRST FLOOR RCP- AREA C
A2.01D FIRST FLOOR RCP- AREA D
A2.02 SECOND FLOOR - REFLECTED CEILING PLAN
A2.02A SECOND FLOOR RCP- AREA A
A2.02B SECOND FLOOR RCP- AREA B
A2.02C SECOND FLOOR RCP- AREA C
A2.02D SECOND FLOOR RCP- AREA D
A2.03 REFLECTED CEILING PLAN DETAILS
A2.04 REFLECTED CEILING PLAN DETAILS
A3.01 BUILDING ELEVATIONS
A3.02 BUILDING ELEVATIONS
A3.03 BUILDING SECTIONS
A3.04 BUILDING SECTIONS

A4.01	WALL SECTIONS
A4.02	WALL SECTIONS
A4.03	WALL SECTIONS
A4.04	WALL SECTIONS
A4.05	WALL SECTIONS
A4.06	WALL SECTIONS
A4.10	DETAILS
A4.11	DETAILS
A4.12	DETAILS
A4.13	DETAILS
A4.14	DETAILS
A4.15	DETAILS
A4.16	DETAILS
A4.17	ENLARGED DETAILS
A4.18	ENLARGED DETAILS
A4.19	TYPICAL ROOF DETAILS
A4.20	DETAIL PLANS
A4.21	DETAIL PLANS
A4.22	DETAIL PLANS
A4.23	DETAIL PLANS
A4.30	ENLARGED CANOPY DETAILS
A4.40	SUNSCREEN DETAILS
A4.41	SUNSCREEN DETAILS
A5.01	STAIRS
A5.02	STAIRS
A5.03	STAIR DETAILS
A5.04	STAIR OPENINGS
A5.05	FEATURE STAIR
A5.10	ELEVATOR
A5.11	ELEVATOR DETAILS
A6.01	INTERIOR ELEVATIONS
A6.02	INTERIOR ELEVATIONS
A6.03	INTERIOR ELEVATIONS
A6.04	INTERIOR ELEVATIONS
A6.05	INTERIOR ELEVATIONS
A6.06	INTERIOR ELEVATIONS
A6.07	INTERIOR ELEVATIONS
A6.08	INTERIOR ELEVATIONS
A6.09	INTERIOR ELEVATIONS
A6.10	INTERIOR ELEVATIONS
A6.11	INTERIOR ELEVATIONS
A6.20	INTERIOR DETAILS
A6.21	INTERIOR DETAILS
A7.10	DOOR SCHEDULE
A7.20	CURTAINWALL/STOREFRONT ELEVATIONS
A7.21	CURTAINWALL/STOREFRONT ELEVATIONS

A7.22	INTERIOR STOREFRONT ELEVATIONS
A7.30	CURTAINWALL/STOREFRONT DETAILS
A7.31	CURTAINWALL/STOREFRONT DETAILS
A7.32	CURTAINWALL/STOREFRONT DETAILS
A8.01	CASEWORK DETAILS
A8.02	CASEWORK DETAILS
A8.03	CASEWORK DETAILS
A8.04	CASEWORK DETAILS
A8.05	CASEWORK DETAILS
A8.06	CASEWORK DETAILS
A9.00	FINISH SCHEDULE
A9.01	FIRST FLOOR FINISH PLAN – OVERALL
A9.01A	FIRST FLOOR FINISH PLAN – AREA A
A9.01B	FIRST FLOOR FINISH PLAN – AREA B
A9.01C	FIRST FLOOR FINISH PLAN – AREA C
A9.01D	FIRST FLOOR FINISH PLAN – AREA D
A9.02	SECOND FLOOR FINISH PLAN - OVERALL
A9.02A	SECOND FLOOR FINISH PLAN - AREA A
A9.02B	SECOND FLOOR FINISH PLAN - AREA B
A9.02C	SECOND FLOOR FINISH PLAN - AREA C
A9.02D	SECOND FLOOR FINISH PLAN - AREA D
A10.10A	EQUIPMENT SCHEDULE
A10.10B	EQUIPMENT SCHEDULE
A10.11	FIRST FLOOR EQUIPMENT PLAN - OVERALL
A10.12	SECOND FLOOR EQUIPMENT PLAN - OVERALL
U1.0	SITE UTILITIES
U1.1	SITE UTILITIES FIBER ALTERNATE
U1.2	SITE UTILITIES ALTERNATE
U1.3	SITE DETAILS
FP1.0	FIRE PROTECTION - DETAILS
FP2.1	FIRE PROTECTION - FIRST FLOOR PLAN
FP2.2	FIRE PROTECTION - SECOND FLOOR PLAN
P1.0	PLUMBING LEGEND AND FIXTURE SCHEDULE
P2.0	PLUMBING - FIRST FLOOR PLAN
P2.1	PLUMBING - SECOND FLOOR PLAN
P3.0	PLUMBING SCHEDULES AND DETAILS
P4.0	PLUMBING RISER DIAGRAM
P4.1	PLUMBING RISER DIAGRAM
M1.0	MECHANICAL LEGEND
M2.0	AIR DIST - FIRST FLOOR PLAN
M2.1	AIR DIST - SECOND FLOOR PLAN
M2.2	AIR DIST - ROOF PLAN

M3.0	HYDRONIC - FIRST FLOOR PLAN
M3.1	HYDRONIC - SECOND FLOOR PLAN
M4.0	ENLARGED MECH ROOM 131
M5.0	MECHANICAL SECTIONS
M5.1	MECHANICAL SECTIONS
M5.2	MECHANICAL SECTIONS
M6.0	PIPING SCHEMATICS
M7.0	MECHANICAL DETAILS
M7.1	MECHANICAL DETAILS
M8.0	CONTROLS
M9.0	MECHANICAL SCHEDULES
E1.0	ELECTRICAL LEGEND
E2.0	LIGHTING - FIRST FLOOR PLAN
E2.1	LIGHTING - SECOND FLOOR PLAN
E2.2	LIGHTING - LIGHTING CONTROL DIAGRAMS
E3.0	POWER - FIRST FLOOR PLAN
E3.1	POWER - SECOND FLOOR PLAN
E3.2	POWER - ROOF PLAN
E3.3	ELECTRICAL ONE-LINE DIAGRAM
E3.4	PANEL SCHEDULES
E4.0	SYSTEMS - FIRST FLOOR PLAN
E4.1	SYSTEMS - SECOND FLOOR PLAN
E4.2	SYSTEMS - DETAILS
E4.3	COMMUNICATIONS RISER
E4.4	COMMUNICATIONS RISER

FURNITURE SHEETS ARE FOR REFERENCE ONLY, AND ARE NOT INCLUDED IN THE CONTRACT FOR CONSTRUCTION

F1.01	FIRST FLOOR FURNITURE PLAN - OVERALL
F1.01A	FIRST FLOOR FURNITURE PLAN - AREA A
F1.01B	FIRST FLOOR FURNITURE PLAN - AREA B
F1.01C	FIRST FLOOR FURNITURE PLAN - AREA C
F1.01D	FIRST FLOOR FURNITURE PLAN - AREA D
F1.02	SECOND FLOOR FURNITURE PLAN - OVERALL
F1.02	SECOND FLOOR FURNITURE PLAN - AREA A
F1.02	SECOND FLOOR FURNITURE PLAN - AREA B
F1.02	SECOND FLOOR FURNITURE PLAN - AREA C
F1.02	SECOND FLOOR FURNITURE PLAN - AREA D
F2.00	FURNITURE SCHEDULE

IN WITNESSETH WHEREOF, the parties hereto have executed this Contract as of the date and year above written.

(Seal)

Lexington-Fayette Urban County Government.

Lexington, Kentucky

(Owner)

ATTEST:

Clerk of the Urban County Council

BY: _____

MAYOR

(Witness)

(Title)

(Seal)

(Contractor)

(Secretary)*

BY: _____

(Witness)

(Title)

(Address and Zip Code)

IMPORTANT: *Strike out any non-applicable terms.

Secretary of the Owner should attest. If the CONTRACTOR is corporation, Secretary should attest. Give proper title of each person-executing Contract.

PART VII

PERFORMANCE AND PAYMENT BONDS

1. PERFORMANCE BOND
2. PAYMENT BOND

PART VII

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that

(Name of CONTRACTOR)

(Address of CONTRACTOR)

a _____, hereinafter
(Corporation, Partnership, or Individual)

called Principal, and _____
(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
200 East Main Street, Third Floor
Lexington, Kentucky 40507

hereinafter called "OWNER" in the penal sum of: _____
Dollars, (\$ _____), for the payment of whereof Principal and Surety bind themselves, their heirs,
executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal by written agreement is entering into a Contract with OWNER for **Construction Services for Replacement Senior Citizen Center** in accordance with drawings and specifications prepared by: **EOP Architects** which Contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Principal shall promptly and faithfully perform said Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the OWNER.

Whenever, Principal shall be, and declared by OWNER to be in default under the Contract, the OWNER having performed OWNER'S obligations thereunder, the Surety may promptly remedy the default, or shall promptly:

- (1) Complete the Contract in accordance with its terms and conditions or
- (2) Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, or if the OWNER elects, upon determination by the OWNER and Surety jointly of the lowest responsible bidder, arrange for a Contract between such bidder and OWNER, and make available as Work progresses (even though there may be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the Contract Price", as used in this paragraph shall mean the total amount payable by OWNER to Principal under the Contract and any amendments thereto, less the amount properly paid by OWNER to Principal.

Any suit under this bond must be instituted before the expiration of two (2) years from the date on which final payment under the Contract falls due.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the OWNER named herein or the heirs, executors, administrators or successors of OWNER.

IN WITNESS WHEREOF, this instrument is executed in _____ each one of which shall be
deemed an original, this the _____ day of _____, 20_____.
(Number)

ATTEST:

(Principal) Secretary

Principal

BY: _____ (s)

(Address)

Witness as to Principal

(Address)

ATTEST:

Surety

BY: _____
Attorney-in-Fact

(Surety) Secretary

(Address)

(SEAL)

Witness as to Surety

(Address)

TITLE: _____

Surety

BY: _____

TITLE: _____

NOTE: The number of executed counterparts of the bond shall coincide with the number of executed counterparts of the Contract.

PART VII

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENT: that

(Name of Contractor)

(Address of Contractor)

a _____, hereinafter

(Corporation, Partnership or Individual)

called Principal, and _____

(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto:

LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
200 East Main Street, Third Floor
Lexington, Kentucky 40507

Obligee, hereinafter called OWNER, for the use and benefit of claimants as hereinafter defined, in the amount of _____ Dollars (\$ _____) the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal by written agreement is entering into a Contract with OWNER for **Construction Services for Replacement Senior Citizen Center** in accordance with drawings and specifications prepared by: **EOP Architects** which Contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Principal shall promptly make payment to all claimants as hereinafter defined for all labor and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions.

1. A claimant is defined as one having a direct contract with the Principal or with a Subcontractor of the Principal for labor, material, or both, used or reasonably required for use in the performance of the Contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contract.

2. The above named Principal and Surety hereby jointly and severally agree with the OWNER that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The OWNER shall not be liable for the payment of any costs or expenses of any such suit.
3. No suit or action shall be commenced hereunder by any claimant:
 - (a) Unless claimant, other than one having a direct contract with the Principal, shall have given written notice to any two of the following: The Principal, the OWNER, or the Surety above named, within ninety (90) days after such claimant did or performed the last of the Work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the Work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, OWNER, or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer.
 - (b) After the expiration of one (1) year following the date on which Principal ceased Work on said Contract, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.
 - (c) Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the project, or any part thereof, is situated, or in the United States District Court for the district in which the project, or any part thereof, is situated, and not elsewhere.
4. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against aid improvement, whether or not claim for the amount of such lien be presented under and against this bond.

IN WITNESS WHEREOF, this instrument is executed in _____ counterparts, each one of
(Number)

which shall be deemed an original, this the _____ day of _____, 20_____.

ATTEST:

(Principal)

(Principal) Secretary

(SEAL)

BY: _____ (s)

(Address)

(Witness to Principal)

(Address)

ATTEST:

(Surety)

(Surety) Secretary

(SEAL)

BY: _____

(Attorney-in-Fact)

Witness as to Surety

(Address)

(Address)

NOTE: The number of executed counterparts of the bond shall coincide with the number of executed counterparts of the Contract.

END OF SECTION

PART VIII

ADDENDA

All addenda issued during the bidding of the Project will be reproduced in the signed Contract Documents, on the pages following this heading sheet.

<u>Addendum Number</u>	<u>Title</u>	<u>Date</u>
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____

**PROJECT MANUAL BOOK 1 OF 2
TECHNICAL SPECIFICATIONS**

July 29, 2014

DIVISION 1 – GENERAL REQUIREMENTS

010800	GENERAL COMMISSIONING REQUIREMENTS
010801	FUNCTIONAL TESTING
010802	TESTING AND BALANCING
012200	UNIT PRICES
012300	ALTERNATES
012500	SUBSTITUTION PROCEDURES
012600	CONTRACT MODIFICATION PROCEDURES
012900	PAYMENT PROCEDURES
013100	PROJECT MANAGEMENT AND COORDINATION
013200	CONSTRUCTION PROGRESS DOCUMENTATION
013233	PHOTOGRAPHIC DOCUMENTATION
013300	SUBMITTAL PROCEDURES
014000	QUALITY REQUIREMENTS
014110	STRUCTURAL SPECIAL INSPECTIONS
015000	TEMPORARY FACILITIES AND CONTROLS
016000	PRODUCT REQUIREMENTS
017300	EXECUTION
017419	CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL
017700	CLOSEOUT PROCEDURES
017823	OPERATION AND MAINTENANCE DATA
017839	PROJECT RECORD DOCUMENTS
017900	DEMONSTRATION AND TRAINING
017901	DEMONSTRATION AND TRAINING OF COMMISSIONED SYSTEMS
018113.13	SUSTAINABLE DESIGN REQUIREMENTS – LEED FOR NEW CONSTRUCTION

DIVISION 3 – CONCRETE

033000	CAST-IN-PLACE CONCRETE
--------	------------------------

DIVISION 4 – MASONRY

042000	CONCRETE UNIT MASONRY
044313.13	ANCHORED STONE MASONRY VENEER
047200	CAST STONE MASONRY

DIVISION 5 – METALS

051200	STRUCTURAL STEEL FRAMING
052100	STEEL JOIST FRAMING
053100	METAL DECKING, FASTENERS AND SHEAR STUDS
054000	COLD-FORMED METAL FRAMING
055000	METAL FABRICATIONS
055100	METAL STAIRS
055214	PIPE AND TUBE RAILINGS
057300	DECORATIVE METAL RAILINGS

DIVISION 6 – WOOD AND PLASTICS

061053 MISCELLANEOUS ROUGH CARPENTRY
061063 EXTERIOR ROUGH CARPENTRY
061600 SHEATHING
062023 INTERIOR FINISH CARPENTRY
064116 PLASTIC-LAMINATE-FACED ARCHITECTURAL CABINETS
068300 COMPOSITE WOOD PANELING

DIVISION 7 – THERMAL AND MOISTURE PROTECTION

071113 BITUMINOUS DAMPROOFING
071353 ELASTOMERIC SHEET WATERPROOFING
071900 WATER REPELLANTS
072100 THERMAL INSULATION
072726 FLUID-APPLIED MEMBRANE AIR BARRIERS
074113.16 STANDING-SEAM METAL ROOF PANELS
074200 EXTERIOR SOLID PHENOLIC CLADDING
074213 METAL COMPOSITE WALL PANELS
074213.13 FORMED METAL WALL PANELS
075323 ETHYLENE-PROPYLENE-DIENE-MONOMER (EPDM) ROOFING
076200 SHEET METAL FLASHING AND TRIM
077100 ROOF SPECIALTIES
077200 ROOF ACCESSORIES
077253 SNOW GUARDS
078413 PENETRATION FIRESTOPPING
079200 JOINT SEALANTS
079500 EXPANSION CONTROL

DIVISION 8 – OPENINGS

081113 HOLLOW METAL DOORS AND FRAMES
081416 FLUSH WOOD DOORS
083113 ACCESS DOORS AND FRAMES
083313 COUNTER DOORS AND GRILLES
084113 ALUMINUM-FRAMED ENTRANCES & STOREFRONTS
084413 GLAZED ALUMINUM CURTAIN WALLS
086300 METAL FRAMED SKYLIGHTS
087100 DOOR HARDWARE
088000 GLAZING
088300 MIRRORS
089119 FIXED LOUVERS

DIVISION 9 – FINISHES

092116.23 GYPSUM BOARD SHAFT WALL ASSEMBLIES
092216 NON-STRUCTURAL METAL FRAMING
092400 CEMENT PLASTERING
092900 GYPSUM BOARD
095113 ACOUSTIC PANEL CEILINGS
095426 WOOD PANEL CEILINGS
096229 CORK FLOORING
096400 WOOD FLOORING
096513 RESILIENT BASE AND ACCESSORIES
096516 RESILIENT SHEET FLOORING
096543 LINOLEUM FLOORING
096810 FLOCKED RESILIENT TILE FLOORING

096813 TILE CARPETING
099113 EXTERIOR PAINTING
099123 INTERIOR PAINTING

DIVISION 10 – SPECIALTIES

101100 VISUAL DISPLAY UNITS
101423 PANEL SIGNAGE
101426 POST AND PANEL SIGNAGE
102113 TOILET COMPARTMENTS
102238 OPERABLE PANEL PARTITIONS
102600 WALL PROTECTION
102800 TOILET, BATH, AND LAUNDRY ACCESSORIES
103100 MANUFACTURED GAS FIREPLACES
104413 FIRE PROTECTION CABINETS
104416 FIRE EXTINGUISHERS
105123 PLASTIC LAMINATE CLAD LOCKERS
107000 EXTERIOR SUN CONTROL DEVICES
107500 FLAGPOLES

DIVISION 11 – EQUIPMENT

110000 EQUIPMENT
115213 PROJECTION SCREENS

DIVISION 12– FURNISHINGS

122413 ROLLER WINDOW SHADES
123661 SIMULATED STONE COUNTERTOPS
129300 SITE FURNISHINGS

DIVISION 14–CONVEYING EQUIPMENT

142400 HYDRAULIC ELEVATORS
144200 WHEELCHAIR LIFTS

REFER TO BOOK 2 FOR DIVISIONS 20 - 33

SECTION 010800 - GENERAL COMMISSIONING REQUIREMENTS**PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, apply to this Section.
- B. Owner's Project Requirements and Systems Basis of Design documentation are included by reference.
- C. Commissioning Plan and Appendices.

1.02 SUMMARY

- A. Section includes general requirements that apply to implementation of commissioning without regard to specific systems, assemblies, or components.
- B. Related Sections:
 - 1. Section 010801 – Functional Testing
 - 2. Section 017900 – Demonstration and Training
 - 3. Section 200800 – Commissioning of Mechanical and Plumbing System
 - 4. Select Division 22 Plumbing Specifications
 - 5. Select Division 23 HVAC Specifications
 - 6. Section 260800 – Commissioning of Electrical System
 - 7. Select Division 26 Electrical Specifications

1.03 DEFINITIONS

- A. Commissioning (Cx): A quality-focused process for enhancing the delivery of a project. The process focuses upon verifying and documenting that the facility and all of its systems and assemblies are planned, designed, installed, tested, operated, and maintained to meet the Owner's Project Requirements.
 - 1. ASHRAE. 2005. *ASHRAE Guideline 0 – The Commissioning Process*. American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc. Atlanta, GA.
- B. Commissioning Authority (CA): The designated person, company, agent, or combination thereof identified by the Owner. This entity will lead, plan, schedule, and coordinate the Commissioning Team in implementing the overall Commissioning Process.
 - 1. ASHRAE. 2005. *ASHRAE Guideline 0 – The Commissioning Process*. American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc. Atlanta, GA.
- C. Commissioning Plan: A document that outlines the organization, schedule, allocation of resources, and documentation requirements of the Commissioning Process. It includes a schedule of Commissioning Process activities, individual responsibilities, documentation requirements, communication and reporting protocols, and evaluation procedures. This document is updated throughout the project.
 - 1. ASHRAE. 2005. *ASHRAE Guideline 0 – The Commissioning Process*. American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc. Atlanta, GA.
- D. Functional Test (FT): A written protocol that defines methods, personnel, and specifications for test conducted on components, equipment, assemblies, systems, and interfaces among systems.
 - 1. ASHRAE. 2005. *ASHRAE Guideline 0 – The Commissioning Process*. American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc. Atlanta, GA.
- E. Owner's Project Requirements (OPR). A written document that details the functional requirements of a project and the expectations of how it will be used and operated. This includes project goals, measurable performance criteria, cost considerations, benchmarks, success criteria, and supporting information. This document is updated throughout the project.

1. ASHRAE. 2005. *ASHRAE Guideline 0 – The Commissioning Process*. American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc. Atlanta, GA.
- F. Construction Checklist (CC): A form used by the Contractor to verify that appropriate components are on-site, ready for installation, correctly installed, and functional. Checklists also include manufacturer's installation start-up and checkout data. The Contractor is responsible for incorporating manufacturer's information into the preliminary checklists provided by the Commissioning Authority.
 1. ASHRAE. 2005. *ASHRAE Guideline 0 – The Commissioning Process*. American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc. Atlanta, GA.
- G. Systems Basis of Design (SBoD): A document that identifies the design parameters of a project and how each criterion in the Owner's Project Requirements will be addressed.¹ The document records the concepts, calculations, decisions, and product selections used to meet the Owner's Project Requirements and to satisfy applicable regulatory requirements, standards, and guidelines. The document includes both narrative descriptions and lists of individual items that support the design process. This document is updated throughout the project.
 1. ASHRAE. 2005. *ASHRAE Guideline 0 – The Commissioning Process*. American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc. Atlanta, GA.
- H. Systems, Subsystems, Equipment, and Components: Where these terms are used together or separately, they shall mean "as-built" systems, subsystems, equipment, and components.

1.04 COMMISSIONING TEAM

- A. During the Construction Phase, members of the Commissioning Team consist of the Owner, Commissioning Authority, Project Manager, Contractor, members appointed by the Contractor, Architect / Engineer (particularly the mechanical engineer), Mechanical Contractor, Electrical Contractor, TAB representative, Controls Contractor, other installing subcontractors or suppliers of equipment, and Members Appointed by Owner(s).
 1. Members Appointed by Contractor: Individuals, each having the authority to act on behalf of the entity he or she represents, explicitly organized to implement the commissioning process through coordinated action. These members shall consist of, but not be limited to, representatives of Construction Manager, including Project superintendent and subcontractors, installers, suppliers, and specialists deemed appropriate by the Commissioning Authority.
 2. Members Appointed by Owner(s): Representatives of the facility user and operation and maintenance personnel.

1.05 OWNER'S RESPONSIBILITIES

- A. Provide the Owner's Project Requirements criteria to the Commissioning Authority for distribution to the Contractor.
- B. Participate in Commissioning Process Meetings.
- C. Assign operation and maintenance personnel and schedule them to participate in Functional Testing activities.
- D. Approve the Systems Basis of Design documentation prepared by Architect / Engineer. Send notice of approval to the Commissioning Authority and Contractor so Systems Basis of Design may be used in developing the Construction Checklists and Functional Performance Tests.

1.06 CONTRACTOR'S RESPONSIBILITIES

- A. Contractor shall assign representatives with expertise and authority to act on its behalf and shall schedule them to participate in and perform commissioning process activities including, but not limited to, the following:
 1. Attend Construction Phase Commissioning Conference.
 2. Satisfy applicable project Owner's Project Requirements.

3. Attend Commissioning Progress Meetings.
 4. Review the Commissioning Plan prepared by Commissioning Authority.
 5. Evaluate performance deficiencies identified in test reports and, in collaboration with entity responsible for system and equipment installation, recommend corrective action.
 6. Cooperate with the Commissioning Authority for resolution of Issues Tracking Log. Resolution of some fashion will occur within one week of finding and notification.
 7. Integrate and coordinate commissioning process activities with Construction Schedule.
 8. Notify Commissioning Authority of system readiness for Construction Checklists, equipment start-ups, and Functional Testing activities.
 9. Support Commissioning Authority's completion of Construction Checklists
 10. Review and accept Functional Test Procedures provided by the Commissioning Authority.
 11. Participate in completion of Functional Test Procedures, including seasonal and any deferred test procedures.
 12. Provide Owner training as directed in equipment specification sections and Section 017900.
 13. Provide O&M Manuals as required by the A/E.
- B. For descriptions of these responsibilities reference the Commissioning Plan and Related Sections.

1.07 COMMISSIONING AUTHORITY'S RESPONSIBILITIES

- A. Review the Owner's Project Requirements and Systems Basis of Design.
- B. Organize and lead the Commissioning Team.
- C. Provide Commissioning Plan.
- D. Convene Commissioning Team Meetings.
- E. Provide Project specific Construction Checklists and Functional Test Procedures.
- F. Prepare and maintain the Issues Tracking Log.
- G. Complete Field Observation Reports
- H. Complete Construction Checklists at the sampling rates identified in the Commissioning Plan.
- I. Observe equipment start-up for the Geothermal Purge, Heat Pump (qty 1), Outside Air Unit, and Generator.
- J. Verify testing, adjusting, and balancing activities by taking a 20% sampling of readings.
- K. Complete Functional Tests at the sampling rates identified in Specification 010801 – Functional Testing.
- L. Compile test data, inspection reports, and certificates; include them in the Commissioning Report.
- M. Prepare a Systems Manual
- N. Verify Owner Training Requirements contained in Specification Section 017900.
- O. Recommissioning – complete a review of building operation and performance at 11 and 18 months after Substantial Completion. Review is for: setpoints, schedules, operational issues, heating season monitoring, cooling season monitoring, and provision of recommendations.
- P. Complete the LEED Submittal Template for EA Prerequisite 1.

1.08 SCHEDULING

- A. Contractor shall integrate and coordinate commissioning process activities with Construction Schedule.
- B. All activities relative to commissioning shall be completed by Substantial Completion. Seasonal functional tests may be deferred to the appropriate weather conditions. Anticipated seasonal functional tests are identified in Specification Section 010801 – Functional Testing.
- C. Schedule shall include coordinating the following in addition to Contractor and Commissioning Authority commissioning process activities:
 - 1. TAB performance and completion in order to facilitate commissioning.
 - 2. Controls network capability in order to facilitate commissioning.
 - 3. Commissioning process activities associated with Owner-Contracted Functional Tests.
- D. Functional Test Procedures may require scheduling of seasonal and deferred functional testing to be performed after the building acceptance period. The Contractor shall be responsible for coordinating seasonal and any deferred functional testing activities with the Commissioning Team.
 - 1. Based on the project's scheduled construction completion date, a list of Functional Test Procedures anticipated to require seasonal testing is included in the Functional Testing Plan in Specification Section 010801 – Functional Testing.
- E. Owner Training Schedules shall be as described in Section 017900 – Demonstration and Training.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 CONSTRUCTION CHECKLIST CREATION

- A. Construction Checklists consist of Paladin-created draft checklists, manufacturer installation, start-up and checkout data, and important instructional data and procedures not covered in manufacturer field checkout sheets.
- B. The Contract Documents and Commissioning Plan contain Construction Checklist information, sampling rates, and examples of Paladin's Construction Checklists. When the GC is ready to review the Construction Checklists, Paladin will distribute the entire Construction Checklist package.
- C. The following process will be used for this project to develop and approve the Construction Checklists.
 - 1. These checklists do not take the place of the manufacturer's recommended checkout and start-up procedures or report. There may be redundancy between checklist procedures and typical factory field checkout sheets. Double documentation is required in those cases.
 - 2. The CA transmits draft Construction Checklists to the GC who then transmits the draft Construction Checklist(s) to the responsible Subs for review and comment.
 - 3. The Sub returns any comments on Construction Checklists to the CA, through the GC.
 - 4. The CA reviews Construction Checklist comments and incorporate changes as appropriate prior to use.

3.02 EXECUTION OF CONSTRUCTION CHECKLISTS

- A. The Construction Checklists will be completed by the CA according to the Sampling Strategy for CA Observation of Construction Checklists contained in the Commissioning Plan, Section 1.4.
- B. At most four (4) weeks prior to startup, the Subs and vendors schedule startup and initial checkout with the GC and CA.
- C. Construction Checklists must be complete for each piece of equipment prior to any manufacturer or Sub start-up.

- D. As deficiencies are identified by the CA, they will be documented in an Issues Tracking Log. Please see the Commissioning Plan, Section 6.12 – Deficiencies and Issues Tracking for procedures related to issues tracking and closeout.

3.02 FUNCTIONAL TESTING

- A. A Functional Testing Plan, Functional Testing requirements, and a sample Functional Test form are located in Specification Section 010801. The CA will prepare and finalize the tests with information such as: change orders, updated points list, control sequences and setpoints, input from contractors, and input from the A/E.

3.03 OWNER TRAINING

- A. Reference Specification Section 017900 – Demonstration and Training for owner training requirements.

END OF SECTION 010800

SECTION 010801 - FUNCTIONAL TESTING**PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, apply to this Section.
- B. Owner's Project Requirements and Systems Basis of Design documentation are included by reference.
- C. Commissioning Plan and Appendices.

1.02 SUMMARY

- A. Section includes:
 - 1. Functional Testing of systems.
 - 2. Documentation of Functional Tests.
 - 3. Acceptance criteria.
- B. Scope.
 - 1. This section describes Functional Testing (FT) procedures and requirements. It describes the General Contractor's and Sub-contractors' requirements for supporting the Commissioning Authority (CA) with functional testing of systems. The section also identifies the level to which systems and equipment will be tested in order to be accepted by the Owner.
 - 2. Commissioning requirements related to Division 07, 22, 23, 26, and 28 equipment encompass the complete scope of the LEED EAp1 and EAc3 tasks. Commissioning requirements related to the Building Envelope are limited to thermography and building pressurizations tests at the need of the project.
- C. Related Sections:
 - 1. Section 010801 – Functional Testing
 - 2. Section 017900 – Demonstration and Training
 - 3. Section 200800 – Commissioning of Mechanical and Plumbing System
 - 4. Select Division 22 Plumbing Specifications
 - 5. Select Division 23 HVAC Specifications
 - 6. Section 260800 – Commissioning of Electrical System
 - 7. Select Division 26 Electrical Specifications

1.03 DEFINITIONS

- A. Refer to Section 010800.

1.04 FUNCTIONAL TESTING

- A. Overview.
 - 1. Functional testing is the dynamic testing of systems (rather than just components) under full operation. Systems are tested under various modes and are run through all of the control system's sequences of operation and components are verified to be responding as the sequences state.
 - 2. The CA develops the Functional Test Procedures and monitors the actual testing. Due to equipment warranties, the installing contractor or vendor manipulates the controls or equipment as described in the tests.
- B. Functional Test Procedures.
 - 1. The CA develops Functional Test (FT) Procedures. This Specification is the basis for the Functional Tests. The CA transmits the FT Procedures to the Construction Manager (CM) and copies the Project Manager (PM).

2. The CM transmits the FT Procedures to the responsible Sub-contractors (Subs) for their review.
 3. The designated Subs review the FT Procedures for feasibility, safety, warranty, and equipment protection. The Subs shall comment and update the FT Procedures as required and forward the FT Procedures to the CM.
 4. The CM forwards the updated FT Procedures to the CA, Architect, Engineer, and PM for review and approval prior to execution.
 5. The CA, Architect, Engineer, and PM review and approve the FT Procedures and convey approval to the CM.
 6. The CM schedules testing with the CA and Subs. The CA will bring FT Procedures and walk through the tests with a Sub representative knowledgeable in the systems, their installation, and their control.
- C. Execution of Functional Test Procedures.
1. The CA organizes and directs the Functional Test Procedures.
 2. The Subs perform the Functional Test Procedures and the CA records test results.
 3. The CA monitors and witnesses the functional testing of commissioned equipment and systems.
 4. Four (4) weeks prior to functional testing, the Subs schedule the functional tests with the CM and CA.
 5. The Subs shall provide their reviews of the Functional Test Procedures created by the CA to the CM for review by the CA, A/E, and PM at least three (3) weeks prior to the performance of the associated test. Subject to conformance with the Specifications and Commissioning Plan, the CA, A/E, and PM will approve the Functional Test Procedures.
- D. Test Documentation.
1. The CA will conduct and/or witness tests. The CA will record all test results on the forms developed for testing. CA will "Pass" or "Fail" the testing and record the date and time for the test. Deficiencies shall be clearly indicated when the test is failed. When all related testing is completed successfully, CA shall recommend acceptance of the system or component.
- E. Deficiencies and Re-Testing: When deficiencies are identified during testing, depending on their extent or magnitude, they can be corrected during the test and the testing can continue to successful completion. More significant deficiencies will require the failure of the test and re-testing.
- F. Sampling: Some types of identical equipment (such as terminal devices) will be tested using a sampling strategy. The sample percentage is indicated in the generic FT provided elsewhere in this Section.
- G. Opposite Season Testing: If directed by the CA, testing procedures shall be repeated and/or conducted as necessary during appropriate seasons. Opposite season testing will be required where scheduling prohibits thorough testing in all modes of operation.
- H. Approval: The CA and A/E will review and approve or disapprove the test results based on methods, results and completeness of the specific data collected.

1.05 FUNCTIONAL TEST ACCEPTANCE CRITERIA

- A. The acceptance criteria shall be as follows unless more specifically indicated within individual tests. CA may exercise professional judgment to relax requirements and pass tests and recommend approval when appropriate.
1. Capacity and/or equipment performance will generally be as specified +/- 5%.
 2. Efficiency where specifically indicated in the documents will be +/- 5%. When inferred from manufacturer's catalog data, criteria will be +/- 10%.
 3. Balancing-related criteria will be +/- 5% for water and +/- 10% for air.
 4. Accuracy/repeatability on sensing devices will be as specified for the device. CA and TAB will use calibrated gauges for independent validation and use judgment in passing or failing

the devices. In many cases, the coordination of multiple related sensors is more important than absolute accuracy.

5. Loop response and setpoint deviation criteria will be as specified in Division 23.
 6. HVAC sequence-related criteria will be as explicitly specified in the documents and as interpreted by the CA. Code required sequencing shall be per the applicable code.
 7. System sequences shall be as required by the approved shop drawings.
 8. Motor phase imbalance: shall be no more than 2% (Amps and Volts.)
 9. Noise Levels:
 - a. Occupied spaces: Noise levels shall be as recommended in the design documents or the most current version of the ASHRAE standards for the applicable occupancy when design requirements are not specified.
 10. Indoor Environmental Parameters (T, RH, CO₂, VOC): As indicated by the design documentation or as recommended in the most current version of the ASHRAE Handbooks for the applicable occupancy.
 11. Air Pressurization: As indicated by the design documentation or as indicated in ASHRAE 90.1-2007 and associated standards. Smoke/shaft pressurization shall be as required by NFPA to maintain maximum door opening forces and restrict the passage of smoke.
 12. Indoor Lighting Levels: As indicated by the design documentation.
 13. Electrical Systems: Shall be in accordance with manufacturers' recommendations of individual components and devices, NFPA 70B and International Electrical Testing Association (NETA) testing specifications NETA ATS-Latest Version.
 14. Inter-system interfaces and coordination: As specified and generally to ensure safe, reliable, and robust operation.
- B. Max Failure Limit and Sample Percentages: A Maximum Failure Limit is indicated along with the Sampling Percentages. The Max Failure Limit indicates the maximum percentage of the tested devices that may have any test that fails before an entirely new sample must be tested. This is based on the concept that if many failures occur, it is a result of inadequate start-up by the Contractor. When the maximum number of failures is reached, testing on that sample will be terminated and re-testing will be scheduled.
1. If no Max Failure Limit is indicated, all tested samples must pass (Max Failure Limit = 0%).
 2. Where sample tests involve multiple systems (i.e. checking strainers on different hydronic systems) the Max Failure Limit will apply per system.
 3. The responsible Contractors shall redo the start-up/TAB for the applicable devices and systems.
 4. All work necessitated by sample failures shall be at no cost to the Owner.
 5. Regardless of whether the Maximum Failure Limit is reached, the Contractor is responsible for correcting all deficiencies identified during the testing.

PART 2 - PRODUCTS

2.01 INSTRUMENTATION

- A. General: All testing equipment shall be of sufficient quality and accuracy to test and/or measure system performance within the specified tolerances. All equipment shall be calibrated according to manufacturer's recommended intervals. Calibration tags shall be affixed or certificates readily available. Supplier of instrumentation shall submit the calibration certificates along with the start-up documentation.
- B. Standard Testing Instrumentation: Standard instrumentation normally used for performance assessment and diagnosis will be provided by the CA for tests being exclusively performed by the CA, for all other tests provided by the Contractor.
- C. Special Instruments and Tools: Special equipment, tools and instruments (only available from vendor, specific to a piece of equipment) required for testing equipment, according to these contract documents shall be included in the base bid price by the Contractor and provided to the Owner.

PART 3 - FUNCTIONAL TEST REQUIREMENTS**3.01 PRE-REQUISITES**

- A. Functional Testing Plan
 - 1. The Functional Testing Plan provides the Contractors with information about where functional testing lies in the schedule, what issues are preventing the start of testing, and which contractors are needed for each test. This plan includes the following information: equipment/system, whether the test includes prerequisites, needed participants at testing, and whether there is anticipated seasonal testing. The Functional Testing Plan is finalized after most equipment has been started up and when functional testing dates are approaching.
 - 2. The Functional Testing Plan is attached to this Specification section.
 - 3. The control system is tested before it is used to verify performance of other components or systems.
 - 4. The air balancing, water balancing, and circuit testing is completed and debugged before functional testing of air-related or water-related equipment or systems.
 - 5. Testing proceeds from components to subsystems to systems and finally to interlocks and connections between systems.
- B. Approvals and Documentation
 - 1. Construction checklists completed, submitted, and approved by CA as ready for functional testing.
 - 2. Start-up completed for each piece of equipment and startup reports submitted and approved by CA as ready for functional testing.
 - 3. Functional testing procedures reviewed and approved by installing contractor.
 - 4. All control system functions and interlocks are programmed and operable per contract documents, including final setpoints and schedules with debugging and loop tuning completed
 - 5. Instrument, sensors, and device calibration checks completed.
 - 6. Control system trending configured and operational for all points identified in contract documents.
 - 7. Test and balance (TAB) completed and approved by CA as ready for functional testing.
 - 8. All Corrective Action and A/E punch list items resolved.
 - 9. Safeties and operating ranges for each piece of equipment reviewed.
 - 10. False loading equipment, systems and procedures provided and available (boilers, preheat or reheat coils, control loops, over-ride on OSA dampers, etc.)

3.02 FUNCTIONAL TESTING PROCESS

- A. Functional Testing on any given system shall generally begin with testing device level elements; progress to component level; to system level, to inter-system level to building level.
- B. Functional Testing of systems shall generally proceed from the utilities to the central systems, to the distribution systems, to the zone terminal units and services.
- C. All operating modes, interlocks, control responses, and responses to abnormal or emergency conditions shall be tested verify proper response of building automation system controllers and sensors verified.
- D. Tests will be performed using design conditions whenever possible.
- E. Simulated conditions may need to be imposed using an artificial load when it is not practical to test under design conditions.
- F. The Commissioning Authority may direct that set points be altered when simulating conditions is not practical.
- G. The Commissioning Authority may direct that sensor values be altered with a signal generator when design or simulating conditions and altering set points are not practical.

- H. If tests cannot be completed because of a deficiency outside the scope of the commissioned systems, the deficiency shall be documented and reported to the Construction Manager and Commissioning Authority. After deficiencies are resolved, tests shall be rescheduled.
- I. If the testing plan indicates specific seasonal testing, appropriate initial performance tests shall be performed and documented and seasonal portions scheduled.

3.03 COMMON ELEMENTS FOR ALL SYSTEMS

- A. BAS and local controller panel graphics: The graphic displays for all components, systems, and areas required to be represented by the graphics shall be checked for adequacy and accuracy. Setpoints and other adjustable parameters shall be checked for functionality.
- B. Where systems and zones are designed for various modes of operation, systems shall be tested to simulate all modes, including, but not limited to:
 - 1. Seasonal Modes.
 - 2. Sequencing Modes.
 - 3. Emergency Modes.
- C. The intent of "Verify and Document" shall include, but not be limited to, the following:
 - 1. Taking the system or device through its entire range of control.
 - 2. Subjecting the system or device to all normal and emergency operating modes.
 - 3. Simulating system or device power and/or communications failure and documenting response.
 - 4. Simulating system or device conditions of increasing and decreasing load.

3.04 DOMESTIC WATER SYSTEM

- A. Summary: Functional Testing of steam sourced domestic hot water heater(s), re-circulating domestic hot water distribution, and controls.
- B. Participants:
 - 1. Commissioning Authority.
 - 2. Mechanical Contractor.
 - 3. Controls Contractor.
- C. Minimum allowable sample rate: 100%.
- D. Percent of testing Witnessed by CA: 100%.
- E. Scope of Testing:
 - 1. Verify and document electric element staging of domestic hot water heater.
 - 2. Verify and document recirculation pump operation.
 - 3. Verify and document temperature control and reset sequences.
 - 4. Verify and document safeties.
 - 5. Verify and document interface with BAS.

3.05 GEOTHERMAL HEAT PUMPS

- A. Summary: Functional Testing of geothermal water-to-air heat pumps and controls.
- B. Participants:
 - 1. Commissioning Authority.
 - 2. Mechanical Contractor.
 - 3. Controls Contractor.
- C. Minimum allowable sample rate: 100%.
- D. Percent of testing Witnessed by CA: 100%.
- E. Scope of Testing:

1. Verify and document the heat pump startup and shutdown sequences including optimal start/stop strategies.
2. Verify and document the space sensor calibration, temperature control and reset sequences.
3. Verify and document operating of unit circulating pump.
4. Verify and document operation of heating and cooling modes according to space setpoint and temperature.
5. Verify and document miscellaneous controls (filter pressures, interlocks, etc).
6. Verify and document safeties and alarms.
7. Verify and document interface with BAS.

3.06 ENERGY RECOVERY VENTILATING UNITS

- A. Summary: Functional Testing of the energy recovery ventilating units and related sequences.
- B. Participants:
 1. Commissioning Authority.
 2. Mechanical Contractor.
 3. Controls Contractor.
- C. Minimum allowable sample rate: 100%.
- D. Percent of testing Witnessed by CA: 100%.
- E. Scope of Testing:
 1. Verify and document the ERV startup and shutdown sequences according to schedule.
 2. Verify and document sensor and control device calibrations.
 3. Verify and document the heating, cooling, ventilation, and supply air temperature control sequences.
 4. Verify and document supply fan VFD operation and differential pressure control.
 5. Verify and document exhaust fan VFD tracking.
 6. Verify and document the interface with both VAV and CAV box dampers, as well as aircurty system.
 7. Verify and document the miscellaneous controls (interlocks, etc).
 8. Verify and document safeties.
 9. Verify and document interface with BAS.

3.07 GEOTHERMAL PUMPING

- A. Summary: Functional Testing of the Geothermal Loop water distribution to the heat pumps, well fields and controls.
- B. Participants:
 1. Commissioning Authority.
 2. Mechanical Contractor.
 3. Controls Contractor.
- C. Minimum allowable sample rate: 100%.
- D. Percent of testing Witnessed by CA: 100%.
- E. Scope of Testing:
 1. Verify and document distribution loop re-circulation pump startup and shutdown sequences including optimal start/stop strategies.
 2. Verify and document pump speed control, differential pressure set-point and reset strategies.
 3. Verify and document demand based staging of well field loop pumping.

4. Verify and document lead / lag staging operation.
5. Verify and document failure mode responses, safeties and emergency shutdown sequences.
6. Verify and document interface with BAS.

3.08 VARIABLE AIR VOLUME SYSTEM

- A. Summary: Functional Testing of the VAV system, air distribution devices and controls.
- B. Participants:
 1. Commissioning Authority.
 2. Mechanical Contractor.
 3. Controls Contractor.
- C. Minimum allowable sample rate: 100%.
- D. Percent of testing Witnessed by CA: 100%.
- E. Scope of Testing:
 1. Verify and document the VAV startup and shutdown sequences.
 2. Verify and document calibration of unit damper and airflow sensor.
 3. Verify and document outside air reset sequence in response to CO2 levels.
 4. Verify and document miscellaneous controls (filter pressures, interlocks, etc).
 5. Verify and document safeties and alarms.
 6. Verify and document interface with BAS.

3.09 CONSTANT AIR VOLUME SYSTEM

- A. Summary: Functional Testing of the CAV system, air distribution devices and controls.
- B. Participants:
 1. Commissioning Authority.
 2. Mechanical Contractor.
 3. Controls Contractor.
- C. Minimum allowable sample rate: 100%.
- D. Percent of testing Witnessed by CA: 100%.
- E. Scope of Testing:
 1. Verify and document the VAV startup and shutdown sequences.
 2. Verify and document calibration of unit damper and airflow sensor.
 3. Verify and document operation of damper and pressure independent setpoint control.
 4. Verify and document miscellaneous controls (filter pressures, interlocks, etc).
 5. Verify and document safeties and alarms.
 6. Verify and document interface with BAS.

3.10 VARIABLE FREQUENCY DRIVES

- A. Summary: Functional Testing of fan and pump VFDs.
- B. Participants:
 1. Commissioning Authority.
 2. Mechanical Contractor.
 3. Controls Contractor.
- C. Minimum allowable sample rate: 100%.
- D. Percent of testing Witnessed by CA: 100%.

E. Scope of Testing:

1. Verify and document the VFD parameters and internal control sequences.
2. Verify and document calibration of sensors and control of associated equipment.
3. Verify and document miscellaneous controls (filter pressures, interlocks, etc).
4. Verify and document safeties and alarms.
5. Verify and document interface with BAS.

3.11 AIRCUIITY SYSTEM

A. Summary: Functional Testing of aircurity system and associated CO2 sensors.

B. Participants:

1. Commissioning Authority.
2. Mechanical Contractor.
3. Controls Contractor.

C. Minimum allowable sample rate: 100%.

D. Percent of testing Witnessed by CA: 100%.

E. Scope of Testing:

1. Verify and document aircurity sensors activate the intended sequence response.
2. Verify and document the CO2 sensor sensing range.
3. Verify and document the system interface with the BAS.

3.12 BAS – SYSTEM INTERFACES

A. Summary: Functional Testing of control system interfaces with fire-alarm, security, sprinkler, elevator, and electrical systems.

B. Participants:

1. Commissioning Authority.
2. Controls Contractor.

C. Minimum allowable sample rate: 100%.

D. Percent of testing witnessed by CA: 100%.

E. Scope of Testing:

1. Verify and document interface between BAS and fire alarm, and electrical systems.
2. Verify and document integration with power monitoring system.
3. Verify and document Alarm initiation and response between systems is consistent with contract documents.
4. Verify and document interlocks between systems are consistent with contract documents.

3.13 BAS – GLOBAL SEQUENCES

A. Summary: Functional Testing of control system sequences related to global building operation, including scheduling and night set-back, outside air temp/humidity monitoring, power monitoring, run-time accumulations, and power-outage recovery.

B. Participants:

1. Commissioning Authority.
2. Controls Contractor.

- C. Minimum allowable sample rate: 100%.
- D. Percent of testing witnessed by CA: 100%.
- E. Scope of Testing:
 - 1. Verify and document monitoring points are accurate and trends are configured in accordance with contract documents.
 - 2. Verify and document scheduling is configured and operating in accordance with contract documents.
 - 3. Verify and document BAS is on backup power and all controlled systems recover from power outage and return to original operating sequence without user interaction.
 - 4. Verify and document Run-Time accumulations are functional and transition equipment from lead/lag in accordance with contract documents.
 - 5. Verify and document graphics and system interfaces are according to contract documents, submittals, and Owner expectations.

3.14 LIGHTING CONTROLS

- A. Summary: Functional Testing of lighting controls, dimming systems, sensors and interfaces.
- B. Participants:
 - 1. Commissioning Authority.
 - 2. Controls Contractor.
 - 3. Lighting Controls Contractor.
 - 4. Electrical Contractor.
- C. Minimum allowable sample rate: 100%.
- D. Maximum failure limit: 10% of sample.
- E. Percent of testing witnessed by CA: 100%.
- F. Scope of Testing:
 - 1. Verify and document day lighting and occupancy sensors activate the intended sequence response.
 - 2. Verify and document the lighting sensor calibration.
 - 3. Verify and document the lighting controls interface with the BAS and master controllers.
 - 4. Verify and document lighting levels in each zone are in accordance with contract documents.
 - 5. Verify and document light switches operate and are circuited in accordance with contract documents.
 - 6. Verify and document failure mode responses result in lights in "On" condition.
 - 7. Verify and document scheduling is configured and functional for all zones.

3.15 EMERGENCY POWER SYSTEM

- A. Summary: Functional Testing of generator, automatic transfer switches, emergency power distribution, panels, and interfaces.
- B. Participants:
 - 1. Commissioning Authority.
 - 2. Controls Contractor.
 - 3. Electrical Contractor.
- C. Minimum allowable sample rate: 100%.
- D. Maximum failure limit: 10% of sample.
- E. Percent of testing witnessed by CA: 100%.

F. Scope of Testing:

1. Verify and document operation of generator and automatic transfer switches upon power loss to building.
2. Verify and document calibration of generator and electrical power monitoring points per specifications.
3. Verify and document integration of emergency generator controls and main electrical meter with BAS.
4. Verify and document response of emergency lighting, receptacles, and other components upon power loss to building.
5. Verify and document response of mechanical and controls components to power loss.
6. Verify and document safeties and alarms.

END OF SECTION 010801

**Attachment A
Functional Testing Plan**

Project:	Lexington Senior Center LFUCG Lexington, KY	Date:
Eng. File No:		
Prepared by:	Paladin, Inc.	

Notes for Consideration and Coordination of Functional Test Schedule

The final Functional Testing Plan is to be developed by Contractor during Phase D in consultation with the Commissioning Authority and Owner. Prerequisites for Functional Tests are indicated in each individual test. The following design /contractual issues need to be addressed to allow the development of this plan:

Division 22: Plumbing

- All Plumbing systems must be operational prior to the domestic hot water system test.

Division 23: HVAC

- All BAS systems must be operational prior to the HVAC test.

Division 25: Communication

The following Notes must be completed prior to completing any Division 21 – 28 Functional Tests.

- The data wiring, routers, and switches must be operational to allow the operation of the HVAC controls for testing. The operation of the HVAC controls is a prerequisite for all Division 23 HVAC testing.

Division 26: Electrical

- The Lighting Controls contract must have completed Lighting Controls programming and verified controls operation prior to Functional Testing.

Functional Test Sequences

The anticipated sequence of testing is shown below. The final sequence will be provided by the contractor in his Functional Testing Plan.

Sequence	Division	Test ID #	Participants	Equipment / System and Related Controls	Prerequisites?	Anticipated Seasonal Testing?
1	22	3.04	CA, MC, CC	Domestic Water System	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	23	3.07	CA, MC, CC	Geothermal Water Pumping	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	23	3.05	CA, MC, CC	Geothermal Heat Pumps	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	23	3.06	CA, MC, CC	Energy Recovery Ventilators	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5	23, 26	3.10	CA, EC, CC	Variable Frequency Drives	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6	23	3.11	CA, MC, CC	Aircuity System	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7	23	3.08	CA, MC, CC	Variable Air Volume Systems	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8	23	3.09	CA, MC, CC	Constant Air Volume Systems	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9	26	3.14	CA, LC, CC	Lighting Control	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10	26	3.15	CA, EC, CC	Emergency Power System	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11	25	3.12	CA, EL, FA, EC CC	BAS System Interfaces	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12	25	3.13	CA, CC	BAS Global Interfaces	<input checked="" type="checkbox"/>	<input type="checkbox"/>
13					<input checked="" type="checkbox"/>	<input type="checkbox"/>

CA = Commissioning Authority EL = Elevator Contractor LC = Lighting Contractor
 CC = Controls Contractor FA = Fire Alarm Contractor MC = Mechanical Contractor
 EC = Electrical Contractor FS = Fire Suppression Contractor GC = General Contractor

Anticipated Seasonal Tests

Anticipated seasonal testing is shown below. Modifications will be required based on the actual construction schedule.

Division	Test ID #	Equipment / System and Related Controls	Test Procedure	Conditions Required
23	3.07	Geothermal Water Pumping	Htg / Clg Operation	Greater or less than 55°F
23	3.05	Geothermal Heat Pumps	Htg / Clg Operation	Greater or less than 55°F
23	3.06	Energy Recovery Ventilators	Htg / Clg / Econ Operation	Greater or less than 55°F

END OF FUNCTIONAL TESTING PLAN

SECTION 010802 - TESTING, BALANCING, LUBRICATION AND ADJUSTMENTS

1. GENERAL

- A. The General Conditions, Instructions to Bidders and other Contract Documents are a part of this specification and shall be binding on all Contractors. It shall be each Contractor's responsibility to apprise himself of all information pertinent to his work prior to submitting his proposal. No adjustments will be made in this Contract which is a result of failure to comply with this requirement.
- B. The Engineer, or his authorized representative, shall be notified by the Contractor twenty-four (24) hours in advance of any tests called for in these specifications or required by others. Any leaks or imperfections found shall be corrected and a new tests run to the satisfaction of the Engineer or his authorized representative. Upon completion of a test, a written approval of that part of the work will be given to the Contractor. Only after written approval, signed by the Engineer, shall the Contractor apply insulation or paint or allow his work to be furred-in. This written approval, however, does not relieve the Contractor of the responsibilities for any failure during the guarantee period. The expense of all tests shall be borne by the Contractor, along with all temporary equipment, materials, gauges, etc. required for tests.

2. PLUMBING

- A. Piping shall be tested before being insulated or concealed in any manner. Where leaks or defects develop, required corrections shall be made and tests repeated until systems are proven satisfactory.
- B. Water piping systems shall be subjected to a hydrostatic test of one hundred fifty pounds. The system shall be proven tight after a twenty-four (24) hour test.
- C. The house drain line, interior storm sewers, interior rain water conductors, and all soil, waste and vent piping shall be subjected to a hydrostatic test of not less than a 10-foot head or an air test of not less than 5 lbs. per sq. inch using a mercury column gauge and shall hold for 15 minutes.
- D. Exterior sewer lines to the termination point outside the building shall be subject to a ten-foot hydrostatic test or an approved smoke test. These lines shall be subjected to a second test after 2 feet of backfill has been properly installed.
- E. After fixtures have been installed, the entire plumbing system, exclusive of the house sewer, shall be subjected to an air pressure test equivalent to one inch water column and proven tight. The Contractor responsible shall furnish and install all of the test tees required, including those for isolating any portion of the system for tests.
- F. Thermometers and gauges shall be checked for accuracy. If instruments prove defective, they shall be replaced.
- G. The Contractor shall perform all additional tests that may be required by the Kentucky Department of Health or other governing agency.
- H. Set temperature control on water heaters and adjust tempering valves as required.
- I. Balance the water flow rate of each domestic hot water recirculating pump. Set the flow rate for each balancing valve in the recirculating hot water system. If flow rates are not indicated, contact the engineer for each balance valve GPM.

- J. Any leaks or imperfections found shall be corrected and a new test run until satisfactory results are obtained. The cost of repair or restoration of surfaces damaged by leaks in any system shall be borne by the Contractor.

3. HEATING, VENTILATING AND AIR CONDITIONING

- A. The test and balance of this system shall be by a contractor who employs only the services of a certified AABC or independent NEBB firm whose sole business is to perform test and balance services. The test and balance contractor shall report all deficiencies to the Engineer and General Contractor.
- B. The Mechanical Contractor shall test all piping before being insulated or concealed in any manner. Where leaks or defects develop, required corrections shall be made and tests repeated until systems are proven satisfactory. Water piping systems shall be subjected to a hydrostatic test of not less than one hundred pounds and shall be proven tight after a twenty-four (24) hour test.
- C. All motors, bearings, etc. shall be checked and lubricated as required during start-up procedures. All automatic, pressure regulating and control valves shall be adjusted. Excessive noise or vibration shall be eliminated. Provide all start-up documents to Designer prior to any test and balance services.
- D. System balancing, where required, shall be performed only by persons skilled in this work. The system shall be balanced as often as necessary to obtain desired system operation and results.
- E. All fan belts shall be adjusted for proper operation of fans.
- F. All deficiencies observed by the Test and Balance Contractor shall be reported immediately to the Engineer and General Contractor.
- G. For the purpose of placing the heating, ventilating and air conditioning system in operation according to design conditions and certifying same, final testing and balancing shall be performed in complete accordance with AABC Standards for Total System Balance, Volume Six (2002), for air and hydronic systems as published by the Associated Air Balance Council. The following systems shall be test and balance:
- (1) Supply, return and outside air duct systems. Provide static pressure profiles thru each system. Static pressure profiles shall include all sections from the return duct inlet and supply duct outlet of the air handling unit. Show accurate representation of return, relief, outdoor and economizer damper locations. On units equipped with return air fans; show location and profile of the return fan.
 - (2) Verify calibrations of the duct static pressure sensors for AHU-1.
 - (3) The geothermal pumps.
 - (7) Set the minimum and maximum air flow rates for each VAV and CAV box.
 - (8) Balance all supply, return and exhaust air grille to within 10% of design air flow rate.
 - (10) Balance all exhaust air fans and record inlet static pressure.
 - (11) Balance the kitchen/exhaust air system.
 - (12) Balance domestic hot water return system including all balance valves and record settings and flows.

- (13) Adjust all adjustable diffusers to minimize air drafts and eliminate suspended light fixture sway. Furthermore, adjustable diffusers in spaces with ceilings taller than 9 feet shall be adjusted to eliminate air stratification during heating season.
- H. Provide a preliminary test report to the mechanical engineer immediately after the system is air balanced, or any initial phases are balanced. This report may be hand written. Anticipate visiting the site again after the engineer has reviewed the report. The engineer may request up to 15 additional static pressure measurements for any air handling system to help resolve any balancing deficiencies. Include five additional static pressure measurements for each exhaust air system. Include commissioning agent's scope of work.
- I. The Test and Balance agency shall provide lifts, scaffolding, etc. as required to balance devices in areas with high ceilings such as gymnasiums, auditoriums, atriums, cupolas, etc. The Test and Balance agency may coordinate with the General Contractor and Mechanical Contractor to arrange for these items to be provided to access high devices, however, it is emphasized the Contractor is finally responsible for providing the means required to balance all devices.
- J. Instruments used for testing and balancing of air and hydronic systems shall have been calibrated within a period of six months prior to balancing. All final test analysis reports shall include a letter of certification listing instrumentation used and last date of calibration.
- K. Test and Balance agency is to provide sizing of fan or motor sheaves required for proper balance. The Mechanical Contractor will purchase and install all sheaves and belts as required. This includes new and existing equipment.
- L. Four (4) copies of the complete test reports shall be submitted to the Consulting Engineer prior to final acceptance of the project. Preliminary test reports shall be submitted when requested.
- M. The Contractor shall provide and coordinate his work in the following manner:
- (1) Provide sufficient time before final completion date so that tests and balancing can be accomplished.
 - (2) Provide immediate labor and tools to make corrections when required without undue delay.
- N. The Contractor shall put all heating, ventilating and air conditioning systems and equipment into full operation and shall continue the operation of same during each working day of testing and balancing.
- O. The test and balance contractor shall be present during the Engineer's final inspection of the building, or a separate project review date. The Engineer may request confirmation of the air balance report by asking for new measurements to be taken at that time. Any information in the test and balance report may be asked to be reconfirmed.
- P. Balance all water and air systems. Be sure to include:
- (1) Domestic Hot Water Recirculating System.
- Q. Geothermal Balance
- (1) Confirm flushing velocities (forward and backward) in geothermal well field.
 - (2) Confirm pressure drop values for each well field zone.
 - (3) Set flow rate for each well field zone.

- (4) Submit report confirming above geothermal information to the Engineer prior to submission of final balance report.

R. Automatic Flow Control Balance Valves

- (1) Verify that each installed automatic flow control device matches the GPM indicated on the drawings.
- (2) Verify that the actual pressure at each automatic flow control device is within the pressure limits specified by the valve manufacturer.

4. FIRE PROTECTION SYSTEM

- A. Test in accord with local Fire Marshall requirements and/or requirements or recommendations of NFPA Regulations.

END OF SECTION 203100

SECTION 012200 - UNIT PRICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for unit prices.
- B. Related Sections include the following:
 - 1. Division 01 Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders.
 - 2. Division 01 Section "Payment Procedures" for procedures for measurement and payment for work under unit prices.

1.3 DEFINITIONS

- A. Unit price is an amount proposed by bidders, stated on the Bid Form, as a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if estimated quantities of Work required by the Contract Documents are increased or decreased.

1.4 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
- B. Measurement and Payment: Refer to individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- A. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT PRICES

- A. Schedule of Unit Prices is as listed in the Form of Proposal.

END OF SECTION 012200

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for alternates.

1.2 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may modify the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

- 1. Alternates described in this Section are part of the Work only if accepted by the Owner and enumerated in the Agreement.
- 2. The cost for each alternate is the net addition or deduction to the Contract Sum to incorporate the alternate into the Work. No other adjustments are made to the Contract Sum.
- 3. Alternates may be accepted individually and in any order. The sequential order that they are listed in the Contract Documents does not determine the order of acceptance.

1.3 PROCEDURES

- A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

- A. Schedule of Alternates is as listed in the Form of Proposal.

END OF SECTION 012300

SECTION 012500 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions made after the Contract award.
- B. Related Requirements:
 - 1. Section 012100 "Allowances" for products selected under an allowance.
 - 2. Section 012300 "Alternates" for products selected under an alternate.
 - 3. Section 016000 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

1.3 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
 - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
 - 2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

1.4 ACTION SUBMITTALS

- A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Substitution Request Form: Use State approved forms as defined by the Kentucky Division of Engineering & Contract Administration's Procedures Manual or other approved form.
 - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.

- b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. Certificates and qualification data, where applicable or requested.
 - g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
 - h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - i. Research reports evidencing compliance with building code in effect for Project, from.
 - j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
 - k. Cost information, including a proposal of change, if any, in the Contract Sum.
 - l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
 - m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
- a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
 - b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

1.5 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

1.6 PROCEDURES

- A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:

- a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
- b. Requested substitution provides sustainable design characteristics that specified product provided.
- c. Substitution request is fully documented and properly submitted.
- d. Requested substitution will not adversely affect Contractor's construction schedule.
- e. Requested substitution has received necessary approvals of authorities having jurisdiction.
- f. Requested substitution is compatible with other portions of the Work.
- g. Requested substitution has been coordinated with other portions of the Work.
- h. Requested substitution provides specified warranty.
- i. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

B. Substitutions for Convenience: Not allowed.

PART 3 - EXECUTION (Not Used)

END OF SECTION 012500

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Requirements:
 - 1. Section 012500 "Substitution Procedures" for administrative procedures for handling requests for substitutions made after the Contract award.

1.3 MINOR CHANGES IN THE WORK

- A. Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on Owner approved form.

1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Work Change Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
 - 2. Within time specified in Proposal Request or 20 days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.
 - d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.

1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Comply with requirements in Section 012500 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
7. Proposal Request Form: Use Owner approved form.

1.5 ADMINISTRATIVE CHANGE ORDERS

- A. Allowance Adjustment: See Section 012100 "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.
- B. Unit-Price Adjustment: See Section 012200 "Unit Prices" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect measured scope of unit-price work.

1.6 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Work Change Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on Owner approved form.

1.7 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect may issue a Construction Change Directive on Owner approved form.. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012600

SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Requirements:
 - 1. Section 012100 "Allowances" for procedural requirements governing the handling and processing of allowances.
 - 2. Section 012200 "Unit Prices" for administrative requirements governing the use of unit prices.
 - 3. Section 012600 "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
 - 4. Section 013200 "Construction Progress Documentation" for administrative requirements governing the preparation and submittal of the Contractor's construction schedule.

1.3 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.
 - 1. Coordinate line items in the schedule of values with other required administrative forms and schedules, including the following:
 - a. Application for Payment forms with continuation sheets.
 - b. Submittal schedule.
 - c. Items required to be indicated as separate activities in Contractor's construction schedule.
 - 2. Submit the schedule of values to Architect at earliest possible date, but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
- B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.

1. Identification: Include the following Project identification on the schedule of values:
 - a. Project name and location.
 - b. Name of Architect.
 - c. Architect's project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
2. Arrange schedule of values consistent with format of Owner approved form.
3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with Project Manual table of contents.
4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
5. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - a. Differentiate between items stored on-site and items stored off-site. If required, include evidence of insurance.
6. Provide separate line items in the schedule of values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
7. Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
8. Purchase Contracts: Provide a separate line item in the schedule of values for each purchase contract. Show line-item value of purchase contract. Indicate owner payments or deposits, if any, and balance to be paid by Contractor.
9. Each item in the schedule of values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
 - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the schedule of values or distributed as general overhead expense, at Contractor's option.
10. Schedule Updating: Update and resubmit the schedule of values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.5 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
 1. Submit draft copy of Application for Payment seven days prior to due date for review by Architect.

- C. Application for Payment Forms: Use Owner approved form.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
 2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
 3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- E. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.
1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment, for stored materials.
 2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
 3. Provide summary documentation for stored materials indicating the following:
 - a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
 - b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
 - c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.
- F. Transmittal: Submit three signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- G. Waivers of Mechanic's Lien: If requested by Owner or Architect, and with each Application for Payment, submit waivers of mechanic's lien from entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
 2. When an application shows completion of an item, submit conditional final or full waivers.
 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 4. Waiver Forms: Submit executed waivers of lien on forms acceptable to Owner.
- H. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
 2. Schedule of values.

3. Contractor's construction schedule (preliminary if not final).
 4. Products list (preliminary if not final).
 5. Schedule of unit prices.
 6. Submittal schedule (preliminary if not final).
 7. List of Contractor's staff assignments.
 8. List of Contractor's principal consultants.
 9. Copies of building permits.
 10. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 11. Initial progress report.
 12. Report of preconstruction conference.
 13. Certificates of insurance and insurance policies.
 14. Performance and payment bonds.
 15. Data needed to acquire Owner's insurance.
- I. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- J. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. State Affidavit Form B210-13.
 5. AIA Document G707, "Consent of Surety to Final Payment."
 6. Evidence that claims have been settled.
 7. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
 8. Final liquidated damages settlement statement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

SECTION 013100

PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. General coordination procedures.
 - 2. Coordination drawings.
 - 3. Requests for Information (RFIs).
 - 4. Project meetings.
- B. Each contractor shall participate in coordination requirements. Certain areas of responsibility are assigned to a specific contractor.
- C. Related Requirements:
 - 1. Section 013200 "Construction Progress Documentation" for preparing and submitting Contractor's construction schedule.
 - 2. Section 017300 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
 - 3. Section 017700 "Closeout Procedures" for coordinating closeout of the Contract.
 - 4. Section 019113 "General Commissioning Requirements" for coordinating the Work with Owner's Commissioning Authority.

1.3 DEFINITIONS

- A. RFI: Request from Owner, Architect, or Contractor seeking information required by or clarifications of the Contract Documents.

1.4 INFORMATIONAL SUBMITTALS

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
 - 1. Name, address, and telephone number of entity performing subcontract or supplying products.
 - 2. Number and title of related Specification Section(s) covered by subcontract.
 - 3. Drawing number and detail references, as appropriate, covered by subcontract.

- B. **Key Personnel Names:** Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.
1. Post copies of list in project meeting room, in temporary field office, on Project Web site, and by each temporary telephone. Keep list current at all times.

1.5 GENERAL COORDINATION PROCEDURES

- A. **Coordination:** Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation.
1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
 3. Make adequate provisions to accommodate items scheduled for later installation.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- C. **Administrative Procedures:** Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
1. Preparation of Contractor's construction schedule.
 2. Preparation of the schedule of values.
 3. Installation and removal of temporary facilities and controls.
 4. Delivery and processing of submittals.
 5. Progress meetings.
 6. Preinstallation conferences.
 7. Project closeout activities.
 8. Startup and adjustment of systems.
- D. **Conservation:** Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.

1.6 COORDINATION DRAWINGS

- A. **Coordination Drawings, General:** Prepare coordination drawings according to requirements in individual Sections, and additionally where installation is not completely shown on Shop Drawings, where limited space availability necessitates coordination, or if coordination is

required to facilitate integration of products and materials fabricated or installed by more than one entity.

1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
 - a. Use applicable Drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
 - b. Coordinate the addition of trade-specific information to the coordination drawings by multiple contractors in a sequence that best provides for coordination of the information and resolution of conflicts between installed components before submitting for review.
 - c. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
 - d. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
 - e. Show location and size of access doors required for access to concealed dampers, valves, and other controls.
 - f. Indicate required installation sequences.
 - g. Indicate dimensions shown on the Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Architect indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.

- B. Coordination Drawing Organization: Organize coordination drawings as follows:
 1. Floor Plans and Reflected Ceiling Plans: Show architectural and structural elements, and mechanical, plumbing, fire-protection, fire-alarm, and electrical Work. Show locations of visible ceiling-mounted devices relative to acoustical ceiling grid. Supplement plan drawings with section drawings where required to adequately represent the Work.
 2. Plenum Space: Indicate subframing for support of ceiling and wall systems, mechanical and electrical equipment, and related Work. Locate components within ceiling plenum to accommodate layout of light fixtures indicated on Drawings. Indicate areas of conflict between light fixtures and other components.
 3. Mechanical Rooms: Provide coordination drawings for mechanical rooms showing plans and elevations of mechanical, plumbing, fire-protection, fire-alarm, and electrical equipment.
 4. Structural Penetrations: Indicate penetrations and openings required for all disciplines.
 5. Slab Edge and Embedded Items: Indicate slab edge locations and sizes and locations of embedded items for metal fabrications, sleeves, anchor bolts, bearing plates, angles, door floor closers, slab depressions for floor finishes, curbs and housekeeping pads, and similar items.
 6. Mechanical and Plumbing Work: Show the following:
 - a. Sizes and bottom elevations of ductwork, piping, and conduit runs, including insulation, bracing, flanges, and support systems.
 - b. Dimensions of major components, such as dampers, valves, diffusers, access doors, cleanouts and electrical distribution equipment.
 - c. Fire-rated enclosures around ductwork.
 7. Electrical Work: Show the following:
 - a. Runs of vertical and horizontal conduit 1-1/4 inches in diameter and larger.

- b. Light fixture, exit light, emergency battery pack, smoke detector, and other fire-alarm locations.
 - c. Panel board, switch board, switchgear, transformer, busway, generator, and motor control center locations.
 - d. Location of pull boxes and junction boxes, dimensioned from column center lines.
8. Fire-Protection System: Show the following:
- a. Locations of standpipes, mains piping, branch lines, pipe drops, and sprinkler heads.
9. Review: Architect will review coordination drawings to confirm that the Work is being coordinated, but not for the details of the coordination, which are Contractor's responsibility. If Architect determines that coordination drawings are not being prepared in sufficient scope or detail, or are otherwise deficient, Architect will so inform Contractor, who shall make changes as directed and resubmit.
10. Coordination Drawing Prints: Prepare coordination drawing prints according to requirements in Section 013300 "Submittal Procedures."
- C. Coordination Digital Data Files: Prepare coordination digital data files according to the following requirements:
1. File Preparation Format: Revit, operating in Microsoft Windows operating system.
 2. File Submittal Format: Submit or post coordination drawing files using format same as file preparation format.
 3. BIM File Incorporation: Develop and incorporate coordination drawing files into Building Information Model established for Project.
 - a. Perform three-dimensional component conflict analysis as part of preparation of coordination drawings. Resolve component conflicts prior to submittal. Indicate where conflict resolution requires modification of design requirements by Architect.
 - b. Navisworks is an acceptable BIM software for the coordination drawings.
 4. Architect will furnish Contractor one set of digital data files of Drawings for use in preparing coordination digital data files.
 - a. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to Drawings.
 - b. Digital Data Software Program: Drawing file format in use by the Architect is Revit 2014.
 - c. Contractor shall execute a data licensing agreement in the form of Agreement form acceptable to Owner and Architect.

1.7 REQUESTS FOR INFORMATION (RFIs)

- A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
1. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.
 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
1. Project name.
 2. Project number.
 3. Date.
 4. Name of Contractor.
 5. Name of Architect.
 6. RFI number, numbered sequentially.
 7. RFI subject.
 8. Specification Section number and title and related paragraphs, as appropriate.
 9. Drawing number and detail references, as appropriate.
 10. Field dimensions and conditions, as appropriate.
 11. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 12. Contractor's signature.
 13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
 - a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.
- C. RFI Forms: Owner approved form.
1. Attachments shall be electronic files in Adobe Acrobat PDF format.
- D. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow seven working days for Architect's response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.
1. The following Contractor-generated RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for approval of Contractor's means and methods.
 - d. Requests for coordination information already indicated in the Contract Documents.
 - e. Requests for adjustments in the Contract Time or the Contract Sum.
 - f. Requests for interpretation of Architect's actions on submittals.
 - g. Incomplete RFIs or inaccurately prepared RFIs.
 2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
 3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Section 012600 "Contract Modification Procedures."
 - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 10 days of receipt of the RFI response.
- E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log monthly. Use Owner approved form. Log shall include the following:

1. Project name.
2. Name and address of Contractor.
3. Name and address of Architect.
4. RFI number including RFIs that were returned without action or withdrawn.
5. RFI description.
6. Date the RFI was submitted.
7. Date Architect's response was received.

F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.

1. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
2. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

1.8 PROJECT MEETINGS

A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated.

1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
2. Agenda: Architect will prepare the meeting agenda and distribute the agenda to all invited attendees.
3. Minutes: Unless note otherwise below, the Architect will be responsible for conducting the project meeting and will record significant discussions or agreements achieved. Minutes will be distributed by the responsible entity defined to everyone concerned, including Owner and General Contractor within three days of the meeting.

B. Preconstruction Conference: Schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement.

1. Architect will conduct the conference to review responsibilities and personnel assignments.
2. Attendees: Authorized representatives of Owner, Owner's Commissioning Authority, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
3. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Tentative construction schedule.
 - b. Phasing.
 - c. Critical work sequencing and long-lead items.
 - d. Designation of key personnel and their duties.
 - e. Lines of communications.
 - f. Procedures for processing field decisions and Change Orders.
 - g. Procedures for RFIs.
 - h. Procedures for testing and inspecting.
 - i. Procedures for processing Applications for Payment.

- j. Distribution of the Contract Documents.
 - k. Submittal procedures.
 - l. Sustainable design requirements.
 - m. Preparation of record documents.
 - n. Use of the premises.
 - o. Work restrictions.
 - p. Working hours.
 - q. Owner's occupancy requirements.
 - r. Responsibility for temporary facilities and controls.
 - s. Procedures for moisture and mold control.
 - t. Procedures for disruptions and shutdowns.
 - u. Construction waste management and recycling.
 - v. Parking availability.
 - w. Office, work, and storage areas.
 - x. Equipment deliveries and priorities.
 - y. First aid.
 - z. Security.
 - aa. Progress cleaning.
4. Minutes: Architect will record and distribute meeting minutes.
- C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.
- 1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect and Owner's Commissioning Authority of scheduled meeting dates.
 - 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - a. Contract Documents.
 - b. Options.
 - c. Related RFIs.
 - d. Related Change Orders.
 - e. Purchases.
 - f. Deliveries.
 - g. Submittals.
 - h. Sustainable design requirements.
 - i. Review of mockups.
 - j. Possible conflicts.
 - k. Compatibility requirements.
 - l. Time schedules.
 - m. Weather limitations.
 - n. Manufacturer's written instructions.
 - o. Warranty requirements.
 - p. Compatibility of materials.
 - q. Acceptability of substrates.
 - r. Temporary facilities and controls.
 - s. Space and access limitations.
 - t. Regulations of authorities having jurisdiction.
 - u. Testing and inspecting requirements.
 - v. Installation procedures.
 - w. Coordination with other work.
 - x. Required performance results.
 - y. Protection of adjacent work.

- z. Protection of construction and personnel.
 3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
 4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
 5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- D. Project Closeout Conference: Schedule and conduct a project closeout conference, at a time convenient to Owner and Architect, but no later than 90 days prior to the scheduled date of Substantial Completion.
1. Conduct the conference to review requirements and responsibilities related to Project closeout.
 2. Attendees: Authorized representatives of Owner, Owner's Commissioning Authority, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
 3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:
 - a. Preparation of record documents.
 - b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
 - c. Submittal of written warranties.
 - d. Requirements for preparing operations and maintenance data.
 - e. Requirements for delivery of material samples, attic stock, and spare parts.
 - f. Requirements for demonstration and training.
 - g. Preparation of Contractor's punch list.
 - h. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
 - i. Submittal procedures.
 - j. Coordination of separate contracts.
 - k. Owner's partial occupancy requirements.
 - l. Installation of Owner's furniture, fixtures, and equipment.
 - m. Responsibility for removing temporary facilities and controls.
 4. Minutes: Entity conducting meeting will record and distribute meeting minutes.
- E. Progress Meetings: Conduct progress meetings at monthly intervals.
1. Coordinate dates of meetings with preparation of payment requests.
 2. Attendees: In addition to representatives of Owner, Owner's Commissioning Authority and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
 3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind

schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

- 1) Review schedule for next period.
- b. Review present and future needs of each entity present, including the following:
- 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Resolution of BIM component conflicts.
 - 4) Status of submittals.
 - 5) Deliveries.
 - 6) Off-site fabrication.
 - 7) Access.
 - 8) Site utilization.
 - 9) Temporary facilities and controls.
 - 10) Progress cleaning.
 - 11) Quality and work standards.
 - 12) Status of correction of deficient items.
 - 13) Field observations.
 - 14) Status of RFIs.
 - 15) Status of proposal requests.
 - 16) Pending changes.
 - 17) Status of Change Orders.
 - 18) Pending claims and disputes.
 - 19) Documentation of information for payment requests.
4. Minutes: The Architect shall be responsible for conducting the meeting. Architect will record and distribute the meeting minutes to each party present and to parties requiring information.
- a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:

1. Startup construction schedule.
2. Contractor's construction schedule.
3. Construction schedule updating reports.
4. Daily construction reports.
5. Material location reports.
6. Site condition reports.
7. Special reports.

- B. Related Requirements:

1. Section 013300 "Submittal Procedures" for submitting schedules and reports.
2. Section 014000 "Quality Requirements" for submitting a schedule of tests and inspections.

1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.

1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
2. Predecessor Activity: An activity that precedes another activity in the network.
3. Successor Activity: An activity that follows another activity in the network.

- B. Cost Loading: The allocation of the schedule of values for the completion of an activity as scheduled. The sum of costs for all activities must equal the total Contract Sum unless otherwise approved by Architect.

- C. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.

- D. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.

- E. Event: The starting or ending point of an activity.
- F. Float: The measure of leeway in starting and completing an activity.
 - 1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
 - 2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
 - 3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- G. Resource Loading: The allocation of manpower and equipment necessary for the completion of an activity as scheduled.

1.4 INFORMATIONAL SUBMITTALS

- A. Format for Submittals: Submit required submittals in the following format:
 - 1. Working electronic copy of schedule file, where indicated.
 - 2. PDF electronic file.
- B. Startup construction schedule.
 - 1. Approval of cost-loaded, startup construction schedule will not constitute approval of schedule of values for cost-loaded activities.
- C. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
- D. Construction Schedule Updating Reports: Submit with Applications for Payment.
- E. Daily Construction Reports: Submit at progress meeting.
- F. Material Location Reports: Submit at progress meeting.
- G. Site Condition Reports: Submit at time of discovery of differing conditions.
- H. Special Reports: Submit at time of unusual event.

1.5 COORDINATION

- A. Coordinate Contractor's construction schedule with the schedule of values, submittal schedule, progress reports, payment requests, and other required schedules and reports.
 - 1. Secure time commitments for performing critical elements of the Work from entities involved.
 - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Time Frame: Extend schedule from date established for the Notice to Proceed to date of final completion.
1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- B. Activities: Treat each story or separate area as a separate numbered activity for each main element of the Work. Comply with the following:
1. Procurement Activities: Include procurement process activities for the following long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
 2. Submittal Review Time: Include review and resubmittal times indicated in Section 013300 "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's construction schedule with submittal schedule.
 3. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
 4. Punch List and Final Completion: Include not more than 30 days for completion of punch list items and final completion.
- C. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
1. Phasing: Arrange list of activities on schedule by phase.
 2. Work under More Than One Contract: Include a separate activity for each contract.
 3. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
 4. Products Ordered in Advance: Include a separate activity for each product. Include delivery date indicated in Section 011000 "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
 5. Owner-Furnished Products: Include a separate activity for each product. Include delivery date indicated in Section 011000 "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
 6. Work Restrictions: Show the effect of the following items on the schedule:
 - a. Coordination with existing construction.
 - b. Limitations of continued occupancies.
 - c. Uninterruptible services.
 - d. Partial occupancy before Substantial Completion.
 - e. Use of premises restrictions.
 - f. Provisions for future construction.
 - g. Seasonal variations.
 - h. Environmental control.
 7. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
 - a. Subcontract awards.

- b. Submittals.
 - c. Purchases.
 - d. Mockups.
 - e. Fabrication.
 - f. Sample testing.
 - g. Deliveries.
 - h. Installation.
 - i. Tests and inspections.
 - j. Adjusting.
 - k. Curing.
 - l. Building flush-out.
 - m. Startup and placement into final use and operation.
8. Construction Areas: Identify each major area of construction for each major portion of the Work. Indicate where each construction activity within a major area must be sequenced or integrated with other construction activities to provide for the following:
- a. Structural completion.
 - b. Temporary enclosure and space conditioning.
 - c. Permanent space enclosure.
 - d. Completion of mechanical installation.
 - e. Completion of electrical installation.
 - f. Substantial Completion.
- D. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and final completion.
- E. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:
- 1. Unresolved issues.
 - 2. Unanswered Requests for Information.
 - 3. Rejected or unreturned submittals.
 - 4. Notations on returned submittals.
 - 5. Pending modifications affecting the Work and Contract Time.
- F. Computer Scheduling Software: Prepare schedules using current version of a program that has been developed specifically to manage construction schedules.
- 2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)
- A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal, Gantt-chart-type, Contractor's construction schedule within 30 days of date established for the Notice to Proceed. Base schedule on the startup construction schedule and additional information received since the start of Project.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.
- 1. For construction activities that require three months or longer to complete, indicate an estimated completion percentage in 10 percent increments within time bar.

2.3 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
1. List of subcontractors at Project site.
 2. List of separate contractors at Project site.
 3. Approximate count of personnel at Project site.
 4. Equipment at Project site.
 5. Material deliveries.
 6. High and low temperatures and general weather conditions, including presence of rain or snow.
 7. Accidents.
 8. Meetings and significant decisions.
 9. Unusual events (see special reports).
 10. Stoppages, delays, shortages, and losses.
 11. Meter readings and similar recordings.
 12. Emergency procedures.
 13. Orders and requests of authorities having jurisdiction.
 14. Change Orders received and implemented.
 15. Construction Change Directives received and implemented.
 16. Services connected and disconnected.
 17. Equipment or system tests and startups.
 18. Partial completions and occupancies.
 19. Substantial Completions authorized.
- B. Material Location Reports: At monthly intervals, prepare and submit a comprehensive list of materials delivered to and stored at Project site. List shall be cumulative, showing materials previously reported plus items recently delivered. Include with list a statement of progress on and delivery dates for materials or items of equipment fabricated or stored away from Project site. Indicate the following categories for stored materials:
1. Material stored prior to previous report and remaining in storage.
 2. Material stored prior to previous report and since removed from storage and installed.
 3. Material stored following previous report and remaining in storage.
- C. Site Condition Reports: Immediately on discovery of a difference between site conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

2.4 SPECIAL REPORTS

- A. General: Submit special reports directly to Owner within one day(s) of an occurrence. Distribute copies of report to parties affected by the occurrence.
- B. Reporting Unusual Events: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule at each regularly scheduled progress meeting.
- B. Distribution: Distribute copies of approved schedule to Architect Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
 - 1. Post copies in Project meeting rooms and temporary field offices.
 - 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 013200

SECTION 013233 - PHOTOGRAPHIC DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for the following:
 - 1. Preconstruction photographs.
 - 2. Periodic construction photographs.
 - 3. Final completion construction photographs.
- B. Related Requirements:
 - 1. Section 012200 "Unit Prices" for procedures for unit prices for extra photographs.
 - 2. Section 013300 "Submittal Procedures" for submitting photographic documentation.
 - 3. Section 017700 "Closeout Procedures" for submitting photographic documentation as project record documents at Project closeout.
 - 4. Section 017900 "Demonstration and Training" for submitting video recordings of demonstration of equipment and training of Owner's personnel.
 - 5. Section 311000 "Site Clearing" for photographic documentation before site clearing operations commence.

1.3 INFORMATIONAL SUBMITTALS

- A. Digital Photographs: Submit image files within seven days of taking photographs.
 - 1. Digital Camera: Minimum sensor resolution of 8 megapixels.
 - 2. Format: Minimum 3200 by 2400 pixels, in unaltered original files, with same aspect ratio as the sensor, uncropped, date and time stamped, in folder named by date of photograph, accompanied by key plan file.

PART 2 - PRODUCTS

2.1 PHOTOGRAPHIC MEDIA

- A. Digital Images: Provide images in JPG format, produced by a digital camera with minimum sensor size of 8 megapixels, and at an image resolution of not less than 3200 by 2400 pixels.

PART 3 - EXECUTION

3.1 CONSTRUCTION PHOTOGRAPHS

- A. General: Take photographs using the maximum range of depth of field, and that are in focus, to clearly show the Work. Photographs with blurry or out-of-focus areas will not be accepted.
- B. Digital Images: Submit digital images exactly as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.
 - 1. Date and Time: Include date and time in file name for each image.
 - 2. Field Office Images: Maintain one set of images accessible in the field office at Project site, available at all times for reference. Identify images in the same manner as those submitted to Architect.
- C. Preconstruction Photographs: Before commencement of excavation, take photographs of Project site and surrounding properties, including existing items to remain during construction, from different vantage points.
 - 1. Take photographs to show existing conditions adjacent to property before starting the Work. Include existing trees and other significant plantings.
 - 2. Take photographs of existing buildings, fences, utilities and other improvements either on or adjoining property to accurately record physical conditions at start of construction.
 - 3. Take additional photographs as required to record settlement or cracking of adjacent structures, pavements, and improvements.
- D. Periodic Construction Photographs: Take photographs monthly, coinciding with the cutoff date associated with each Application for Payment. Select vantage points to show status of construction and progress since last photographs were taken. Provide sufficient quantity of photographs to thoroughly document work completed or underway since the previous photographic documentation.
- E. Final Completion Construction Photographs: Take color photographs after date of Substantial Completion for submission as project record documents.

END OF SECTION 013233

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Requirements:
 - 1. Section 012900 "Payment Procedures" for submitting Applications for Payment and the schedule of values.
 - 2. Section 013200 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.
 - 3. Section 017823 "Operation and Maintenance Data" for submitting operation and maintenance manuals.
 - 4. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.
 - 5. Section 017900 "Demonstration and Training" for submitting video recordings of demonstration of equipment and training of Owner's personnel.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."
- C. File Transfer Protocol (FTP): Communications protocol that enables transfer of files to and from another computer over a network and that serves as the basis for standard Internet protocols. An FTP site is a portion of a network located outside of network firewalls within which internal and external users are able to access files.
- D. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.4 ACTION SUBMITTALS

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.
1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
 2. Initial Submittal: Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.
 - a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.
 4. Format: Arrange the following information in a tabular format:
 - a. Scheduled date for first submittal.
 - b. Specification Section number and title.
 - c. Submittal category: Action; informational.
 - d. Name of subcontractor.
 - e. Description of the Work covered.
 - f. Scheduled date for Architect's final release or approval.
 - g. Scheduled date of fabrication.
 - h. Scheduled dates for purchasing.
 - i. Scheduled dates for installation.
 - j. Activity or event number.

1.5 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Architect's Digital Data Files: Electronic digital data files of the Contract Drawings will be provided by Architect for Contractor's use in preparing submittals.
1. Architect will furnish Contractor one set of digital data drawing files of the Contract Drawings for use in preparing Shop Drawings and Project record drawings.
 - a. Architect makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.
 - b. Contractor shall execute a data licensing agreement in the form of Agreement form acceptable to Owner and Architect.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.

2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
 3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
 4. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Resubmittal Review: Allow 15 days for review of each resubmittal.
 4. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow 21 days for initial review of each submittal.
- D. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:
1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
 2. Name file with submittal number or other unique identifier, including revision identifier.
 - a. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g., LNHS-061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., LNHS-061000.01.A).
 3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.
 4. Transmittal Form for Electronic Submittals: Use electronic form acceptable to Owner, containing the following information:
 - a. Project name.
 - b. Date.
 - c. Name and address of Architect.
 - d. Name of Construction Manager.
 - e. Name of Contractor.
 - f. Name of firm or entity that prepared submittal.
 - g. Names of subcontractor, manufacturer, and supplier.
 - h. Category and type of submittal.
 - i. Submittal purpose and description.
 - j. Specification Section number and title.
 - k. Specification paragraph number or drawing designation and generic name for each of multiple items.
 - l. Drawing number and detail references, as appropriate.

- m. Location(s) where product is to be installed, as appropriate.
 - n. Related physical samples submitted directly.
 - o. Indication of full or partial submittal.
 - p. Transmittal number, numbered consecutively.
 - q. Submittal and transmittal distribution record.
 - r. Other necessary identification.
 - s. Remarks.
- E. Options: Identify options requiring selection by Architect.
- F. Deviations and Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.
- G. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
- 1. Note date and content of previous submittal.
 - 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 - 3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.
- H. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- I. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
- 1. Submit electronic submittals via email as PDF electronic files.
 - a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.
 - 2. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 - a. Provide a digital signature with digital certificate on electronically submitted certificates and certifications where indicated.
 - b. Provide a notarized statement on original paper copy certificates and certifications where indicated.

- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
 2. Mark each copy of each submittal to show which products and options are applicable.
 3. Include the following information, as applicable:
 - a. Manufacturer's catalog cuts.
 - b. Manufacturer's product specifications.
 - c. Standard color charts.
 - d. Statement of compliance with specified referenced standards.
 - e. Testing by recognized testing agency.
 - f. Application of testing agency labels and seals.
 - g. Notation of coordination requirements.
 - h. Availability and delivery time information.
 4. For equipment, include the following in addition to the above, as applicable:
 - a. Wiring diagrams showing factory-installed wiring.
 - b. Printed performance curves.
 - c. Operational range diagrams.
 - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
 5. Submit Product Data before or concurrent with Samples.
 6. Submit Product Data in the following format:
 - a. PDF electronic file.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Identification of products.
 - b. Schedules.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.
 - e. Notation of dimensions established by field measurement.
 - f. Relationship and attachment to adjoining construction clearly indicated.
 - g. Seal and signature of professional engineer if specified.
 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm), but no larger than 30 by 42 inches (750 by 1067 mm).
 3. Submit Shop Drawings in the following format:
 - a. PDF electronic file.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.

1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of applicable Specification Section.
 - e. Specification paragraph number and generic name of each item.
 3. For projects where electronic submittals are required, provide corresponding electronic submittal of Sample transmittal, digital image file illustrating Sample characteristics, and identification information for record.
 4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
 5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
 6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Number of Samples: Submit three sets of Samples. Architect will retain one Sample sets; remainder will be returned. Mark up and retain one returned Sample set as a project record sample.
 - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
 - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
- E. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:

1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
 2. Manufacturer and product name, and model number if applicable.
 3. Number and name of room or space.
 4. Location within room or space.
 5. Submit product schedule in the following format:
 - a. PDF electronic file.
- F. Coordination Drawing Submittals: Comply with requirements specified in Section 013100 "Project Management and Coordination."
- G. Contractor's Construction Schedule: Comply with requirements specified in Section 013200 "Construction Progress Documentation."
- H. Application for Payment and Schedule of Values: Comply with requirements specified in Section 012900 "Payment Procedures."
- I. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Section 014000 "Quality Requirements."
- J. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Section 017700 "Closeout Procedures."
- K. Maintenance Data: Comply with requirements specified in Section 017823 "Operation and Maintenance Data."
- L. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- M. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.
- N. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- O. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- P. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- Q. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- R. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.

- S. **Product Test Reports:** Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- T. **Research Reports:** Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
1. Name of evaluation organization.
 2. Date of evaluation.
 3. Time period when report is in effect.
 4. Product and manufacturers' names.
 5. Description of product.
 6. Test procedures and results.
 7. Limitations of use.
- U. **Preconstruction Test Reports:** Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- V. **Compatibility Test Reports:** Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- W. **Field Test Reports:** Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- X. **Design Data:** Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

2.2 DELEGATED-DESIGN SERVICES

- A. **Performance and Design Criteria:** Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. **Delegated-Design Services Certification:** In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF electronic file and three paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Project Closeout and Maintenance Material Submittals: See requirements in Section 017700 "Closeout Procedures."
- C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

- A. Action Submittals: Architect will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action.
- B. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.
- D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- E. Submittals not required by the Contract Documents may be returned by the Architect without action.

END OF SECTION 013300

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, Commissioning Authority, or authorities having jurisdiction are not limited by provisions of this Section.
 - 4. Specific test and inspection requirements are not specified in this Section.

1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.
- C. Mockups: Full-size physical assemblies that are constructed on-site. Mockups are constructed to verify selections made under Sample submittals; to demonstrate aesthetic effects and, where indicated, qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.
 - 1. Integrated Exterior Mockups: Mockups of the exterior envelope erected separately from the building but on Project site, consisting of multiple products, assemblies, and subassemblies.

- D. **Preconstruction Testing:** Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria.
- E. **Product Testing:** Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- F. **Source Quality-Control Testing:** Tests and inspections that are performed at the source, e.g., plant, mill, factory, or shop.
- G. **Field Quality-Control Testing:** Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- H. **Testing Agency:** An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- I. **Installer/Applicator/Erector:** Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
 - 1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade(s).
- J. **Experienced:** When used with an entity or individual, "experienced" means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 CONFLICTING REQUIREMENTS

- A. **Referenced Standards:** If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for a decision before proceeding.
- B. **Minimum Quantity or Quality Levels:** The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.5 ACTION SUBMITTALS

- A. **Shop Drawings:** For integrated exterior mockups, provide plans, sections, and elevations, indicating materials and size of mockup construction.
 - 1. Indicate manufacturer and model number of individual components.
 - 2. Provide axonometric drawings for conditions difficult to illustrate in two dimensions.

1.6 INFORMATIONAL SUBMITTALS

- A. Contractor's Quality-Control Plan: For quality-assurance and quality-control activities and responsibilities.
- B. Qualification Data: For Contractor's quality-control personnel.
- C. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility sent to authorities having jurisdiction before starting work on the following systems:
 - 1. Seismic-force-resisting system, designated seismic system, or component listed in the designated seismic system quality-assurance plan prepared by Architect.
 - 2. Main wind-force-resisting system or a wind-resisting component listed in the wind-force-resisting system quality-assurance plan prepared by Architect.
- D. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- E. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
 - 1. Specification Section number and title.
 - 2. Entity responsible for performing tests and inspections.
 - 3. Description of test and inspection.
 - 4. Identification of applicable standards.
 - 5. Identification of test and inspection methods.
 - 6. Number of tests and inspections required.
 - 7. Time schedule or time span for tests and inspections.
 - 8. Requirements for obtaining samples.
 - 9. Unique characteristics of each quality-control service.

1.7 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
 - 1. Date of issue.
 - 2. Project title and number.
 - 3. Name, address, and telephone number of testing agency.
 - 4. Dates and locations of samples and tests or inspections.
 - 5. Names of individuals making tests and inspections.
 - 6. Description of the Work and test and inspection method.
 - 7. Identification of product and Specification Section.
 - 8. Complete test or inspection data.
 - 9. Test and inspection results and an interpretation of test results.
 - 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 - 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 - 12. Name and signature of laboratory inspector.
 - 13. Recommendations on retesting and reinspecting.